State of Connecticut
HOUSE OF REPRESENTATIVES
STATE CAPITOL
HARTFORD, CONNECTICUT 06106-1591

REPRESENTATIVE SEAN SCANLON
98TH ASSEMBLY DISTRICT

LEGISLATIVE OFFICE BUILDING
ROOM 4024
CAPITOL: (860) 240-8585
E-MAIL: Sean.Scanlon@cga.ct.gov

MEMBER
ENVIRONMENT COMMITTEE
PUBLIC HEALTH COMMITTEE
TRANSPORTATION COMMITTEE

RECEIVED
MAR 16 2015
Department of Public Health
Office of the Commissioner

March 9, 2015

The Honorable Jewel Mullen, M.D.
Commissioner
Department of Public Health
Office of Health Care Access
410 Capitol Avenue
Hartford, CT 06134

Re: Walden Behavioral Care: Clinic for Eating Disorders

Dear Commissioner Mullen,

As a State Representative for the 98th District, I have a vested interest in the health care services that are being delivered to my constituents in Guilford and the surrounding towns in New Haven and Middlesex Counties. As you know, the accessibility to quality health care services is one of the most important issues that impacts their wellbeing.

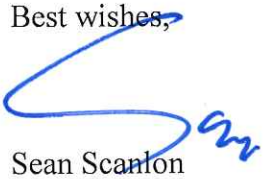
Walden Behavioral Care is seeking your approval for an outpatient adult and adolescent eating disorder service for both men and women in Guilford. Walden has an established inpatient hospital program as well as several outpatient clinics in Massachusetts, as well as one Connecticut-based clinic in South Windsor. The South Windsor facility has been in existence for two years and has already outgrown the needed space two times because of the constantly increasing volume. This service would be extremely valuable for those people who need help in the Guilford area. As you know, eating disorders which spring from a mental illness, are becoming more prevalent in our society. Today these disorders can be cured with appropriate treatment.

It is for these reasons that I write to you today to ask you to approve the application that is being submitted by Walden Behavioral Care to allow them to begin providing eating disorder programs

for adolescents and adults who suffer from anorexia, bulimia and binge eating in a clinic to be located on Goose Lane in Guilford.

Thank you for your consideration of this application.

Best wishes,



Sean Scanlon

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

Jewel Mullen, M.D., M.P.H., M.P.A.
Commissioner

Dannel P. Malloy
Governor

Nancy Wyman
Lt. Governor

March 18, 2015

The Honorable Sean Scanlon
Representative -98th Assembly District
State of Connecticut
Legislative Office Building, Room 4024
Hartford, CT 06106-1591

Re: Certificate of Need
Walden Behavioral Care: Clinic for Eating Disorders

Dear Representative Scanlon:

On March 16, 2015, the Department of Public Health ("DPH") received your letter concerning the Certificate of Need ("CON") for the proposed outpatient adult and adolescent eating disorder service for both men and women in Guilford.

I welcome and appreciate your comments regarding this matter. Your letter will be made part of the Office of Health Care Access (OHCA) formal record of the CON application docket once it is received. Please be advised, once a decision has been rendered it will be posted and available on OHCA's website at http:// www.ct.gov/dph/ohca. Meanwhile, OHCA's website maintains status reports that you may review at your convenience.

If you have any further concerns or questions, please feel free to contact Kimberly Martone, Director of Operations for OHCA at (860) 418-7029.

Sincerely,

Janet M. Brancifort

Janet M. Brancifort, MPH
Deputy Commissioner

Connecticut Department of Public Health

Phone: (860) 509-8000 • Fax: (860) 509-7184 • VP: (860) 899-1611
410 Capitol Avenue, P.O. Box 340308
Hartford, Connecticut 06134-0308
www.ct.gov/dph
Affirmative Action/Equal Opportunity Employer

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APR - 2 2015
Office of
HEALTHCARE ACCESS

Application Checklist

Instructions:

1. **Please check each box below, as appropriate; and**
2. **The completed checklist *must* be submitted as the first page of the CON application.**

☒ **Attached is the CON application filing fee in the form of a certified, cashier or business check made out to the "Treasurer State of Connecticut" in the amount of $500.**

For OHCA Use Only:

Docket No.: 15-31988-CON **Check No.:** 31459
OHCA Verified by: KR **Date:** 4.2.15

☒ **Attached is evidence demonstrating that public notice has been published in a suitable newspaper that relates to the location of the proposal, 3 days in a row, at least 20 days prior to the submission of the CON application to OHCA. (*OHCA requests that the Applicant fax a courtesy copy to OHCA (860) 418-7053, at the time of the publication)***

☒ **Attached is a paginated hard copy of the CON application including a completed affidavit, signed and notarized by the appropriate individuals.**

☒ **Attached is completed Financial Attachment I.**

☒ **Submission includes one (1) original and four (4) hard copies with each set placed in 3-ring binders.**

Note: A CON application may be filed with OHCA electronically through email, if the total number of pages submitted is 50 pages or less. In this case, the CON Application must be emailed to ohca@ct.gov.

Important: For CON applications(less than 50 pages) filed electronically through email, the signed affidavit and the check in the amount of $500 must be delivered to OHCA in hardcopy.

☒ **The following have been submitted on a CD**

1. **A scanned copy of each submission in its entirety, including all attachments in Adobe (.pdf) format.**
2. **An electronic copy of the documents in MS Word and MS Excel as appropriate.**

AFFIDAVIT

Applicant: **Walden Behavioral Care, LLC**

Project Title: **Walden Behavioral Care Outpatient Services for Eating Disorders in Guilford**

I, Stuart L. Koman, President and CEO of Walden Behavioral Care, LLC, being duly sworn, depose and state that Walden Behavioral Care, LLC's information submitted in this Certificate of Need Application is accurate and correct to the best of my knowledge.

Signature _____ Date 3/23/15

Subscribed and sworn to before me on 3/23/15

_____

Notary Public/Commissioner of Superior Court

My commission expires: 6/25/21

CHARLES R ROSSIGNOL
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
June 25, 2021

HOLD TO LIGHT TO VIEW WATERMARK IN PAPER HEAT SENSITIVE RED IMAGE DISAPPEARS WITH HEAT DETECTION CIRCLE REVEALS A LOCK WHEN TESTED

31459

WALDEN BEHAVIORAL CARE, LLC
51 SAWYER RD
WALTHAM, MA 02453

Citizens Bank®

EZShield™ Check Fraud Protection for Business

5-7017-2110

3/18/2015

PAY TO THE ORDER OF Treasurer, State of Connecticut

$ **500.00

Five Hundred and 00/100********** DOLLARS

Treasurer, State of Connecticut
55 Elm Street
Hartford, CT 06106

MEMO

AUTHORIZED SIGNATURE

Security features. Details on back.

⑈031459⑈ ⑆211070175⑆ 131593208O⑈

WALDEN BEHAVIORAL CARE, LLC

31459

Treasurer, State of Connecticut

3/18/2015

Date	Type	Reference	Original Amt.	Balance Due	Discount	Payment
3/16/2015	Bill	CT Clinic Filing Fee	500.00	500.00		500.00
					Check Amount	500.00

Citizens - Operating 500.00

AFFIDAVIT OF PUBLICATION
New Haven Register

STATE OF CONNECTICUT, County of New Haven

I, Christopher Gilson, of New Haven, Connecticut, being duly sworn, do depose and say that I am a ***Sales Representative*** of the New Haven Register, and that on the following date .2/.25,.26/27/.15.....to wit..... there was published in the regular daily edition of the said newspaper an advertisement,

LEGAL NOTICE

Pursuant to Section 19a-638 of the Connecticut General Statutes, Walden Behavioral Care LLC intends to offer a new eating disorder service in Guilford, CT in property located at 157 Goose Lane, Guilford, CT. The following Certificate of Need will be filed with the CT DPH Office of Health Care Access:
Applicants: Walden Behavioral Care LLC.
Address: 157 Goose Lane, Guilford, CT 06437
Proposal: An eating disorder program to be established as a clinic for outpatient services for men and women, including adolescents.
Estimated Capital Cost: $ 400,000.00

And that the newspaper extracts hereto annexed were clipped from each of the above-named issues of said newspaper.

Subscribed and sworn to this ...12th..... day of March. 2015....Before me.

My commission expires July 31, 2019

Letters of Support

State of Connecticut
HOUSE OF REPRESENTATIVES
STATE CAPITOL
HARTFORD, CONNECTICUT 06106-1591

REPRESENTATIVE SEAN SCANLON
98TH ASSEMBLY DISTRICT

LEGISLATIVE OFFICE BUILDING
ROOM 4024
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E-MAIL: Sean.Scanlon@cga.ct.gov

MEMBER
ENVIRONMENT COMMITTEE
PUBLIC HEALTH COMMITTEE
TRANSPORTATION COMMITTEE

March 9, 2015

The Honorable Jewel Mullen, M.D.
Commissioner
Department of Public Health
Office of Health Care Access
410 Capitol Avenue
Hartford, CT 06134

Re: Walden Behavioral Care: Clinic for Eating Disorders

Dear Commissioner Mullen,

As a State Representative for the 98th District, I have a vested interest in the health care services that are being delivered to my constituents in Guilford and the surrounding towns in New Haven and Middlesex Counties. As you know, the accessibility to quality health care services is one of the most important issues that impacts their wellbeing.

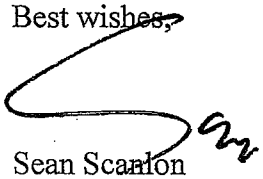
Walden Behavioral Care is seeking your approval for an outpatient adult and adolescent eating disorder service for both men and women in Guilford. Walden has an established inpatient hospital program as well as several outpatient clinics in Massachusetts, as well as one Connecticut-based clinic in South Windsor. The South Windsor facility has been in existence for two years and has already outgrown the needed space two times because of the constantly increasing volume. This service would be extremely valuable for those people who need help in the Guilford area. As you know, eating disorders which spring from a mental illness, are becoming more prevalent in our society. Today these disorders can be cured with appropriate treatment.

It is for these reasons that I write to you today to ask you to approve the application that is being submitted by Walden Behavioral Care to allow them to begin providing eating disorder programs

for adolescents and adults who suffer from anorexia, bulimia and binge eating in a clinic to be located on Goose Lane in Guilford.

Thank you for your consideration of this application.

Best wishes,



Sean Scanlon

Eastern Connecticut Health Network
71 Haynes Street
Manchester, CT 06040
860.533.3414
www.echn.org

The Honorble Jewel Mullen, M.D.
Commissioner
Department of Public Health
Division of the Office of Health Care Access
410 Capitol Avenue, MS#13HCA
P.O. Box 340308
Hartford, CT 06134-0308

Re: Walden Behavioral Care: Outpatient Services for Eating Disorders in Guilford, CT

Dear Commissioner Mullen,

I am writing to you in support of the Certificate of Need application being filed by Walden Behavioral Care ("Walden") to open an eating disorder clinic on Goose Lane in Guilford. ECHN has been fortunate to work with Walden over the last two years in connection with the eating disorder services Walden offers in South Windsor, CT through WBC East, LLC. ECHN has a membership in the company and provides emergency back-up for Walden's patients who are being treated in South Windsor. ECHN has worked with the people who run the Walden clinic and we have been very impressed with the services that Walden offers as well as with the members of their staff. They are highly professional and extremely competent.

Walden has a great deal of experience treating both male and female adults and adolescents, and we have experienced a growing need for a service. Since they operate both outpatient and an inpatient hospital programs in Massachusetts, they have much to offer given their background and experience. Adding a facility in Guilford will be very beneficial for the people who live in that area of Connecticut.

Respectfully submitted,

Dennis P. McConville, Senior V.P and Chief Strategy Officer

TOWN OF GUILFORD

HEALTH DEPARTMENT

50 BOSTON STREET – TOWN HALL SOUTH

GUILFORD, CONNECTICUT 06437

SETTLED IN 1639

Dennis Johnson, MPH
Director of Health

TELEPHONE: (203) 453.8118
FAX: (203) 453.8034

March 20, 2015

The Honorable Jewel Mullen, M.D.
Commissioner
Department of Public Health
Office of Health Care Access
410 Capitol Avenue
Hartford, CT 06134

Re: Eating Disorder Clinic, Guilford, CT

Dear Commissioner Mullen:

A recent Community Health Risk Assessment for the Town of Guilford revealed that both the adult and adolescent populations were at high risk for being over-weight or obese. The assessment concluded that specific health care services are needed to address eating disorders problems in both the adolescent and adult populations suffering from binge eating, over-eating or other nutrition behavior disorders. As you know, eating disorder, which spring from a mental illness, are becoming more prevalent in our society. Such disorders can be cured with appropriate clinical interventions. A reduction in the incidence of obese and overweight individuals will have a noticeable affect on reducing chronic diseases such as heart disease and diabetes in a population.

As the Director of Health for the Town of Guilford, I keep informed of any new health services planning proposed for our community. Although, in my capacity I can not specifically endorse the application for the proposed Walden Behavioral Care's Clinic for Eating Disorders, I do recognize the potential public health benefits that could occur if a clinic that effectively addresses eating disorders was accessible for residents of the shoreline.

Thank you for your consideration with this important matter.

Sincerely,

Dennis Johnson
Director of Health

State of Connecticut

HOUSE OF REPRESENTATIVES
STATE CAPITOL
HARTFORD, CONNECTICUT 06106-1591

REPRESENTATIVE VINCENT J. CANDELORA
EIGHTY-SIXTH ASSEMBLY DISTRICT

LEGISLATIVE OFFICE BUILDING, ROOM 4200
300 CAPITOL AVENUE
HARTFORD, CT 06106-1591

TOLL FREE: (800) 842-1423
CAPITOL: (860) 240-8700
Vin.Candelora@housegop.ct.gov

DEPUTY REPUBLICAN LEADER

MEMBER
FINANCE, REVENUE AND BONDING COMMITTEE
JUDICIARY COMMITTEE
LEGISLATIVE MANAGEMENT COMMITTEE
PUBLIC HEALTH COMMITTEE
REGULATIONS REVIEW COMMITTEE

March 16, 2015

The Honorable Jewel Mullen, M.D.
Commissioner
Department of Public Health
Office of Health Care Access
410 Capitol Avenue
Hartford, CT 06134

Re: Walden Behavioral Care: Clinic for Eating Disorders

Dear Commissioner Mullen,

As a State Representative for the 86th District, I have a vested interest in the health care services that are being delivered to my constituents in Guilford and the surrounding towns in New Haven and Middlesex Counties. The accessibility to quality health care services is one of the most important issues that impact their wellbeing.

Walden Behavioral Care is seeking your approval for an outpatient adult and adolescent eating disorder service for both men and women in Guilford, CT. Walden has an established inpatient hospital program as well as several outpatient clinics in Massachusetts, as well as one Connecticut-based clinic in South Windsor. The South Windsor facility has been in existence for two years and has already outgrown the needed space two times because of the constantly increasing volume. This service would be extremely valuable for those people who need help in the Guilford area. As you know, eating disorders which spring from a mental illness, are becoming more prevalent in our society. Today these disorders can be cured with appropriate treatment.

It is for these reasons that I write to you today to ask you to approve the application that is being submitted by Walden Behavioral Care to allow them to begin providing eating disorder programs for adolescents and adults who suffer from anorexia, bulimia and binge eating in a clinic to be located on Goose Lane in Guilford.

Thank you for your consideration of this important application.

Sincerely,

Vincent J Candelora

Vin Candelora
State Representative
86th District
Service North Branford, Durham, Guilford, and Wallingford

Walden Behavioral Care
CON Application

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1. Pike, K.M., Carter, J.X., and Olmstead, M.P., "Cognitive-Behavioral Therapy for Anorexia Nervosa", in C. Grilo and J. Mitchell (Eds.), The Treatment of Eating Disorders, (pp. 83-107), New York: Guilford Press (2010) .....pp. 24 -49

2. Linehan, M.M. (1993) "Dialectical Behavioral Therapy at a Glance", refer to Linehan's web site: www.behaviroaltech.org/resources/whatisdbt/cfm. .....pp. 50 -52

3. Tanofsky-Kraff, M. and Wilfley, D.E,. "Interpersonal Psychotherapy (IPT) for Bulimia Nervosa and Binge Eating Disorder" in C. Grilo and J. Mitchell (Eds.), The Treatment of Eating Disorders, (pp. 271-293), New York: Guilford Press .....pp. 53 -75

4. Loeb, K. and leGrange, D., "Fsmilu-Based Treatment for Adolescent Eating Disorders: Current Status, New Applications and Future Directions", Int J Child Adolesc. Health, Vol. 1:2(2), pp. 243-254. .....pp. 76 -88

5. Johnson. J. and Xavier,J., "Effectiveness of Maudsley Therapy with Dialectical Behavioral Therapy in an Intensive Outpatient Program", Walden Behavioral Care Study, (2009). .....pp. 89 -92

6. American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders (5th Ed., text rev.), Washington, D.C., 2013, pp. 338-345 .....pp. 93 -110

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10. Crow, S.J. and Brandenburg B., "Diagnosis, Assessment and Treatment Planning for Bulimia Nervosa" in C. Grilo and J. Mitchell (Eds.), The Treatment of Eating Disorders (pp. 28-43). New York: Guilford Press (2010). .....pp. 161 -177

11. Wildes, J.E. and Marcus, M.D., "Diagnosis, Assessment and Treatment

Planning of Binge-Eating Disorder and Eating Disorder Not Otherwise Specified" in C. Grilo and J. Mitchell (Eds.), The Treatment of Eating Disorders (pp. 44-65). New York: Guilford Press (2010). .....pp. 178 -201

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13. "Clients with Substance Use and Eating Disorders", SAMSHA Advisory (2011). .....pp. 204 -214

14. O'Reardon, J., Allison, K., Martino, N., Lungren, J., Heo, M. and Stunkard, A., "A Randomized Placebo-Controlled Trial of Sertraline in the Treatment of Night Eating Syndrome", Am. Journal of Psychiatry Vol. 163.5, pp. 893-898, (May 2006). .....pp. 215 -220

15. Smink, F.R.E., van Hoeken, D., and Hock, H.W., "Epidemiology of Eating Disorders: Incidence, Prevalence and Mortality Rates" Current Psychiatry Report 14:406-414, (2012) .....pp. 221 -230

16. "Get the Facts on Eating Disorders", National Eating Disorders Association, refer to website www.nationaleatingdisorders.org. .....pp. 231 -236

17. Kaye, W. and McCurdy, D., a review of Swanson, et. Al. "Prevalence and Correlates of Eating Disorders in Adolescents", Archives of General Psychiatry, (2011) online article, E1-E10. .....pp. 237 -239

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State of Connecticut
Office of Health Care Access
Certificate of Need Application

Instructions: Please complete all sections of the Certificate of Need ("CON") application. If any section or question is not relevant to your project, a response of "Not Applicable" may be deemed an acceptable answer. If there is more than one applicant, identify the name and all contact information for each applicant. OHCA will assign a Docket Number to the CON application once the application is received by OHCA.

Docket Number:	
Applicant:	Walden Behavioral Care, LLC
Applicant's Facility ID:	1730442179
Contact Person:	Charles Rossignol
Contact Person's Title:	Assistant Vice President, Business Development
Contact Person's Address:	Walden Behavioral Care 51 Sawyer Road Waltham, MA 02453
Contact Person's Phone Number:	781-647-2922
Contact Person's Fax Number:	781-647-6755
Contact Person's Email Address:	crossignol@waldenbehavioralcare.com
Project Town:	Guilford
Project Name:	Walden Behavioral Care Outpatient Services for Eating Disorders in Guilford
Statute Reference:	Section 19a-638, C.G.S.
Estimated Total Capital Expenditure:	$495,000

1. Project Description: New Service (Behavioral Health/Substance Abuse)

Please provide a narrative detailing the proposal. Include in the narrative the purpose of the proposal and the services to be provided by the applicant. Describe any unique services that may be included in the proposal. List the type and number of the licensed professional staff members that will be required to initiate the proposal.

Walden Behavioral Care LLC

Walden Behavioral Care, LLC (hereafter referred to as "Walden"), plans to establish an outpatient clinic at 157 Goose Lane, Guilford, CT. We seek approval to treat adults and adolescents (ages 12 – 18) with eating disorders in two levels of care, Partial Hospital ("PHP") and Intensive Outpatient ("IOP"). Additionally, aftercare support for adolescents and their families may be provided.

Walden is a Massachusetts based provider of behavioral health services, with a particular clinical competence and established track record in the treatment of eating disorders. Founded in 2003, Walden recently surpassed 15,000 in the number of unique patients it has treated through its continuum of care service structure, indicative of the significant demand for treatment of these serious illnesses. Walden's Massachusetts continuum includes inpatient, residential, PHP/IOP services in licensed clinics, and most recently (2015) outpatient office treatment. Walden Behavioral Care has multiple service locations in Massachusetts and Connecticut.

- Waltham, Massachusetts
- Northampton, Massachusetts,
- Worcester, Massachusetts,
- Braintree, Massachusetts,
- Peabody, Massachusetts, and
- South Windsor, Connecticut.

Walden is the only provider with a dedicated inpatient eating disorders unit treating both male and female patients on the East Coast [1] Walden Behavioral Care offers the only diabetes eating disorder program in the Northeast for males and females (ages 12+) at inpatient and residential levels of care.

In 2012, Walden received permission from the Office of Health Care Access to open an eating disorders clinic in South Windsor, CT, which was subsequently licensed by both the CT Department of Public Health (DPH) and Department of Children and Families (DCF). This clinic provides services under the provider name WBC Connecticut East LLC, a joint venture with Eastern Connecticut Health Network (ECHN), a non-profit healthcare system based in Manchester CT. In 2013, its first full year of operation, the South Windsor clinic received over 200 admissions. In 2014, the number of admissions increased to 341, a 70% increase over the prior year. The clinic has undergone two physical space expansions since opening to adequately treat the increased patient demand.

The proposed outpatient clinic in Guilford, CT will provide treatment offerings that mirror those provided in South Windsor. This clinic will be solely operated by

[1] The nearest similar inpatient provider is Eating Recovery Center, located in Denver, Colorado.

Walden Behavioral Care, LLC under the provider name Walden Behavioral Care. We seek approval to treat adults and adolescents (ages 12-18) with eating disorders in two levels of care, Partial Hospital (PHP) and Intensive Outpatient (IOP), as well as treatment for Binge Eating Disorders (recently included in the most current edition of DSM V). Additionally, we may provide aftercare support for adolescents and their families.

Evidence Based Practices

The programs rely upon the evidenced based practices summarized below:

Cognitive Behavioral Therapy (CBT) combining self-monitoring, behavioral experimentation and the challenging of dysfunctional thoughts about eating and body image. (Pike, Carter & Olmstead, 2010, *See* Exhibit #1). In this model, Eating Disorder symptoms result from an interaction between cognitive disturbances and eating and weight control behavior. Often these cognitions function below conscious awareness. CBT helps patients learn to identify them and restructure these thoughts, promoting new approaches to problem solving and flexibility in thinking.

Dialectical Behavioral Therapy (DBT) helps participants learn new ways to manage painful emotions and interact with each other more effectively during this difficult time of their illness. DBT skills groups include mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness (Linehan, 1993, *See* Exhibit #2).

Interpersonal Therapy (IT) –allows an individual to explore his/her interactions with others and consider how interpersonal distress may contribute to symptomatic behavior. Individuals build the self-confidence and self-esteem that will foster resilience and decrease eating disorder behavior (Tanosfsky-Kraff & Wilfley, 2010, *See* Exhibit #3).

Family Based Therapy (FBT) -- *Maudsley Method* -- emphasized in our work with adolescents, FBT helps restore a child's physical health by reestablishing parental authority in all areas of family life that relate to food (meal planning, shopping, and eating expectations). Research shows the Maudsley method highly effective with eating disordered adolescents (Loeb & le Grange et al., (2009), *See* Exhibit #4). Families are uniquely positioned to provide the support and supervision necessary to combat this life-threatening disease. Parents are temporarily put in charge of eating behaviors in order to combat the eating disorder that is controlling their child's behavior. The treatment seeks to respect the adolescent's opinions and experience, but refuses to let this devastating illness continue to control their lives (Johnson & Xavier, "Effectiveness of Maudsley Therapy with Dialectical Behavioral Therapy in an Intensive Outpatient Program", *See* Exhibit #5).

Proposed Levels of Care
Partial Hospital Programs

The Partial Hospital Programs meet five days per week, with an option for Saturday programming. The adult PHP will serve ten patients, and the adolescent PHP will serve ten adolescents. These patients require PHP treatment to avoid the progression of the eating disorder to the point where the patient would require admission to a more restrictive environment, (such as a residential or inpatient setting).

The PHP level of care offers the following:

- An integrated multidisciplinary treatment plan care including psychopharmacological evaluation and management. Assessment and treatment of co-morbid psychiatric diagnoses commonly associated with eating disorders.
- Coordination of care with other medical conditions treated by the patient's primary care provider and appropriate medical specialists.
- Structure and supervision (five days per week), needed to interrupt and contain eating disorder behaviors.
- Individual and group therapy using evidence-based practices.

Intensive Outpatient Programs

The Intensive Outpatient Programs will each meet three days per week, and serve twelve adults and twelve adolescents in distinct programs. The adolescent program will emphasize Family Based Therapy, using the Maudsley approach described above. This program will be provided after school, to avoid disrupting this aspect of the patient's natural support system.

At the IOP level of care, patients are able to actively engage in working towards eating disorder recovery. With guidance from our clinicians, IOP participants develop individualized recovery goals in the following domains:

- **Motivation** – Increasing percent of time working on change towards recovery; maintaining belief in need for change and maintain desire for change.
- **Co-Morbid Conditions** -- Work on personal weight goal; keeping labs normal, following through on treatment plan(s) for other presenting problems.
- **Physical Activity** -- Set and work on a personal activity goal.
- **Eating** – Increase the percent of time following meal plan; Expand variety of foods eaten/reduce avoidance; Know triggers of ED behavior, increase use of prevention and coping strategies; Maintain reduced body checking/weighing, reduce more if necessary; Practice eating in a variety of social situations, decrease avoidance; Monitor and increase awareness of hunger and fullness cues; Maintain abstinence from ED behaviors or reduce: specify behavior & make specific goal; Avoid substituting self-injurious or substance use behaviors for ED ones; Avoid replacing one ED behavior with another.

- **Cognition** -- Create or update formulation of ED; Review cognitive strategies and pick two /week to try; Maintain reduced dietary rules, reduce if necessary; Reduce relative importance of weight and shape in self-image; Identify four positive qualities about self, unrelated to eating/body; Review strategies to reduce preoccupation/obsessing.
- **Emotional** -- Increase appropriate expression of emotions in group treatment, Increase appropriate expression of emotions outside of treatment; Learn more/review emotion-regulation strategies: pick one or two to try for week; Follow up on any treatment plan specified for mood; Take all medications as prescribed.
- **Social/Interpersonal** -- Plan step towards increasing social support: specify 2 goals for week; Maintain participation in interpersonal components of group treatment; Practice communication skills in all areas of life: specify goal; Identify 1-2 links between interpersonal patterns and ED symptoms; Work on 1 interpersonal problem area (grief, role transitions, role disputes, deficits).
- **Education/Occupation** -- Create or review pie chart and identify possible new life interests, hobbies or activities; Continue working on developing other life interests, hobbies or activities; Begin to re-integrate back into work/school/hobbies; Reclaim life!
- **Relapse Prevention** -- Maintain or update relapse prevention plan, and increase the time between relapses, decrease the intensity and length of the relapse, and increase the ability to recover from relapses. Reframe relapse as part of the learning and recovery process, rather than failure.

Outpatient Aftercare Support

Once they complete the IOP program, adolescents and their families may continue in specialized eating disorder recovery treatment by participating in individual, group, and family treatment.

Binge Eating Disorder (BED) IOP

We also plan to provide a distinct IOP program for twelve adults with Binge Eating Disorder. The BED population is best served in a specialized IOP program where the peer group support of individuals struggling with similar issues related to controlling caloric intake and weight is available. The program integrates the self-help CBT model with nutrition education and DBT skill building. This program is currently offered at the South Windsor facility.

The program integrates Fairburn's guided self-help CBT model with nutrition education and DBT skill building. A sample program is provided below:

Table 1: Sample Programs for Binge Eating Disorder Patients

Cognitive Behavioral Therapy (CBT)	Nutrition	Dialectical Behavioral Therapy (BT)
Getting Started: -Self-Monitoring -Introduce diary -Commitment/Stages of Change/Motivations to change	**Nutrition Basics I:** -eating for health -food as fuel -functions of proteins, vitamins, minerals etc.	**Mindfulness/Awareness:** -developing awareness of experiences, thoughts and feelings (will help with self-monitoring) -focus on caring for oneself
Review Monitoring/daily diary 157 Introduce summary card **Why do we binge?** -Pros and Cons -What does it do for you? -What are you avoiding? -3x5 card for Motivation	**Structured/Regular Eating** -Why is this important and how will it help What to eat: —balanced meals --planning ahead and shopping	**More Mindfulness and Stress Reduction:** -role of stress in bingeing -stress reduction techniques (breathing, relaxation, guided imagery) -making time for self-care
Alternatives to Bingeing: -learn to spot urges early -generate list of alternate activities -preparing for triggering times/places/situations	**Dieting and Other forms of Avoidance: Why Diets Don't Work** -restricting consumption over time -restricting foods -restricting calories -effects of hunger on mind	**Emotion Regulation:** -observe &identify, describe, participate -myths about emotions -anger management -forgiveness, letting go of painful emotions
Problem Solving: -practice problem solving -behavior chain analysis -what strategies work/which don't -review progress: am I following programming?	**Nutrition Basics II:** -more facts about food groups, nutrients, -tips for meal planning -time for questions and trouble-shooting -sweets and treats?	**Emotion Regulation & Interpersonal Effectiveness:** -interpersonal triggers -self-respect, advocacy, -assertiveness -saying no, asking for help -prioritizing health needs
Distorted Cognitions: -common cognitive distortions -separating thoughts from emotions -evaluate assumptions -excessive concerns about weight and or appearance	**Focused Nutrition Education** - address special issues, ie, nutrition for diabetics, avoiding toxins, vegetarian, organic etc.	**Distress Tolerance:** -Improving the Moment -Turning the Mind
What's Next: Relapse Prevention -create relapse prevention plan -review progress -discharge planning	**Nutrition for Life** -weight reduction and weight maintenance -nutrition goals for health and balance	**Distress Tolerance** -Radical Acceptance -Willingness vs Willfulness

Proposed Staffing

The following table provides the staffing, by discipline and hours, which will be used to operate the program.

Table 2: Staffing for Guilford Clinic

Employee	Department	Year 1 Hrs/Wk	(Notes)	Year 2 Hrs/Wk	Year 3 Hrs/Wk
Social Worker #1	Social Worker	40		40	40
Social Worker #2	Social Worker	24	Starts Year 1, mo. 4	40	40
Social Worker #3	Social Worker	20	Starts Year 1, mo. 7	40	40
Psychologist	Social Worker	30	Starts Year 1, mo. 4	40	40
Mental Health Tech #1	Mental Health Tech	40		40	40
Mental Health Tech #2	Mental Health Tech	20	Starts Year 1, mo. 4	40	40
Nutritionist	Nutrition	16		24	40
Medical Doctor	MD	9		12	16
Program Director	Program Director	40		40	40
Administrator	Admin	40		40	40
Receptionist	Admin	40	Starts Year 1, mo. 4	40	40
	Total Hours	**319**		**396**	**416**
	Total FTE's:	**8.0**		**9.9**	**10.4**

Please note the staggered staffing during Year 1, reflective of our ramping up staffing during startup. This staffing matrix correlates directly to the staffing expenses identified in Exhibit #27, Financial Attachment I.

2. Clear Public Need

a. List the new services to be provided and report the street, address, town and zip code for the location, the population to be served and the proposed days and hours that the services will be provided.

TABLE 3: APPLICANT'S SERVICES AND SERVICE LOCATIONS

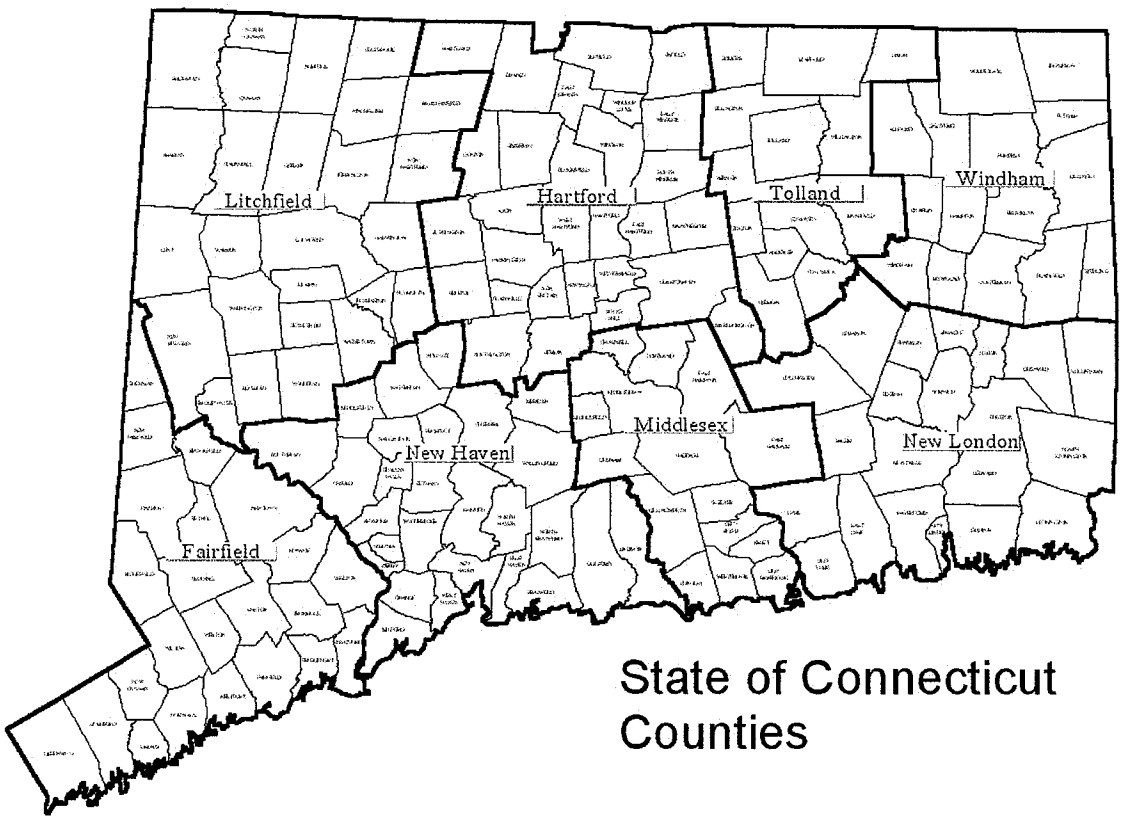
Service or Program Name	Street Address, Town and Zip Code	Population To Be Served	Days/Hours of Operation
Adult IOP and PHP Adolescent IOP and PHP	157 Goose Lane Guilford, CT 06437	Adults aged 18+ Adolescents aged 12 – 18	Monday-Thursday, 8:30am-9:00pm Friday 8:30am-6:00pm (Optional Saturday programming for PHP only)

As described in the response to Question 1, above, the proposed facility to be located in Guilford will treat adults and adolescents (ages 12 – 18) with eating disorders in two levels of care, Partial Hospital ("PHP") and Intensive Outpatient ("IOP"). Additionally, aftercare support for adolescents and their family may be provided. The core population to be served is located in Guilford and the towns which surround it.

b. List the service area towns and the basis for their selection in the following table.

The service area for the Guilford facility includes all of Middlesex County and those portions of New Haven County and New London County which are within a one hour's drive time of 157 Goose Lane in Guilford. Because the services offered by Walden are so specialized, patients are also expected to come from a wide range of locations outside of the specific service area towns. This is anticipated because approximately 20% of the patients being treated at Walden's existing outpatient clinical services program in South Windsor, CT[2] are from southeastern or south central Connecticut. If this application is approved, those patients will be redirected to the Guilford facility, which will be closer to their homes. Also, due to the lack of a comprehensive continuum of eating disorder treatment services for adolescents and adults in Connecticut, especially services for males, Walden will continue to serve as a regional resource.

[2] Walden currently operates an outpatient facility for the treatment of eating disorders in South Windsor, Connecticut provided by WBC Connecticut East, LLC, a subsidiary of Walden Behavioral Care.



The primary service area towns are Branford, Cheshire, Chester, Clinton, Colchester, Cromwell, Deep River, East Haddam, East Hampton, East Haven, Guilford, Haddam, Hamden, Lyme, Madison, Meriden, Middletown, New Haven, North Branford, North Haven, Old Lyme, Old Saybrook, Portland, Wallingford and Westbrook.

The secondary service area towns are Ansonia, Beacon Falls, Bethany, Bozrah, Durham, East Lyme, Essex, Franklin, Griswold, Groton, Killingworth, Lebanon, Ledyard, Lisbon, Middlebury, Middlefield, Montville, Naugatuck, New London, North Stonington, Norwich, Oxford, Preston, Prospect, Salem, Sprague, Stonington, Voluntown, Waterbury, Waterford, West Haven, Wolcott, and Woodbridge.

c. The population to be served, including specific evidence such as incidence, prevalence, or other demographic data that demonstrates need;

Walden's programs will serve adults and adolescents (ages 12-18) with eating disorders. Patients diagnosed with Anorexia Nervosa, Bulimia Nervosa and Binge Eating Disorder will be treated through outpatient programs at the proposed facility.

The increasing number of people who suffer with eating disorders has created a need for the specific services to address those illnesses. Literature pertaining to the prevalence of eating disorders within the population includes the following:

Anorexia Nervosa (AN)

- Anorexia impacts 1 in 200 females and 1 in 2,000 males during their lifetime. (American Psychiatric Association. (2013). Diagnostic and Statistical Manual of Mental Disorders (5th ed., text rev.) Washington, DC., pp. 338-345, attached as Exhibit #6.

- Recent Studies suggest 0.9% lifetime AN prevalence among women in the U.S. (Hudson, Hiripi, Pope, & Kessler, 2007, Exhibit #7) and 2.2% in Finland (Keski-Rahkonen et al., 2007. *See* Exhibit #8, p. 1261).

- New AN cases per 100,000 increased over the 20th century (Keel & Klump, 2003, *See* Exhibit #9), suggesting that the disorder has become increasingly common.

Bulimia Nervosa (BN)

- Currently, there is consensus that BN, as defined by the DMS-IV-TR, impacts 2-3% of young women, (Crow & Brandenburg, 2010, Exhibit #10, p. 30).
- Based on surveys of a large, nationally representative sample of randomly chosen U.S. adults, the National Comorbidity Survey Replication study reported a lifetime prevalence of BN as 1.5% among females and 0.5% among males (Hudson, Hiripi, Pope, and Kessler, 2007, Exhibit #7, p.1).

- A review of the literature finds that a striking feature associated with BN is the high rate of co-occurring psychopathology -- unipolar and bipolar depression, OCD, and substance use disorders, and cluster B personality disorders. (Crow and Brandenburg, 2010, Exhibit #10, p. 30)

- The twelve month prevalence of BN in young females is 1% - 1.5%. The disorder peaks in older adolescents and young adults. BN is less common in males with an approximate of 10:1 female to male ratio. (American Psychiatric Association. (2013). Diagnostic and Statistical Manual of Mental Disorders (5th ed., text rev.) Washington, DC. pp. 345-350, attached as Exhibit #6.

Binge Eating Disorder (BED)

- Recent studies indicates that BED is at least as common as AN and BN in the general population. (*See* Wildes & Marcus, 2010, Exhibit #11).

- Prevalence rate estimates among obese individuals are even higher, ranging from 4 to 8% in community samples, and up to 30% among

patients seeking bariatric surgery or other weight loss interventions (Wildes & Marcus 2010, Exhibit #11, page 45)

- Using National Comorbidity Survey Replication data, Hudson and colleagues (2007) reported life time prevalence estimates for BED of 3.5% of women and 2.0% of men during their lifespan, nearly twice as high as those reported for AN and BN combined. (See Hudson, Hiripi, Pope and Kessler, 2007, Exhibit #7).

- The twelve month prevalence of BED among U.S. is 1.6% females and 0.6% males. (American Psychiatric Association. (2013). Diagnostic and Statistical Manual of Mental Disorders (5th ed., text rev.) Washington, DC. pp. 350-354, attached as Exhibit #6.

The following table presents the incidence of eating disorders in the United States based on the prevalence rates reported above.

Table 4 Incidence of Eating Disorders in the United States

Eating disorder	Gender	Population	Prevalence	Incidence
Anorexia Nervosa	Male Female **Total**	152,753,000 157,479,000 **310,232,000**	0.05% 0.90% **0.48% (weighted average)**	76,377 1,417,311 **1,493,688**
Bulimia Nervosa	Male Female **Total**	152,753,000 157,479,000 **310,232,000**	0.50% 1.50% **1.01% (weighted average)**	763,765 2,362,185 **3,125,950**
Binge Eating Disorder	Male Female **Total**	152,753,000 157,479,000 **310,232,000**	2.00% 3.50% **2.76% (weighted average)**	3,055,060 5,511,765 **8,566,825**
Total Eating Disorder	Male Female **Total**	152,753,000 157,479,000 **310,232,000**	2.55% 5.9% **4.25% (weighted average)**	3,895,202 9,291,261 **13,186,463**

Sources:
http://www.census.gov/prod/2011pubs/12statab/pop.pdf
American Psychiatric Association. (2000). Diagnostic and Statistical Manual of Mental Disorders (4th ed., text rev.).
Hudson JI, Hiripi E, Pope HG, Jr, & Kessler RC. (2007), Biological Psychiatry, 61: 348-358.

The incidence of eating disorders in Connecticut, and the proposed service area are presented in Table 5. This table was created by applying the percentage of the population which suffers from eating disorders to the specific population of each of the towns within the Guilford facility's service area, and adding them together. Please see Exhibit #12 for an estimate of eating disorder by service area town.

Table 5 Incidence of Eating Disorders in Connecticut and the Service Area

Area	Anorexia Nervosa	Bulimia Nervosa	Binge Eating Disorder	Total
Connecticut	16,938	35,448	97,147	149,533
Service Area	5,695	11,983	32,745	50,423

Notes:
Prevalence for AN is 0.48%
Prevalence for BN is 1.01%
Prevalence for Binge Eating Disorder is 2.76%
Total Prevalence is 4.25%

i. How and where the proposed patient population is currently being served;

There are no dedicated eating disorder programs offering a continuum of care within the service area of the proposed program. As a result, patients who reside within the service area and seek treatment for eating disorders at a dedicated facility must travel long distances or out of state to receive comprehensive treatment. Currently WBC provides adolescent and adult patients from the service area (both male and female) with PHP, IOP and aftercare treatment at its facility in South Windsor

Hospital based eating disorder programs are provided at Hartford Hospital, Yale-New Haven Hospital and Silver Hills Hospital. However, treatment is not necessarily provided within a dedicated unit.

Community based services are provided in Greenwich (Renfrew Center, Wilkins Center and Center for Discovery) and in Fairfield (Center for Discovery). These programs are over an hour away from some of the service areas towns. Wellspring, located in Bethlehem, treats eating disorders in women as part of its mental health service. These programs are all outside the service area for the Guilford facility.

ii. Identify all existing facility providers and, as available, provide the facility ID, address, services provided, hours and days of operation, and current utilization. Include facility providers in the towns served by the Applicant as well as providers in contiguous towns.

There are no providers in Guilford, nor the towns contiguous to Guilford offering treatment services for eating disorders for men, women and adolescents. There is one provider within the service area as identified in Table 6, below. Although Yale-New Haven Hospital provides a clinic for assessment and offers inpatient treatment to adolescents with eating

disorders, it does not offer a specialized program dedicated to the treatment of eating disorders. Additionally, Yale-New Haven Hospital does not have a dedicated eating disorder program for adults. Walden is actively exploring a cooperative relationship with Yale New Haven Hospital to both receive referrals from Yale for eating disorder patients, as well as provide clinical training opportunities within the clinic for selected medical, social work and nutrition staff.

TABLE 6: SERVICES AND SERVICE LOCATIONS OF EXISTING PROVIDERS

Service or Program Name	Facility ID*	Street Address, Town	Population Served	Hours of Operation	Current Utilization
Yale-New Haven Hospital	1336139500	20 York Street New Haven, CT 06510	Inpatient and outpatient adolescents		

*Please provide either the Medicare, Connecticut Department of Social Services (DSS), or National Provider Identifier (NPI) facility identifier and label column with the identifier used.

iii. The effect of the proposal on existing providers, explaining how current referral patterns will be affected by the proposal.

The current referral patterns will not be affected by the establishment of the proposed facility in Guilford because Yale-New Haven Hospital does not offer a specialized eating disorder program. The proposed outpatient facility in Guilford is a specialized eating disorder program for both adolescents and adults.

As is the case with the South Windsor facility, the referrals to the program will be from primary care physicians, acute and psychiatric hospitals, community health, behavioral health and human service providers, educational systems and districts, as well as insurance companies and the families of those who need treatment.

3. Projected Volume

a. What are the beginning and end dates for the Applicant's fiscal year?

The fiscal year is January 1 to December 31.

b. Identify the specific population groups that will be served by the proposal. For example, men, women, specific age groups or persons with a specific condition or disorder.

Walden's programs will serve adults and adolescents (ages 12-18) with eating disorders. Patients diagnosed with Anorexia Nervosa, Bulimia Nervosa and Binge Eating Disorder will be treated through outpatient programs at the proposed facility.

c. For each of the specific population groups to be served, report the following by service level (include all assumptions):

(i) An estimate of the number of persons within the population group by town that need the proposed service;

Within the service area there are 50,423 persons suffering from eating disorders (e.g. anorexia nervosa, bulimia nervosa or binge eating disorder. See Exhibit #12 for an estimate of persons with eating disorders by service area town.

(ii) The number of persons in need of the service that will be served by the proposal (estimated patient volume).

It is projected that 249 persons will be served during the first full year of operation, 434 will be served during the second year and 585 will be served during the third year.

d. Provide supporting statistical information from the Center for Behavioral Health Statistics and Quality of the federal Substance Abuse and Mental Health Administration ("SAMSHA") or similar organization that supports the proposal.

Additional supporting information can be found in the following selected articles.

1. ED: *Clients with Substance Use and Eating Disorders,* SAMSHA Advisory (2011). Please see Exhibit #13 for the complete article. When substance use and eating disorders co-occur the consequences for assessment, treatment and recovery are more complicated for both disorders than either disorder alone.

2. BN/BE: *The Prevalence and Correlations of Eating Disorders in the National Comorbidity Survey Replication Survey*, Biological Psychiatry, Hudson, Hiripi, et. al. (2007). (http://www.biologicalpsychiatryjournal.com/article/S0006-3223(06)00474-4/abstract). See Exhibit #7 for complete article. This study, among other data, reveals the prevalence of eating disorders in the general population. *"Lifetime prevalence estimates of DSM-IV anorexia nervosa, bulimia nervosa, and binge eating disorder are .9%, 1.5%, and 3.5% among women, and .3% .5%, and 2.0% among men."*

3. NE: *A Randomized, Placebo-Controlled Trial of Sertraline in the Treatment of Night Eating Syndrome*, American Journal of Psychiatry, O'Reardon, Allison, et. al. (2006). Please see Exhibit #14 for the complete article. (http://ajp.psychiatryonline.org/cgi/content/full/ajp;163/5/893). This study identifies the prevalence of the population with Night Eating Syndrome. *"Night eating syndrome is of clinical importance because it is associated with both obesity and psychological distress. Its prevalence has been estimated at 1.5% in the general population with a reported range of 8.9% to 14% in obesity clinics and rates of up to 27% in severely obese persons."*

4. ED: *Epidemiology of Eating Disorders: Incidence, Prevalence and Mortality Rates,* Current Psychiatry Report, Smink, Van Hoeken and Hock (2012). Please see Exhibit #15 for the complete article. While overall incidence rates for eating disorders have remained relatively stable over the past decades, there has been an increase in the high risk group of 15 – 19 year old girls. All eating disorder groups have elevated mortality risk.

5. ED: *Get the Facts on Eating Disorders*, National Eating Disorders Association website. Please see Exhibit #16 for the complete article.

6. ED: *A review* of Swanson, et.al. *Prevalence and Correlates of Eating Disorders in Adolescents*, Archives of General Psychiatry, Online Article, E1-E10, (2011) Kaye and McCurdy. Please see Exhibit #17 for the complete article. This study describes the rates of eating disorders in adolescents.

7. ED: *Eating Disorders in adult women: biopsychosocial, developmental, and clinical considerations",* Advances in Eating Disorders: Theory, Research and Practice, Maine, Samuels and Tantillo (2015). Please see Exhibit #18 for the complete article. This population requires unique treatment options, especially outpatient programs and psychoeducation and support for the families and life partners in order to foster recovery while maintaining their roles in their families, workplaces and communities.

e. Complete the following table for the first three full fiscal years ("FY") of the proposed service. If operations begin within a fiscal year, include the projections for the partial year.

The following projections are based on the experience in South Windsor, CT where volumes have increased dramatically since the facility opened in 2012. See Table 8 below in answer to Question 3.f. for the data.

TABLE 7: PROJECTED VOLUME FOR GUILFORD FACILITY

Service/Program	Projected Volume in Days (First 3 Full Operational Years)		
	FY 2016	**FY 2017**	**FY2018**
Binge IOP	351	624	780
Adult IOP	624	858	1,248
Adult POP	824	1,430	1,820
Adolescent IOP	351	858	1,248
Adolescent PHP	390	780	1,040
Total	**2,540**	**4,550**	**6,136**

Fiscal year is January 1 – December 31.
It is anticipated that the Guilford facility will commence operation in January 2016.

Service/Program	Projected Number of Patients (First 3 Full Operational Years)		
	FY 2016	**FY 2017**	**FY2018**
Binge IOP	41	73	91
Adult IOP	73	100	145
Adult POP	83	144	183
Adolescent IOP	28	69	100
Adolescent PHP	25	50	66
Total	**249**	**434**	**585**

Fiscal Year is January 1 – December 31
It is anticipated that the Guilford facility will commence operation in January 2016.

f. Provide historical volumes for three full years and the current year to date for any of the Applicant's existing services that support the need to implement the proposed service.

Historical volume is provided for Walden's South Windsor facility. This is the only facility currently operated in Connecticut by Walden and is most comparable to the facility proposed for Guilford.

TABLE 8: WALDEN'S SOUTH WINDSOR HISTORICAL UTILIZATION BY SERVICE/PROGRAM

Service/Program	2012 (start 8/202)	2013	2014
	Volume in Days	Volume in Days	Volume in Days
Adult Binge IOP (start 11/2013)		54	731
Adult IOP	130	826	1,532
Adult PHP	493	1,115	1,945
Adolescent IOP	102	766	772
Adolescent PHP (start 4/2014)			621
Totals	725	2,761	5,601

Fiscal Year: January-December. Data above are reported for these periods.
Location: All services reported above were provided at the South Windsor CT clinic site.

Service/Program	2012 (start 8/20122)0	2013	2014
	Number of Patients	Number of Patients	Number of Patients
Adult Binge IOP (start 11/2013)		6	38
Adult IOP	13	72	97
Adult PHP	38	88	114
Adolescent IOP	12	35	47
Adolescent PHP (start 4/2014)			45
Totals	63	201	341

Fiscal Year: January-December. Data above are reported for these periods.
Location: All services reported above were provided at the South Windsor CT clinic site.

g. Explain any increases and/or decreases in volume seen in the table above.

The South Windsor clinic opened in August 2012. By year end, Walden treated 63 patients in 2012, or an average of 12.6/month. In FY 2013 Walden treated a total of 201 patients in 2013, or an average of 16.75/month. In FY 2014 Walden treated 341 patients, or an average of 30.2/month. Since opening in FY 2012 the South Windsor clinic has undergone two physical space expansions in order to adequately treat the increased patient demand.

4. Quality Measures

a. Submit a list of all key professional, administrative, clinical, and direct service personnel related to the proposal. Attach a copy of their Curriculum Vitae.

The following is a list of the key professional, administrative, clinical and direct service personnel related to the proposal. A copy of their CVs is attached as Exhibit #19.

Stuart L Koman, PhD – President and CEO
Jim Greenblatt, MD - Chief Medical Officer
Paula Vass, Vice President, Clinical Operations
Rebekah Doweyko, Clinic Director
Lawrence Behan, Vice President of Finance and Administration
Margaret Moran, RN, MHSA – Sr. Vice President, Marketing and Business Development
Curtis Garry – Manager of Quality Improvement
Charles Rossignol, MBA – Assistant Vice President, Business Development
Bridget Hastings, MS, RD, CD-N – Nutritionist

b. Identify the Standard of Practice Guidelines that will be utilized in relation to the proposal. Attach copies of relevant sections and briefly describe how the Applicant proposes to meet each of the guidelines.

Walden utilizes the American *Psychiatric Association's Practice Guidelines for the Treatment of Patients with Eating Disorders, Third Edition.* (Exhibit #20). These standards are the basis for the clinical guidelines utilized in our contracts with third-party payers, and provide detailed information on the formulation and implementation of a treatment plan. Specifically, they address:

- Establishing and maintaining a therapeutic alliance
- Coordination of care and collaboration with other clinicians
- Assessing and monitoring eating disorder symptoms and behaviors
- Assessing and monitoring the patient's general medication condition
- Assessing and monitoring the patient's psychiatric status and safety
- Family assessment and treatment
- Developing a Treatment Plan for the Individual Patient
    - Choosing a site of treatment (level of care – inpatient, residential, partial, intensive outpatient).
    - Choice of specific treatments for specific eating disorders
        - Nutritional rehabilitation
        - Psychosocial interventions
        - Medications

Compliance with these standards is managed through clinical supervision, medical record review, and concurrent utilization review.

Walden utilizes a Policy & Procedure Manual for its South Windsor clinic. This manual is attached as Exhibit #21, and will be implemented at the Guilford clinic. Walden Behavioral Care is developing a transfer agreement with Yale-New Haven Hospital to address any emergency medical situation it may encounter with its patients at their Guilford facility. A draft transfer agreement is attached as Exhibit # 22.

Walden maintains accreditation under the Joint Commission Comprehensive Behavioral Healthcare standards, (See Exhibit #23 and attached summary (http://www.jointcommission.org/assets/1/18/Behavioral Health Care Accreditation.pdf).

These standards include guidelines which specifically focus on the assessment and provision of care, treatment, and services for individuals served who have eating disorders. Walden carefully integrates these standards into the organization's policies and procedures. Each year, we formally evaluate and report the results to the Joint Commission. We address any variation from those standards with a formal corrective action plan, including quantitative, verifiable measures of success as required by the Joint Commission.

c. Explain how the proposal will improve quality, accessibility and cost effectiveness of health care delivery in the region, including but not limited to, (1) provision of or any change in the access to services for Medicaid recipients and indigent persons, and (2) the impact upon the cost effectiveness of providing access to services provided under the Medicaid program.

The proposal will improve quality and accessibility in the service area because patients who need eating disorder services offered by the applicant now have to travel out of the service area to locate the specific services they need. Additionally, the services to be offered by Walden Behavioral Care at the Guilford facility will be available to Medicaid patients. Currently, the volume of Medicaid patients at Walden's facility in South Windsor is 29%.

5. Organizational and Financial Information

a. Identify the Applicant's ownership type(s) (e.g. Corporation, PC, LLC, etc.).

LLC

b. Does the Applicant have non-profit status?
☐ Yes (Provide documentation) ☒ No

c. Provide a copy of the State of Connecticut, Department of Public Health license(s) currently held by the Applicant and indicate any additional licensure categories being sought in relation to the proposal.

WBC Connecticut East, LLC is currently licensed by DPH and DCF for the programs operated in South Windsor. The DPH licenses are for a mental health day treatment facility and for a psychiatric outpatient clinic for adults. The DCF license is for an outpatient psychiatric clinic for children. Copies of the licenses are attached as Exhibit #24. The proposed facility in Guilford will seek the same licenses from DPH and DCF.

d. Financial Statements

i. If the Applicant is a Connecticut hospital: Pursuant to Section 19a-644, C.G.S., each hospital licensed by the Department of Public Health is required to file with OHCA copies of the hospital's audited financial statements. If the hospital has filed its most recently completed fiscal year audited financial statements, the hospital may reference that filing for this proposal.

ii. If the Applicant is not a Connecticut hospital (other health care facilities): Audited financial statements for the most recently completed fiscal year. If audited financial statements do not exist, in lieu of audited financial statements, provide other financial documentation (e.g. unaudited balance sheet, statement of operations, tax return, or other set of books.)

See Exhibit #25 for FY 2013 Audited Financial Statements for Walden.

e. Submit a final version of all capital expenditures/costs as follows:

TABLE 9: TOTAL PROPOSAL CAPITAL EXPENDITURE

Purchase/Lease	Cost
Equipment (Medical, Non-medical Imaging)	
Medical Equipment	$2,500
Non-medical equipment	$82,500
Land/Building Purchase*	
Construction/Renovation**	$410,000
Land/Building Purchase*	
Other (specify)	
Total Capital Expenditure (TCE)	**$495,000**
Lease (Medical, Non-medical Imaging)***	
Total Capital Cost (TCO)	
Total Project Cost (TCE+TCO)	**$495,000**

*If the proposal involves a land/building purchase, attach a real estate property appraisal including the amount; the useful life of the building; and a schedule of depreciation.
**If the proposal involves construction/renovations, attach a description of the proposed building work, including the gross square feet; existing and proposed floor plans; commencement date for the construction/ renovation; completion date of the construction/renovation; and commencement of operations date.
***If the proposal involves a capital or operating equipment lease and/or purchase, attach a vendor quote or invoice; schedule of depreciation; useful life of the equipment; and anticipated residual value at the end of the lease or loan term.

See Exhibit # 26 for the Applicant's schematic drawings. This exhibit also contains the Letter of Intent with the landlord of 157 Goose Lane, Guilford for the lease two floors for a total of 6,256 square feet. Renovation of the space will begin upon receipt of CON authorization, which is anticipated by October 2015. The renovations are anticipated to be completed in December 2015. We anticipate that operations will commence in January 2016.

f. List all funding or financing sources for the proposal and the dollar amount of each. Provide applicable details such as interest rate; term; monthly payment; pledges and funds received to date; letter of interest or approval from a lending institution.

As indicated in Walden's audited financial statements for FY 2013, Walden has sufficient resources to satisfy the financial obligations of this proposal through to profitability. Please see Exhibit #25.

g. Demonstrate how this proposal will impact the financial strength of the health care system in the state or that the proposal is financially feasible for the applicant.

This proposal is financially feasible for the applicant as demonstrated by the answer to Question 5.d.ii. There will be no reliance on state funding.

6. Patient Population Mix: Current and Projected

a. Provide the current and projected volume (and corresponding percentages) by patient population mix; including, but not limited to, access to services by Medicaid recipients and indigent persons for the proposed program.

TABLE 10: APPLICANT'S PROJECTED PAYER MIX AT THE GUILFORD FACILITY

Payer	Projected					
	FY 2016		FY 2017		FY 2018	
	Volume	%	Volume	%	Volume	%
Medicare*	0	0.0%	0	0.0%	0	0.0%
Medicaid*	72	28.9%	126	28.9%	169	28.9%
CHAMPUS & TriCare	0	0.0%	0	0.0%	0	0.0%
Total Government	**72**	**28.9%**	**126**	**28.9%**	**169**	**28.9%**
Commercial Insurers	175	70.4%	306	70.4%	412	70.4%
Uninsured	2	0.7%	3	0.7%	4	0.7%
Workers Compensation	0		0		0	
Total Non-Government	**177**	**71.1%**	**309**	**71.1%**	**416**	**71.1%**
Total Payer Mix	**249**	**100%**	**435**	**100%**	**585**	**100%**

*Includes managed care activity.
**Fill in years. Ensure the period covered by this table corresponds to the period covered in the projections provided.
Note: The patient population mix should be based on patient volumes, not patient revenues.

b. Provide the basis for/assumptions used to project the patient population mix.

The patient population mix basis at the South Windsor facility was used as the basis for these projections. In FY 2014, 28% of the patients treated were Medicaid patients.

c. For the Medicaid population only, provide the assumptions and actual calculation used to determine the projected patient volume.

The projections related to the Medicaid population are based on the actual experience at Walden's South Windsor facility.

d. If the proposal fails to provide or reduces access to services by Medicaid recipients or indigent persons, provide explanation for good cause for doing so. *Note: good cause shall not be demonstrated solely on the basis of differences in reimbursement rates between Medicaid and other health care payers.*

Not applicable, the facility will provide access to services by Medicaid recipients and indigent persons.

7. Financial Attachment I

a. Provide a summary of revenue, expense, and volume statistics, without the CON project, incremental to the CON project, and with the CON project. **Complete Financial Attachment I.** (Note that the actual results for the fiscal year reported in the first column must agree with the Applicant's audited financial statements.) The projections must include the first three full fiscal years of the project.

See Exhibit #27: Financial Attachment I

b. Provide the assumptions utilized in developing **Financial Attachment I** (e.g., full-time equivalents, volume statistics, other expenses, revenue and expense % increases, project commencement of operation date, etc.).

See Exhibit #28: Financial Assumptions for Financial Attachment I

c. Provide the minimum number of units required to show an incremental gain from operations for each fiscal year.

The minimum number of days required to show an incremental gain from operations is as follows:

FY 2016 – 2,920
FY 2017 – 3,900
FY 2018 – 4,300

Table 11, below provides the documentation for the derivation of the minimum number of days required to show an incremental gain from operations.

Table 11: Derivation of Minimum Number of Days to Demonstrate Gain

	FY 2016	FY 2017	FY 2018
Unit of Service (days)	2,540	4,550	6,136
Net Revenue	$772,135	$1,293,931	$1,743,146
Net income/Unit of Service	$304	$284	$284
Operating Expenses	$886,902	$1,106,581	$1,221,311
Break Even (days)	2,917	3,896	4,300

Source: Financial Attachment I

d. Explain any projected incremental losses from operations contained in the financial projections that result from the implementation and operation of the CON proposal.

See Exhibit 27: Financial Attachment I. As presented in this attachment, an operating loss (net loss) of $131,882 is anticipated for only the first year of operations. This is due to startup costs incurred from hiring a critical mass of staff sufficient to enable a startup initial volume and treatment. In fiscal year 2, an operating profit (net income) of $170,676 represents (approximately) a $300,000 improvement in financial performance. Fiscal year 3 represents net income of $475,392 before income taxes. Increases in profitability arise from the economy of servicing additional patient volume without substantial increases in staff capacity.

e. Describe how this proposal is cost effective.

The proposed facility is part of a larger organization that currently operates a facility in South Windsor, Connecticut and five facilities in Massachusetts. As a result it will be able to achieve economies of operation with respect to purchasing and administration.

Exhibit 1

CHAPTER 5

Cognitive-Behavioral Therapy for Anorexia Nervosa

Kathleen M. Pike, Jacqueline C. Carter, and Marion P. Olmsted

This chapter describes the cognitive-behavioral approach to the treatment of anorexia nervosa (AN). Originally developed by Aaron T. Beck and colleagues (e.g., Beck, 1976; Beck, Rush, Shaw, & Emery, 1979), cognitive-behavioral therapy (CBT) has become one of the most influential and well-validated models of psychotherapy available. CBT has demonstrated efficacy for a broad range of psychiatric disorders, including depression, anxiety disorders, substance abuse, and eating disorders (EDs) (see Nathan & Gorman, 2002; Wilson, Grilo, & Vitousek, 2007).

CBT for AN has been elaborated in recent years by several authors (Fairburn, Shafran, & Cooper, 1999; Pike, Carter, & Olmsted, 2004; Pike, Devlin, & Loeb, 2004; Pike, Loeb, & Vitousek, 1996). The model has expanded and evolved as our understanding of the psychopathology of AN has progressed. Current CBT models address cognitive and behavioral disturbances linked to the core features of AN as well as more encompassing issues of temperament, character, and motivation. In this chapter we review the empirical support of CBT for AN, describe our view on the cognitive-behavioral formulation of AN, and present an abbreviated version of the most recent CBT treatment manual for AN (Pike et al., 2004).

The Cognitive-Behavioral Formulation of AN

The treatment manual presented in this chapter is based on a CBT model that views overvalued ideas about the significance of control over eating, shape, and weight as the core maintaining mechanism in AN. A central premise of the CBT model of AN is that ED symptoms are maintained by the interaction between *cognitive disturbances* involving overconcern for eating, shape, and weight and *behavioral disturbances* that affect eating and weight control behavior. Certain personality characteristics and temperament, coupled with low self-esteem, appear to predispose some individuals to internal-

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ize sociocultural ideals about the importance of thinness and the myth that achieving such ideals will mitigate feelings of low self-esteem and ineffectiveness. A dysfunctional schema that attaches primary value to control over eating, shape, and weight develops as individuals internalize these beliefs. This dysfunctional cognitive schema is expressed behaviorally by extreme weight control behaviors aimed at attaining unrealistic levels of thinness and control. For those individuals who are able to maintain the extreme dietary restriction, severe emaciation follows, resulting in AN-restricting subtype (AN-R). For many individuals, this vigilant dietary restriction is intermittently interrupted with episodes of loss of control, such that subjective overeating occurs. In response to the loss of control and the overeating, many individuals redouble their efforts and engage in various compensatory purging behaviors, resulting in AN-binge–purge subtype (AN-B-P) (or bulimia nervosa [BN]).

As the ED develops, the individual's self-concept and feelings of self-worth increasingly revolve almost exclusively around control over eating, shape, and weight. As the disorder becomes more entrenched, there is often a belief that food restriction and maintaining a low weight are the only way to experience any sense of self-esteem. The physiological and psychological effects of starvation reinforce the cognitive and behavioral disturbances. For example, the food preoccupation associated with starvation is experienced as a threat to maintaining control over eating and results in increased efforts to restrict food intake. Thus, the disorder becomes self-perpetuating.

One of the strengths of the CBT-AN model is its acknowledgment that EDs are multidetermined. Thus, in addition to the core components of the CBT-AN model described above, CBT-AN recognizes that various biological factors may contribute to increased vulnerability for the development of AN, and this possibility is addressed in the psychoeducational component of CBT-AN. Additional factors that can contribute to the etiology and maintenance of AN, such as problems with motivation for recovery, difficulties with emotion regulation, core negative beliefs, and interpersonal problems, are also often incorporated into CBT-AN, as needed.

Empirical Support of CBT for AN

The empirical database on CBT for AN is limited. However, several recent investigations provide preliminary support of the utility of CBT for AN, particularly for weight-restored individuals. Cooper and Fairburn (1984) published the first case-series report of CBT for AN with promising results. Since then only five randomized controlled studies of CBT for acute AN have been published. In the first study Channon and colleagues (1989) randomly assigned 24 adult patients with AN to either CBT, behavior therapy (BT), or an eclectic "treatment-as-usual" control condition. All treatments involved 18 sessions of individual therapy over 6 months, followed by six booster sessions over the next 6 months. Compliance with treatment was significantly better in CBT and BT as compared with the control condition. All randomized subjects were included in the analyses. No significant differences in outcome were found between the three treatment conditions. Overall, significant improvements were found in weight, nutritional status, and menstrual functioning, based on Morgan and Russell (1975) ratings in all three conditions.

In the second study, 35 adult patients with AN were randomized to either CBT or nutritional counseling for 6 months (Serfaty, Turkington, Heap, Ledsham, & Jolley, 1999). Unfortunately, the results of this study were uninterpretable because all of the participants in the nutritional counseling condition dropped out. In contrast, the attrition rate in the CBT condition was low (8%). A small but statistically significant increase in weight was observed among 87% of participants who received CBT (mean change = +1.6 body mass index [BMI] units). CBT participants also reported significant reductions on self-report measures of depression and ED attitudes.

A third study, conducted by Ball and Mitchell (2004), compared individual CBT with behavioral family therapy in a mixed sample of 25 adolescents and young adults (mean age = 18) with AN. Treatment involved 25 sessions over a 12-month period. No between-group differences were found at posttreatment or 6-month follow-up; approximately 78% of patients in both conditions were classified as having a "good outcome" in terms of weight and menstrual functioning at follow-up. "Good outcome" was defined as weight within 10% of average body weight, no bulimic symptoms, and resumption of menses. The relatively high rates of remission in this study may be related to the young age of the participants.

In the fourth study McIntosh and colleagues (2005) compared CBT with interpersonal psychotherapy (IPT) and nonspecific supportive clinical management (NSCM) for AN in 56 adult patients. Treatment involved 20 sessions over 20 weeks. The intent-to-treat results showed that IPT was significantly less effective than NSCM. The effectiveness of CBT fell between IPT and NSCM and was not significantly different from either. The dropout rate and degree of residual eating pathology were both high, and the effect sizes in terms of weight gain were small in all three treatment conditions.

Finally, Gowers and colleagues (2007) randomized 167 adolescent patients with AN to inpatient treatment, 24 sessions of outpatient therapy, or treatment as usual in the community. Treatment lasted up to 6 months. The outpatient therapy condition comprised elements of both CBT and family therapy. Adherence to treatment allocation was 65%. In the inpatient condition, 49% remained in treatment for at least 4 weeks, and the mean length of stay was 15 weeks. In the outpatient condition, 75% attended at least four therapy sessions. In the treatment-as-usual condition, 70% attended the usual first-line treatment appointments in community-based clinics with no additional specialized treatment. At 1-year follow-up, there were no statistically significant differences among the three groups in terms of weight outcome, based on intent-to-treat analyses. It was found that patients in all three conditions had made substantial improvements in terms of weight and ED psychopathology. The researchers concluded that there is no advantage of specialized treatment over treatment as usual and no advantage of inpatient treatment over outpatient treatment for AN. Of note, the attrition rate in this study was substantial (i.e., >50% in the inpatient condition), and there was a significant rate of treatment nonadherence.

There have also been two studies of CBT for weight-restored patients with AN. Pike, Walsh, Vitousek, Wilson, and Bauer (2003) conducted a year-long posthospital study evaluating CBT for weight-restored adults with AN. In this study 77% of the CBT group (n = 18) reported an intermediate or better outcome according to modified Morgan–Russell criteria. The CBT group achieved a better recovery in terms of overall clinical pathology and dropout and relapse rates, compared to the comparison group

that received supportive nutritional counseling ($n = 15$). Although these findings are promising, the sample size was small. Also, this study established efficacy for CBT compared to supportive nutritional counseling, but it did not compare CBT to another psychotherapy intervention, so we do not know whether the reported efficacy is a CBT-specific effect or a psychotherapy-specific effect. A subsequent study comparing CBT to another psychotherapy intervention is necessary to provide further support and clarification of these findings.

In an attempt to further evaluate the role of CBT for weight-restored individuals, Carter, McFarlane, Bewell, and colleagues (2008) recently conducted a nonrandomized clinical trial comparing CBT ($n = 46$) and maintenance treatment as usual (MTAU) ($n = 42$) for weight-restored adults with AN. The MTAU condition was intended to mirror follow-up care as usual in the community. When relapse was defined as a BMI ≤ 17.5 for 3 months or the resumption of regular binge-eating and/or purging behavior for 3 months, time to relapse was significantly longer in the CBT condition as compared with MTAU. At 1 year, 65% of the CBT group and 34% of the MTAU group had not relapsed.

In summary, none of the five published randomized trials on CBT for *acute* AN provides evidence that CBT was superior to comparison treatments. However, these studies were limited by small sample sizes, high rates of attrition, short durations of treatment, and other methodological problems. The two studies of weight-restored patients with AN provide promising preliminary evidence for the effectiveness of CBT in preventing relapse and improving recovery rates following weight restoration.

An Abbreviated CBT Manual for AN

This "mini-manual" represents an abbreviated version of the treatment approach employed in the clinical trial described by Pike and colleagues (2003) and Walsh and colleagues (2007). Originally developed by Pike, Vitousek, and Wilson (1993), it was revised in 1998 by the same authors and subsequently by Pike, Carter, and Olmsted (2004). In addition, this mini-manual draws on the supplemental relapse prevention modules for CBT developed by Carter and colleagues (2006), which focus on preventing early weight loss, enhancing self-efficacy, and addressing body image disturbances and excessive exercise.

Overview of CBT for AN

This treatment program includes four phases. Phase I outlines specific strategies for initiating treatment, orienting patients to CBT and assessing and enhancing motivation with the intent of promoting engagement in treatment. This phase draws on the "transtheoretical model of change" by Prochaska, DiClemente, and Norcross (1992), motivational interviewing strategies described by Miller and Rollnick (1991), and Vitousek, Watson, and Wilson's (1998) discussion of these issues specifically as they relate to treatment for AN. Phase II describes the weight gain protocol and interventions focused on the cognitive distortions and behavioral dysfunction pertaining to the patient's eating habits and weight. Phase III describes a schema-based approach that addresses relevant issues that extend beyond the specific domain of eating and weight.

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Phase IV focuses on reviewing the course of treatment to consolidate gains and prepare to continue working independently after the therapy ends. Additionally, during the last phase of treatment, individuals prepare a personalized program of relapse prevention based on the course of therapy.

Clinical trials evaluating CBT-AN for weight-restored individuals with AN utilized treatment programs designed to include approximately 50 sessions over the course of 1 year. The treatment program evaluated in the McIntosh and colleagues (2005) study was comprised of only 20 sessions and targeted individuals with acute AN. As discussed above, the longer duration of treatment for individuals who had already achieved minimal weight restoration shows greater promise in terms of AN treatment than the shorter version of CBT-AN for those with acute AN.

Although the phases of the manual are presented in sequence, in practice, therapy rarely progresses exactly according to the nomothetic course outlined. Typically, interventions from Phases I, II, and III are utilized throughout the course of therapy, as needed, according to the particular issues and challenges of each patient. A hierarchy of symptoms serves to guide the clinician's judgment regarding the appropriate level of intervention. The first order of therapy is to engage patients in treatment and enhance motivation for recovery. Once goals are set, treatment focuses on normalization of eating behavior, achieving a healthy weight, and reducing the level of weight concern using the CBT interventions described in Phase II. However, in those cases when a patient is unable to progress in the work of normalizing her eating and gaining weight using the interventions described in Phase II, the focus of therapy shifts to issues of motivation (Phase I) as well as possible maladaptive schemas that are interfering with treatment (Phase III). Also, if at any point in treatment the patient begins to lose weight, therapy returns to an explicit focus on weight gain in the course of recovery and a review of issues raised and addressed in Phases I and II.

At the outset of treatment, it is important to discuss conditions for terminating outpatient treatment and recommending more intensive inpatient or day hospital programs. Specifically, dangerously low weight, serious medical complications, and suicidality may require termination of outpatient treatment. In addition to reviewing these parameters with the individual with AN, it can be helpful to conduct a session with the individual's family and/or spouse to provide information regarding AN and to discuss how best to support the therapeutic work for the individual with AN.

PHASE I: Getting Started—Orientation to CBT, Engagement, and Motivation

Phase I provides an introduction to the structure and rationale of CBT, assessment of motivation, and enhancing motivation for recovery.

Introduction to the Structure and Rationale of CBT

CBT begins with an explicit introduction to the structure and rationale of the treatment. This overview includes the theoretical underpinnings of CBT, structure of the sessions, therapeutic relationship, collaborative nature of CBT, focus on the here and now, self-monitoring, weight monitoring, and work between sessions.

The theoretical underpinnings of CBT, as described at the beginning of the chapter, are explicitly shared with patients once the initial assessment has been completed,

so that an individual case formulation of the theoretical model may be presented using the patient's own experience. This is often a powerful intervention in organizing what has heretofore been chaotic and only partially understood. Tailored to the individual's unique history, this theoretical framework provides the rationale for CBT and guides the remainder of treatment.

The Therapeutic Relationship

As with all forms of psychotherapy, the efficacy of CBT is mediated by the therapeutic relationship, and therapists need to attend to building a trusting therapeutic alliance from the start (Orlinsky, Grawe, & Parks, 1994; Pike, Devlin, & Loeb, 2004). The nonspecific therapist qualities of warmth, empathy, respect, and openness are as essential to CBT as they are to all others forms of psychotherapy (Thompson & Williams, 1987; Truax & Mitchell, 1971). In addition, CBT requires that therapists are comfortable being active in sessions, thinking strategically, and providing structure and direction, especially at the beginning of treatment. Given the higher level of activity from the start, it is important that CBT therapists find a therapeutic balance between this level of activity and suspending their own assumptions and judgments so that they can provide an empathic balance of promoting change and enhancing understanding as patients grapple with recovery (Young, Weinberger, & Beck, 2001).

CBT is a collaborative treatment; that is, therapist and patient work together toward a common goal, jointly articulate the focus of each session, and take responsibility for keeping the treatment session on track. The therapist emphasizes that one of the primary goals of CBT is for the patient to learn the skills necessary for her to become "her own therapist," so that she can continue to make changes after treatment terminates. Establishing personal control and normal eating is expected to take time, and patients are encouraged to anticipate difficulties and be persistent in their efforts.

Structure of the Session

Every CBT session has an explicit internal structure that includes weight assessment and discussion of weight status, review of self-monitoring and between-session work, agenda setting, working on core issues of the agenda, setting goals for between-session work in the upcoming days, and summarizing the session. The structure of the session is maintained collaboratively. Although CBT therapists are active in treatment, this is not a therapist-led treatment; therapist and patient work together jointly on each component of the session.

Getting Started

CBT begins with a focus on the present by specifically targeting current eating pathology and its implications for current functioning. CBT approaches to treatment recognize that EDs are multidetermined and that different factors are involved in the development and maintenance of the disorder. By the time the individual presents for treatment, the ED has often taken on a life of its own. Thus, addressing the current issues and achieving resolution of symptoms are the most powerful starting points because they will bring some immediate relief and increase the patient's sense of self-

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efficacy about recovering from the ED. Moreover, from a CBT perspective, resolution of the acute issues will bring clarity of vision in analyzing the more distal, developmental factors. Therapists explicitly share this approach to treatment with patients, so the information serves as both an orientation and a therapeutic intervention.

Weight Monitoring

It is important to establish a regular schedule for monitoring weight during treatment. Consistent weight monitoring can be achieved in a variety of ways—at the beginning of each session with the therapist, at home with a parent, at school with a nurse, etc. The essential elements are that the schedule is regular and that someone initially assists the patient in monitoring her weight. After weight gain is completed and the patient's weight is stable, it is healthy for her to assume this responsibility. At the outset of treatment, the concept of an optimal weight range is discussed with the patient, and as she seems ready to commit to a weight gain protocol, the therapist and patient explicitly discuss and design a personalized weight gain plan, as described in Phase II.

Working between Sessions

An essential part of CBT is the work that is done between sessions, and its importance is stressed from the start. Between-session tasks target particular behavior patterns that are problematic and offer the patient the opportunity to experiment with changes in the context of a supportive therapeutic environment. The therapist reviews carefully the patient's experience with doing this work between sessions and builds on it for subsequent steps. The amount of effort that a patient expends on between-session work will be influenced by the attention it receives from the therapist. Therefore, it is crucial that the therapist integrate these efforts into each session. If a patient does not complete between-session tasks, it is essential that the therapist explore with the patient to understand the resistance. Typically, when the therapist and patient set the goals collaboratively, the patient sees the value and is invested in the work, and the likelihood of compliance is much higher.

Self-Monitoring

Self-monitoring, an important component of CBT, is not limited to recording food intake but also includes recording social and emotional experiences and situations that contextualize the ED. Self-monitoring is frequently experienced as tedious by patients with AN, and therapists are encouraged to let patients adapt the self-monitoring procedures in ways that make the task valuable for them so that they actually are motivated to do it. Sometimes highly perfectionistic patients use the self-monitoring to provide obsessional levels of detail. The critical issue is to use the self-monitoring to constructively communicate about the patient's experience between sessions. Thus the clinician and patient need to adapt the procedures and personalize the process according to the specific therapeutic needs of the patient. As noted, in addition to addressing the core issues related to food intake (or lack thereof), therapists use the self-monitoring to help patients begin to reconnect their emotional and interpersonal worlds with their eating by exploring contextual factors. Where does the patient eat? With whom does she eat?

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How is she feeling? What was she thinking right before a meal? How did she manage to skip a meal when she was visiting with a friend? What was she thinking and feeling before she binged?

A thorough review of the patient's self-monitoring will help her begin to identify eating situations that range from extremely difficult to extremely manageable. In this way, the therapist and patient can discuss what differentiates these situations and begin to expand the patient's ideas about the range of thoughts, feelings, and behaviors that accompanies eating. The purpose of this portion is to begin to point out the limitation and inaccuracy of labeling oneself solely as "anorexic." Pointing out cognitive distortions, such as "labeling" and "all-or-nothing thinking," lays the groundwork for cognitive work that will follow in subsequent sessions.

Assessing and Enhancing Motivation

One of the essential first steps in treatment is assessing whether and why an individual is motivated for treatment. Such work is the bedrock for establishing a trusting therapeutic alliance and for effectively engaging patients in committing to the difficult work of pursuing recovery. CBT for AN makes use of the "transtheoretical model" (Proschaska & DiClemente, 1983; Prochaska et al., 1992) and motivational interviewing (Miller & Rollnick, 1991) to provide a framework for assessing and enhancing motivation at multiple levels.

Vitousek and colleagues (1998) have addressed the issue of motivation from both a theoretical and practical perspective with specific regard to those with AN. Throughout the course of this treatment, therapists draw on the recommendations provided by Vitousek and colleagues. These authors emphasize the importance of acknowledging the ego-syntonic nature of extreme thinness and self-control and the desperation that is associated with "choosing" AN as a solution. They encourage therapists to explicitly acknowledge the difficulties of making real changes in one's life and remind them not to "attach surplus meaning to resistance." By employing a Socratic style and using the patient's language to conceptualize and collaborate on making change, therapists are able to communicate respect and hope for patients. It is important to remain honest and curious with patients. Although certain aspects of the disorder are universal, it is constructive for therapists to also focus on and validate the individuality of each patient. In fact, recovery is strongly associated with the reemergence of the individuality of each person.

It can be very helpful early in treatment for the therapist to become familiar with the patient's values and life goals. This information provides the context for examining the impact the ED is likely to have on the patient's life and helps to identify competing goals as residing within the patient as opposed to between the patient and the therapist. Consider the following conversation:

THERAPIST: I understand that controlling your weight is very, very important to you, but I'm not sure whether it is more important to you than becoming a lawyer, as you have planned.

PATIENT: Well, I expect to do both.

THERAPIST: You mentioned the other day that you have had trouble concentrat-

ing on your work and that you aren't doing very well at school. What are the chances of your getting into law school if you aren't able to study effectively and pull up your grades?

PATIENT: Not very good; you need high grades to get in.

THERAPIST: And as we discussed before, poor concentration and reduced mental capabilities are a side effect of being poorly nourished and underweight.

PATIENT: I know you think I should eat more.

THERAPIST: You are right, that is my bias, but what you think is more important. If you focus on controlling your weight and ignore the impact of being poorly nourished on other areas of your life, there's a good chance you won't get into law school. It's really up to you; the decision is yours. My job is to help you sort through the options and make a thoughtful choice. Will working on your weight be enough to satisfy you for the rest of your life, or do you need other things in your life?

In addition to assessing motivation, psychoeducation is an important component of treatment in the early phase of CBT. This includes reviewing the multiple causes of AN, its associated biological risks and sequelae, the deleterious consequences of semistarvation (illustrated via the case study in the Minnesota Study of Semi-Starvation), the relationship of weight gain to menstrual functioning, normalization of eating behavior, and basic nutritional education regarding the consumption of fat, carbohydrates, and protein in a healthy diet. A summary of core psychoeducational components for AN treatment is provided by Treasure (1997). Therapists and patients are encouraged to make use of the wealth of psychoeducational information available to assist in treatment and recovery.

PHASE II: Core Cognitive and Behavioral Interventions for AN

Phase II employs CBT interventions that focus on identifying, understanding, and changing maladaptive cognitions and behaviors that serve to maintain the ED. The specific focus of Phase II depends on the patient's readiness and motivation for change, and therapists need to use judgment in choosing the most appropriate and effective CBT interventions in relation to the specific issues of each patient. The latitude to tailor treatment to the individual needs of the patient is essential for good therapy; however, therapists can also make use of the Hierarchy of Symptoms Guidelines(Figure 5.1) to help guide the focus of treatment.

Weight Gain Protocol and Meal Planning

During Phase II, it is important to establish a weight gain goal and meal plan. Therapists begin by reviewing the reasons why the patient needs to gain weight to reach a healthy level in order to overcome the ED (see Rock & Curran-Celentano, 1994) and integrate examples from the patient's own history. In addition, therapists present the rationale for thinking in terms of a weight *range* rather than a specific number. In negotiating a preliminary weight gain goal, it is important to take into account the patient's level of readiness to change. Although the ultimate goal is to achieve a healthy weight

Is Patient Motivated for Treatment?

If yes:	If no:
Proceed with core CBT interventions described in Phase II.	Focus on motivational enhancement strategies of Phase I.

Is Patient Participating In Weight Gain Protocol?

If yes:	If no:
Proceed with core CBT interventions described in Phase II and continue to challenge patient with behavioral exercises included in the weight gain protocol.	If she is losing weight but not in medical danger, return to motivational enhancement strategies. If she describes being motivated but is behaviorally unable to implement weight gain strategies, adjust behavioral plans, enlist significant other, consider schema-based approaches. If she is not losing weight but also not gaining weight, utilize specific AN motivational enhancement strategies such as cost–benefit analysis, projecting forward, writing one's own obituary.

Is Patient Binge-Eating and/or Purging?

If yes:	If no:
Review dietary restraint model of binge–purge cycle (Fairburn, Wilson, & Marcus, 1993). Utilize CBT behavioral strategies outlined in Phase II for normalizing eating behaviors. Utilize CBT cognitive interventions for building alternative coping strategies for stressful situations. Discuss the possibility of increasing lab work medical monitoring of patient's clinical status if she is vomiting and/or using laxatives.	Continue to steadily challenge patient to normalize her eating behavior in terms of frequency, variety, and quantity of intake, as described in the weight gain protocol and in Phase II.

Is the Patient's Self-Schema Sabotaging Her Capacity to Successfully Engage in Treatment?

If yes:	If no:
Proceed with schema-based work described in Phase III.	Stick with core cognitive and behavioral interventions described in Phase II.

FIGURE 5.1. Hierarchy of Symptoms Guidelines.

From *The Treatment of Eating Disorders: A Clinical Handbook* edited by Carlos M. Grilo and James E. Mitchell. Copyright 2010 by The Guilford Press. Permission to photocopy this figure is granted to purchasers of this book for personal use only (see copyright page for details).

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(typically a minimum BMI of 20 kg/m^2), some patients may find this amount to be overwhelming initially. Instead, they may need to set weight gain goals in manageable steps. For example, it may be helpful to suggest an initial 2- to 3-kilogram weight gain goal and progress from there. The aim is to gradually increase caloric intake to achieve a 0.5- to 1.0-kilogram increase in weight per week.

A meal plan is a helpful tool for teaching patients when, what, and how much to eat. In some cases, it can be helpful to engage a nutritionist in establishing a meal plan. The initial focus is on helping patients meet their calorie goal with a subsequent focus on the quality and variety of food intake as weight gain progresses. Self-monitoring is an important tool for establishing normal eating habits and tracking progress.

Behavioral Experimentation

Behavioral experimentation between sessions is one of the pillars of CBT. Initially the behavioral experimentation for those with AN is largely focused on specific areas related to the weight gain protocol and normalization of food intake. As individuals progress in treatment, the behavioral experimentation may be focused more broadly to assist patients in the cognitive work of CBT as well. Stepwise behavioral experimentation in the interpersonal realm is an essential aspect of the integration of cognitive and behavioral interventions. (See Figure 5.2 for a Behavioral Experiment Worksheet.)

With each successive session, the therapist and patient build on the previous session. To the extent that cognitive distortions interfered with the patient's successful completion of the task, these are identified and examined. To the extent that the task was accomplished successfully, the therapist and patient decide on the next logical step in the normalization of the patient's eating patterns and establish that step as the behavioral challenge on which to focus between sessions. This work requires the construction of a hierarchy of behavioral challenges and includes addressing the issue of forbidden foods in a thoughtful manner to establish a stepwise sequence that steadily aids the individual in normalizing her eating.

It is extremely important that therapy focus not only on the elimination of symptoms but also on building strengths. As patients reconnect to strengths that help them function independently of the ED, they gain confidence about engaging in treatment, at which point resolution of the eating disorder usually gains momentum. Skill development might include relaxation training, stress management, problem solving, assertiveness training, social skills with an emphasis on building healthy friendships, and attention to emotional and physical self-care.

Identifying and Challenging Dysfunctional Thoughts

The concept of dysfunctional thoughts or cognitive distortions is a central component of CBT, and in Phase II, treatment focuses on identifying cognitive distortions and understanding their role in perpetuating the ED. Patients are encouraged to engage in testing the validity or evidence of cognitions, and therapists and patients work together to formulate functional or adaptive "challenges" or responses to the dysfunctional thoughts. One of the templates that can be useful in conducting this work is the Dysfunctional Thought Record (Figure 5.3).

PLAN

Data to be collected:

What I have to do:

Is this task suitable for me at this time? (Or is it too hard?)

What can I do if I feel overwhelmed?

What maladaptive thoughts can I anticipate?

How will I cope with these?

Do I expect to have urges for any symptomatic behavior?

How will I cope with these?

Under what circumstances is it appropriate to delay or cancel the experiment?

Prediction or hypothesis:

OUTCOME

What happened?

What conclusion is supported by the data?

Is any follow-up experiment required?

FIGURE 5.2. Behavioral Experiment Worksheet.

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SITUATION Describe the problematic situation (specific situations will be linked to problems with eating; more general problematic situations may also be addressed).	FEELINGS Specify the feelings that you were aware of at this time.	DYSFUNCTIONAL THOUGHT(S) Specify the thought(s) that preceded the problematic eating, response, or general behavior.	CHALLENGE DYSFUNCTIONAL THOUGHT(S) 1. What is the evidence for and against these thoughts? 2. Is there an alternative way of viewing the event? 3. What is the effect of having this thought?

FIGURE 5.3. Dysfunctional Thought Record.

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In practice, CBT often combines self-monitoring, behavioral experimentation, and the challenging of dysfunctional thoughts, as demonstrated in the following examples.

Example 1

THERAPIST: I see [from the patient's self-monitoring food diary] that you have done an excellent job of sticking to the structure of your meal plan and having all your meals and snacks. How do you feel about this?

PATIENT: I'm feeling a lot better physically than I was before, and I know I needed to gain some weight. So I'm glad that I increased my eating even though it has been very difficult.

THERAPIST: What do you think a good next step would be?

PATIENT: If I eat more, I will gain too much weight.

THERAPIST: Is that the reason that you have been using nonfat yogurt and not using butter or salad dressing?

PATIENT: Yes, I know that people eat way too much fat and end up with too much fat on their body.

THERAPIST: If you were going to take your eating up a step, would it be easier to eat more food or to eat food that is more calorie-dense?

PATIENT: I don't want to do either. But theoretically I guess it would be easier to have larger portions at dinner and maybe have a granola bar some days.

THERAPIST: What do you think about making sure that you have a whole portion of chicken or fish for dinner each day and adding a granola bar to your afternoon snack? We will continue to monitor your weight carefully each week and adjust your eating plan if you are gaining weight too quickly. Do you think you could do that for 1 week and see what happens?

Note: The therapist makes a mental note that using added fats is more difficult for the patient and decides to return to this issue in a subsequent session.

Example 2

THERAPIST: I see from your eating diary that you missed dinner on Tuesday, and you noted that you were upset with Jill. What was going on?

PATIENT: Jill called at the last minute and said that she couldn't go to the movie with me because a friend had dropped in, but I'm over it now.

THERAPIST: Oh, how did you get over it?

PATIENT: Well, I just told myself that it isn't worth causing trouble over and that I should just forget it.

THERAPIST: So you don't plan to let Jill know that her behavior bothered you?

PATIENT: No, it's just not worth it to me.

THERAPIST: You've mentioned that before about other situations in which you

didn't want to speak to someone you were upset with or someone who borrowed something and didn't give it back. Have you noticed that?

PATIENT: It's true. I don't want to make trouble or push things.

THERAPIST: What is your worry? What might happen if you pushed things?

PATIENT: I don't want people to be mad at me and to dislike me.

Over the next few weeks, the patient and therapist address the patient's belief that people will dislike her if she asserts herself or asks for anything. Eventually they set up a behavioral experiment that involves the patient making a small assertive request to a friend and noting how the friend responds. They also develop strategies for following the meal plan even when the patient is stressed or distressed.

Preventing Weight Loss after Minimum Target Weight Has Been Achieved

For individuals recovering from AN, the transition from eating for weight *gain* to eating for weight *maintenance* is often challenging. Most are terrified that continuing to eat normally will cause further weight gain, and urges to shave calories, miss exchanges/supplements, skimp on portion size, increase exercise, skip added fats, and cut back on high-energy foods may be intense at this stage. Due to the unavoidable repeated pairings between eating and weight gain during early stages of treatment, individuals with AN are scared that if they continue to eat normally, they will continue to gain weight. However, patients typically need to eat a lot more calories than they expect in order to maintain their target weight and prevent weight loss. When people cut back on their eating to avoid further weight gain, weight loss is the inevitable result. A recent research study found that even a small amount of weight loss following achievement of target weight is strongly associated with subsequent relapse in AN. Thus, it is essential that therapists educate patients about these issues. Therapists may find it therapeutic to share with patients the experience of one individual ("The Little Things that Grow," Figure 5.4). This individual had relapsed in the past partially due to early weight loss after discharge from inpatient treatment, and she now knows the importance of maintaining her weight to prevent relapse. The therapist can encourage the patient to take an experimental approach to recovery and gather evidence about what really does happen to her weight if she follows her maintenance meal plan. If necessary, ask her to try the experiment 1 week at a time. In terms of cognitive restructuring, it is useful to identify and challenge beliefs about weight maintenance and relapse.

Addressing Body Image Disturbance

Body dissatisfaction is a core feature of EDs. The repeated checking of body shape or weight ("body checking") and the avoidance of seeing actual body shape or weight ("body avoidance") have been hypothesized to maintain body image disturbance and contribute to increased dietary restraint (Farrell & Lee, 2005; Shafran, Fairburn, Nelson, & Robinson, 2003). There is a strong association between body checking and overevaluation of shape and weight. One of the goals of CBT is to assess and reduce body checking and body avoidance. The approach described in this regard is based on the work of Roz Shafran and colleagues.

Fighting through intensive treatment is an exhausting journey. Reaching the end of this portion of recovery is an incredible relief. I remember feeling overjoyed that the work was finally complete. After all, the weight had been gained and the meal plan was etched into my mind. I felt ready to face the world with my armor of coping strategies and had no intention of returning to my disordered ways. I have come to realize that there is danger in this time, and that the anorexic voice can sneak in undetected and take over faster than I would have ever believed. The truth is that leaving treatment marks the starting point of a new battle. Transitioning back into the real world is, as we are warned, an equally difficult and dangerous time. I've discovered that the "little things" that seem unimportant are my greatest threats for relapse.

Toward the end of treatment, the concept of maintenance is repeatedly stressed and restressed by professionals. The importance of maintaining above one's low end, maintaining the meal plan, maintaining the food choices and variety, and maintaining the separation from exercise is repeated time and time again. There are graphs, studies, and extensive pieces of data that prove the importance of holding onto all the changes. At the end of my first inpatient stay I remember thinking that all this sounded a bit paranoid. The reentry of the anorexic voice came in the form of a "What's the big deal?" attitude. The accompanying thoughts seemed innocent enough. I remember thinking "Who cares if I am 2 pounds below my goal weight? Why does it matter if I use diet products? Everyone does it! I don't want to go back to my illness, I just want to be healthy and fit!" Although these thoughts don't seem distorted, they represent a shifting definition of healthy that led me back into the throes of my disorder. Something that started as simply as switching to skim milk landed me back in treatment within a matter of months. If there is one thing I have learned, it is that the little things grow.

Straying away from the maintenance meal plan fuels the disorder and keeps it alive and well. I've discovered that feeding the anorexia, whether it's in the form of a couple pounds or skimping on portions, leads me down the slippery path. Soon the little things grow in number and severity. If there is one piece of advice I could give somebody leaving treatment, it would be this: "Don't feed the voice." Maintaining seems arduous and overly cautious at times, but the anorexia only needs a little bit of fuel to start a fire. The shifting view of "healthy" that strays from what we were taught in treatment is likely the disorder trying to worm its way in.

Now having completed my second inpatient stay, I know the "little things" I have to watch out for. I am faced with all the familiar urges and annoying anorexic thoughts. I still find myself doubting and questioning the importance of maintaining all the little things. However, I know from experience that where my eating disorder is concerned, the smallest spark can restart the fire. Although it continues to be a struggle, I know that my path to freedom requires my continued efforts and vigilance. So in the name of recovery, I will continue to fight against all aspects of my disorder, including the "little things."

FIGURE 5.4. "The Little Things That Grow," written by a former patient.

Body checking typically involves excessive behaviors aimed at identifying any signs of weight gain or assessing one's shape (Shafran et al., 2003), whereas body avoidance is just the opposite—that is, refusal to be weighed, avoidance of mirrors or other reflective surfaces, and the wearing of baggy clothes to conceal one's shape. Both of these behaviors contribute to negative thoughts and feelings about body shape and weight. Therapists can make use of the Body Image Avoidance Questionnaire (Rosen, Srebnik, Saltzberg, & Wendt, 1991) and Body Checking Questionnaire (Reas, Whisenhunt, Netemeyer, & Williamson, 2002) to formally assess these aspects of patient functioning and measure progress in terms of body image satisfaction over the course of treatment. Treatment strategies directed at body image include psychoeducation about the negative impact of body checking and body avoidance, exercises that help individuals distance themselves from negative body image thoughts, body image exposure exercises, and cognitive work on developing other aspects of self-identity that enhance self-esteem, as described by Pike and colleagues (1996). In addition, it is useful to encourage patients to get rid of "sick" clothes that are too small for them and support them in obtaining comfortable

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clothing in an appropriate size. Wearing clothes that are too small draws their attention to their body size and shape. Wearing clothes that are too big or baggy is another form of avoidance and tends to be associated with negative body image.

When addressing body image issues with the patient, it is especially important to validate her feelings and at the same time introduce doubt and distance about the associated beliefs:

PATIENT: I am really frightened of gaining weight because I already feel so huge and fat.

THERAPIST: I know it really bothers you to feel so fat, and it seems that you feel that way most of the time.

PATIENT: Yes, I do.

THERAPIST: If I recall correctly, your weight has changed over the last year and you have felt fat the whole time at a few different weights. Is that right?

PATIENT: Yes, it is, although I did feel even fatter when my weight was higher.

THERAPIST: What do you make of the fact that other people think your weight is too low?

PATIENT: I can see that too, if I try really hard, but it doesn't match at all with the way I feel.

THERAPIST: I wonder if this very heavy feeling that you have could be about something other than what you weigh. I know you feel very fat, but what if this feeling somehow means that you are distressed and this feeling somehow got tied to your body, and the details about other things that are happening somehow got lost along the way? What do you think about the idea of recording how fat you feel in your self-monitoring diary several times each day and also noting what else is going on at the time and whether you have any other feelings?

Combating Excessive Exercise

Many individuals with AN engage in excessive exercise. Typically, it is therapeutic for patients to refrain from all exercise until related issues have been discussed in therapy and patients have maintained a minimum target weight for at least 1 month. CBT therapists encourage the use of behavioral strategies (e.g., distraction, delay, self-talk), stimulus control (e.g., disassemble exercise equipment, put gym membership on hold, hide running shoes) and thought records to assist patients in resisting urges to exercise. In addition, it is helpful to encourage patients to assume an "experimental approach" to *not* exercising, so that they can gain actual experiential data on what it is like *not* to exercise. It is important to underscore the fact that refraining from exercise at this stage in treatment is a temporary measure, much like wearing a cast on a broken limb.

It can be helpful to encourage physical activity that cannot turn into excessive exercise and that is not aimed primarily at weight control (e.g., some types of yoga, crafts, social activities such as ice skating with friends). If sufficient time has passed during which the patient continues to maintain her weight and has remained symptom-free (e.g., 1 or 2 months), it may be reasonable to gradually implement moderate exercise with careful planning and testing. The emphasis should be placed on having fun,

socializing, developing a skill, and improving health rather than controlling weight and shape or burning calories.

PHASE III: Schema-Based Cognitive Therapy and Related Clinical Issues

General Outline of Schema-Based CBT

Vitousek and Hollon (1990) argue that the cognitive schema of AN can contribute to an understanding of both the "choice" and maintenance of the disorder. Unlike most other psychological disorders, one of the hallmark features of AN is the ego-syntonic nature of the disturbance. Individuals with AN choose to maintain an excessively low body weight, at least in part, via the cognitive schema that overvalues weight and thinness. Individuals with AN value and rely on their symptoms to simplify, organize, and manage the stresses and conflicts of life. Once established, this cognitive schema operates automatically. The automatic nature of such cognitive processing can account, at least in part, for the maintenance or stability of the psychopathology and its resistance to change (Bemis, 1983; Striegel-Moore & McAvay, 1986).

At this stage in treatment the therapist works with the patient on diversifying her self-schema to include a wider range of roles and activities that meaningfully enhance her sense of self. Although the exact details of the ED schema will vary, the core of the schema is typically of the form, "I am anorexic and must stay this way because it brings me control, mastery, and somehow makes me special." The therapist helps the patient separate the *goals* of achieving control, mastery, and importance from the *means*. It is essential that the therapist support the patient's needs and desires to have control, mastery, and self-importance in life; these goals are normative and healthy. The therapist emphasizes that the work of therapy is not to alter these goals but to work on how to achieve them more adaptively.

In addition to the ED schema that tends to be fairly explicit and within the patient's conscious awareness, additional maladaptive schemas may contribute significantly to the underlying issues related to the ED and therefore will need to be addressed in the course of treatment. For patients with AN, maladaptive schemas in the interpersonal realm appear to be intricately linked with the more conscious ED schema. Some examples of maladaptive interpersonal schemas include (1) feeling unable to take care of oneself and undeserving of nurturing by others; (2) believing that achieving nurturing, rewarding relationships will not be possible for oneself; (3) feeling worthless and undesirable to others in terms of appearance, social skills, inner worth, etc; (4) believing that to have any worth one must be loved by everyone, and therefore one must avoid conflict at all cost (e.g., "I dare not be rejected by others").

To the extent that patients are unable to participate successfully in the other components of this psychotherapy intervention or remain symptomatic, it can be useful to evaluate whether and which maladaptive schemas or core negative beliefs are interfering with making greater progress in treatment. The therapist and patient can identify the relevant maladaptive schemas that contribute to the core pathology of the ED. Given the rigid nature and chronic course that is characteristic of AN, this level of intervention is designed to address the deeper and probably more historical dysfunctional assumptions that contribute to the ED.

The primary focus of these sessions is to work with the patient on her specific maladaptive schemas with the goal of gaining awareness of the role that such schemas

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play in the ED and challenging the schemas using the range of CBT techniques. The specific details of these sessions will need to be shaped by the particular maladaptive schemas of a given patient. The therapist remains active, and change techniques are implemented explicitly and systematically. In particular, the therapist continues to emphasize the importance of homework and experimenting with behavioral change. The therapist and patient continue to work collaboratively to evaluate the current data derived from such experimentation, and they continue to utilize an empirical approach to evaluating the validity and functionality of the maladaptive schemas.

Affect Regulation and Interpersonal Effectiveness Skills

Issues of affect regulation and difficulties in interpersonal relationships plague many individuals with AN. It is often the case that resolution of the behavioral symptoms of the ED results in greater clarity regarding these more global problems. This entire CBT intervention is designed to enhance our patients' ability to self-regulate and successfully manage interpersonal situations. In addition to the program outlined here, especially in the later phases of treatment, it may also be useful for therapists to incorporate Linehan's (1993) work, which was designed for individuals with borderline personality disorder. These interventions are based on sound cognitive-behavioral principles and may be effectively adapted for our patients with AN. In particular, Linehan provides clear and useful descriptions of interventions aimed at enhancing interpersonal effectiveness skills and affect regulation.

Treating Individuals with Binge Eating and Purging

A significant percentage of individuals with AN report binge eating and purging, and a significant minority of these individuals will go on to develop BN. Thus, it is important to assess and address these aspects of the eating disturbance carefully and employ CBT interventions that specifically target binge eating and purging, as needed. It is unusual for individuals with AN to report binge eating without purging; however, it is not unusual for individuals to report purging in the absence of binge eating. Treating patients who report binge eating, compared to those who do not, requires first determining the nature of the binge-eating episodes. To the extent that the subjective reports do not meet criteria for an objective bingeing, the primary thrust of the behavioral interventions will be consistent across all patients: The goal is not to alter the specific behavior that the patient describes as a binge but rather to focus on normalizing eating three meals per day, plus snacks, and increasing the variety of food with which the patient is comfortable. The cognitive interventions for these patients focus on identifying and challenging the distortions that make average meals and snacks "binges."

Individuals with AN who purge need to be monitored carefully, given their increased risk for medical complications. Vomiting and any other compensatory behaviors, such as laxative or diuretic abuse, are driven by the same core dysfunctional thoughts as the excessive restraint characteristic of all patients with AN. All of these behaviors are pursued to achieve the central aim of extreme thinness because individuals with AN believe that such efforts will provide a sense of control, mastery, and self-worth. Thus, the cognitive interventions directed at vomiting are the same as those used to address excessive restriction. These cognitive techniques elucidate and challenge the dysfunc-

tional thinking underlying these compensatory behaviors and restriction, since all of these behaviors are motivated by the same underlying core beliefs. Behavioral interventions such as the use of delay strategies and alternatives are designed to inhibit the purging behavior.

Using the Therapeutic Relationship to Address Maladaptive Thoughts and Schemas

The therapist can make use of the therapeutic relationship to explore the patient's general feelings and assumptions about interpersonal relationships. As mentioned above, patients with AN often have significant interpersonal problems. For example, many patients describe problems in balancing attachment and autonomy in relationships, feeling excessively dependent, vulnerable, and mistrustful. Also, many individuals with AN describe feeling worthless and unlovable. CBT therapists stay alert to any indications that the patient holds such dysfunctional schemas and use the Dysfunctional Thought Record (Figure 5.3) to explore and challenge such distortions with the patient. In addition, therapists can use the relationship to make explicit the maladaptive assumptions that the patient may hold regarding interpersonal relationships. In doing so, the goal is to articulate and challenge any maladaptive schemas that are identified.

PHASE IV: Ending Treatment and Relapse Prevention

In preparing for the termination of treatment, the therapist and patient review specific CBT tools and strategies that the patient has found most helpful. It should be emphasized to the patient that the goal of treatment is not to solve all potential problems while in treatment, but to learn the skills necessary to manage such problems adaptively in the future. This stage offers the patient the opportunity to describe an enhanced sense of self-efficacy as a result of the gains she has made in treatment. At this point, the therapist can reiterate that as long as the patient continues to employ what she has learned, she will be acting as her own therapist and thereby decrease her risk of relapse.

The therapist helps the patient think ahead to potentially stressful situations and challenges that lie in the near future. During these sessions, the therapist helps the patient practice and plan for particular challenges. Anticipation and planning are key elements in preventing relapse. However, the therapist also emphasizes that no one stays exactly on course 100% of the time. As much as possible, the therapist helps the patient learn to identify and monitor cues that she is "off course." The more attentive and responsive the patient is to such cues, the less likely she is to relapse. (See Figure 5.5, Self-Therapy Worksheet, and Figure 5.6, Relapse Prevention Plan.)

Specific End-of-Treatment Interventions

As described below, some key factors in making the ending therapeutic include letting up on perfectionism, acceptance, anticipating the loss, and recognizing that successful treatment does not always prevent relapse. A wide range of interventions can be used to assist with the consolidation of therapy and relapse prevention. Table 5.1 highlights some of the most common and useful strategies.

One way to maintain a watchful eye and ensure that you continue to work independently is to provide a time and a structure for regularly checking in with yourself. Consider setting up a very important appointment with yourself to work through items in a structured way. Remember to pick a time when you will have some privacy and be able to focus on yourself.

Date and time of appointment: _____

How is my eating going? Did I restrict at all? Do I need to change anything about my eating?

Have I had any eating-disordered symptoms of any kind? If so, what do I need to do about them?

How am I doing with my body image? Do I need to change anything related to this?

How am I doing with having feelings, being aware of them, and finding appropriate forms of expression?

Is any thought or feeling haunting me? What do I need to do about it?

How am I doing in my relationships? Do I need to address anything related to this area?

How am I doing with my job, schoolwork, or daily activities? Do I need to change anything related to these?

Am I aware of how hard I am working to maintain my recovery? Am I giving myself credit?

What am I most proud of this week?

What challenge am I setting for myself in the week to come?

FIGURE 5.5. Self-Therapy Worksheet.

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Relapse can be triggered by any set of circumstances that makes it easy to slide off your meal plan, not eat regular meals, or diet. Examples include being physically ill with the flu or unable to eat for any reason, being very busy or stressed, skipping meals to save time, stressful events, negative emotions, and self-defeating thoughts. One critical strategy is to maintain a high level of vigilance: Be aware of what is going on!

What factors or situations might be likely to lead you to relapse (i.e., what do you need to watch out for)? _____

What do you have in place to keep yourself vigilant? _____

If you start to slip, what do you need to do in terms of your eating behavior and meal plan? _____

Other symptoms that might need attention: _____

What do you need to do about these? _____

What maladaptive thoughts can you expect? _____

What will you do about these? _____

What do you need in terms of social support? _____

What are the chances that your difficulties will go away on their own? _____

FIGURE 5.6. Relapse Prevention Plan.

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TABLE 5.1. End-of-Treatment Interventions

Below is a list of possible interventions that may assist in the work around ending treatment.

1. Case summary: Ask your patient to write her own case summary, highlighting what was especially useful, what was difficult, etc.
2. Risks for relapse: Ask your patient to write about the risks that she sees on the horizon. In that regard it is also useful to have her identify cues that will tell her she is off course or at risk for relapsing and have her prepare a plan for how to minimize or avert such risk.
3. Goal Setting: Patients can prepare a list of goals for the coming month, 3 months, 1 year.
4. Encourage patients to review CBT materials from therapy and keep a folder of the materials that seem most relevant.
5. Have your patient project forward to when she is an old woman. As she reflects on the life she imagines, how does she want to be remembered (by the therapist, friends, or family)? What does she want her legacy to be? Throughout this discussion, you can link your patient's desires to the year's work of CBT.
6. Ask your patient to write about past relapses and to be as detailed as possible about the patterns that were central to relapsing; discuss with her how she can handle things differently this time.
7. Review specific processes of CBT interventions, such as food diaries, Dysfunctional Thought Record, and problem solving. Find out how the patient is using these instruments at the end of treatment and discuss how she can maximize their utility for transitioning out of treatment.
8. Role playing: Use this technique to anticipate and work through any anticipated difficult situations.
9. Explore what the patient thinks it would mean if she were to relapse. Does it mean that treatment didn't work? If so, it may make her less likely to seek help when she needs it. It may be useful to use the analogy of a shower here (e.g., "You get dirty after a shower, but that doesn't mean the shower didn't work; moreover, getting dirty isn't so scary when you know how to shower").
10. Emphasize growth potential of slips.

Letting Up on Perfectionism and Acceptance

Therapists' acceptance of patients facilitates patients' self-acceptance. In turn, this self-acceptance relieves the misery of feeling unworthy that many individuals with AN feel. Some individuals with AN will always be vulnerable to reengaging in eating pathology, but if they can accept this susceptibility and pay attention to markers of risk, they can achieve a higher and stabler level of functioning. Sometimes individuals expect too much from treatment, and helping them let go of mythical ideals can facilitate a more constructive ending. Assisting patients to identify ideals that empower and those that defeat their own growth can be very therapeutic—not only beauty ideals but ideals about the way they think they should live. Linking the perfectionism to demoralization and relapse is an important goal of treatment and its termination.

Anticipating the Loss

Throughout the treatment and with increasingly explicit reference, it may be helpful to discuss the possible feelings of loss that are associated with ending treatment. It is useful to help patients plan for how they will take care of themselves in the face of such loss. This aspect of treatment is important because it give patients a clear message of support from the therapist: They have the needed ability to take care of themselves.

Acceptance That a Successful Intervention Does Not Always Prevent Relapse

Many of our patients require multiple treatments. To the extent that the disorder will run its course, a particular intervention may be therapeutic in its capacity to reduce deleterious effects. Also, putting into practice all the components of CBT often takes time. Although a patient may not be able to successfully avert a relapse, she may have learned a lot during the course of treatment that will ultimately contribute to a more complete recovery.

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Exhibit 2

DBT Resources: What is DBT?

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- DBT Frequently Asked Questions

Dialectical Behavior Therapy at a Glance

In the late 1970s, Marsha M. Linehan (1993) attempted to apply standard Cognitive Behavior Therapy (CBT) to the problems of adult women with histories of chronic suicide attempts, suicidal ideation, urges to self-harm, and self-mutilation. Trained as a behaviorist, she was interested in treating discrete behaviors; however, through consultation with colleagues, she concluded that she was treating women who met criteria for Borderline Personality Disorder (BPD). In the late 1970s, CBT had gained prominence as an effective psychotherapy for a range of serious problems. Linehan was keenly interested in investigating whether or not it would prove helpful for individuals whose suicidality was in response to extremely painful problems. As she and her research team applied standard CBT, they encountered numerous problems with its use. Three were particularly troublesome:

1. Clients receiving CBT found the unrelenting focus on change inherent to CBT invalidating. Clients responded by withdrawing from treatment, by becoming angry, or by vacillating between the two. This resulted in a high drop out rate. And, obviously, if clients do not attend treatment, they cannot benefit from treatment.

2. Clients unintentionally positively reinforced their therapists for ineffective treatment while punishing their therapists for effective therapy. In other words, therapists were unwittingly under the control of consequences outside their awareness, just as all humans are. For example, the research team noticed through its review of audio taped sessions that therapists would "back off" pushing for change of behavior when the client's response was one of anger, or emotional withdrawal, or shame, or threatened self-harm. Similarly, clients would reward the therapist with interpersonal warmth or engagement if the therapist allowed them to change the topic of the session from one they didn't want to discuss to one they did want to discuss.

3. The sheer volume and severity of problems presented by clients made it impossible to use the standard CBT format. Individual therapists simply did not have time to both address the problems presented by clients – suicide attempts, urges to self-harm, urges to quit treatment, noncompliance with homework assignments, untreated depression, anxiety disorders, etc, -- AND have session time devoted to helping the client learn and apply more adaptive skills.

Adding Validation and Dialectics to CBT. In response to these key problems with standard CBT, Linehan and her research team made significant modifications to standard CBT. They added in new types of strategies and reformulated the structure of the treatment (see below, next section). In the case of new strategies, Acceptance-based interventions, frequently referred to as validation strategies, were added. Adding these communicated to the clients that they were both acceptable as they were and that their behaviors, including those that were self-harming, made real sense in some way. Further, therapists learned to highlight for clients when their thoughts, feelings, and behaviors were "perfectly normal", helping clients discover that they had sound judgment and that they were capable of learning how and when to trust themselves. The new emphasis on acceptance did not occur to the exclusion of the emphasis on change: Clients also must change if they want to build a life worth living. Thus, the focus on acceptance did not occur to the exclusion of change based strategies; rather, the two enhanced the use of one another. In the course of weaving in acceptance with change, Linehan noticed that a third set of strategies –Dialectics --came into play. Dialectical strategies gave the therapist a means to balance acceptance and change in each session and served to prevent both therapist and client from becoming stuck in the rigid thoughts, feelings, and behaviors that can occur when emotions run high, as they often do in the treatment of clients diagnosed with BPD. Dialectical strategies and a dialectical world view, with its emphasis on holism and synthesis, enable the therapist to blend acceptance and change in a manner that results in movement, speed, and flow in individual sessions and across the entire treatment. This counters the tendency, found in treatment with clients diagnosed with BPD, to become mired in arguments, polarizing positions, and extreme positions. Thus, these three sets of strategies and the theories on which they are based from are the three foundations of DBT.

Restructuring the Treatment. As noted above, very significant changes were also made to the structure of treatment in order to solve the problems encountered in the application of standard CBT. Below we discuss how DBT treatment is organized by Functions and Modes and by Stages and Targets. The treatment we are describing is the treatment that is considered to be Standard and Comprehensive DBT. It is the form of DBT that has been subject to the most rigorous research in terms of randomized controlled trials (RCTs). The variations of DBT that differ from the structure described below is being researched but has not yet been subjected to as rigorous a test as standard DBT. Thus, the reader should keep in mind that this is how comprehensive DBT is defined and that variations from this structure are not considered comprehensive or standard.

Functions and Modes. Briefly, Linehan (1993) hypothesizes that any comprehensive psychotherapy must meet five critical functions.

The therapy must: a) enhance and maintain the client's motivation to change; b) enhance the client's capabilities; c) ensure that the client's new capabilities are generalized to all relevant environments; d) enhance the therapist's motivation to treat clients while also enhancing the therapist's capabilities; and, e) structure the environment so that treatment can take place. Due to space considerations, we will not review every possible mode (method) that can meet these functions. Rather, we offer the most common examples of how these functions are met in standard outpatient DBT. It is typically the individual therapist who maintains the client's motivation for treatment, since the individual therapist is the most salient individual for the client. Skills are acquired, strengthened, and generalized through the combination of skills groups, phone coaching (clients are instructed to call therapists for coaching prior to engaging in self harm), in vivo coaching, and homework assignments. Therapists' capabilities are enhanced and burnout prevented through weekly consultation team meetings. The consultation team helps the therapist stay balanced in his or her approach to the client, while supporting and cheerleading the therapist in applying effective interventions. (In DBT, a therapist is not considered to be meeting the requirements of the treatment unless he or she meets weekly in a DBT consultation team). Finally, the environment can be structured in a variety of ways, say by the client and therapist meeting with family members to ensure that the client is not being reinforced for maladaptive behaviors or punished for effective behaviors in the home.

Stages and Targets. DBT also organizes treatment into stages and targets and, with very few exceptions, adheres strictly to the order in which problems are addressed. The organization of the treatment into stages and targets prevents DBT being a treatment that, week after week, addresses the crisis of the moment. Further, it has a logical progression that first addresses behaviors that could lead to the client's death, then behaviors that could lead to premature termination, to behaviors that destroy the quality of life, to the need for alternative skills. In other words, the first goal is to insure the client stays alive, so that the second goal (staying in therapy), results in meeting the third goal (building a better quality of life), partly through the acquisition of new behaviors (skills). In short, we have just described the targets found in Stage I. To repeat, the first stage of treatment focuses, in order, on decreasing life threatening behaviors, behaviors that interfere with therapy, quality of life threatening behaviors and increasing skills that will replace ineffective coping behaviors. The goal of Stage I DBT is for the client to move from behavioral dyscontrol to behavioral control so that there is a normal life expectancy. In Stage II, DBT addresses the client's inhibited emotional experiencing. It is thought that the client's behavior is now under control but the client is suffering "in silence". The goal of Stage II is to help the client move from a state of quiet desperation to one of full emotional experiencing. This is the stage in which post-traumatic stress disorder (PTSD) would be treated. Stage III DBT focuses on problems in living, with the goal being that the client has a life of ordinary happiness and unhappiness. Linehan has posited a Stage IV specifically for those clients for whom a life of ordinary happiness and unhappiness fails to meet a further goal of spiritual fulfillment or a sense of connectedness of a greater whole. In this stage, the goal of treatment is for the client to move from a sense of incompleteness towards a life that involves an ongoing capacity for experiences of joy and freedom.

Research on DBT

Two randomized controlled trials (RCTs) of DBT, supported by grants from the National Institute of Mental Health and the National Institute of Drug Abuse, have indicated that DBT is more effective than Treatment-As-Usual (TAU) in treatment of BPD and treatment of BPD and co-morbid diagnosis of substance abuse (Linehan, Armstrong, Suarez, Allmon & Heard, 1991; Linehan, Schmidt, Dimeff, Craft, Kanter & Comtois, 1999). Clients receiving DBT, compared to TAU, were significantly less likely to drop out of therapy, were significantly less likely to engage in parasuicide, reported significantly fewer parasuicial behaviors and, when engaging in parasuicidal behaviors, had less medically severe behaviors. Further, clients receiving DBT were less likely to be hospitalized, had fewer days in hospital, and had higher scores on global and social adjustment. Likewise, in the RCT conducted on DBT for women with co-morbid substance abuse, in addition to similar findings to the original study regarding improvement in BPD criterion behaviors, DBT was more effective than TAU at reducing drug abuse. Follow up indicated that subjects who had received DBT also had greater gains in global and social adjustment. DBT has also been the subject of RCTs conducted independently of Linehan's research clinic at the University of Washington. Koons, Robins, Tweed & Lynch (2001) randomly assigned 20 women veterans diagnosed with BPD to either DBT or TAU. Unlike Linehan's, et al. (1991, 1993) original studies, subjects were not required to have a recent history of parasuicide. However, subjects enrolled in DBT showed statistically significant reductions in suicidal ideation, depression, hopelessness, and anger compared to subjects enrolled in TAU. Verheul, Van Den Bosch, Koeter, De Ridder, Stijnen & Van Den Brink (2003) conducted an RCT in the Netherlands, again comparing DBT to TAU. Their findings are consistent with the earlier studies: Subjects enrolled in DBT had greater treatment retention, reduced suicidality, reduced episodes of self harm and self-mutilation. DBT continues to be the subject of randomized controlled trials. At present, Linehan (personal communication, 2003) is completing a randomized controlled trial of DBT v. Treatment- By-Community-Expert (TBCE). Other studies are ongoing regarding the use of DBT with eating disorders, DBT with BPD and co-morbid substance abuse, as well as the utility of DBT in other than outpatient settings.

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Exhibit 3

CHAPTER 15

Interpersonal Psychotherapy for Bulimia Nervosa and Binge-Eating Disorder

Marian Tanofsky-Kraff and Denise E. Wilfley

Interpersonal psychotherapy (IPT) was originally developed in the late 1960s by Gerald Klerman and colleagues (Klerman, Weissman, Rounsaville, & Chevron, 1984) for the treatment of unipolar depression. IPT is a brief, time-limited therapy that focuses on improving interpersonal functioning and, in turn, psychiatric symptoms, by relating symptoms to interpersonal problem areas and developing strategies for dealing with these problems (Freeman & Gil, 2004; Klerman et al., 1984). In the late 1980s, IPT was successfully modified for patients with BN (Fairburn et al., 1991; Fairburn, Peveler, Jones, Hope, & Doll, 1993) and shortly thereafter adapted into a group format for individuals with BED (Wilfley, Frank, Welch, Spurrell, & Rounsaville, 1998; Wilfley, MacKenzie, Welch, Ayres, & Weissman, 2000; Wilfley et al., 1993, 2002). IPT has been found to be an effective treatment for bulimia nervosa (BN) and binge-eating disorder (BED).

The present chapter reviews interpersonal theory and how it provides the foundation for IPT. The central role that interpersonal functioning plays in the development and manifestation of eating disorders (EDs) is discussed. Empirical evidence supporting the efficaciousness of IPT for the treatment of EDs is reviewed. The delivery of IPT for BN and BED are also explained, along with a description of the major tenets of the treatment and a novel adaptation of IPT for the prevention of obesity. Finally, we discuss how the delivery of IPT has been improved, and future directions are proposed.

Interpersonal Theory

IPT is grounded in theories developed independently by Meyer (1957), Sullivan (1953), and Bowlby (1982), which hypothesize that interpersonal function is a critical component of psychological adjustment and well-being. Meyer postulated that psychopathology was rooted in maladjustment to one's social environment (Frank & Spanier, 1995;

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Klerman et al., 1984; Meyer, 1957). Sullivan theorized that a patient's interpersonal relationships, rather than intrapsychic processes alone, established the relevant focus of therapeutic attention (Sullivan, 1953). He believed that individuals could not be understood in isolation from their interpersonal relationships and posited that enduring patterns in these relationships could either encourage self-esteem or result in anxiety, hopelessness, and psychopathology. IPT is also associated with the work of Bowlby (1982), the originator of attachment theory. Bowlby emphasized the importance of early attachment in the later development of interpersonal relationships and emotional well-being, hypothesizing that failures in attachment resulted in later psychopathology.

The interpersonal roles of major interest to IPT occur within the nuclear family, the extended family, the friendship group, the work situation, and the neighborhood or community. IPT acknowledges a two-way relationship between social functioning and psychopathology: Disturbances in social roles can serve as antecedents for psychopathology, and mental illness can produce impairments in one's capacity to perform social roles (Bowlby, 1982). IPT is, therefore, derived from a theory in which interpersonal functioning is recognized as a critical component of psychological adjustment and well-being. It should be noted that IPT makes no assumptions about the causes of psychiatric illness; however, IPT does assume that the development and maintenance of some psychiatric illnesses occur in a social and interpersonal context and that the onset, response to treatment, and outcomes are influenced by the interpersonal relations between the patient and significant others. The major tenets of IPT for BN and BED are described in this chapter. The extensive empirical background and theoretical foundation, as well as the strategies and techniques of IPT, are fully described in a comprehensive book by Weissman, Markowitz, and Klerman (2000).

Interpersonal Functioning and EDs

A wealth of research has linked poor interpersonal functioning to EDs (Wilfley, Stein, & Welch, 2005). Individuals with BN and BED typically report past difficult social experiences, problematic family histories, and specific interpersonal stressors more often than non-eating-disordered individuals (Fairburn et al., 1997, 1998). Individuals with BN and BED also tend to experience a wide range of social problems, such as loneliness, lack of perceived social support, poor self-esteem and social adjustment, and difficulty with social problem-solving skills (Crow et al., 2002; Ghaderi & Scott, 1999; Grissett & Norvell, 1992; Gual et al., 2002; Johnson et al., 2001; O'Mahony & Hollwey, 1995; Rorty et al., 1999; Steiger et al., 1999; Troop et al., 1994; Wilfley et al., 2003). Heightened sensitivity to interpersonal interactions appears to be a common characteristic among individuals with bulimic tendencies (Evans & Wertheim, 1998; Humphrey, 1989; Steiger et al., 1999; Tasca et al., 2004; Troisi et al., 2005). Indeed, interactive paradigms suggest that interpersonal distress may trigger overeating (Steiger et al., 1999; Tanofsky-Kraff, Wilfley, & Spurrell, 2000) and potentially perpetuate binge eating. Furthermore, interpersonal difficulties, low self-esteem, and negative affect may be interconnected in a reciprocal fashion (Fairburn et al., 1997, 1998; Gual et al., 2002) and serve to perpetuate a cycle, each exacerbating the other and combining to precipitate and/or maintain dysfunctional bulimic or binge-eating patterns (Herzog, Keller, Lavori, & Ott, 1987). Therefore, the use of an interpersonally focused intervention appears to be especially

suitable for the treatment of BN and BED and those with similar manifestations of these disorders. IPT is designed to improve interpersonal functioning and self-esteem, reduce negative affect, and, in turn, decrease ED symptoms.

Review of Outcome Studies and Relevant Empirical Literature

IPT for BN

IPT has been shown to be effective for the treatment of BN. To date, cognitive-behavioral therapy (CBT) is currently the most researched, best established treatment for BN (Wilson, Grilo, & Vitousek, 2007). Nevertheless, IPT is the only psychological treatment for BN that has demonstrated long-term outcomes that are comparable to those of CBT (Wilson & Shafran, 2005). Currently, all *controlled* studies of IPT for BN have been comparison studies with CBT. Initially, similar short- and long-term outcomes for binge-eating remission between CBT and IPT were reported (Fairburn et al., 1993, 1995). In a subsequent multisite study (Agras, Walsh, Fairburn, Wilson, & Kraemer, 2000) comparing CBT and IPT as treatments for BN, in the short-term posttreatment, patients receiving CBT demonstrated higher rates of abstinence from binge eating and lower rates of purging. By 8- and 12-month follow-ups, however, patients receiving CBT tended to maintain their progress or slightly worsen, whereas patients receiving IPT experienced slight improvement such that the two treatments no longer differed significantly in their outcomes. The more impressive effect of CBT compared to IPT may be at least partially explained by a relative lack of focus on ED symptomatology in the research version of individual IPT for BN. Interestingly, IPT patients rated their treatment as more suitable and expected greater success than did CBT patients. Therefore, a potential advantage of IPT may be that many patients with BN perceive the interpersonal focus of IPT as particularly relevant to their ED and to their treatment needs, perhaps more so than a cognitive-behavioral focus on distortions related to weight and shape. Currently, IPT is considered an alternative to CBT for the treatment of BN (Wilson et al., 2007). Although, it has been recommended that clinicians inform patients of the slower response time for improvements compared to CBT (Wilson, 2005), our contention is that when IPT is delivered in a manner such that interpersonal problems are consistently linked to ED symptoms, response to treatment will likely occur more rapidly.

An emerging literature has provided some insight into predictors of success with IPT for the treatment of EDs. Chui, Safer, Bryson, Agras, and Wilson (2007) reported that although patients in the large multicenter trial responded with higher abstinence rates when randomized to CBT as opposed to IPT, African American participants showed greater reductions in binge-eating episode frequency when treated with IPT compared to CBT. This finding suggests that IPT may be particularly appropriate for African American women with BN, and speaks to the need for further study of IPT with different racial and ethnic groups. Since therapeutic alliance is associated with treatment outcome, researchers from this same study examined patient expectation of improvement (Constantino, Arnow, Blasey, & Agras, 2005). They found that expectation of improvement was positively associated with outcome for both CBT and IPT, emphasizing the important role of patient expectations in both treatments. Finally, in a

study of postremission predictors of relapse, Keel and colleagues found that for women with BN, worse psychosocial functioning was associated with a greater risk for relapse, which, the authors posited, may partly help to explain the long-term effectiveness of IPT for BN (Keel, Dorer, Franko, Jackson, & Herzog, 2005).

IPT for BED

Based upon the initial success of IPT in BN (Fairburn et al., 1991), IPT for BED was developed. Wilfley and colleagues first adapted IPT to a group format for patients with BED (Wilfley et al., 1993, 2000). During their work, they found that a number of patients presented with chronically unfulfilling relationships that were well suited to be addressed in the group format. Therefore, new strategies were adapted to specifically address such interpersonal deficits. For example, in the current format of group IPT for BED, group members with interpersonal deficits are strongly encouraged to use the group as a "live" social network. This social milieu is designed to decrease social isolation, support the formation of new social relationships, and serve as a model for initiating and sustaining social relationships outside of the therapeutic context (Wilfley et al., 1998). Shame and self-stigmatization are common among patients with BED and may contribute to the maintenance of the disorder. By its very nature, group therapy offers a radically altered social environment for patients with BED, who typically keep shameful eating behaviors hidden from others.

IPT has demonstrated effectiveness in the treatment of BED. As in the case of CBT for BN, CBT for BED has been shown to have specific and robust treatment effects (Devlin et al., 2005; Grilo, Masheb, & Wilson, 2005; Kenardy, Mensch, Bowen, Green, & Walton, 2002; Nauta, Hospers, Kok, & Jansen, 2000; Ricca et al., 2001; Telch, Agras, Rossiter, Wilfley, & Kenardy, 1990; Wilfley et al., 1993). Two randomized trials have compared IPT with CBT and found that IPT has similar effects to CBT in the management of BED. The first study, comparing group CBT and IPT, revealed that both treatments were more effective than a wait-list control group at reducing binge eating and had similar significant reductions in binge eating in both the short and long term (Wilfley et al., 1993). In the second study, which included a substantially larger sample size, both CBT and IPT demonstrated equivalent short- and long-term efficacy in reducing binge eating and associated specific and general psychopathology, with approximately 60% of the patients remaining abstinent from binge eating at 1-year follow-up (Wilfley et al., 2002). In contrast to the literature on IPT for BN, the time course of almost all outcomes with IPT was identical to that of CBT.

In a follow-up analysis of treatment predictors of long-term outcome of the 2002 study, patients with a greater extent of interpersonal problems at both baseline and midtreatment showed poorer treatment response to both treatments (Hilbert et al., 2007). An important caveat of this finding, however, is that, not surprisingly, those individuals with greater interpersonal problems were also those who had more Axis I and Axis II psychiatric disorders and lower self-esteem than those with less severe interpersonal problems. Such individuals are likely in need of augmented or extended treatment. Supporting this assertion, in IPT adapted for individuals with borderline personality disorder, many of whom present with comorbid depression, Markowitz and colleagues suggest that extending IPT effectively improves the disorder (Markowitz, Skodol, & Bleiberg, 2006). A preliminary examination of patients in the larger BED cohort at least 5 years posttreatment indicated that those in IPT maintained reductions

in binge eating and disordered eating cognitions (Bishop, Stein, Hilbert, Swenson, & Wilfley, 2007, October). These data may suggest evidence for good maintenance of change for patients with BED treated with IPT.

Results from a recently completed multisite trial that compared individual IPT to behavioral weight loss treatment or CBT guided self-help for the treatment of BED points to the importance of making a clear connection between interpersonal problems and binge eating symptoms in the delivery of IPT. Similar to Wilfley and colleagues' 2002 trial, in this multisite study the clinicians linked interpersonal functioning to disordered-eating symptoms throughout the course of IPT. Findings from this study revealed that IPT was most acceptable to patients; the dropout rate was significantly lower in IPT compared to the other two interventions (Wilfley, Wilson, & Agras, 2008). IPT and CBT guided self-help were significantly more effective than behavioral weight loss in eliminating binge eating after 2 years. Furthermore, compared to the other two programs, IPT produced greater binge episode reductions for patients with low self-esteem and greater disordered eating behaviors and cognitions, whereas CBT guided self-help was generally effective only for those with low ED psychopathology. It is notable that in this trial, compared to the 2002 study (Hilbert et al., 2007; Wilfley et al., 2002), individuals with more psychopathology showed greater improvements in IPT than with CBT guided self-help. This is in concert with Hilbert and colleagues' follow-up data suggesting that greater disordered eating serves as a moderator in predicting poorer outcome in CBT (Hilbert et al., 2007).

In general, compared to European American participants, individuals of other ethnic minorities demonstrated less retention in the multisite study (Wilfley et al., 2008). Although there was no treatment by ethnicity effects in this regard, there was very low attrition for minority participants in IPT and very high dropout rates by minorities in CBT guided self-help. The small sample size of minority participants across sites precludes definitive conclusions. Nevertheless, this pattern is in concert with the finding that IPT was particularly effective for African American participants in the previously described multisite study for individuals with BN (Chui et al., 2007). It is possible that the personalized nature of IPT (e.g., problem areas and goals are developed based upon each individual's social environment) is modifiable to, and thus particularly acceptable to, persons of various cultures and backgrounds.

A number of recommendations can be drawn from the recent multisite study. It is possible that CBT guided self-help could be considered the first-line treatment for the majority of individuals with BED, and that IPT is recommended for patients with low self-esteem and high eating-disorder psychopathology. Alternatively, IPT may be considered a first-line treatment for BED. This recommendation is based upon a number of factors: IPT has been shown to be effective across multiple research sites, is associated with high retention across different patient profiles (e.g., high negative affect, minority groups), and demonstrated superior outcomes to behavioral weight loss overall, and to CBT guided self help among a subset of patients with high disordered-eating psychopathology and low-self-esteem. Clinicians and patients should consider these alternatives when deciding the best approach to treating their disorder. Finally, behavioral weight loss should not be considered as a first choice when treating individuals with BED.

In summary, the literature suggests that IPT represents an efficacious treatment alternative to CBT for BED. If delivering IPT for BED in a group format, as with all group therapies, developing member cohesion is paramount to the achievement of treatment success.

Additional Considerations When Choosing Treatment Modality

When determining the treatment approach for patients with EDs, the clinician and patient should together evaluate the advantages and disadvantages of utilizing IPT, CBT, or another therapeutic modality. Furthermore, as part of this determination, it is crucial for clinicians to also explore their own comfort level in terms of their expertise, theoretical knowledge, and propensity toward administering an interpersonally focused treatment. IPT, like CBT, is a specialty treatment and should be administered only by trained practitioners. It has been argued that experienced clinicians who have been trained in other treatment modalities tend to learn IPT quickly and are often able to implement IPT with a high degree of integrity despite minimal training (Birchall, 1999). Currently, there are more data in support of the efficacy of CBT. Based on the evolving literature, IPT may be well suited for patients presenting with or without exacerbated difficulties in social functioning. Although greater problems were associated with poorer outcomes for both CBT and IPT in the Hilbert and colleagues (2007) study, the moderator effect in the more recent multisite study—that patients presenting with greater psychopathology seem to respond well to IPT (Wilfley et al., 2008)—suggests that IPT (or another specialized treatment such as CBT) may be well suited for individuals with a broad range of disordered eating and general psychopathology. Moreover, IPT can be enhanced for individuals with exacerbated psychological problems (Markowitz et al., 2006). It is also possible that IPT may be especially fitting for some minority groups (e.g., African Americans) or specific age cohorts (e.g., adolescents, as described below). Lastly, some patients may express discomfort or difficulties with elements of CBT (e.g., self-monitoring), and IPT should be considered for these individuals.

IPT for Eating Disorders

Basic IPT Concepts

A number of basic concepts are common across all adaptations of IPT, including treatment for EDs. Specifically, adaptations for IPT all focus on interpersonal problem areas and maintain a similar treatment structure. Given the time-limited nature of IPT, treatment success hinges on the clinician's rapid discernment of patterns in interpersonal relationships and the linking of these patterns to eating-disordered symptoms that may have precipitated and maintain the disorder. Thus, early identification of the problem area(s) and treatment goals by the clinician and patient is crucial. Throughout every session, interpersonal functioning should be linked to the onset and maintenance of the eating disorder.

Interpersonal Problem Areas

A primary aim of IPT is to help patients identify and address *current* interpersonal problems. By focusing on current as opposed to past relationships, IPT makes no assumptions about the etiology of an ED. Treatment focuses on the resolution of problems within four social domains that are associated with the onset and/or maintenance of the ED: interpersonal deficits, interpersonal role disputes, role transitions, and grief. *Interpersonal deficits* apply to those patients who are either socially isolated or who are involved in chronically unfulfilling relationships. For clients with this problem area,

unsatisfying relationships and/or inadequate social support are frequently the result of poor social skills. *Interpersonal role disputes* refer to conflicts with a significant other (e.g., a partner, other family member, coworker, or close friend) that emerge from differences in expectations about the relationship. *Role transitions* include difficulties associated with a change in life status (e.g., graduation, leaving a job, moving, marriage/divorce, retirement, changes in health). The problem area of *grief* is identified when the onset of the patient's symptoms is associated with either the recent or past loss of a person or a relationship. Making use of this framework for defining one or more interpersonal problem areas, IPT for EDs focuses on identifying and changing the maladaptive interpersonal context in which the eating problem has developed and been maintained. The four problem areas are discussed in detail in the section describing the "Intermediate Phase."

Treatment Structure

IPT for EDs is a time-delineated treatment that typically includes 15–20 sessions over 4–5 months. Regardless of the exact number of sessions, IPT is delivered in three phases. The *initial phase* is dedicated to identifying the problem area(s) that will be the target for treatment. The *intermediate phase* is devoted to working on the target problem area(s). The *termination phase* is devoted to consolidating gains made during treatment and preparing patients for future work on their own.

Implementing IPT for EDs

The Initial Phase

The first five sessions typically constitute the initial phase of IPT for EDs. The patient's current ED symptoms are assessed and a history of these symptoms is obtained. The clinician provides the patient with a formal diagnosis, which they then discuss, along with what can be expected from treatment. An assignment of the "sick role" (described in further detail below) during this phase serves several functions, including granting the patient the permission to recover, delineating recovery as a responsibility of the patient, and allowing the patient to be relieved of other responsibilities in order to recover. The clinician explains the rationale of IPT, emphasizing that therapy will focus on identifying and altering current dysfunctional interpersonal patterns related to ED features. In order to determine the precise focus of treatment, the clinician conducts an "interpersonal inventory" with the patient and, in doing so, develops an interpersonal formulation that specifically relates to the patient's ED. In the interpersonal formulation the clinician links the patient's ED to at least one of the four interpersonal problem areas. The patient's concurrence with the clinician's identification of the problem area and agreement to work on this area are essential before beginning the intermediate phase of treatment. Indeed, a collaborative effort is promoted throughout the interpersonal inventory and the ensuing therapy sessions.

Diagnosis and Assignment of the Sick Role

Following a psychiatric assessment, the patient is formally diagnosed with an ED and assigned what is termed the "sick role." The assignment of the sick role is theoretical

and serves a practical purpose. Consistent with the medical model, receiving a formal diagnosis reinforces the understanding that the patient has a known condition that can be treated. Accurate diagnosis is essential to effective treatment. Providing a diagnosis also explicitly identifies the patient as in need of help. The sick role is assigned not to condescend to the patient but rather to temporarily exempt him/her from other responsibilities in order to devote full attention to recovery. This is particularly important for individuals with a tendency to set aside their own needs and desires in order to care for and please others. If appropriate, the IPT clinician might explicitly highlight the patient's excessive caretaking tendencies and encourage the patient to redirect this energy from others toward self-recovery.

The Interpersonal Inventory

An initial and critical component of IPT is the interpersonal inventory, which involves a thorough examination of the patient's interpersonal history. Although clinicians have historically taken up to three sessions to complete the interpersonal inventory, we have found that conducting a longer first session (approximately 2 hours) to complete the entire interpersonal inventory may increase the effectiveness of the treatment. This is likely because it allows patients to get "on board" early in terms of their understanding of IPT and how their ED fits into the IPT rationale (Wilfley et al., 2000). The interpersonal inventory is essential for adequate case formulation and the development of an optimal treatment plan. The clinical importance of investing the time to conduct a comprehensive interpersonal inventory cannot be overemphasized; accurate identification of the patient's primary problem area(s) is often complicated and is crucial to success in treatment.

The interpersonal inventory involves a review of the patient's current close relationships, social functioning, relationship patterns, and expectations of relationships. Interpersonal relationships—both patterns and changes—are explored and discussed with reference to the onset and maintenance of ED symptoms. For each significant relationship the following information is assessed: frequency of contact, activities shared, satisfactory and unsatisfactory aspects of the relationship, and ways in which the patient wishes to change the relationship. The clinician obtains a chronological history of significant life events, fluctuations in mood and self-esteem, interpersonal relationships, and ED symptoms. Throughout this process, the clinician works collaboratively with the patient to make connections between life experiences and ED development and symptoms. This exploration provides an opportunity for the patient to clearly understand the relationship between life events, social functioning, and the ED, and thereby clarifies the rationale behind IPT. Upon completion of the interpersonal inventory, the clinician and patient collaboratively identify a primary interpersonal problem area. In some cases, more than one problem area may be identified.

The Interpersonal Formulation

Following completion of the interpersonal inventory, the clinician develops an individualized interpersonal formulation that includes the identification of the patient's primary problem area. Although some patients may present for treatment with difficulties in several problem areas, the time-limited nature of the treatment necessitates

a focused approach. Therefore, the clinician should focus treatment on the problem area(s) that appears to not only impact the patient's interpersonal functioning most, but also those most closely linked to the ED. The clinician, with the agreement of the patient, should assign one, or at most two, problem area(s) for which to develop a treatment plan. We recommend that clinicians write out the agreed-upon goals and present this write-up to patients. The presentation of documented goals can be a very effective technique that serves as a treatment "contract" of sorts. This document becomes a collaborative work agreement that can be revisited and revised throughout treatment to assess and plan future progress. The goals developed at this stage will be referenced at each future session and will guide the day-to-day work of the treatment. If more than one problem area is identified, the patient may choose to work simultaneously on both or may decide to first address the problem area that seems most likely to be responsive to treatment. For example, when a patient has role disputes and interpersonal deficits, clinical attention might first be focused on role disputes, since interpersonal deficits reflect long term patterns that may require considerably more time and effort to change. Once the role dispute has been resolved, the clinician and patient would then decide how to best address the more entrenched interpersonal deficits. Once the primary problem area(s) has been identified and the treatment goals have been agreed upon, the initial phase of treatment is completed.

The Intermediate Phase

The intermediate phase typically contains a total of 8–10 sessions and constitutes the "work" stage of the therapy. As currently conceptualized, an essential task throughout the intermediate phase of IPT for EDs is to assist the patient in understanding the connection between difficulties in interpersonal functioning and the ED behaviors and symptoms. Therapeutic strategies and goals of this phase are shaped by the primary problem area targeted in the treatment. The following section describes the implementation of specific treatment strategies based upon the identified problem area.

Problem Areas

Grief. Grief is identified as the problem area when the onset of the patient's symptoms is associated with the death of a loved one, either recent or past. Grief is not seen as limited to the physical death of a loved one; it can also result from the loss of a significant relationship or the loss of an important aspect of one's identity. The goals for treating complicated bereavement include facilitating mourning and helping the patient find new activities and relationships to substitute for the loss. Reconstructing the relationship, both the positive and its negative aspects, is central to the assessment of not only what has been lost but also what is needed to counter the idealization that so commonly occurs. As patients become less focused on the past, they should be encouraged to consider new ways of becoming more involved with others and establishing new interests (Wilfley et al., 2005).

Role Transitions. Role transition includes any difficulties resulting from a change in life status. Common role transitions include a career change (promotion, firing, retirement, changing jobs), a family change (marriage, divorce, birth of a child, child

moving out), the beginning or end of an important relationship, a move, graduation, or diagnosis of a medical illness. The goals of therapy include mourning and accepting loss of the old role, recognizing the positive and negative aspects of both the old and new roles, and restoring the patient's self-esteem by developing a sense of mastery in the new role. Key strategies in achieving these goals include a thorough exploration of the patient's feelings related to the role change as well as encouraging the patient to develop new skills and adequate social support for the new role (Wilfley et al., 2005b).

Interpersonal Role Disputes. Such disputes involve conflicts with a significant other (e.g., a partner, other family member, employer, coworker, teacher, close friend) that emerge from differences in expectations about the relationship. The goals of treatment include clearly identifying the nature of the dispute and exploring options to resolve it. It is important to determine the stage of the dispute; once the stage of the dispute becomes clear, it may be important to modify the patient's expectations and remedy faulty communication in order to bring about adequate resolution. It may be particularly helpful to explore how nonreciprocal role expectations relate to the dispute. If resolution is impossible, the clinician assists the patient in dissolving the relationship and in mourning its loss (Wilfley et al., 2005b).

Interpersonal Deficits. Interpersonal deficits are typically seen in patients who are socially isolated or who are in chronically unfulfilling relationships. The goal is to reduce the patient's social isolation by helping enhance the quality of existing relationships and encouraging the formation of new ones. To help these patients, it is necessary to determine why they have difficulty in forming or maintaining relationships. Carefully reviewing past significant relationships is particularly useful in making this assessment. During this review, attention should be given to both the positive and negative aspects of the relationships, as well as an investigation of potentially recurrent patterns in these relationships. It may also be appropriate to examine the nature of the patient–clinician relationship, since this may be the patient's only close relationship and it can be observed firsthand by the therapist (Wilfley et al., 2005b).

The Termination Phase

By the end of the intermediate phase, patients are often acutely aware that treatment will soon be ending. The clinician should begin to discuss termination explicitly and address any anxiety the patient may be experiencing. In doing so, the patient should be prepared for emotions that may arise with termination, including grief related to the ending of treatment. At times, patients deny any emotion with regard to the end of treatment and appear to have little reaction to termination. Nevertheless, the clinician should clearly address termination, as the patient may be unaware of, or avoiding, affects related to the end of treatment.

The termination phase typically lasts four or five sessions. During this phase, the patient should be encouraged to reflect on the progress that has been made during therapy—both within sessions and outside of the therapeutic milieu—and to outline goals for remaining work. IPT does not assume that the work toward changes in interpersonal functioning is complete after the last session of the therapy. Rather, patients

and clinician collaboratively summarize the remaining work for the patient to continue outside of the therapeutic milieu. Patients are encouraged to identify early warning signs of relapse (e.g., binge eating, overeating or chaotic eating, excessive dietary restriction, negative mood) and to prepare plans of action. Patients are reminded that ED symptoms tend to arise in times of interpersonal stress and are encouraged to view such symptoms as important early warning signals. Identifying potential strategies to cope with such situations is designed to increase patients' sense of competence and security. Nevertheless, it is also essential to assist patients in identifying warning signs and symptoms that may indicate the need for professional intervention in the future.

Therapeutic Techniques

Therapeutic Stance

As with most therapies, IPT places importance on establishing a positive therapeutic alliance between clinician and patient. The IPT therapeutic stance is one of warmth, support, and empathy. Furthermore, throughout all phases of the treatment, the clinician is active and advocates for the patient rather than remaining neutral. Issues and discussions are framed positively so that the clinician can help the patient feel at ease throughout treatment. Such an approach promotes a safe and supportive working environment. Confrontations and clarifications are offered in a gentle and timely manner, and the clinician is careful to encourage the patient's positive expectations of the therapeutic relationship. Finally, the clinician conveys a hopeful and optimistic attitude about the patient's potential to recover.

Focusing on Goals

As a directed, goal-oriented therapy, IPT clinicians should maintain a focus each week on how the patient is working on his/her agreed upon goals between sessions. Phrases such as "moving forward on your goals" and "making important changes" are used to encourage patients to be responsible for their treatment while also reminding them that altering interpersonal patterns requires attention and persistence. Sometimes during the course of therapy, unfocused discussions arise. The clinician should sensitively, but firmly, redirect the discussion to the key interpersonal issues. By explicitly addressing goals each week, the patient can work toward necessary changes. This goal-oriented focus has been supported by research on IPT maintenance treatment for recurrent depression, which has demonstrated that the clinician's ability to maintain focus on interpersonal themes is associated with better outcomes (Frank, Kupfer, Wagner, McEachran, & Cornes, 1991). In IPT for EDs, it is essential that the clinician facilitate and strengthen the recognition of connections between patients' problematic eating and difficulties in their interpersonal lives.

Making Connections

During the intermediate phase, it is crucial that the clinician assist patients in recognizing, and ultimately becoming more aware of, the connections between eating difficulties and interpersonal events during the week. As patients learn to make these connec-

tions, the clinician should guide them to develop strategies to alter the interpersonal context in which the disordered-eating symptoms occur. As a result, the cycle of the ED is interrupted. Patients are encouraged to make connections between interpersonal functioning and eating patterns that are positive as well. For example, an individual may recognize that communication improved with a significant other and, as a result, the patient did not engage in eating-disordered behaviors. To encourage positive and negative connections, clinicians should ask the patient about his/her eating patterns between sessions: if there were any changes and if the patient recognized any links between eating patterns and interpersonal functioning.

Redirecting Issues Related to ED Symptoms

During sessions, patients with EDs may raise issues relating to distressing eating behavior (e.g., binge episodes; overconcern about eating, shape, and weight) or want to engage in extended discussion related to these behaviors. These issues are relevant insofar as they reflect the clinical status of the patient's ED. The clinician must be cognizant of how these issues are being discussed during the sessions and vigilantly keep the session focused on the patient's treatment goals by gently, but firmly, redirecting discussion to work on the treatment goals. For example, a female patient who avoids intimacy with her husband may attribute her avoidance to body dissatisfaction related to her obesity. She may wish to discuss her body concerns at great length to circumvent actual difficulties in communication with her husband. Dialogue related to ED symptoms must be consistently and repeatedly linked to its functional role in the patient's interpersonal domain.

General Therapeutic Techniques

The IPT clinician differs from providers of other modalities in that throughout the course of treatment, a constant focus on the interpersonal context of the patient's life and its link to the ED symptoms is maintained. Although this approach is unique to IPT, a number of the therapeutic techniques utilized in IPT are similar to those used in other therapies. Such techniques include exploratory questions, encouragement of affect, clarification, communication analysis, and use of the therapeutic relationship.

Exploratory Questions. Use of general, open-ended questions or statements often facilitates the free discussion of material. This technique is especially useful during the beginning of a session. For example, the clinician might open a session with the statement "Tell me about your relationship with your husband." Progressively more specific questioning should follow, as the patient describes the relationship.

Encouraging Affect. IPT's focus throughout the therapeutic process involves affect evocation and exploration (Wilfley et al., 2000). This emphasis is particularly relevant for patients with EDs because problematic eating often serves to regulate negative affect. The IPT clinician should assist patients in (1) acknowledging and accepting painful emotions, (2) using affective experiences to facilitate desired interpersonal changes, and (3) experiencing suppressed affect (Wilfley, 2008; Wilfley et al., 2000).

to, and useful for, patients with interpersonal deficits and interpersonal role disputes. Use of this technique offers the patient the opportunity to understand the nature of his/her difficulties in interacting with others and provides the patient with helpful feedback on his/her interactional style.

Use of a Group. The group setting frequently provides an optimal modality for conducting IPT (Wilfley et al., 2000). Following an individual session to conduct a thorough interpersonal inventory, the group is an ideal milieu in which to work on interpersonal skills with other patients struggling with similar eating problems. It also offers the clinician an opportunity to observe and identify characteristic interpersonal patterns with other individuals. Furthermore, when another group member recognizes and verbally identifies a dysfunctional pattern of communication in a fellow patient, it can be powerful for the patient as well as the other group members. The group setting allows patients to experiment with different ways of communicating within the safe confines of the group. Members can use the sessions to discuss problems they are having in their significant relationships and how these problems relate to their eating patterns. This format often allows patients to recognize that they are not alone in their difficulties, thereby helping to reduce feelings of isolation.

IPT for the Prevention of Excessive Weight Gain

A recent and novel adaptation of IPT has been developed, and is currently being tested, for the prevention of excessive weight gain in adolescents who report loss of control (LOC) eating patterns. LOC refers to the sense that one cannot control what or how much one is eating, regardless of the reported amount of food consumed (Tanofsky-Kraff, 2008). Common among youths, LOC eating is associated with distress and overweight (Tanofsky-Kraff, 2008) and predicts excessive weight gain over time (Tanofsky-Kraff et al., 2009). This adaptation makes use of IPT for the prevention of depression in adolescents (IPT Adolescent Skills Training, IPT-AST) (Young, Mufson, & Davies, 2006) and group IPT for BED (Wilfley et al., 2000), and evolved from the outcome data of psychotherapy trials for the treatment of BED. An unexpected finding of IPT and most psychological treatments for BED has been that individuals with BED who cease to binge-eat tend to maintain their body weight during and/or following treatment (Agras et al., 1995; Agras, Telch, Arnow, Eldredge, & Marnell, 1997; Devlin et al., 2005; Wilfley et al., 1993, 2002). Therefore, it has been hypothesized that treatment of binge eating in youths may reduce excessive weight gain and prevent full-syndrome EDs during development (Tanofsky-Kraff, Wilfley, et al., 2007).

A number of factors suggest that IPT is particularly appropriate for the prevention of obesity in high-risk adolescents with LOC eating patterns. Specifically, adolescents frequently use peer relationships as a crucial measure of self-evaluation (Mufson, Dorta, Moreau, & Weissman, 2004; Mufson, Moreau, Weissman, & Klerman, 1993). A recent study revealed the import of perceived social interactions and social standing on body weight gain over time (Lemeshow et al., 2008). In this prospective cohort study, adolescent girls who rated themselves lower on a subjective social standing scale were 69% more likely to gain more weight over time, compared to girls who rated themselves

on the higher end of the scale (Lemeshow et al., 2008). Furthermore, overweight teens are more likely to experience negative feelings about themselves, particularly regarding their body shape and weight, compared to normal-weight adolescents (Fallon et al., 2005; Schwimmer, Burwinkle, & Varni, 2003; Striegel-Moore, Silberstein, & Rodin, 1986), perhaps because of their elevated rates of appearance-related teasing, rejection, and social isolation (Strauss & Pollack, 2003). The social isolation that overweight teens report can be directly targeted by IPT.

Several longitudinal studies have found depressive symptoms to predict weight gain and obesity onset in children and adolescents (Anderson, Cohen, Naumova, & Must, 2006; Goodman & Whitaker, 2002; Pine, Goldstein, Wolk, & Weissman, 2001; Stice, Presnell, Shaw, & Rohde, 2005). Thus, the proven efficacy of IPT in decreasing depressive symptoms in adolescents (Mufson, Dorta, Wickramaratne, et al., 2004) may serve to decrease an additional risk factor for inappropriate weight gain. In addition to ameliorating depressive symptomatology, IPT is posited to increase social support, which has been demonstrated to improve weight loss and weight maintenance in overweight adults (Wing & Jeffery, 1999) and children (Wilfley et al., 2007). Indeed, data suggest that low social problems predict better response to weight loss treatment in children (Wilfley et al., 2007).

IPT for the prevention of excessive weight gain (IPT-WG) in adolescents at high risk for adult obesity, delivered in a group format, maintains the key components of traditional IPT: (1) a focus on interpersonal problem areas that are related to the target behavior (LOC eating in the present adaptation); (2) the use of the interpersonal inventory at the outset of treatment to identify interpersonal problems that are contributing to the targeted behavior; and (3) the three-staged structure of the intervention (initial, middle, and termination). The primary activities of IPT-WG involve providing psychoeducation about risk factors for excessive weight gain and teaching general skill building to improve interpersonal problems. IPT-WG was founded on Young and Mufson's IPT-AST (Young & Mufson, 2003) and group IPT for the treatment of BED in adulthood (Wilfley et al., 2000). IPT-WG differs from other adaptations in that it was developed to specifically address the particular needs of adolescent girls at high risk for adult obesity due to their current body mass index (BMI) percentile and report of LOC eating behaviors.

Based on IPT-AST, IPT-WG is presented to teenagers as "Teen Talk" in order to be nonstigmatizing. As designed by Dr. Young, this preventive adaptation of IPT focuses on psychoeducation, communication analysis, and role playing (Young & Mufson, 2003). Specific interpersonal communications skills are taught, including "strike while the iron is cold," "use 'I' statements," "be specific" (when talking about a problem), and "put yourself in their shoes" (Young & Mufson, 2003). For IPT-WG, an additional skill, "what you don't say speaks volumes," has been added to teach adolescents how their body language has the ability to impact communication regardless of their words. During the interpersonal inventory, a "closeness circle" (Mufson, Dorta, Moreau, et al., 2004) is used to identify the close relationships of the participant. Sessions can be appropriately geared toward the adolescents' developmental level. For instance, younger adolescents, who may be uncomfortable talking about themselves, may respond better to hypothetical situations and games, whereas older teenagers may more readily discuss their own interpersonal issues from the outset.

Based on IPT for BED, IPT-WG focuses on linking negative affect to LOC eating, overeating, times when individuals eat in response to cues other than hunger, as well as overconcern about shape and weight. Furthermore, a timeline of personal eating and weight-related problems and life events is discussed individually with participants prior to the group program. Unlike IPT for BED, the problem area of grief is rarely relevant due to the young age of participants, but may be included on a case-by-case basis. Similar to both programs, IPT-WG is delivered in a group format. IPT-WG is 12 weeks in duration, longer than IPT-AST (8 sessions), but shorter than group IPT for BED (typically 20 sessions). Similar to IPT-AST, group size is smaller than in IPT-BED (five vs. nine members), enabling clinicians to keep adolescents engaged.

Progress in the Delivery of IPT for EDs

IPT interventions for major depression and associated disorders are uniform in that they include a consistent focus on the target symptoms of the respective disorders. By contrast, most research applications of IPT for EDs, especially BN, did not initially include a strong focus on ED symptoms. Initially, this lack of symptom focus was intentional in order to minimize procedural overlap with CBT and, in doing so, clearly distinguish IPT from CBT in comparative psychotherapy trials. Increasingly, however, in both clinical settings and research studies of IPT for BED and the prevention of adult obesity, consistent attention to the relationship between interpersonal functioning and disordered-eating symptoms is being utilized to achieve maximum therapeutic impact. Indeed, in each session of IPT for EDs, symptoms should be explicitly and repeatedly linked to problems in interpersonal functioning. In IPT-WG for adolescents at risk for adult obesity, linking LOC eating to interpersonal functioning is done consistently and frequently throughout the interpersonal inventory as well as the group sessions (Tanofsky-Kraff, Wilfley, et al., 2007). Indeed, preliminary findings suggest that IPT prevents excess weight gain among these high-risk adolescent girls (Tanofsky-Kraff, Wilfley, et al., 2008).

Future Directions for IPT in the Treatment of EDs

Several important areas require further study. An important next step is to determine whether IPT for EDs can be translated from specialty care centers to the primary care setting and other typically nonresearch clinical practice milieus where counselors are trained to deliver IPT. In an effort to continually improve IPT and broaden its utility, we propose other research directions in this section.

Enhancing IPT for BN and BED

As efforts to more frequently and consistently link ED symptoms to interpersonal functioning have evolved in the use of IPT for BED, clinical researchers involved in developing IPT for BN should also consider stressing this link during the delivery of IPT so that it offers the utmost potency. IPT, in its current form, already seamlessly incorporates aspects of other therapeutic modalities. For example, the collaborative, behavioral for-

mulation during the interpersonal inventory is one of the ways in which IPT more closely resembles the behavior therapies than it does the supportive or psychodynamic therapies. Therefore, some aspects of CBT may support the efficacy of IPT. For example, IPT clinicians might wish to use self-monitoring as a method for patients to become more aware of their negative affect surrounding ED symptoms. Such an approach is already being tested in other treatment modalities. Indeed, Fairburn and colleagues have found the inclusion of an interpersonal module effective when administering a recently modified version of CBT for EDs (Enhanced CBT for Eating Disorders; Fairburn, 2008).

Adolescent– and Child–Parent Adaptations

Given the robust efficacy of IPT for adolescents with depressive disorders, and the initial promise of IPT-WG, future research should involve additional adolescent adaptations. Adolescence is a key developmental period for cultivating social and interpersonal patterns, which may explain why adolescents appear to relate well to IPT. From its inception, Mufson and colleagues made important adolescent-relevant adaptations to the treatment (Mufson, Dorta, Moreau, et al., 2004), for example, the inclusion of a parent component and the assignment of a "*limited* sick role," since adolescents are required to attend school and reducing their activities is likely to exacerbate their interpersonal difficulties. Given that this foundation has been established, the use of IPT for adolescents with BN and BED warrants investigation.

Utilizing IPT for younger children may also be effective. A pilot study of family-based IPT for the treatment of depressive symptoms in 9- to 12-year-old children was found to be feasible and acceptable to families (Dietz, Mufson, Irvine, & Brent, 2008). Currently, an effectiveness trial is underway. The moderating influence of social problems on weight loss outcome in a family-based program (Wilfley et al., 2007) suggests that targeting interpersonal functioning in the nuclear family milieu may serve as a point of intervention for the treatment of eating- and weight-related problems during middle childhood.

Developing IPT for the Prevention of Eating- and Weight-Related Problems

Given the increasingly high rates of obesity in the United States (Ogden et al., 2006), it may be reasonably posited that the increases in disordered eating will continue as well, considering that overweight is a significant risk factor for the development of eating pathology (Fairburn et al., 1997, 1998). Therefore, the use of IPT to prevent obesity and full-syndrome EDs should be explored by targeting other behaviors that promote both conditions. Since not all overweight individuals report LOC eating, reducing emotional eating and eating in the absence of hunger may also be suitable for IPT modalities. Recent studies suggest that LOC eating in youths is associated with eating in response to negative affect (Goossens, Braet, & Decaluwe, 2006), including anger, frustration, depression, and anxiety (Tanofsky-Kraff, Wilfley, et al., 2007). In studies of adolescents, emotional eating is significantly correlated with constructs of disturbed eating (van Strien, 1996; van Strien, Engels, Van Leeuwe, & Snoek, 2005) and symptoms of depression and anxiety (van Strien et al., 2005). Data also suggest that emotional eating may be associated with overweight in youths (Braet & van Strien, 1997) and predict overeat-

ing in cross-sectional structural models (van Strien et al., 2005). Considering that IPT for BED effectively reduces eating in response to negative affect in adults (Wilfley et al., 1993, 2002), preventive adaptations targeting emotional eating require investigation.

Eating in the absence of hunger has been associated with overweight (Moens & Braet, 2007) and excessive weight gain over time (Shunk & Birch, 2004). Reported eating in the absence of hunger has been shown to be associated with LOC eating, emotional eating, and elevations in general psychopathology (Tanofsky-Kraff, Ranzenhofer, et al., 2008). Of concern are data indicating that eating in the absence of hunger is a stable trait throughout adolescence (Birch, Fisher, & Davison, 2003; Fisher & Birch, 2002). Promising findings indicate that young children can be trained to better regulate food intake (Johnson, 2000), and a number of intervention studies targeting eating in the absence of hunger are currently underway. IPT may serve as a natural extension on this work; in particular, negative affect associated with interpersonal problems might be linked to eating in the absence of hunger. Then, recognition of internal physiological hunger cues can be taught so that patients learn to differentiate true hunger from when they are already sated.

Finally, there has been a growing interest in, and awareness of, the role that social and interpersonal factors may play in behavioral health problems (Glass & McAtee, 2006). Particularly for obesity, moving away from focusing solely on individual behavioral changes (e.g., diet and exercise) and toward the greater social context has not been the norm. IPT may be particularly well suited for developing new approaches for the prevention of obesity and EDs on a broader social level.

Conclusion

IPT for BN and BED is a focused, time-limited treatment that targets interpersonal problems associated with the onset and/or maintenance of the ED. The interpersonal focus is highly relevant to individuals with EDs, many of whom experience difficulties in interpersonal functioning. Depending on the individual's primary problem area, specific treatment strategies and goals are incorporated into the treatment plan. The primary problem area is determined by conducting a thorough interpersonal inventory, a unique aspect of IPT, and by devising an individualized interpersonal formulation for each patient. IPT has demonstrated significant and well-maintained improvements for the treatment of BN and BED. Preliminary data support the utility of IPT for the prevention of excess weight gain in adolescent girls. Adaptations of IPT should be explored for adolescent populations and the treatment of other eating- and weight-related problems.

Acknowledgments

This work was supported by National Institute of Diabetes and Digestive and Kidney Diseases Grant No. 1R01DK080906-01A1 and Uniformed Services University of the Health Sciences Grant No. R072IC (to Marian Tanofsky-Kraff) and by National Institute of Mental Health Grant Nos. 5R01MH064153-06 and 1K24MH070416 (to Denise E. Wilfley). The opinions and asser-

tions expressed herein are those of the authors and are not to be construed as reflecting the views of the Uniformed Services University of the Health Sciences or the U.S. Department of Defense.

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Exhibit 4

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Published in final edited form as:
Int J Child Adolesc health. 2009 January 1; 2(2): 243–254.

Family-Based Treatment for Adolescent Eating Disorders: Current Status, New Applications and Future Directions

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Abstract

Family-based treatment (FBT) is emerging as a treatment of choice for adolescent anorexia nervosa (AN) and bulimia nervosa (BN). This paper reviews the history of FBT, core clinical and theoretical elements, and key findings from the FBT for AN and BN treatment outcome literature. In addition, we address clinical questions and controversies regarding FBT for eating disorders, including whether FBT is clinically appropriate for all adolescents (e.g., older adolescents, patients with comorbid conditions), and whether it indicated for all types of families (e.g., critical, enmeshed, and non-intact families). Finally, we outline recently manualized, innovative applications of FBT for new populations currently under early investigation, such as FBT as a preventive/early intervention for AN, FBT for young adults with eating disorders, and FBT for pediatric overweight.

Keywords

family-based treatment; eating disorders; adolescents

Introduction

While there are several schools of family therapy, Family-Based Treatment (FBT) specifically refers to a treatment modality originally developed in the late 1970s and early 1980s by a team of clinical researchers led by two family therapists, Christopher Dare and Ivan Eisler. This team was based at the Institute of Psychiatry and the Maudsley Hospital in London, England. Consequently, this treatment has come to be known as the "Maudsley Approach" or the "Maudsley Method" (1).

FBT is a novel therapy in that it is theoretically agnostic and emphasizes parents as a resource, and empowers families in their effort to bring about recovery in their adolescent with an eating disorder. However, the first effort to include families in the treatment of adolescents with anorexia nervosa (AN) was made by Minuchin and his colleagues at the Child Guidance Clinic in Philadelphia (2). While treatment was quite mixed, the primary intervention was family therapy and the authors reported successful outcome in about 86% of patients. Given this success rate, as well as the theoretical model of the "psychosomatic family" upon which much of their work was based, Minuchin's work ultimately exerted considerable influence on ensuing efforts by the Maudsley group to involve families in the treatment of adolescents with AN.

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The underlying theoretical principles and clinical application of Minuchin's structural family therapy, along with other school's of thought such as Palazzoli's (3) work from the Milan Group and Haley's (4) strategic therapy, served as the foundation for the development of FBT. This, in turn, gave rise to a number of controlled FBT studies which were pioneered at the Maudsley Hospital in London. FBT, as employed in these studies, contained several aspects of Minuchin's approach, but differed in significant ways.

Most important of these was that the Maudsley team, unlike Minuchin, encouraged parents to persist in their efforts until normal body weight had been achieved. In FBT, general adolescent and family issues are deferred until the eating disorder behavior was under control.

FBT remained limited to England from the time of its development until the mid 1990s. In 1994, Daniel le Grange, a member of the Maudsley team introduced FBT to his colleagues in the United States, when he trained at Stanford University. Through the relationships he established at Stanford University, he teamed up with James Lock to collaborate on manualizing (5) and studying this approach in clinical research trials targeting adolescents with eating disorders.

Much of their work, both collaboratively and independently, has led to the successful dissemination of FBT to other specialist centers in the United States, Canada and Australia.

The Foundation Approach

Core Clinical and Theoretical Elements

FBT for adolescent AN is the original application of this model and its protocol (5) represents the foundation approach. In addition, manualized adaptations exist for bulimia nervosa (BN) (6), for the prevention of AN in children and adolescents with clinically significant, prodromal presentations (7), for young adults with AN (8), and for pediatric overweight (9). These newer applications will be described in detail below. FBT for adolescent AN is a short-term treatment designed to mobilize parents in assisting their ill child reverse his/her state of starvation acutely and ultimately achieve remission from AN. Given the profound physical and psychosocial liabilities associated with AN, a primary goal of FBT is to facilitate a return to a normal developmental trajectory, consistent with chronological age. FBT challenges the practical factors maintaining the AN, such as allowing the ill adolescent to make his/her own food choices, and makes no assumptions about the cause of AN. The treatment does not presuppose a familial pathology and in fact works to reduce parental self-blame regarding etiology. Moreover, FBT externalizes the illness, thereby reducing blame toward the ill adolescent for the symptoms s/he is experiencing. This aids in correcting misperceptions often held by siblings, who may believe their sister/brother is orchestrating the AN for attention. Sibling relationships are further protected by assigning a supportive role in treatment to siblings, reserving all supervisory responsibilities exclusively for the parents (10).

In the first of three phases of treatment, parents fully take charge of their ill child's eating, assuming the functions typical of an inpatient staff. The therapist helps parents develop and refine their techniques in an in-session family meal, a goal of which is for parents to convince their child to consume at least one more bite than s/he was originally willing. It is important to emphasize that this parental stance is unique to Phase I of FBT; once a minimal level of weight restoration is achieved (i.e., the adolescent crosses back over the diagnostic weight threshold) and conflict around eating is significantly reduced, control over food consumption is transferred back to the adolescent in Phase II of treatment. Phase III of FBT focuses on termination and more general issues of adolescent development. In its manualized format (5), FBT encompasses 20 sessions, although recent research indicates that a shorter course is as efficacious and arguably more cost-effective (11).

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As suggested above, FBT incorporates an amalgam of techniques from family systems therapy, structural family therapy, and eating disorders-specific interventions. Also, as the treatment does not align with a particular therapeutic approach, etiological theory of AN, or model regarding maintenance of illness, hypothesized mechanisms of action of FBT for AN include exposure to forbidden foods and feared weight ranges, restructuring of family authorities and coalitions, and hormonal re-regulation as a function of weight restoration. FBT for AN has not been directly compared to inpatient behavioral interventions; however, long-term data across clinical trials and naturalistic follow-up studies indicate that treatment effects are more durable and relapse rates are markedly lower in FBT (12–14). Since FBT does not directly target the psychological feature of AN, such as fear of weight gain and body image disturbance, it is unlikely that improvements in these domains account for the sustained good outcome several years after completing FBT (12–14). However, indirect effects in these symptoms via the mechanisms noted above (e.g., exposure to feared weights, hormonal correction following full and sustained weight restoration) cannot be ruled out. Another possibility is that since FBT for adolescent AN by definition targets younger patients with a more recent onset of illness than their adult counterparts, this population is more responsive to treatment and has a better prognosis. However, randomized controlled trials (RCTs) of FBT versus individual psychotherapy show that even within this restricted age range, FBT is superior (12,15–17). Finally, it is likely that by training parents to create a zero-tolerance environment for self-starvation in their home and teaching them to identify signs and symptoms of AN, they keep relapse at bay. In that respect, parents can prevent a kindling effect, with each relapse increasing the likelihood of a subsequent one and of a more chronic course of illness.

FBT for Adolescent Anorexia Nervosa

Key Findings from the Literature

The efficacy of FBT for adolescent AN has been tested in RCTs (11–19). The first RCT of FBT for AN included a population of adolescent and adult patients. The only significant finding from this study demonstrated that FBT was particularly efficacious for patients 18 and younger. That is, FBT delivered better results in absolute clinical outcome and relative to individual treatment, acutely (one-year post-hospitalization) (17) and at five-year follow-up (12). These seminal studies provided preliminary evidence of FBT's utility in preventing relapse and facilitating continued improvement following inpatient weight restoration.

Since then, FBT for adolescents with AN has been subjected to further study in several additional RCTs, open trials, and clinical case series. Taken together, this literature has demonstrated that FBT is effective for a full course of outpatient weight restoration thereby preventing hospitalization (11,18,19) and that such gains are maintained 4–5 years after treatment ends (12–14); a version of FBT in which parents are seen separately from their adolescent is superior to the traditional conjoint FBT format when families are critical of their adolescent (high levels of expressed emotion) (18,21); that FBT yields a better outcome than either supportive individual psychotherapy (17) or a more focused and manualized ego-oriented individual therapy (15,16); that an abbreviated, 10-session course of FBT is as efficacious as the manualized 20-session version (11); that FBT can be disseminated in that it is feasible and effective when administered by investigators other than its developers (22,23); and that it appears to be as effective for children as it is for adolescents (24).

FBT for Adolescent Bulimia Nervosa

Rationale for Adaptation

Family-Based Treatment for bulimia nervosa (FBT-BN) (6) has been adapted from FBT for AN and, like its predecessor, is designed for adolescents. Until the development of this manual, only a limited number of either case series or case studies have been conducted for adolescents

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with BN. Most of these studies involve the patient's parents in the treatment. Moreover, AN - binge/purge subtype (about 20% of the samples studied) is typically responsive to FBT in terms of weight gain and reductions in binge and purge episodes. This suggests that parents are able to effectively decrease bulimic behaviors in addition to reversing severe dieting (11,18). Whereas AN and BN are distinct syndromes, considerable overlap in symptomatology is common. Therefore, the efficacy of FBT for adolescent AN might be extended to include adolescent BN.

As in FBT for AN, this treatment modality for adolescents with BN is an outpatient intervention typically conducted in 20 sessions over 6 months. In some instances a shorter course is sufficient while additional sessions may be necessary for others. FBT-BN consists of three phases. In Phase I parents are encouraged to assist their teen to reestablish healthy eating patterns and avoid engaging in binge eating and purging episodes. This process is collaborative in nature, however, parental authority is mobilized should this be required to manage the health crisis that the eating disorder poses. The adolescent's autonomy in other domains such as friendships and school is almost always kept intact at a level consistent with the patient's stage of development. In Phase II manages the return of control over eating to the adolescent at the time that acute symptoms have abated and regular eating patterns are established. Phase III addresses termination and issues of family structure and normal adolescent development.

In keeping with FBT for AN, FBT-BN also views the parents as a resource for resolving the eating disorder, and corrects misperceptions of blame directed to either the parents and their adolescent. Siblings are protected from the job assigned to the parents and are encouraged to play a supportive role in treatment. FBT-BN does not delve into what caused BN, instead, this treatment focuses on what can be done to resolve this serious disorder.

Key Findings from the Literature

The first of only two RCTs for adolescents with BN compared family therapy (n=41) (a form of FBT-BN) and cognitive-behavioral guided self-care (n=44) (CBT-GSC) (25). These authors found no statistical differences at six months follow-up between the two treatments on binge/purge abstinence rates (around 40% for both). Direct cost was lower for CBT-GSC compared to family therapy, however, there were no other differences in cost between these two treatments. In the second RCT, Le Grange and colleagues (26) assigned 41 patients to FBT-BN and 39 to supportive psychotherapy (SPT), and unlike the Schmidt et al. (25), significant differences between the treatments did emerge. Categorical outcomes at post-treatment demonstrated significantly more patients in FBT-BN (39%) were binge/purge abstinent compared to SPT (17.9%). Somewhat fewer patients were abstinent at 6-month follow-up, however, the difference was statistically in favor of FBT-BN (29.3% vs 10.3%). Secondary outcome assessment, based upon random regression analysis, revealed main effects in favor of FBT-BN on all measures of eating pathology. Therefore, FBT-BN showed a clinical and statistical advantage over IPT at post-treatment and at 6-month follow-up. Reduction in core bulimic symptoms was also more acute for patients in FBT-BN as opposed to SPT. But still it is the same results, when comparing FBT-BN to CBT-GSC. That is, FBT-BN and CBT-GSC are significantly favored treatments in comparison to SPT.

Clinical Questions and Controversies

Does FBT Work for All Adolescents with AN or BN?

Is FBT clinically appropriate across the child-adolescent age spectrum?—Eating disorders impose significant developmental constraints on adolescents in both physical and psychosocial domains, with AN rendering the most severe liabilities. As described above, FBT works to restore the adolescent to his/her chronologically expected developmental state. In

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addition, FBT views the illness as directly responsible for impairing the adolescent's decision-making capabilities with regard to sensible food consumption and shape/weight standards. In that respect, the adolescent – even the older adolescent - is seen as functioning at a developmentally regressed level in his/her ability to appropriately self-feed. FBT asks parents to compensate for this discrepancy between chronological age and illness-influenced developmental state by temporarily taking charge of their child's eating until the eating disorder minimally recedes. In AN, this initial phase of treatment is characterized by parents assuming full responsibility for their child's eating; in BN, where the adolescent is typically less impaired and more on a par with her peers in terms of adolescent development, the process in Phase I is more collaborative between parents and child.

Given the equalizing force of the eating disorder in yielding a similarly regressed state across chronological age, FBT does not modulate its early techniques as a function of adolescent stage of development. However, Phase II, in which control is transferred back to the adolescent, and Phase III, in which broader issues of adolescence are addressed, are exquisitely sensitive to the subtle and gross differences between early, middle, and late adolescence. Importantly, even in Phase I, the therapist instructs the family to defer to actual stage of adolescent development in domains external to the eating disorder. For example, while parents may fully supervise meals, they would not supervise their adolescent's social encounters in the same manner. If parents do not afford sufficient respect to adolescent development in these other areas – whether pre-morbidly, as a function of general concern for their ill child, or based on a misunderstanding of their mission in FBT – the therapist actively corrects this.

Does the research support the application of FBT across the full child-adolescent age spectrum?—While not yet tested in an RCT, FBT for children has generated promising results in a clinical case series (24) Within adolescence, compared to younger adolescents with AN, the evidence for the efficacy of FBT for older adolescents is somewhat mixed. A case series of adolescents with AN (22) showed no difference in outcome for younger (9–14 years) versus older (15–18 years) patients. Recent FBT trials for adolescent AN (12 to 18 years) (11) or BN (12 to 19 years old) (26) found that age was not a moderator of treatment outcome. In contrast, younger age was a predictor of remission for AN in univariate (but not multivariate) analyses (20). However, it is difficult to disentangle age from other variables that might be a proxy for severity of illness, such duration of illness, number of previous hospitalizations, and BMI, all of which loaded with age on the principal component analysis in that study (20).

Is FBT clinically appropriate for adolescents with greater levels of specific and comorbid psychopathology?—In the only predictor analysis of adolescents with AN receiving FBT, Lock and colleagues (20) found that co-morbid psychiatric disorder predicted dropout and lower remission rates, and that the probability of remission increased with a reduction in child behavioral symptoms. Moderator analyses from the original trial (11) found that patients with higher levels of eating disorder-specific obsessions and compulsions fared better in a full course of treatment compared to an abbreviated course, but that that other severity indices (e.g., duration of illness, purging status) did not moderate outcome. In the only predictor analysis for adolescents with BN receiving FBT or SPT, findings indicated that participants with less severe Eating Disorder Examination (EDE) (27) eating concerns at baseline were more likely to be binge and purge abstinent (remitted) at post-treatment and follow-up, regardless of the treatment that they received (28). Participants with lower depression scores and fewer binge/purge episodes at baseline were more likely to be partly remitted (no longer meeting study entry criteria) at post-treatment and follow-up, respectively. In terms of moderators, participants with less severe eating disorder psychopathology (EDE global score), receiving FBT-BN, were more likely to meet criteria for partial remission at follow-up. Lower eating concerns are the best predictor of remission for adolescents with BN and FBT-BN may

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be most effective in those cases with low levels of eating disorder psychopathology. It is noteworthy that some severity-related factors with prior support as predictive of outcome, such as duration of illness and diagnosis (17,29), turned out to be neither predictors nor moderators of outcome in the present study. (28).

Does FBT Work for All Families?

Critical Families—Expressed Emotion (EE) has been studied in the families of patients with eating disorders (21,30–35), and has become a useful way to tap into the quality of the 'emotional life' of families of children with eating disorders. For instance, Minuchin and his colleagues (2,36) suggested that families of children with AN have several characteristics in common, such as enmeshment, and lack of conflict resolution. EE allows us to reliably measure several aspects of functioning in families with an eating disorder offspring.

Studies have shown that patients with AN are more likely to drop out of treatment prematurely, or have a poor outcome should they remain in treatment, if their parents are overly critical toward them (high EE family) (21,33,34). This finding has recently also been replicated for adolescents with BN (31). Family interaction has important treatment implications. For instance, a version of FBT for AN in which parents are seen separately from their adolescent has shown to be superior to FBT in its conjoint format when families present with high levels of EE (high in terms of criticism) (18,21). This line of inquiry is still in its infancy and more work is clearly required.

Enmeshed Families: A traditional theory of eating disorders in adolescence, particularly AN, is that the illness represents a maladaptive attempt at separation and control in the context of an enmeshed family (36). Correspondingly, a prescription for recovery is often to afford more autonomy to the adolescent, especially with regard to eating, so as to prevent an exacerbation of symptoms. At its extreme, this recommendation excludes parents from treatment entirely, and has been labeled a "parentectomy" (37). In turn, a criticism that has been raised against FBT is that it prescribes, rather than proscribes enmeshment by virtue of Phase I techniques. This concern is predicated on four assumptions: first, that family enmeshment is implicated in the etiology of adolescent eating disorders; second, that FBT does not respect adolescent autonomy; third, that enmeshed parents would resist the transfer of control back to the adolescent in Phase II; and fourth, that FBT should ultimately worsen symptoms, even if it suppresses them in the short term. Each assumption is contradicted by or lacks support in research findings.

First, there are no longitudinal data to indicate enmeshment plays an etiological role in eating disorders. Even if large cross-sectional studies were to find an increased prevalence of enmeshment in eating disorder families relative to psychiatric and normal controls, it would be difficult to know whether this reflected cause of illness or the effect of having a child with a severe disorder, particularly one associated with a high mortality rate. Second, as noted above, FBT affords significant respect to adolescent autonomy, by maintaining domain specificity of parental control in Phase I, requiring transfer of control over food in Phase II, and directly addressing adolescent development, including issues pertaining to separation and individuation, in Phase III. In this respect, FBT can theoretically correct the expressions of an enmeshed family dynamic (while not directly treating the underlying family pathology) and would not be contraindicated for such a family. Third, there is no evidence to suggest that parents resist the transition to Phase II, which would be indicative of an enmeshed family process; in fact, clinical observations suggest a greater risk is parents' abrupt or rapid abdication of supervisory responsibilities once weight is minimally restored. Finally, follow up studies of FBT for AN (12–14) demonstrate sustained and robust improvement, without evidence of an

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ultimate symptomatic backlash in response to Phase I techniques. In other words, it is the eating disorder, not FBT, which appears to pose an insult to adolescent development.

Non-Intact Families: Another concern that has been raised about FBT is whether it is appropriate for a variety of family structures (e.g., divorced, separated, single parent, grandparent-headed households, etc.) beyond the traditional intact family. The treatment manuals (5,6) have the latitude to accommodate atypical family configurations provided that at least one parent or guardian can be involved in treatment. Moderator analyses from the Lock et al (11) comparison of 6-month versus 12-month FBT for AN showed that non-intact family status fared better with a longer treatment duration. Predictor analyses (20) from this study did not find family status to predict dropout or remission. In the BN literature, FBT was equally effective for intact and non-intact families (28). Collectively, these findings support the use of FBT with both intact and non-intact families, with the latter benefiting from a full, 12-month (20-session) course of treatment, per the published manual (5).

New Applications under Investigation

FBT for Young Adults with AN

The absence of FBT studies for young adults (18–25 years) with AN is surprising for at least two reasons; there are similarities in terms of how financially dependent older adolescents and young adults are upon their parents, and there are significant challenges to engage and maintain adults in treatment. Young adults like older adolescents are substantially financially dependent on their parents, with nearly two-thirds of young adults in their early 20s receiving economic support from their parents (38). US census data from 1970–2000 suggest that the percentage of young adults living without financial dependence on family has declined significantly (39). Thus, dependence upon family resources continues later into the 20's for more young adults today than it did even a decade or two ago. Thus, it is surprising that we have not systematically used family treatment with young adults especially given the notorious difficulty in engaging and maintaining adults with AN in treatment (29). Involving family or other individuals who are concerned about the patient in treatment together with the AN patient may be a powerful way to maintain the patient's engagement. This is seen clearly in dropout rates for adult AN with the largest study reporting a dropout rate of 46% (29) and FBT treatment with adolescent AN showing dropout rates of 10–20% (11,40).

While young adults may still be substantially dependent upon parents, they also face different challenges than adolescents. It must also be noted that despite similarities, young adulthood has certain developmental differences from adolescence. For instance, young adults are legally regarded as adults, are more likely to be independent, and are more intellectually and socially experienced and skilled than adolescents. For instance, young adults are more likely to have moved out from home than adolescents with about half of the 27 million 18 to 24 years olds in the USA are not living with their parents (55.7%) (41). Due to this relative independence from family, young adults may struggle with new living situations, participation in the work-force or further educational challenges. Capitalizing on this ongoing leverage that parents may still have over their ill young adult offspring, FBT for this patient population is more collaborative. In other words, it is more in keeping with the model for BN as opposed to adolescent AN.

FBT for Subsyndromal Anorexia Nervosa in Children and Adolescents

Early identification and treatment of AN is considered to have a positive prognostic impact on the course of illness in AN (42,43), although duration of illness remains a potential confound in these analyses (44). Given that (a) children and adolescents often present atypically on a number of dimensions relative to strict DSM (45) diagnostic criteria (Workgroup for

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Classification of Eating Disorders in Children and Adolescents (WCEDCA)), (46), (b) clinically significant but technically subthreshold presentations of AN (SAN) can reflect a disorder in evolution rather than a stable state or transient phase (e.g., 47,48,49) and (c) once the diagnostic threshold is crossed, AN is notoriously refractory to treatment, it is reasonable to target SAN at the intersect of prevention and intervention for AN. FBT is an excellent candidate preventive intervention for SAN in light of its efficacy for AN (50). In addition, an open feasibility/dissemination trial of FBT for AN-spectrum presentations found that FBT arrested and reversed AN symptoms in an SAN subset (23). An RCT is currently underway at Mount Sinai School of Medicine comparing FBT-SAN (7) to individual supportive psychotherapy in this potentially prodromal population.

While much of the core FBT for AN protocol (5) applies to clinically significant SAN patients, several important modifications are noted. First, the foundation approach is modified to address a wider range of developmental stages. While AN typically onsets in mid-late adolescence, prodromal AN by definition precedes this. Second, for SAN participants who have lost weight but do not yet meet the weight cutoff for AN, regulation of eating patterns and the incorporation of a full range of foods in the child or adolescent's diet may be as important goals as weight gain early in treatment. Third, the goals and language of the treatment re modified to incorporate the notion of risk of progression from SAN to AN, while at the same time emphasizing the clinical severity of the SAN in and of itself, and the need for reduction and resolution of presenting symptoms. While we cannot be certain that all such patients would eventually go on to develop AN (i.e., that they are truly prodromal), their symptoms are sufficiently clinically severe to warrant intervention. Fourth, the revisions for SAN stress the importance of regular family meals at home and the modeling of healthy, non-restrictive eating habits by parents.

FBT for Pediatric Overweight

Parent involvement is a crucial element in reducing pediatric overweight (PO) in light of parents' ability to control and modify the family's home environment to promote the child's healthy behaviors. Data from the PO literature highlight that the most efficacious PO interventions include parental involvement to some degree (51,52). However, a recent review of studies with differing degrees of parental involvement provides mixed evidence of a positive relationship between greater parental involvement and better weight loss outcomes (53). It is possible that the relationship between family involvement and successful weight loss, as well as the optimal level of parental involvement, may vary as a function of the child's age and psychosocial development. In particular, the literature has not adequately addressed the unique needs of adolescents and the ideal quality and quantity of parental involvement at this crucial stage of development. Treatment of adolescent overweight must adequately navigate the dual challenge of the adolescent's increasing need for independence in the context of sustained reliance on a parent-influenced home environment. To date, no PO treatment study has targeted overweight across the child-adolescent age spectrum, nor has attempted to modulate parental involvement from a transdevelopmental perspective. FBT is a logical foundation approach to begin to resolve these deficits in the literature.

Inherent in the FBT model is a mission to increase parental empowerment, competence, and efficacy in facilitating healthy behaviors and outcomes for children, and in unapologetically assuming appropriate parental influence. Beyond this, FBT provides a strong foundation for application to the significant problem of PO because of its attention to parental engagement strategies, its demonstrated efficacy in correcting maladaptive eating and related behaviors, its explicit agenda of blame reduction, its disease-based model, and its emphasis on promoting normal physical and psychosocial development for the child or adolescent. Loeb and colleagues (9) proposed an innovative adaptation of FBT to PO (FBT-PO) that maintains the underlying tenets of the original FBT protocol but modifies it for a non-psychiatric weight disorder, with

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application to either psychiatric or primary care settings. FBT-PO is currently being piloted at two sites (Mount Sinai School of Medicine and the University of Chicago.) Importantly, FBT-PO recognizes that PO is not a psychiatric disorder and that children/adolescents are not developmentally regressed as they are in severe eating disorders. Therefore, FBT-PO modulates the quality and intensity of parental involvement as a function of developmental stage. It also recognizes specific challenges of socioeconomically diverse populations (e.g., built environment, reduction in school-based physical activity), the challenges of concordance of overweight across family members, and the need for parents to model attitudes and dietary/physical activity habits associated with healthy weight. Finally, FBT-PO addresses the multi-systemic toxic environment (54) that contributes to PO, and focuses on parent-driven, family-level change.

Conclusions

In conclusion, FBT is emerging as a treatment of choice for adolescent anorexia nervosa and bulimia nervosa, with promising adaptations for prevention of eating disorders in high risk children and adolescents, for young adult eating disorders, and for pediatric overweight. While the intervention continues to raise questions and controversies, it is gaining public and scientific acceptance in light of its demonstrated efficacy to date. However, additional and larger clinical trials are necessary to fully test its scientific merit. An NIMH five year two-site RCT (the University of Chicago and Stanford University) commenced in April 2004. In this study, adolescents with AN were randomly allocated to either FBT or Ego-oriented Individual Therapy (EOIT). This is the first large-scale treatment trial for adolescents with AN and should, upon completion, go some way toward verifying the relative efficacy of FBT for this clinical population. Another NIMH-funded multi-site study (with Stanford University as the Coordinating Center and 6 clinical sites) is examining FBT relative to family systems therapy as well as the adjunctive role of medication. Other studies underway involving FBT principles include a parent training treatment development study at Duke University; a study investigating the role of FBT in inpatient care at the University of Sydney; and a study of multi-family group FBT at the Institute of Psychiatry, London. Beyond these, future inquiries should focus on dismantling and step-care studies, as well as comparisons between FBT and treatment as usual, including inpatient and day treatment models. Larger trials for AN and BN, especially designs with two active treatments with hypothesized mediators, would permit investigation of mechanisms of FBT. It is also important to examine the relative moderating effect of symptom severity in terms of cognitions for a treatment that focuses on such symptoms, e.g., CBT, in order to determine whether these moderating effects would be similar between two specific treatments. Finally, the newly manualized and piloted adaptations of FBT described above require formal testing, as well as raise intriguing possibilities about the adaptation of FBT to other psychiatric disorders in adolescence, such as substance abuse.

Acknowledgments

This work was supported in part by a Career Development Award granted to the first author by the NIMH (K23-MH 074506-01) and a Research Project Grant Program awarded to the second author by the NIMH (R01-MH 70620). The authors thank Lauren Alfano, BA, Angela Celio Doyle, PhD, Tom Hildebrandt, PsyD, and James Lock, MD, PhD for their contributions to the manuscript.

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Exhibit 5

EFFECTIVENESS OF MAUDSLEY THERAPY WITH DIALECTICAL BEHAVIORAL THERAPY IN AN INTENSIVE OUTPATIENT PROGRAM

Jennifer A. Y. Johnston
Jesine S. Xavier

Walden Behavioral Care

Introduction

Eating disorders pose a considerable risk to the physical and psychological health of adolescents, and can become a chronic, potentially fatal illness (Le Grange & Lock, 2005).

In stark contrast to the gravity of eating disorders is the lack of empirically supported treatment options for adolescents (Lock & Gowers, 2005). No clear consensus has been reached as to which type of treatment is most effective, nor which treatment setting allows for the most successful delivery of interventions. There has been a recent trend away from in-patient services and a call for the development of outpatient and day treatment services for adolescents (Bryant-Waugh, 2006).

In response, research on outpatient treatment options for adolescents, most notably family therapy, has increased, but systemic data about residential or day treatment is more limited (Lock & Gowers, 2005). Thus, while there is recognition of the need to develop day treatment service options, as of yet there is little information to guide such development.

Some researchers have advocated flexibility in day treatment programs, and recommend combining different theoretical and clinical approaches in order to meet the unique and variable needs of each presenting patient (Schaffner & Buchanan, 2008). However, few investigations have assessed such multimodal interventions (Chavez & Insel, 2007).

It would seem that there is a need for programs that do combine clinical approaches to document and report their outcomes in order to provide direction to program development and additional research. Towards that end, we describe a possible model of intensive outpatient (IOP) therapy for adolescents and families combining the Maudsley approach to family therapy and Dialectical Behavior Therapy skills training.

Maudsley family therapy
Randomized controlled studies indicate that family therapy may be the most effective treatment yet studied for adolescent anorexia nervosa and bulimia nervosa (Lock & Gowers, 2005; Le Grange et al. 2007). The Maudsley approach, as described by Dare & Eisler (1997), focuses on family management of the symptoms and consequences of anorexia nervosa, and prioritizes behavioral change around eating and weight gain over development of insight into causes of the illness.

Dialectical Behavior Therapy (DBT)
DBT group therapy was chosen as an ancillary treatment approach to help parents and children tolerate distress, manage their emotions, and interact with each other more effectively during this difficult time of illness. DBT skills groups include mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness (Linehan, 1993).

Methods

Participants
47 female adolescents (*Mage* = 14.7 years, Age Range: 12 -17.5 years) attended the Adolescent Intensive Outpatient (IOP) program at Walden Behavioral Care (WBC) for an average of 21.5 days (SD 4.3 days). Parents of these adolescents chose to be contacted three months, six months, and one year after discharge for follow up.

Program Description
The Adolescent IOP eating disorder program at WBC meets three evenings a week for three to four hours. The stated goals of the IOP program are weight restoration/healthy weight maintenance and the elimination of eating disorder behaviors. Each family meets once a week for forty-five minutes with a trained family therapist. These family sessions follow the format of Phase I treatment of the family based approach as described in the recently published treatment manuals for Anorexia Nervosa and Bulimia Nervosa (Lock et al., 2001; Le Grange & Lock, 2007). Multi-family coached family meals occur three nights a week, and parents and adolescents attend DBT skills groups weekly.

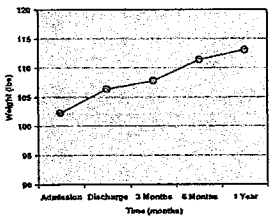
		4:05pm – 4:50pm		5:15pm – 6:00pm	6:00pm – 6:45pm
Monday	Snack	DBT Skills Integration	DBT for Parents*	Multi-Family Group**	Family Dinner**
Wednesday	Snack	DBT I		CBT-Body Image	Family Dinner**
Thursday	Snack	DBT II		Problem Solving	Family Dinner**

* One Maudsley family therapy session once a week before or after program
** Parent participation required

Measures
Program efficacy was evaluated by patient improvement in physiological and psychological indicators of eating disorder pathology. The physiological measures used were weight and menstruation status. Psychological improvement was measured by global scores from the eating disorder examination questionnaire (EDE-Q). Parents were contacted three months, six months, and one year after discharge and reported their child's weight, menstruation status, utilization of outpatient services, and frequency of eating disorder behaviors. Adolescents were sent an EDE-Q in the mail six months and one year after discharge. Paired samples T-Tests were performed for both weight and global EDE-Q scores to determine significance.

Results

Weight Change
Patients gained a significant amount of weight during the program ($t(46) = 5.57$, $p < .001$), and continued to make significant weight gains in the next three months ($t(36) = 2.97$, $p < .01$), six months ($t(23) = 3.31$, $p < .01$), and twelve months ($t(12) = 3.53$, $p < .01$). Difference scores were examined in relation to treatment services utilized post treatment with a 2 x 2 x 2 x 2 x 2 (individual therapist [y, n] x nutritionist [y, n] x family therapist [y, n] x physician [y, n] x psychiatrist [y, n]) analysis of variance (ANOVA). This ANOVA revealed no significant main effects for these variables.



Average Weight Gain

<u>Admission</u>

Average BMI = 17.89 (SD = 2.09)

Average % (IBW) = 89.43% (SD = 8.76%)

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Average BMI = 19.56 (SD = 1.59)

Average % IBW was 100.54% (SD = 8.06%)

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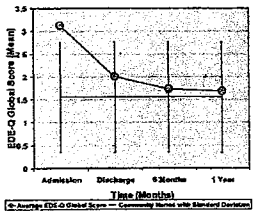
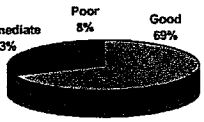
Upon admission, the average global EDE-Q score was 3.13 (SD = 1.52), outside the community norm of 1.25 (SD = 1.32). At discharge, the average global EDE-Q score (*MEDE-Q* = 2.01; SD = 1.4) had decreased significantly ($t(41) = 5.04$, $p < .001$) to within one standard deviation of the community norm. Scores continued to decline six months (*MEDE-Q* = 1.73; SD = 1.20) and one year (*MEDE-Q* = 1.68; SD = 1.69) after discharge. Difference scores were then examined with a 2 x 2 x 2 (individual therapist [y, n] x family therapist [y, n] x psychiatrist [y, n]) ANOVA which revealed no significant main effect.

Change in EDE-Q Scores



Morgan Russell Outcome Categories

	Weight Restoration	Menstrual Cycle
Good	⊕	⊕
Intermediate	⊕	⊖
Poor	⊖	⊖



Conclusions

Results suggest that the combination of DBT and Maudsley therapy is effective at the intensive outpatient level of care. Patients completing the Adolescent IOP program at Walden Behavioral Care gained a significant amount of weight and experienced a decrease in eating disorder thoughts, attitudes, and behaviors as measured by the EDE-Q. Patients continued making significant gains in weight and maintained improvement in eating disorder psychopathology up to one year post-treatment. At the one year follow-up, sixty-nine percent of patients had fully weight restored and resumed normal menstrual cycles. These improvements occurred regardless of type of treatment services utilized after discharge.

Additional research is needed to determine whether other multi-modal approaches would result in similar improvements in weight and eating disorder psychopathology, or whether these results are particular to the combination of DBT and Maudsley. Moreover, it is possible that outpatient services alone, without an eight week IOP, could be equally effective, thus negating the need for more intensive programs.

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Attachment 1.a
Maudsley Method Effectiveness

EFFECTIVENESS OF MAUDSLEY THERAPY WITH DIALECTICAL BEHAVIORAL THERAPY IN AN INTENSIVE OUTPATIENT PROGRAM

Jennifer A. Y. Johnston
Jesine S. Xavier

Walden Behavioral Care

Introduction

Eating disorders pose a considerable risk to the physical and psychological health of adolescents, and can become a chronic, potentially fatal illness (Le Grange & Lock, 2005).

In stark contrast to the gravity of eating disorders is the lack of empirically supported treatment options for adolescents (Lock & Gowers, 2005). No clear consensus has been reached as to which type of treatment is most effective, nor which treatment setting allows for the most successful delivery of interventions. There has been a recent trend away from in-patient services and a call for the development of outpatient and day treatment services for adolescents (Bryant-Waugh, 2006).

In response, research on outpatient treatment options for adolescents, most notably family therapy, has increased, but systemic data about residential or day treatment is more limited (Lock & Gowers, 2005). Thus, while there is recognition of the need to develop day treatment service options, as of yet there is little information to guide such development.

Some researchers have advocated flexibility in day treatment programs, and recommend combining different theoretical and clinical approaches in order to meet the unique and variable needs of each presenting patient (Schaffner & Buchanan, 2008). However, few investigations have assessed such multimodal interventions (Chavez & Insel, 2007).

It would seem that there is a need for programs that do combine clinical approaches to document and report their outcomes in order to provide direction to program development and additional research. Towards that end, we describe a possible model of intensive outpatient (IOP) therapy for adolescents and families combining the Maudsley approach to family therapy and Dialectical Behavior Therapy skills training.

Maudsley family therapy
Randomized controlled studies indicate that family therapy may be the most effective treatment yet studied for adolescent anorexia nervosa and bulimia nervosa (Lock & Gowers, 2005; Le Grange et al. 2007). The Maudsley approach, as described by Dare & Eisler (1997), focuses on family management of the symptoms and consequences of anorexia nervosa, and prioritizes behavioral change around eating and weight gain over development of insight into causes of the illness.

Dialectical Behavior Therapy (DBT)
DBT group therapy was chosen as an ancillary treatment approach to help parents and children tolerate distress, manage their emotions, and interact with each other more effectively during this difficult time of illness. DBT skills groups include mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness (Linehan, 1993).

Methods

Participants
47 female adolescents (Mage = 14.7 years, Age Range: 12 -17.5 years) attended the Adolescent Intensive Outpatient (IOP) program at Walden Behavioral Care (WBC) for an average of 21.5 days (SD 4.3 days). Parents of these adolescents chose to be contacted three months, six months, and one year after discharge for follow up.

Program Description
The Adolescent IOP eating disorder program at WBC meets three evenings a week for three to four hours. The stated goals of the IOP program are weight restoration/healthy weight maintenance and the elimination of eating disorder behaviors. Each family meets once a week for forty-five minutes with a trained family therapist. These family sessions follow the format of Phase I treatment of the family based approach as described in the recently published treatment manuals for Anorexia Nervosa and Bulimia Nervosa (Lock et al., 2001; Le Grange & Lock, 2007). Multi-family coached family meals occur three nights a week, and parents and adolescents attend DBT skills groups weekly.

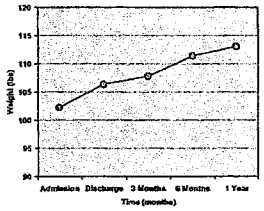
	4:05pm – 4:50pm		5:15pm – 6:00pm	6:00pm – 6:45pm
Monday	Snack	DBT Skills Integration	DBT for Parents**	Multi-Family Group**	Family Dinner**
Wednesday	Snack	DBT I		CBT-Body Image*	Family Dinner**
Thursday	Snack	DBT II		Problem Solving*	Family Dinner**

* One Maudsley family therapy session once a week before or after program
** Parent participation required

Measures
Program efficacy was evaluated by patient improvement in physiological and psychological indicators of eating disorder pathology. The physiological measures used were weight and menstruation status. Psychological improvement was measured by global scores from the eating disorder examination questionnaire (EDE-Q). Parents were contacted three months, six months, and one year after discharge and reported their child's weight, menstruation status, utilization of outpatient services, and frequency of eating disorder behaviors. Adolescents were sent an EDE-Q in the mail six months and one year after discharge. Paired samples T-Tests were performed for both weight and global EDE-Q scores to determine significance.

Results

Weight Change
Patients gained a significant amount of weight during the program ($t(46) = 5.57$, $p < .001$), and continued to make significant weight gains in the next three months ($t(36) = 2.97$, $p < .01$), six months ($t(23) = 3.31$, $p < .01$), and twelve months ($t(12) = 3.53$, $p < .01$). Difference scores were examined in relation to treatment services utilized post treatment with a 2 x 2 x 2 x 2 x 2 (individual therapist [y, n] x nutritionist [y, n] x family therapist [y, n] x physician [y, n] x psychiatrist [y, n]) analysis of variance (ANOVA). This ANOVA revealed no significant main effects for these variables.



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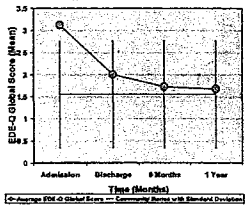

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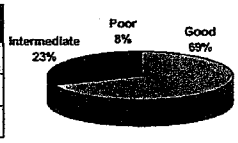

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Attachment 1.a

Maudsley Method and its use in the Adolescent IOP Program

Adolescent IOP

The focus of the Adolescent IOP is on the development of healthy coping skills through evidence-based behavioral treatments. Walden's treatment encompasses:

- Family Based Therapy (FBT)
- Dialectical Behavioral Therapy (DBT)
- Cognitive Behavioral Therapy (CBT)

Family Based Therapy (FBT) uses a the ***Maudsley Method*** and helps restore a child's physical health by reestablishing parental authority all areas of family life that relate to food (meal planning, shopping, and eating expectations). Research shows the Maudsley method to be the most effective treatment for adolescents with eating disorders (Lock & Gowers, Le Grange et al.). Families are uniquely positioned to provide the support and supervision necessary to combat this life-threatening disease. Parents are temporarily put in charge of eating behaviors in order to "combat" the eating disorder that is controlling their child's behavior. The treatment seeks to respect the adolescent's opinions and experience, but refuses to let this devastating illness continue to control their lives.

Dialectical Behavioral Therapy (DBT) helps parents and adolescents learn new ways to manage painful emotions and interact with each other more effectively during this difficult time of their illness. DBT skills groups include mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness (Linehan, 1993).

Cognitive Behavioral Therapy (CBT) helps the adolescent identify and restructure faulty thoughts or *cognitions* that allow the eating disorder to take root, and enable it to persist if not challenged or *restructured.* The Cognitive Behavioral Therapy (CBT) group is designed to help identify ways to challenge their eating disordered thinking, and dispute distorted body image thoughts. (For example, an adolescent may restrict because of a faulty belief such as *eating will make me ugly and I will be alone.* This can be challenged, and replaced with the cognition; *eating will nourish my body and spirit, and help me more fully participate in my relationships.*) Often these cognitions function below conscious awareness, but with professional and peer support, adolescents can learn to identify them and restructure them, promoting new approaches to problem solving and flexibility in thinking.

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Exhibit 6

be best made in the context of a clinical relationship over time. In some individuals, avoidant/restrictive food intake disorder might precede the onset of anorexia nervosa.

Obsessive-compulsive disorder. Individuals with obsessive-compulsive disorder may present with avoidance or restriction of intake in relation to preoccupations with food or ritualized eating behavior. Avoidant/restrictive food intake disorder should be diagnosed concurrently only if all criteria are met for both disorders and when the aberrant eating is a major aspect of the clinical presentation requiring specific intervention.

Major depressive disorder. In major depressive disorder, appetite might be affected to such an extent that individuals present with significantly restricted food intake, usually in relation to overall energy intake and often associated with weight loss. Usually appetite loss and related reduction of intake abate with resolution of mood problems. Avoidant/restrictive food intake disorder should only be used concurrently if full criteria are met for both disorders and when the eating disturbance requires specific treatment.

Schizophrenia spectrum disorders. Individuals with schizophrenia, delusional disorder, or other psychotic disorders may exhibit odd eating behaviors, avoidance of specific foods because of delusional beliefs, or other manifestations of avoidant or restrictive intake. In some cases, delusional beliefs may contribute to a concern about negative consequences of ingesting certain foods. Avoidant/restrictive food intake disorder should be used concurrently only if all criteria are met for both disorders and when the eating disturbance requires specific treatment.

Factitious disorder or factitious disorder imposed on another. Avoidant/restrictive food intake disorder should be differentiated from factitious disorder or factitious disorder imposed on another. In order to assume the sick role, some individuals with factitious disorder may intentionally describe diets that are much more restrictive than those they are actually able to consume, as well as complications of such behavior, such as a need for enteral feedings or nutritional supplements, an inability to tolerate a normal range of foods, and/or an inability to participate normally in age-appropriate situations involving food. The presentation may be impressively dramatic and engaging, and the symptoms reported inconsistently. In factitious disorder imposed on another, the caregiver describes symptoms consistent with avoidant/restrictive food intake disorder and may induce physical symptoms such as failure to gain weight. As with any diagnosis of factitious disorder imposed on another, the caregiver receives the diagnosis rather than the affected individual, and diagnosis should be made only on the basis of a careful, comprehensive assessment of the affected individual, the caregiver, and their interaction.

Comorbidity

The most commonly observed disorders comorbid with avoidant/restrictive food intake disorder are anxiety disorders, obsessive-compulsive disorder, and neurodevelopmental disorders (specifically autism spectrum disorder, attention-deficit/hyperactivity disorder, and intellectual disability [intellectual developmental disorder]).

Anorexia Nervosa

Diagnostic Criteria

A. Restriction of energy intake relative to requirements, leading to a significantly low body weight in the context of age, sex, developmental trajectory, and physical health. *Significantly low weight* is defined as a weight that is less than minimally normal or, for children and adolescents, less than that minimally expected.

B. Intense fear of gaining weight or of becoming fat, or persistent behavior that interferes with weight gain, even though at a significantly low weight.

C. Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or persistent lack of recognition of the seriousness of the current low body weight.

Coding note: The ICD-9-CM code for anorexia nervosa is **307.1,** which is assigned regardless of the subtype. The ICD-10-CM code depends on the subtype (see below).

Specify whether:

(F50.01) Restricting type: During the last 3 months, the individual has not engaged in recurrent episodes of binge eating or purging behavior (i.e., self-induced vomiting or the misuse of laxatives, diuretics, or enemas). This subtype describes presentations in which weight loss is accomplished primarily through dieting, fasting, and/or excessive exercise.

(F50.02) Binge-eating/purging type: During the last 3 months, the individual has engaged in recurrent episodes of binge eating or purging behavior (i.e., self-induced vomiting or the misuse of laxatives, diuretics, or enemas).

Specify if:

In partial remission: After full criteria for anorexia nervosa were previously met, Criterion A (low body weight) has not been met for a sustained period, but either Criterion B (intense fear of gaining weight or becoming fat or behavior that interferes with weight gain) or Criterion C (disturbances in self-perception of weight and shape) is still met.

In full remission: After full criteria for anorexia nervosa were previously met, none of the criteria have been met for a sustained period of time.

Specify current severity:

The minimum level of severity is based, for adults, on current body mass index (BMI) (see below) or, for children and adolescents, on BMI percentile. The ranges below are derived from World Health Organization categories for thinness in adults; for children and adolescents, corresponding BMI percentiles should be used. The level of severity may be increased to reflect clinical symptoms, the degree of functional disability, and the need for supervision.

Mild: BMI ≥ 17 kg/m^2

Moderate: BMI 16–16.99 kg/m^2

Severe: BMI 15–15.99 kg/m^2

Extreme: BMI < 15 kg/m^2

Subtypes

Most individuals with the binge-eating/purging type of anorexia nervosa who binge eat also purge through self-induced vomiting or the misuse of laxatives, diuretics, or enemas. Some individuals with this subtype of anorexia nervosa do not binge eat but do regularly purge after the consumption of small amounts of food.

Crossover between the subtypes over the course of the disorder is not uncommon; therefore, subtype description should be used to describe current symptoms rather than longitudinal course.

Diagnostic Features

There are three essential features of anorexia nervosa: persistent energy intake restriction; intense fear of gaining weight or of becoming fat, or persistent behavior that interferes with weight gain; and a disturbance in self-perceived weight or shape. The individual maintains a body weight that is below a minimally normal level for age, sex, developmental trajectory, and physical health (Criterion A). Individuals' body weights frequently meet this criterion following a significant weight loss, but among children and adolescents, there may alternatively be failure to make expected weight gain or to maintain a normal developmental trajectory (i.e., while growing in height) instead of weight loss.

Criterion A requires that the individual's weight be significantly low (i.e., less than minimally normal or, for children and adolescents, less than that minimally expected). Weight assessment can be challenging because normal weight range differs among individuals, and different thresholds have been published defining thinness or underweight status. Body mass index (BMI; calculated as weight in kilograms/height in meters^2) is a useful measure to assess body weight for height. For adults, a BMI of 18.5 kg/m^2 has been employed by the Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) as the lower limit of normal body weight. Therefore, most adults with a BMI greater than or equal to 18.5 kg/m^2 would not be considered to have a significantly low body weight. On the other hand, a BMI of lower than 17.0 kg/m^2 has been considered by the WHO to indicate moderate or severe thinness; therefore, an individual with a BMI less than 17.0 kg/m^2 would likely be considered to have a significantly low weight. An adult with a BMI between 17.0 and 18.5 kg/m^2, or even above 18.5 kg/m^2, might be considered to have a significantly low weight if clinical history or other physiological information supports this judgment.

For children and adolescents, determining a BMI-for-age percentile is useful (see, e.g., the CDC BMI percentile calculator for children and teenagers. As for adults, it is not possible to provide definitive standards for judging whether a child's or an adolescent's weight is significantly low, and variations in developmental trajectories among youth limit the utility of simple numerical guidelines. The CDC has used a BMI-for-age below the 5th percentile as suggesting underweight; however, children and adolescents with a BMI above this benchmark may be judged to be significantly underweight in light of failure to maintain their expected growth trajectory. In summary, in determining whether Criterion A is met, the clinician should consider available numerical guidelines, as well as the individual's body build, weight history, and any physiological disturbances.

Individuals with this disorder typically display an intense fear of gaining weight or of becoming fat (Criterion B). This intense fear of becoming fat is usually not alleviated by weight loss. In fact, concern about weight gain may increase even as weight falls. Younger individuals with anorexia nervosa, as well as some adults, may not recognize or acknowledge a fear of weight gain. In the absence of another explanation for the significantly low weight, clinician inference drawn from collateral history, observational data, physical and laboratory findings, or longitudinal course either indicating a fear of weight gain or supporting persistent behaviors that prevent it may be used to establish Criterion B.

The experience and significance of body weight and shape are distorted in these individuals (Criterion C). Some individuals feel globally overweight. Others realize that they are thin but are still concerned that certain body parts, particularly the abdomen, buttocks, and thighs, are "too fat." They may employ a variety of techniques to evaluate their body size or weight, including frequent weighing, obsessive measuring of body parts, and persistent use of a mirror to check for perceived areas of "fat." The self-esteem of individuals with anorexia nervosa is highly dependent on their perceptions of body shape and weight. Weight loss is often viewed as an impressive achievement and a sign of extraordinary self-discipline, whereas weight gain is perceived as an unacceptable failure of self-control. Although some individuals with this disorder may acknowledge being thin, they often do not recognize the serious medical implications of their malnourished state.

Often, the individual is brought to professional attention by family members after marked weight loss (or failure to make expected weight gains) has occurred. If individuals seek help on their own, it is usually because of distress over the somatic and psychological sequelae of starvation. It is rare for an individual with anorexia nervosa to complain of weight loss per se. In fact, individuals with anorexia nervosa frequently either lack insight into or deny the problem. It is therefore often important to obtain information from family members or other sources to evaluate the history of weight loss and other features of the illness.

Associated Features Supporting Diagnosis

The semi-starvation of anorexia nervosa, and the purging behaviors sometimes associated with it, can result in significant and potentially life-threatening medical conditions. The nutritional compromise associated with this disorder affects most major organ systems and can produce a variety of disturbances. Physiological disturbances, including amenorrhea and vital sign abnormalities, are common. While most of the physiological disturbances associated with malnutrition are reversible with nutritional rehabilitation, some, including loss of bone mineral density, are often not completely reversible. Behaviors such as self-induced vomiting and misuse of laxatives, diuretics, and enemas may cause a number of disturbances that lead to abnormal laboratory findings; however, some individuals with anorexia nervosa exhibit no laboratory abnormalities.

When seriously underweight, many individuals with anorexia nervosa have depressive signs and symptoms such as depressed mood, social withdrawal, irritability, insomnia, and diminished interest in sex. Because these features are also observed in individuals without anorexia nervosa who are significantly undernourished, many of the depressive features may be secondary to the physiological sequelae of semi-starvation, although they may also be sufficiently severe to warrant an additional diagnosis of major depressive disorder.

Obsessive-compulsive features, both related and unrelated to food, are often prominent. Most individuals with anorexia nervosa are preoccupied with thoughts of food. Some collect recipes or hoard food. Observations of behaviors associated with other forms of starvation suggest that obsessions and compulsions related to food may be exacerbated by undernutrition. When individuals with anorexia nervosa exhibit obsessions and compulsions that are not related to food, body shape, or weight, an additional diagnosis of obsessive-compulsive disorder (OCD) may be warranted.

Other features sometimes associated with anorexia nervosa include concerns about eating in public, feelings of ineffectiveness, a strong desire to control one's environment, inflexible thinking, limited social spontaneity, and overly restrained emotional expression. Compared with individuals with anorexia nervosa, restricting type, those with binge-eating/purging type have higher rates of impulsivity and are more likely to abuse alcohol and other drugs.

A subgroup of individuals with anorexia nervosa show excessive levels of physical activity. Increases in physical activity often precede onset of the disorder, and over the course of the disorder increased activity accelerates weight loss. During treatment, excessive activity may be difficult to control, thereby jeopardizing weight recovery.

Individuals with anorexia nervosa may misuse medications, such as by manipulating dosage, in order to achieve weight loss or avoid weight gain. Individuals with diabetes mellitus may omit or reduce insulin doses in order to minimize carbohydrate metabolism.

Prevalence

The 12-month prevalence of anorexia nervosa among young females is approximately 0.4% Less is known about prevalence among males, but anorexia nervosa is far less common in males than in females, with clinical populations generally reflecting approximately a 10:1 female-to-male ratio.

Development and Course

Anorexia nervosa commonly begins during adolescence or young adulthood. It rarely begins before puberty or after age 40, but cases of both early and late onset have been described. The onset of this disorder is often associated with a stressful life event, such as leaving home for college. The course and outcome of anorexia nervosa are highly variable. Younger individuals may manifest atypical features, including denying "fear of fat." Older

individuals more likely have a longer duration of illness, and their clinical presentation may include more signs and symptoms of long-standing disorder. Clinicians should not exclude anorexia nervosa from the differential diagnosis solely on the basis of older age.

Many individuals have a period of changed eating behavior prior to full criteria for the disorder being met. Some individuals with anorexia nervosa recover fully after a single episode, with some exhibiting a fluctuating pattern of weight gain followed by relapse, and others experiencing a chronic course over many years. Hospitalization may be required to restore weight and to address medical complications. Most individuals with anorexia nervosa experience remission within 5 years of presentation. Among individuals admitted to hospitals, overall remission rates may be lower. The crude mortality rate (CMR) for anorexia nervosa is approximately 5% per decade. Death most commonly results from medical complications associated with the disorder itself or from suicide.

Risk and Prognostic Factors

Temperamental. Individuals who develop anxiety disorders or display obsessional traits in childhood are at increased risk of developing anorexia nervosa.

Environmental. Historical and cross-cultural variability in the prevalence of anorexia nervosa supports its association with cultures and settings in which thinness is valued. Occupations and avocations that encourage thinness, such as modeling and elite athletics, are also associated with increased risk.

Genetic and physiological. There is an increased risk of anorexia nervosa and bulimia nervosa among first-degree biological relatives of individuals with the disorder. An increased risk of bipolar and depressive disorders has also been found among first-degree relatives of individuals with anorexia nervosa, particularly relatives of individuals with the binge-eating/purging type. Concordance rates for anorexia nervosa in monozygotic twins are significantly higher than those for dizygotic twins. A range of brain abnormalities has been described in anorexia nervosa using functional imaging technologies (functional magnetic resonance imaging, positron emission tomography). The degree to which these findings reflect changes associated with malnutrition versus primary abnormalities associated with the disorder is unclear.

Culture-Related Diagnostic Issues

Anorexia nervosa occurs across culturally and socially diverse populations, although available evidence suggests cross-cultural variation in its occurrence and presentation. Anorexia nervosa is probably most prevalent in post-industrialized, high-income countries such as in the United States, many European countries, Australia, New Zealand, and Japan, but its incidence in most low- and middle-income countries is uncertain. Whereas the prevalence of anorexia nervosa appears comparatively low among Latinos, African Americans, and Asians in the United States, clinicians should be aware that mental health service utilization among individuals with an eating disorder is significantly lower in these ethnic groups and that the low rates may reflect an ascertainment bias. The presentation of weight concerns among individuals with eating and feeding disorders varies substantially across cultural contexts. The absence of an expressed intense fear of weight gain, sometimes referred to as "fat phobia," appears to be relatively more common in populations in Asia, where the rationale for dietary restriction is commonly related to a more culturally sanctioned complaint such as gastrointestinal discomfort. Within the United States, presentations without a stated intense fear of weight gain may be comparatively more common among Latino groups.

Diagnostic Markers

The following laboratory abnormalities may be observed in anorexia nervosa; their presence may serve to increase diagnostic confidence.

Hematology. Leukopenia is common, with the loss of all cell types but usually with apparent lymphocytosis. Mild anemia can occur, as well as thrombocytopenia and, rarely, bleeding problems.

Serum chemistry. Dehydration may be reflected by an elevated blood urea nitrogen level. Hypercholesterolemia is common. Hepatic enzyme levels may be elevated. Hypomagnesemia, hypozincemia, hypophosphatemia, and hyperamylasemia are occasionally observed. Self-induced vomiting may lead to metabolic alkalosis (elevated serum bicarbonate), hypochloremia, and hypokalemia; laxative abuse may cause a mild metabolic acidosis.

Endocrine. Serum thyroxine (T_4) levels are usually in the low-normal range; triiodothyronine (T_3) levels are decreased, while reverse T_3 levels are elevated. Females have low serum estrogen levels, whereas males have low levels of serum testosterone.

Electrocardiography. Sinus bradycardia is common, and, rarely, arrhythmias are noted. Significant prolongation of the QTc interval is observed in some individuals.

Bone mass. Low bone mineral density, with specific areas of osteopenia or osteoporosis, is often seen. The risk of fracture is significantly elevated.

Electroencephalography. Diffuse abnormalities, reflecting a metabolic encephalopathy, may result from significant fluid and electrolyte disturbances.

Resting energy expenditure. There is often a significant reduction in resting energy expenditure.

Physical signs and symptoms. Many of the physical signs and symptoms of anorexia nervosa are attributable to starvation. Amenorrhea is commonly present and appears to be an indicator of physiological dysfunction. If present, amenorrhea is usually a consequence of the weight loss, but in a minority of individuals it may actually precede the weight loss. In prepubertal females, menarche may be delayed. In addition to amenorrhea, there may be complaints of constipation, abdominal pain, cold intolerance, lethargy, and excess energy.

The most remarkable finding on physical examination is emaciation. Commonly, there is also significant hypotension, hypothermia, and bradycardia. Some individuals develop lanugo, a fine downy body hair. Some develop peripheral edema, especially during weight restoration or upon cessation of laxative and diuretic abuse. Rarely, petechiae or ecchymoses, usually on the extremities, may indicate a bleeding diathesis. Some individuals evidence a yellowing of the skin associated with hypercarotenemia. As may be seen in individuals with bulimia nervosa, individuals with anorexia nervosa who self-induce vomiting may have hypertrophy of the salivary glands, particularly the parotid glands, as well as dental enamel erosion. Some individuals may have scars or calluses on the dorsal surface of the hand from repeated contact with the teeth while inducing vomiting.

Suicide Risk

Suicide risk is elevated in anorexia nervosa, with rates reported as 12 per 100,000 per year. Comprehensive evaluation of individuals with anorexia nervosa should include assessment of suicide-related ideation and behaviors as well as other risk factors for suicide, including a history of suicide attempt(s).

Functional Consequences of Anorexia Nervosa

Individuals with anorexia nervosa may exhibit a range of functional limitations associated with the disorder. While some individuals remain active in social and professional functioning, others demonstrate significant social isolation and/or failure to fulfill academic or career potential.

Differential Diagnosis

Other possible causes of either significantly low body weight or significant weight loss should be considered in the differential diagnosis of anorexia nervosa, especially when the presenting features are atypical (e.g., onset after age 40 years).

Medical conditions (e.g., gastrointestinal disease, hyperthyroidism, occult malignancies, and acquired immunodeficiency syndrome [AIDS]). Serious weight loss may occur in medical conditions, but individuals with these disorders usually do not also manifest a disturbance in the way their body weight or shape is experienced or an intense fear of weight gain or persist in behaviors that interfere with appropriate weight gain. Acute weight loss associated with a medical condition can occasionally be followed by the onset or recurrence of anorexia nervosa, which can initially be masked by the comorbid medical condition. Rarely, anorexia nervosa develops after bariatric surgery for obesity.

Major depressive disorder. In major depressive disorder, severe weight loss may occur, but most individuals with major depressive disorder do not have either a desire for excessive weight loss or an intense fear of gaining weight.

Schizophrenia. Individuals with schizophrenia may exhibit odd eating behavior and occasionally experience significant weight loss, but they rarely show the fear of gaining weight and the body image disturbance required for a diagnosis of anorexia nervosa.

Substance use disorders. Individuals with substance use disorders may experience low weight due to poor nutritional intake but generally do not fear gaining weight and do not manifest body image disturbance. Individuals who abuse substances that reduce appetite (e.g., cocaine, stimulants) and who also endorse fear of weight gain should be carefully evaluated for the possibility of comorbid anorexia nervosa, given that the substance use may represent a persistent behavior that interferes with weight gain (Criterion B).

Social anxiety disorder (social phobia), obsessive-compulsive disorder, and body dysmorphic disorder. Some of the features of anorexia nervosa overlap with the criteria for social phobia, OCD, and body dysmorphic disorder. Specifically, individuals may feel humiliated or embarrassed to be seen eating in public, as in social phobia; may exhibit obsessions and compulsions related to food, as in OCD; or may be preoccupied with an imagined defect in bodily appearance, as in body dysmorphic disorder. If the individual with anorexia nervosa has social fears that are limited to eating behavior alone, the diagnosis of social phobia should not be made, but social fears unrelated to eating behavior (e.g., excessive fear of speaking in public) may warrant an additional diagnosis of social phobia. Similarly, an additional diagnosis of OCD should be considered only if the individual exhibits obsessions and compulsions unrelated to food (e.g., an excessive fear of contamination), and an additional diagnosis of body dysmorphic disorder should be considered only if the distortion is unrelated to body shape and size (e.g., preoccupation that one's nose is too big).

Bulimia nervosa. Individuals with bulimia nervosa exhibit recurrent episodes of binge eating, engage in inappropriate behavior to avoid weight gain (e.g., self-induced vomiting), and are overly concerned with body shape and weight. However, unlike individuals with anorexia nervosa, binge-eating/purging type, individuals with bulimia nervosa maintain body weight at or above a minimally normal level.

Avoidant/restrictive food intake disorder. Individuals with this disorder may exhibit significant weight loss or significant nutritional deficiency, but they do not have a fear of gaining weight or of becoming fat, nor do they have a disturbance in the way they experience their body shape and weight.

Comorbidity

Bipolar, depressive, and anxiety disorders commonly co-occur with anorexia nervosa. Many individuals with anorexia nervosa report the presence of either an anxiety disorder

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or symptoms prior to onset of their eating disorder. OCD is described in some individuals with anorexia nervosa, especially those with the restricting type. Alcohol use disorder and other substance use disorders may also be comorbid with anorexia nervosa, especially among those with the binge-eating/purging type.

Bulimia Nervosa

Diagnostic Criteria 307.51 (F50.2)

A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
   1. Eating, in a discrete period of time (e.g., within any 2-hour period), an amount of food that is definitely larger than what most individuals would eat in a similar period of time under similar circumstances.
   2. A sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating).

B. Recurrent inappropriate compensatory behaviors in order to prevent weight gain, such as self-induced vomiting; misuse of laxatives, diuretics, or other medications; fasting; or excessive exercise.

C. The binge eating and inappropriate compensatory behaviors both occur, on average, at least once a week for 3 months.

D. Self-evaluation is unduly influenced by body shape and weight.

E. The disturbance does not occur exclusively during episodes of anorexia nervosa.

Specify if:

In partial remission: After full criteria for bulimia nervosa were previously met, some, but not all, of the criteria have been met for a sustained period of time.

In full remission: After full criteria for bulimia nervosa were previously met, none of the criteria have been met for a sustained period of time.

Specify current severity:
The minimum level of severity is based on the frequency of inappropriate compensatory behaviors (see below). The level of severity may be increased to reflect other symptoms and the degree of functional disability.

Mild: An average of 1–3 episodes of inappropriate compensatory behaviors per week.

Moderate: An average of 4–7 episodes of inappropriate compensatory behaviors per week.

Severe: An average of 8–13 episodes of inappropriate compensatory behaviors per week.

Extreme: An average of 14 or more episodes of inappropriate compensatory behaviors per week.

Diagnostic Features

There are three essential features of bulimia nervosa: recurrent episodes of binge eating (Criterion A), recurrent inappropriate compensatory behaviors to prevent weight gain (Criterion B), and self-evaluation that is unduly influenced by body shape and weight (Criterion D). To qualify for the diagnosis, the binge eating and inappropriate compensatory behaviors must occur, on average, at least once per week for 3 months (Criterion C).

An "episode of binge eating" is defined as eating, in a discrete period of time, an amount of food that is definitely larger than most individuals would eat in a similar period of time under similar circumstances (Criterion A1). The context in which the eating occurs

may affect the clinician's estimation of whether the intake is excessive. For example, a quantity of food that might be regarded as excessive for a typical meal might be considered normal during a celebration or holiday meal. A "discrete period of time" refers to a limited period, usually less than 2 hours. A single episode of binge eating need not be restricted to one setting. For example, an individual may begin a binge in a restaurant and then continue to eat on returning home. Continual snacking on small amounts of food throughout the day would not be considered an eating binge.

An occurrence of excessive food consumption must be accompanied by a sense of lack of control (Criterion A2) to be considered an episode of binge eating. An indicator of loss of control is the inability to refrain from eating or to stop eating once started. Some individuals describe a dissociative quality during, or following, the binge-eating episodes. The impairment in control associated with binge eating may not be absolute; for example, an individual may continue binge eating while the telephone is ringing but will cease if a roommate or spouse unexpectedly enters the room. Some individuals report that their binge-eating episodes are no longer characterized by an acute feeling of loss of control but rather by a more generalized pattern of uncontrolled eating. If individuals report that they have abandoned efforts to control their eating, loss of control should be considered as present. Binge eating can also be planned in some instances.

The type of food consumed during binges varies both across individuals and for a given individual. Binge eating appears to be characterized more by an abnormality in the amount of food consumed than by a craving for a specific nutrient. However, during binges, individuals tend to eat foods they would otherwise avoid.

Individuals with bulimia nervosa are typically ashamed of their eating problems and attempt to conceal their symptoms. Binge eating usually occurs in secrecy or as inconspicuously as possible. The binge eating often continues until the individual is uncomfortably, or even painfully, full. The most common antecedent of binge eating is negative affect. Other triggers include interpersonal stressors; dietary restraint; negative feelings related to body weight, body shape, and food; and boredom. Binge eating may minimize or mitigate factors that precipitated the episode in the short-term, but negative self-evaluation and dysphoria often are the delayed consequences.

Another essential feature of bulimia nervosa is the recurrent use of inappropriate compensatory behaviors to prevent weight gain, collectively referred to as *purge behaviors* or *purging* (Criterion B). Many individuals with bulimia nervosa employ several methods to compensate for binge eating. Vomiting is the most common inappropriate compensatory behavior. The immediate effects of vomiting include relief from physical discomfort and reduction of fear of gaining weight. In some cases, vomiting becomes a goal in itself, and the individual will binge eat in order to vomit or will vomit after eating a small amount of food. Individuals with bulimia nervosa may use a variety of methods to induce vomiting, including the use of fingers or instruments to stimulate the gag reflex. Individuals generally become adept at inducing vomiting and are eventually able to vomit at will. Rarely, individuals consume syrup of ipecac to induce vomiting. Other purging behaviors include the misuse of laxatives and diuretics. A number of other compensatory methods may also be used in rare cases. Individuals with bulimia nervosa may misuse enemas following episodes of binge eating, but this is seldom the sole compensatory method employed. Individuals with this disorder may take thyroid hormone in an attempt to avoid weight gain. Individuals with diabetes mellitus and bulimia nervosa may omit or reduce insulin doses in order to reduce the metabolism of food consumed during eating binges. Individuals with bulimia nervosa may fast for a day or more or exercise excessively in an attempt to prevent weight gain. Exercise may be considered excessive when it significantly interferes with important activities, when it occurs at inappropriate times or in inappropriate settings, or when the individual continues to exercise despite injury or other medical complications.

Individuals with bulimia nervosa place an excessive emphasis on body shape or weight in their self-evaluation, and these factors are typically extremely important in determining

self-esteem (Criterion D). Individuals with this disorder may closely resemble those with anorexia nervosa in their fear of gaining weight, in their desire to lose weight, and in the level of dissatisfaction with their bodies. However, a diagnosis of bulimia nervosa should not be given when the disturbance occurs only during episodes of anorexia nervosa (Criterion E).

Associated Features Supporting Diagnosis

Individuals with bulimia nervosa typically are within the normal weight or overweight range (body mass index [BMI] ≥ 18.5 and < 30 in adults). The disorder occurs but is uncommon among obese individuals. Between eating binges, individuals with bulimia nervosa typically restrict their total caloric consumption and preferentially select low-calorie ("diet") foods while avoiding foods that they perceive to be fattening or likely to trigger a binge.

Menstrual irregularity or amenorrhea often occurs among females with bulimia nervosa; it is uncertain whether such disturbances are related to weight fluctuations, to nutritional deficiencies, or to emotional distress. The fluid and electrolyte disturbances resulting from the purging behavior are sometimes sufficiently severe to constitute medically serious problems. Rare but potentially fatal complications include esophageal tears, gastric rupture, and cardiac arrhythmias. Serious cardiac and skeletal myopathies have been reported among individuals following repeated use of syrup of ipecac to induce vomiting. Individuals who chronically abuse laxatives may become dependent on their use to stimulate bowel movements. Gastrointestinal symptoms are commonly associated with bulimia nervosa, and rectal prolapse has also been reported among individuals with this disorder.

Prevalence

Twelve-month prevalence of bulimia nervosa among young females is 1%–1.5%. Point prevalence is highest among young adults since the disorder peaks in older adolescence and young adulthood. Less is known about the point prevalence of bulimia nervosa in males, but bulimia nervosa is far less common in males than it is in females, with an approximately 10:1 female-to-male ratio.

Development and Course

Bulimia nervosa commonly begins in adolescence or young adulthood. Onset before puberty or after age 40 is uncommon. The binge eating frequently begins during or after an episode of dieting to lose weight. Experiencing multiple stressful life events also can precipitate onset of bulimia nervosa.

Disturbed eating behavior persists for at least several years in a high percentage of clinic samples. The course may be chronic or intermittent, with periods of remission alternating with recurrences of binge eating. However, over longer-term follow-up, the symptoms of many individuals appear to diminish with or without treatment, although treatment clearly impacts outcome. Periods of remission longer than 1 year are associated with better long-term outcome.

Significantly elevated risk for mortality (all-cause and suicide) has been reported for individuals with bulimia nervosa. The CMR (crude mortality rate) for bulimia nervosa is nearly 2% per decade.

Diagnostic cross-over from initial bulimia nervosa to anorexia nervosa occurs in a minority of cases (10%–15%). Individuals who do experience cross-over to anorexia nervosa commonly will revert back to bulimia nervosa or have multiple occurrences of cross-overs between these disorders. A subset of individuals with bulimia nervosa continue to binge eat but no longer engage in inappropriate compensatory behaviors, and therefore their

symptoms meet criteria for binge-eating disorder or other specified eating disorder. Diagnosis should be based on the current (i.e., past 3 months) clinical presentation.

Risk and Prognostic Factors

Temperamental. Weight concerns, low self-esteem, depressive symptoms, social anxiety disorder, and overanxious disorder of childhood are associated with increased risk for the development of bulimia nervosa.

Environmental. Internalization of a thin body ideal has been found to increase risk for developing weight concerns, which in turn increase risk for the development of bulimia nervosa. Individuals who experienced childhood sexual or physical abuse are at increased risk for developing bulimia nervosa.

Genetic and physiological. Childhood obesity and early pubertal maturation increase risk for bulimia nervosa. Familial transmission of bulimia nervosa may be present, as well as genetic vulnerabilities for the disorder.

Course modifiers. Severity of psychiatric comorbidity predicts worse long-term outcome of bulimia nervosa.

Culture-Related Diagnostic Issues

Bulimia nervosa has been reported to occur with roughly similar frequencies in most industrialized countries, including the United States, Canada, many European countries, Australia, Japan, New Zealand, and South Africa. In clinical studies of bulimia nervosa in the United States, individuals presenting with this disorder are primarily white. However, the disorder also occurs in other ethnic groups and with prevalence comparable to estimated prevalences observed in white samples.

Gender-Related Diagnostic Issues

Bulimia nervosa is far more common in females than in males. Males are especially underrepresented in treatment-seeking samples, for reasons that have not yet been systematically examined.

Diagnostic Markers

No specific diagnostic test for bulimia nervosa currently exists. However, several laboratory abnormalities may occur as a consequence of purging and may increase diagnostic certainty. These include fluid and electrolyte abnormalities, such as hypokalemia (which can provoke cardiac arrhythmias), hypochloremia, and hyponatremia. The loss of gastric acid through vomiting may produce a metabolic alkalosis (elevated serum bicarbonate), and the frequent induction of diarrhea or dehydration through laxative and diuretic abuse can cause metabolic acidosis. Some individuals with bulimia nervosa exhibit mildly elevated levels of serum amylase, probably reflecting an increase in the salivary isoenzyme.

Physical examination usually yields no physical findings. However, inspection of the mouth may reveal significant and permanent loss of dental enamel, especially from lingual surfaces of the front teeth due to recurrent vomiting. These teeth may become chipped and appear ragged and "moth-eaten." There may also be an increased frequency of dental caries. In some individuals, the salivary glands, particularly the parotid glands, may become notably enlarged. Individuals who induce vomiting by manually stimulating the gag reflex may develop calluses or scars on the dorsal surface of the hand from repeated contact with the teeth. Serious cardiac and skeletal myopathies have been reported among individuals following repeated use of syrup of ipecac to induce vomiting.

Suicide Risk

Suicide risk is elevated in bulimia nervosa. Comprehensive evaluation of individuals with this disorder should include assessment of suicide-related ideation and behaviors as well as other risk factors for suicide, including a history of suicide attempts.

Functional Consequences of Bulimia Nervosa

Individuals with bulimia nervosa may exhibit a range of functional limitations associated with the disorder. A minority of individuals report severe role impairment, with the social-life domain most likely to be adversely affected by bulimia nervosa.

Differential Diagnosis

Anorexia nervosa, binge-eating/purging type. Individuals whose binge-eating behavior occurs only during episodes of anorexia nervosa are given the diagnosis anorexia nervosa, binge-eating/purging type, and should not be given the additional diagnosis of bulimia nervosa. For individuals with an initial diagnosis of anorexia nervosa who binge and purge but whose presentation no longer meets the full criteria for anorexia nervosa, binge-eating/purging type (e.g., when weight is normal), a diagnosis of bulimia nervosa should be given only when all criteria for bulimia nervosa have been met for at least 3 months.

Binge-eating disorder. Some individuals binge eat but do not engage in regular inappropriate compensatory behaviors. In these cases, the diagnosis of binge-eating disorder should be considered.

Kleine-Levin syndrome. In certain neurological or other medical conditions, such as Kleine-Levin syndrome, there is disturbed eating behavior, but the characteristic psychological features of bulimia nervosa, such as overconcern with body shape and weight, are not present.

Major depressive disorder, with atypical features. Overeating is common in major depressive disorder, with atypical features, but individuals with this disorder do not engage in inappropriate compensatory behaviors and do not exhibit the excessive concern with body shape and weight characteristic of bulimia nervosa. If criteria for both disorders are met, both diagnoses should be given.

Borderline personality disorder. Binge-eating behavior is included in the impulsive behavior criterion that is part of the definition of borderline personality disorder. If the criteria for both borderline personality disorder and bulimia nervosa are met, both diagnoses should be given.

Comorbidity

Comorbidity with mental disorders is common in individuals with bulimia nervosa, with most experiencing at least one other mental disorder and many experiencing multiple comorbidities. Comorbidity is not limited to any particular subset but rather occurs across a wide range of mental disorders. There is an increased frequency of depressive symptoms (e.g., low self-esteem) and bipolar and depressive disorders (particularly depressive disorders) in individuals with bulimia nervosa. In many individuals, the mood disturbance begins at the same time as or following the development of bulimia nervosa, and individuals often ascribe their mood disturbances to the bulimia nervosa. However, in some individuals, the mood disturbance clearly precedes the development of bulimia nervosa. There may also be an increased frequency of anxiety symptoms (e.g., fear of social situations) or anxiety disorders. These mood and anxiety disturbances frequently remit follow-

ing effective treatment of the bulimia nervosa. The lifetime prevalence of substance use, particularly alcohol or stimulant use, is at least 30% among individuals with bulimia nervosa. Stimulant use often begins in an attempt to control appetite and weight. A substantial percentage of individuals with bulimia nervosa also have personality features that meet criteria for one or more personality disorders, most frequently borderline personality disorder.

Binge-Eating Disorder

Diagnostic Criteria 307.51 (F50.8)

A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
   1. Eating, in a discrete period of time (e.g., within any 2-hour period), an amount of food that is definitely larger than what most people would eat in a similar period of time under similar circumstances.
   2. A sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating).

B. The binge-eating episodes are associated with three (or more) of the following:
   1. Eating much more rapidly than normal.
   2. Eating until feeling uncomfortably full.
   3. Eating large amounts of food when not feeling physically hungry.
   4. Eating alone because of feeling embarrassed by how much one is eating.
   5. Feeling disgusted with oneself, depressed, or very guilty afterward.

C. Marked distress regarding binge eating is present.

D. The binge eating occurs, on average, at least once a week for 3 months.

E. The binge eating is not associated with the recurrent use of inappropriate compensatory behavior as in bulimia nervosa and does not occur exclusively during the course of bulimia nervosa or anorexia nervosa.

Specify if:

In partial remission: After full criteria for binge-eating disorder were previously met, binge eating occurs at an average frequency of less than one episode per week for a sustained period of time.

In full remission: After full criteria for binge-eating disorder were previously met, none of the criteria have been met for a sustained period of time.

Specify current severity:

The minimum level of severity is based on the frequency of episodes of binge eating (see below). The level of severity may be increased to reflect other symptoms and the degree of functional disability.

Mild: 1–3 binge-eating episodes per week.

Moderate: 4–7 binge-eating episodes per week.

Severe: 8–13 binge-eating episodes per week.

Extreme: 14 or more binge-eating episodes per week.

Diagnostic Features

The essential feature of binge-eating disorder is recurrent episodes binge eating that must occur, on average, at least once per week for 3 months (Criterion D). An "episode of binge eating" is defined as eating, in a discrete period of time, an amount of food that is defi-

nitely larger than most people would eat in a similar period of time under similar circumstances (Criterion A1). The context in which the eating occurs may affect the clinician's estimation of whether the intake is excessive. For example, a quantity of food that might be regarded as excessive for a typical meal might be considered normal during a celebration or holiday meal. A "discrete period of time" refers to a limited period, usually less than 2 hours. A single episode of binge eating need not be restricted to one setting. For example, an individual may begin a binge in a restaurant and then continue to eat on returning home. Continual snacking on small amounts of food throughout the day would not be considered an eating binge.

An occurrence of excessive food consumption must be accompanied by a sense of lack of control (Criterion A2) to be considered an episode of binge eating. An indicator of loss of control is the inability to refrain from eating or to stop eating once started. Some individuals describe a dissociative quality during, or following, the binge-eating episodes. The impairment in control associated with binge eating may not be absolute; for example, an individual may continue binge eating while the telephone is ringing but will cease if a roommate or spouse unexpectedly enters the room. Some individuals report that their binge-eating episodes are no longer characterized by an acute feeling of loss of control but rather by a more generalized pattern of uncontrolled eating. If individuals report that they have abandoned efforts to control their eating, loss of control may still be considered as present. Binge eating can also be planned in some instances.

The type of food consumed during binges varies both across individuals and for a given individual. Binge eating appears to be characterized more by an abnormality in the amount of food consumed than by a craving for a specific nutrient.

Binge eating must be characterized by marked distress (Criterion C) and at least three of the following features: eating much more rapidly than normal; eating until feeling uncomfortably full; eating large amounts of food when not feeling physically hungry; eating alone because of feeling embarrassed by how much one is eating; and feeling disgusted with oneself, depressed, or very guilty afterward (Criterion B).

Individuals with binge-eating disorder are typically ashamed of their eating problems and attempt to conceal their symptoms. Binge eating usually occurs in secrecy or as inconspicuously as possible. The most common antecedent of binge eating is negative affect. Other triggers include interpersonal stressors; dietary restraint; negative feelings related to body weight, body shape, and food; and boredom. Binge eating may minimize or mitigate factors that precipitated the episode in the short-term, but negative self-evaluation and dysphoria often are the delayed consequences.

Associated Features Supporting Diagnosis

Binge-eating disorder occurs in normal-weight/overweight and obese individuals. It is reliably associated with overweight and obesity in treatment-seeking individuals. Nevertheless, binge-eating disorder is distinct from obesity. Most obese individuals do not engage in recurrent binge eating. In addition, compared with weight-matched obese individuals without binge-eating disorder, those with the disorder consume more calories in laboratory studies of eating behavior and have greater functional impairment, lower quality of life, more subjective distress, and greater psychiatric comorbidity.

Prevalence

Twelve-month prevalence of binge-eating disorder among U.S. adult (age 18 or older) females and males is 1.6% and 0.8%, respectively. The gender ratio is far less skewed in binge-eating disorder than in bulimia nervosa. Binge-eating disorder is as prevalent among females from racial or ethnic minority groups as has been reported for white females. The disorder is more prevalent among individuals seeking weight-loss treatment than in the general population.

Development and Course

Little is known about the development of binge-eating disorder. Both binge eating and loss-of-control eating without objectively excessive consumption occur in children and are associated with increased body fat, weight gain, and increases in psychological symptoms. Binge eating is common in adolescent and college-age samples. Loss-of-control eating or episodic binge eating may represent a prodromal phase of eating disorders for some individuals.

Dieting follows the development of binge eating in many individuals with binge-eating disorder. (This is in contrast to bulimia nervosa, in which dysfunctional dieting usually precedes the onset of binge eating.) Binge-eating disorder typically begins in adolescence or young adulthood but can begin in later adulthood. Individuals with binge-eating disorder who seek treatment usually are older than individuals with either bulimia nervosa or anorexia nervosa who seek treatment.

Remission rates in both natural course and treatment outcome studies are higher for binge-eating disorder than for bulimia nervosa or anorexia nervosa. Binge-eating disorder appears to be relatively persistent, and the course is comparable to that of bulimia nervosa in terms of severity and duration. Crossover from binge-eating disorder to other eating disorders is uncommon.

Risk and Prognostic Factors

Genetic and physiological. Binge-eating disorder appears to run in families, which may reflect additive genetic influences.

Culture-Related Diagnostic Issues

Binge-eating disorder occurs with roughly similar frequencies in most industrialized countries, including the United States, Canada, many European countries, Australia, and New Zealand. In the United States, the prevalence of binge-eating disorder appears comparable among non-Latino whites, Latinos, Asians, and African Americans.

Functional Consequences of Binge-Eating Disorder

Binge-eating disorder is associated with a range of functional consequences, including social role adjustment problems, impaired health-related quality of life and life satisfaction, increased medical morbidity and mortality, and associated increased health care utilization compared with body mass index (BMI)–matched control subjects. It may also be associated with an increased risk for weight gain and the development of obesity.

Differential Diagnosis

Bulimia nervosa. Binge-eating disorder has recurrent binge eating in common with bulimia nervosa but differs from the latter disorder in some fundamental respects. In terms of clinical presentation, the recurrent inappropriate compensatory behavior (e.g., purging, driven exercise) seen in bulimia nervosa is absent in binge-eating disorder. Unlike individuals with bulimia nervosa, individuals with binge-eating disorder typically do not show marked or sustained dietary restriction designed to influence body weight and shape between binge-eating episodes. They may, however, report frequent attempts at dieting. Binge-eating disorder also differs from bulimia nervosa in terms of response to treatment. Rates of improvement are consistently higher among individuals with binge-eating disorder than among those with bulimia nervosa.

Obesity. Binge-eating disorder is associated with overweight and obesity but has several key features that are distinct from obesity. First, levels of overvaluation of body

weight and shape are higher in obese individuals with the disorder than in those without the disorder. Second, rates of psychiatric comorbidity are significantly higher among obese individuals with the disorder compared with those without the disorder. Third, the long-term successful outcome of evidence-based psychological treatments for binge-eating disorder can be contrasted with the absence of effective long-term treatments for obesity.

Bipolar and depressive disorders. Increases in appetite and weight gain are included in the criteria for major depressive episode and in the atypical features specifiers for depressive and bipolar disorders. Increased eating in the context of a major depressive episode may or may not be associated with loss of control. If the full criteria for both disorders are met, both diagnoses can be given. Binge eating and other symptoms of disordered eating are seen in association with bipolar disorder. If the full criteria for both disorders are met, both diagnoses should be given.

Borderline personality disorder. Binge eating is included in the impulsive behavior criterion that is part of the definition of borderline personality disorder. If the full criteria for both disorders are met, both diagnoses should be given.

Comorbidity

Binge-eating disorder is associated with significant psychiatric comorbidity that is comparable to that of bulimia nervosa and anorexia nervosa. The most common comorbid disorders are bipolar disorders, depressive disorders, anxiety disorders, and, to a lesser degree, substance use disorders. The psychiatric comorbidity is linked to the severity of binge eating and not to the degree of obesity.

Other Specified Feeding or Eating Disorder

307.59 (F50.8)

This category applies to presentations in which symptoms characteristic of a feeding and eating disorder that cause clinically significant distress or impairment in social, occupational, or other important areas of functioning predominate but do not meet the full criteria for any of the disorders in the feeding and eating disorders diagnostic class. The other specified feeding or eating disorder category is used in situations in which the clinician chooses to communicate the specific reason that the presentation does not meet the criteria for any specific feeding and eating disorder. This is done by recording "other specified feeding or eating disorder" followed by the specific reason (e.g., "bulimia nervosa of low frequency").

Examples of presentations that can be specified using the "other specified" designation include the following:

1. **Atypical anorexia nervosa:** All of the criteria for anorexia nervosa are met, except that despite significant weight loss, the individual's weight is within or above the normal range.
2. **Bulimia nervosa (of low frequency and/or limited duration):** All of the criteria for bulimia nervosa are met, except that the binge eating and inappropriate compensatory behaviors occur, on average, less than once a week and/or for less than 3 months.
3. **Binge-eating disorder (of low frequency and/or limited duration):** All of the criteria for binge-eating disorder are met, except that the binge eating occurs, on average, less than once a week and/or for less than 3 months.
4. **Purging disorder:** Recurrent purging behavior to influence weight or shape (e.g., self-induced vomiting; misuse of laxatives, diuretics, or other medications) in the absence of binge eating.

5. **Night eating syndrome:** Recurrent episodes of night eating, as manifested by eating after awakening from sleep or by excessive food consumption after the evening meal. There is awareness and recall of the eating. The night eating is not better explained by external influences such as changes in the individual's sleep-wake cycle or by local social norms. The night eating causes significant distress and/or impairment in functioning. The disordered pattern of eating is not better explained by binge-eating disorder or another mental disorder, including substance use, and is not attributable to another medical disorder or to an effect of medication.

Unspecified Feeding or Eating Disorder

307.50 (F50.9)

This category applies to presentations in which symptoms characteristic of a feeding and eating disorder that cause clinically significant distress or impairment in social, occupational, or other important areas of functioning predominate but do not meet the full criteria for any of the disorders in the feeding and eating disorders diagnostic class. The unspecified feeding and eating disorder category is used in situations in which the clinician chooses *not* to specify the reason that the criteria are not met for a specific feeding and eating disorder, and includes presentations in which there is insufficient information to make a more specific diagnosis (e.g., in emergency room settings).

000110

Exhibit 7

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Biol Psychiatry. Author manuscript; available in PMC 2008 February 1.
Published in final edited form as:
Biol Psychiatry. 2007 February 1; 61(3): 348–358.
Published online 2006 July 3. doi: 10.1016/j.biopsych.2006.03.040

PMCID: PMC1892232
NIHMSID: NIHMS19542

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The Prevalence and Correlates of Eating Disorders in the National Comorbidity Survey Replication

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Abstract

Background

Little population-based data exist on the prevalence or correlates of eating disorders.

Methods

Prevalence and correlates of eating disorders from the National Comorbidity Replication, a nationally representative face-to-face household survey (n _ 9282), conducted in 2001–2003, were assessed using the WHO Composite International Diagnostic Interview.

Results

Lifetime prevalence estimates of DSM-IV anorexia nervosa, bulimia nervosa, and binge eating disorder are .9%, 1.5%, and 3.5% among women, and .3% .5%, and 2.0% among men. Survival analysis based on retrospective age-of-onset reports suggests that risk of bulimia nervosa and binge eating disorder increased with successive birth cohorts. All 3 disorders are significantly comorbid with many other DSM-IV disorders. Lifetime anorexia nervosa is significantly associated with low current weight (body-mass index18.5), whereas lifetime binge eating disorder is associated with current severe obesity (body-mass index < _ 40). Although most respondents with 12-month bulimia nervosa and binge eating disorder report some role impairment (data unavailable for anorexia nervosa since no respondents met criteria for 12-month prevalence), only a minority of cases ever sought treatment.

Conclusions

Eating disorders, although relatively uncommon, represent a public health concern because they are frequently associated with other psychopathology and role impairment, and are frequently under-treated.

Keywords: Anorexia nervosa, binge eating disorder, bulimia nervosa, eating disorders, epidemiology, national comorbidity survey replication (NCS-R)

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Two eating disorders—anorexia nervosa and bulimia nervosa—are recognized as diagnostic entities in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) (American Psychiatric Association 1994); a third category, binge eating disorder, is proposed in DSM-IV as a possible new diagnostic entity. However, data are incomplete on the prevalence of these 3 disorders in the general population. The prevalence of anorexia nervosa has been investigated mainly in samples of young women in Europe and North America, where the average point prevalence has been .3% (Hoek and van Hoeken 2003; Favaro et al 2004). The lifetime prevalence among adult women has been reported as .5%–.6% in 2 large population-based surveys in the United States (Walters and Kendler 1995) and Canada (Garfinkel et al 1996); the latter study found a prevalence of anorexia nervosa among adult men of .1%. The lifetime prevalence of bulimia nervosa in adult women has been estimated as 1.1%–2.8% in 3 large populationbased surveys in New Zealand (Bushnell et al 1990), the United States (Kendler et al 1991), and Canada (Garfinkel et al 1995). For men, the lifetime prevalence of bulimia nervosa was estimated at .1% in the Canadian study and .2% in the New Zealand study, but the point prevalence of bulimia nervosa in a study in Austria was reported as .5% (Kinzl et al 1999b). For the case of binge eating disorder, 2 population -based telephone interview surveys of adults in Austria estimated the point prevalence as 3.3% among women (Kinzl et al 1999a) and .8% among men (Kinzl et al 1999b). Other studies of binge eating disorder have been limited to specific populations (e.g., young women) or were based only on questionnaires, rather than personal interviews (Streigel-Moore and Franko 2003; Favaro et al 2004).

Population-based interview data are needed to ascertain the prevalence of the 3 eating disorders as well as to provide data on age-of-onset distributions, duration, and association with sociodemographics and body-mass index (BMI). Population data could also address the question of cohort effects—whether the incidence of eating disorders has changed in recent decades. Also of interest is the association of eating disorders with other mental disorders, with measures of disability, and with history of mental health treatment. Finally, population-based data may be useful in examining alternative definitions of eating disorder syndromes in order to determine which definitions are most meaningful as markers of psychopathology. To address these questions, we analyzed data from the recently completed National Comorbidity Survey Replication (NCS-R).

Methods and Materials

Sample

The NCS-R is a nationally representative survey of the US household population that was administered face-to-face to a sample of 9282 English-speaking adults ages 18 and older between February 2001 and December 2003 (Kessler and Merikangas 2004). The response rate was 70.9%. The sample was based on a multi-stage clustered area probability design. Recruitment featured an advance letter and Study Fact Brochure followed by in-person interviewer visits to obtain informed consent. Consent was verbal rather than written in order to parallel the consent procedures in the baseline NCS (Kessler et al 1994). Respondents were given a $50 financial incentive for participation. The Human Subjects Committees of both Harvard Medical School and the University of Michigan approved these recruitment and consent procedures.

The survey was administered in 2 parts. Part I included the core diagnostic assessment and was administered to all respondents. Part II assessed additional disorders and correlates of disorders. Part II was administered to a subset of 5692 respondents consisting of all those who met lifetime criteria for a Part I disorder plus a probability sample of other respondents. Disorders of secondary interest were

administered to probability sub-samples of the Part II sample. Eating disorders were among the latter disorders.

The analyses reported here were carried out in a sub-sample of 2980 Part II respondents who were randomly assigned to have an assessment of eating disorders. Data records in this subsample were weighted to adjust for the over-sampling of Part I respondents with a mental disorder, differential probabilities of selection within households, systematic non-response, and residual socio-demographic-geographic differences between the sample and the 2000 Census. NCS-R sampling and weighting are discussed in more detail elsewhere (Kessler et al 2004b).

Diagnostic Assessment

NCS-R diagnoses were based on Version 3.0 of the World Health Organization Composite International Diagnostic Interview (CIDI) (Kessler and Ustun 2004), a fully structured layadministered diagnostic interview that generates diagnoses according to both ICD-10 and DSM-IV criteria. DSM-IV criteria were used in the current report. Core disorders included the three broad classes of disorder assessed in previous CIDI surveys (anxiety disorders, mood disorders, and substance disorders) plus a group of disorders that share a common feature of difficulties with impulse control (e.g., intermittent explosive disorder, attention-deficit/hyperactivity disorder, retrospectively reported childhood oppositional-defiant disorder, and conduct disorder). Diagnostic hierarchy rules and organic exclusion rules were used in making all diagnoses. As detailed elsewhere (Kessler et al 2004a, 2005), good concordance was found between these core CIDI diagnoses and diagnoses based on the Structured Clinical Interview for DSM-IV (SCID) (First et al 2002) in a probability sub-sample of NCS-R respondents who were administered clinical reappraisal interviews. The area under the receiver operator characteristic curve was in the range of .65–.81 for anxiety disorders, .75 for major depressive episode, .62–.88 for substance disorders, and .76 for any anxiety, mood, or substance disorder. No clinical reappraisal interviews were carried out for the impulse-control disorders, as these were not core NCS-R disorders.

For the present study, questions from the CIDI were used to assign diagnoses of anorexia nervosa, bulimia nervosa, and binge eating disorder based on DSM-IV criteria. The full diagnostic algorithms for all 3 disorders, together with a sensitivity analysis using alternative, narrower definitions of bulimia nervosa and binge eating disorder, are presented as supplemental material available online with the electronic version of this article and at www.hcp.med.harvard.edu/ncs//eating.php; the corresponding CIDI questions used to operationalize the criteria are available at www.hcp.med.harvard.edu/ncs.

Most of the CIDI questions closely paralleled the DSM-IV criteria, but to meet criteria for binge eating disorder, DSM-IV requires a minimum of 6 months of regular eating binges, whereas the CIDI asked only whether the individual experienced 3 months of symptoms. Thus, individuals displaying more than 3 months, but less than 6 months, of regular binge eating would be classified as having binge eating disorder in our algorithm, but not in DSM-IV. Also of note is that for binge eating episodes in bulimia nervosa and binge eating disorder, DSM-IV requires assessment of loss of control, and for binge eating disorder requires marked distress regarding binge eating; these items were assessed in the CIDI by a series of questions about attitudes and behaviors that are indicators of loss of control and of distress, rather than by direct questions.

In addition to the 3 eating disorders, we also defined 2 provisional entities. The first was "subthreshold binge eating disorder," defined as a) binge eating episodes, b) occurring at least twice a week for at least 3 months, and c) not occurring solely during the course of anorexia nervosa, bulimia nervosa, or binge eating

disorder. Thus, subthreshold binge eating disorder did not require DSM-IV criterion B (3 of 5 features associated with binge eating) or C (marked distress regarding binge eating for binge eating disorder). The second was "any binge eating," also defined as a) binge eating episodes (again, not requiring DSM-IV criteria B and C), b) occurring at least twice a week for at least 3 months, but c) lacking the hierarchical exclusion criterion if the individual simultaneously exhibited another eating disorder. In other words, any binge eating was diagnosed regardless of whether or not the individual simultaneously met criteria for any of the other 3 eating disorders or for subthreshold binge eating disorder. This entity thus included all cases of bulimia nervosa, binge eating disorder, and subthreshold binge eating disorder, as well as cases of anorexia nervosa with binge eating. Full diagnostic algorithms for these 2 provisional entities, together with a sensitivity analysis parallel to that above, are presented as supplemental material available with the online version of this article and at www.hcp.med.harvard.edu/ncs//eating.php.

In summary, we examined a total of 5 conditions—2 official DSM-IV disorders (anorexia nervosa and bulimia nervosa), 1 proposed DSM-IV disorder (binge eating disorder), and 2 provisional entities that partially overlapped with 1 or more of the previous 3 disorders. Although in the following text we refer to these 5 conditions collectively as "disorders" for simplicity, the reader should bear in mind that they vary in terms of their level of general acceptance.

As indicated above, our criteria allowed that individuals could display more than one lifetime diagnosis of an eating disorder. We used data from the CIDI regarding time of onset and recency (i.e., the time when the disorder was last present) to apply diagnostic hierarchies, so that bulimia nervosa, binge eating disorder, and subthreshold binge eating disorder were not diagnosed in the presence of anorexia nervosa; and so that binge eating disorder and subthreshold binge eating disorder were not diagnosed in the presence of bulimia nervosa. Because the CIDI provides information only about onset and recency of a disorder, individuals with an episode of a given eating disorder occurring only in between two or more discrete episodes of a hierarchically exclusionary disorder (e.g., anorexia nervosa) would not have been diagnosed with that disorder.

For individuals meeting criteria for any of the 5 five disorders, the CIDI assessed age of onset, recency, years with the disorder, and professional help-seeking. Respondents with 12-month prevalence (that is, individuals who met criteria for the eating disorder at any time within the 12 months before interview) were additionally administered the Sheehan Disability Scales (Leon et al 1997) to assess the severity of recent episodes and were asked about treatment in the past 12 months.

Statistical Analyses

Cross-tabulations were used to estimate prevalence, disability, and treatment. The actuarial method (Wolter 1985) was used to estimate age-of-onset curves. Discrete-time survival analysis with the person-year as the unit of analysis (Willett and Singer 1993) using logistic regression (Hosmer and Lemeshow 2000) was used to estimate cohort effects. Logistic regression was also used to study socio-demographic correlates and comorbidity. Logits and their 95% confidence intervals were converted into odd ratios by exponentiation for ease of interpretation. Standard errors and significance tests were estimated using the Taylor series linearization method (Wolter 1985) implemented in the SUDAAN software system (Research Triangle Institute 2002) to adjust for the weighting and clustering of the NCS-R data. Multivariate significance of predictor sets was evaluated using Wald _ 2 tests based on design-corrected coefficient variance-covariance matrices. Statistical significance was evaluated using 2-tailed .05-level tests; it should

be noted that this level, which was pre-specified for all NCS-R analyses, does not correct for multiple comparisons and thus underestimates the overall type I error rate.

Results Prevalence

Lifetime prevalence estimates of anorexia nervosa, bulimia nervosa, binge eating disorder, subthreshold binge eating disorder, and any binge eating were .6%, 1.0%, 2.8%, 1.2%, and 4.5% (Table 1). Lifetime prevalence was consistently 1¾ to 3 times as high among women as men for the 3 eating disorders (z _ 2.2–2.8, P _ .029–.005), 3 times as high among men as women for subthreshold binge eating disorder (z _ 3.3, P _ .001), and approximately equal among women and men for any binge eating (z _ 1.2., P _ .219). No 12-month cases of anorexia nervosa were found in the sample. The 12-month prevalence estimates of the other 4 disorders were considerably lower than the lifetime estimates, although with similar sex ratios. Estimates of cumulative lifetime risk by age 80, based on retrospective age-of-onset reports (Figure 1), were 0.6% for anorexia nervosa, 1.1% for bulimia nervosa, 3.9% for binge eating disorder, 1.4% for subthreshold binge eating disorder, and 5.7% for any binge eating.

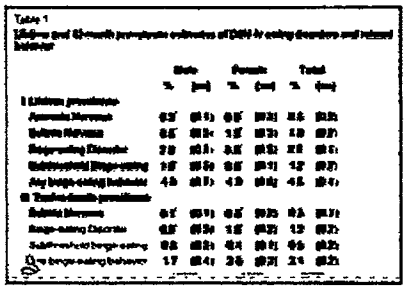


Table 1
Lifetime and 12-month prevalence estimates of DSM-IV eating disorders and related behavior

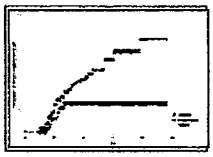


Figure 1
Age-of-onset distributions for DSM-IV eating disorders

Age of Onset and Persistence

Median age of onset of the five disorders ranged from 18–21 years (Table 2). The period of onset risk was shorter for anorexia nervosa than for the other disorders, with the earliest cases of the other disorders beginning about 5 years earlier than those of anorexia nervosa (ages 10 vs. 15), and no cases of anorexia nervosa beginning after the mid-20s—whereas some cases of the other disorders began at a much older age (Figures 1 and 2).

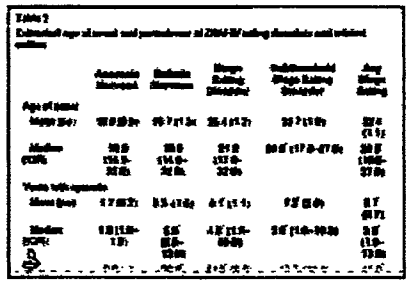


Table 2
Estimated age of onset and persistence of *DSM-IV* eating disorders and related entities

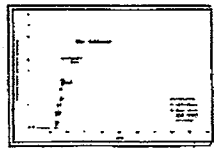


Figure 2
Cohort-specific age-of-onset distributions for DSM-IV Anorexia Nervosa

The mean number of years with anorexia nervosa (1.7 years) was significantly lower than for either bulimia nervosa (8.3; t _ 4.1, P _ .001), binge eating disorder (8.1; t _ 2.9, P _ .006), subthreshold binge eating disorder (7.2; t _ 2.6, P _ .013), or any binge eating (8.7; t _ 2.9, P _ .005) (Table 2). Consistent with these differences in duration, 12-month persistence, defined as 12-month prevalence among lifetime cases, was lowest for anorexia nervosa (.0%) and higher for bulimia nervosa (30.6%), binge eating disorder (44.2%), subthreshold binge eating (47.2%), and any binge eating (46.9%).

Cohort Effects

Consistent inverse associations between cohort (age at interview) and lifetime risk were found in survival analyses of all 5 disorders (Table 3). However, the odds ratios in younger (ages 18–29, 30–44) versus older (60_) cohorts were significantly higher for all comparisons only for bulimia nervosa, binge eating disorder, and any binge eating.

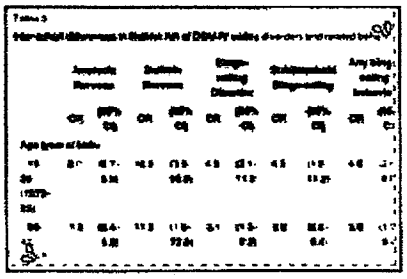


Table 3
Inter-cohort differences in lifetime risk of DSM-IV eating disorders and related behavior

Association with Body-Mass Index

Individuals with a lifetime diagnosis of anorexia nervosa displayed a significantly lower current BMI—with a greater prevalence of a current BMI of _ 18.5, and a lower prevalence of a current BMI _ 40—than respondents without any eating disorder (Table 4). The reverse pattern was found for binge eating disorder, with a significantly higher prevalence of BMI of _ 40 among individuals with binge eating disorder than respondents without any eating disorder. Any binge eating was also associated with severe obesity, but this finding was attributable entirely to cases of binge eating disorder.

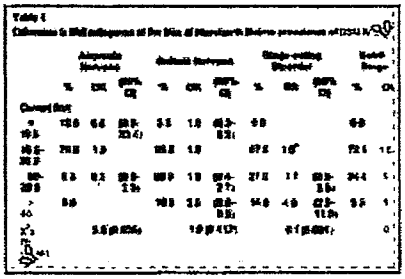


Table 4
Difference in BMI categories at the time of interview in lifetime prevalence of DSM-IV disorders and related behavior

Twelve-Month Role Impairment

Role impairment was assessed only for 12-month cases; since there were no 12-month cases of anorexia nervosa, our analysis was limited to the other 4 disorders. The majority of respondents with bulimia nervosa, binge eating disorder, or any binge eating reported at least some role impairment (mild, moderate, or severe) in at least 1 role domain (53.1%–78.0%), but only 21.8% of respondents with subthreshold binge eating disorder reported this degree of impairment (Table 5). Severe role impairment was much less common, and ranged from 3.4% in subthreshold binge eating to 16.3% in bulimia nervosa, with no significant differences in prevalence among groups.

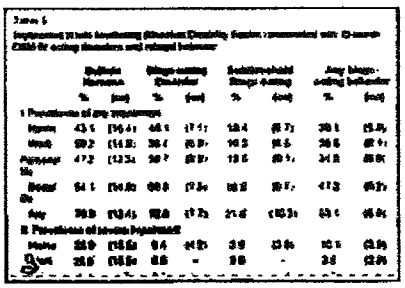


Table 5
Impairment in role functioning (Sheehan Disability Scales) associated with 12-month DSM-IV eating disorders and related behavior

Comorbidity

More than half (56.2%) of respondents with anorexia nervosa, 94.5% with bulimia nervosa, 78.9% with binge eating disorder, 63.6% with subthreshold binge eating disorder, and 76.5% with any binge eating met criteria for at least 1 of the core DSM-IV disorders assessed in the NCS-R (Table 6). Eating disorders were positively related to almost all of the core DSM-IV mood, anxiety, impulse-control, and substance use disorders after controlling for age, sex, and race-ethnicity, with 89% of the odds ratios for the association between individual eating disorders and individual comorbid conditions greater than 1.0 and 67% significant at the .05 level. The odds ratios were consistently largest, though, for bulimia nervosa, with a median (and inter-quartile range in parentheses) odds ratio of 4.7 (4.3–7.5), next highest for binge eating disorder (3.2 [2.6–3.7]) and any binge eating (3.2 [2.4–3.8]), and smaller for anorexia nervosa (2.1 [1.2–2.9]) and subthreshold binge eating disorder (2.2 [1.1–2.9]). No single class of disorders stood out as showing consistently or markedly higher comorbidity with eating disorders.

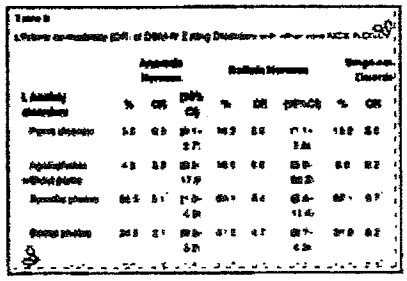


Table 6
Lifetime co-morbidity (OR) of DSM-IV Eating Disorders with other core NCS-R/DSM-IV disorders and related behaviors[1]

Treatment

A majority of respondents with anorexia nervosa, bulimia nervosa, and binge eating disorder (50.0%–63.2%) received treatment for emotional problems at some time in their lives, with the most common site of treatment being the general medical sector for anorexia nervosa (45.3%) and binge eating disorder (36.3%), and the mental health specialty sector for bulimia nervosa (48.2% for psychiatrist and 48.3% for

other mental health) (Table 7). However, smaller proportions sought treatment specifically for their bulimia nervosa (43.2%) or binge eating disorder (43.6%). Only 15.6% of respondents with 12-month bulimia nervosa and 28.5% with 12-month binge eating disorder received treatment for emotional problems in the 12 months before interview, with the most common site of treatment being the general medical sector, and similar proportions received 12-month treatment specifically for their bulimia nervosa or binge eating disorder.

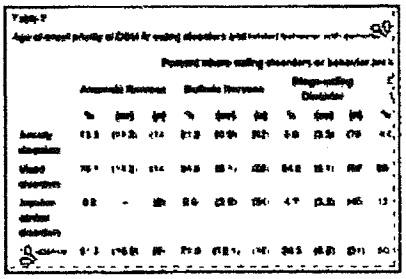


Table 7
Age-of-onset priority of DSM-IV eating disorders and related behavior with comorbid DSM-IV disorders

Supplemental data are available with the electronic version of this article and online at www.hcp.med.harvard.edu/ncs/eating.php.

Discussion

In a population-based survey of American households—the first nationally representative study of eating disorders in the United States—we found estimates of lifetime prevalence for eating disorders that are broadly consistent with earlier data. However, we found a surprisingly high proportion of men with anorexia nervosa and bulimia nervosa (representing approximately one-fourth of cases of each of these disorders). By contrast, clinical and case registry studies (Fairburn and Beglin 1990; Hoek and van Hoeken 2003) report that fewer than 10% men among cases of these disorders, and population-based studies report a 15% proportion of men for anorexia nervosa (Garfinkel et al 1996) and 8%–10% of men for bulimia nervosa (Bushnell et al 1990; Garfinkel et al 1995). Note, however, that estimates from population-based studies, including ours, are unstable because they involve small numbers of men with eating disorders (no more than 5 men with either disorder in any study).

Our findings provide unique data regarding the lifetime duration of eating disorders, and the onset and duration of binge eating disorder, together with extensive information on sociodemographic features of individuals with all 5 disorders. Also, our study provides support for the common impression that the incidence of bulimia nervosa has increased significantly in the second half of the twentieth century (Kendler et al 1991; Hoek and van Hoek 2003), and it provides the first data showing a similar trend for binge eating disorder. Nevertheless, there are some data suggesting that the incidence of bulimia nervosa may be leveling off in recent years (Currin et al 2005). Whether the incidence of anorexia nervosa has increased over time is unclear and subject to debate. We failed to find a significant increase, but had little power to detect such a trend; case registry study data have yielded conflicting findings and interpretations (Fombonne, 1995; Lucas et al 1999; Hoek and van Hoeken 2003; Currin et al 2005).

We found that lifetime anorexia nervosa is associated with a low current BMI, a finding consistent with follow-up studies of clinical samples of individuals with anorexia nervosa showing that low weight often persists after resolution of the disorder (Steinhausen 2002). By contrast, binge eating disorder was found to

be strongly associated with current severe obesity (BMI _ 40)—a finding also consistent with earlier reports (de Zwaan 2001; Streigel-Moore and Franko 2003; Hudson et al 2006). Although the causal pathways responsible for this latter association are unclear, shared familial factors (such as shared genes or shared family environmental exposures) are likely at least partly responsible (Hudson et al 2006).

We also assessed role impairment in all disorders except anorexia nervosa, where analysis was precluded because no 12-month cases were identified. While the majority of respondents with bulimia nervosa, binge eating disorder, or any binge eating reported at least some role impairment in at least 1 role domain, only 21.8% of respondents with subthreshold binge eating disorder reported any role impairment. Severe role impairment was uncommon in all conditions. It is important to note, though, that participants may possibly have under-reported role impairment due to factors such as minimization, shame, secrecy, or lack of insight stemming from the ego-syntonicity of symptoms.

Less than half of individuals with bulimia nervosa or binge eating disorder had ever sought treatment for their eating disorder (a measure not assessed for anorexia nervosa), although the majority of individuals with all 3 disorders had received treatment at some point for some emotional problem. This finding, coupled with the observation that physicians infrequently assess patients for binge eating (Crow et al 2004) and often fail to recognize bulimia nervosa and binge eating disorder (Johnson et al 2001), highlights the importance of querying patients about eating problems even when they do not include such problems among their presenting complaints.

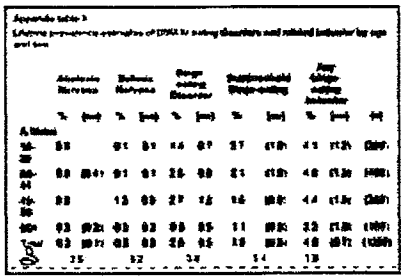
We found a high prevalence of lifetime comorbid psychiatric disorders in individuals with all disorders except subthreshold binge eating disorder, although this finding was less pronounced for anorexia nervosa. These results are again generally consistent with those reported in previous population-based studies for anorexia nervosa (Garfinkel et al 1996), bulimia nervosa (Kendler et al 1991; Bushnell et al 1994; Garfinkel et al 1995; Rowe et al 2002), binge eating behavior (Vollrath et al 1992; Angst 1988; Bulik et al 2002), and regular binge eating without compensatory behaviors (Reichborn-Kjennerud et al 2004b), as well as in previous studies of clinical populations for anorexia nervosa, bulimia nervosa, and binge eating disorder (Hudson et al 1987; Halmi et al 1991; Johnson et al 2001; Godart et al 2002; Kaye et al 2004; McElroy et al 2005). The cause for the high levels of comorbidity is not known, although there is evidence that the co-occurrence of eating disorders with mood disorders may be caused in part by common familial (Mangweth et al 2003) or genetic factors (Walters et al 1992; Wade et al 2000).

Several findings in this study are particularly noteworthy. First, we found that anorexia nervosa displayed a significantly shorter lifetime duration and lower 12-month persistence, as well as lower overall levels of comorbidity, than either bulimia nervosa or binge eating disorder. These findings contrast with previous studies (Steinhausen 2002) that have conceptualized anorexia nervosa as a chronic and malignant condition. This discrepancy may be due to the fact that our population-based method identified individuals with milder cases of anorexia nervosa who might have been missed in previous follow-up studies, which were based largely on clinical samples. Alternatively, our population-based method might have missed more severe cases of anorexia nervosa, either because they were unavailable, unreachable, hospitalized, or unwilling to participate in an interview about emotional problems. Parenthetically, we would note that while we found no cases of current anorexia nervosa in our study, 15.6% of the individuals with a lifetime diagnosis of anorexia nervosa still had a current BMI of less than 18.5 at the time of interview. Indeed, these individuals (3 cases) were all below 85% of ideal body weight, thus meeting our operationalization for DSM-IV criterion A for anorexia nervosa. However, all of these individuals failed to meet at least one of the

other criteria for anorexia nervosa currently—although our data did not permit an analysis of which specific criteria were lacking in individual cases. Nevertheless, these data suggest that a minority of individuals with past anorexia nervosa may continue to maintain an abnormally low body weight, even though they no longer meet full criteria for anorexia nervosa.

Our findings also provide further evidence for the clinical and public health importance of binge eating disorder. In contrast to some earlier studies suggesting that binge eating disorder might be a relatively transient condition (Cachelin et al 1999; Fairburn et al 2000), the present findings, together with those from another recent study (Pope et al, in press), suggest that this disorder is at least as chronic and stable as anorexia nervosa or bulimia nervosa. Binge eating disorder also appears more common than either of the other two eating disorders, exhibits substantial comorbidity with other psychiatric disorders, and is strongly associated with severe obesity. Collectively, these findings suggest that binge eating disorder represents a public health problem at least equal to that of the other 2 better-established eating disorders, adding support to the case for elevating binge eating disorder from a provisional entity to an official diagnosis in DSM-V.

Subthreshold binge eating disorder, by contrast, was found to be associated with such low impairment and comorbidity that it likely does not merit consideration for inclusion as a DSM disorder. It should be recalled, in this connection, that the main difference between subthreshold binge eating disorder and binge eating disorder is that the former lacks the criterion of distress (see Appendix Table 1 in Supplement 1). These findings suggest that the criterion of distress may be important for defining clinically meaningful forms of binge eating.



Appendix table 1
Lifetime prevalence estimates of DSM-IV eating disorders and related behavior by age and sex

Note that subthreshold binge eating disorder may be defined in different ways. For example, relaxing the frequency criteria to less than the average of 2 days per week for 6 months required by DSM-IV identifies groups with characteristics similar to the full disorder (Striegel-Moore et al 2000; Crow et al 2002). We were unable, however, to evaluate these definitions due the nature of the CIDI questions, and instead defined subthreshold binge eating disorder by relaxing criteria other than frequency of binges. Thus, while our definition of subthreshold binge eating disorder does not appear to identify a clinically meaningful entity, other definitions may well do so.

Unlike subthreshold binge eating disorder, the entity "any binge eating" is associated with severe obesity, modest levels of impairment, and high levels of comorbidity with other mental disorders. These features appear to be accounted for cases of bulimia nervosa or binge eating disorder within the "any binge eating" group, given that such features are not shared by those with subthreshold binge eating disorder, and individuals with anorexia nervosa contribute only a small number of cases. The findings for any binge eating are interesting to consider in the light of findings from twin studies of binge eating. These studies

have suggested that there are genetic influences on binge eating (Bulik et al 1998) and on binge eating without compensatory behaviors (Reichborn-Kjennerud et al 2004a). On the basis of our findings here, it is tempting to speculate that the heritability of binge eating behavior may be attributable primarily to cases of bulimia nervosa and binge eating disorder—both of which have been shown to be familial (Strober et al 2000; Hudson et al 2006)—rather than to cases of subthreshold binge eating disorder within the group.

Several limitations of the study should be considered. First, some CIDI questions did not precisely mirror the DSM-IV criteria for the various eating disorders, as illustrated by in the diagnostic algorithms discussed in our methods section. Perhaps the most important inconsistency is that, in order to have parallel duration requirements for bulimia nervosa and for binge eating disorder, we required only 3 months of illness for a diagnosis of binge eating disorder, in contrast to the 6 months required by DSM-IV. Thus, it is possible that we may have overestimated the prevalence of binge eating disorder by including some cases with a duration of only 3 to 5 months.

Second, diagnoses were based on unvalidated, fully structured lay interviews where lifetime information was assessed retrospectively. These may be important considerations, given that an earlier version of the CIDI was found to underdiagnose eating disorders (Thornton et al 1998), possibly because some individuals minimized or denied symptoms. Version 3.0 of the CIDI was designed to reduce this sort of under-reporting by using a number of techniques developed by survey methodologists to reduce embarrassment and other psychological barriers to reporting (Kessler and Ustun 2004)—but these changes necessitated indirect assessments of loss of control and distress, as noted above. In any event, pending validation studies, it would seem prudent to think of the NCS-R estimates as lower bounds on the true prevalence of eating disorders.

Third, in our analyses of the associations between eating disorders and body weight, we possessed only current BMI, rather than maximum or minimum adult BMI, or BMI at the time of the disorder. Thus, we likely underestimated the magnitude of these associations.

Fourth, because recall of earlier experiences may diminish with age, our retrospective assessments may have overestimated the magnitude of cohort effects (Giuffra and Risch 1994). Since cohort effects and age effects are confounded, and no prospective studies have been performed over the period under study, it is not possible to assess the magnitude of this potential bias. Prospective studies will be useful to track possible cohort effects in the future.

Fifth, our results are based on the assumption that any exiting from the population available for sampling was non-informative and that there was no selection bias (in the form of non-response bias) due to sampling from available subjects; these limitations are discussed elsewhere (Hudson et al 2005). For example, the validity of our results would be threatened if the development of eating disorders rendered individuals less likely to be available for sampling, which might occur if there were a high mortality due to eating disorders, or a significant proportion of cases hospitalized at the time of sampling. Although some clinical follow-up studies have suggested substantial mortality for anorexia nervosa (Sullivan 1995; Steinhausen 2002; Keel et al 2003), data from a community case registry study (Iacovino 2004) did not find excess mortality.

Another possible threat to validity would be bias in sampling of available individuals, in that individuals with eating disorders might be more or less likely to participate. However, we carried out a non-response survey to deal with this problem, which offered a larger financial incentive ($100) to main survey nonrespondents

for a short (15-min) telephone interview that assessed diagnostic stem questions. Very little evidence was found that survey respondents and non-respondents differed on stem question endorsement for the NCS-R core anxiety, mood, impulsecontrol, or substance use disorders (Kessler et al 2004b). Thus, it is likely that non-response bias for eating disorders was minimal.

Sixth, while we examined 2 provisional entities in addition to those for which criteria were provided in DSM-IV, we did not examine many other possible entities that lie within the category of Eating Disorder Not Otherwise Specified (Fairburn and Bohn, 2005)—such as subthreshold forms of anorexia nervosa and bulimia nervosa, alternative definitions for subthreshold binge eating disorder (discussed above), purging without either bulimia nervosa or anorexia nervosa (Keel et al 2005), and night eating syndrome (Stunkard et al 2005)— because the questions in the CIDI did not permit evaluation of these conditions.

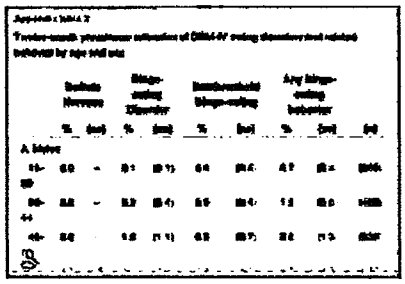
In conclusion, the lifetime prevalence of the individual eating disorders ranged from 0.6–4.5%; these disorders displayed substantial comorbidity with other DSM-IV disorders and were frequently associated with role impairment. These patterns raise concerns that such a low proportion of individuals with these disorders obtain treatment for their eating problems. As it turns out, though, a high proportion of cases did receive treatment for comorbid conditions. Thus, detection and treatment of eating disorders might be increased substantially if treatment providers queried patients about possible eating problems, even if the patients did not include such problems among their presenting complaints.



Figure 3
Cohort-specific age-of-onset distributions for DSM-IV Bulimia Nervosa

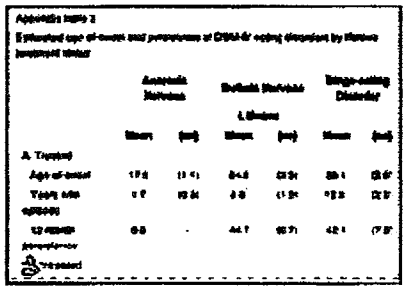


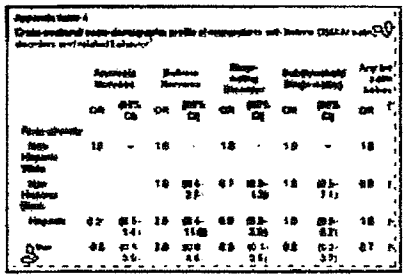
Figure 4
Cohort-specific age-of-onset distributions for DSM-IV Binge-Eating Disorder



Appendix table 2
Twelve-month prevalence estimates of DSM-IV eating disorders and related behavior by age and sex

Appendix table 3
Estimated age-of-onset and persistence of DSM-IV eating disorders by lifetime treatment status





Appendix table 4

Cross-sectional socio-demographic profile of respondents with lifetime DSM-IV eating disorders and related behavior[1]

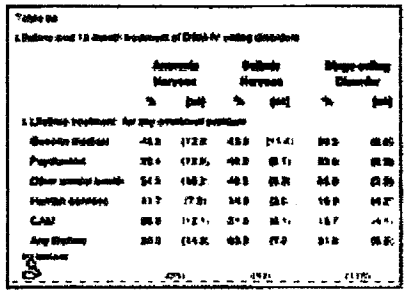


Table 8a

Lifetime and 12-month treatment of DSM-IV eating disorders

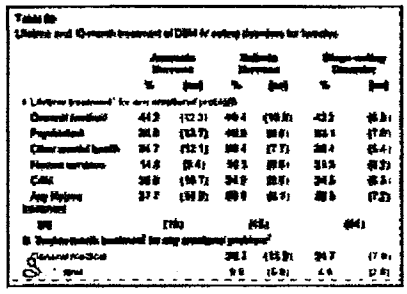


Table 8b

Lifetime and 12-month treatment of DSM-IV eating disorders for females

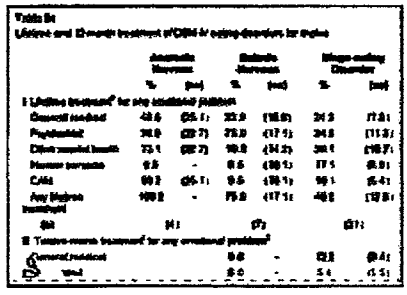


Table 8c

Lifetime and 12-month treatment of DSM-IV eating disorders for males

Acknowledgments

The National Comorbidity Survey Replication (NCS-R) is supported by the National Institute of Mental Health (NIMH; U01-MH60220) with supplemental support from the National Institute of Drug Abuse, the Substance Abuse and Mental Health Services Administration, the Robert Wood Johnson Foundation (Grant # 044780), Eli Lilly and Company, and the John W. Alden Trust. Preparation of this report was additionally supported by OrthoMcNeil Neurologics, Inc. Collaborating NCS-R investigators include Ronald C. Kessler (Principal Investigator, Harvard Medical School), Kathleen Merikangas (Co-Principal Investigator, NIMH), James Anthony (Michigan State University), William Eaton (The Johns Hopkins University), Meyer Glantz (NIDA), Doreen Koretz (Harvard University), Jane McLeod (Indiana University), Mark Olfson (Columbia University College of Physicians and Surgeons), Harold Pincus (University of Pittsburgh), Greg Simon (Group Health Cooperative), T Bedirhan Ustun (World Health Organization), Michael Von Korff (Group Health Cooperative), Philip Wang (Harvard Medical School), Kenneth Wells (UCLA), Elaine Wethington (Cornell University), and Hans-Ulrich Wittchen (Max Planck Institute of Psychiatry). The views and opinions expressed in this report are those of the authors and should not be construed to represent the views of any of the sponsoring organizations, agencies, or US Government. A complete list of NCS publications and the full text of all NCS-R instruments can be found at http://www.hcp.med.harvard.edu/ncs. The NCS-R is carried out in conjunction with the World Health Organization World Mental Health (WMH) Survey Initiative.

We thank the staff of the WMH Data Collection and Data Analysis Coordination Centres for assistance with instrumentation, fieldwork, and consultation on data analysis. These activities were supported by the John D. and Catherine T. MacArthur Foundation, the US Public Health Service (R13-MH066849, R01-MH069864, and R01 DA016558), the Pan American Health Organization, the Pfizer Foundation, Eli Lilly and Company, GlaxoSmithKline, and OrthoMcNeil Neurologics, Inc. A complete list of WMH publications and instruments can be found at http://www.hcp.med.harvard.edu/wmhcidi. Supplemental material cited in this article is available online.

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Exhibit 8

Epidemiology and Course of Anorexia Nervosa in the Community

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Objective: Most previous studies of the prevalence, incidence, and outcome of anorexia nervosa have been limited to cases detected through the health care system, which may bias our understanding of the disorder's incidence and natural course. The authors sought to describe the onset and outcomes of anorexia nervosa in the general population.

Method: Lifetime prevalences, incidence rates, and 5-year recovery rates of anorexia nervosa were calculated on the basis of data from 2,881 women from the 1975–1979 birth cohorts of Finnish twins. Women who screened positive for eating disorder symptoms (N=292), their screen-negative female co-twins (N=134), and 210 randomly selected screen-negative women were assessed for lifetime eating disorders by telephone by experienced clinicians. To assess outcomes after clinical recovery and to detect residua of illness, women who had recovered were compared with their unaffected co-twins and healthy unrelated women on multiple outcome measures.

Results: The lifetime prevalence of DSM-IV anorexia nervosa was 2.2%, and half of the cases had not been detected in the health care system. The incidence of anorexia nervosa in women between 15 and 19 years of age was 270 per 100,000 person-years. The 5-year clinical recovery rate was 66.8%. Outcomes did not differ between detected and undetected cases. After clinical recovery, the residua of illness steadily receded. By 5 years after clinical recovery, most probands had reached complete or nearly complete psychological recovery and closely resembled their unaffected co-twins and healthy women in weight and most psychological and social measures.

Conclusions: The authors found a substantially higher lifetime prevalence and incidence of anorexia nervosa than reported in previous studies, most of which were based on treated cases. Most women recovered clinically within 5 years, and thereafter usually progressed toward full recovery.

(Am J Psychiatry 2007; 164:1259–1265)

Anorexia nervosa is a severe psychiatric disorder that mainly affects adolescent girls and young women (1–3). Although the disorder was first described centuries ago, its risk factors, etiology, and course remain poorly understood (1–3).

Numerous studies have assessed the prevalence of anorexia nervosa (4, 5). Estimates of prevalence are influenced by the number of new-onset cases, but also by duration of illness, methods of case detection, and the age of study participants (6). Counting new-onset cases only, that is, calculating the incidence, is a more accurate approach to comparing rates of illness across communities and time periods and is essential for rigorous investigations of the etiology and course of illness (6). Despite this, few studies have examined the incidence of anorexia nervosa. Those that have been reported (7–9) reflect the difficulty of addressing relatively rare disorders: either they are limited to cases detected in health care settings or they lack statistical power because of small sample sizes. Nevertheless, they document a steady increase in the incidence of anorexia nervosa among 15- to 19-year-old women since the 1930s (9–11).

Long-term follow-up studies of anorexia nervosa are few and primarily reflect clinical case series or studies based on clinical catchment areas (12–14). They suggest that anorexia nervosa tends to have a chronic course and carries a high risk of mortality (about 5.6% per decade) (15–17). However, as it has been estimated that only half of cases of anorexia nervosa are detected in primary care settings (18) and only one-third of the community cases are treated in mental health care settings (5), the natural course of the illness remains poorly understood.

Our aim was to describe the onset and outcomes of anorexia nervosa in the general population. Using the nationwide population-based 1975–1979 birth cohorts of Finland, we examined the incidence and lifetime prevalence of anorexia nervosa among twins. To better understand the impact of anorexia on young women's lives, we also compared the behavioral, psychological, and social outcomes of women with anorexia nervosa with those of their unaffected co-twins and unrelated healthy women.

Method

The "FinnTwin 16" Birth Cohorts

Study subjects were Finnish twins participating in "FinnTwin 16," a nationwide longitudinal cohort study of health behaviors in twins and their families (19) that identified virtually all live twin

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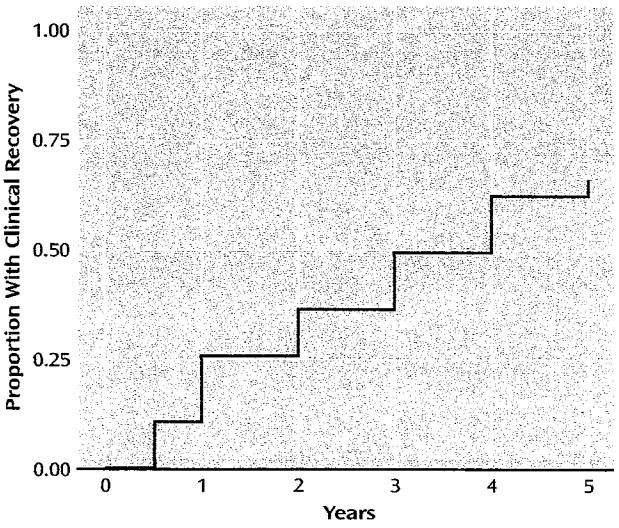
FIGURE 1. Five-Year Clinical Recovery Rates From DSM-IV Anorexia Nervosa[a]



[a] Results of Kaplan-Meier survival analysis. The 5-year clinical recovery rate was defined as the proportion who reached clinical recovery within 5 years after onset of illness. Clinical recovery was defined as restoration of weight and menstruation and the absence of bingeing and purging for at least 1 year prior to assessment.

births from 1975 through 1979 from the central population registry of Finland. The twins and their parents were sent baseline self-report questionnaires when the twins were 16 years old (wave 1), and follow-up questionnaires were mailed to the twins at age 17, age 18, and between ages 22 and 28 (waves 2, 3, and 4, respectively). Data collection and analysis were approved by the ethics committee of the Department of Public Health of the University of Helsinki.

Questionnaire Screening for Eating Disorders

The wave 4 questionnaire included a self-report screen for eating disorder symptoms that assessed current height and weight, ideal weight, minimum and maximum weight at current height, purging, and weight loss behaviors. Body image was assessed by use of three subscales of the Eating Disorder Inventory (20)—body dissatisfaction, drive for thinness, and bulimia. All screen-positive women (N=292), their screen-negative female co-twins (N=134), and 210 randomly selected screen-negative women were invited to participate in diagnostic telephone interviews. A total of 2,881 participants responded to the wave 4 questionnaire (response rate, 90.4%), and the mean age of respondents was 24.4 years (SD=0.9). Details of the screening process are provided elsewhere (21).

Diagnostic Interviews

Five experienced clinicians (four M.D.'s and one R.N. at the Eating Disorder Unit of Helsinki University Central Hospital) received detailed training in administering the short version of the Structured Clinical Interview for DSM-IV (SCID) (22). The interviews were conducted by telephone to obtain current and lifetime diagnoses of anorexia nervosa, bulimia nervosa, and binge eating disorder, to define the age of participants at the first and last manifestations of these illnesses, and to establish the temporal sequence of these diagnoses and their respective time courses. Interrater agreement for diagnosis was good (mean kappa=0.87, range=0.64–1.00) (21). Drs. Keski-Rahkonen and Sihvola supervised interviewers throughout the study and helped solve diagnostic problems, such as concerns about diagnostic threshold and differential diagnosis.

The interview participation rate was 85.2% overall (90.1% for screen-positive women, 76.2% for screen-negative female co-twins, and 84.8% for the random sample of screen-negative women). Only 12 individuals (1.9%) declined to be interviewed; the others who did not participate could not be reached because their current telephone numbers could not be obtained.

Definition of Disorder

Because the diagnostic criteria and the boundaries of anorexia nervosa have changed over time and remain contentious, we used two definitions of the disorder: DSM-IV anorexia nervosa and broad anorexia nervosa. Broad anorexia nervosa includes DSM-IV anorexia nervosa and ICD-10 atypical anorexia, here defined as anorexia nervosa without amenorrhea or weight loss of at least 15% that led to a body mass index (BMI) ≤19, coupled with undue influence of body weight on self-evaluation or intense fear of weight gain.

Many of the cases identified in this study were in subjects who reported that they had never received an eating disorder diagnosis from a health professional. We refer to these cases as undetected by the health care system, and we refer to all other cases as detected by the health care system, whether or not the individuals received treatment for their disorder.

Prevalent and Incident Cases

We defined lifetime prevalent cases of DSM-IV or broad anorexia nervosa to include all cases identified in this study, regardless of age at onset, age at interview, or recovery status. Lifetime prevalent cases of DSM-IV anorexia nervosa comprised 55 probands in 53 twin pairs (51 discordant and two concordant pairs; both concordant pairs were monozygotic); broad anorexia nervosa comprised 107 probands in 100 twin pairs (93 discordant and seven concordant pairs, of which six were monozygotic and one dizygotic).

We defined incident cases for the age interval from 15 to 19 years as those in which the first manifestation of anorexia nervosa occurred during that age interval as reported in the diagnostic interview. For 10 individuals who could not clearly recall their age at illness onset, age at minimum BMI was substituted.

Five-Year Clinical Recovery Rates

For each case of DSM-IV or broad anorexia nervosa, the interviewers determined the last age at which any eating disorder symptoms occurred. We defined clinical recovery as restoration of weight and menstruation and the absence of bingeing and purging for at least 1 year prior to assessment. The 5-year clinical recovery rate was defined as the proportion of women with anorexia nervosa who reached clinical recovery within 5 years after onset.

Outcomes After Clinical Recovery

The possible residua of illness after clinical recovery were measured in three domains. First, physical characteristics were measured by BMI. We calculated current BMI from self-reported weight and height; agreement between self-reported and measured BMI in the women from this birth cohort was 0.92 (23). Second, social characteristics were measured by occupation, education, parity, and marriage or cohabitation. Third, psychological characteristics were measured by eight scales with well-established psychometric properties: four scales of the Eating Disorder Inventory (drive for thinness, bulimia, body dissatisfaction, and perfectionism) (20); the state anxiety and trait anxiety subscales from the Spielberger State-Trait Anxiety Inventory (24); the Rosenberg Self-Esteem Scale (25); and the Psychosomatic Symptom Scale (26).

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TABLE 1. Clinical Characteristics and Psychosocial Outcome Measures of Currently Ill and Recovered (>5 years) DSM-IV Anorexia Probands, Their Unaffected Co-Twins, and Healthy Comparison Women

	Probands				Unaffected Comparison Women			
	Currently Ill (N=16)		Recovered >5 Years (N=24)		Co-Twins (N=24)		Healthy Women (N=134)	
Measure	Mean	95% CI	Mean	95% CI	Mean	95% CI	Mean	95% CI
Age at onset of eating disorder	17.3	15.3–19.3	15.0	14.2–15.9				
Age at interview	25.0	24.3–25.7	25.2	24.7–25.8	25.7	24.9–26.4	26.6	26.2–26.9
Minimum body mass index	15.9	15.0–16.7	15.6	14.5–16.6	19.2	18.5–20.0	19.7	19.2–20.1
Current body mass index	19.9	18.5–21.3	22.1	21.1–23.0	21.7	20.7–22.7	22.3	21.6–23.0
Eating Disorder Inventory								
Drive for thinness subscale	28.5	24.8–32.3	22.7	19.1–26.2	17.8	15.6–20.0	17.2	16.0–18.5
Body dissatisfaction subscale	32.3	29.0–35.6	29.8	25.9–33.7	25.9	23.3–28.4	23.1	21.3–25.0
Bulimia subscale	18.9	15.1–22.8	13.9	12.1–15.7	11.0	9.5–12.4	10.6	10.1–11.1
Perfectionism subscale	20.9	16.7–25.0	15.4	13.6–17.1	15.3	13.7–17.0	15.0	14.2–15.9
State-Trait Anxiety Inventory								
Trait anxiety	51.1	47.6–54.7	41.5	38.0–45.0	39.0	35.9–42.1	37.9	36.7–39.2
State anxiety	45.5	40.5–50.5	34.9	30.6–39.1	35.9	31.3–40.4	33.2	31.6–34.8
Psychosomatic Symptom Scale	5.4	4.0–6.8	5.4	4.1–6.6	5.0	4.0–6.1	4.7	4.2–5.2
Rosenberg Self-Esteem Scale	14.6	11.8–17.3	22.9	20.2–25.6	23.1	21.3–25.0	22.5	21.7–23.6

In the evaluation of outcomes after clinical recovery, we compared probands with DSM-IV and broad anorexia nervosa with their unaffected female co-twins. "Unaffected" was defined as screening negative for eating disorder symptoms in the wave 4 questionnaire (21) and not having a lifetime diagnosis of DSM-IV anorexia nervosa, bulimia nervosa, binge eating disorder, or eating disorder not otherwise specified in the SCID interview. Of the 93 co-twins in pairs discordant for broad anorexia nervosa, seven women had lifetime eating disorders, 13 were female co-twins who did not participate in the interview, and 26 were male co-twins from opposite-sex dizygotic twin pairs. After these individuals were excluded, 47 unaffected female co-twins remained.

Although unaffected co-twins are in many respects an ideal comparison group, they may differ from women in the general population. In order to detect any such differences that might be relevant to our conclusions, we drew a random sample of 105 female-female twin pairs (210 women) from the screen-negative women in these birth cohorts. Those who were also negative for all eating disorders in the SCID interview were termed "healthy women" (N=134).

Statistical Analysis

Lifetime prevalences of DSM-IV and of broad anorexia nervosa were calculated by dividing the number of lifetime prevalent cases by the total number of women who responded to the eating disorder screen material in the wave 4 questionnaire (N=2,545).

We computed the incidence rates of DSM-IV and of broad anorexia nervosa for the peak 5-year interval of risk (ages 15–19 years), as has been done in previous studies (5). For later age groups, the data would be less reliable because of the small number of cases and varying ages at assessment. The numerator was the number of incident cases detected in the given age interval, and the denominator was the number of person-years at risk.

We used the Kaplan-Meier survival method to compute 5-year clinical recovery rates for DSM-IV and broad anorexia nervosa, and we used the log-rank test to compare survival curves across groups.

Psychological outcomes after clinical recovery were analyzed in two ways. To examine trends toward full recovery, we calculated mean psychological outcome scores for women with DSM-IV anorexia nervosa who were currently ill, those who had been in clinical recovery for >5 years, and the two comparison groups (unaffected co-twins and healthy women). These results do not account for age at illness onset and illness duration. Next, to examine the trends toward full recovery after clinical recovery and to assess their statistical significance while also accounting for age at illness onset and illness duration, we designed a model that compared the probands and their unaffected co-twins as a function of time on the eight psychological outcome scales. We predicted each outcome variable using a random intercept linear regression model and the following predictors: disorder status (we used only broad anorexia nervosa because of power constraints), age at illness onset, illness duration, time from recovery to interview for the proband (with linear and quadratic terms), and the same time variables for the co-twin. The random intercepts were included to account for dependence between twins. Age at onset, illness duration, and the time-dependent predictors for the unaffected co-twins were found not to be significant and were dropped from the final model.

For comparisons of physical and social characteristics between cases and comparison groups, we used analysis of variance for continuous outcome measures and logistic regression for categorical outcome measures. To account for clustered sampling within the twin pair, p values and confidence intervals in all analyses were adjusted using standard procedures for survey data (27). We used the statistical software Stata 9.2 (Stata Corp, College Station, Tex.) for all analyses.

Results

Prevalence and Incidence

The lifetime prevalence was 2.2% (95% confidence interval [CI]=1.6–2.7) for DSM-IV anorexia nervosa (55 cases out of 2,545 women) and 4.2% (95% CI=3.4–5.0) for broad anorexia nervosa (107 cases out of 2,545 women). The incidence of DSM-IV anorexia nervosa for ages 15–19 years was 270 per 100,000 person-years (95% CI=180–360), and the incidence of broad anorexia nervosa was 490 per 100,000 person-years (95% CI=370–610).

Five-Year Clinical Recovery Rate

The 5-year clinical recovery rates were 66.8% and 69.1% for DSM-IV and broad anorexia nervosa, respectively (Figure 1). Overall, 70.9% women with DSM-IV anorexia nervosa and 76.6% with broad anorexia nervosa had reached clinical recovery by the time of the interview.

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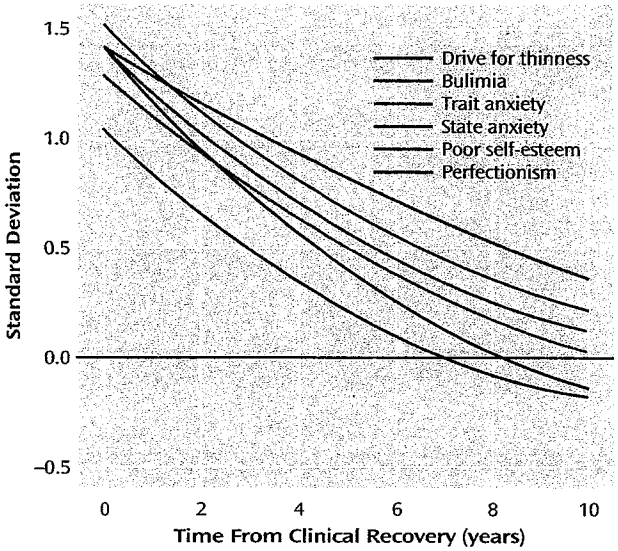
TABLE 2. Clinical Characteristics and Psychosocial Outcome Measures of Women With Detected and Undetected Broad Anorexia Nervosa[a]

	Currently Ill (N=23)				Recovered ≤5 Years (N=29)			
	Detected (N=11)		Undetected (N=12)		Detected (N=12)		Undetected (N=17)	
Measure	Mean	95% CI	Mean	95% CI	Mean	95% CI	Mean	95% CI
Age at onset of eating disorder	16.6	14.2–19.1	18.7	16.6–20.5	18.3	16.6–19.9	19.0	17.4–20.6
Age at interview	25.6	24.5–26.6	24.6	23.8–25.5	25.3	24.5–26.2	25.2	24.6–25.7
Minimum body mass index	15.9	15.0–16.9	17.2	16.2–18.3	16.3	15.1–17.6	16.5	15.9–17.2
Current body mass index	20.1	18.9–21.3	21.9	19.7–24.0	22.6	19.7–25.5	20.2	19.1–21.4
Eating Disorder Inventory								
Drive for thinness subscale	30.8	25.5–36.1	30.3	26.3–34.2	27.1	21.3–32.8	26.5	22.0–31.0
Body dissatisfaction subscale	33.2	29.1–37.3	33.7	29.4–38.1	34.3	28.4–40.2	32.4	27.0–37.8
Bulimia subscale	22.2	17.2–27.2	19.1	14.9–23.3	18.5	14.5–22.6	18.2	13.9–22.4
Perfectionism subscale	20.4	15.3–25.4	23.8	20.2–27.5	19.5	14.8–24.1	19.2	15.5–22.9
State-Trait Anxiety Inventory								
Trait anxiety	52.5	48.3–56.8	54.3	48.9–59.6	46.8	40.1–53.4	44.8	39.9–49.6
State anxiety	47.6	40.4–54.8	51.8	43.9–59.6	40.9	31.9–49.9	39.2	32.4–46.0
Psychosomatic Symptom Scale	6.9	4.3–9.5	7.4	5.3–9.6	6.9	5.0–8.7	7.3	5.8–8.8
Rosenberg Self-Esteem Scale	13.2	9.9–16.5	15.2	11.5–18.9	16.2	12.4–19.9	17.7	15.0–20.4

[a] Broad anorexia nervosa includes DSM-IV anorexia nervosa and ICD-10 atypical anorexia, here defined as anorexia nervosa without amenorrhea or weight loss of at least 15% that led to a BMI ≤19, coupled with undue influence of body weight on self-evaluation or intense fear of weight gain. Detected cases are those in which the individual reported having received an eating disorder diagnosis from a health professional prior to this study; undetected cases are those that did not receive such a diagnosis. Diagnostic status prior to this study was unknown for 14 women. The means were not adjusted for age of illness onset or illness duration.

FIGURE 2. Time-Dependent Psychological Outcomes of Broad Anorexia Nervosa Probands in Clinical Recovery Compared With Their Unaffected Co-Twins[a]



[a] State and trait anxiety are from the State-Trait Anxiety Inventory, poor self-esteem is from the Rosenberg Self-Esteem Scale, and the other three measures are subscales of the Eating Disorder Inventory. These outcome measures were standardized: for each one, the curved lines represent broad anorexia nervosa probands, and the line at SD=0 represents the level of unaffected co-twins. Age at illness onset and illness duration were not statistically significantly associated with psychological outcomes after clinical recovery.

Outcomes After Clinical Recovery

The mean current BMI of DSM-IV anorexia probands in clinical recovery (mean BMI=21.7, SD=3.0, 95% CI=21.0–22.4) did not significantly differ from that of their unaffected co-twins (mean BMI=21.8, SD=2.7, 95% CI=21.0–22.6).

Over time in clinical recovery, the mean psychological outcome scores of DSM-IV anorexia nervosa probands generally improved (Table 1). Using the broad definition of anorexia nervosa to maximize statistical power, we formally tested these observed trends. The null hypothesis was that outcomes of probands and co-twins do not converge, that is, that probands remain more symptomatic than their co-twins. We could reject the null hypothesis for six of the eight outcome measures: drive for thinness ($z=-2.30$, $p=0.021$), bulimia ($z=-3.23$, $p<0.001$), perfectionism ($z=-3.01$, $p=0.003$), state anxiety ($z=-2.49$, $p=0.013$), trait anxiety ($z=-2.53$, $p=0.011$), and self-esteem ($z=4.02$, $p<0.0001$). For the other two measures, there was no detectable convergence of proband and co-twin outcomes (body dissatisfaction, $z=-1.35$, $p=0.18$; psychosomatic symptoms, $z=-1.42$, $p=0.16$). In other words, we found that the residua of illness receded steadily and statistically significantly over time for six of the eight psychological outcome measures, converging over time with their healthy co-twins' outcomes (Figure 2).

Neither the women who were currently ill with broad anorexia nervosa nor the probands who were in clinical recovery differed from their unaffected co-twins on education, occupation, or parity. The currently ill probands did differ from their unaffected co-twins in the proportion married or cohabiting with a partner (26.9% versus 53.1%, $p=0.04$); the probands in clinical recovery showed a smaller and statistically nonsignificant difference from their unaffected co-twins on this measure (43.9% versus 52.1%).

Detected Versus Undetected Cases

Approximately half of the cases ascertained in this study had been detected in the health care system. Detected cases constituted 53% (29 of 55) of all DSM-IV anorexia nervosa cases and 41% (44 of 107) of all broad anorexia

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Recovered >5 Years (N=41)			
Detected (N=21)		Undetected (N=20)	
Mean	95% CI	Mean	95% CI
15.2	14.1–16.3	16.1	15.6–16.5
25.2	24.6–25.7	25.9	25.0–26.7
15.8	14.9–16.7	17.1	16.7–17.6
21.5	20.4–22.7	21.5	20.6–22.4
22.0	17.8–26.2	24.1	20.1–28.0
26.3	22.0–30.6	29.2	25.3–33.0
13.6	11.5–15.7	13.0	10.8–15.2
17.0	15.4–18.7	14.8	12.8–16.7
41.8	39.1–44.4	42.5	37.4–47.7
35.3	31.8–38.9	36.4	30.5–42.2
5.9	4.5–7.2	5.8	4.4–7.2
22.1	19.9–24.4	22.3	18.7–25.9

nervosa cases. The 5-year clinical recovery rates were similar for the detected and undetected cases: 61.8% versus 68.4%, respectively, for DSM-IV anorexia nervosa, and 60.1% versus 69.5%, for broad anorexia nervosa.

For broad anorexia nervosa, we had a sufficient number of cases to compare the detected and undetected cases on numerous measures, including age at onset, minimum BMI, and psychological symptoms (Table 2). There were few differences between the detected and undetected cases, none statistically significant.

Unaffected Co-Twins Versus Healthy Women

The unaffected co-twins of broad anorexia nervosa probands were also compared with the healthy women from the same birth cohorts (Table 2), and the differences were neither statistically nor clinically significant. The frequency of marriage or cohabitation was similar in unaffected co-twins (52.1%) and healthy women (50.0%).

Discussion

In this population cohort of young women, there were three main findings. First, the incidence rate of anorexia nervosa was about twice as high as rates reported in prior studies. Second, the great majority of women who developed anorexia nervosa achieved clinical recovery within 5 years. Third, 5 years after clinical recovery, most women reached complete or nearly complete psychological recovery, closely resembling their unaffected co-twins and healthy women in weight and psychosocial measures.

Incidence Rates

The incidence rate of DSM-IV anorexia nervosa at ages 15–19 years was 270 per 100,000 person-years in this study, compared with previous reports of 136 per 100,000 person-years in the United States (4) and 109 per 100,000 person-years in the Netherlands (11). We propose five competing explanations for the high incidence rate: first, that anorexia nervosa was underascertained in prior studies, most of which were restricted to cases detected in the health care system; second, that anorexia nervosa was overascertained in this study; third, that anorexia nervosa is more common among twin than nontwin individuals because of unknown twin-specific exposures not shared by the general population; fourth, that the incidence rate of anorexia nervosa in Finland may be higher than in other countries; and fifth, that high incidence rates of anorexia nervosa were observed because of a cohort effect.

The first explanation predicts that our results should be similar to those of prior studies when we compute our incidence rates only on the basis of cases detected in the health care system. This prediction was borne out: the incidence of DSM-IV anorexia nervosa, based only on the detected cases, was 140 per 100,000 person-years at ages 15–19 years, which is similar to the figures cited above from the United States and the Netherlands. Also, our lifetime prevalences are well in line with earlier community-based observations from the United States (28) and Australia (29).

The second explanation predicts that noncases misclassified as cases of anorexia nervosa (undetected cases) should have a less severe and clear-cut illness than true (detected) cases. This prediction was not borne out: the undetected and the detected cases exhibited similar psychopathology and recovery rates.

The third explanation predicts that anorexia is more common among twin than nontwin individuals. However, previous research has found that rates of psychiatric disorders in twin and nontwin populations are comparable (30). In this study, we found no differences in the diagnostic distribution and outcomes of broad anorexia nervosa by zygosity, and most cases were from discordant twin pairs. We also observed no appreciable differences in marriage and cohabitation frequency, body dissatisfaction, or psychosomatic symptoms between monozygotic and dizygotic healthy women (data available from first author).

Our data thus suggest that the incidence of anorexia nervosa has been substantially underestimated in previous studies, because a large proportion of true cases of anorexia nervosa remain undetected (5, 18), even in countries with highly developed and universal health care systems, such as Finland. More research on the patterns of help-seeking behavior in women with anorexia nervosa is warranted.

The other two possible explanations cannot be directly tested by our study. The first is that the incidence rate of anorexia nervosa in Finland may be higher than in other countries. However, several recent studies have found lifetime prevalences of anorexia nervosa comparable to ours, although they did not assess incidences of anorexia nervosa (4, 28, 29). The second is that the high incidences of anorexia nervosa we detected may in part reflect a secular

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trend that is specific to recent birth cohorts. Bulik et al. (4) recently demonstrated that the prevalence of anorexia nervosa is greater among Swedes born after 1945 than among those born earlier. The incidence of anorexia nervosa also has risen linearly in the United States and in the Netherlands in recent past decades (9–11).

Clinical Recovery Rates

The 5-year clinical recovery rate of anorexia nervosa in our study was higher than rates reported by most, though not all, previous studies. A recent review of 119 clinical outcome studies found that 47% of participants with anorexia nervosa reached clinical recovery (14). Recovery rates increased significantly with follow-up time. In studies that recorded 5- or 6-year recovery rates from anorexia nervosa, the proportion achieving clinical recovery ranged from 35% to 80% of participants; the use of different definitions of clinical recovery probably contributed to the variability of the recovery rates (31–36). In this study, more than two-thirds of the women with DSM-IV anorexia nervosa achieved clinical recovery within 5 years. Despite this, the burden of illness was considerable: in almost two-thirds of the cases, the illness duration was ≥2 years, and in half, it was ≥3 years.

Outcomes After Recovery

Rather than simply relying on our evaluation of clinical recovery, we were able to compare broad anorexia probands with their unaffected co-twins and healthy women on multiple measures. Probands with broad anorexia nervosa in clinical recovery could not be distinguished from their unaffected co-twins and healthy women in self-reported BMI, nor on measures of social function. They still differed from their unaffected co-twins on eight measures designed to capture psychological characteristics. Over time, however, these residua of illness receded. On six of the eight measures, the probands progressed to full recovery. The pattern was less clear for the other two measures of psychological characteristics: body dissatisfaction and psychosomatic symptoms appeared to be more persistent in the probands. Future follow-up waves will establish whether these differences diminish over time.

Limitations

Selection bias due to differential participation of cases and noncases of anorexia nervosa in the telephone interviews is possible but likely minimal. Telephone numbers were obtained by letters sent to addresses updated from the Finnish population registry (response rate, 90.4%). The telephone interview participation rate of women with self-reported eating disorders was 90.1%, while that of healthy women was 84.8%.

The impact of treatment on outcome could not be directly assessed in this study. We found that the detection of broad anorexia nervosa by the health care system had no association with prognosis in this study. This result does not, however, demonstrate that treatment had no effect, because case detection does not necessarily imply treatment (or proper treatment).

We did not assess mortality, because the number of cases was small and the follow-up did not extend beyond ages 22–28 years. Previous studies have shown that the risk of mortality increases as a function of illness duration (16). Only a third of women with broad anorexia nervosa (N=38) in our study had eating disorder symptoms for more than 5 years, and only 8.4% (N=19) had them for more than 10 years. Thus, estimates of anorexia nervosa-related mortality in this birth cohort will be more meaningful when linkage with mortality and cause-of-death registries is conducted. It is worth noting, nonetheless, that the overall mortality in this cohort was very low; only eight deaths were recorded in the population registry between the first assessment wave at age 16 and the fourth wave at ages 22–28. In the worst-case scenario, if all the deaths in the cohort were due to anorexia nervosa, the crude mortality rate of 0.3% per decade would be markedly lower than those recorded in follow-up studies of anorexia nervosa in clinical settings (37, 15–17), although they would be in line with community-based and national registry-based observations (38–40).

Conclusion

In this population study, the incidences of DSM-IV and broad anorexia nervosa were much higher than rates reported previously. The 5-year clinical recovery rates were higher than those reported in most previous studies. Nonetheless, the burden of illness was remarkable. After clinical recovery, the residua of illness steadily receded: women closely resembled their unaffected co-twins on most measures after 5 years in clinical recovery, which demonstrates that full psychological recovery is both possible and likely.

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All authors report no competing interests.

Dr. Keski-Rahkonen had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

The design and conduct of this study were funded by NIAAA grants AA12502 and AA08315, the Academy of Finland (44069 and 201461), and the European Union Fifth Framework Program (QLRT-1999-00916 and QLG2-CT-2002-01254). Data preparation and analysis were supported by the Psychiatric Epidemiology Training Program at Columbia University (MH013043), the State Endowment for

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Helsinki University Central Hospital, and the Ahokas, Jahnsson, Helsingin Sanomat, and Finnish Cultural Foundations.

The authors thank Prof. Ian McKeague for statistical advice, Jutta Kaukoranta, M.D., and Seija Salmelin, R.N., for helping conduct the interviews, and Eila Voipio, R.N., Kauko Heikkilä, Lic.Phil., and Ms. Pia Ruokolinna for technical assistance.

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Exhibit 9

Psychological Bulletin
2003, Vol. 129, No. 5, 747–769

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0033-2909/03/$12.00 DOI: 10.1037/0033-2909.129.5.747

Are Eating Disorders Culture-Bound Syndromes? Implications for Conceptualizing Their Etiology

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The authors explore the extent to which eating disorders, specifically anorexia nervosa (AN) and bulimia nervosa (BN), represent culture-bound syndromes and discuss implications for conceptualizing the role genes play in their etiology. The examination is divided into 3 sections: a quantitative meta-analysis of changes in incidence rates since the formal recognition of AN and BN, a qualitative summary of historical evidence of eating disorders before their formal recognition, and an evaluation of the presence of these disorders in non-Western cultures. Findings suggest that BN is a culture-bound syndrome and AN is not. Thus, heritability estimates for BN may show greater variability cross-culturally than heritability estimates for AN, and the genetic bases of these disorders may be associated with differential pathoplasticity.

The influence of culture on the development of eating disorders such as anorexia nervosa (AN) and bulimia nervosa (BN) has been long appreciated. These syndromes are more prevalent in industrialized and often Western cultures and are far more common among females than males, mirroring cross-cultural differences in the importance of thinness for women (Miller & Pumariega, 2001; Pate, Pumariega, Hester, & Garner, 1992). Furthermore, eating disorders seem to have become more common among younger females during the latter half of the twentieth century, during a period when icons of American beauty (Miss America contestants and *Playboy* centerfolds) have become thinner and women's magazines have published significantly more articles on methods for weight loss (Garner, Garfinkel, Schwartz, & Thompson, 1980; Owen & Laurel-Seller, 2000; Rubinstein & Caballero, 2000; Wiseman, Gray, Mosimann, & Ahrens, 1992). Patients with eating disorders often describe intense preoccupation with weight and dieting as the first stages of their illness, and the American Psychiatric Association's (2000) diagnostic criteria for AN and BN require body image disturbance. The cognitive–behavioral theory of eating disorders places weight concerns and dieting at the center of their etiology (Fairburn, Cooper, & Shafran, 2002). These patterns indict current cultural beauty ideals in the etiology and maintenance of eating disorders.

Yet, a recent trend in eating disorders research has been to focus on their genetic bases and deemphasize the role of culture (cf. DeAngelis, 2002). Briefly, data from community-based twin studies have suggested that the heritability of eating disorders is greater than 50% (Bulik, Sullivan, & Kendler, 1998; Bulik, Sullivan, Wade, & Kendler, 2000; Kendler et al., 1991, 1995; Klump, Miller, Keel, McGue, & Iacono, 2001; Kortegaard, Hoerder, Joergensen, Gillberg, & Kyvik, 2001; Wade, Bulik, Neale, & Kendler, 2000), and several recent reports have emerged indicating specific genetic loci for susceptibility to eating disorders (Grice et al., 2002; Koronyo-Hamaoui et al., 2002; Ricca et al., 2002; Westberg et al., 2002). Indeed, one eating disorders researcher has equated the shift from psychosocial to biological theories of etiology in eating disorders to the shift that occurred within schizophrenia research (DeAngelis, 2002). However, unlike schizophrenia, eating disorders have been characterized as culture-bound syndromes.

Prince (1985) defined a culture-bound syndrome as "a collection of signs and symptoms (excluding notions of cause) which is restricted to a limited number of cultures primarily by reason of certain of their psychosocial features" (p. 201). With this definition, he proposed that AN might represent a culture-bound syndrome. However, he cautioned that "the decision hinges on the empirical question of whether or not the syndrome occurs in non-Western cultures or segments of them which are not markedly influenced by Western cultures" (Prince, 1985, p. 201). In contrast, Swartz (1985) argued that evidence of AN in non-Western cultures would not decrease the extent to which it represents a culture-bound syndrome because AN cannot be understood separated from its cultural context:

> The identical symptoms now may mean different things from what they may have meant in the late 19th century when the disorder was first documented in the form we now recognize. This implies that it may be valid to relate symptoms now occurring to social factors which may not have existed in the same form years ago. (p. 727)

Thus, the same disorder could be attributed to different social factors (the aspect of the syndrome that is culture bound) despite having existed in different cultural contexts. Swartz's distinction between disorder and culturally embedded syndrome resembles

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We acknowledge support from a Radcliffe Institute for Advanced Study Fellowship to Pamela K. Keel and from National Institute of Mental Health Grants R01 61836 and R01 63758 to Pamela K. Keel and R03 65447 to Kelly L. Klump. We also wish to thank Mark Baxter, Kyle Gobrogge, Richard McNally, Natalie Lester, Alyson Zalta, and the 2001–2002 Radcliffe Institute Fellows for their contributions in the preparation of this article.

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Kleinman's (1987) distinction between disease and illness. According to Kleinman, *disease* represents the biological entity for which the pathophysiology is known, and *illness* represents the culturally shaped manifestation of the disease.

Because research into the genetic diathesis of eating disorders represents a search for their underlying disease, this search would benefit from an examination of whether or not core features of these syndromes exist outside of modern Western influences. We begin by evaluating whether rates of eating disorders have increased significantly over recent decades because evidence of a secular increase has been used as the cornerstone of arguments that they are caused by the recent emphasis on thinness (Garner et al., 1980; Russell, 1985). However, this evidence has been challenged by several investigators (Fombonne, 1995, 1996; Lucas, 1992; Pawluck & Gorey, 1998; Van't Hof & Nicolson, 1996), sparking considerable debate on this point. We then examine the cross-historical and cross-cultural evidence for eating disorders. The purpose of this article is to explore the extent to which eating disorders, specifically AN and BN, represent culture-bound syndromes and to discuss the implications of these findings for understanding the role genes play in their etiology.

Method

In order to examine the extent to which eating disorders are represented outside of their current sociohistorical context, this review was subdivided into three sections: epidemiology since the recognition of the modern syndromes, historical evidence of the syndromes prior to their formal recognition, and cross-cultural evidence of the syndromes.

Meta-analyses were conducted to investigate whether AN and BN have become more common during the twentieth century by examining secular trends in incidence rates (newly identified cases per 100,000 population per year) according to the methods described in Rosenthal and Rosnow (1991). Specific details of this method are described within the *Epidemiology of AN in the Twentieth Century* section in the *Data coding* subsection. As noted by Hoek (1993; Hoek, Van Hoeken, & Katzman, 2003), epidemiological studies of AN tend to use incidence, and epidemiological studies of BN tend to use prevalence (percentage of individuals who currently [point] or have ever [lifetime] met criteria for a disorder regardless of when the disorder first emerged). Because incidence rates track when cases are first identified, only incidence rates are considered in the meta-analyses. Both the cross-historical and cross-cultural sections represent a qualitative review, as they necessarily relied more on specific case histories for sufficient detail to evaluate the presence of eating disorders.

We restricted our review to published works. Benefits of this approach include the increased scientific rigor of published (particularly peer-reviewed) work compared with unpublished work and permanent availability of published work within the public domain for independent evaluation by others. Because restriction to published articles has the potential to be biased by the "file-drawer phenomenon" (Rosenthal & Rosnow, 1991), we have included information concerning the number of studies with nonsignificant results that would alter meta-analytic findings and interpretations within the *Epidemiology of AN in the Twentieth Century* and *Epidemiology of BN in the Twentieth Century* sections.

Definitions

We sought information for the diagnostic entities of AN and BN as they are conceptualized in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM–IV*; American Psychiatric Assocation, 1994; 4th ed., text rev.; *DSM–IV–TR*; American Psychiatric Association, 2000). We did not attempt to limit our review to cases meeting full *DSM–IV* criteria for AN and BN. Rather the *DSM–IV* was used to define boundaries that separate these as distinct syndromes. Although a great deal of recent attention has been paid to binge-eating disorder in the literature, less emphasis has been placed on the role of culture in the etiology of this proposed syndrome, and significant findings on its genetic bases remain limited (Burnet, Smith, Cowen, Fairburn, & Harrison, 1999; Branson et al., 2003; Ricca et al., 2002). We therefore restricted our review to AN and BN.

Using the *DSM–IV* conceptualization of AN and BN to organize our search introduces a sociohistorical bias. Thus, a brief discussion of both our rationale and our attempts to recognize these biases is warranted. The first issue concerns the overlap of AN and BN. In the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed.; *DSM–III*; American Psychiatric Association, 1980), a diagnosis of AN trumped a diagnosis of bulimia. In the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed., rev.; *DSM–III–R*; American Psychiatric Association, 1987), both diagnoses could be given concurrently. In the *DSM–IV*, a diagnosis of AN again trumps a diagnosis of BN. Based on data concerning age of onset, naturalistic course, treatment response, and mortality, the *DSM–IV* conceptualization has considerable empirical support (Keel & Mitchell, 1997; Keel, 2003). Moreover, women with concurrent symptoms of AN and BN do not differ from women with the restricting subtype of AN, and all women with AN differ significantly from women with BN alone on naturalistic course, treatment response, and mortality (Herzog et al., 1999; Keel et al., 2003). The second issue concerns the combination of binge eating with inappropriate compensatory behavior in defining BN. In the *DSM–III*, inappropriate compensatory behavior in the form of self-induced vomiting was included as a possible, but not necessary, feature of bulimia. Subsequent work comparing individuals with binge eating alone versus binge eating and inappropriate compensatory behavior, most often purging, shows significant differences in gender ratios, etiologic factors, clinical correlates, and course (Halmi, 2003; Keel, 2003). Moreover, the *DSM–IV* definition of BN has demonstrated predictive validity in being distinguished from both AN and binge-eating disorder (Keel, Mitchell, Miller, Davis, & Crow, 2000). Despite evidence supporting the validity of the *DSM–IV* conceptualizations of AN and BN, there remain several definitional shortcomings. The impact of these shortcomings on evidence of these disorders outside of their current sociohistorical context is considered and discussed throughout the review. Particular attention is given to the cognitive features of body image disturbance that define these disorders.

One aspect of this review that became challenging was the need to define the construct of a "non-Western" culture. In reading other reviews, it became clear that what was considered non-Western varied considerably. Indeed, the *Cassell Dictionary of Modern Politics* (East & Joseph, 1994) describes *the West* as "a misleading term in a variety of usages" (p. 319). For the purposes of this article, we selected the definition for *non-Western* used by Karan (in press):

> The area whose cultures developed essentially apart from the Greco–Judaic–Christian tradition of the Western culture. Thus, it includes East Asia (China, Japan, and Korea), Southeast Asia, the Indian subcontinent, the Middle East, and Sub-Saharan Africa. Latin America, Russian Asia, and Oceania are excluded. The indigenous cultures of Latin America and Oceania are not western, but they are also not non-Western . . . the contemporary cultural pattern in Latin America and Oceania, unlike the non-Western cultures of Asia and Africa, is based dominantly on western traditions and values. (p. 1)

Although clear cultural differences exist among countries such as Bulgaria, Portugal, and the United States and may seem greater than cultural differences among Hong Kong, Japan, and the United States, Karan's (in press) definition of *non-Western* is influenced less by recent political and economic changes that essentially coincide with the recognition of eating disorders within Western cultures. Further, this definition acknowledges aspects of culture that are derived from historically unique evolutions of civilization.

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Literature Search

Literature reviews were conducted using computer databases (PsycINFO, 1887–June 2002; MEDLINE, 1966–June 2002; RLG's Eureka Anthropological Literature, 1900–June 2002; and ABC-CLIO Historical Abstracts, 1954–June 2002) and hand searches of the reference sections of all articles, books, and book chapters retrieved by computer and hand search. The following search terms were used: *eating disorder*, *anorexia nervosa*, *bulimia*, *epidemiology*, *incidence*, *prevalence*, *history*, *culture*, *cross-cultural*, and the names of every nation and continent in the world with the explode option to detect relevant permutations of terms. For the historical search, the terms *binge*, *purge*, *vomit*, and *starvation* were also included using the explode option. Pamela K. Keel reviewed references for the epidemiology and cross-historical sections. Titles and abstracts retrieved for non-Western nations (n " 1,190) were evaluated by Kelly L. Klump for potential relevance, and articles were obtained to determine whether cases of AN or BN were reported in non-Western nations. Although several articles provided evidence of elevated levels of disordered eating behaviors and attitudes in non-Western cultures as assessed by standardized questionnaires (Al-Subaie, 2000; Al-Subaie et al., 1996; Hooper & Garner, 1986; A. M. Lee & Lee, 1996; S. Lee, 1993; S. Lee & Lee, 2000; S. Lee, Lee, & Leung, 1998; S. Lee, Lee, Leung, & Yu, 1997; S. Lee, Leung, Lee, Yu, & Leung, 1996), we sought specific instances of clinical eating disorders in these regions. Because we were specifically interested in evidence of eating disorders outside of our current sociohistorical context, an attempt was made to include information from articles regardless of language. Thus, some information is from English translations of work originally published in another language and abstracts written in English for articles written in non-English languages, as well as reviews of these non-English works by other authors. Much of the historical information prior to the mid-seventeenth century was collected through secondary sources because English translations were unavailable for many original sources. Although this section of the review is vulnerable to the interpretations of the secondary source, many of the cases were reviewed by multiple authors with differing theses, thus allowing a reasonably comprehensive presentation.

Anorexia Nervosa

According to the *DSM–IV–TR*, AN is defined by the following diagnostic criteria:

> A. Refusal to maintain body weight at or above a minimally normal weight for age and height (e.g., weight loss leading to maintenance of body weight less than 85% of that expected; or failure to make expected weight gain during period of growth, leading to body weight less than 85% of that expected).
>
> B. Intense fear of gaining weight or becoming fat, even though underweight.
>
> C. Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or denial of the seriousness of the current low body weight.
>
> D. In postmenarcheal females, amenorrhea, i.e., the absence of at least three consecutive menstrual cycles. (A woman is considered to have amenorrhea if her periods occur only following hormone, e.g., estrogen, administration.) (American Psychiatric Association, 2000, p. 589)

Attempts to characterize the presence of AN across time or across cultures have been marked by debates concerning the core features of the disorder. Although there is universal agreement that AN represents a disorder marked by starvation, some (Banks, 1992, 1997; Katzman & Lee, 1997; S. Lee, 1995; Palmer, 1993) have argued that weight phobia (Criterion B) represents an aspect of the culturally bound illness that is not necessarily related to the disease that underlies AN. Others (Beumont, 1988; Habermas, 1989) have argued that weight phobia is a necessary motivating force behind food refusal to distinguish AN from "other social (deprivation), physical or psychiatric causes of undernutrition" (Beumont, 1988, p. 171). Similarly, there have been debates over whether or not amenorrhea (Criterion D) should be retained as a diagnostic criterion or viewed as a consequence of malnutrition (Cachelin & Maher, 1998). Because the definition of AN continues to be contested, we included studies using various definitions of AN and noted how these definitions differed from that presented in the *DSM–IV–TR*.

Epidemiology of AN in the Twentieth Century

Table 1 provides reported incidence rates for AN from studies evaluating secular trends, organized by study cohort and presented in ascending order of year (r values and probability values were calculated by Pamela K. Keel as described below). Attempts to determine changes in incidence rates of AN have been plagued by the low base rate associated with the disorder and diagnostic uncertainty (Fombonne, 1995). Indeed, differences in diagnostic criteria have contributed to incidence rates differing more across studies than across time (see Table 1). Further, the definition of AN has changed over recent decades. Thus, studies relying solely on diagnoses recorded in case registers (e.g., Jones, Fox, Babigian, & Hutton, 1980; Kendell, Hall, Hailey, & Babigian, 1973; Møller-Madsen & Nystrup, 1992; Nielsen, 1990; Shinkwin & Standen, 2001; Williams & King, 1987) may be tracking decreasing stringency of diagnostic criteria for AN as well as secular trends for true incidence. To guard against this particular confound, several investigators (e.g., Eagles, Johnston, Hunter, Lobban, & Millar, 1995; Hall & Hay, 1991; Hoek et al., 1995; Joergensen 1992; Lucas, Beard, O'Fallon, & Kurland, 1988, 1991; Lucas, Crowson, O'Fallon, & Melton, 1999; Pagsberg & Wang, 1994; Szmukler, McCance, McCrone, & Hunter, 1986; Willi & Grossmann, 1983; Willi, Giacometti, & Limacher, 1990) have ensured application of uniform diagnostic criteria across years by directly evaluating medical records, interviewing clinicians and patients, or training clinicians to assess eating disorders.

Data coding. Across the epidemiological studies included in Table 1, 10 articles reported a statistically significant secular increase in AN incidence, 9 reported a failure to find a significant increase, and one reported a significant decrease. There was a clear relationship between study finding and inclusion of statistics required for meta-analyses. Only 2 studies (Lucas et al., 1988; Turnbull, Ward, Treasure, Jick, & Derby, 1996) that failed to find a significant secular increase provided specific data concerning either effect size or probability value. Thus, findings from 7 studies (Hall & Hay, 1991; Hoek et al., 1995; Joergensen, 1992; Nielsen, 1990; Szmukler et al., 1986; Willi et al., 1990; Williams & King, 1987) indicating at least one nonsignificant secular trend would be excluded from a meta-analysis of reported statistics. To avoid this bias, original data concerning annual incidence per 100,000 were recorded from each study from a combination of tables and figures. Tabulations of these raw data are available on request from Pamela K. Keel. For articles reporting annual incidence based on averaged data over a period of several years, this

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Table 1
Anorexia Nervosa Incidence

Midpoint	Range	Location	Criteria	Reported incidence	*r*	*p*	Study
1945	1931–1960	Sweden	—	0.24	.948	.002	Theander (1970)
1962	1935–1979	Rochester, Minnesota	*DSM–III, DSM–III–R*	7.3[a]	.404	.109	Lucas et al. (1988)[b]
	1935–1984			8.2[a]			Lucas et al. (1991)[c]
	1985–1989			8.3[a]			Lucas et al. (1999)[c]
1968	1960–1969	New York	—	0.37	.501	.058	Kendell et al. (1973)[c]
	1960–1976			0.47			Jones et al. (1980)[c]
1968	1965–1971	London	—	0.66	.886	.004	Kendell et al. (1973)[c]
1970	1956–1975	Zurich, Switzerland	—	0.38–1.12	.822	.0005	Willi & Grossmann (1983)[c]
	1983–1985			1.43			Willi et al. (1990)[b]
1974	1966–1969	Scotland	Russell (1970)	1.6	.804	.000004	Kendell et al. (1973)[c]
	1965–1982			4.06			Szmukler et al. (1986)[b]
1977	1972–1981	England	—	—	.648	.0215	Williams & King (1987)[b]
1978	1965–1991	Northeast Scotland	ICD 8	—	.708	.00001	Eagles et al. (1995)[c]
1980	1970–1989	Bornholm County, Denmark	ICD 10	1.6–6.8	.815	.0925	Pagsberg & Wang (1994)[c]
1981	1977–1985	Ireland	ICD 8, ICD 9	4.18	# .935	.0001	Shinkwin & Standen (2001)[d]
1982	1970–1989	Denmark	ICD 8	0.42–1.17	.179	.087	Møller-Madsen & Nystrup (1992)[c]
	1973–1987			1.04			Nielsen (1990)[b]
	1970–1993			—			Munk-Jørgensen et al. (1995)[c]
1982	1977–1986	Fyn County, Denmark	*DSM–III–R*	11.0[e]	.004	.496	Joergensen (1992)[b]
1982	1977–1986	Wellington, New Zealand	*DSM–III*	5.0	# .230	.261	Hall & Hay (1991)[b]
1987	1985–1989	The Netherlands	*DSM–III–R*	8.1	.674	.212	Hoek et al. (1995)[b]
1989	1978–1992	Yamagata Prefecture, Japan	*DSM–III–R*	—	.805	.202	Nadaoka et al. (1996)
1991	1988–1993	England and Wales	*DSM–IV*	4.2[a]	.128	.405	Turnbull et al. (1996)[b]

Note. *DSM–III* " *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed.); *DSM–III–R* " *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed., rev.); ICD 8 " *International Classification of Diseases* (8th ed.); ICD 10 " *International Classification of Diseases* (10th ed.); ICD 9 " *International Classification of Diseases* (9th ed.); *DSM–IV* " *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.).
[a] Age- and sex-adjusted incidence rate. [b] Reported no significant change. [c] Reported significant increase in incidence. [d] Reported significant decrease in incidence. [e] Incidence for females ages 10–24 years.

annual incidence was assigned to the year representing the midpoint of that period.

Pearson product–moment correlation coefficients were then calculated between incidence rates and years of observation within each cohort. These correlations along with their associated one-tailed probability values appear in Table 1. Cohorts rather than articles were selected as the unit of analysis because one article (Kendell et al., 1973) included three separate cohorts, two of which were followed later in subsequent articles (Jones et al., 1980; Szmukler et al., 1986). Similarly, continued follow-up has been reported in subsequent articles for two other cohorts (e.g., Hoek, 1991, Hoek et al., 1995; Lucas et al., 1988, 1991, 1999). Finally, incidences for overlapping periods have been reported for one cohort in three separate articles (Møller-Madsen & Nystrup, 1992; Munk-Jørgensen, Møller-Madsen, Nielsen, & Nystrup, 1995; Nielsen, 1990). Thus, conducting analyses by cohort rather than article ensured independence of observations.

One challenge in conducting the meta-analysis was variations across studies in how incidence was calculated. Williams and King (1987) demonstrated that the increased incidence for AN over time observed in their study was due to an increase in the proportion of the population comprising adolescent and young adult women. After age and sex were controlled for, no significant trend was found. Thus, age- and sex-adjusted incidence rates provide the best measure of secular trends, and studies were weighted according to their method of calculating incidence. A coefficient of 3 was given to studies that controlled for both sex and age. Studies controlling only for sex were given a coefficient of 2, and studies reporting incidence without controlling for age or sex were given a coefficient of 1. Because the significance of correlation values was influenced by the number of years of observation (which improves reliability of observed time trends) and not by the size of the population from which data were drawn, population size was used to weight values in the meta-analysis on the following scale: 1 " a population of 10,001 to 100,000; 2 " 100,001 to 1,000,000; and 3 " greater than 1,000,000. Thus, the meta-analysis favored findings from larger populations because they are less vulnerable to minor fluctuations in numbers of cases.

Results. Combining effect sizes across cohorts according to the equations presented in Rosenthal and Rosnow (1991) resulted in a medium effect for increased AN incidence across cohorts over time (r " .35). Combining probability values across cohorts according to the equations presented by Rosenthal and Rosnow indicated a significant increase in incidence over time (p " .00005, one-tailed). According to a formula presented in Rosenthal and Rosnow, approximately 205 nonsignificant studies would be required to alter the result of this meta-analysis.

Theander (1970) was the first author to publish evidence of increased incidence rates for AN; however, he noted many methodological reasons his findings might not reflect an increase in the true incidence of AN. These included "above all, increasing tendency to arrange medical care and hospitalisation for patients with anorexia nervosa" (Theander, 1970, p. 30). Of interest, during the period in which a significant increase in AN incidence was observed in Monroe County, New York (Jones et al., 1980; Kendell et al., 1973), a significant increase was observed for the number of

adolescents receiving psychiatric treatment in this region. Specifically, the incidence of AN rose from 0.35 to 0.64 per 100,000 population per year from 1960–1969 to 1970–1976 (Jones et al., 1980). Similarly, the incidence of children and adolescents using psychiatric services rose from 348 to 662 per 100,000 population per year from 1960 to 1976 (Roghmann, Babigian, Goldberg, & Zastowny, 1982). This suggests that cases of AN represented approximately 0.1% of children and adolescents receiving treatment from 1960 to 1976 with the apparent increase in AN incidence potentially reflecting the increase in adolescents being entered into the psychiatric case register. Supporting this possibility, Willi and Grossmann (1983) found that the percentage of those diagnosed with AN first hospitalized in psychiatry versus pediatrics or internal medicine increased steadily from 0% to 31.6% between 1956 and 1975. These authors attributed this trend to changes in how emaciation was interpreted in adolescent girls: "In the past, the cause of the disease was more frequently assumed to be organic (hypopituitarism), whereas in recent years, the diagnostic view of anorexia nervosa has changed from somatic to psychic causes" (Willi & Grossmann, 1983, p. 565). Secular increases in psychiatric contact for patients with AN have been reported by others (George, Weiss, Gwirtsman, & Blazer, 1987; Lucas et al., 1999). These patterns may explain why Szmukler et al. (1986) observed a secular increase in AN incidence ascertained through the Aberdeen Psychiatric Case Register in Scotland but observed no significant change in AN incidence ascertained through the general hospital register. Restricting our meta-analysis to just those investigations using general medical records indicates a small effect size (r " .25) that is statistically significant (p " .03) for an increase in AN incidence over the 20th century. Approximately 23 nonsignificant studies would be required to alter the results of this meta-analysis. Thus, a modest increase in AN incidence has coincided with increasing idealization of thinness (Garner et al., 1980; Owen & Laurel-Seller, 2000; Rubinstein & Caballero, 2000; Wiseman et al., 1992).

Introduction of AN to the medical nomenclature. Although popular and professional attention to AN has increased dramatically over recent decades (perhaps out of proportion with the actual increase in AN incidence), AN is not a "new" disorder that first appeared when Western culture emphasized the thin ideal. The term *anorexia nervosa* was first introduced in the medical literature by William Gull in 1874 to describe four cases of adolescent girls with deliberate weight loss, among whom three went on to achieve full weight recovery (Gull, 1874). Independent descriptions of a similar syndrome appeared under the labels *l'anorexie hysterique* (Laségue, 1873) and *anoressia* (Brugnoli, 1875, as cited in Habermas, 1992b; Ruggerio, Prandin, & Mantero, 2001) throughout Europe at that time. Similarly, at the end of the nineteenth century, American physicians were beginning to differentiate anorexia as a syndrome distinct from the larger category of hysteria (Vandereycken & Lowenkopf, 1990), and German physicians were differentiating AN from the larger category of neurasthenic disorders (Vandereycken, Habermas, Van Deth, & Meermann, 1991). A paper presented at a meeting of the South Australian Branch of the British Medical Association in 1882 documented two cases of anorexia in young women in Australia (Vandereycken & Beumont, 1990), and Kissyel reported a case of severe hysterical anorexia in an 11-year-old girl in Russia in 1894 (as cited in DiNicola, 1990b).

Both Gull (1868, 1874, 1888) and Laségue (1873) acknowledged the presence of several cases of anorexia prior to their providing the syndrome with a specific name. Laségue (1873) commented, "I wish to treat of a symptomatic complexus *too often observed* [italics added] to be a mere exceptional occurrence" (p. 265). Similarly, Gull (1888) stated his case was "an illustration of most of these cases" (p. 517) and in an earlier article referred to "young women emaciated to the last degree through hysteric apepsia" (Gull, 1868, p. 175). Thus, both the language used in these articles and the widespread attention and confirmation these works received from other physicians support that the condition was a familiar entity, although previously known by other names or viewed within a larger category of mental disorders.

The features of Gull's (1888) AN included significant weight loss, slow pulse rate, skin changes, and loss of menstruation with "perversions of the 'ego' being the cause and determining the course of the malady" (p. 517). Gull (1874) specifically noted the following: "The want of appetite is, I believe, due to a morbid mental state. I have not observed in these cases any gastric disorder to which the want of appetite could be referred" (p. 25). In a similar vein, Gull (1874) advised physicians to treat the illness with feeding despite the likely protests of the patient. Laségue (1873) viewed l'anorexie hysterique as a form of hysteria in which psychological distress was converted into food refusal motivated by "disgust" or "uneasiness after food, vague sensations of fullness, suffering, and gastralgia *post-prandium*" that "although hypothetical, is dreaded in advance" (p. 265). Laségue's description, based on eight cases, resembled present-day AN in that his patients were primarily women between the ages of 15 and 20 years. Both Gull's (1874) and Laségue's formulations of the syndrome focused on the food refusal itself; emaciation (Criterion A) and amenorrhea (Criterion D) were viewed as consequences of the syndrome. This resembles the current view of bradycardia and constipation as sequelae of AN rather than core features of the syndrome. Another distinction between the formulation of the illness by both Gull (1888) and Laségue versus present-day AN was the absence of mention of weight or shape concern.

Cross-Historical Evidence of AN

Historical cases of anorexia. Prior to the formal recognition of AN as a distinct syndrome, several reports in the medical literature suggest the presence of AN throughout the nineteenth century. Marce (1860) described a form of hypochondria in which "young girls, who at the period of puberty and after a precocious physical development, become subject to inappetency carried to the utmost limits" (p. 264). He noted that patients actively refused to eat in the absence of true gastric incapacity ("the stomach is well able to digest, and suffers only from want of food"; Marce, 1860, p. 265) and that the result is that "all trace of adipose tissue had disappeared, and the patients were reduced to skeletons" (p. 264). Marce emphasized that deliberate food refusal and resistance to treatment could lead to death in some cases; however, he also reported that patients could be cured if forcibly refed. From 1812 to 1917, W. L. L. Parry-Jones (1985) found evidence of 40 cases of AN among 36,000 hospital admissions in England, suggesting that 0.1% of psychiatric inpatients may have suffered from AN (similar to the rate reported from 1960 to 1976 in Monroe County, New York). Two cases were described in greater detail. One involved a young woman who was admitted to the Warneford

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Asylum in 1831 who was emaciated from chronic food refusal. She was noted to be "delirious from debility rather than insane" (W. L. L. Parry-Jones, 1985, p. 97), and she died after 12 days from starvation. The second case involved a 26-year-old woman admitted in 1862 who was emaciated from food refusal. She was described as "sensible of all that is said to her" (W. L. L. Parry-Jones, 1985, p. 99), and she was ultimately discharged following a 7-month treatment of refeeding. In an 1840 text on women's diseases, Imbert characterized *anorexie nerveuse* by loss of appetite, refusal to eat, and emaciation (as cited in Vandereycken & Van Deth, 1994). Chipley (1860) described cases of extreme emaciation among females who actively refused to eat (*sitomania*) despite pangs of hunger and attributed the deliberate self-starvation to a desire for attention and notoriety.

Chipley's (1860) conclusion concerning the motivation behind sitomania overlaps with the motivations attributed to so-called fasting girls of the eighteenth and nineteenth centuries. Throughout this period, cases of fasting girls gained great attention in the popular media throughout America and Europe (Bemporad, 1996; Brumberg, 1989; Vandereycken & Van Deth, 1994). Typically, these cases involved adolescent girls who abruptly refused to eat. The cases drew a mixture of medical concern and religious awe. Particularly notorious cases attracted national and international attention with details of the fast reported in newspapers and skepticism about the miraculous fasts expressed by medical professionals in scholarly journals. Thus, in all recorded cases, food refusal leading to emaciation was associated with the secondary gain of fame. And, for some, continued food refusal was a lucrative occupation. Not surprisingly, this secondary gain attracted fraud. Cases involving proven deception include Anne Moore, Margaretha Weiss, Barbara Kremers, and Eva Vliegen (Bemporad, 1996; Brumberg, 1989; Vandereyeken & Van Deth, 1994). Some fasting girls were acclaimed as miracles for their ability to eat nothing yet remain completely healthy (including maintaining a healthy weight). Conversely, other fasting girls became extremely emaciated, in some cases leading to their deaths. Among these were Lina Finch (1886), Kate Smulsey (1885), and Lenora Eaton (1881), who all reportedly died of starvation before the age of 22 as a result of their food refusal (Brumberg, 1989).

Sarah Jacobs (1869), the "Welsh Fasting Girl," represents a particularly tragic case of self-starvation leading to death in a fasting girl (Bemporad, 1996; Brumberg, 1989; Vandereycken & Van Deth, 1994). She began to fast in 1867 at the age of 12. Her parents publicized her behavior with the support of a local reverend who confirmed the authenticity of the claims. She became a tourist attraction for the curious and a source of inspiration for religious pilgrims. Sarah Jacobs's fame attracted concern and skepticism from the medical profession. To resolve ongoing debate over her case, nurses from Guy's Hospital were dispatched to keep watch on the girl. As a condition of the watch, her parents insisted that she not be offered unsolicited food. Over the course of the week, Sarah Jacobs grew feeble and lost the ability to regulate her own body temperature. The nurses and supervising doctors attempted to end the watch and recommended refeeding, but her parents refused to end or modify the conditions of the test, and Sarah never requested food. After 10 days, she died of starvation (Brumberg, 1989; Vandereycken & Van Deth, 1994).

According to Brumberg (1989), Anglo American girls during the Victorian era were well-acquainted with the religious fasting of medieval saints, and St. Catherine of Siena's biography was included in inspirational books for girls. Indeed, the actions of Sarah Jacobs's parents seem to reflect a deep faith in a divine source of their daughter's food refusal. However, the growing field of psychiatry viewed these individuals as suffering from "nervous" conditions. Thus, fasting girls of the eighteenth and nineteenth centuries embraced the continuity between the religious medieval fasting of saints and their own behaviors. Meanwhile, psychiatrists endorsed the continuity between the extreme fasts leading to death among adolescent girls in the United States, England, France, and Germany and the newly identified syndrome of AN.

Between the seventeenth and eighteenth centuries, "miraculous maids" were girls between the ages of 14 and 20 who engaged in self-starvation, modeling themselves explicitly after ascetic medieval saints (Bemporad, 1996). From 1685 to 1710, Bliss and Branch (1960) found seven medical doctoral theses on anorexia, including one authored by Hardenus in 1703 that attributed the disorder to dysfunction of the gastric nerves as well as disturbances in the spirit and feelings (p. 8). Morton (1689) described *nervous atrophy* or a *nervous consumption* characterized by loss of appetite, extreme emaciation, amenorrhea, overactivity, and indifference to the condition (as cited in Morton, 1694, English translation). Morton (1694) detailed two cases in the first chapter of his thesis on consumption. Mr. Duke's 18-year-old daughter experienced amenorrhea and significant weight loss "like a Skeleton only clad with skin" (Morton, 1694, p. 9) that could not be attributed to tuberculosis or chlorosis. The patient engaged in "continual poring upon Books, to expose her self both Day and Night to the injuries of the Air" (Morton, 1694, p. 8). After initial compliance with treatment she "quickly tired with Medicines, she beg'd that the whole Affair might be committed again to Nature, whereupon consuming every day more and more, she was after three Months taken with a Fainting Fit and dyed" (Morton, 1694, p. 9). The cause of death is unclear; however, refeeding syndrome seems to be one plausible explanation (see Walsh, Wheat, & Freund, 2000, for a review of treatment complications in AN). The second case involved a 16-year-old boy whose loss of appetite was also attributed to "studying too hard," although he responded to treatment with a "Milk Diet," "Riding," and "Country Air" (Morton, 1694, p. 10).

For possible cases of AN in the sixteenth century, McSherry (1985) suggested that Mary, Queen of Scots (1542–1587), suffered from AN. However, too little information is included in the short report to examine the supposition. Conversely, a great deal has been written of fasting medieval religious ascetics (Bell, 1985; Bynum, 1987; Carroll, 1998; Rampling, 1985), and cases of self-starvation were recorded by hagiographers from the eighteenth century back to the twelfth century.

Bell (1985) reviewed the vitae of 261 saints who lived in the Italian peninsula from A.D. 1200 on for evidence of what he termed *holy anorexia.* Holy anorexia, like AN, involved food refusal resulting in emaciation overtly motivated by the belief that this reflected divine intervention. Of the 261 saints, approximately 170 had adequate information for determination of eating pathology, and Bell argued that over half of these 170 individuals demonstrated a pattern of holy anorexia, such as that presented by St. Catherine of Siena and St. Veronica.

St. Catherine of Siena entered a pattern of self-starvation at around 16 years of age that continued until her death in 1380 (at age 32 or 33). Her death was brought on by her refusal to consume food or water. Because St. Catherine was a prolific writer, more is

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known about her internal experience of self-starvation than about any other historical case. She portrayed herself as feeling unable to eat and claimed that "I prayed continually and I pray to God and will pray that he will grace me in this matter of eating so that I may live like other creatures" (St. Catherine, as cited in Bell, 1985, p. 23). As with patients treated by Gull, (1874), Laségue (1873), and Marce (1860) St. Catherine refused to eat because she viewed herself as afflicted by an inability to eat. St. Veronica (Veronica Giuliani) began a pattern of self-starvation at age 18 that may have represented a relapse from a previous episode at age 15. Fellow nuns reported seeing St. Veronica sneaking into the kitchen and gorging herself on food when she thought no one else was around, and she was placed repeatedly in the infirmary where she was forced to eat and prevented from binge eating. Although St. Veronica wrote several diaries, little information is given concerning the motivation behind her food refusal. The closest revelation on this point is that she felt she was "in a race against all the other novices to show who loved God the most" (Bell, 1985, p. 71). In contrast to St. Catherine, St. Veronica ultimately achieved recovery sometime between her 30s and 50s and lived until the age of 67 (death 1727).

Despite the acceptance of divine intervention as the reason for self-starvation in these cases, Bell (1985) described in detail the repeated attempts of peers and superiors to induce eating in the fasting saints to help them avoid the sin of vainglory, an inability to engage in holy responsibilities, or the sin of suicide. According to Bell, the Reformation functionally removed self-starvation as a means of achieving holiness for women such that St. Clare of Assisi (death 1253) and St. Catherine of Siena (death 1380) were revered for their self-starvation whereas Sister Domenica (death 1553) and Catherine Vannini (death 1606) were viewed with significantly greater suspicion. Bynum (1987) argued for a plurality of meaning for self-starvation among the fasting saints throughout this period such that extreme asceticism was alternately viewed as a mark of God's grace, demonic possession, fraud, and illness within the lifetimes of all fasting saints, not just those following the Reformation. Bynum's (1987) text includes the following quote from St. Catherine's confessor: "If food was ever forced down her throat, intense pain followed, no digestion took place, and all that had been violently forced down was violently forced back again" (p. 168). The use of forced feeding emphasizes the ambivalence that St. Catherine's fasting met. According to Ruggiero et al. (2001), psychiatric interpretations of self-starvation in young women were published in Italy by Pietro di Abano (1270–1316), Alessandro Benedetti (1533), Simone Porta (1551), and Becarri (1745). Thus, self-starvation in pursuit of a religious ideal was not unambiguously sanctioned in medieval times any more than self-starvation in pursuit of a thin ideal is sanctioned in modern times.

Purported cases of AN prior to the twelfth century include St. Wilgefortis, who allegedly engaged in self-starvation resulting in emaciation and lanugo (fine, downy body hair usually restricted to the fetal stage of development) sometime between A.D. 700 to 1000 (Lacey, 1982). Lacey (1982) argued that the popularity of this legend reflected the presence of AN throughout the European countries in which the bearded saint was known by various names (St. Ontkommena, St. Kummernis, St. Livrade, St. Leberata, and St. Uncumber). Hajal (1982) reviewed the case of self-starvation in al-Mut'tazz billah, son of Khalifah, as a case of AN successfully treated by Bukhtishu'ibn Jibrail (870). Cases of self-starvation attributed to demonic possession or cured by exorcism were documented during the 5th and 8th centuries, and early Christianity offers a possible case of AN from the late 4th century in Blessila in which an individual died from self-starvation at the age of 20 (Bemporad, 1996; Lacey, 1982). However, these earliest cases are not without controversy. For example, Bynum (1987) characterized the description of St. Wilgefortis as having AN as a "bizarre communication to a British medical journal" (p. 194). Indeed, the story of St. Wilgefortis recounted by Lacey is open to numerous interpretations, among which AN is one possibility. Moreover, prior to the twelfth century, details become sparse, increasing the difficulty of interpreting these potential cases.

Interpretation of historical cases of anorexia. Although all of the above cases have been included in reviews of the history of AN, controversy exists concerning the validity of retrospectively diagnosing these women with AN. Much of the debate centers on the motivation behind food refusal, and limited information on this point is the greatest challenge to interpretation. Habermas (1989, 1996) has argued that modern-day AN extends to historical cases presented in the latter half of the nineteenth century by Gull (1874, 1888), Laségue (1873), and Marce (1860) but not to fasting found among medieval religious ascetics or Victorian-era females with hysteria or fasting girls. He argued that fasting among religious ascetics and Victorian females with hysteria was not AN because (a) fasting was used to heighten spirituality along with other forms of self-mortification, (b) fasting was associated with convalescence and paralysis, and (c) fasting was interpreted in religious terms both by the fasting women and by the clergymen and doctors who wrote of these cases: "if some of the fasting women had been worried about their body weight, it would have been a concept accessible also to the reporting clergymen and doctors" (Habermas, 1989, p. 261). Conversely, Habermas (1989) interpreted early cases of AN (Gull, 1888) and l'anorexie hysterique (Laségue, 1873) as being motivated by weight phobia despite a lack of documentation of this feature. He concluded that "it is plausible that weight concerns have been present in AN from its beginning on but have been overlooked by most German and British medical men" (Habermas, 1989, p. 269) because early accounts of AN provided no "plausible motivation" (p. 269) for self-starvation and patients with AN tend to hide their goal of losing weight and give other explanations for their refusal to eat such as loss of appetite, inability to eat, and stomachache. According to Habermas (1989), weight loss was the "secret motivation" (p. 269), allowing it to be a necessary, if hidden, feature for defining the presence of the disorder since its introduction in the latter half of the nineteenth century. The absence of this motivation in earlier cases makes them invalid in his view. However, Habermas's (1989) discussion leaves unclear why the presence of religious motivation would negate the presence of weight phobia (or vice versa) or why weight concerns would be a more accessible concept for medieval clergymen and doctors than it was for Gull (1874) or Laségue.

The presence of religious motivation does not preclude the presence of weight concerns as evidenced by modern cases of "spiritual starvation" (Banks, 1992, 1997; Bynum, 1988; Katzman & Lee, 1997; Morgan, Marsden, & Lacey, 2000). Cases presented by Banks (1992, 1997) involve women who fasted to engender spiritual purity and thus bear a striking resemblance to historical cases of fasting performed by medieval religious ascetics. In one case, the syndrome resulted in death despite numerous hospitalizations. In the second case, the syndrome remitted and full recov-

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ery was achieved. In terms of outcome, these cases are not unlike those of St. Catherine and St. Veronica, respectively. Morgan et al. (2000) reported on three cases of spiritual starvation. Although the authors indicated that *DSM–IV* AN was diagnosed in two of these cases, religious themes appeared to provide primary motivation for deliberate self-starvation in all three cases (Morgan et al., 2000).

It seems unlikely that Gull (1874) and Laségue (1873) overlooked weight concerns as a motivation for food refusal because contemporary authors noted these features in fasting girls. Winslow (1880) provided the following quote attributed to Erasmus Darwin from the end of the eighteenth century:

> Some young ladies I have observed to fall into this general debility but so as but just to be able to walk about, which I have sometimes ascribed to their voluntary fasting, when they believed themselves too plump; and who have thus lost both health and beauty by too great abstinence, which could never be restored. (p. 281)

Similarly, Charcot emphasized the role of weight phobia in the etiology of self-starvation among his patients (as cited in Habermas, 1989; Vandereycken & Van Deth, 1994). The work of both Winslow and Charcot would have been available to Gull and Laségue, suggesting that both men could be aware of this possible explanation for self-starvation. However, neither seemed to regard this information as a compelling explanation for food refusal in their patients. In a later publication, Habermas (1996) elaborated his argument that weight phobia represents the central feature of AN on the basis that diagnostic criteria have to differentiate syndromes in such a way that a syndrome represents a homogeneous group distinct from other syndromes. Although weight phobia achieves this end, it does not appear to be the only means to this end.

Given both current (as well as historical) plurality in motivations behind self-starvation, Rieger, Touyz, Swain, and Beumont (2001) recommended requiring ego-syntonic emaciation rather than weight phobia to differentiate AN from other conditions that lead to weight loss. The authors noted that cases of AN are uniform in the extent to which self-starvation is deliberate and the responses to resulting emaciation range from indifference to pride. Their proposition offers a solution to differentiating fasting to convey religious devotion that is common to most religions (Bliss & Branch, 1960) and that displayed in holy anorexia. Moreover, ritualistic religious fasting is time-limited and tends to focus on avoiding specific foods entirely or not eating during specific time intervals and thus does not typically result in emaciation. It lacks the persistent and pervasive nature of food refusal that characterizes the form of fasting observed in medieval religious ascetics or modern-day AN. In addition, weight loss that results from other physical and psychological conditions is often distressing to the affected individual (Rieger et al., 2001).

Despite the utility of Rieger et al.'s (2001) recommendation, there are other contemporary cases in which ego-syntonic emaciation would not represent an eating disorder or any other form of psychopathology. For example, deliberate self-starvation may be used as an effective means of protest. Although women with AN can be seen as using self-starvation as a means of protest (Brumberg, 1989), this can be differentiated from nonpathological forms of deliberate self-starvation. Individuals who engage in hunger strikes do so as a means to an end. When the end is reached, the self-imposed starvation ceases. Mogul (1980) wrote, "What distinguishes adaptive asceticism from pathological states is not so much its extent, or even the subjective experience of gratification from it, but the degree to which the asceticism becomes an end in itself" (pp. 159–160). Food refusal has been used as a means to different ends in different periods (moral purity, fame, attention, thinness), but in all periods it also becomes an end in itself. What seems to unite fasting saints and women with AN is the paradox that the starvation is both deliberate and nonvolitional. That is, across historical contexts women deliberately refuse to eat food that they require for sustenance. Yet, they do not appear to be able to stop their pattern of food refusal in response to reward or punishment. This characterization resembles Shafran, Cooper, and Fairburn's (2002) depiction of clinical perfectionism as the core pathology of AN. The internal motivation to avoid eating overrides all internal and external drives to eat, and for many adolescent girls throughout history this means becomes their ultimate end.

Although motivations for food refusal may have differed across periods (in many cases this information is simply lacking), purported motivations may not represent the true causes of self-starvation. Instead, they may represent culturally meaningful attempts to understand an affliction that leaves women feeling unable and unwilling to eat. The extent to which fear of fat is viewed as causing AN may be, in part, an illusion (Wegner, 2002). Thus, if the core feature of AN is taken to be an intentional yet nonvolitional self-starvation, then evidence of AN appears to trace back to early medieval times. Furthermore, across the various historical contexts in which AN has emerged, this disorder demonstrates a particular affinity for affecting females beginning in their adolescence and thus satisfies Habermas's (1996) call for defining the core features of a syndrome such that they retain descriptive specificity.

Cross-Cultural Evidence of AN

Although several reports have suggested that AN was nonexistent in non-Western regions such as sub-Saharan Africa (German, 1972), Northern Sudan (Elsarrag, 1968), and Southeast Asia (Neki, 1973), our review of the literature indicated that AN has been observed in every non-Western region of the world. Table 2 summarizes features of reports of AN in non-Western nations, including the country, diagnostic criteria, number or prevalence of cases, presence of weight concern among these cases, and level of Western influence. These publications included case reports, letters to journal editors, and clinical and epidemiological investigations.

Data coding. Presence of weight concerns was evaluated because of the evidence reviewed above that this symptom varies both across and within historical periods. For studies indicating that all cases met diagnostic criteria that require weight concerns and for which details for specific case histories were not provided, we concluded that all cases (e.g., 100%) must have reported weight concern. Unfortunately, this did not preclude an inconsistent or idiosyncratic application of diagnostic criteria in those studies. By contrast, for cases in which weight concerns were explicitly denied by the patient but were perceived by the author to be the secret motivation, we considered the feature to be absent. Some of these cases may resemble patients with AN who have denied fears of becoming fat only for the fears to emerge as weight restoration begins. However, inferring the presence of weight concerns in the absence of any confirming evidence prevents awareness of cases in which this feature is genuinely absent. Further, it runs the risk of

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relying on an ethnocentric conception of the core features of AN (S. Lee, Ho, & Hsu, 1993).

For characterization of Western influence, we took authors' estimation of the degree of Western influence when possible. When authors made no comment on this issue, we used all available information to code the study appropriately. We developed six categorizations in this regard: (a) No—at least one reported case where the author specifically noted that the case lacked exposure to Western influence (e.g., Abou-Saleh, Younis, & Karim, 1998, described a case of AN in an 18-year-old nomadic woman from the Empty Quarter in the United Arab Emirates and specifically noted the absence of Western influence in this case); (b) Unlikely—at least one case likely meets all of the following criteria: comes from a nonurban region, is of low socioeconomic status, resides within a traditional family, has not surpassed secondary education, *and* is non-English speaking; (c) Probable—all cases likely meet at least one of the following criteria: reside in an urban setting, are of high socioeconomic status, are English-speaking, *or* have higher educational attainment (i.e., baccalaureate or higher); (d) Definite—all cases spent considerable time in a Western nation before developing eating pathology (e.g., Ford, 1992, reported a case of BN in an Egyptian individual who developed the disorder after spending ages 5–17 in Canada); (e) Indeterminable—not enough information was provided to determine the degree of Western influence (e.g., data come from patients treated in an urban medical center; however, it is not possible to determine if any patients would fit above criteria for unlikely or no Western influence); and (f) Unknown—the original article was not written in English and information on Western influence was not included in the English abstract or English review article from which data were taken. Both the presence of weight concerns and Western influence were coded by consensus between Pamela K. Keel and Kelly L. Klump.

Results. Although food refusal leading to emaciation was reported for all cases in Table 2, the presence of weight concerns as a motivating factor for food refusal does not appear to be universal. S. Lee et al. (1993) described 70 cases of AN in Hong Kong among whom 59% did not report weight concerns. As with the cases described by Laségue (1873) and Gull (1874), digestive discomfort was the most frequent reason for not eating. These data suggest that Westernization and industrialization bring about certain aspects of AN (weight concerns) but are not necessary for producing a self-starvation syndrome. Alternatively, as has been argued for historical cases, weight concerns may have been present but denied by some patients. S. Lee et al. (1993) predicted that Western influence in China would result in increased presentation of weight-phobic AN. Consistent with this hypothesis S. Lee (2000) and Lai (2000) have both described an increasing prevalence of AN characterized by body dissatisfaction in the East. Further, S. Lee and Lee (2000) found that weight concerns were greatest in Hong Kong and least prominent in Hunan, suggesting an association between Westernization and body image disturbance.

Although some authors have indicated that AN cases were limited to the social elite or higher socioeconomic classes (Buchan & Gregory, 1984; Chadda, Malhotra, Asad, & Bambery, 1987), several reports suggested the presence of AN in the absence of Western influence (Abou-Saleh et al., 1998; Chandra et al., 1995; Fahy, Robinson, Russell, & Sheinman, 1988; Gandhi, Appaya, & Machado, 1991). When Western exposure could be determined, 42% (8/19) of articles reported at least one case with no or unlikely exposure to Western ideals.

Epidemiological data not only support the existence of AN in non-Western countries but suggest that its prevalence may be similar to that in Western nations. The lifetime prevalence of *DSM–III* AN in Korea did not differ from estimates produced by the Epidemiological Catchment Area study for lifetime prevalence of AN in New Haven or St. Louis (C. K. Lee et al., 1987, 1990). A recent study (Nobakht & Dezhkam, 2000) reported the lifetime prevalence of AN to be 0.9% in Iranian schoolgirls, a value that is higher than the lifetime prevalence reported in the *DSM–IV–TR*, and the incidence and prevalence of AN in Hong Kong (Chen et al., 1993; S. Lee, Chiu, & Chen, 1989) and Japan (Azuma & Henmi, 1982; Kuboki, Nomura, Ide, Suematsu, & Araki, 1996) are similar to those reported in Western nations (e.g., Kendell et al., 1973; C. K. Lee et al., 1987; Møller-Madsen & Nystrup, 1992; Theander, 1970, Willi & Grossmann, 1983). According to reports from Malaysia (Buhrich, 1981; Goh, Ong, & Subramaniam, 1993) and Egypt (Okasha, Kamel, Sadek, Lotaif, & Bishry, 1977), AN constituted between 0.05% and 0.19% of psychiatric cases. These figures are roughly comparable to those reported for Norway from 1990–1994 (Götestam, Eriksen, Heggestad, & Nielsen, 1998). Thus, excluding the criterion of weight concerns, AN appears to represent a similar proportion of the general and psychiatric populations in several Western and non-Western nations.

Summary of Findings for AN

It does not appear to be the case that AN is a culture-bound syndrome. Although cultural factors such as the increasing idealization of thinness may influence rates of AN, such factors seem neither sufficient nor necessary. Moreover, evidence of a secular increase in AN incidence is modest after controlling for factors such as changes in population distribution, population size, and ascertainment of cases through psychiatric registers. Cases of deliberate yet nonvolitional self-starvation, sometimes resulting in recovery, sometimes resulting in death, and primarily affecting young adolescent girls, exist in numerous historical periods. Similarly, specific cases of AN that cannot be attributed to the influence of Western ideals have been reported in the Middle East, the Indian subcontinent, and East Asia. Like historical cases that emerged in the absence of the "modern 'cult of thinness' " (Russell, 1997, p. 23), many of these non-Western cases lack weight concerns. Our results suggest that weight concerns may be a culturally bound phenomenon, restricted to sociohistorical contexts that idealize thinness and denigrate fatness. However, this is not entirely accurate either because a plurality of motivations for food refusal has been described both across and within sociohistorical contexts.

Bulimia Nervosa

The most recent edition of the *DSM* (*DSM–IV–TR*) defines BN with the following diagnostic criteria:

> A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
>
> (1) eating, in a discrete period of time (e.g., within any 2-hour period), an amount of food that is definitely larger than most people would eat during a similar period of time and under similar circumstances

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Table 2
Studies of Anorexia Nervosa (AN) in Non-Western Nations

Article	Place	Diagnostic criteria	% weight concern	Number–prevalence	Western influence?
			Africa		
Norris (1979)	Johannesburg, South Africa	Study specific	100	54 patients with AN; 8 Afrikaans-speaking and 4 other non-English-speaking patients	Indeterminable
Nwaefuna (1981)	Nigeria	Not given	100	1 case described in a Black Nigerian woman	Indeterminable
Famuyiwa (1988)	Nigeria	Not given	0	2 suspected cases reported; symptoms were loss of $ 30% body weight, denial of seriousness of low weight, and amenorrhea	Case 1: definite; Case 2: indeterminable
Buchan & Gregory (1984)	Zimbabwe	Feighner	Questionable case[a]	1 case reported in Black Zimbabwean	Definite
Fahy et al. (1988)	Ethiopia	Not given	100	1 case reported in Ethiopian torture victim	Probable
			Middle Eastern–Arab cultures		
Okasha et al. (1977)	Cairo, Egypt	Not given	Not given	2 cases of AN; 0.19% of psychiatric cases	Probable
Abou-Saleh et al. (1998)	United Arab Emirates	*DSM–III–R* for 3 of 5 patients	80	5 cases reported, among which diagnoses of *DSM–III–R* AN were confirmed by interview for 3 cases; 1 case (20%) lacked exposure to Western influences	No
Nobakht & Dezhkam (2000)	Iran	*DSM–IV*	100	0.9% of 3,100 female high school students age 15–18	Probable
Yager & Smith (1993)	Pakistan	Not given	100	1 case reported	No
			Indian subcontinent		
Neki, Mohan & Sood (1977)	India	Study specific	Not given	2 cases who were monozygotic twins	Indeterminable
Chakraborty (1985)	India	Not given	Absent in 8–10 cases	15–17 cases reported	Indeterminable
Chadda et al. (1987)	India	*DSM–III*	100	1 case of AN from the upper social class in India	Probable
Gandhi et al. (1991)	India	Not given	60	5 cases reported	No
Khandelwal et al. (1995)	India	Modified Feighner	20	5 cases reported	Unlikely
Chandra et al. (1995)	India	Modified *DSM–III–R*	33	3 cases reported	No
			Southeast Asia		
Ong et al. (1982)	Malaysia	Not given	71	7 cases reported—1 case with no formal education from lowest social class	Unlikely
Buhrich (1981)	Malaysia	Study specific	Not given	30 cases reported; 19 Chinese, 8 Indian, 1 Malaysian, 2 Eurasian; no change reported in prevalence over 15- to 20-year period; 0.05% of psychiatric referrals	Indeterminable
Krahl et al. (1981)	Malaysia	Unknown	Unknown	2.5% of cases presenting to a community child guidance clinic	Unknown
Krahl (1983)[b]	Malaysia	Unknown	Unknown	2 cases reported	Unknown
Goh et al (1993)	West Malaysia	Study specific	60	15 cases of partial AN in 9,000 female patients from 1970–1988; 0.16% of female patients	Indeterminable
Ung, Lee, & Kua (1997)	Malaysia	Not given		33 patients with AN; 36% partial syndrome patients with "lack of amenorrhea in anorexic range" (p. 334)	Indeterminable
			East Asia		
S. Lee, Chiu, & Chen (1989)	Hong Kong	Modified *DSM–III–R*	67	Reported % 10 cases treated during 5 years (incidence % 0.4 per 100,000 person years); 3 cases described in detail	Indeterminable
Chiu (1989)	Hong Kong	*DSM–III*	100	1 case reported	No
S. Lee (1991)	Hong Kong	Modified Feighner	19	16 cases reported	Unlikely
S. Lee, Leung et al. (1991)	Hong Kong	Study specific	0	2 cases reported	Indeterminable
S. Lee, Ho, & Hsu (1993)[c]	Hong Kong	Study specific	41	70 cases reported	Indeterminable

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Table 2 (*continued*)

Article	Place	Diagnostic criteria	% weight concern	Number–prevalence	Western influence?
			East Asia (*continued*)		
Chen et al. (1993)	Hong Kong	*DSM–III*	100	0.03 lifetime prevalence of AN in 7,229 males and females surveyed	Probable
Lai, Pang, & Wong (1995)	Hong Kong	Not given	100	1 case reported	Probable
Kam & Lee (1998)	Hong Kong	Study specific	50	1 case reported	Indeterminable
S. Lee, Lee, & Leung (1998)	Hong Kong	"Broadly diagnosed"	58	26 cases of AN from case series treated from 1990–1996	Probable
Lai (2000)	Hong Kong	Lask (1992)	88	16 cases reported	Probable
S. Lee (2001)	Hong Kong	Modified *DSM–IV*	67	48 cases reported	Indeterminable
Song & Fang (1990)[d]	China	*DSM–III*	Unknown	9 cases reported	Unknown
Tseng et al. (1989)[e]	Taiwan	*DSM–III*	Unknown	7 cases reported	Unknown
Hung & Cheng (1992)[f]	Taipei, Taiwan	*DSM–III–R*	100	2 cases of AN reported among 12,435 females ages 12–25	Indeterminable
Sonoda et al. (1974)[e]	Japan	Unknown	Unknown	1 case reported in a 10-year-old girl	Unknown
Nogami & Yabana (1977)[g]	Japan	Not given	Not given	9 cases reported	Indeterminable
Azuma & Henmi (1982)[h]	Japan	Unknown	Unknown	0.2% urban areas; 0.05% rural areas	Unknown
Mizushima & Ishii (1983)	Japan	Study specific	100	16 girls and 1 boy with AN among 36,403 girls and 37,520 boys in secondary school	Unknown
Suematsu et al. (1985)	Japan	Study specific	75% of 1,011	2,392 patients treated in 1980–1981; detailed data collected from 1,011 cases	Indeterminable
Suematsu et al. (1986)	Japan	Study specific	100	7 cases reported	Indeterminable
Kuboki et al. (1996)	Japan	Modified *DSM–III–R*	100	2.9–3.7/100,000 general population 1985; 3.6–4.5/100,000 general population 1992	Indeterminable
Nadaoka et al. (1996)	Japan	*DSM–III–R*	100	59 cases of AN treated at Yamagata University Hospital between 1978 and 1992	Probable
Nakamura et al. (2000)	Japan	*DSM–IV*	100	0.005% of female population; 0.003% of general population	Indeterminable
Takei et al (2000)[e]	Japan	*DSM–IV*	100	223 students with AN from 335 college health administration centers across Japan	Unknown
C. K. Lee et al. (1987)	Korea	*DSM–III*	100	0.02% of general population	Indeterminable
C. K. Lee et al. (1990)	Korea	*DSM–III*	100	0.03% of general population	Indeterminable

Note. Not given " authors did not provide the information in the article; Unknown " authors may have provided information in the non-English publication, but the information was not provided in the English abstract or the English review article summarizing it; Study specific " diagnostic criteria were specific to the study indicated; Indeterminable " exposure to Western influence could not be determined from article; *DSM–III–R* " *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed., rev.); *DSM–IV* " *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.); *DSM–III* " *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed.).

[a] Report states "score on the Eating Attitudes Test (Garner & Garfinkel, 1979) was 78 — clear evidence of her terror of becoming overweight" (Buchan & Gregory, 1984, pp. 328–329). However, initial weight loss does not seem intentional, and case was characterized by many psychotic and dissociative symptoms. [b] As reported in DiNicola (1990b). [c] 16 (23%) participants also took part in the S. Lee (1991) study. [d] As reported in S. Lee, Ho, and Hsu (1993). [e] Data were taken from an English abstract of a non-English publication. Overlap of cases across reports from a single country is unknown. [f] As reported in Tsai (2000). [g] As reported in Davis and Yager (1992). [h] As reported in Dolan (1991).

(2) a sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating)

B. Recurrent inappropriate compensatory behavior in order to prevent weight gain, such as self-induced vomiting; misuse of laxatives, diuretics, enemas, or other medications; fasting; or excessive exercise.

C. The binge eating and inappropriate compensatory behaviors both occur, on average, at least twice a week for 3 months.

D. Self-evaluation is unduly influenced by body shape and weight.

E. The disturbance does not occur exclusively during episodes of Anorexia Nervosa. (American Psychiatric Association, 2000, p. 594)

Although the definition of BN has been revised since its introduction to the psychiatric nomenclature, the above definition bears a striking resemblance to that given by Russell (1979) in his seminal description of the disorder. Slightly earlier, independent reports of a binge–purge syndrome in normal-weight young women were published in German and Spanish (Ziolko, 1996) and have since been translated into English by the original authors (Doerr-Zegers, 1994; Ziolko, 1994). Notably, among these first descriptions of BN (Doerr-Zegers, 1994; Russell, 1979; Ziolko, 1994), no author described a large awareness of this syndrome before 1960. Based on BN's recent appearance and dramatically increasing incidence, Russell (1997) concluded, "Bulimia nervosa is a new disorder" (p. 23).

Epidemiology of BN in the Twentieth Century

Table 3 provides incidence rates for BN from studies evaluating secular trends, organized by study cohort and presented in ascend-

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Table 3
Bulimia Nervosa Incidence

Midpoint	Range	Location	Criteria	Reported incidence	*r*	*p*	Study
1980	1970–1989	Bornholm County, Denmark	ICD 10	0.7–3.0	.905	.0475	Pagsberg & Wang (1994)
1982	1977–1986	Fyn County, Denmark	*DSM–III*	5.5[a]	.618	.0285	Joergensen (1992)
1982	1977–1986	Wellington, New Zealand	*DSM–III*	6.0–44.0	.869	.0005	Hall & Hay (1991)
1985	1980–1990	Rochester, Minnesota	*DSM–III–R*	13.5[b]	.347	.1475	Soundy et al. (1995)
1987	1985–1989	The Netherlands	*DSM–III–R*	11.5	.828	.042	Hoek et al. (1995)
1989	1978–1992	Yamagata Prefecture, Japan	*DSM–III–R*	—	.863	.1685	Nadaoka et al. (1996)
1991	1988–1993	England and Wales	*DSM–IV*	12.2	.968	.001	Turnbull et al. (1996)

Note. ICD 10 " *International Classification of Diseases* (10th ed.); *DSM–III* " *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed.); *DSM–III–R* " *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed., rev.); *DSM–IV* " *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.).
[a] Incidence for females ages 10–24 years. [b] Age- and sex-adjusted incidence rate.

ing order of year. Among these studies, all reported a significant rise in cases over time (Hall & Hay, 1991; Hoek et al., 1995; Joergensen, 1992; Nadaoka et al., 1996; Pagsberg & Wang, 1994; Soundy, Lucas, Suman, & Melton, 1995; Turnbull et al., 1996). Of interest, several of these studies found a significant increase in BN incidence despite finding no significant change in AN incidence (Hall & Hay, 1991; Hoek et al., 1995; Turnbull et al., 1996). Combining results across the seven studies that provide BN incidence data over time (Hall & Hay, 1991; Hoek et al., 1995; Joergensen, 1992; Nadaoka et al., 1996; Pagsberg & Wang, 1994; Soundy et al., 1995; Turnbull et al., 1996) weighted by method of calculating incidence and population size (as described above for the meta-analysis of AN incidence data), we found a large effect size (r " .89) for a secular trend of increasing BN incidence that is statistically significant (p " .0000001). Approximately 62 nonsignificant studies would be required to alter the results of this meta-analysis. Restricting our meta-analysis to include only those studies that used general medical records also results in a large effect size (r " .90) that is statistically significant (p " .00002). Approximately 28 nonsignificant results would be required to alter the results of this meta-analysis. Thus, studies tracking a secular trend in BN incidence from 1970 to 1993 suggest a significant increase.

Fombonne (1996) argued that the patterns seen for BN frequency follow that expected for a newly defined disorder but do not necessarily represent the emergence of a previously nonexistent syndrome. Specifically, one would expect to see a significant increase in incidence immediately following official recognition of a disorder because incidence rates often reflect when individuals first seek treatment for a disorder. Thus, incidence rates are inflated initially by the combination of new onset cases and cases with onset prior to disorder recognition. This description matches changes in incidence rates reported by Soundy et al. (1995). Incidence of BN increased steeply from 7.4 to 49.7 per 100,000 females from 1980 to 1983 and then remained relatively stable around 30 per 100,000 females from 1984 to 1990. According to Fombonne (1996), the decline from 49.7 to 30 cases per 100,000 females per year reflected a decline in cases with onset before the disorder had been defined rather than a true decrease in disorder incidence. Conversely, Soundy et al. noted that the particularly high rate in 1983 was inflated by a BN treatment study that year for which participants were being actively recruited from the community. Unfortunately, there are no incidence data for BN prior to 1970. Thus, one cannot use incidence rates to determine how the frequency of this disorder changed in relation to the current cultural idealization of thinness as was possible for AN.

Despite the ever-present cultural ideal of thinness, BN prevalence estimates were reduced from the *DSM–III* to the *DSM–III–R*. Early studies of BN point prevalence suggested that the disorder affected 8% (Pyle, Halvorson, Neuman, & Mitchell, 1986; Zuckerman, Colby, Ware, & Lazerson, 1986) to 19% (Halmi, Falk, & Schwartz, 1981) of university women whereas later studies suggested a lower point prevalence of BN among college women with estimates ranging from approximately 1% (Schotte & Stunkard, 1987) to 3% (Drewnowski, Yee, & Krahn, 1988). Although these results suggest a decline in the point prevalence of BN running counter to the continued idealization of thinness for this time (Wiseman et al., 1992), several methodological factors, unrelated to changing prevalence, may account for the observed differences.

First, earlier studies used the *DSM–III* criteria (Halmi et al., 1981; Pyle et al., 1986; Zuckerman et al., 1986) whereas later studies used *DSM–III–R* criteria (Drewnowski et al., 1988; Schotte & Stunkard, 1987). Between the *DSM–III* and *DSM–III–R*, the diagnostic criteria for BN grew more stringent. For example, recurrent inappropriate compensatory behavior was required in the *DSM–III–R* but was not strictly required in the *DSM–III*. In addition to being generally less stringent, the *DSM–III* was also less specific. For example, although the *DSM–III* criteria required "recurrent" binge-eating episodes, it did not specify a minimum frequency required for the episodes to be considered recurrent. Zuckerman et al. (1986) demonstrated that the simple stipulation of bingeing more than once per week versus just once per week reduced the point prevalence estimate of bulimia from 8% to 4% for college women in 1982. Similarly, Pyle et al. (1986) reported that the point prevalence of *DSM–III* bulimia in college women was approximately 8% in both 1980 and 1983; however, when weekly binge eating and purging were required, the point prevalence dropped to 1% in 1980 and 3% in 1983. Of interest, the stricter definition resulted in a threefold increase in the point prevalence of bulimia among college women from 1980 to 1983—mirroring results of incidence studies for this period. Thus, had *DSM–III–R* criteria been used in the earliest studies, prevalence estimates might have ranged from 1% to 4%.

Second, different methods of assessment across studies over time may have contributed to the perceived decrease in prevalence rates. Early prevalence studies (Halmi et al., 1981; Pyle et al., 1986; Zuckerman et al., 1986) more often used survey assessments, and later studies more often used interview assessments

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(Bushnell, Wells, Hornblow, Oakley-Browne, & Joyce, 1990; Schotte & Stunkard, 1987). Self-report surveys tend to produce higher estimates of BN prevalence than structured clinical interviews (Keel, Crow, Davis, & Mitchell, 2002). Bulimic symptoms such as binge eating are particularly vulnerable to high false-positive rates on self-report surveys compared with interviews because lay definitions tend to be more inclusive than clinical definitions (Whitehouse, Cooper, Vize, Hill, & Vogel, 1992). In addition, women appear to be more willing to admit to bulimic symptoms on self-report surveys compared with interviews because the increased anonymity of questionnaires increases candor (Keel et al., 2002). Both patterns could contribute to an artificial decline in BN prevalence over time.

Third, differences in the samples evaluated have led to varying prevalence rates (Fairburn & Beglin, 1990). Few studies have used random sampling, and inconsistent sampling strategies across studies could influence the extent to which individuals with eating disorders are over- or underrepresented in study groups. Moreover, epidemiological samples have varied in response rates, socioeconomic status, geographic location, ethnic representation, and age. Thus attempts to determine time-related changes in prevalence could be confounded by any of these differences. For example, women ages 18 to 24 (approximately college-aged) have rates of BN that are 2 to 10 times greater than those reported for women ages 25 to 64 (Bushnell et al., 1990).

An alternative to examining prevalence rates over different time periods is to measure lifetime prevalence rates across birth cohorts at one time. If a disorder has a stable incidence and onset occurs throughout life, then lifetime prevalence rates increase as birth cohorts age. If a disorder has a stable incidence but onset is limited to early ages (as it is for eating disorders), then lifetime prevalence rates would remain stable across birth cohorts that had passed through the period of risk. However, as noted above, lifetime BN prevalence rates are actually higher among younger birth cohorts compared with older birth cohorts (Bushnell et al., 1990; Kendler et al., 1991). These findings suggest either that the risk of BN has increased over recent years or that recall of past episodes of BN diminishes with age. Of interest, lifetime prevalence of AN has not differed significantly across birth cohorts (Robins et al., 1984; Wade, Heath, Abraham, & Treloar, 1996). Similarly, in an examination of eating disorders among relatives of AN probands, rates of BN were higher among sisters compared with mothers (4.1% vs. 1.0%), consistent with lifetime prevalence rates for a disorder with increasing incidence rates (Strober, Lampert, Morrell, Burroughs, & Jacobs, 1990). Conversely, rates of AN were 3 times lower in sisters than in mothers (2.0% vs. 6.2%), consistent with lifetime prevalence rates for a disorder with stable incidence rates (Strober et al., 1990). Unfortunately, data on lifetime prevalence rates do not inform us regarding when the disorder developed relative to the cultural ideal of thinness.

There is evidence of changing rates of BN during the latter half of the 20th century; however, the causes of these changes are unclear. Incidence data suggest a significant increase in BN incidence from 1970 to 1990 but do not allow evaluation of BN incidence prior to 1970. Prevalence studies in college and primary care samples suggest a decreasing prevalence from the 1980s to the 1990s; however, inconsistent methods across prevalence studies obfuscate the meaning of this observation. Finally, lifetime prevalence data across birth cohorts support an increasing incidence. Taken together, these data suggest that BN emerged as a new syndrome during the latter half of the twentieth century. However, it is possible that perceived trends resulted from the formal recognition of a disorder that had existed as a hidden form of psychiatric morbidity in earlier periods.

Cross-Historical Evidence of BN

Historical cases of bulimia. Several authors have reviewed historical cases of BN prior to its formal recognition (Habermas, 1989; B. Parry-Jones, 1991; B. Parry-Jones & Parry-Jones, 1991; Pope, Hudson, & Mialet, 1985; Stein & Laakso, 1988; Ziolko, 1996). The case histories of Ellen West (Binswanger, 1994, as cited in Stein & Laakso, 1988; Binswanger, 1958, as cited in Pope & Hudson, 1988) and Laura (Lindner, 1954, as cited in Stein & Laakso, 1988) have been interpreted as examples of BN in the earlier half of the twentieth century. However, several experts in the field of eating disorders have reviewed Ellen West as representing AN, and it is unclear that binge eating and purging ever occurred at normal weight in her case (DiNicola, 1990a; Habermas, 1992a). Cases described by Wulff (1932, as cited in Habermas, 1989 and Stunkard, 1990), Bergmann, (1932, as cited in Habermas, 1992a), and Feuchtinger (1942, as cited in Habermas, 1992a) in the German psychiatric literature have been characterized by binge eating and purging. According to Habermas (1989), Wulff's cases included four women and one man, all of whom experienced periods of compulsive eating at normal weight. In three cases, age of onset was during puberty. In two cases, vomiting was present in addition to dieting. Finally, in three cases, body image disturbance was recorded. However, a different picture emerges from Stunkard's (1990) translation of Wulff's work. First, Wulff described marked obesity in two of four cases (Cases A and C). Further, in three of the four cases (Cases A, B, and C), binge eating and fasting or purging occurred in distinct phases. In Case A, for example, the periods of binge eating, hypersomnia, and lack of personal hygiene would persist for months without attempts to counteract the episodes of overeating. These periods are contrasted with periods in which Patient A would eat very little and experience improved mood and increased energy (Stunkard, 1990). Stunkard agreed with Habermas's (1989) conclusion that these cases represent early instances of "bulimia," but his use of the term *bulimia* rather than *bulimia nervosa* appears to be a deliberate distinction between the syndrome defined in the *DSM–III* versus that defined in the *DSM–III–R*. Given that the *DSM–III* category encompassed what are currently recognized as BN and binge-eating disorder, it is unclear whether Wulff's cases better represent binge-eating disorder. Echoing this diagnostic uncertainty, Habermas (1992a) commented, "Stunkard's (1990) hypothesis of a historical continuity of bulimia probably is not true if it is restricted to bulimia nervosa" (p. 357). Only Patient D was characterized by a pattern in which she experienced a binge–purge cycle within one period; these periods alternated with short periods of abstinence and fasting (Wulff, 1932, as translated by Stunkard, 1990).

Pope et al. (1985) reviewed four individuals presented by Pierre Janet in 1903 who appeared to satisfy *DSM–III* criteria for bulimia on the basis of recurrent binge-eating episodes. However, of these four cases, the combination of binge eating with purging is presented in only one case. This case involved a 17-year-old man, "Ron," who experienced episodes of "voracious appetite," "never felt satiety," (Pope et al., 1985, p. 741) and engaged in self-induced

vomiting after the periods of heavy food consumption. The remaining three cases provide inadequate information to make a differential diagnosis of present-day BN versus AN—binge–purge subtype or binge-eating disorder. Habermas (1991) presented Ludwig Binswanger's description of Irma, published in 1909, as "the first known report on a case of bulimia nervosa at normal body weight" (p. 361). The 22-year-old patient engaged in recurrent binge eating and fasting and experienced fear of becoming overweight. Thus, according to Habermas's (1989, 1991, 1992a) reviews, cases of BN existed during the first half of the 20th century.

Following their review of Janet's cases, Pope et al. (1985) concluded that the major psychiatric texts of the nineteenth century, including those of Esquirol (1838), Briquet (1859), and Laségue (1871; all as cited in Pope et al., 1985), included no apparent cases of *DSM–III* bulimia. Conversely, Habermas's (1989) review of Briquet revealed a case of apparent BN in a woman who "ate well" but vomited everything she had eaten and maintained a normal weight (Habermas, 1989, p. 267). Van Deth and Vandereycken (1995) reviewed cases of hysterical vomiting and noted that some cases occurred in individuals of normal weight who also engaged in binge eating and fasting behaviors. Notably, most of these cases occurred in female adolescents. However, the authors equated these cases more with a modern-day conversion disorder, psychogenic vomiting, or AN rather than BN (Van Deth & Vandereycken, 1995). Rosenvinge and Vandereycken (1994) reviewed a case of "hysteria" described by Selmer in 1892 in which a 12-year-old girl refused to eat but maintained normal weight. This apparent contradiction was explained one night when the girl's mother observed her "eating butter, herrings, potatoes and all the food she was able to find in the house" (Selmer as cited in Rosenvinge & Vandereycken, 1994, p. 280). Thus, this girl appeared to fast during the day and binge eat at night (Rosenvinge & Vandereycken, 1994), although it remains unclear how the parents failed to notice the disappearance of so much food earlier in the course of their daughter's illness. One 1870 report described a 14-year-old girl who would fast for 18 days and then enter a period during which she ate voraciously (B. Parry-Jones & Parry-Jones, 1991). This case resembles those presented by Wulff (Stunkard, 1990) in that extended periods of binge eating alternate with extended periods of fasting rather than there being a cycle of binge eating coupled with inappropriate compensatory behavior. Remaining cases of purported bulimia in the nineteenth century include one 30-year-old man in 1897 who consumed large quantities of food day and night and 2 men whose voracious consumption included living animals and human flesh, but none engaged in purging or other forms of inappropriate compensatory behavior (B. Parry-Jones & Parry-Jones, 1991).

For the eighteenth century, B. Parry-Jones (1992) detailed the case of Samuel Johnson from 1784 as meeting *DSM–III–R* criteria for BN. Johnson engaged in binge-eating episodes as they are defined in the *DSM–IV*, and these caused him to be significantly overweight. To control his weight, he engaged in fasting and used senna as a purging agent. As in cases reported by Wulff (1932, as cited in Stankard, 1990), Johnson's use of fasting and purging seemed quite time limited compared with his long-standing pattern of compulsive overeating. In 1764, a 16-year-old boy developed a voracious appetite during the course of illness with typhus fever; however, no inappropriate compensatory behavior was noted (B. Parry-Jones & Parry-Jones, 1993; Silverman, 1987).

For the seventeenth century, a 50-year-old man (1678) experienced uncontrollable eating followed by vomiting 20 days each year, and, following the 20-day binge–purge cycle, the man fasted for 20 days and then resumed normal eating throughout the remainder of the year (B. Parry-Jones & Parry-Jones, 1991; Ziolko, 1996). Robert Whytt (1714–1766) provided a description of *fames canina* originally observed by Richard Lower (1631–1691) in the seventeenth century (Silverman, 1987). According to Whytt (1764), Lower observed "an uncommon hunger" among patients with hypochondria and hysteria that produced "a great craving for food" (as cited in Silverman, 1987, p. 145). "In other cases, however, the morbid matter affecting the nerves of the stomach in hypochondriac and hysteric patients, sometimes occasions a want of appetite and a *nausea*" (Silverman, 1987, p. 145). Although fames canina is supposed to be a disorder characterized by large food intake followed by vomiting (Stein & Laakso, 1988), Whytt's review of Lower's observations does not make a clear connection between the presence of "uncommon hunger" and "want of appetite and a nausea" in the same patients (Silverman, 1987). B. Parry-Jones and Parry-Jones (1991) reviewed 12 potential cases of BN from the seventeenth to nineteenth centuries. Five of these cases were described above. Among the remaining 7 cases, none were associated with inappropriate compensatory behavior, and parasitic worms were found in 4 cases. As cited in Ziolko (1996), Forestus (1602) described a nun afflicted with canine appetite (fames canina or kynorexia) who was miraculously cured after several unsuccessful medicinal treatments by physicians. Like fames canina, kynorexia was defined by insatiable appetite, eating that is out of control, and then compulsive vomiting as a result of excessive food intake (Stein & Laakso, 1988; Ziolko, 1996).

From the twelfth to the seventeenth centuries, many of the fasting saints were reported to engage in binge eating (e.g., St. Veronica) and self-induced vomiting (e.g., St. Catherine; Bell, 1985; Rampling, 1985). However, these cases appear to fall within the diagnosis of AN—binge–purge subtype (*DSM–IV–TR*). It is unclear whether there were cases of binge eating and purging among normal-weight women seeking spiritual purification through fasting. If these cases were common in convents, there is little reason to think that they would go unnoticed given the religious significance of women's eating during medieval times (Bynum, 1987).

In the eighth century A.D., Avicenna prescribed self-induced vomiting to undo the ill effects of overeating; however, he warned,

> To procure vomiting to an undue degree is injurious for the stomach, it is also prejudicial to the thorax and the teeth . . . and may lead to consumption. The custom of some people who eat to excess and then procure vomiting, is one of the things that end in a chronic disorder. (Gruner, 1930, as cited in Nasser, 1993, p. 130)

This suggests awareness of the morbidity associated with chronic self-induced vomiting and that a disorder characterized by overeating and self-induced vomiting was known in Arabic medicine. However, no further information was provided concerning the individuals with this disorder or whether the disorder was maintained at normal weight.

For cases prior to the second century A.D., Crichton (1996) speculated as to whether the Roman emperors Claudius (A.D. 41–54) and Vitellius (circa A.D. 69) suffered from BN. Notably, Ziolko (1996) rejected these cases on the basis that excessive food intake appeared to be based in intentional gluttony with self-

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induced vomiting used as a means to allow continued consumption. However, excerpts from Suetonius's description of Vitellius suggest that the emperor's excessive food intake may not have been under his control: "He was a man of not only such extreme and impulsive, but also disgusting, gluttony that he could not even curb it during a sacrifice or on a journey" (translated in Crichton, 1996, p. 204). Crichton noted that vomiting distinguished Claudius and Vitellius from their historical peers; however, Seneca is known to have commented, "vomunt ut edant, edunt ut vomant [they vomit that they may eat, they eat that they may vomit]" (as cited in Crichton, 1996, p. 206). This suggests that binge eating and purging may have represented a common behavioral pattern among the elite in the Roman Empire, and, in the case of Vitellius, a not entirely volitional pattern of eating.

Interpretation of historical cases of bulimia. In our review of historical cases of AN, we found numerous examples of young women engaging in self-starvation. The overt behaviors, consequences, course, and affected population resembled that for modern-day AN. Thus, the debate centered mostly on the motivation behind food refusal. In contrast, evidence of a binge–purge syndrome outside of its present historical context is quite sparse. Historical accounts of bulimia do not seem to preponderate in adolescent or young adult females. In fact, prior to the nineteenth century, cases involved mostly adult men. Further, most historical cases of bulimia represented the syndrome defined in the *DSM–III* that did not require inappropriate compensatory behavior. Thus, in our attempt to find historical accounts of BN, we seemed to find numerous examples of binge-eating disorder.

According to the restraint hypothesis (Polivy & Herman, 1985), one would expect that the fasting evident throughout the twelfth to the nineteenth centuries would result in binge eating for a number of young women. Consistent with this hypothesis, there were isolated cases in which individuals seemed to engage in binge eating after a period of restricted food intake. However, the use of purging (or other forms of inappropriate compensatory behaviors) to counteract or undo such episodes was lacking in most reported cases of binge eating. This difference may be explained by the motivation behind food restriction. In modern times, food restriction often is intended to achieve weight loss. When a binge episode occurs, purging is motivated by the belief that it will prevent weight gain. Conversely, if fasting is interpreted in a religious framework, then purging cannot prevent the sin of gluttony once the binge episode has occurred (Bynum, 1987). Bynum (1987) related the story of Friderade, who suffered from voracious appetite and "grew enormous" (p. 89). After confessing, she was cured and did not eat for the following 3 years (Bynum, 1987). This story provides a template for most of the historical cases of bulimic syndromes—a period of recurrent binge eating is followed by a period of abstinence. However, this behavioral pattern resembles that of a person with binge-eating disorder in which extended periods of binge eating alternate with periods of dieting.

Our review of AN suggested that specific motivations related to weight concerns did not seem to be necessary to produce the syndrome. We raised the question of whether weight concerns truly cause AN or represent an attempt to understand the disorder by both the individual suffering from AN (Wegner, 2002) and her culture. Conversely, our review suggests that a binge–purge syndrome predominantly affecting normal-weight women may not emerge in the absence of weight concerns.

Cross-Cultural Evidence for BN

Characterizing the actual prevalence of BN outside of a Western context has proven challenging. For example, across several reviews of eating disorders cross-culturally (Davis & Yager, 1992; Dolan, 1991; Miller & Pumariega, 2001; Pate, Pumariega, Hester, & Garner, 1992; Tsai, 2000), references to AN far outnumbered references to BN. This difference is also reflected in the range of countries reporting BN among their citizens; in our review, we found reports of AN in five of five non-Western regions of the world (see Table 2), whereas BN was reported in only three of five non-Western regions (see Table 4). Similar to the construction of Table 2, Table 4 indicates the country in which cases were found, diagnostic criteria used, number or prevalence of cases, and degree of Western influence. We eliminated the column concerning presence of weight concerns because our review of cases indicated that BN was accompanied by weight concerns in *all* cases. As in the analysis shown in Table 2, weight concern and Western influence were established by consensus.

We found no studies reporting the presence of BN in an individual with no exposure to Western ideals. All of the BN cases that could be categorized involved individuals who were probably or definitely exposed to Western ideals and values through urbanization, English-medium schools, previous residence in Western nations, and/or higher socioeconomic status or educational attainment. If BN only emerges in non-Western countries as a result of Western influences, then this may explain why there does not appear to be a non-weight-concerned form of BN.

With the exceptions of Japan and a recent study in Iran, prevalence estimates of full BN in non-Western nations were below the range reported for Western nations in the *DSM–IV–TR*. Degree of Western influence may account for a good deal of variance in BN prevalence estimates. For example, following World War II, Japan has emulated some of the ideals of the United States. Indeed, the *Cassell Dictionary of Modern Politics* (East & Joseph, 1994) indicates that Japan is sometimes included in the definition of the West. Thus, it is not surprising that BN prevalence is the most similar between the United States and this non-Western nation. Epidemiological data for BN in non-Western nations suggest that BN has a lower prevalence than AN in these countries, a pattern that is the opposite of that observed in Western nations. The point prevalence of AN has been found to be four to five times greater than full-syndromal BN in Japan (Nakamura et al., 2000), and it has been noted that AN is more prevalent than BN in Hong Kong (Chen et al., 1993; S. Lee, Hsu, & Wing, 1992). Thus, even when BN is found in non-Western nations, it is not found in the absence of Western influence, and it seems to be less common than AN.

Summary of Findings for BN

It appears to be the case that BN is a culture-bound syndrome. Although epidemiological data for BN are limited, they support a large and significant increase in BN incidence during the latter half of the twentieth century. Our attempts to find evidence of BN in earlier historical periods were largely unsuccessful. Most historical cases of recurrent binge eating seem to represent binge-eating disorder (because of a lack of inappropriate compensatory behavior) or AN— binge–purge subtype (because of the presence of low weight). Finally, although BN does exist in non-Western nations, we were unable to find evidence of the disorder arising in the absence of Western influence.

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Table 4
Studies of Bulimia Nervosa (BN) in Non-Western Nations

Article	Place	Diagnostic criteria	Number–prevalence	Cases without Western influence?
			Middle Eastern–Arab Cultures	
Ford (1992)	Egypt	*DSM–III–R*	1 case reported; developed BN upon returning to Egypt after living in Canada for 12 years	No
Nasser (1994)	Cairo, Egypt	Russell (1979)	0.9% full BN; 3.4% partial syndrome BN in 351 high school students	Unlikely
Nobakht & Dezhkam (2000)	Tehran, Iran	*DSM–IV*	3.2% of 3,100 female high school students ages 15–18	Unlikely
Choudry & Mumford (1992)	Pakistan	*DSM–III–R*	0.4% full BN in 271 Urdu medium school girls ages 12–16	Unlikely
Mumford et al. (1992)	Pakistan	*DSM–III–R*	0.002% full BN, and 0.01% subthreshold BN in 369 English-medium school girls ages 14–16	Unlikely
			Southeast Asia	
Ong et al. (1982)	Malaysia	Not given	1 case of nonpurging BN reported in a woman during recovery from AN	Unlikely
Schmidt (1993)	Malaysia	*DSM–III–R*	1 case in a male; vomiting–weight concerns began in Malaysia, binge eating in England	Unlikely
Goh et al. (1993)	West Malaysia	Study specific	1 case reported	Indeterminable
Ung et al. (1997)	Malaysia	Not given	16 cases of "bingeing and/or purging behavior in subjects of normal or above normal weight" (p. 332)	Indeterminable
			East Asia	
Nogami et al. (1984)	Japan	Unknown	17 individuals with both binge eating and purging of 846 university students ages 18–30	Unlikely
Kiriike et al. (1988)	Japan	*DSM–III* and Russell (1979)	2.9% of 456 college women report bingeing and purging at least twice per week	Unlikely
Takeda et al. (1993)[a]	Japan	*DSM–III–R*	1.9% high school girls	Unlikely
Kuboki et al. (1996)	Japan	Not given	1.3–2.5 per 100,000 general population in 1992	Indeterminable
Nadaoka et al. (1996)	Japan	*DSM–III–R*	38 cases treated at Yamagata University Hospital between 1978 and 1992	Unlikely
Nakamura et al. (2000)	Japan	*DSM–IV*	1.02 per 100,000 females	Indeterminable
Takei et al. (2000)[b]	Japan	*DSM–IV*	321 students with BN from 335 college health administration centers across Japan	Unknown
Chun et al. (1992)	China	*DSM–III–R*	1.1% of 509 freshman medical college students (401 female)	Unlikely
S. Lee, Hsu, & Wing (1992)	Hong Kong	*DSM–III–R*	4 cases treated at Department of Psychiatry, University of Hong Kong, between 1980 and 1988	Unlikely
S. Lee (1993)	Hong Kong	*DSM–III–R*	0.3% partial BN syndromes in 1,020 bilingual university students	Unlikely
S. Lee, Lee, & Leung (1998)	Hong Kong	*DSM–III–R*	17 consecutive series of patients treated from 1990–1996	Unlikely
Lam & Lee (2000)	Hong Kong	*DSM–IV*	Report on 30 cases of BN between 1984 and 1998; provided detailed case histories of 3 patients among whom only 1 seemed to have *DSM–IV* BN	Indeterminable; unlikely for 3 detailed cases
Tseng et al (1989)[b]	Taiwan	*DSM–III*	5 patients reported	Unknown
Hung & Cheng (1992)[a]	Taipei, Taiwan	*DSM–III–R*	5.6% in 12,435 females ages 12–25	Indeterminable

Note. Not given " authors did not provide the information in the article; Unknown " authors may have provided indicated information in the non-English publication, but the information was not provided in the English abstract or the English review article summarizing it; Study specific " diagnostic criteria were specific to the study indicated; Indeterminable " exposure to Western influence could not be determined from article; *DSM–III–R* " *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed., rev.); *DSM–IV* " *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.); *DSM–III* " *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed.).
[a] As reported in Tsai (2000). [b] Data were taken from an English abstract of a non-English publication.

Discussion

Divergent patterns emerged in our examination of epidemiological, cross-historical, and cross-cultural evidence of AN and BN as culture-bound syndromes. Unlike previous conclusions that eating disorders either are culture bound or are not culture bound (Habermas, 1989; S. Lee et al., 1993), our findings suggest that BN is culture bound and that AN is not.

Reasons for the differences in findings between AN and BN could be attributed to our definition of the phenotypes. We sought evidence of AN and BN according to their conceptualization within the *DSM–IV*. However, the *DSM–IV* does not represent "nature carved at its joints." If we had allowed a more generous definition of BN to include all syndromes characterized by recurrent binge eating, the conclusions of our review would be significantly altered as the symptom of binge eating appeared in more historical and culture contexts than the syndrome of BN. We chose to follow the *DSM–IV* conceptualization of these syndromes because it has the greatest empirical support. Of interest, the results of our review seem to add support for distinguishing between the

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two syndromes. Further support comes from a recent study of the influence of Western media exposure on rates of disordered eating in Fiji (Becker, Burwell, Gilman, Herzog, & Hamburg, 2002). In 1995 (within a month of the introduction of television), 7.9% of Fijian girls reported binge eating. In 1998 (3 years after the introduction of television), the percentage had decreased nonsignificantly to 4.6%. Conversely, the percentage of girls who reported self-induced vomiting increased significantly from 0% to 11.3% over the same period (Becker et al., 2002). Prior to study initiation, one case of AN had been reported in Fiji (Becker et al., 2002). These data suggest that AN and binge eating in the absence of inappropriate compensatory behavior may not be particularly dependent on exposure to Western ideals. However, a syndrome characterized by the combination of binge eating and purging at normal weight may be more culture bound.

Although the evidence leads us to a strong conclusion that AN has existed outside of its current sociohistorical context, the conclusion for BN is necessarily weaker as there were fewer articles concerning BN than AN. This may represent the relatively longer recognition of AN as a syndrome (and thus greater time to accumulate publications on AN); however, the majority of the articles reviewed have been published since the introduction of BN to the psychiatric nomenclature. Further, this publication pattern is the inverse of that observed for the treatment literature in AN versus BN (Peterson & Mitchell, 1999). Thus, it remains unclear whether the recent recognition of BN is the cause or result of limited data concerning its existence. The limited data for BN may not reflect the absence of the disorder because BN may have existed but eluded detection. This seems plausible because there is no overt sign of BN such as the emaciation that characterizes AN. Indeed, Whitehouse et al. (1992) found that 50% of cases of BN determined in the community were unknown to their general practitioners, despite referrals made for complications of bulimic pathology in half of these "hidden" cases. No such hidden cases of AN were found, suggesting that the low weight of AN likely makes AN easier to detect outside of the confines of a recognized syndrome. However, there are reasons why concerns about detection of BN may be overstated. Further, these reasons contribute to the understanding of why BN may represent a more culturally bound syndrome than AN.

Although self-starvation can occur in any context, binge eating requires large stores of readily edible food. Thus, cases may be validly limited to places and periods with abundant food, such as the palaces of the Roman Empire, places of communal living with shared kitchens, or affluent households in Victorian England. In earlier historical contexts, food consumed a greater proportion of household budgets, and distribution was closely monitored with greater portions going to men who were engaging in manual labor (Bailey & Earle, 1999). Indeed, gender differences in access to food may explain why cases of binge eating prior to the nineteenth century more commonly involved men (B. Parry-Jones & Parry-Jones, 1991). Thus, whereas individuals can deliberately starve themselves regardless of access to food—in some cases refusing even the meager portions allotted to them—individuals cannot binge eat without free access to large quantities of food. If large amounts of food were obtainable, it is difficult to believe that recurrent binge episodes would go unnoticed because food was not obtained in anonymity as it is today. Certainly, the food intake of Samuel Johnson was not only noticed but recorded by several individuals during and following his lifetime (B. Parry-Jones, 1992) as were the binge-eating episodes of St. Veronica (Bell, 1985). Indeed, the presence of binge eating as a symptom has been recorded both cross-historically and cross-culturally with the primary constraint being one of access to food. Similar to difficulties in attempting to binge eat without detection, purging would be a difficult behavior to hide prior to the wide availability of modern plumbing. The ability to flush away evidence of self-induced vomiting, or laxative or diuretic abuse, from the privacy of one's indoor bathroom would greatly facilitate secretive purging. Chamber pots and outhouses would not. Further, accounts of fasting and excessive exercise are plentiful among historical cases of fasting girls, even those of normal weight, suggesting that nonpurging forms of inappropriate compensatory behavior would not remain hidden for long. Although no obvious sign characterizes BN, it seems unlikely that BN would go unnoticed in earlier historical periods. Thus, the relative dearth of evidence of BN outside of its sociohistorical cultural context may reflect its lack of existence. Of interest, an ability to obtain large amounts of food inconspicuously may explain why BN, but not AN, is more common in urban than rural areas (Hoek et al., 1995; Robins et al., 1984).

Binge eating may be constrained by access to large quantities of food, and purging may be relatively limited to a context in which prevention of weight gain is culturally meaningful. Thus, unlike AN, which can occur in numerous contexts, the specific combination of binge eating and purging may be limited by two factors specific to modern Western cultures—access to food and use of purging to prevent weight gain. This would suggest greater cross-historical and cross-cultural representation of the restricting subtype of AN compared with the binge–purge subtype. Of interest, a clinical difference between S. Lee et al.'s (1993) patients with fat phobic and non-fat phobic AN was the increased presence of binge–purge symptoms in the patients with fat phobia.

Conceptualizing the Genetic Bases of Eating Disorders

Sociocultural and cognitive–behavioral models of eating disorders emphasize the role of weight concerns in their etiology, whereas behavioral genetic research emphasizes the role of genes. As we stated in the introduction, the purpose of our research was to understand the extent to which eating disorders represent culture-bound syndromes and the implications of our findings for conceptualizing their genetic bases. Our review suggests that BN may be a culture-bound syndrome, influenced by weight concerns, anonymous access to large quantities of food, and a motivation to prevent the effects of binge eating on weight through the use of inappropriate compensatory behavior. Conversely, our review suggests that weight concerns can influence the incidence of AN but that whatever cultural influences contribute to the etiology of AN, they are not particularly limited in their distribution across history or cultures.

Although recent behavioral genetic research has provided substantial evidence of genetic influences on the development of both AN (Klump et al., 2001; Kortegaard et al., 2001; Wade et al., 2000) and BN (Bulik et al., 1998, 2000; Kendler et al., 1991, 1995), heritability estimates are constrained to the cultures from which study samples are drawn. In cultures in which the thin ideal is ubiquitous, these kinds of environmental factors are held relatively constant across individuals and thus cannot account for individual differences in eating disorder development. In cultures in which relevant environmental factors vary across individuals,

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cultural pressures to be thin have the potential to play a much larger role in individual differences in the development of eating pathology. As such, heritability estimates of BN are more likely to vary across cultures. Within a culture in which there is large variability in exposure to the thin ideal and access to food, genetic estimates may be quite low for BN. Conversely, heritability estimates of AN are likely to be more stable. Current data do not allow us to examine this hypothesis directly because twin studies of AN and BN have been conducted within industrialized Western nations. Future research should seek to examine this question more closely using, whenever possible, twins from non-Western countries or combining samples from Western and non-Western countries.

Because heritability estimates are statistical entities that gauge the extent to which individual differences within a population can be explained by genetic influences, they do not directly index the action of genes. Although these statistical estimates can vary depending on environmental contexts (with the potential for BN to have low heritability in some contexts), this variation does not mean that genes do not influence BN or that they influence BN less than AN. The genetic diathesis for BN may exhibit more pathoplasticity cross-culturally than the genetic diathesis for AN. When the diathesis for a disorder is general or has high pathoplasticity, the disorder may not be evident cross-culturally or cross-historically. That is, although the genetic diathesis may exist throughout history and cross-culturally, when tapped, it presents as a different form of pathology conforming to its current sociohistorical context. In contrast, when the genetic diathesis for a disorder is specific or has low pathoplasticity, evidence of the disorder should be available cross-culturally and cross-historically. The disorder may be less common in different sociohistorical periods, but whenever the diathesis is tapped, it should produce the same narrow syndrome.

In past historical periods, the genetic predisposition for what is now BN may have produced different forms of psychopathology, such as hysteria in the Victorian era. The demographic features of those afflicted with these two illnesses are quite similar, and the abrupt emergence of these syndromes is also quite similar. Pope and Hudson (1988) have long viewed eating disorders as lying along an etiologic spectrum with numerous other syndromes. The extent to which BN represents a culturally shaped manifestation of a general genetic diathesis may explain why this disorder, but not AN, responds to the same medications and psychosocial treatments that are used to treat major depressive disorder (MDD) and obsessive–compulsive disorder (OCD; Peterson & Mitchell, 1999). Specifically, both antidepressant medications and cognitive–behavioral therapy have demonstrated efficacy in treating BN but not AN (Peterson & Mitchell, 1999). Possibly the genetic diathesis to BN can be expressed as hysteria, BN, MDD, OCD, or any combination of these depending on a variety of environmental factors. Twin studies have the ability to examine this question indirectly by investigating whether disorders share genetic transmission. If there is a high degree of shared transmission among disorders, then the disorders may represent different expressions of a genetic diathesis with high pathoplasticity. An early twin investigation of BN found shared genetic transmission between this disorder and major depression (Walters et al., 1992). However, when examined with a larger, more powerful multivariate model including six psychiatric disorders (BN, phobias, generalized anxiety disorder, panic disorder, major depression, and alcoholism), BN loaded on a single genetic factor with phobias and panic disorder (Kendler et al., 1995). Findings from this study suggest that BN may indeed share genetic transmission with other forms of "neuroses" and that this shared transmission may be indicative of greater pathoplasticity of the disorder. To date, no study has examined AN using multivariate, genetic analyses. Although one study found some common genetic risk factors between AN and major depression (Wade et al., 2000), findings were limited by the inclusion of only one comorbid disorder. Thus, future twin research can evaluate the pathoplasticity associated with the genetic diatheses for AN and BN.

Conclusion

Previous work has posed modern Western idealization of thinness as a common etiologic factor for AN and BN. However, our review reveals that the epidemiology, history, and cultural distribution of these disorders are distinct. Researchers interested in revealing the pathophysiology of these disorders would do well to attend to these patterns, as they suggest distinct hypotheses concerning variability of heritability estimates and pathoplasticity. If our hypotheses are supported in future behavior genetic research, then two lines of evidence would suggest that some or all of the genes contributing to the development of BN differ from those contributing to the development of AN. This would provide the greatest evidence, thus far, for etiologic validity in distinguishing between these two syndromes. The extent to which AN and BN are linked in the medical, academic, and popular press may represent a historical coincidence more than a true relationship between these disorders.

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Received August 30, 2002
Revision received January 24, 2003
Accepted March 27, 2003

New Editor Appointed for *Contemporary Psychology: APA Review of Books*, 2005–2010

The Publications and Communications Board of the American Psychological Association announces the appointment of Danny Wedding (Missouri Institute of Mental Health) as editor of *Contemporary Psychology: APA Review of Books*, for a 6-year term beginning in 2005. The current editor, Robert J. Sternberg (Yale University), will continue as editor through 2004.

All reviews are written by invitation only, and neither the current editor nor the incoming editor receives books directly from publishers for consideration. Publishers should continue to send three copies of books for review consideration, along with any notices of publication, to PsycINFO Services Department, APA, Attn: *Contemporary Psychology: APA Review of Books* Processing, P.O. Box 91600, Washington, DC 20090-1600 or (for UPS shipments) 750 First Street, NE, Washington, DC 20002-4242.

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Exhibit 10

CHAPTER 2

Diagnosis, Assessment, and Treatment Planning for Bulimia Nervosa

Scott J. Crow and Beth Brandenburg

Bulimia nervosa (BN) was initially described as distinct from anorexia nervosa (AN) by Russell in 1979. Since that time, BN has emerged as an important diagnostic entity with well-recognized medical, psychological, and social comorbidities and complications. Much is now known about its associated features, complications, and course. Risk factors and appropriate treatments are also increasingly well understood. This chapter provides a broad overview of BN, discusses appropriate assessment approaches, and describes a basic approach to treatment planning.

Diagnostic Criteria for and Differential Diagnosis of BN

Two sets of diagnostic criteria for BN currently exist. The diagnostic criteria included in the text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR; American Psychiatric Association [APA], 2000) are as follows:

A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
   1. Eating, in a discrete period of time (e.g., within any 2-hour period), an amount of food that is definitely larger than most people would eat during a similar period of time and under similar circumstances.
   2. A sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating).

B. Recurrent inappropriate compensatory behavior in order to prevent weight gain, such as self-induced vomiting; misuse of laxatives, diuretics, enemas, or other medications; fasting or excessive exercise.

C. The binge eating and inappropriate compensatory behaviors both occur, on average, at least twice a week for 3 months.

D. Self evaluation is unduly influenced by body shape and weight.

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E. The disturbance does not occur exclusively during episodes of AN.
Specify type:
1. **Purging Type:** During the current episode of BN, the person has regularly engaged in self-induced vomiting or the misuse of laxatives, diuretics, or enemas.
2. **Nonpurging Type:** During the current episode of BN, the person has used other inappropriate compensatory behaviors, such as fasting or excessive exercise, but has not engaged in self-induced vomiting or the misuse of laxatives, diuretics, or enemas. (p. 550)

The ICD-10 classification of mental and behavioral disorders (World Health Organization, 1992) lays out similar diagnostic guidelines, though the focus of the cognitive criterion is "morbid fear of fatness," not self-evaluation as per DSM-IV-TR. In addition, purging and nonpurging types are not recognized in ICD-10.

These two sets of diagnostic criteria, if rigorously applied, will lead to some diagnostic discrepancy for certain individuals, but each criterion set captures the broad concept of disordered eating characterized by binge eating, compensatory behaviors, and a disturbance in attitudes about weight, shape, and eating. A substantial number of individuals with disordered eating have symptoms reminiscent of BN but do not meet either DSM-IV-TR or ICD-10 criteria for BN, often because they lack the required frequency of binge eating, compensatory behaviors, or both. Under current diagnostic guidelines, such individuals would likely receive a diagnosis of eating disorder not otherwise specified (EDNOS). At this writing the DSM criteria for eating disorder (ED) diagnoses are being critically examined in anticipation of a new DSM to be published in 2012. In light of these efforts, these diagnostic criteria for BN (and the corresponding differential diagnosis for those not meeting full criteria for BN) may be subject to change. Another differential diagnostic consideration is AN: Individuals with AN can present with binge-eating and purging behavior and typically have similar disturbances regarding body shape, weight, and eating. The DSM-IV-TR stipulates that if someone has such symptoms but is at sufficiently low weight to meet diagnostic criteria for AN, then that diagnosis would supersede BN, with the AN binge–purge subtype specification.

On rare occasion, other medical entities should be considered in the differential diagnosis. For example, some types of upper gastrointestinal pathology can be associated with recurrent vomiting. Similarly, other gastrointestinal pathology (e.g., celiac sprue) can be associated with weight loss and persistent diarrhea, thus mimicking purging by laxative abuse.

Brief Overview of BN

Epidemiology

Estimates of the prevalence of BN have varied widely since it was introduced as a diagnostic category in 1980. This variation has been attributed to changing definitions of the illness, differences in the populations studied, and possible changes in illness prevalence over time. DSM-III did not include a frequency requirement for binge-eating episodes. Prevalence estimates based on DSM-III were therefore quite high, as the diagnostic criteria did not distinguish occasional binge episodes from a more serious disorder. DSM-III-R established a minimum number of weekly eating binges, resulting

in lower prevalence estimates. Currently, the general consensus is that approximately 2–3% of young women meet criteria for BN as defined in DSM-IV-TR. However, most of the epidemiological studies of BN have been conducted on school- or college-age populations. Based on surveys of a large, nationally representative sample of randomly chosen U.S. adults, the National Comorbidity Survey Replication study reported a lifetime prevalence of BN as 1.5% among females and 0.5% among males (Hudson, Hiripi, Pope, & Kessler, 2007). The median age of onset reported was 18, which is consistent with previous studies.

It is unclear whether the prevalence of BN has changed over time; evidence exists for decreased, increased, and stable prevalence. Keel, Heatherton, Dorer, Joiner, and Zalta (2006) found that the point prevalence of BN (based on DSM-III criteria) among college females decreased significantly from 1.7% in 1982 to 1.3% in 1992, then stabilized to 1.5% in 2002. A survey of adolescent girls conducted at a suburban high school in 1981 and again in 1986 showed a significant decrease in point prevalence of BN from 1.1 to 2.9% (Johnson, Tobin, & Dipkin, 1989). Heatherton, Nichols, Mahamedi, and Keel (1995) conducted a survey of college students in 1982 and again in 1992. They found that the point prevalence of BN (based on DSM-III criteria) had decreased from 7.2 to 5.1% in women and from 1.1 to 0.1% in men. Several more recent studies found no significant change in the prevalence of BN (Crowther, Armey, Luce, Dalton, & Leahey, 2009; van Son, van Hoeken, Bartelds, van Furth, & Hoek, 2006; Zachrisson, Vedul-Kjelsas, Gotestam, & Mykletun, 2008). Still other studies have argued for increased risk with successive birth cohorts (e.g., Hudson et al., 2007; Kendler et al., 1991). Interpretation of these various studies is limited by changes in diagnostic criteria over time and between studies. Possible explanations for any changes observed might include true changes in prevalence, growing awareness of the disease after it was described, changes in media portrayal of eating disorders since that time, or recall bias.

Associated Features/Comorbidity

A striking feature associated with BN is the high rate of co-occurring psychopathology. Most prominent is depression, which occurs in the majority of patients with BN at some point during the illness (Herzog, Keller, Sacks, Yeh, & Lavori, 1992; Hudson et al., 2007); studies suggest rates of 50–70% or more. At one time, BN was hypothesized to be a variant of depression (Hudson, Pope, Jonas, & Yurgelun-Todd, 1985; Hudson, Pope, Yurgelun-Todd, Jonas, & Frankenburg, 1987; Kassett et al., 1989), although this hypothesis seems no longer tenable. Whether this comorbidity with mood disorders is confined to unipolar mood disorder is somewhat unclear. Historically, the focus has been mostly on major depression, but recent reports suggest that rates of bipolar illness may be elevated as well (Baldassano et al., 2005; Hudson et al., 2006; Ramacciotti et al., 2005). Mood disorders have their own, independent clinical significance, of course. The presence of comorbid mood problems portends a less favorable outcome in some studies (Keel, Mitchell, Miller, Davis, & Crow, 1999) but not others (e.g., Fichter, Quadflieg, & Hedlund, 2008).

A wide variety of anxiety disorders is also quite common (Kaye, Bulik, Thornton, Barbarich, & Masters, 2004). Obsessive–compulsive disorder (OCD) is sometimes viewed as being more strongly related to AN (Swinbourne & Touyz, 2007), although in some samples rates in AN and BN are similar (e.g., Kaye et al., 2004). OCD symptoms

may persist long after recovery from BN (von Ranson, Kaye, Weltzin, Rao, & Matsunaga, 1999). Substance use disorders are also quite common. Alcohol and other types of substance dependence appear to impact a substantial minority of patients with BN (Bulik et al., 2004; Holderness, Brooks-Gunn, & Warren, 1994), and tobacco dependence is also quite common (Anzengruber et al., 2006; Welch & Fairburn, 1998). The relationship between BN and personality disorders also has been widely explored. A number of reports have cited elevated rates of personality disorders, including particularly those in Cluster B (for a review, see Grilo, 2002).

Cultural Factors

Cultural factors are thought to play an important role in BN, as in other EDs (Keel & Klump, 2003). Prevailing cultural attitudes regarding thinness, the importance of shape, and the high positive value placed on low weight are widely prevalent in Western societies at this time. Many observers have commented on the fact that the seeming appearance of BN as an important diagnostic entity in the latter half of the 20th century coincides with a growing cultural emphasis on thinness. This seems evident from a casual examination of the evolution of popular culture over several decades, whether reflected in popular media, in advertising and fashion, or in the depiction of ideal body types in art. Some investigators have also provided objective evidence for this change (e.g., in the form of changes in the body mass index (BMI) of beauty contest winners; Rubinstein & Caballero, 2000). One might interpret the birth cohort effects on BN prevalence (found in some BN prevalence studies, reviewed above) as supporting the role of culture in BN.

There is also growing evidence supporting the impact of cultural change on the prevalence of both disordered-eating attitudes and EDs. One example comes from studies conducted by Becker and colleagues in Fiji, both prior to, and shortly following, the introduction of Western TV broadcasting (Becker, Burwell, Navara, & Gilman, 2003). This work has documented very low rates of disordered eating prior to the introduction of Westernized TV and the rapid development of attitudes toward weight and shape similar to those found in Western culture within just a few years of the introduction of Western media. This natural experiment vividly highlights the potent role of culture in the development of BN and other EDs.

Gender

BN primarily affects women. This fact has been known from the earliest descriptive samples (Fairburn, Cooper, Doll, Norman, & O'Connor, 2000), and historically, gender ratios of 10:1 or greater have been cited (e.g., see DSM-IV). On the other hand, more recent samples (e.g., from the National Comorbidity Survey; Hudson et al., 2007) have found that although in community samples BN is still more prevalent in women than men, the ratio may be closer to 3:1. One possibility is that this finding reflects a radical shift in prevalence, but it seems more likely that it results from a higher prevalence of treatment seeking among women with BN than among men.

This gender disparity raises the interesting question as to the reason for such a divergence. The answer remains somewhat unclear, and a number of hypotheses have been advanced. Certainly, cultural messages about weight and shape are focused mostly

(though not entirely) on females, which might account for part of the discrepancy. Biological factors might also help to explain this difference. There is evidence to suggest that changes in gonadal hormone status with puberty may impact eating behavior (Klump, Keel, Culbert, & Edler, 2008). Furthermore, there is now evidence to suggest that the impact of familial, presumably genetic, variables on eating behavior may be highly dependent on changes in gonadal hormone status associated with the onset of puberty (Klump, Burt, McGue, & Iacono, 2007). Intrauterine hormonal exposure (assessed using co-twin gender in twin studies) influences disordered eating in adulthood (Culbert, Breedlove, Burt, & Klump, 2008). These results raise the possibility that biological factors may play a far greater role in the gender disparity and prevalence of BN than was previously thought.

Course

The course of BN is increasingly well understood. A wide variety of studies has now described this course, though many have been of relatively short duration (Keel & Mitchell, 1997). One study examined outcome in a cohort 10–15 years after participants initially presented for treatment (Keel et al., 1999). In this study of 222 women (80.5%) agreed to participate. At a mean follow-up of 11.5 years, only 11% still had full BN and about 70% were in full remission. Other studies using somewhat smaller samples have also described outcomes using repeated assessments (rather than a single time point). Examples include studies of 4 years' duration (Agras, in press), 5 years' duration (Grilo et al., 2007), 7.5 years' duration (Herzog et al., 1999), and 12 years' duration (Fichter et al., 2008). All these studies found partial remission or full recovery at follow-up in the majority of participants. At the same time the pattern observed en route to recovery involves remission and relapse for many people, and frequent diagnostic crossover (most often to EDNOS or binge-eating disorder, but rarely to AN). Thus, it appears that the overall course of BN is more favorable than that seen in AN, and this appears to be true both in clinical (Keel et al., 1999) and community (Fairburn et al., 2000) samples.

One important aspect is mortality, and here the data are somewhat surprising. For example, in the Keel et al. study, mortality was 0.5%. In this and other studies, mortality rates have been low and standardized mortality ratios (i.e., the mortality reported in the population divided by the expected mortality rate, based on age, gender, and ethnicity) have generally not been elevated. This finding is surprising for two reasons: (1) the medical complications known to be associated with BN, and (2) the strong association of BN with other psychiatric illnesses known to confer increased risk for suicide. Whether this finding accurately represents mortality in BN or is due to a variety of confounding factors (e.g., the secretive nature of the illness, the inadequacy of mortality reporting, methods used to ascertain vital status) is unknown.

Psychobiology

Efforts to understand the psychobiology of BN have evolved along several lines. First, a variety of studies has attempted to examine neurotransmitters and neuromodulators known to be involved in the control of feeding, mood, or anxiety. A main focus of this work has been serotonin (Kaye, 2008). In brief, there is evidence for diminished serotonergic neurotransmission, reflected by diminished serotonin metabolite levels in acutely ill women with BN (Jimerson, Lesem, Kaye, & Brewerton, 1992), which appears,

conversely, high in recovered women (Kaye et al., 1998). Platelet paroxetine binding, another measure of serotonin function, is also altered in BN (Steiger et al., 2005), and response to serotonergic probes is blunted (Brewerton, Lydiard, Laraia, Shook, & Ballenger, 1992; Jimerson et al., 1997). These findings intersect with positron emission tomography (PET) studies that have shown altered serotonin receptor 1A and 2A activity after recovery from BN (Kaye, 2008; Kaye et al., 2001) and diminished serotonin transporter levels in ill individuals (Tauscher et al., 2001).

Functional magnetic resonance imaging (fMRI) studies have also been conducted, examining patterns of brain activation and response to salient stimuli. The stimuli have included drawings of varying body shapes (Schienle, Schafer, Hermann, & Vaitl, 2008; Uher et al., 2005), visual images of food (Schienle et al., 2008; Uher, 2004), and ingestion of glucose (Frank et al., 2006). Increased activation of structures such as the anterior cingulate cortex (ACC) and insula, in conjunction with diminished activity in other cortical regions, has been frequently observed in acutely ill participants, with persistent diminished ACC activities in recovered participants. PET studies have also pointed to alterations in regional cerebral blood flow (rCBF) (Andreason et al., 1992) which may normalize with recovery (Frank, Kaye, Greer, Meltzer, & Price, 2000).

Taken together, this work suggests state-dependent alterations in brain function at neurochemical and circuitry levels. Whether these represent an underlying predisposition to BN, the acute effects of BN symptoms, or aftereffects of the illness (in recovered individuals) is unclear, and the implications for treatment or prevention are not known. Of potential importance, it is not known whether alterations observed in recovered women are associated with risk for relapse.

Genetics/Familial Issues

A wide variety of studies has now examined the familial and genetic bases for BN. This work has evolved as follows. First, there is clear evidence that BN is a familial entity, as are other EDs. For example, the risk of having BN, if one has a female relative with an ED, has been reported to be 4.4 times the risk in the general population (Strober, Freeman, Lampert, Diamond, & Kaye, 2000). The results of twin registry studies comparing monozygotic and dizygotic twins have also shown that disordered eating appears to be not merely familial but in fact genetic; that is, symptoms occur more commonly in the sibling of an affected identical cotwin than in the sibling of an affected fraternal cotwin. Different analyses have yielded different heritability estimates, often in the range of 50–80% (Kendler et al., 1991). Examination of behaviors seen in BN separately has shown both binge eating and vomiting to be heritable (Sullivan, Bulik, & Kendler, 1998). More recently, Wade et al. have reported both common and distinct risk factors for these two BN symptoms (Wade, Treloar, & Martin, 2008). At this point, active work is underway to understand the specific genetic bases for this heritable risk (Kaye, Devlin, et al., 2004). Linkage analyses and candidate gene studies are now beginning to identify potential target regions for consideration for a variety of quantitative traits observed in EDs (Bacanu et al., 2005).

Etiology

The forgoing provides a complex but potentially somewhat contradictory series of factors to be considered when thinking about the etiology of BN. Evidence of a genetic

basis for BN is strong, consistent, and, at this point, widely accepted. On the other hand, studies suggest an important role for cultural factors. Furthermore, it is difficult to reconcile a simple genetic basis for BN with the apparent emergence of this diagnostic entity over the last half century (during which time the genome could not have changed sufficiently to account for the rise of a new, purely genetic illness). The most likely explanation of the etiology of BN, which addresses all of these conflicting factors, is one in which gene–environment interactions are posited. Specifically, genes of importance in BN may code for behavioral traits important in, but probably not specific to, BN. These likely include anxiety, perfectionism, impulsivity, and food obsessions. In the absence of the critically necessary environment, these genes may have a different behavioral presentation or may have very little observable behavioral impact. When provided with a critically important environment—in this case, an environment that places extreme salience on weight, shape, and appearance—many of those carrying these genes develop BN. This appealingly parsimonious explanation is consistent with a number of observations, including the relatively recent appearance of BN; the important contributions of both genetic and environmental factors; the development of disordered-eating attitudes in substantial numbers of individuals after relatively brief exposure to Westernized culture; and the fact that, although disordered attitudes toward eating, weight, and shape are relatively common in a society that exposes everyone to messages about weight and shape, full-blown eating disorders do not occur in most individuals. This conceptualization also fits well with existing literature that has examined factors that provide risk for the onset of disordered eating (including BN). These include a variety of prospective studies (Bearman, Martinez, & Stice, 2006; Fairburn, Cooper, Doll, & Davies, 2005; McKnight Investigators, 2003; Neumark-Sztainer et al., 2007; Wade, Bulik, Prescott, & Kendler, 2004). From this literature, a number of important factors, particularly risk factors for onset, has emerged, including constructs such as thin ideal internalization, higher BMI, neuroticism, weight teasing, social pressure, and negative life events. Most would be consistent with the forgoing model of etiology

Maintenance Factors

BN symptoms typically persist for years, raising the question: What factors maintain these symptoms? Generally, work in this area has focused on psychological mechanisms. A limited amount of work has hypothesized potential biological maintenance mechanisms, such as vagal nerve dysfunction (Faris et al., 2008); other psychobiological changes (discussed elsewhere in this chapter) might also play an important maintaining role. None of these potential biological changes has yet been incorporated into a well-developed maintenance model that has been formally tested, however.

The best developed model for the maintenance of BN symptoms has been described by Fairburn and has received some empirical support (Fairburn et al., 2003). In this model a critical factor is extreme concern about weight and shape, which results in severely restrictive eating behavior, in turn leading to binge eating followed by compensatory purging behavior. Binge eating and purging tend to lead to one another in a cyclical fashion. In addition, both are thought to increase concern about weight and shape, leading to further restrictive eating, further binge eating and purging, and so on.

Fairburn and colleagues (2003) examined this potential model in a 5-year longitudinal study. Predictors of persistent BN symptoms were overvaluation of shape and weight, a history of childhood obesity, poor social adjustment, and duration of eating disturbance. Also in keeping with the model, persistent binge eating and persistent purging predicted one another.

Thus, it appears that cognitive symptoms of the eating disorder lead to behavioral symptoms, which in turn reinforce the cognitive symptoms. There is every possibility that biological maintenance factors also tend to perpetuate this cycle, although this hypothesis remains untested.

Assessment

Initial Interview and Data Gathering

Aspects of effective interview techniques are directly applicable to the assessment of individuals with BN. This disorder is frequently a secretive illness in which most individuals have symptoms for a number of years prior to acknowledging the problem and first seeking assessment and treatment. Some individuals present in an open fashion, eager to receive treatment, but others are more guarded and reluctant to divulge BN symptoms unless specifically asked. Traditional, open-ended initial questioning often yields little information regarding BN symptoms, about which many patients feel much shame. More directed, focused questions are then useful. Conveying an open, accepting, nonjudgmental, and knowledgeable attitude is particularly useful. It is often necessary to ask about BN symptoms at repeat visits because patients may only gradually become willing to reveal some symptoms.

A number of ED-specific factors should be addressed as they help to inform treatment, predict course, and assess for possible complications. For example, understanding the time course of symptoms leading up to presentation is quite useful. A specific evaluation of the severity of symptoms (including the size of eating binges and their frequency, the nature and frequency of compensatory behaviors, eating patterns, dietary restraint, and body image/body dissatisfaction) is also needed. A careful assessment of laxative and ipecac use is important, as the presence of these factors influence risk of medical complications and helps inform management. The use of diuretics, diet pills, and over-the-counter weight loss medications is not uncommon, but their use is not often volunteered. It is important to inquire about a history of AN in the past, as this information will help to clarify the risk for osteoporosis. Finally, a critical part of initial data gathering involves the measurement of weight. Careful information about the frequency of self-weighing by subjects should also be collected.

Psychological Assessment

Because other psychiatric problems frequently co-occur with BN, a thorough assessment for comorbid psychopathology is also indicated. Most prominent among the comorbid problems are mood disorders, particularly unipolar depression. Clinical assessment for unipolar depression can be aided by the use of an instrument that quantifies severity of depressive symptoms, such as the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). Repeated use of such measures will allow the clinician

to track the severity of depression throughout treatment. Moreover, there is increased interest in subtyping those with BN based on the presence of even subdiagnostic levels of depression symptoms (Stice & Fairburn, 2003), and the BDI allows for this. Of note, ED treatment is often associated with improvement in mood symptoms, independent of using medications or psychotherapies that directly target depressed mood. Thus, monitoring mood is helpful for identifying those instances in which adding definitive treatment for mood disorder is necessary.

Anxiety disorders are similarly very common in people with BN; these too should be evaluated in everyone presenting for BN treatment. As with depression, treatments for BN can improve anxiety, and some BN treatments are treatments for anxiety in their own right, such as selective serotonin reuptake inhibitors (SSRIs). Conversely, improvements in eating behavior are sometimes associated with the short-term exacerbation of anxiety symptoms. Finally, comorbid substance abuse and dependence should be assessed at intake.

Medical Evaluation

Because medical complications are common in BN, a physical examination is often indicated. BN occurs most frequently at an age when contacts with the medical system are relatively uncommon, so such contact typically must be specifically recommended. Early in the course of treatment when symptom levels are high, medical monitoring is appropriate and useful. In many treatment settings individuals are referred to their regular medical provider when they first present for BN treatment.

One of the most common complications is electrolyte disturbance, particularly hypokalemia, which is a fairly specific but not particularly sensitive method for detecting the presence of purging (Crow, Salisbury, Crosby, & Mitchell, 1997). Electrolytes should be measured at intake and then intermittently when they are abnormal at intake, or when purging symptoms persist during treatment. Dental evaluation is often overlooked but can be quite helpful, because dental complications are common in BN. Also, clear identification of any existing dental complications can form an important part of the rationale for change for some patients. Finally, osteoporosis evaluation should be considered in those with a prior history of AN. There is evidence to suggest that a history of depression may also increase osteoporosis risk (Konstantynowicz et al., 2005).

Nutritional Assessment

The major measure used to inform nutritional assessment in most patients with BN is that of weight. This measure is vital for ascertaining a patient's overall level of physical and nutritional health, and it serves as critically important information for providing feedback that addresses eating disorder–related cognitions, in particular, as they may worsen with the resumption of standard patterned eating. Usually, an assessment of meal patterning is obtained through self-monitoring. For some individuals, this occurs as an independent aspect of treatment; for others, this may be an integral part of psychotherapy. In particular, empirically supported therapies for the treatment of BN, such as cognitive-behavioral therapy (CBT) (Fairburn, Marcus, & Wilson, 1993), target self-monitoring of both weight and meal pattern. For patients at relatively "normal"

body weights, further nutritional assessment beyond that described above is typically not indicated.

Treatment Planning

Treatment should provide the patient with sufficient structure and support to resume normal meal patterning and cease binge eating and purging. Most often, these goals can be effectively accomplished in outpatient treatment. There is evidence to suggest that an early treatment focus on symptom interruption may provide a greater chance of eventual abstinence (Mitchell, et al., 1993). In turn, symptom interruption may be facilitated by a higher frequency of sessions early in treatment; in fact, many specialized outpatient treatments for BN now include a greater frequency of treatment visits (often twice per week) in the first several weeks.

For patients who require more intensive treatment, partial hospitalization or day programming may be a useful alternative. Most often such programs involve living at home and attending treatment several hours a day, several days per week. Many patients struggle most with urges to binge-eat and purge later in the day, so these programs often meet later in the day and provide structured meal interventions. Hospitalization is generally reserved as an option when less intensive treatments fail or when severe co-occurring psychopathology (particularly suicidality) is present.

One other possible indication for a more intensive treatment setting is the presence of co-occurring substance or alcohol use dependence (SAUD). When EDs and SAUD co-occur, it would seem ideal to provide an integrated treatment program that actively addresses both of these issues. Unfortunately, the question of how best to treat such co-occurring problems has received little research attention, and combined programs are rare. One recent controlled trial found that for alcohol-dependent women with concurrent ED, participation in treatment for alcoholism (behavioral coping skills therapy) was associated with reductions in both alcohol and ED problems, although the addition of the opiate antagonist naltrexone did not further substantially enhance outcomes (O'Malley et al., 2007). In the absence of such an integrated program, arguments can be made favoring the initial treatment of either the BN or the SAUD; practically speaking, sequencing of treatment is usually decided partly by the availability of each of these treatment resources, and also by the relative severity of the BN and the substance or alcohol use (and their attendant medical complications).

Treatment Choices

A substantial literature provides empirical support for several approaches to treating BN (National Institute for Health and Clinical Excellence [NICE], 2004; Wilson, Grilo, & Vitousek, 2007), including CBT, interpersonal therapy (IPT), and antidepressant pharmacotherapy. Among the best studied of these treatments is CBT, which received an "A" evidence grade in the NICE guidelines (2004). Currently, CBT is viewed as the treatment of choice for BN; it can be delivered using individual, group, and guided self-help approaches (Hay et al., 2008). However, delivery of CBT via group therapy methods is mostly confined to specialty ED settings, as most practitioners who do not specialize in ED treatment will not have a critical mass of patients at any given time to

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allow for group treatment. In studies with BN, CBT generally achieves abstinence in one-third to one-half of patients. There is also empirical support for IPT, another focal psychological treatment, which received a "B" grade in the NICE guidelines (2004). In two studies IPT resulted in lower abstinence rates than CBT at end of treatment, but did not differ from CBT at later follow-up (Agras, Walsh, Fairburn, Wilson, & Kraemer, 2000; Fairburn, Jones, Peveler, Hope, & O'Connor, 1993).

An extensive body of literature also has examined pharmacotherapy for BN, with antidepressants by far the most studied agents. Most antidepressants have been studied, and most trials have reported positive results relative to placebo. Overall, response rates to antidepressant medications are generally lower than those seen in psychotherapy trials (typically, end-of-treatment abstinence rates of 20–35%). The SSRI fluoxetine in high doses (i.e., 60 mg/day) is often described as the "gold standard" pharmacotherapy treatment, given significant findings reported in the largest trial to date (Fluoxetine Bulimia Nervosa Collaborative Study Group, 1992; Goldstein, Wilson, Thompson, Potvin, & Rampey, 1995), and it has received a Food and Drug Administration (FDA) indication for BN treatment in the United States. Less is known about the relative or combined effects of CBT and pharmacotherapy. Studies have found that CBT alone is superior to pharmacotherapy alone (Agras et al., 1992; Walsh et al, 1997). Combined treatments seem to be better than pharmacotherapy alone but not substantially better than CBT alone, although the combined approach may have an added benefit for associated problems such as depressed affect (Agras et al., 1992; Walsh et al., 1997).

A major practical challenge in the treatment of BN is the fact that most therapists have not received specific training in these therapies (Mussell et al., 2000), and it appears that these treatments are rarely used (Crow, Mussell, Peterson, Knopke, & Mitchell, 1999). This reality raises questions about the potential utility of more generalizable treatments such as medications, self-help approaches, and stepped-care approaches. Guided self-help CBT appears to be an option with some literature support (see Wilson, Grilo, & Vitousek, 2007, for a review), although effective implementation of self-help treatments in real-world controlled trials has been challenging (Walsh, Fairburn, Mickley, Sysko, & Parides, 2004). Alternatively, a treatment plan employing an increasingly intensive series of interventions could be considered. There is some evidence that simple sequential treatment approaches for nonresponders to a first full course of treatment may be associated with limited further response and low retention rates (Mitchell et al., 2002). This finding has spurred interest in stepped-care treatment approaches, which make more rapid transitions between treatments involving increasing intensity, specialization, and cost. For example, a stepped-care approach of guided self-help, followed by fluoxetine, followed by CBT may be more cost-effective and more therapeutically effective than starting with the most cost- and time-intensive treatments, such as CBT (Crow et al., 2008; Mitchell et al., 2008).

Treatment Team

Many treatment configurations are used in ED treatment. These span the spectrum from an individual physician prescribing antidepressant treatment as the sole treatment approach to a specialty center treatment team consisting of a psychotherapist, a psychiatrist for medication management, a dietician for nutritional assessment and recommendations, an occupational therapist for group cooking activities, and a primary

care physician for medical monitoring. In practice, decisions as to the makeup of the treatment team are driven by several practical factors, including the local availability of clinicians. Due to the scarcity of specialized eating disorder services, many (perhaps most) patients live in areas where this full spectrum treatment team is unavailable. If somewhat less than that full spectrum is available, then the secondary question should be: What functions are most critically necessary? First, obtain initial medical assessment and ongoing monitoring of medical stability as needed. Second, obtain initial psychiatric/psychological assessment. Third, identify someone to provide initial specific treatment for BN (medication treatment or psychotherapy).

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Exhibit 11

CHAPTER 3

Diagnosis, Assessment, and Treatment Planning for Binge-Eating Disorder and Eating Disorder Not Otherwise Specified

Jennifer E. Wildes and Marsha D. Marcus

According to the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV; American Psychiatric Association, 1994), individuals presenting with "disorders of eating that do not meet the criteria for any specific eating disorder" (p. 550), that is, individuals with clinically significant eating disorder psychopathology that does not meet DSM-IV criteria for anorexia nervosa (AN) or bulimia nervosa (BN), are classified as having an eating disorder not otherwise specified (EDNOS). Because EDNOS is, by definition, a residual diagnostic category, there are numerous presentations, and little is known about specific variants, with a few notable exceptions. Chief among these is binge-eating disorder (BED), for which research criteria are included in an appendix to the DSM-IV. Investigators also have proposed diagnostic criteria for two additional forms of EDNOS: purging disorder (PD) (Keel, 2007) and night-eating syndrome (Stunkard, Allison, & Lundgren, 2008). Although the limitations of categorical approaches to conceptualizing psychiatric diagnosis have been discussed widely (see, e.g., Widiger & Samuel, 2005), one advantage of defining specific EDNOS syndromes has been to promote research that may inform approaches to the evaluation and treatment of these conditions. Thus, in this chapter, we focus primarily on issues pertaining to the diagnosis, assessment, and treatment of BED, as this is by far the best-studied EDNOS variant. Second, we address forms of EDNOS that are more closely related to AN and BN, including PD. Because night-eating syndrome is covered in another chapter in this volume (see Allison & Stunkard, Chapter 27, this volume), we do not discuss it further here.

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Binge-Eating Disorder

Diagnostic Considerations

Diagnostic Criteria

Binge-eating disorder (BED) is characterized by recurrent episodes of binge eating (i.e., the ingestion of a large amount of food accompanied by a sense of loss of control over when, what, or the amount that one is eating) that occur in the absence of the regular compensatory behaviors (e.g., purging, fasting, excessive exercise) seen in BN and the binge-eating/purging subtype of AN. DSM-IV criteria for BED require that binge-eating episodes be associated with "marked distress" and three or more of the following features: (1) eating much more rapidly than normal; (2) eating until uncomfortably full; (3) eating in the absence of hunger; (4) eating alone because of embarrassment over the amount eaten; and (5) feelings of disgust, depression, or guilt after overeating. Finally, the DSM-IV stipulates that for individuals with BED, binge eating occurs at least 2 days per week, on average, for a 6-month period. However, research findings are mixed with respect to the clinical validity of the 2-day-per-week frequency criterion (Latner & Clyne, 2008), and there is no empirical basis for the 6-month duration requirement.

Epidemiology

Recent studies indicate that BED is at least as common as AN and BN in the general population (Hudson, Hiripi, Pope, & Kessler, 2007; Striegel-Moore et al., 2003; Wade, Bergin, Tiggemann, Bulik, & Fairburn, 2006). For example, using data from the National Comorbidity Survey Replication, Hudson and colleagues (2007) reported lifetime prevalence estimates for BED of 3.5% in women and 2.0% in men; these rates were nearly twice as high as those reported for AN and BN combined. Prevalence estimates for BED are even higher among obese individuals, ranging from 4 to 8% in community samples, and up to 30% among patients seeking bariatric surgery or other weight loss interventions (Kalarchian et al., 2007; Marcus & Levine, 2004).

Demographic Correlates

Although eating disorders (EDs) often are thought of as "culture-bound syndromes" that affect young, white females primarily (Keel & Klump, 2003), epidemiological data suggest that BED may occur more widely in the general population. For example, studies using structured diagnostic interviews to evaluate rates of binge eating in black women have documented lifetime prevalence estimates for BED that are similar to those of white women (Taylor, Caldwell, Baser, Faison, & Jackson, 2007), although one report indicates that rates of BED still are higher in whites compared to blacks (Striegel-Moore et al., 2003). Sex differences in rates of BED also are less pronounced than those for AN and BN. Indeed, epidemiological data indicate that although full-syndrome BED is approximately 1.75 times more common in women than in men, the prevalence of recurrent binge eating is at least as high among males as compared to females (Hudson et al., 2007). This discrepancy may be due, in part, to the fact that men are less likely

than women to endorse distress related to binge-eating episodes (Hudson et al., 2007), and thus fail to meet the threshold for BED diagnosis. Finally, it appears that threshold and subthreshold forms of BED may be more common in adults as compared to children and adolescents (Favaro, Ferrara, & Santonastaso, 2003). However, this discrepancy may be due, in part, to the current definition of binge eating, which requires the intake of an objectively large amount of food. Indeed, research has indicated that loss of control is more salient to disordered eating in children than is the amount of food eaten (Tanofsky-Kraff et al., 2007). Similarly, among adolescents, loss of control over eating is associated with heightened ED psychopathology and depression independent of overeating (Goldschmidt et al., 2008).

Other Associated Features and Comorbidity

The clinical correlates of BED are well documented and include high rates of medical and psychiatric comorbidity, elevated distress related to weight, shape, and eating, and diminished quality of life relative to comparison groups. Individuals with BED are significantly more likely than controls to be obese (Hudson et al., 2007) and to have chronic medical problems such as irritable bowel syndrome, fibromyalgia, and insomnia (Javaras, Pope, et al., 2008). Patients with BED also have higher rates of most major psychiatric disorders, including major depressive disorder, bipolar disorder, anxiety disorders, BN, substance use, and personality disorders, compared to individuals without clinically significant binge eating (Cassin & von Ranson, 2005; Hudson et al., 2007; Javaras, Pope, et al., 2008). Studies focusing on the cognitive correlates of disordered eating have documented that concerns about weight, shape, and eating are elevated in individuals with BED relative to obese and nonobese controls, including other disordered-eating groups (Allison, Grilo, Masheb, & Stunkard, 2005; Pike, Dohm, Striegel-Moore, Wilfley, & Fairburn, 2001). Furthermore, overvaluation of shape and weight, a diagnostic requirement for BN but not a diagnostic criterion for BED, is a commonly occurring cognitive feature in BED that has been found to be associated with greater levels of ED psychopathology, higher depression, and lower self-esteem (Grilo et al., 2008; Hrabosky, Masheb, White, & Grilo, 2007). Finally, there is evidence that obese individuals with BED have significantly greater impairment in psychosocial aspects of quality of life (e.g., work, sexual life, self-esteem) relative to obese individuals without binge-eating problems (Hudson et al., 2007; Rieger, Wilfley, Stein, Marino, & Crow, 2005).

Etiology

Although the exact causes remain unknown, BED almost certainly arises from a complex cascade of genetic, biological, and environmental factors. Studies using twin data and advanced statistical techniques have indicated that the heritability of BED lies somewhere between 30 and 80%, most likely in the middle of this range (Javaras, Laird, et al., 2008). Moreover, family interview data have shown that BED aggregates in families independently of obesity (Hudson et al., 2006).

With respect to biological mechanisms, there is evidence that individuals with binge-eating problems have functional alterations in several central and peripheral systems that are associated with the regulation of appetite and eating behavior (for a

review, see Steiger & Bruce, 2007). However, the role of these biological correlates in the pathogenesis of BED has not been well established. For example, although decreased serotonin availability has been implicated in animal models of binge eating (Blundell, 1986), as well as in studies focusing on the pathophysiology of BN (Steiger & Bruce, 2007), one report examining prolactin response to *d*-fenfluramine in individuals with BED found no evidence that the hypothalamic serotonin system is altered in this group (Monteleone, Brambilla, Bortolotti, & Maj, 2000). Similarly, research has failed to document an association between level of brain-derived neurotrophic factor (BDNF) and BED, although BDNF has been shown to modulate eating behavior both in animals and in humans, and decreased levels of BDNF have been found in other disordered-eating groups (e.g., underweight individuals with AN, individuals with BN) (Monteleone et al., 2005). Finally, studies examining the role of appetite-regulating hormones (e.g., cholecystokinin [CCK], leptin, ghrelin) in BED have produced mixed results. Although alterations in CCK and leptin generally have not been observed in individuals with BED (for review, see Steiger & Bruce, 2007), there is some evidence that levels of fasting ghrelin may be diminished in this group (Geliebter, Gluck, & Hashim, 2005; Geliebter, Yahav, Gluck, & Hashim, 2004). However, studies examining ghrelin gene polymorphisms in relation to BN and BED have produced equivocal findings (Monteleone, Tortorella, Castaldo, Di Filippo, & Maj, 2006, 2007), leading some investigators to conclude that ghrelin alterations in patients with BED are a consequence rather than a cause of binge eating (Steiger & Bruce, 2007).

Finally, studies using case-control methodology have identified several potential genetic and environmental risk factors for BED. Examples include childhood obesity, family overeating, low parental contact and high parental demands, and negative comments about weight, shape, and eating (Fairburn et al., 1998; Striegel-Moore et al., 2005). One study using signal detection analysis to identify potential risk factors for BED and BN reported that an elevated level of perceived stress prior to age 14 preceded the onset of binge eating in a significant minority of individuals (Striegel-Moore et al., 2007). Finally, some research has indicated that rates of childhood physical and sexual abuse and bullying by peers are higher in women with BED compared to healthy control women; however, with the exception of sexual abuse in black women, these factors generally do not distinguish women with BED from psychiatric comparison women, suggesting that they are associated with an increased risk for psychiatric disorders, in general, rather than binge eating more specifically (Striegel-Moore, Dohm, Pike, Wilfley, & Fairburn, 2002).

Course of Illness

With notable exceptions (i.e., Cachelin et al., 1999; Fairburn, Cooper, Doll, Norman, & O'Connor, 2000), research evidence indicates that BED is a chronic condition associated with morbidity, mortality, and duration of illness comparable to BN. For example, using data from the National Comorbidity Survey Replication, Hudson and colleagues (2007) reported a mean lifetime duration of illness for BED that was roughly equivalent to BN (i.e., 8.1 vs. 8.3 years) and significantly longer than AN (1.7 years). Similarly, Pope and colleagues (2006) found that individuals with BED reported a significantly longer mean duration of illness (i.e., 14.4 years) than did individuals with AN (5.7 years) or BN (5.8 years) in a community sample of 888 relatives of overweight and obese probands.

Finally, Fichter, Quadflieg, and Hedlund (2008) followed a clinical sample for 12 years after discharge from an inpatient ED program and found no differences between individuals initially diagnosed with BED and individuals initially diagnosed with BN on rates of current ED diagnoses (36% of patients with BED and 28% of patients with BN met criteria for an ED at follow-up), rates of current and lifetime mood and anxiety disorder diagnoses, and number of inpatient treatment days during the follow-up period. The standardized mortality ratios for BED and BN were low (i.e., 2.29 and 2.36, respectively) and did not differ significantly (Fichter et al., 2008). Taken together, these findings highlight the clinical significance of BED as a chronic syndrome, requiring a similar degree of long-term care and follow-up to other EDs.

Assessment

Psychological Evaluation and Data Gathering

BED is a complicated syndrome with behavioral (i.e., binge eating) and psychological (e.g., depression, guilt) components, and a comprehensive assessment may require multimodal methods (Grilo, Masheb, & Wilson, 2001). An interview format generally is the preferred method of diagnostic evaluation. Although self-report questionnaires can be used to screen for BED symptoms, these instruments are not appropriate for assigning diagnoses due to limited specificity—that is, high rates of false-positive diagnoses in persons who do not actually meet criteria for BED (Celio, Wilfley, Crow, Mitchell, & Walsh, 2004). Similarly, although self-report measures can be used to screen for associated psychological problems that may influence treatment formulation and planning, such as mood, anxiety, and substance use disorder comorbidities, interviews are required to arrive at firmer diagnostic impressions. Finally, it is important to keep in mind that although self-report measures can provide useful information about ED psychopathology, their results sometimes differ from those generated by interview-based assessments (Grilo et al., 2001).

In research settings BED often is assessed using standardized interview schedules such as the Structured Diagnostic Interview for DSM-IV Axis I Disorders (SCID-I) (First, Spitzer, Gibbon, & Williams, 1995) or the Eating Disorder Examination (EDE) (Fairburn & Cooper, 1993). However, these instruments require extensive training and considerable time to administer and thus are impractical in many clinical settings. Nevertheless, a careful psychiatric evaluation is important for all individuals seeking treatment for BED. Because binge eating is the cardinal feature of BED, particular attention should be given to the assessment of this behavior. It may be helpful to ask patients to recall details of specific overeating and loss-of-control eating episodes, or to request a description of a "typical binge." Self-monitoring methods, in which patients record information about overeating or loss-of-control eating prospectively for a specified of period time (e.g., the week prior to the interview), also can provide detailed assessment information without introducing the bias of retrospective self-report; however, self-monitoring has been shown to affect eating behavior and frequently is employed in clinical treatment.

It is important to recognize that unlike BN, the BED diagnosis is based on the number of binge-eating "days" rather than "episodes." However, recent data suggest that individuals with BED are able to delineate binges into discrete episodes (e.g., Grilo &

Masheb, 2005; Hilbert et al., 2007), and assessment of binge eating–episode frequency may provide useful clinical information. Finally, many observers have concluded that loss of control over eating, rather than the amount of food ingested, is the hallmark of binge eating (e.g., Latner, Hildebrandt, Rosewall, Chisholm, & Hayashi, 2007); thus, the patient's subjective experience of loss of control is of particular salience.

Medical Evaluation

There is no standard indication for the medical evaluation of individuals with BED independent of the assessment of obesity-related comorbidities. However, because many patients with BED are overweight or obese, medical evaluation may be necessary to ensure that comorbid conditions are managed appropriately. Obesity is associated with numerous medical problems including cardiovascular disease, diabetes, hypertension, kidney disease, obstructive sleep apnea, and several forms of cancer (i.e., colon, breast, esophageal, uterine, ovarian, kidney, and pancreatic) (Eckel, 2008). Thus, it is important that clinicians involved in the evaluation and treatment of obese patients with BED attend to the possibility that these individuals may require referral for assessment and management of coexisting medical problems.

Nutrition Assessment

Nutrition rehabilitation generally is not a major focus of BED treatment. Individuals with BED typically do not engage in severe dietary restriction, and thus the prescription of a healthy diet is of less concern than it might be in other disordered-eating groups (e.g., underweight patients with AN). Nevertheless, because overeating and overweight are common in patients with BED (Allison et al., 2005; Hudson et al., 2007), a nutrition evaluation that focuses on the tailoring of a balanced eating plan that reflects individual preferences may have considerable utility for this group.

Treatment Planning

Treatment Setting

Treatment for BED typically occurs in an outpatient setting. Inpatient or partial hospitalization programs rarely are warranted unless there are significant psychiatric or medical comorbidities that require more intensive intervention. For patients with relatively uncomplicated presentations and no history of prior treatment, it may be appropriate to suggest a stepped-care approach in which a course of self-help is undertaken prior to initiating more intensive intervention. Several studies have documented the benefits of therapist-guided self-help programs relative to waiting-list controls in the treatment of BN and BED (for a review, see Sysko & Walsh, 2008). Moreover, results from a recent study indicate that self-help guided by brief (i.e., six 15- to 20-minute sessions conducted individually over a 12-week period) cognitive-behavioral therapy (CBT) is superior to self-help guided by behavioral weight control in the management of BED (Grilo & Masheb, 2005). Recent work also has documented the promise of computerized technologies (e.g., CD-ROM and Internet-based interventions) as a means of disseminating therapist-guided self-help for BED (Ljotsson et al., 2007; Shapiro, Reba-Harrelson, et al., 2007).

Treatment Options

Several forms of treatment, including individual and group psychotherapy, behavioral weight control, and pharmacotherapy, have demonstrated efficacy in the management of BED. Because empirical support for these interventions has been derived primarily from clinical trials conducted in specialized research centers, their effectiveness in "real-world" settings remains unknown (Wilson, Grilo, & Vitousek, 2007). Nevertheless, evidence-based treatments represent the best first-line approaches to managing BED.

With respect to psychotherapeutic interventions, CBT, conducted individually or in a group format, has the strongest empirical support in the treatment of BED. Indeed, guidelines published by the National Institute for Health and Clinical Excellence (NICE; 2004) in the United Kingdom state that CBT is the treatment of choice for this disorder. Controlled trials have shown that CBT is effective in reducing the frequency of binge days and episodes and also leads to improvements in associated behavioral and cognitive features of disordered eating (e.g., hunger, restraint, disinhibition; for a review, see Brownley, Berkman, Sedway, Lohr, & Bulik, 2007). Moreover, research has documented that these improvements are well maintained over 12-month follow-up (Wilson et al., 2007). Nevertheless, one limitation of CBT as a treatment for BED is that it generally does not produce significant weight loss, despite high rates of abstinence from binge eating at treatment completion. In addition, the superiority of CBT for BED relative to other active interventions remains uncertain. As detailed below, although some research has shown that CBT is more effective than fluoxetine in the treatment of individuals with BED (Grilo, Masheb, & Wilson, 2005; Ricca et al., 2001), there is no evidence that CBT performs better than interpersonal psychotherapy (IPT) in the management of these patients.

Other specialized psychotherapies that have shown promise in the treatment of BED include IPT and dialectical behavior therapy (DBT). As noted above, IPT produces improvements in binge eating, the cognitive correlates of disordered eating, self-esteem, depressive symptoms, and interpersonal functioning that are comparable to CBT (Wilfley et al., 1993, 2002). Likewise, a study comparing group DBT skills training to a wait-list control found that DBT was associated with high rates of abstinence from binge eating at treatment completion that were well-maintained over a 6-month follow-up (Telch, Agras, & Linehan, 2001). However, despite its emphasis on emotion regulation, DBT did not demonstrate superiority relative to the wait-list control in reducing negative affect or enhancing adaptive affect regulation skills—which raises some question about the mechanisms by which this intervention effects change in BED symptoms.

Because most individuals seeking treatment for BED are overweight or obese, there has been considerable interest in the role of behavioral weight control in the management of this illness. Weight management interventions focusing both on moderate calorie restriction and very-low-calorie diets (i.e., approximately 800 kilocalories [kcal] per day) have been utilized in the treatment of obese patients with BED. These interventions differ from psychotherapeutic approaches in that the focus is on weight loss rather than amelioration of binge eating. Although caloric restriction and weight loss do not appear to exacerbate binge eating in patients with BED (for a review, see Marcus & Levine, 2004), support for the efficacy of behavioral weight control in this group has been equivocal.

Several studies have documented that participation in a behavioral weight control program is associated with improvements in binge eating and mood among obese

patients with BED. For example, de Zwaan and colleagues (2005) randomized 71 obese women with BED to a very-low-calorie diet program with or without the addition of group CBT for binge eating. They found no differences between the two conditions with respect to weight loss or abstinence from binge eating. Participants in both groups lost a significant amount of weight (i.e., 35.2 pounds, on average), and 66% were free of binge eating at treatment completion (de Zwaan et al., 2005). These findings are consistent with work from our research group, which found no benefit for CBT over behavioral weight loss in ameliorating binge eating and associated ED psychopathology among obese patients with BED (Marcus & Levine, 2004). Moreover, results from our study indicated that behavioral weight control using a moderate-calorie diet (i.e., 1,200–1,500 kcal/day) was associated with significantly more weight loss at posttreatment compared to CBT in obese individuals with BED. Taken together, these findings suggest that behavioral weight control interventions may be the optimal approach for treating individuals with comorbid obesity and BED.

However, some investigators have raised questions about the utility of behavioral weight control for obese patients with BED. Of particular concern are high rates of weight regain posttreatment in most studies (for a review, see Wilson et al., 2007), as well as research indicating that behavioral weight loss interventions may not be as effective as CBT and IPT in reducing binge eating among patients with BED (Grilo & Masheb, 2005; Wilfley, Wilson, & Agras, 2008). For example, a recently completed multisite randomized controlled trial comparing IPT, behavioral weight loss, and guided self-help CBT for BED found that rates of remission from binge eating at 2 years posttreatment were significantly lower among patients who received the behavioral weight loss intervention compared to those who received IPT or guided self-help CBT (Wilfley, Wilson, et al., 2008). Moreover, results of this study suggested that behavioral weight control was particularly ineffective for patients with BED who had more severe ED and general psychopathology (Wilfley, Wilson, et al., 2008).

Finally, several classes of medication, including antidepressants, anticonvulsants, and antiobesity agents, have demonstrated efficacy relative to placebo in reducing the frequency of binge eating episodes and promoting weight loss in patients with BED (for a review, see Brownley et al., 2007; Reas & Grilo, 2008). Because pharmacological interventions require considerably less investment of time by patient and clinician than do psychotherapeutic approaches or behavioral weight loss programs, medication may be an attractive first-line treatment for BED in many clinical settings. However, it is important to consider that most controlled trials of pharmacological treatments for BED have been of short duration (i.e., 6–14 weeks), and the long term benefits of these approaches following medication discontinuation are unknown, as no controlled pharmacotherapy-only trials have reported follow-up data (Reas & Grilo, 2008). Although two recent studies have documented the efficacy of an anticonvulsant (i.e., topiramate) and an antiobesity agent (i.e., sibutramine) relative to placebo in ameliorating BED symptoms and reducing body weight over longer periods of active treatment (i.e., 21 and 24 weeks, respectively), neither report included posttreatment follow-up data (Claudino et al., 2007; Wilfley, Crow, et al., 2008).

One approach that often is suggested for the management of patients with BED is the combination of psychotherapeutic and pharmacological interventions. This strategy may be particularly useful for treating obese patients with BED, given that psychotherapies for BED generally have a limited impact on body weight (Wilson et al., 2007).

However, the few studies that have examined the effects of adding pharmacological treatments to psychotherapeutic and behavioral approaches have produced equivocal findings (Reas & Grilo, 2008). For example, although early reports indicated that adding antidepressant medication (i.e., fluoxetine, desipramine, imipramine) to CBT or behavioral weight control interventions was associated with a greater short-term reduction in the frequency of binge eating (imipramine only) and improved weight loss in overweight individuals with binge eating (Agras et al., 1994; Laederach-Hofmann et al., 1999; Marcus et al., 1990), two recent double-blind randomized controlled trials found no benefit of augmenting CBT (Grilo, Masheb, & Wilson, 2005) or behavioral weight control (Devlin et al., 2005) with fluoxetine for either weight loss or remission of binge eating in patients with BED. Findings for anticonvulsant and antiobesity agents are somewhat more promising. For example, one recent study found that augmenting group CBT for BED with the anticonvulsant medication topiramate produced significantly greater reductions in body weight and higher rates of remission from binge eating over a 21-week course of treatment, relative to CBT with placebo (Claudino et al., 2007). Similarly, another report showed that adding the antiobesity agent orlistat to guided self-help CBT led to increased weight loss and higher rates of remission from binge eating at the completion of a 12-week course of treatment; moreover, reductions in body weight were maintained at a 3-month posttreatment follow-up (Grilo, Masheb, & Salant, 2005). These results require replication with longer-term follow-up to determine whether reduction in binge eating and weight loss persist after drug withdrawal. Nevertheless, they provide tentative support for the notion that augmenting empirically supported psychosocial treatments with medications designed specifically to target overweight is an effective approach to managing obese patients with BED.

In summary, treatment options for patients with BED include individual and group psychotherapies, behavioral weight loss interventions, and medication. Although CBT has been recommended as the treatment of choice for BED by some evidence-based expert guidelines (i.e., NICE, 2004), no available intervention is effective for all patients. There is an emerging literature on factors that predict treatment response and outcome in patients with BED. For example, research has shown that comorbid personality disorders and increased interpersonal problems, higher levels of shape and weight concern (among patients with low interpersonal problems), and greater negative affect are associated with poor treatment outcome in BED (Hilbert et al., 2007; Masheb & Grilo, 2008). In contrast, it appears that rapid response to treatment, defined as 65% or greater reduction in binge eating by the fourth week of treatment, is associated with superior outcomes in patients with BED, although the prognostic significance of rapid response depends, to some degree, on the treatment studied (Grilo, Masheb, & Wilson, 2006; Masheb & Grilo, 2007). Moderators of treatment outcome (i.e., variables that predict for whom or under what conditions a specific treatment works; Kraemer, Wilson, Fairburn, & Agras, 2002) for BED have yet to be identified (Masheb & Grilo, 2008). Thus, the selection of a specific treatment approach for an individual with BED must be based on a careful assessment by the clinician or treatment team, as well as a discussion of the pros and cons of available options with each patient.

Involvement of Family and Caregivers

Only one study has examined the impact of involving family members or supportive others in the treatment of BED. The results indicate that spouse involvement does not

improve the efficacy of group CBT for BED (Gorin, Le Grange, & Stone, 2003). Nonetheless, there is some evidence that including a support partner improves the efficacy of behavioral weight control programs for obese individuals without BED (Black, Gleser, & Kooyers, 1990; Wing & Jeffery, 1999). Furthermore, including support partners in behavioral weight loss treatment is one of the few strategies that has been shown to improve weight loss maintenance (Gorin et al., 2005). Thus, the involvement of family members or other supportive persons may offer some benefit in the management of obese patients with BED, particularly those enrolled in behavioral weight control programs.

Treatment Team

The treatment team for an individual with BED depends, in large part, on the choice of intervention. Specialized psychotherapies such as CBT, IPT, and DBT require involvement of clinicians with specific training and experience in these modalities, which may be difficult to obtain in some settings. Behavioral weight control programs are available in a variety of contexts (e.g., academic centers, commercial weight loss programs, self-help manuals) and from providers of numerous backgrounds (e.g., dietitians, nutritionists, health psychologists). However, the extent to which weight management provided in the community resembles interventions tested in clinical research may vary widely. Finally, pharmacological interventions require a physician or nurse practitioner to prescribe medication; however, because pharmacotherapy can be performed in a primary care setting by nonspecialists, these treatments may hold the greatest promise in terms of widespread dissemination (Wilson et al., 2007).

Summary

BED is a chronic disorder associated with significant medical and psychiatric morbidity. It also is a relatively common condition, especially among obese individuals. Thus, treatment for BED often focuses on promoting weight loss as well as ameliorating disordered-eating symptoms. Effective interventions include individual and group psychotherapy, behavioral weight control, and pharmacotherapy. However, each of these treatments has disadvantages (e.g., psychotherapy for BED generally does not lead to weight loss; long-term benefits of behavioral weight control and pharmacotherapy are unknown), and no intervention is effective for all patients. Thus, decisions about the treatment of BED must be based on a careful assessment of each patient's presenting symptomatology, including medical and psychiatric comorbidities, review of the benefits and disadvantages of different therapies, and consideration of the availability of trained professionals to provide care.

NOS Variants of AN and BN

In the second part of this chapter we review issues pertaining to the diagnosis, assessment, and treatment of individuals presenting with EDNOS variants that resemble, but do not meet the criteria for, AN and BN. As detailed below, such presentations often represent either a prodromal or residual phase of threshold-level illness, and as such, their management is identical to that of full-syndrome AN or BN. In cases in which

EDNOS symptomatology is atypical or does not resemble a DSM-defined ED, best clinical judgment and consultation are recommended.

Diagnostic Considerations

Diagnostic Criteria

Although the DSM-IV provides no specific criteria for NOS variants of AN and BN, clinicians and researchers working in the ED field are familiar with several common examples of these EDNOS subgroups. Frequently cited NOS presentations of AN include (1) all criteria for AN are met except amenorrhea; (2) all criteria for AN are met except the individual denies fear of fat or concerns about body weight and shape; and (3) all criteria for AN are met; however, despite significant weight loss, current weight is in the normal range. With respect to BN, NOS variants generally are diagnosed in cases in which an individual does not meet the two-episode-per-week frequency criterion for binge eating or compensatory behaviors, or in situations in which the size of the binge-eating episodes is not objectively large. Keel and colleagues (Keel, 2007; Keel, Haedt, & Edler, 2005) have termed this latter EDNOS variant "purging disorder"; others have called it EDNOS—purging type (EDNOS-p; Binford & Le Grange, 2005; Wade, 2007) and EDNOS-BN (Le Grange et al., 2006). In the remainder of this chapter, we use the term *purging disorder* (PD) to denote an EDNOS variant characterized by recurrent episodes of purging (i.e., self-induced vomiting, laxative misuse, diuretic misuse) in the absence of objectively large binge-eating episodes among individuals who are normal weight or overweight.

With the recent formation of the Eating Disorders Work Group for DSM-V, there has been considerable interest in the utility of amending the diagnostic criteria for AN and BN to encompass some of the above-mentioned EDNOS variants. One possibility for change is deletion of amenorrhea from the diagnostic criteria set for AN, as research has consistently failed to document that amenorrhea increases the specificity of this diagnosis (e.g., Andersen, Bowers, & Watson, 2001; Garfinkel et al., 1996). Other proposed changes include modifying "arbitrary" diagnostic criteria such as the suggested minimal body weight criterion for AN (i.e., maintenance of body weight that is < 85% of that expected) and the twice-weekly frequency criterion for BN (Wilfley, Bishop, Wilson, & Agras, 2007). Finally, PD has been proposed as a new diagnostic category for DSM-V (Keel, 2007); however, the ongoing debate over the validity of the large-amount-of-food criterion for binge eating coupled with high numbers of subjective binge-eating episodes in samples of patients with PD (e.g., Keel et al., 2005) raise questions about whether this group could be encompassed more appropriately within the BN spectrum.

Epidemiology

Individuals with EDNOS comprise the majority of patients seeking treatment for disordered eating (for a review, see Fairburn & Bohn, 2005). Moreover, with few exceptions (e.g., Fairburn et al., 2007), clinical data have indicated that most of these patients present with atypical or subthreshold forms of AN and BN. For example, Andersen and colleagues (2001) reported that of 119 individuals with EDNOS admitted to the ED unit of a large university hospital, 78% met all but one criterion for AN ($n = 89$) or

BN (n = 4). Similarly, Eddy, Doyle, Hoste, Herzog, and Le Grange (2008) reported that three-quarters of a sample of treatment-seeking adolescents with EDNOS (N = 166) had subthreshold AN (n = 46) or subthreshold BN, including PD (n = 79). High rates of EDNOS also have been reported in general psychiatric settings. For example, Zimmerman, Francione-Witt, Chelminski, Young, and Tortolani (2008) found that 51% (N = 81/164) of individuals with a current ED presenting to a nonspecialty psychiatric service had EDNOS. Moreover, 40% of these patients met criteria for subthreshold AN (n = 17) or BN (n = 17). Finally, studies examining rates of ED psychopathology in community samples have documented that 2–5% of individuals have a lifetime diagnosis of subsyndromal AN or BN (Favaro et al., 2003; Wade et al., 2006).

Demographic Correlates

Consistent with the demographic characteristics of threshold-level EDs, available data suggest that NOS variants of AN and BN occur more frequently in whites compared to nonwhites and in females compared to males (Eddy et al., 2008; Fairburn & Bohn, 2005). A notable exception may be extreme dietary restriction in the absence of fear of fat or weight concern, as this AN variant often is observed in non-Western groups (Keel & Klump, 2003).

Other Associated Features and Comorbidity

In general, NOS variants of AN and BN are similar in presentation to full-syndrome EDs. Affected individuals endorse significantly more ED symptomatology, Axis I and II psychiatric comorbidity—particularly mood and anxiety disorder comorbidity—and impairment in psychosocial functioning than do non-eating-disordered groups (Keel et al., 2005; Wade, 2007). Furthermore, studies comparing individuals with NOS variants of AN and BN to their threshold-level counterparts have found few differences on measures of comorbid psychopathology or psychosocial impairment (Binford & Le Grange, 2005; Fairburn et al., 2007; Garfinkel et al., 1996; Keel et al., 2005). There is some evidence that threshold-level BN is associated with greater ED symptomatology relative to PD and other NOS presentations of BN (Binford & Le Grange, 2005; Keel et al., 2005; Le Grange et al., 2006; Wade, 2007); however, differences relate primarily to lower levels of disinhibition and hunger in individuals with PD compared to those with BN, which is consistent with the absence of objective binge-eating episodes in the former group (Keel, 2007).

Etiology

Although there has been considerable interest in identifying factors that may influence the onset of threshold-level EDs, few studies have focused specifically on the etiology of NOS variants of AN and BN. The limitations of assuming etiological continuity across full- and partial-syndrome presentations notwithstanding (for a review, see Striegel-Moore & Bulik, 2007), longitudinal data indicate that NOS variants of AN and BN often represent stages in the long-term course of threshold-level EDs (Milos, Spindler, Schnyder, & Fairburn, 2005), and thus it is likely that they arise from many of the same factors as their DSM-defined counterparts. Indeed, risk-factor studies have identified

several variables that are associated with the onset of both threshold and subthreshold ED psychopathology; examples include childhood feeding problems, sexual abuse and other early adverse experiences, dieting and weight concerns, negative self-evaluation, and general psychiatric morbidity (for a review, see Jacobi, Hayward, de Zwaan, Kraemer, & Agras, 2004). Furthermore, family history data have shown that rates of subthreshold EDs (defined as meeting all but one diagnostic criterion for AN, BN, or BED) are significantly higher in the first-degree relatives of women with threshold-level EDs, as compared to the first-degree relatives of non-eating-disordered probands (Stein et al., 1999), indicating that EDNOS aggregates in the families of individuals with DSM-defined eating disturbance.

Because, by definition, individuals with PD do not report objective binge-eating episodes, there has been some recent speculation that the physiological mechanisms underlying this EDNOS variant may differ from those associated with threshold-level BN. In particular, research has documented that women with PD do not exhibit the blunted postprandial CCK response that has been found in patients with BN (Keel, Wolfe, Liddle, De Young, & Jimerson, 2007). Moreover, when compared to women with BN and healthy controls, women with PD report greater subjective feelings of fullness, nausea, and stomachache following a test meal, which may suggest that other neuropeptide systems involved in the regulation of food intake or delayed gastric emptying are involved in the pathophysiology of this illness (Keel et al., 2007). However, future research is needed to determine whether physiological differences between PD and BN represent a distinction in the causes, consequences, or maintenance factors for these conditions. In addition, studies are needed to identify biological factors that may be associated with the presentation and course of other NOS variants of AN and BN.

Course of Illness

Available data suggest that NOS variants of AN and BN are characterized by a variable course of illness, with frequent diagnostic crossover to threshold-level ED psychopathology and high rates of remission from disordered-eating symptoms. For example, Milos and colleagues (2005) reported that of 29 patients initially diagnosed with EDNOS, only 8 (27.6%) retained this status at 12-month follow-up; 5 (17.2%) were diagnosed with AN, 7 (24.1%) with BN, and 9 (31.0%) no longer met criteria for an ED. Furthermore, at the 30-month follow-up assessment, more than half of the patients initially diagnosed with EDNOS no longer met criteria for an ED. Fichter and Quadflieg (2007) found similar results in a longitudinal study of inpatients with EDs. Specifically, they reported that more than two-thirds of patients with an EDNOS diagnosis (excluding BED) crossed over to "no eating disorder" at some point during their course of illness; the next highest remission rate was from BED (62.7%) followed by BN (53.0%) and AN (37.6%). Finally, Grilo and colleagues (2007) reported that 83% of a sample of 69 patients with EDNOS experienced remission from threshold-level ED symptoms during a 5-year follow-up, compared to 74% of individuals with BN ($n = 23$); however, relapse rates were high for both groups, with 42% of remitted EDNOS patients and 47% of remitted BN patients experiencing a return of threshold-level ED symptoms. These findings are consistent with the results of other longitudinal studies that have documented similarities between EDNOS and BN with respect to course of illness (Ben-Tovim et al., 2001).

Assessment

Psychological Evaluation and Data Gathering

As in other EDs, a clinical interview by a trained professional is the preferred method of assessment for NOS variants of AN and BN. Interviews should focus particular attention on the individual's history of ED symptoms and weight, as this may help to determine whether the NOS presentation represents a residual phase in the course of a threshold-level illness, a newer onset of disordered-eating symptoms, or a distinct pattern of symptomatology altogether (e.g., PD). Psychological evaluations of individuals presenting with NOS variants of AN and BN also should address psychiatric comorbidities frequently seen in patients with EDs (e.g., depression, anxiety, substance use), as well as history of past treatment for disordered eating and other mental illness.

Medical Evaluation

The medical evaluation of individuals with NOS variants of AN and BN generally is identical to that recommended for threshold-level EDs. Individuals presenting with NOS variants of AN should receive the standard protocol for DSM-defined AN; individuals with bulimic symptoms should be evaluated in the same manner as patients with BN.

Nutrition Assessment

Nutrition concerns for patients with NOS variants of AN and BN generally are similar to those for individuals with threshold-level EDs. Thus, nutrition assessment should follow guidelines recommended for the DSM-defined disorder that the patient's presenting symptomatology resembles most closely.

Treatment Planning

Although individuals with NOS variants of AN and BN have been included in some recent clinical trials (e.g., Fairburn & Grave, 2008), no studies have focused specifically on the treatment of these patients. Thus, there are limited empirical data to guide decisions about the management of NOS variants of AN and BN. As detailed below, in the absence of specific treatment guidelines, individuals presenting with NOS variants of AN and BN typically receive care that is identical to that of individuals with the DSM-defined ED that their symptoms resemble most closely (see Figure 3.1).

Treatment Setting

Decisions about the appropriate level of care for individuals with NOS variants of AN and BN are based largely on the nature and severity of the presenting psychopathology. For underweight patients, acute weight restoration treatment in an inpatient or day hospital setting often is warranted to normalize eating and decrease the frequency of unhealthy compensatory behaviors (e.g., purging, excessive exercise). Normal-weight individuals typically are treated in an outpatient setting; however, brief hospital stays may be required to address medical abnormalities consequent to disordered-eating

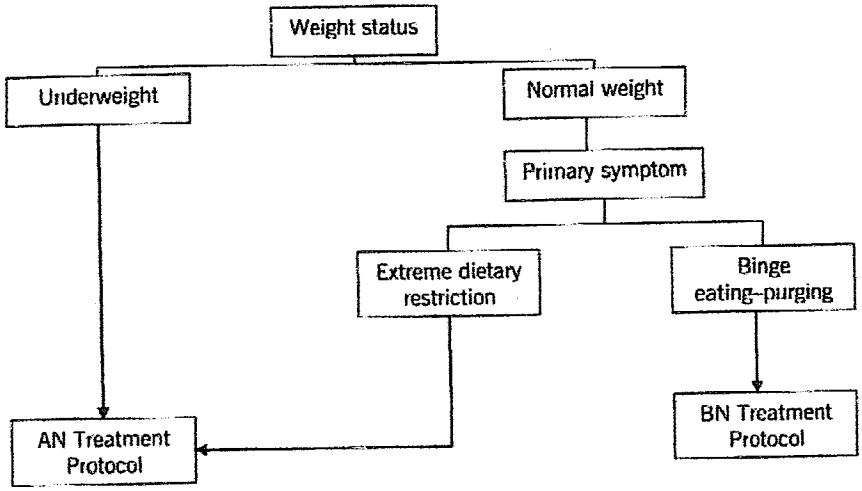

FIGURE 3.1. Treatment algorithm for patients presenting with NOS variants of AN and BN.

behaviors (e.g., electrolyte imbalances due to frequent purging) or severe psychiatric comorbidities (e.g., suicidal behaviors).

Treatment Options

The choice of treatment for individuals with NOS variants of AN and BN depends on the nature of the disordered-eating psychopathology. For underweight individuals, nutrition rehabilitation aimed at normalizing eating and restoring a healthy body weight is a critical component of treatment. However, there is consensus in the field that nutrition rehabilitation alone is insufficient to promote lasting recovery from disordered-eating symptoms (Agras et al., 2004), and thus there is a need for research to develop effective psychotherapeutic and pharmacological interventions for individuals with NOS variants of AN. As reviewed in detail elsewhere (Bulik, Berkman, Brownley, Sedway, & Lohr, 2007), very few controlled trials have focused on the treatment of patients with DSM-defined AN, and they have produced inconsistent findings. Consequently, there is limited evidence on which to base even tentative suggestions for the management of individuals with NOS variants of the disorder. Interventions that may hold promise for the treatment of patients with NOS variants of AN include family therapy for adolescents and individual psychotherapy, particularly for weight-restored patients. Few empirical data support the efficacy of pharmacological interventions for underweight individuals with anorexic psychopathology (Bulik et al., 2007).

Treatment options for patients presenting with NOS variants of BN include individual and group psychotherapies and medication. CBT appears to be particularly effective for individuals with bulimic psychopathology, although there also is evidence that IPT, DBT, and guided imagery are associated with significant and sustained reductions in the frequency of binge-eating and compensatory behaviors (for a review, see Shapiro, Berkman, et al., 2007). With respect to pharamacological interventions, there is strong support for the utility of fluoxetine in the management of patients with BN, and pre-

liminary evidence suggests that several other medications (e.g., trazodone, topiramate, desipramine) are effective in reducing bulimic symptomatology (Shapiro, Berkman, et al., 2007). Finally, some investigators have suggested that differences in the psychobiology of BN and PD may indicate the need for novel pharmacological treatments for individuals who purge in the absence of objective binge-eating episodes (e.g., Keel et al., 2007); however, no empirical studies have addressed the treatment of individuals with PD.

Involvement of Family and Caregivers

For adolescents living at home, parental involvement is standard in the treatment of disordered eating. Empirical studies that have included adolescents with NOS variants of AN and BN have documented the efficacy of family-based interventions for this group (Le Grange, Crosby, Rathouz, & Leventhal, 2007; Lock, Agras, Bryson, & Kraemer, 2005). In contrast, research generally has not supported the utility of family-based treatment for adults with EDs (Bulik et al., 2007); however, clinical experience suggests that some adults with EDNOS may benefit from including family members or other supportive individuals in treatment.

Treatment Team

Professionals involved in the care of patients with NOS variants of AN and BN include psychiatrists, psychologists, social workers, and dietitians. The specific treatment team for an individual with EDNOS depends on the required level of care and the choice of intervention.

Summary

EDNOS is the most common diagnosis assigned to patients seeking treatment for disordered eating, and data suggest that many of these individuals have NOS variants of AN and BN. Although clinical research has found few differences between patients with EDNOS and patients with DSM-defined EDs on measures of clinical severity, including course of illness, little is known about the specific needs of this group. In the absence of empirical data on which to guide treatment planning decisions, the management of EDNOS generally is identical to the management of threshold-level EDs. Future research is needed to characterize EDNOS subgroups more clearly and to develop strategies for their evaluation and treatment.

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Exhibit 12

Exhibit 12: Estimate of Persons with Eating Disorders in the Service Area

Town	Anorexia Nervosa	Bulimia Nervosa	Binge Eating Disorder	Total
Ansonia	92	193	529	814
Beacon Falls	29	61	167	254
Bethany	27	56	153	236
Bozrah	13	27	73	112
Branford	135	283	773	1,191
Cheshire	141	296	809	1,245
Chester	20	43	117	180
Clinton	63	133	364	561
Colchester	78	163	447	688
Cromwell	68	144	392	604
Deep River	22	46	127	196
Durham	35	74	203	313
East Haddam	44	92	253	389
East Hampton	62	131	357	550
East Haven	140	295	806	1,241
East Lyme	91	191	521	803
Essex	32	67	183	283
Franklin	10	20	55	85
Griswold	58	121	331	509
Groton	192	403	1,101	1,696
Guilford	108	226	618	952
Haddam	40	84	231	355
Hamden	292	615	1,680	2,587
Killingworth	30	66	180	276
Lebanon	35	74	202	311
Ledyard	72	152	416	641
Lisbon	21	44	120	185
Lyme	12	24	66	102
Madison	88	185	505	777
Meriden	291	612	1,674	2,577
Middlebury	36	76	209	322
Middlefield	21	45	122	188
Middletown	227	478	1,306	2,011
Montville	94	199	543	837
Naugatuck	153	321	877	1,350
New Haven	628	1,320	3,608	5,556
New London	133	280	765	1,178
North Branford	69	145	397	611
North Haven	115	243	663	1,021
North Stonington	25	54	146	225

Town	Anorexia Nervosa	Bulimia Nervosa	Binge Eating Disorder	Total
Norwich	194	409	1,118	1,721
Old Lyme	36	77	210	323
Old Saybrook	49	103	283	435
Oxford	62	129	354	545
Portland	45	96	261	403
Preston	23	48	131	202
Prospect	46	97	266	410
Salem	20	42	116	178
Sprague	14	30	82	127
Stonington	89	187	512	789
Voluntown	13	26	72	111
Wallingford	217	456	1,247	1,920
Waterbury	528	1,110	3,034	4,671
Waterford	94	197	539	830
Westbrook	33	70	191	294
West Haven	266	560	1,529	2,355
Wolcott	80	169	462	711
Woodbridge	43	91	247	381
TOTAL	**5,695**	**11,983**	**32,745**	**50,423**

Exhibit 13

Substance Abuse and Mental Health Services Administration
SAMHSA ADVISORY
www.samhsa.gov • 1-877-SAMHSA-7 (1-877-726-4727)

CLIENTS WITH SUBSTANCE USE AND EATING DISORDERS

Eating disorders (EDs), which cause serious health problems and can be fatal, frequently co-occur with substance use disorders (SUDs). There are numerous psychosocial consequences of EDs (e.g., problems with family, friends, school, or work; lowered perceived happiness).[1] When SUDs and EDs co-occur, the consequences, assessment, treatment, and recovery are more complicated for both disorders than for either disorder alone.[2]

Although researchers have called for integrated treatment of SUDs and EDs,[3,4] few programs provide such treatment, and no research exists on the best ways to provide simultaneous treatment for both disorders. An analysis of National Treatment Center Study data found that, of 351 publicly funded SUD treatment programs surveyed, only 16 percent offered treatment for co-occurring EDs.[5] Furthermore:

- Only half the programs screened for EDs.
- Only 14 percent of those that did screen used a standardized instrument.
- Only 3 percent had formal referral arrangements with ED treatment providers.

SUD treatment counselors are in a good position to help their clients with undiagnosed EDs by being aware of the disorders, screening clients for EDs in the SUD treatment setting, and/or supporting their recovery from SUDs and EDs. Counselors need to understand EDs and their treatments so they can:

- Identify clients with possible EDs.
- Make appropriate referrals for evidence-based ED treatments.
- Help clients with both EDs and SUDs attain and maintain recovery by understanding the effects of EDs on SUDs and vice versa.

The goals of this *Advisory* are to raise counselors' awareness of EDs and their relationship to SUDs and provide an overview of screening and evidence-based treatments for EDs. The *Advisory* does not provide comprehensive, how-to information for treating clients with EDs. Resources for more information are listed throughout the document and in the Resources section.

What are eating disorders?

EDs are characterized by disturbed eating patterns and dysfunctional attitudes toward food, eating, and body shape. The primary features of EDs are similar to those of SUDs: compulsive use or behavior, loss of control, and continuing behavior despite negative consequences. Genetics and other biological factors, as well as environmental factors, appear to be involved in the etiology of EDs, although exact mechanisms remain unknown.[6,7] The median age range for the onset of EDs is between ages 8 and 21,[8] although EDs can begin earlier or later in life.

The *Diagnostic and Statistical Manual of Mental Disorders,* Fourth Edition, Text Revision (DSM-IV-TR),[9] describes three diagnostic categories for EDs: anorexia nervosa (AN), bulimia nervosa (BN), and eating disorder not otherwise specified. Healthcare providers often consider compulsive overeating an ED as well; however, this disorder is included in DSM-IV-TR only as a possible symptom of other behavioral health disorders.

Anorexia Nervosa

Primary characteristics of AN are an extreme desire to be thin and failure to maintain minimal body weight (defined as 85 percent of that expected based on age and height, using standard weight tables). A stricter indicator of AN is a body mass index (BMI) of 17.5 or less, according to DSM-IV-TR and based on the World Health Organization's (WHO's) International

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Exhibit 1. Body Mass Index[10, 11]

BMI is a number derived from a calculation based on a person's weight and height. For most people, BMI correlates with their amount of body fat. Measuring BMI is an inexpensive and easy alternative to a direct measurement of body fat percentage and is a useful method of screening for weight categories that may lead to health problems. BMI categories are:

Underweight: BMI score of less than 18.5

Severe thinness	*BMI score of less than 16*
Moderate thinness	*BMI score between 16.00 and 16.99*
Mild thinness	*BMI score between 17.00 and 18.49*

Normal range: BMI score between 18.5 and 24.9

Overweight: BMI score between 25.0 and 29.9

Obese: BMI score of 30.0 or more

BMI in children and adolescents is calculated somewhat differently from BMI in adults. More information and BMI calculators for adults and children/adolescents are on the Centers for Disease Control and Prevention (CDC) Web site: http://www.cdc.gov/healthyweight/assessing/bmi

Classification of Diseases-10 diagnostic criteria (Exhibit 1). However, these are guidelines only. Low body weight alone is not enough for a diagnosis of AN; a person may be severely underweight because of severe malnutrition from addiction or from illness.

Although anorexia literally means lack of appetite, people with AN do experience hunger and appetite, but they severely restrict food intake regardless of hunger. DSM-IV-TR criteria for AN are listed in Exhibit 2.

ED workgroups for the fifth edition of the *Diagnostic and Statistical Manual* (DSM-5) currently in development have recommended changes in the diagnostic criteria for AN. A significant proposed change is to eliminate criterion D, amenorrhea. The reason for the proposed change is that some individuals exhibit all other symptoms and signs of AN but report at least some menstrual activity. Also, amenorrhea is limiting as a criterion because it cannot be applied to premenarcheal females, females taking oral contraceptives, postmenopausal females, or males.[12]

There are two subtypes of AN: *restrictive* and *binge eating/purging*. People with the restrictive subtype maintain a low body weight by restricting food intake and, often, exercising to excess. People with the binge eating/purging subtype also maintain a low body weight by restricting eating but have episodes of binge eating (an inability to control eating to the point of discomfort or pain) followed by purging (self-induced vomiting and/or using laxatives and diuretics). Both subtypes can have many serious medical consequences, including delayed puberty and/or slowed growth, bone mass reduction, nutritional deficiencies, serious cardiac problems, and severe anemia.

The mortality rate for AN is high; more than 10 percent of those diagnosed with the disorder die from it. Death typically is caused by starvation, suicide, or electrolyte imbalance.[9]

Exhibit 2. DSM-IV-TR Diagnostic Criteria for Anorexia Nervosa

A. Refusal to maintain body weight at or above a minimally normal weight for age and height (e.g., weight loss leading to maintenance of body weight less than 85% of that expected; or failure to make expected weight gain during period of growth, leading to body weight less than 85% of that expected).

B. Intense fear of gaining weight or becoming fat, even though underweight.

C. Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or denial of the seriousness of the current low body weight.

D. In postmenarcheal females, amenorrhea, i.e., the absence of at least three consecutive menstrual cycles. (A woman is considered to have amenorrhea if her periods only occur following hormone, e.g., estrogen, administration.)

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Bulimia Nervosa

Binge eating and purging after a binge eating episode are the primary characteristics of BN. Periods of fasting, misuse of laxatives and diuretics, use of enemas, and excessive exercise are common. People with BN typically are of normal or higher than normal weight. DSM-IV-TR criteria are listed in Exhibit 3.

BN also has two subtypes: purging and nonpurging. People with the nonpurging subtype use other compensatory behaviors (e.g., fasting, excessive exercise).

Medical consequences of either subtype include potentially dangerous fluid and electrolyte imbalances, nutritional deficiencies, and menstrual irregularity and other reproductive system problems.[9] Rare but potentially fatal complications include esophageal tears and gastric rupture from purging, as well as cardiac arrhythmias. Erosion of tooth enamel (from stomach acid) is common with the purging subtype. People with purging BN are more likely than those with the nonpurging type to experience severe medical problems.

Eating Disorder Not Otherwise Specified: Binge Eating Disorder

DSM-IV-TR includes binge eating disorders (BEDs) in EDs not otherwise specified. The proposed revisions for DSM-5 include BED as a separate diagnostic category (Exhibit 4, see next page).

Unlike individuals with BN, those with BED do not purge and they tend to be obese. Medical consequences are typically those of obesity such as type 2 diabetes, high blood pressure and high cholesterol, stroke, cancers (e.g., endometrial, breast, colon), osteoarthritis, liver and gallbladder disease, and gynecological problems (e.g., abnormal menses, infertility).[14]

Compulsive Overeating

Although compulsive overeating is a primary characteristic of both BED and BN, compulsive overeating *without* purging or binge eating or with infrequent binge eating is common. Compulsive overeating is characterized by eating large amounts of food to cope with emotions and often eating without regard to hunger or feelings of fullness.[15] Compulsive overeating is a serious problem that can lead to obesity and associated medical consequences.

How common are eating disorders?

EDs occur more frequently in women, but men also are vulnerable and experience the same types of physical and behavioral signs and symptoms as women. However, men are less likely to be diagnosed with an ED, which is often considered a female disorder.[7] Hudson and colleagues[8] analyzed a subset from the National Comorbidity Survey Replication study that consisted

Exhibit 3. DSM-IV-TR Diagnostic Criteria for Bulimia Nervosa

A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
   1. Eating, in a discrete period of time (e.g., within any 2-hour period), an amount of food that is definitely larger than most people would eat during a similar period of time and under similar circumstances
   2. A sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating)

B. Recurrent inappropriate compensatory behavior in order to prevent weight gain, such as self-induced vomiting; misuse of laxatives, diuretics, enemas, or other medications; fasting; or excessive exercise.

C. The binge eating and inappropriate compensatory behaviors both occur, on average, at least twice a week for 3 months.

D. Self-evaluation is unduly influenced by body shape and weight.

E. The disturbance does not occur exclusively during episodes of Anorexia Nervosa.

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Exhibit 4. Proposed DSM-5 Diagnostic Criteria for Binge Eating Disorder[13]

A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
   1. Eating, in a discrete period of time (for example, within any 2-hour period), an amount of food that is definitely larger than most people would eat in a similar period of time under similar circumstances
   2. A sense of lack of control over eating during the episode (for example, a feeling that one cannot stop eating or control what or how much one is eating)

B. The binge eating episodes are associated with three (or more) of the following:
   1. Eating much more rapidly than normal
   2. Eating until feeling uncomfortably full
   3. Eating large amounts of food when not feeling physically hungry
   4. Eating alone because of being embarrassed by how much one is eating
   5. Feeling disgusted with oneself, depressed, or very guilty afterwards

C. Marked distress regarding binge eating is present.

D. The binge eating occurs, on average, at least once a week for three months.

E. The binge eating is not associated with the recurrent use of inappropriate compensatory behavior (for example, purging) and does not occur exclusively during the course of Anorexia Nervosa, Bulimia Nervosa, or Avoidant/ Restrictive Food Intake Disorder.

of adults ages 18 and older with an ED. Exhibit 5 summarizes lifetime prevalence estimates of EDs (based on DSM-IV-TR diagnostic criteria) found in the Hudson study.[8]

Overweight and obesity are common in the United States. A 2010 analysis of National Health and Nutrition Examination Survey data of adults ages 20 and older found:[16]

- 68 percent of the general population is overweight or obese (72 percent of men, 64 percent of women).
- 34 percent of the general population is obese (32 percent of men, 35.5 percent of women).

Exhibit 5. Lifetime Prevalence Estimates of EDs (n=2,980)[8]

Disorder	Women (%)	Men (%)
Anorexia nervosa	0.9	0.3
Bulimia nervosa	1.5	0.5
Binge eating disorder	3.5	2.0

What is the relationship between EDs and SUDs?

A 2010 review found that both clinical and community studies have reported high co-occurrence of EDs among women with SUDs.[3] For example:

- Gadalla and Piran[17] found that women with either an SUD or an ED were more than four times as likely to develop the *other* disorder as were women who had neither disorder.
- Gilchrist and colleagues[18] examined the co-occurrence of EDs and SUDs and reported that 14 percent of women with an SUD had AN and 14 percent had BN.

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Exhibit 6. Lifetime Comorbidity Estimates of EDs and SUDs (n=2,980)[8]

Disorder	Alcohol Abuse or Dependence (%)	Illicit Drug Abuse or Dependence (%)	Any Substance Use Disorder (%)
Anorexia nervosa	24.5	17.7	27.0
Bulimia nervosa	33.7	26.0	36.8
Binge eating disorder	21.4	19.4	23.3

Similarly, Hudson and colleagues[8] found that men and women with EDs had high rates of co-occurring SUDs (Exhibit 6).

Piran and Robinson[19] looked at the relationship between EDs and SUDs and found that:

- As EDs became more severe, the number of different substances used increased.
- Severe BED was consistently associated with alcohol use.
- Attempts to lose weight by purging (with or without binge eating) were associated with stimulant/amphetamine and sleeping pill (e.g., triazolam, flurazepam) abuse.

People often use food and substances to help them cope.[2] A person in recovery from an ED often uses substances to cope with the stresses of recovery. Similarly, a person in recovery from an SUD may use disordered eating to cope with or to compensate for the lack of chemical reinforcement.

For a person with AN, treatment typically begins with *refeeding*, a process of incrementally increasing calorie intake to achieve a weight gain of 0.5 to 1 pound per week. Refeeding and the subsequent weight gain are particularly stressful, and a client in this process should be monitored closely for relapse to ED and substance use.[2] During this process, the SUD treatment counselor must closely coordinate with the ED specialists (e.g., therapist, dietitian), psychiatrist, physician, and other professionals treating the person for AN.

As with recovery from SUDs, recovery from EDs can be a long process with periods of relapse and recovery,[2] and relapse to one disorder may affect a client's recovery from the other. Relapse prevention counseling is critical to recovery from both disorders. For example, peer influences are important aspects for people with both EDs and SUDs. EDs often occur in clusters among particular groups (e.g., sports teams, sororities, cliques),[2] so changes in friends and recreational activities to avoid triggers are important in ED recovery as well as in SUD recovery.

Exhibit 7. Lifetime Comorbidity Estimates of EDs and Other Behavioral Health Disorders (n=2,980)[8]

Disorder	Co-Occurring Anxiety Disorders (%)	Co-Occurring Mood Disorders (%)	Co-Occurring Impulse Control Disorders* (%)
Anorexia nervosa	48	42	31
Bulimia nervosa	81	71	64
Binge eating	65	46	43

*Includes intermittent explosive disorder, attention deficit hyperactivity disorder, oppositional-defiant disorder, and conduct disorder.

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What is the relationship between EDs and other behavioral health disorders?

Co-occurring behavioral health disorders (particularly anxiety and mood disorders) are common in people with EDs.[6] Exhibit 7 (see page 5) lists incidence rates of common co-occurring disorders found in the study by Hudson and colleagues.[8]

DSM-IV-TR links EDs to a range of specific behavioral health disorders, such as:[9]

- AN is an associated disorder for major depressive disorder and narcissistic personality disorder.
- Both AN and BN are associated disorders for bipolar II disorder.
- EDs in general (but BN in particular) are disorders associated with borderline personality disorder.

When and how should SUD treatment counselors screen for EDs and refer for ED treatment?

Screening Clients for EDs

Little is known about ideal screening for EDs in SUD treatment programs. Merlo and colleagues[2] recommend that SUD treatment programs screen for EDs, along with other behavioral health disorders, at intake and intermittently during treatment of all clients in SUD treatment. An analysis of National Treatment Center Study data notes that programs that screen for EDs do so during intake and assessment. About half these programs screen *all* admissions for EDs, and half screen only when an ED is suspected.[5]

Screening for EDs only when one is suspected can be complex, because signs and symptoms of EDs can overlap

Exhibit 8. Possible Indications of Eating Disorders[2, 9]

Disorder	Indication
Anorexia nervosa	Eating tiny portions, refusing to eat, and denying hunger
	Dressing in loose, baggy clothing (to hide weight loss)
	Exercising excessively and compulsively
	Feeling cold frequently
	Experiencing hair loss, sunken eyes, or pale skin
	Complaining of being fat, even when underweight
	Developing *lanugo*, fine body hair that develops along the midsection, legs, and arms
Bulimia nervosa	Eating little in public but overeating in private
	Disappearing after eating; spending a lot of time in the bathroom
	Sounding hoarse
	Experiencing bruised or callused knuckles, bloodshot eyes, or light bruising under eyes
	Hiding food wrappers and other evidence of binge eating
	Experiencing severe dental problems (loss of enamel)
Binge eating disorder	Hiding food to eat later
	Eating little in public but overeating in private
	Hiding food wrappers and other evidence of binge eating
Compulsive overeating	History of repeating cycles of losing and regaining body weight (yo-yo dieting)
	Believing that all problems could be solved by losing weight
	Eating little in public but overeating in private
	Hiding food wrappers and other evidence of binge eating

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with those of SUDs or with those of other behavioral health problems. For example, weight loss, lethargy, changes in eating habits, and depressed mood can indicate an SUD or an affective disorder. In addition, signs may not be readily observable to counselors, because people with EDs often go to great lengths to disguise and hide their disorder.[2] However, counselors should be aware of common red flags for EDs that tend not to overlap with those of other behavioral health disorders. Exhibit 8 (see page 6) lists some indications (in addition to DSM criteria) that an ED may be present.

Screening *all* clients for EDs will likely result in identification of more clients in need of further assessment and treatment. SUD treatment counselors can easily (and unobtrusively) incorporate some ED screening into the SUD assessment in a number of ways:

- As part of the drug use assessment, ask clients about their use of over-the-counter and prescription laxatives, diuretics, and diet pills.
- As part of taking a medical history, ask clients about past hospitalizations and behavioral health treatment history, including for EDs.
- As part of assessing daily activities, ask clients how often and for how long they exercise.
- Ask clients, "Other than those we've discussed so far, are there any health issues that concern you?"

Counselors also can use a standardized screening instrument. Exhibit 9 lists the five questions in the SCOFF questionnaire.[20] This screening tool was originally developed and validated in the United Kingdom and has been validated for use in the United States.[21] Other validated brief screening instruments include:

- The Eating Attitudes Test (a 26-item version of the original 40-question Eating Attitudes Test[22, 23]
- The Bulimia Test—Revised (BULIT—R)[24]

Clients in SUD treatment may be confused or defensive about being asked questions regarding their eating and body image. Counselors can prepare clients by:

- Explaining that EDs commonly co-occur with SUDs.
- Explaining that it is important to have a clear picture of the client's overall health status.

Exhibit 9. The SCOFF Questionnaire[20, 21]

1. Do you make yourself **S**ick [induce vomiting] because you feel uncomfortably full?
2. Do you worry you have lost **C**ontrol over how much you eat?
3. Have you recently lost more than **O**ne stone* in a 3-month period?
4. Do you believe yourself to be **F**at when others say you are too thin?
5. Would you say that **F**ood dominates your life?

Two or more "yes" responses indicate that an ED is likely.

*14 pounds

- Asking the client for permission to pursue ED screening (e.g., "May I ask you some questions about your eating habits?").

Screening does not end at intake. Counselors should remain alert for signs of EDs, including changes in weight that may appear later in treatment or recovery.

Referring Clients for Further Assessment and Treatment

Ideally, a person with both an ED and an SUD would receive integrated treatment from one program.[3] However, because such programs are rare, SUD treatment counselors generally need to refer clients with EDs to specialized ED treatment programs and vice versa.

After medical stabilization (if necessary), treatment of the SUD should generally come first when integrated treatment for both disorders is unavailable,[2, 4] because a client with an active SUD will be less likely to engage in and benefit from ED treatment. In addition, many specialized ED programs are not prepared to treat a client who also has an SUD.

Treatment decisions (such as whether the SUD and ED will be treated sequentially or concurrently or on an inpatient or outpatient basis) should be made together by the client and family, the SUD treatment counselor, the physician, and the ED specialist as part of a multidisciplinary team approach. This team approach

to treating SUDs and EDs is critical. Counselors should consider developing formal referral relationships with local evidence-based ED treatment resources to enhance the referral process and ongoing treatment of both disorders.

ED treatment resources include specialized programs and practitioners, dentists, and nutritionists/dietitians. Possible sources of ED treatment referral information include:

- American Dietetic Association. A list of registered dietitians is at http://www.eatright.org
- Families Empowered and Supporting Treatment of Eating Disorders (F.E.A.S.T.). A list of treatment resources by State and country is at http://www.feast-ed.org/clinics.aspx; a list of active clinical trials is at http://www.feast-ed.org/SearchResults.aspx?Search=clinical+trials
- National Association of Anorexia Nervosa and Associated Disorders. A list of resources by State is at http://www.anad.org/get-help/treatment-centers/
- Community behavioral health centers and other behavioral health specialists.
- Hospital psychiatry departments and outpatient clinics.
- University- or medical school-affiliated programs specializing in EDs.
- Employee assistance programs.
- Local medical and/or psychiatric societies.

What is the treatment for EDs?

Evidence-based specialized treatment for EDs generally includes some combination of:

- Medical stabilization.
- Nutritional rehabilitation.
- Pharmacotherapy.
- Psychosocial treatment.

Medical Stabilization

Immediate inpatient medical care and stabilization are necessary for individuals with AN who are severely malnourished or for those with AN or BN with dehydration or electrolyte imbalances. Inpatient medical care for other physical consequences of EDs also may be necessary. For people with less severe malnutrition and medical consequences, medical care may be provided on an outpatient basis.[2]

Nutritional Rehabilitation

Nutritional rehabilitation is a critical aspect of treatment for those with EDs.[25] For individuals with AN, nutritional rehabilitation begins with a process of refeeding. Refeeding is usually initiated in an inpatient setting for severe malnutrition. The process must be done slowly and must be closely supervised to avoid *refeeding syndrome*, a cluster of possibly severe consequences (including cardiovascular problems) associated with a too-rapid increase in nutrient intake.[25] In less severe cases, refeeding may be done on an outpatient basis.

Nutritional rehabilitation for EDs also includes other services, typically provided by a registered dietitian. A dietitian may evaluate a client's nutritional status, provide information about risk regarding the ED, educate about nutrition, and monitor weight gain or loss.

Pharmacotherapy

Pharmacotherapy is often used for BN and BED. No medications have been found to be effective for AN. The selective serotonin reuptake inhibitor (SSRI) fluoxetine has been approved by the U.S. Food and Drug Administration for the treatment of BN and is commonly used to treat BED. Topiramate may also be effective for both disorders.[26] Preliminary research has found that:[26]

- Trazodone and desipramine may be effective treatments for BN.
- SSRIs (other than fluoxetine), imipramine, and sibutramine may be effective treatments for BED.

Psychosocial Treatments

More research on treatment for specific EDs is needed. However, some psychosocial treatments have been found to be more effective than others for particular EDs and/or age groups. Two extensive reviews of the literature

Exhibit 10. Overview of Evidence-Based Psychosocial Treatments for EDs[26, 27]

Population	Anorexia Nervosa	Bulimia Nervosa	Binge Eating Disorder
Preadolescents/adolescents (ages 10–17)	Maudsley Approach Manual-guided self-help	Maudsley Approach	Inconclusive evidence
Older adolescents/young adults (ages 18–20)	Maudsley Approach (if client is still living at home) CBT Manual-guided self-help	CBT Manual-guided self-help	Inconclusive evidence
Adults (ages 21 and older)	Nonspecific individual psychotherapy CBT (*after* near-normal weight is gained)	CBT IPT	CBT IPT

found that the most promising of these treatments include Maudsley Approach family therapy, cognitive–behavioral therapy (CBT), Interpersonal Psychotherapy (IPT), and self-help approaches.[26, 27] Exhibit 10 provides an overview of the psychosocial treatments that have been found to be most effective for particular EDs and age groups.

Maudsley Approach Family Therapy

Maudsley Approach family therapy is based on family systems theory and is a mainstay of AN treatment for adolescents. It also has been adapted for use with adolescents with BN.[27] The therapy has three phases:

- Phase 1: With coaching by a clinician with specialized training in ED treatment, parents of an adolescent with AN take control of the adolescent's eating (i.e., what, when, how much he or she eats). When the adolescent has BN, parents disrupt his or her ED behaviors (e.g., binge eating, purging).
- Phase 2: After significant weight gain is achieved (or ED behaviors have significantly decreased), control over eating behavior is carefully returned to the adolescent. At the same time, the family explores issues related to the ED.
- Phase 3: The ED clinician and family work to restore normal and age-appropriate developmental processes and relationships within the family.

Cognitive–Behavioral Therapy

CBT approaches, used widely in SUD treatment, have been tailored for treating EDs. For EDs, cognitive approaches address distorted thought processes related to body shape and image that drive ED behaviors. Behavioral approaches are directed at altering the food restriction of AN, compulsive overeating, or binge/purge behavior. These approaches appear to be most effective when combined.[26] CBT appears to be most effective for clients with BN or BED. It also appears to reduce relapse in adult clients with AN, but only after the client has reached near-normal weight.[26]

Interpersonal Psychotherapy

IPT focuses on interpersonal problems rather than intrapsychic processes. IPT has been found effective in treating BN or BED and is sometimes combined with CBT. When IPT is used to treat EDs, the premise is that negative interactions may lead to negative emotions that then lead to ED behaviors. During IPT sessions, clients with BN or BED focus on how to cope with the tension and frustration that can result from negative interpersonal interactions and learn to improve their relationship skills.

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Self-Help Approaches

Self-help approaches show promise for treating EDs.[26, 27, 28] These approaches use highly structured audiovisual materials or manuals based on CBT principles. Manuals can be used by clients independently, in peer-led groups, or with a nonspecialized clinician (guided self-help).

Are there mutual-help groups for EDs?

Yes. Two mutual-help groups focus on people with EDs; both offer face-to-face, online, and telephone meetings:

- Overeaters Anonymous (OA) is a well-established mutual-help group based on the 12-Step model. OA was developed for people with compulsive overeating but has since broadened its scope to welcome those with other EDs. For example, it offers an informational packet titled *Focus on Anorexia and Bulimia*. More information and a meeting locator are available at http://www.oa.org/new-to-oa/about-oa.php
- Eating Disorders Anonymous (EDA) is appropriate for people with any ED. More information and an EDA meeting locator are at http://www.eatingdisordersanonymous.org

Although research on mutual-help groups for clients with EDs is virtually nonexistent, these groups may be useful for clients in long-term recovery from EDs.

Resources

Web Resources

Academy for Eating Disorders
http://www.aedweb.org

Alliance for Eating Disorders Awareness
http://www.allianceforeatingdisorders.com

American Dietetic Association
http://www.eatright.org

American Psychiatric Association
Treatment of Patients With Eating Disorders, Third Edition
http://www.psychiatryonline.com/pracGuide/pracGuideTopic_12.aspx

Eating Disorder Referral and Information Center
http://www.edreferral.com/index.html

Eating Disorders Anonymous
http://www.eatingdisordersanonymous.org

F.E.A.S.T.
http://www.feast-ed.org

International Association of Eating Disorder Professionals
http://www.iaedp.com

National Association of Anorexia Nervosa and Associated Disorders
http://www.anad.org

National Eating Disorders Association
http://www.nationaleatingdisorders.org

National Institute of Diabetes and Digestive and Kidney Diseases, Weight-control Information Network
http://win.niddk.nih.gov

National Institute of Mental Health
http://www.nimh.nih.gov/health/topics/eating-disorders/index.shtml

National Library of Health, Medline Plus
http://www.nlm.nih.gov/medlineplus/eatingdisorders.html

The National Women's Health Information Center
http://www.womenshealth.gov/bodyimage/eatingdisorders/

Overeaters Anonymous
http://www.oa.org/new-to-oa/about-oa.php

Relevant Publications from SAMHSA

Treatment Improvement Protocol (TIP) 35: *Enhancing Motivation for Change in Substance Abuse Treatment* (SMA) 08-4212

TIP 39: *Substance Abuse Treatment and Family Therapy* (SMA) 08-4219

TIP 42: *Substance Abuse Treatment for Persons With Co-Occurring Disorders* (SMA) 08-3992

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Women's Mental Health: What It Means to You (OWH09-CONSUMER) and the companion publication for professionals, *Action Steps for Improving Women's Mental Health* (OWH09-PROFESSIONAL)

These publications can be ordered from the Substance Abuse and Mental Health Services Administration (SAMHSA) by calling 1-877-SAMHSA-7 (1-877-726-4727). Publications also can be ordered or downloaded via the SAMHSA Store at http://store.samhsa.gov/home

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SAMHSA Advisory

This *Advisory* was written and produced under contract number 270-09-0307 by the Knowledge Application Program (KAP), a Joint Venture of JBS International, Inc., and The CDM Group, Inc., for the Center for Substance Abuse Treatment (CSAT), Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services (HHS).

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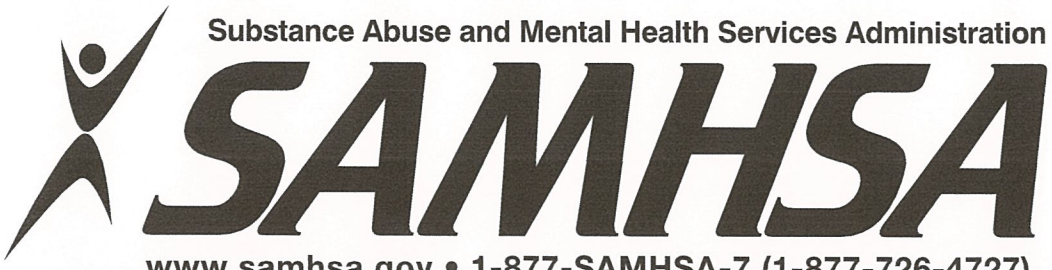
Recommended Citation: Substance Abuse and Mental Health Services Administration. (2011). Clients With Substance Use And Eating Disorders. *Advisory*, Volume 10, Issue 1.



HHS Publication No. (SMA) 10-4617
First Printed 2011

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Exhibit 14

A Randomized, Placebo-Controlled Trial of Sertraline in the Treatment of Night Eating Syndrome

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Objective: The authors assessed the efficacy of sertraline in the treatment of night eating syndrome.

Method: Thirty-four outpatients diagnosed with night eating syndrome were randomly assigned to receive either sertraline (N=17) or placebo (N=17) in an 8-week, double-blind, flexible-dose (50–200 mg/day) study. A mixed effects linear regression model was used to analyze change in the primary outcome measure, Clinical Global Impression (CGI) improvement rating. Secondary outcomes included changes in night eating symptoms, the number of nocturnal awakenings and ingestions, total daily caloric intake after the evening meal, CGI severity ratings, quality of life ratings, and weight.

Results: Sertraline was associated with significantly greater improvement than placebo. Twelve subjects in the sertraline group (71%) were classified as having responded (CGI improvement rating ≤2, indicating much or very much improved) versus only three (18%) in the placebo group. There were also significant improvements in night eating symptoms, CGI severity ratings, quality of life ratings, frequency of nocturnal ingestions and awakenings, and caloric intake after the evening meal. Overweight and obese subjects in the sertraline group (N=14) lost a significant amount of weight by week 8 (mean=–2.9 kg, SD=3.8) compared with overweight and obese subjects receiving placebo (N=14) (mean=–0.3 kg, SD=2.7).

Conclusions: In this 8-week trial, sertraline was effective in the treatment of night eating syndrome and was well tolerated.

(Am J Psychiatry 2006; 163:893–898)

Night eating syndrome is an eating disorder characterized by morning anorexia, evening hyperphagia, and insomnia with awakenings followed by nocturnal ingestions (1, 2). In addition, mood is usually low (3), with a pattern of worsening in the latter half of the day (2). The core feature of night eating syndrome appears to be delay in the circadian timing of food intake (4). Food intake is lower in the first half of the day and greater in the evening and nighttime. Sleep is often disrupted in the service of food ingestion. In the largest controlled study to date of overweight and obese outpatients with night eating syndrome (4), energy intake in the first 8 hours of the day (6:00 a.m. to 2:00 p.m.) averaged only 575 kcal in night eating syndrome subjects (N=46) versus 1,082 kcal in a comparison group (N=43), whereas energy intake in the last 8 hours (10:00 p.m. to 6:00 a.m.) averaged 591 kcal in night eating syndrome subjects versus only 118 kcal in comparison subjects. The total energy intake over 24 hours was not different between the two groups.

Night eating syndrome is of clinical importance because it is associated with both obesity and psychological distress. Its prevalence has been estimated at 1.5% in the general population (5) with a reported range of 8.9% (6) to 14% (3) in obesity clinics and rates of up to 27% in severely obese persons (5). Night eating syndrome appears to be more common in obese persons than in nonobese persons and to increase in prevalence with increasing adiposity. In a Danish study (7), female obese subjects exhibiting night eating gained 5 kg over a 6-year period, whereas female obese subjects who did not engage in night eating gained 1 kg. About half of individuals with night eating syndrome report that they were of normal weight before the syndrome developed, suggesting that night eating syndrome may be an important pathway to obesity (8).

There have been few reports on the treatment of night eating syndrome. Case reports have suggested benefit from a variety of strategies including *d*-fenfluramine (9), phototherapy (10), progressive muscular relaxation (11), and topiramate (12). The first clinical pharmacotherapy trial (13) was a 12-week, open-label study of 17 subjects treated with sertraline, a selective serotonin reuptake inhibitor (SSRI). A significant reduction of symptoms was seen in obese subjects with night eating syndrome, with about half (N=8) of the group responding to sertraline. Those responders who achieved remission of night eating syndrome (N=5) also lost a significant amount of weight (–4.8 kg, SD=2.6).

The present study sought to follow up this previous open-label trial with a double-blind, randomized, placebo-controlled trial. This time we also included a small number of normal weight subjects with night eating syndrome to deter-

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mine if sertraline might relieve the distress associated with the syndrome.

Method

Subjects were recruited from a study that characterized the psychological and behavioral aspects of night eating syndrome (4). These patients were recruited through a combination of print advertisements, TV programming, and a website. The characterization study included 1) a structured clinical interview designed to assess the presence or absence of night eating syndrome, performed by a trained clinician; 2) a 10-day sleep and food diary; 3) the Structured Clinical Interview for DSM-IV (SCID) to assess the presence of past or current psychiatric disorders; and 4) the Eating Disorder Examination to assess the presence of concomitant eating disorders.

Participants

Eligible subjects were at least 18 years of age, met standard criteria for night eating syndrome according to the structured clinical interview, and had a body mass index (BMI) >18 kg/m^2. Applicants were excluded if they 1) were severely depressed (symptoms in excess of the number required for DSM-IV diagnosis and markedly interfering with occupational functioning or with usual social activities or relationships); 2) had a lifetime diagnosis of bipolar disorder or any psychotic disorder; 3) reported substance abuse or dependence within the preceding 6 months; 4) were currently taking psychotropic medications (including hypnotics); 5) were working a night shift or swing shift schedule; 6) were in a weight reduction program; 7) had a current diagnosis of anorexia nervosa or bulimia nervosa (but not binge eating disorder); or 8) lacked awareness of their night eating episodes. The latter criterion was used to exclude subjects with nocturnal sleep-related eating disorder, a parasomnia in which nocturnal eating is accompanied by a lack of awareness at the time and subsequent amnesia for the behavior.

Procedures and Measures

Baseline night eating syndrome symptoms were assessed as part of the characterization of night eating syndrome study (4). Each subject collected data in a food and sleep diary during a 10-day 24-hour prospective monitoring period, with the first 2 days discarded as practice days and the last day discarded because of incomplete data. The diary included a record of all meals, snacks, and beverages consumed. Awakenings (during which the subject got out of bed), nocturnal ingestions, as well as the timing of bedtime and morning awakening were all recorded. A research dietician analyzed diaries for caloric intake and macronutrient content. Subjects were paid for the baseline diary data collection but not for participation in the treatment trial itself. Of the 65 subjects with night eating syndrome who completed the diary assessment, 28 who were eligible to participate in the trial decided not to. Reasons for not participating were inability to schedule (N=16), not wanting to be in a placebo-controlled study (N=7), and not wanting a medication (N=5). This left a total of 37 subjects who entered the treatment trial. Three subjects attended the baseline visit but did not return for any subsequent visits, leaving a total of 34 subjects whose data were included in the analyses.

Subjects were randomly assigned to 8 weeks of double-blind treatment with sertraline or placebo. Psychotropic agents other than the study medication were prohibited during the study. The 8-week duration of the trial was based on the results of our earlier 12-week trial. Subjects took tablets, identical in appearance, containing either 50 mg of sertraline or placebo. Subjects commenced with one tablet daily taken with the evening meal. Subjects were seen every other week for 30-minute visits at which time medication dosage could be adjusted up to a maximum of four tablets daily. Medication tolerance and adherence were recorded at each visit.

Subjects were weighed at each visit and completed three self-report scales: 1) a night eating symptom scale, 2) the Beck Depression Inventory, and 3) the Quality of Life Enjoyment and Satisfaction Questionnaire. The night eating symptom scale is a self-report scale measuring the range and severity of night eating symptoms over the preceding week (13). It measures in a series of 13 items the degree of morning anorexia, evening hyperphagia, sleep disturbance, nocturnal eating episodes and associated cravings or compulsion to eat, and level and pattern of mood disturbance. Each item is scored from 0 to 4, providing a possible range of scores from 0 to 52. The study physician recorded the number of nighttime awakenings (defined as when the subject got up out of bed for reasons other than solely to use the bathroom) and ingestions. The study physician also administered the Clinical Global Impression (CGI) improvement and severity scales and the 17-item Hamilton Depression Rating Scale at each visit. The Hamilton and Beck instruments were used to track changes in depressive symptoms. Outcome was categorized at week 8 on the basis of the CGI improvement rating, which ranges from 1 to 7. CGI improvement ratings were considered a primary outcome measure, with a priori standards applied as follows: subjects with scores of 2 (much improved) were categorized as having responded, and those with scores of 1 (very much improved) were categorized as having remitted.

Evening hyperphagia was assessed by reviewing with the subject the proportion of their daily caloric intake that occurred between the end of the evening meal and bedtime plus any nocturnal ingestions that occurred. As some subjects with night eating syndrome delay their evening meal considerably as part of the circadian delay in the food intake rhythm, a cutoff of 8:00 p.m. was used. Any food intake commencing after this time was considered to be caloric intake after the evening meal. The total caloric intake after the evening meal represents the sum of calories ingested between the end of the evening meal and bedtime plus any calories derived from nocturnal ingestions; it is expressed as a percentage of total 24-hour calorie intake.

The Institutional Review Board of the University of Pennsylvania approved the protocol. All subjects signed the informed consent form after study procedures had been fully explained.

Data Analysis

Means and standard deviations of the outcome variables at each time point were used for descriptive statistics as well as for the depiction of trends over the 8 weeks. The analyses were conducted on an intent-to-treat basis for all subjects who completed at least one follow-up visit after the baseline visit. The repeated-measures outcome variables over the 8-week period were analyzed by a mixed effects linear regression model in the following form: outcome variable=intercept + group + week + group x week. The intercept was assumed to be random in order to take within-subject correlations of the dependent variables into account for statistical inference. Group and time variables were taken as fixed and discrete; two-sided $p<0.05$ was considered significant. This mixed effects modeling approach with available cases using a maximum likelihood method is valid in the presence of observations missing at random (14).

The effects of particular interest were the main group effect and the group-by-week interaction, with this interaction representing differences in trends of the outcome variables over time between night eating syndrome and comparison groups. Omnibus interaction significance tests are reported in the text. Post hoc testing of the main group effects at each time point on the outcome variables was followed by testing of the corresponding parameter contrasts in the mixed effects model with Wald t tests. For this purpose, we used a Bonferroni-corrected significance level

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TABLE 1. Demographic and Clinical Characteristics at Baseline Among Subjects With Night Eating Syndrome Randomly Assigned to 8 Weeks of Double-Blind Treatment With Sertraline or Placebo

Characteristic	Sertraline Group (N=17)		Placebo Group (N=17)	
	Mean	SD	Mean	SD
Age (years)	45.1	11.0	44.2	10.6
BMI (kg/m^2)	32.4	6.5	32.9	9.0
Night eating symptom score[a]	31.7	5.6	30.5	6.2
Duration of night eating syndrome (years)	17.6	15.5	15.3	12.7
Beck Depression Inventory score	14.4	9.7	12.1	9.5
Hamilton Depression Rating Scale score	9.9	4.5	9.6	5.2
Quality of Life Enjoyment and Satisfaction Questionnaire score	47.1	11.2	47.4	9.3
	N	%	N	%
Female	11	64.7	12	70.6
Normal weight	3	17.6	3	17.6
Race				
Caucasian	12	70.6	15	88.2
African American	5	29.4	2	11.8

[a] Obtained from self-report ratings of 13 items (score range=0–52).

0.05/4=0.0125 (correcting for the number of treatment visits after baseline), except when testing for correlations. Main group effects at any week with p values lower than this corrected significance level were declared to be significant even if the overall main group or interaction effects were not significant.

Three subjects who met criteria for binge eating disorder in addition to night eating syndrome were included as part of the sample. In line with recent evidence, binge eating disorder and night eating syndrome appear to be two distinct disorders rather than variable expressions of the same underlying psychopathology (15, 16). In this respect, binge eating disorder was treated as a comorbid condition in night eating syndrome subjects and was not viewed as exclusionary for study participation. All three subjects with binge eating disorder plus night eating syndrome were randomly assigned to the placebo group. We tested for the significance of binge eating disorder by including binge eating disorder status in the aforementioned mixed effects models. Binge eating disorder status did not have a significant effect on any of the outcomes except for caloric intake after the evening meal. Thus, caloric intake after the evening meal was the only variable for which binge eating disorder status was controlled. Pearson's correlations were used to assess the association of changes at week 2 with those at week 8 in the SSRI group. We used SAS v8.2 for statistical analyses.

Results

Characteristics of the sertraline and placebo groups at baseline are presented in Table 1. No significant between-group differences for these variables were found.

CGI Ratings

The CGI improvement rating classified 12 of the 17 subjects receiving sertraline as having responded (score ≤2), and seven of these 12 achieved remission or complete resolution of night eating syndrome symptoms (F=6.7, df=4, 113, p<0.001). Of those receiving placebo, only three subjects were classified as having responded (a response rate significantly lower than that seen with sertraline [χ^2=9.66, df=1, p<0.002]), with one of the three placebo responders achieving remission status. Of the three normal weight subjects in the sertraline group, two responded, while none of the three normal weight subjects in the placebo group responded.

Figure 1 shows that the largest reduction in symptoms occurred between baseline and week 2, indicating an early and robust effect of sertraline. Overall, a subject receiving sertraline had a 30% chance of responding by week 2. Five of the 12 who ultimately responded to sertraline had responded as early as week 2, and four of these five achieved remission status by week 2. The lack of early improvement with sertraline did not preclude ultimate response, as 50% of all responses occurred between weeks 4 and 8.

The CGI severity scale is a further index of overall change in night eating syndrome symptoms. The sertraline group had a reduction of two points in symptom severity, from 4.2 at baseline (moderate severity) to 2.2 at endpoint (borderline ill), whereas there was a much more modest reduction (from 4.2 to 3.4) in the placebo group (F=4.1, df=4, 107, p=0.004).

Night Eating Symptoms

Changes in night eating syndrome symptoms were significantly greater in the sertraline group, as assessed by night eating symptom scores over the course of the 8-week study (Figure 1).

By week 8, the night eating symptom scores of the sertraline group had dropped by 18.1 points (57%) from a baseline score of 31.7 as compared with a reduction of only 5 points (16%) from a baseline score of 30.5 in the placebo group (F=8.0, df=4, 112, p<0.0001). A significant correlation was found between the change in night eating symptom scores from baseline to week 2 and the change from baseline to week 8 for subjects receiving sertraline (r=0.68, p=0.01), indicating that early improvement with sertraline was predictive of ultimate response. In addition, in terms of the speed of response, the dose at first observed response in the sertraline group was correlated with the week of response, suggesting that those responding early improved at lower doses than those responding later (r=0.84, p<0.001). How-

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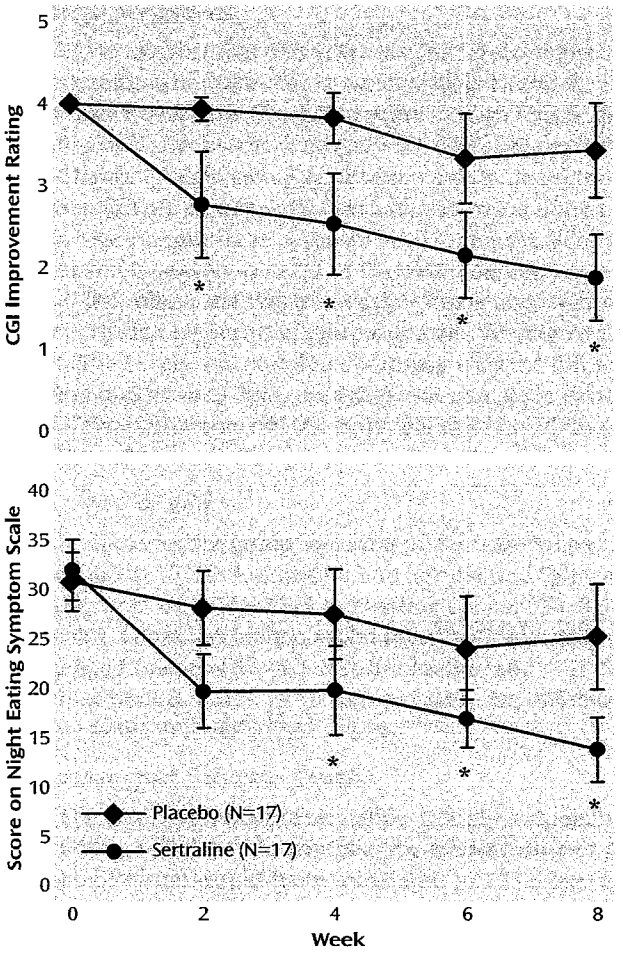
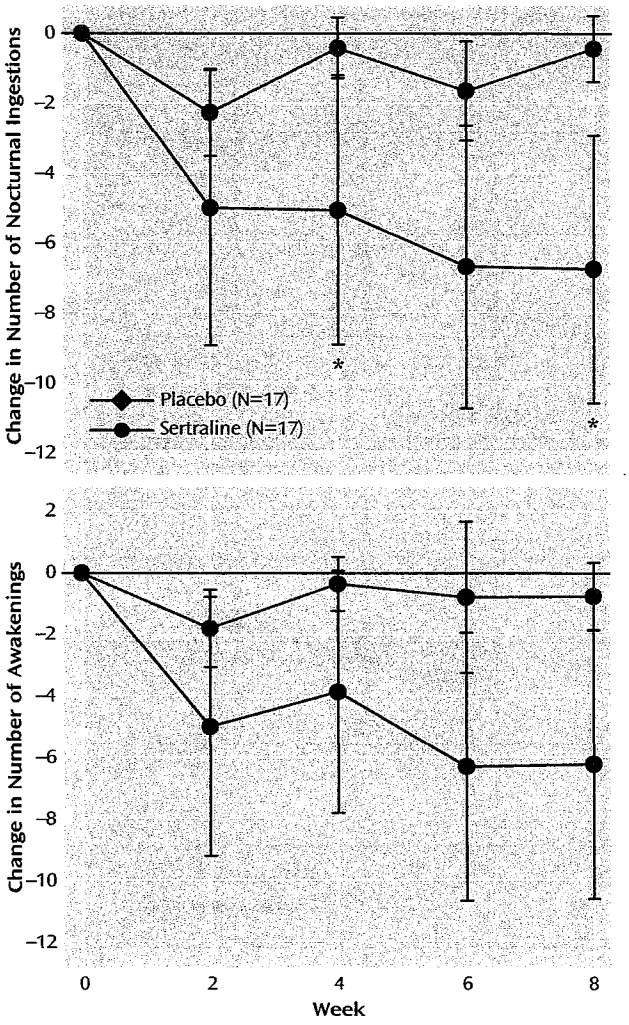
FIGURE 1. Changes in CGI Improvement Ratings and Night Eating Symptoms Over the Course of the Study in Subjects With Night Eating Syndrome Randomly Assigned to 8 Weeks of Double-Blind Treatment With Sertraline or Placebo



*p<0.0125.

FIGURE 2. Changes in Frequency of Awakenings and Nocturnal Ingestions in Subjects With Night Eating Syndrome Randomly Assigned to 8 Weeks of Double-Blind Treatment With Sertraline or Placebo



*p<0.0125.

ever, the probability of response by the study endpoint at week 8 was not correlated with dose, indicating that dose per se was not an important predictor of ultimate response to sertraline (r=0.52, p<0.09).

Ingestions and Awakenings

Figure 2 shows a significant reduction in the frequency of nocturnal ingestions in the sertraline group relative to the placebo group. The number of nocturnal ingestions in the sertraline group fell by 81% (from a mean at baseline of 8.3 per week [SD=8.5] to 1.6 [SD=2.6]) versus a fall of only 14% for the placebo group (from 6.4 [SD=4.9] to 5.5 [SD=4.9] per week) (F=3.7, df=4, 80, p=0.01). Figure 2 indicates that the number of awakenings fell by 74% in the sertraline group (from a mean of 8.8 per week [SD=8.6] to 2.3 [SD=4.7]) versus a fall of only 14% in the placebo group (from 6.4 [SD=4.6] to 5.5 [SD=5.0]). This drop failed to reach significance in the overall interaction effect (F=0.9, df=4, 80, p=0.40), but it yielded a difference in main effect between groups (F=4.7, df=1, 32, p=0.03). In post hoc testing, after adjustment for multiple comparisons, the difference at week 8 was not significant (t=–2.52, df=80, p=0.0137).

Caloric Intake After the Evening Meal

Figure 3 shows that caloric intake after the evening meal in the sertraline group fell by 68%, from 47.3% of total daily calories at baseline to 14.8% at week 8. In the placebo group, caloric intake after the evening meal fell by 29.3%, from 44.7% at baseline to 31.6% at week 8 (F=3.5, df=4, 106, p=0.009). Comparisons of individual time points were not significant (week 8: t=2.0, df=106, p=0.047).

Weight Change

Among overweight subjects (N=14 in both groups), the sertraline group lost 2.9 kg (SD=3.8) versus 0.3 kg (SD=2.7) in the placebo group (F=2.6, df=4, 63, p=0.06). The difference in

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sponse after only 2 weeks of receiving active medication. Improvement in the seven other responders occurred more gradually, between weeks 4 and 8. The fact that there was only a weak, nonsignificant correlation between improvement in depressive symptoms among night eating syndrome subjects receiving sertraline and improvement in night eating symptoms strongly implies that the improvement with sertraline was independent of its antidepressant effect.

Subjects receiving sertraline had experienced night eating syndrome for a prolonged period of time (average duration of 17.6 years) before entering the study, but nevertheless, four of the five fast responders achieved full remission after only 2 weeks of sertraline treatment at a dose of 50 mg/day. This indicates that, despite chronicity of symptoms, a rapid and robust improvement is possible for some night eating syndrome patients. A similar finding has been reported in another eating disorder, bulimia nervosa. When treated with the SSRI fluoxetine, a significant reduction was noted in both the binge eating and vomiting episodes after a single week of active treatment (17). It is possible that the nocturnal ingestions in night eating syndrome, while not actual binges, share the psychological component of disinhibition with the binges of bulimia, and that serotonergic medications such as fluoxetine and sertraline have the potential to quickly ameliorate the loss of control present in both disorders.

As indicated earlier, the core feature of night eating syndrome appears to be a delay in the circadian timing of energy intake, with intake suppressed in the morning and increased in the evening and night. In an earlier study of carefully monitored outpatients with night eating syndrome and weight-matched comparison subjects (4), we found dissociation between the sleep and eating rhythms in the night eating syndrome group, with a delay in the food intake rhythm but not in the sleep rhythm.

The maintenance of normal circadian rhythms is the task of the suprachiasmatic nucleus of the hypothalamus, and serotonergic neurons are known to have inputs into the suprachiasmatic nucleus (18). It is possible that sertraline may act by modulating suprachiasmatic nucleus function to restore a more normal food intake pattern in subjects with night eating syndrome. The suprachiasmatic nucleus may be a site of action in some individuals for promoting a rapid improvement in night eating syndrome symptoms.

Limitations of this study include its short duration and small size. Future studies of sertraline and other pharmacotherapy agents in treating night eating syndrome should determine if positive results are sustained over a longer term. If so, sertraline may be able to control both the core night eating syndrome symptoms and the obesity that is a frequent and distressing complication of the syndrome.

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Supported by grants from the National Institute of Diabetes and Digestive and Kidney Diseases (R01 DK56735) and Pfizer Inc.

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Exhibit 15

Curr Psychiatry Rep (2012) 14:406–414
DOI 10.1007/s11920-012-0282-y

Epidemiology of Eating Disorders: Incidence, Prevalence and Mortality Rates

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Published online: 27 May 2012
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Abstract Eating disorders are relatively rare among the general population. This review discusses the literature on the incidence, prevalence and mortality rates of eating disorders. We searched online Medline/Pubmed, Embase and PsycINFO databases for articles published in English using several keyterms relating to eating disorders and epidemiology. Anorexia nervosa is relatively common among young women. While the overall incidence rate remained stable over the past decades, there has been an increase in the high risk-group of 15–19 year old girls. It is unclear whether this reflects earlier detection of anorexia nervosa cases or an earlier age at onset. The occurrence of bulimia nervosa might have decreased since the early nineties of the last century. All eating disorders have an elevated mortality risk; anorexia nervosa the most striking. Compared with the other eating disorders, binge eating disorder is more common among males and older individuals.

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Keywords Epidemiology · Incidence · Prevalence · Mortality · Eating disorders · Anorexia nervosa · Bulimia nervosa · Eating disorder not otherwise specified · Binge eating disorder

Introduction

Epidemiological studies provide information about the occurrence of disorders and trends in the frequency of disorders over time. For epidemiological studies on eating disorders there are some methodological issues. Eating disorders are relatively rare among the general population and patients tend to deny or conceal their illness and avoid professional help. This makes community studies costly and ineffective. Therefore, many epidemiological studies use psychiatric case registers or medical records from hospitals in a circumscribed area. This type of study will underestimate the occurrence of eating disorders in the general population, because not all patients will be detected by their general practitioner or referred to the hospital or mental health care. Furthermore, differences in rates over time could be due to improved case detection, increased public awareness leading to earlier detection and wider availability of treatment services, instead of a true increase in occurrence [1, 2].

Anorexia nervosa (AN) and bulimia nervosa (BN) are the two specified eating disorders according to the *Diagnostic and Statistical Manual of Mental Disorders Fourth Edition* (DSM-IV). However, the most common eating disorder diagnosis in either clinical and community samples is the rest category 'eating disorder not otherwise specified' (EDNOS) [3–7]. EDNOS is a heterogeneous, not well defined group of eating disorders and includes partial syndromes of AN and BN, purging disorder and binge eating

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disorder (BED). A comprehensive meta-analysis of 125 studies suggests that EDNOS is associated with substantial psychological and physiological morbidity, comparable with the specified eating disorders [8]. In 2013 the fifth edition of the DSM is scheduled to appear, including a thoroughly revised eating disorder section. A major goal is to reduce the size of the EDNOS-category. To achieve this goal the criteria for AN and BN will be broadened [9, 10] and BED will be added as a specific eating disorder. The decision to make BED a separate diagnosis is partly informed by epidemiological data supporting the construct validity of BED. BED differs from AN and BN in terms of age at onset, gender and racial distribution, psychiatric comorbidity and association with obesity. BED is often seen in obese individuals, but is distinct from obesity per se regarding levels of psychopathology, weight- and shape concerns and quality of life [11]. BED aggregates strongly in families independently of obesity, which may reflect genetic influences [12, 13].

In this review we will describe the epidemiology of AN, BN, EDNOS and BED according to DSM-IV and – if available – to the proposed DSM-5-criteria. The proposed changes in DSM-5 diagnostic criteria will alter the coverage of the diagnostic categories and thus their disease frequencies as well. Some studies used both a narrow and a broad or partial definition of AN, including DSM-IV AN with or without amenorrhea and ICD-10 atypical AN [14–16]. These broad or partial definitions of AN are in line with the proposed DSM-5-criteria for AN and will be referred to as 'broad AN' throughout this review [9]. In a Finnish study of female twins, the 5-year clinical recovery rates of AN and broad AN were almost the same; i.e. 66.8 % and 69.1 % respectively, providing evidence for the validity of broad AN [14]. Definitions of each epidemiological measure are provided at the respective paragraphs.

This article is based on research publications on the epidemiology of eating disorders and updates our previous reviews, with special emphasis on studies published in the last three years [2, 17–19].

Method

We searched online Medline/Pubmed, Embase and PsycINFO databases using several keyterms relating to eating disorders and epidemiology. The reference lists of the articles found were checked for any additional articles missed by the database search. This review is limited to articles published in English, describing the basic epidemiological parameters incidence, prevalence and mortality rates.

Incidence

The incidence rate is the number of new cases of a disorder in the population over a specified period. The incidence rate of eating disorders is commonly expressed in terms of per 100 000 persons per year (person-years). The study of new cases provides clues to etiology.

Anorexia Nervosa

Community studies assessing the incidence of eating disorders are scarce. Keski-Rahkonen and colleagues conducted a large community study to quantify the incidence of AN, yielding an incidence rate of 270 per 100 000 person-years in 15–19 year old Finnish female twins during 1990–1998 [14, 19]. The incidence rate of broad AN was 490 per 100 000 person-years in the same group [14]. A much higher incidence rate of 1204 per 100 000 person-years (95 % confidence interval (CI): 652-2181) for broad AN in females aged 15–18 was found in another Finnish study of a relatively small sample of 595 adolescents [20]. The high incidence rate might be explained by the small sample size limiting statistical power and a very broad definition of AN used in this study, including subjects with an age-adjusted body mass index (BMI) up to 19, without explicitly stating that weight loss of at least 15 % had to be present. Community rates are much higher than incidence rates derived from primary care and medical records [1, 21], reflecting the selection filters that form the pathway to (psychiatric) care [22].

Incidence rates derived from general practices represent eating disorders at the earliest stage of detection by the health care system. Currin and colleagues [23] searched the General Practice Research Database in the UK for new cases of AN between 1994 and 2000 and compared their data with the findings of a similar study for 1988–1993 [24]. The age-adjusted and sex-adjusted incidence rate of AN remained stable over the two study periods: In 2000 it was 4.7 (95 % CI: 3.6-5.8) per 100 000 person-years, compared with 4.2 (95 % CI: 3.4-5.0) per 100 000 person-years in 1993. In the Netherlands the overall incidence rate of AN ascertained by general practitioners in a large representative sample of the Dutch population remained stable as well. In 1995–1999 it was 7.7 (95 % CI: 5.9-10.0) per 100 000 person-years, practically the same as the rate of 7.4 per 100 000 person-years in 1985–1989 [1]. Incidence rates are highest for females aged 15–19 years. They constitute approximately 40 % of all cases, resulting in an incidence rate of 109.2 per 100 000 15–19 year old girls per year in 1995–1999 [1]. The incidence of AN among males was less than 1 per 100 000 person-years in general practices in the Netherlands and the UK [1, 23]. AN does occur among

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children <13 years of age, but is relatively rare [1, 23]. Three studies used a national Paediatric Surveillance System to identify new cases of early-onset eating disorders presenting to pediatricians [25•, 26•, 27]. In Canada, the incidence rate of early-onset restrictive eating disorders diagnosed by pediatricians was 2.6 (95 % CI: 2.1-3.2) per 100 000 person-years in children aged 5 to 12 years [25•]; in Australia it was 1.4 (95 % CI: 1.1-1.7) per 100 000 person-years in 5–13 year old children [27]. In the Canadian study 62 % of new restrictive eating disorder cases met criteria for AN [25•]. Of the Australian pediatric inpatients with a newly diagnosed restrictive eating disorder only 37 % could be classified as AN, although 61 % had life-threatening complications of malnutrition [27]. In British pediatric and psychiatric care an overall incidence rate of 1.1 per 100 000 person-years for AN was found among children <13 years of age [26•]. Among middle aged and elderly women AN is relatively rare as well [28–30]. In a Spanish population-based study using the Public Health Registry to identify eating disorder cases diagnosed by mental health professionals, new cases of AN were found among women over 45 years of age, constituting 64 % of all new eating disorder diagnoses in this age-group [31]. It is unknown whether this reflects late detection or late age at onset.

The question of whether the incidence of AN is on the rise has been under debate. Longterm epidemiological studies are sensitive to minor changes in the absolute incidence numbers and in the methods used, for example, variations in registration policy, demographic differences between the populations, faulty inclusion of readmissions, the specific methods of detection used or the availability of services [18, 32].

In a meta-analysis of the incidence of AN in mental health care, various studies in northern Europe were combined (see figure 1). Until the 1970s, there was an increase of the registered incidence of AN in Europe. Since 1970, the incidence of AN in Europe seems to have been rather stable [1, 18, 33, 34]. In Switzerland the incidence of severe AN in females was studied in a geographically defined region using the same methodology from 1956 to 1995. The incidence of severe AN requiring hospital admission rose significantly during the 1960s and 1970s and reached a plateau of around 1.2 per 100 000 person-years thereafter [21].

In the Netherlands from the 1980s up to now general practitioners have registered new cases with an eating disorder in a representative sample of the Dutch population. While the overall incidence of AN was stable around 7 per 100 000 person-years, the incidence in 15–19 year old girls increased significantly from 56.4 per 100 000 person-years in 1985–1989 to 109.2 per 100 000 person-years in 1995–1999 [1]. This is in line with an Italian study examining age at onset of AN in a large sample of 1,666 patients referred to an eating disorders outpatient unit between 1985 and 2008. Patients referred in more recent years had an earlier age at onset [35•]. In Rochester, MN, USA, the age-adjusted incidence rates of AN showed a significant linear increasing trend only in females aged 15–24 years from 1935–1989 [36].

Bulimia Nervosa

Only a few incidence studies of BN have been conducted. In the community study of the 1975–1979 birth cohorts of female Finnish twins the incidence rate of BN was 200 per 100 000 person-years at the peak age of incidence, 16–20 years [37••]. A broader definition of BN was examined as well. When symptom frequency was relaxed to once a week, in concordance with the proposed DSM-5-criteria [10], the peak incidence rate of broad BN was 300 per 100 000 person-years in 16–20 year old females [37••]. Isomaa and colleagues found an incidence rate of 438 (95 % CI: 132–1175) per 100 000 person-years in 15–18 year old Finnish females for another broad definition of BN, including subjects who fulfilled all but one of the criteria for BN [20] .

According to the nation-wide primary care study in the Netherlands, the overall incidence rate of BN tended to decrease from 8.6 per 100 000 person-years in 1985–1989 to 6.1 per 100 000 person-years in 1995–1999 [1]. In a primary-care study from the UK, the overall age- and sex-adjusted incidence rate of BN decreased during the second half of the 1990s from 12.2 per 100 000 person-years in 1993 to 6.6 per 100 000 person-years in 2000. However, the incidence rate of BN in women aged 10–19 years remained relatively stable around 40 per 100 000 person-years in 1993 as well as in 2000 [23].

Several studies suggest that age at onset of BN is decreasing. In a sample of 793 Italian BN patients referred to an eating disorders outpatient unit between 1985 and 2008, subjects born in 1970–1972 had a mean age at onset of 18.5 years, compared to 17.1 years in subjects born between 1979–1981 [35•]. In the Dutch primary care study the high risk group of BN shifted from 25–29 year old females in 1985–1989 to 15–24 year old females in 1995–1999 [1]. It is unclear whether this reflects a true earlier age at onset or rather earlier detection of BN cases.

Eating Disorder Not Otherwise Specified and Binge Eating Disorder

Epidemiological studies on EDNOS are sparse, because of its heterogeneity and undefined operational criteria, except for BED, for which in DSM-IV research criteria were formulated. In a Spanish population-based study using the Public Health Registry to identify eating disorder cases diagnosed by mental health professionals, the incidence rate

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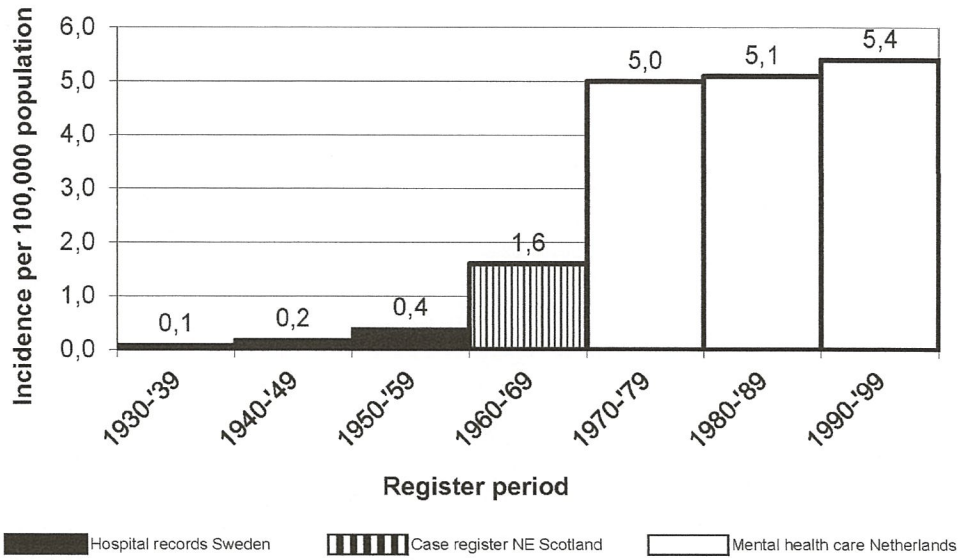

Fig. 1 Registered Yearly Incidence of Anorexia Nervosa. *Adapted from* Hoek [18]

of EDNOS was 6.5 (95 % CI: 4.8-7.9) per 100 000 inhabitants per year [31]. A British national surveillance study of newly diagnosed eating disorders in pediatric and psychiatric care found an incidence rate of 1.2 per 100 000 person-years for EDNOS among children <13 years [26•]. To our knowledge no incidence studies on BED yet exist. Binge eating as a disordered eating behavior or symptom is quite common among adolescents: In a longitudinal study of a large cohort of US adolescents, the incidence rate for binge eating was 10.1 per 1000 person-years among females and 6.6 per 1000 person-years among males (both sexes ≥ 14 years), which translates into 1010 per 100 000 person-years and 660 per 100 000 person-years among female and male adolescents, respectively [38].

Prevalence

The prevalence can be expressed as point prevalence, one-year prevalence rate and lifetime prevalence. The point prevalence is the prevalence at a specific point in time, e.g. January 1 of a specific year. The one-year prevalence rate is the point prevalence plus annual incidence rate (the number of new cases in the following year). The lifetime prevalence is the proportion of people that had the disorder at any point in their life. The prevalence is the most useful measure for planning health care facilities, as it indicates the demand for care. Case detection through a two-stage screening approach is the standard procedure to estimate the prevalence of eating disorders [2, 39]. In the first stage a large population is screened for the likelihood of an eating disorder by means of a screening questionnaire that identifies an at-risk group. In the second stage definite cases in the at-risk group are established on the basis of a personal interview. Problems associated with this type of study are poor response rates, sensitivity of the screening instrument and the restricted size of the groups interviewed [40]. To circumvent this last problem several studies use a structured interview such as the Composite International Diagnostic Interview (CIDI), usually administered by lay-interviewers, to assess the prevalence of eating disorders in a large population sample.

Anorexia Nervosa

The lifetime prevalence of AN and broad AN has been assessed in three large population-based cohort studies of twins [14–16]. In Sweden, it was 1.2 % (AN) and 2.4 % (broad AN) in the largest twin study of women from the 1935–1958 birth cohorts [16]. In an Australian study of female twins aged 28–39 years, the lifetime prevalence of AN was 1.9 % and of broad AN 4.3 % [15]. The lifetime prevalence of AN was 2.2 % and of broad AN 4.2 % in a large sample of women from the 1975–1979 birth cohorts of Finnish twins [14]. In men from the same birth cohort the lifetime prevalence of AN was 0.24 % [41].

Stice and colleagues followed a relatively small sample of 496 adolescent girls over an 8-year period from early adolescence into young adulthood, administering annual diagnostic interviews. They found a lifetime prevalence by age 20 years of 0.6 % for AN and 2.0 % for broad AN [42]. In Portugal, the point prevalence of AN among adolescent girls was 0.39 % and of broad AN 0.64 % [6]. In an Australian population-based sample of 1,597 14-year old boys and girls, only one case of AN was identified by means of a self-report eating disorder screening questionnaire; four other subjects met partial criteria for AN [43].

Prevalences of AN estimated with two-stage procedures varied from 0 to 0.9 % with an average point prevalence of

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0.29 % in young females [2]. In a meta-analysis [2], the one-year prevalence rate per 100 000 young females was computed at different levels of care (Table 1).

Using two-stage studies of community samples and estimates of the incidence, the one-year prevalence rate of AN in the community was calculated as 370 per 100 000 young females. One can conclude from table 1 that the majority of patients with AN in the community do not enter the mental healthcare system [18].

Several studies used the CIDI to estimate the lifetime prevalence of AN in large population samples [45, 46••, 47••]. Both in a nationally representative survey of the US household population [45] and in a population-based study in six European countries [46••], the lifetime prevalence of AN was 0.9 % among adult females. In the US study it was 0.3 % among males [45], while in the European study not a single male case of AN was found [46••]. In a large representative sample of US adolescents the lifetime prevalence of AN was 0.3 % in 13–18 year old females as well as males [47••]. The female-to-male ratio in these studies is considerably lower than the 10:1 ratio found in the Finnish twin study and as reported in previous reviews [2, 14, 41], which could be due to differences in methodology and small numbers of cases with eating disorders [45, 47••]. However, despite this restriction many recent community-based studies have found that AN is more common among males than previously thought. AN may be even more frequently underdetected in males than in females [19].

A large study of Swedish twins born during the period 1935–1958 documented a higher prevalence of AN in both male and female participants born after 1945 than those born before 1945 [16].

Bulimia Nervosa

The generally accepted point prevalence of BN from two-stage studies is about 1 % among young females [2, 40]. Keski-Rahkonen and colleagues found a lifetime prevalence of 1.7 % for BN in women from the 1975–1979 birth cohorts of Finnish twins [37••]. When symptom frequency was relaxed to once a week, in concordance with the proposed DSM-5-criteria, the lifetime prevalence rose to 2.3 % in women [37••]. In an Australian twin cohort of women aged 28–39 years, a lifetime prevalence of BN of 2.9 % was found [15]. According to US [45] and European [46••] large scale two-stage studies of the population the lifetime prevalence of BN, assessed with the CIDI, varied between 0.9 and 1.5 % among women and between 0.1 % and 0.5 % among men. Marques and colleagues compared the prevalence of BN across nationally representative samples of ethnic groups in the US. BN was more prevalent among Latinos and African Americans than non-Latino whites. Lifetime prevalences ranged from 0.51 % (non-Latino whites) to 2.0 % (Latinos) [48]. In a recent study of a nationally representative sample of US adolescents, a lifetime prevalence of BN of 1.3 % and 0.5 % was found among 13–18 year old females and males, respectively [47••]. In a US sample of 496 adolescent females, followed for 8 years, a lifetime prevalence of 1.6 % for BN was found at age 20 years [42]. An Australian population-based study of 1,597 14-year old adolescents reported 9 cases of BN, translating into a point prevalence of 0.6 % [43].

Trace and colleagues assessed the impact of reducing the binge eating frequency on the lifetime prevalence of BN in a large population sample of female Swedish twins. The lifetime prevalence of BN increased from 1.2 % for a minimum of 8 binges per month (DSM-IV) to 1.6 % for at least 4 binges per month (proposal DSM-5) [49].

The decrease in occurrence of BN over time found in the incidence studies is supported by a US study of university students in which the point prevalence of BN among women significantly decreased from 4.2 % in 1982, to 1.3 % in 1992 and 1.7 % in 2002 [44]. In another US study among female students the point-prevalence of probable cases of BN remained relatively stable between 1990 and 2004 [50].

Eating Disorder Not Otherwise Specified and Binge Eating Disorder

Often used diagnostic interviews to estimate the prevalence of eating disorders, like the CIDI and the Structured Clinical Interview for DSM disorders (SCID) do not cover EDNOS. In recent studies that used the CIDI alterations have been made to include subthreshold AN [47••] and BED [45, 46••, 47••]. Researchers have operationalized EDNOS in different ways; reported prevalences are therefore difficult to compare and in community studies the use of limited definitions will underestimate the true prevalence of eating pathology that could be classified as EDNOS [8]. The point prevalence of EDNOS in a nation-wide community sample of young females was 2.4 % [6].

The lifetime prevalence of BED has been assessed in large population samples in the US [45, 47••] and Europe [46••]. In six European countries it was 1.9 % for women and 0.3 % for men [46••]. In the US higher lifetime prevalences were found

Table 1 Estimates of one-year prevalence rates per 100 000 young females at different levels of care

Level of morbidity	Anorexia nervosa	Bulimia nervosa[a]
Community	370	1000
Primary care	160	150
Mental health care	127	75

[a] Based on a meta-analysis of Hoek and van Hoeken in 2003 and corrected for more recent findings of a decrease in point prevalence [44] and incidence [1] of BN

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among adults (women 3.5 %; men 2.0 %) and among 13–18 year old adolescents (girls 2.3 %; boys 0.8 %) [45, 47••]. The US researchers used a duration criterium of only three months instead of the six months DSM-IV research criteria require, which might partly explain the higher percentages. Hudson and colleagues examined data from a non-clinical sample to estimate how much the prevalence of BED will increase under the proposed DSM-5-criteria that relax the requiremens for the frequency (from two per week to one per week) and duration of binges (from six to three months). They extrapolated their findings to the results of the aforementioned study of the US household population and estimated that the lifetime prevalence of BED would increase with an additional 0.1 % to 3.6 % in women and 2.1 % in men [51]. In a study of a large sample of adult Swedish female twins, a relatively low lifetime prevalence of 0.17 % for BED was found, which rose to 0.35 % when DSM-5 criteria were applied [49].

Mortality

One could describe the mortality rate as an incidence rate in which the event being measured is death [52]. Mortality rates are often used as one of the indicators of illness severity. The standard measures for mortality are the crude mortality rate (CMR) and the standardized mortality ratio (SMR). The CMR is the number of deaths within the study population over a specified period. The SMR is the ratio of observed deaths in the study population to expected deaths in the population of origin [18, 19, 52].

Anorexia Nervosa

In a meta-analysis of excess mortality in the 1990s, anorexia nervosa was associated with the highest rate of mortality among all mental disorders [53]. In a recent meta-analysis of 35 published studies [54••], the weighted CMR for AN was 5.1 deaths (95 % CI: 3.99-6.14) per 1000 person-years, translating into 5.1 % per decade or 0.51 % per year. One in five individuals with AN who died had committed suicide [54••]. The overall SMR was 5.86 (95 % CI: 4.17-8.26) with a mean follow-up period of 14 years. The duration of follow-up is inversely correlated with the reported SMR; as duration of follow-up increases, the expected mortality in the population of origin will increase as well, resulting in lower SMRs. In a meta-analysis of SMRs in 2001, the overall SMR of AN in studies with 6–12 years of follow-up was 9.6 (95 % CI: 7.8-11.5) and in studies with 20–40 years of follow-up 3.7 (95 % CI: 2.8-4.7) [55]. Age, case severity and study period influence mortality rates as well [54••]. In a Swedish study [56], a significantly higher mortality rate (4.4 % vs. 1.2 %) was found among female patients hospitalized due to AN in 1977–1981 compared with those hospitalized in 1987–1991. The authors argue that this dramatic decrease in mortality is related to the introduction of specialized care units for patients with eating disorders. Finally, in an audit conducted in the UK, death certificates emerged as a flawed source of information with both over- and underreporting of AN as a cause of death, the latter probably more common [19, 57].

Bulimia Nervosa

In a recent meta-analysis of 12 studies describing the mortality rates of patients with BN, a weighted mortality rate of 1.74 per 1000 person-years was found (95 % CI: 1.09-2.44), which means that per year 0.17 % of BN-patients die. The overall SMR was 1.93 (95 % CI: 1.44-2.59) [54••]. Crow and colleagues examined mortality in a sample of 1885 patients evaluated for treatment for eating disorders at an out-patient clinic between 1979 and 1997. Of the 906 BN-patients, 35 (3.9 %) had died after a mean follow-up of almost 19 years. Suicide accounted for 23 % of deaths [58].

Eating Disorder Not Otherwise Specified and Binge Eating Disorder

A recent meta-analysis of six studies describing the mortality rate of patients with EDNOS reported a weighted annual mortality rate of 3.31 deaths (95 % CI: 1.48-5.75) per 1000 person-years. The overall SMR was 1.92 (95 % CI: 1.46-2.52) [54••]. Any elevated mortality risk of EDNOS could be partly explained by the assertion that EDNOS sometimes reflects the earlier stages of AN [54••, 59]. None of the six studies stated that BED was part of the EDNOS category, which may be explained by the fact that the study periods of these studies were (in part) before the publication of DSM-IV in 1994, in which BED was introduced [58–63].

Keel and Brown reviewed six studies describing course and outcome of BED [64]. Duration of follow-up ranged from one (four studies) to 12 years (one study). The single 12-year follow-up study provided the only report of deaths at follow-up: 2 of 68 patients admitted for inpatient treatment of BED had died after 12 years, leading to a CMR of 2.9 % and a non-significant SMR of 2.29 (95 % CI: 0.00-5.45) [65]. These data from an inpatient sample may not be representative of patients with BED seen in other settings [64]. BED is associated with obesity. In a large US population-based study 42 % of the subjects with a lifetime diagnosis of BED were obese (BMI >30 kg/m^2) at the time of the interview and also a significantly higher prevalence of morbid obesity (BMI>40 kg/m^2) was found among these subjects compared to respondents without any eating disorder (OR 4.9; 95 % CI: 2.2-11.0) [45]. Obesity and especially morbid obesity is associated with increased risk for mortality, although the net effect of obesity on mortality is difficult

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to quantify [66, 67]. Finally, in a meta-analysis of the risk of suicide in eating disorders, no suicide had occurred among 246 patients with BED after a mean follow-up of 5.3 years [68].

Eating Disorders in Non-Western Countries and Among Ethnic Minorities

In the past, eating disorders have been characterized as culture-bound syndromes, specific to Caucasian subjects in Western, industrialized societies [69]. Recent studies demonstrate that eating disorders and abnormal eating behaviors do occur in non-Western countries and among ethnic minorities [48, 70–74]. An increasing occurrence of eating disorders in non-Western countries has been associated with cultural transition and globalization, including modernization, urbanization and media-exposure promoting the Western beauty-ideal [70, 75–77]. The most comprehensive attempt to quantify eating disorders in a non-Western setting was conducted on the Caribbean island Curaçao (Netherlands Antilles), where the full spectrum of community health and service providers was contacted. The overall incidence of AN of 1.82 (95 % CI: 0.74-2.89) per 100 000 person-years was much lower than in the US and Western Europe. No cases were found among the black population. However, the incidence of 9.08 (95 % CI: 3.71–14.45) among the minority mixed and white population was similar to the incidence in the Netherlands and in the United States [78]. In the Netherlands, incidence rates of psychiatric hospital admissions for AN did not differ between Netherlands Antilles immigrants and native Dutch [79], suggesting that exposure to the Western beauty ideal is a risk factor for the development of AN, possibly in interaction with migration-related stress. A similar finding for risk of BED among Mexican-American immigrants was found by Swanson and colleagues: In their study of a sample of people of Mexican origin in Mexico and the US, migration from Mexico to the US was associated with an increased risk of BED [80]. A recent study comparing prevalences of eating disorders across ethnic groups in the United States reported similar prevalences of AN and BED among non-Latino whites, Latinos, Asians and African Americans. BN was more prevalent among Latinos and African Americans than among non-Latino whites [48].

Conclusions

AN is relatively common among young women. While the overall incidence rate remained stable over the past decades, there has been an increase in the high risk-group of 15–19 year old girls. It is unclear whether this reflects earlier detection of AN cases or an earlier age at onset. The occurrence of BN might have decreased since the early nineties of the last century. All eating disorders have an elevated mortality risk; AN the most striking. Compared with the other eating disorders, BED is more common among males and older individuals.

Disclosure No potential conflicts of interest relevant to this article were reported.

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Exhibit 16

Get the Facts on Eating Disorders

What Are Eating Disorders?

Eating disorders are real, complex, and devastating conditions that can have serious consequences for health, productivity, and relationships. They are not a fad, phase or lifestyle choice. Eating disorders are serious, potentially life-threatening conditions that affect a person's emotional and physical health. People struggling with an eating disorder need to seek professional help. The earlier a person with an eating disorder seeks treatment, the greater the likelihood of physical and emotional recovery.

In the United States, 20 million women and 10 million men suffer from a clinically significant eating disorder at some time in their life, including anorexia nervosa, bulimia nervosa, binge eating disorder, or an eating disorder not otherwise specified (EDNOS) (Wade, Keski-Rahkonen, & Hudson, 2011). For various reasons, many cases are likely not to be reported. In addition, many individuals struggle with body dissatisfaction and sub-clinical disordered eating attitudes and behaviors, and the best-known contributor to the development of anorexia nervosa and bulimia nervosa is body dissatisfaction (Stice, 2002). By age 6, girls especially start to express concerns about their own weight or shape. 40-60% of elementary school girls (ages 6-12) are concerned about their weight or about becoming too fat. This concern endures through life (Smolak, 2011).

Health Consequences, Including Mortality

In anorexia nervosa's cycle of self-starvation, the body is denied the essential nutrients it needs to function normally. Thus, the body is forced to slow down all of its processes to conserve energy, resulting in:

- Abnormally slow heart rate and low blood pressure, which mean that the heart muscle is changing. The risk for heart failure rises as the heart rate and blood pressure levels sink lower and lower.
- Reduction of bone density (osteoporosis), which results in dry, brittle bones.
- Muscle loss and weakness.
- Severe dehydration, which can result in kidney failure.
- Fainting, fatigue, and overall weakness.
- Dry hair and skin; hair loss is common.
- Growth of a downy layer of hair—called lanugo—all over the body, including the face, in an effort to keep the body warm.

A review of nearly fifty years of research confirms that anorexia nervosa has the highest mortality rate of any psychiatric disorder (Arcelus, Mitchell, Wales, & Nielsen, 2011).

For females between fifteen to twenty-four years old who suffer from anorexia nervosa, the mortality rate associated with the illness is twelve times higher than the death rate of allother causes of death (Sullivan, 1995).

The recurrent binge-and-purge cycles of bulimia can affect the entire digestive system and can lead to electrolyte and chemical imbalances in the body that affect the heart and other major organ functions. Health consequences include:

- Electrolyte imbalances that can lead to irregular heartbeats and possibly heart failure and death.
- Electrolyte imbalance is caused by dehydration and loss of potassium, sodium and chloride from the body as a result of purging behaviors.

- Potential for gastric rupture during periods of bingeing.
- Inflammation and possible rupture of the esophagus from frequent vomiting.
- Tooth decay and staining from stomach acids released during frequent vomiting.
- Chronic irregular bowel movements and constipation as a result of laxative abuse.
- Peptic ulcers and pancreatitis.

Binge eating disorder often results in many of the same health risks associated with clinical obesity, including:

- High blood pressure.
- High cholesterol levels.
- Heart disease as a result of elevated triglyceride levels.
- Type II diabetes mellitus.
- Gallbladder disease.

Did You Know?

- The rate of development of new cases of eating disorders has been increasing since 1950 (Hudson et al., 2007; Streigel-Moore &Franko, 2003; Wade et al., 2011).
- There has been a rise in incidence of anorexia in young women 15-19 in each decade since 1930 (Hoek& van Hoeken, 2003).
- The incidence of bulimia in 10-39 year old women TRIPLED between 1988 and 1993 (Hoek& van Hoeken, 2003).
- The prevalence of eating disorders is similar among Non-Hispanic Whites, Hispanics, African-Americans, and Asians in the United States, with the exception that anorexia nervosa is more common among Non-Hispanic Whites (Hudson et al., 2007; Wade et al., 2011).

It is common for eating disorders to occur with one or more other psychiatric disorders, which can complicate treatment and make recovery more difficult. Among those who suffer from eating disorders:

- Alcohol and other substance abuse disorders are 4 times more common than in the general populations (Harrop&Marlatt, 2010).
- Depression and other mood disorders co-occur quite frequently (Mangweth et al., 2003; McElroy, Kotwal, & Keck, 2006).
- There is a markedly elevated risk for obsessive-compulsive disorder (Altman &Shankman, 2009).

Prevalence vs. Funding

Despite the prevalence of eating disorders, they continue to receive inadequate research funding.

Illness	Prevalence	NIH Research Funds (2011)
Alzheimer's Disease	**5.1 million**	**$450,000,000**
Autism	**3.6 million**	**$160,000,000**
Schizophrenia	**3.4 million**	**$276,000,000**
Eating disorders	**30 million**	**$28,000,000**

Research dollars spent on Alzheimer's Disease averaged $88 per affected individual in 2011. For Schizophrenia the amount was $81. For Autism $44. For eating disorders the average amount of research dollars per affected individual was just $0.93. (National Institutes of Health, 2011)

National Survey Shows Public Understands Eating Disorders Are Serious Illnesses

In August of 2010, American Viewpoint (a nationally recognized public opinion research company) conducted a telephone survey of American adults for the National Eating Disorders Association. The national survey shows an increased public awareness of eating disorders and a shift in how eating disorders are viewed.

The survey polled a nationwide sample of one thousand adults in the United States. Among the findings were the following:

- 82% percent of respondents believe that eating disorders are a physical or mental illness and should be treated as such, with just 12% believing they are related to vanity.
- 85% of the respondents believe that eating disorders deserve coverage by insurance companies just like any other illness.
- 86% favor schools providing information about eating disorders to students and parents.
- 80% believe conducting more research on the causes and most effective treatments would reduce or prevent eating disorders.
- 70% believe encouraging the media and advertisers to use more average sized people in their advertising campaigns would reduce or prevent eating disorders.

Dieting And The Drive For Thinness

Dieting and weight control strategies reflect how dissatisfied an individual is with her or his own body size and shape. Besides being associated with the onset of eating disorders, these behaviors alone can be dangerous to one's health.

- 42% of 1st-3rd grade girls want to be thinner (Collins, 1991).
- In elementary school fewer than 25% of girls diet regularly. Yet those who do know what dieting involves and can talk about calorie restriction and food choices for weight loss fairly effectively (Smolak, 2011; Wertheim et al., 2009).
- 81% of 10 year olds are afraid of being fat (Mellin et al., 1991).
- 46% of 9-11 year-olds are "sometimes" or "very often" on diets, and 82% of their families are "sometimes" or "very often" on diets (Gustafson-Larson & Terry, 1992).
- Over one-half of teenage girls and nearly one-third of teenage boys use unhealthy weight control behaviors such as skipping meals, fasting, smoking cigarettes, vomiting, and taking laxatives (Neumark-Sztainer, 2005).
- 35-57% of adolescent girls engage in crash dieting, fasting, self-induced vomiting, diet pills, or laxatives. Overweight girls are more likely than normal weight girls to engage in such extreme dieting (Boutelle, Neumark-Sztainer, Story, &Resnick, 2002; Neumark-Sztainer&Hannan, 2001; Wertheim et al., 2009).
- Even among clearly non-overweight girls, over 1/3 report dieting (Wertheim et al., 2009).
- Girls who diet frequently are 12 times as likely to binge as girls who don't diet (Neumark-Sztainer, 2005).
- The average American woman is 5'4" tall and weighs 165 pounds. The average Miss America winner is 5'7" and weighs 121 pounds (Martin, 2010).
- The average BMI of Miss America winners has decreased from around 22 in the 1920s to 16.9 in the 2000s. The World Health Organization classifies a normal BMI as falling between 18.5 and 24.9 (Martin, 2010).
- 95% of all dieters will regain their lost weight in 1-5 years (Grodstein, Levine, Spencer, Colditz, &Stampfer, 1996; Neumark-Sztainer, Haines, Wall, & Eisenberg, 2007).

- 35% of "normal dieters" progress to pathological dieting. Of those, 20-25% progress to partial or full-syndrome eating disorders (Shisslak, Crago, & Estes, 1995).
- Of American elementary school girls who read magazines, 69% say that the pictures influence their concept of the ideal body shape. 47% say the pictures make them want to lose weight (Martin, 2010).

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Exhibit 17

Prevalence and Correlates of Eating Disorders in Adolescents

A review of "Swanson, S., Crow, S., Le Grange, D., Swendsen, J., Merikangas, K. (2011).Prevalence and Correlates of Eating Disorders in Adolescents. Archives of General Psychiatry, Online Article, E1-E10."Walter Kaye, M.D. & Danyale McCurdy, Ph.D.

A new study describes the rates of eating disorders in adolescents. Drs. Swanson, Crow, LeGrange, and Merikangas utilized data from the National Comorbidity Survey Replication Adolescent Supplement, which is a nationally representative sample of 10,123 adolescents ranging from 13- to 18-years-old. Importantly, this survey used face-to-face interviews which are likely to improve the accuracy of making diagnoses.

Five eating disorder diagnoses were ascertained: anorexia nervosa (AN), bulimia nervosa (BN), binge eating disorder (BED), subthreshold AN (SAN), and subthreshold BED (SBED). In general, the findings for the rates over the lifetime of people were similar to past studies. That is, the rates of AN, BN, BED, SAN, and SBED were 0.3%, 0.9%, 1.6%, 0.8%, and 2.5%, respectively. Regarding illness onset, the median ages for onset of AN, BN, BED, and SBED was about 12- to 13-years-old. Eating disorders among adolescents was often associated with functional impairment and suicidality. Most teenagers who had a diagnosis of AN, BN, and BED in the past 12 months reported significant impairment (97%, 78%, and 63%, respectively). In particular, BN and SAN were associated with suicide plans, and BN and BED were associated with suicide attempts.

There were several surprises in this study. There was not a female preponderance in AN and BN. Moreover, AN was only associated with oppositional defiant disorder, not other psychiatric diagnoses. Whether such unusual finding were due to the methods used in the study, or are explained by the young age of the sample, or are due to other factors, remains uncertain.

The majority (73 to 88%) of adolescents with ED reported some contact with service providers, such as mental health specialty care, school services, or general medical services. However, only a minority (3 to 28%) had specifically talked with a professional about their eating or weight problems. As the authors note, whether this is due to denial, shame or stigma, or a lack of recognition of eating symptoms by professionals treating other targeted problems, it shows that adolescents do use services. This suggests possible avenues for prevention and early intervention if recognition could be improved.

In summary, not only are eating disorders as prevalent as previously thought, but they are also highly related to significant comorbidity, functional impairment, suicidality, and health service usage. Given the young age of onset, early intervention and prevention is crucial. Furthermore, it appears the gender and ethnicity gap is closing in disordered eating, and prevention programs should also incorporate educational strategies targeting these often underrepresented populations in eating disorder research and treatment studied 1,885 individuals with anorexia nervosa (N=177), bulimia nervosa (N=906), or eating disorder not otherwise specified (N=802) over 8 to 25 years. The investigators used computerized record linkage to the National Death Index, which provides vital status information for the entire United States, including cause of death extracted from death certificates. Crow and colleagues found that crude mortality

rates were 4.0% for anorexia nervosa, 3.9% for bulimia nervosa, and 5.2% for eating disorder not otherwise specified. They also found a high suicide rate in bulimia nervosa. The elevated mortality risks for bulimia nervosa and eating disorder not otherwise specified were similar to those for anorexia nervosa.

In summary, these findings underscore the severity and public health significance of all types of eating disorders.

Exhibit 18

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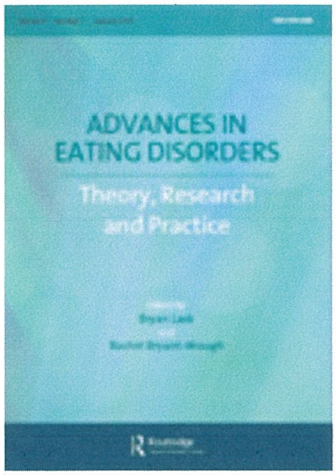

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Advances in Eating Disorders: Theory, Research and Practice
Publication details, including instructions for authors and subscription information:
http://www.tandfonline.com/loi/reat20

Eating disorders in adult women: biopsychosocial, developmental, and clinical considerations

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Published online: 19 Jan 2015.

To cite this article: Margo D. Maine, Karen L. Samuels & Mary Tantillo (2015): Eating disorders in adult women: biopsychosocial, developmental, and clinical considerations, Advances in Eating Disorders: Theory, Research and Practice, DOI: 10.1080/21662630.2014.999103

To link to this article: http://dx.doi.org/10.1080/21662630.2014.999103

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Advances in Eating Disorders: Theory, Research and Practice, 2015
http://dx.doi.org/10.1080/21662630.2014.999103

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Eating disorders in adult women: biopsychosocial, developmental, and clinical considerations

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(*Received 11 April 2014; accepted 12 December 2014*)

Research and clinical practice indicate that increasing numbers of adult women are suffering from both clinical and subclinical eating disorders and are now seeking treatment. The unique needs and experiences of this population bear examination through the lens of female adult development. The rapid increase in eating disorders, the ongoing gender disparity, and the complex realities of female biology suggest that this evaluation will be best informed by a biopsychosocial perspective. Developmental transitions including marriage, divorce, pregnancies, parenting, menopause, and the ageing process all create risk in an era that promotes weight loss, thinness, and a youthful appearance as the ultimate signs of success for women. Globalisation has contributed to the emergence of eating disorders in diverse countries and cultures. Consequently, all primary mental health and medical providers must understand the risk factors, signs, and symptoms of adult eating disorders, as well as the effect of environmental stressors on these risk factors in producing illness. This patient population requires unique treatment options, especially outpatient programmes and psychoeducation and support for their families and life partners, in order to foster recovery while maintaining their roles in their families, workplaces, and communities.

Keywords: adult women; eating disorders; treatment

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Age does not immunise women from full-syndrome and subclinical eating disorders, raising questions regarding the efficacy of current treatments for the adult population. This paper examines the biopsychosocial, developmental, and clinical factors that bear examination when treating eating disorders during the various stages of female development, from young adulthood, through the midlife transition of the 30s and 40s, middle age, and later years. Exact age parameters for these stages are difficult to define, in a youth-obsessed era typified by statements like '60 is the new 40'. Furthermore, when it comes to the typical experiences associated with a particular decade or life stage, the lives of contemporary women are non-linear. Women in their 40s may be experiencing a first pregnancy or menopause, an empty nest or a growing family, a long and satisfying marriage or a return to the dating game, and early retirement or the beginning of graduate school or a new career. Thus, this paper will examine how the biopsychosocial experiences

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throughout adult developmental stages create risk for eating disorders, without the framework of specific age categories. Clinicians report that more adult women are seeking treatment for their eating disorders than ever before (Zerbe, 2013). A treatment centre dedicated to eating disorders experienced a 400% increase in admissions of patients over 40 years of age in the previous decade (Cumella & Kally, 2008). Research also demonstrates that eating disorders are increasingly affecting middle-aged and older people (Brandsma, 2007). A recent study, on the prevalence of eating disorders in middle-aged women, aged 40–60, found that 4.6% met the full criteria for a clinical eating disorder, while another 4.8% met the subthreshold standards, with these two groups reporting the same degree of psychopathology, distress, and impairment(Mangweth-Matzek et al., 2014). This suggests that even subclinical eating disorders have a significant impact on the well-being of adult women and require professional attention.

Population-based surveys and non-clinical research both demonstrate the epidemic of concerns regarding weight, dieting, and body image that contribute to eating disorders. Comparable levels of dieting and disordered eating are now found across young and elderly women, with disordered eating and a fear of ageing going hand in hand (Lewis & Cachelin, 2001). Between 1995 and 2005, an Australian survey of men and women 35 years and older reported an increased frequency of binge eating, purging, and strict dieting, while the cohort under age 35 actually reported decreased frequencies (Hay, Mond, Buttner, & Darby, 2008). In a recent study of US women over age 50, 79% report that weight/shape affects their self-image. Additionally, 41% weigh themselves daily; 36% spent at least half of the last 5 years dieting; 13.3% report eating disorder symptoms; and 8% report purging. Overall, 13% of the sample admitted to current eating disorder symptoms (Gagne et al., 2012). A study of 45–64-year old Canadian 'weight preoccupied women' indicated a higher incidence of symptoms such as bingeing, feeling guilty after eating, feeling out of control of food, and giving too much time and thought to food than in younger women (Park & Beaudet, 2007). Furthermore, when asked what bothered them most about their bodies, women aged 61–92 identify weight as the greatest concern (Clarke, 2002). These trends require close examination through the lens of female adult development. The rapid increase in eating disorders and the ongoing gender disparity (Levine & Smolak, 2006; Maine & Bunnell, 2010; Streigel-Moore & Bulik, 2007) suggest that this evaluation will be best informed by a biopsychosocial perspective. Eating disorders no longer belong to a place or a life stage, but instead inhabit many different and evolving global social spheres and developmental periods. Occurring in over 40 nations (Gordon, 2001), eating disorders are now globalised conditions, and a critical public health issue. Nasser and Malson (2009) remind us: 'Thinness as a gendered body "ideal" and a signifier of a multiplicity of positively construed "attributes" can clearly no longer be considered exclusively western or white (p. 82).'

Toxic cultural messages teach women to pathologise and demonise normal developmental physical changes. Even the rhythmic cycles of the female body, many of which are associated with weight gain, such as premenstrual bloating, pregnancy, and the slower menopausal metabolism, are great challenges in an era that glorifies youth, thinness, and unrealistic beauty images. In this cultural environment, post-pregnancy weight gain and the pounds gained at menopause can be a source of great distress and anticipated disempowerment (Maine, 2010). The female body has never been more exposed while its natural processes, like the symptoms of menses or menopause, are to be masked or controlled (Brumberg, 1997). Due to the 'advances' in body technology, ageing naturally is no longer the only option, as women are sold the myth that they can, and should, be in complete command of their bodies, even pursuing cosmetic surgeries to look younger and more attractive. The 'war on obesity' and the misinformation promulgated by the diet industry intensify many women's concerns about health and appearance. These pressures further contribute to body image and food obsessions, potentially triggering eating disorders during the transitions inherent to adult development.

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Female development and eating disorders

Theorists and experts in the field of eating disorders have consistently cited developmental issues as aetiological factors (Bruch, 1973; Crisp, 1980). In fact, girls are at the greatest risk of developing eating disorders during the progression from late childhood into adolescence and then from mid- to late adolescence (Smolak & Levine, 1996). We recognise the intense pressures and troubling transitions as they move from being a girl to a preteen, teen, and young adult. Adolescence requires major changes in the female body's functioning, accompanied by cognitive and psychosocial pressures to adopt the dominant culture's norms, values, and ideals, and to move away from the dependence on family into more engagement with the culture. These normative external stressors require a significant internal reorganisation of the sense of self, including personality, cognitive, and emotional structures. As they move through adolescence, girls feel increasing pressure to compete and succeed through beautifying and controlling their bodies, while denying their appetites – physical, emotional, and relational (Mikel-Brown, 1991; Tantillo & Kreipe, 2006). Contemporary culture's relentless and unrealistic standards for beauty and appearance encourage unhealthy scrutiny of the body, markedly increasing the risk for eating disorders at these developmental junctures.

Until recently, the field of developmental psychology seemed to stop at early adulthood (Willis & Martin, 2005). Adult life, however, is full of turning points and stressors placing women once more at risk for disordered eating and eating disorders. These include the complications of an ageing body, including fluctuating or diminished sexual energy; multiple role changes from school to career to marriage, mothering, empty nesting, caring for older parents; midlife stressors such as menopause, divorce, and widowhood; and health and mortality issues, among others (Maine, 2010, Maine & Kelly, 2005). Adult women often find themselves dealing with these issues in isolation, with little support or validation, but increasing responsibilities and burdens along with the compulsion to adapt and achieve in each progressive life stage. When they present for treatment of eating disorders, they often appear to others as having a very rich life while feeling internally empty, alone, and unfulfilled, struggling in secret.

An apt example of the biopsychosocial nature of the developmental process, the 'deadline decade,' the years between 35 and 45, can be particularly disruptive (Sheehy, 2006). Reaching the 'prime of life' inevitably marks the halfway point, presenting a time to re-evaluate, take stock, and set intentions for the future, with women pondering these questions earlier than men. For some, the biological clock is ticking away, and decisions about relationships and child-bearing are heightened. For those who have focused on family, the career clock may be ticking just as loudly. For the women who have tried 'to do it all', the 'what-about-me' clock is ticking (Maine, 2010). To complicate their experience, women may be in their sexual prime at this age (Easton, Confer, Goetz, & Buss, 2010), often with a heightened interest in sexuality, resulting in unsettling guilt and confusion. Potentially transformative, this decade is also filled with endless obligations and responsibilities, leaving women little time to reflect on the impact of all these events, emotions, and changes. The pressures and challenges of this transitional period are only heightened in adult women at risk for developing eating disorders or for reactivating previous conditions.

Where biology intersects social experiences: biopsychosocial factors

Just like puberty, women's later reproductive processes, especially pregnancy and the transition through menopause, reflect a complex blend of biopsychosocial phenomena, including neuroendocrine, physical, emotional, mental, and social changes, leaving women psychologically vulnerable. Dramatic hormonal changes, such as those associated with pregnancy, post-partum, and peri-menopause, are associated with increased risk for psychological distress, especially depression and/or co-occurring eating disorders (Freeman et al., 2004; Mangweth-Matzek et al., 2013).

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Transitions into a new phase of life always challenge a woman, but pregnancy particularly puts her body on centre stage, as pregnant bodies seem to become public property, with unwanted comments and even unsolicited touching from complete strangers. Furthermore, the natural changes in eating and appetite may be unsettling to women who have struggled with food. Chronic restrictors may begin to binge-eat, or to see normal amounts of food as binges, and those with a history of binge eating disorder may experience intensified symptoms (Bulik et al., 2007). Morning sickness may trigger women with a history of self-induced vomiting to relapse or intensify current bulimic symptomatology. The normative discomfort with shape becomes magnified as women's bodies grow, especially in the era of fascination with celebrity pregnancies. Media coverage of 'pregorexia', describing the Hollywood stars who gain very little during pregnancy and then instantly return to pre-pregnancy weight (CBS NEWS, 2008), only heightens the risk for eating disorders.

Although the research related to pregnancy and eating disorders is limited, a prospective, longitudinal study (Crow, Agras, Crosby, Halmi, & Mitchell, 2008) of women with clinical or subclinical eating disorders indicates that pregnancy presents the potential for positive change, despite the risk for increased pathology. Symptoms generally improved during pregnancy, but tended to regress after childbirth. Psychoeducation and collaboration with medical providers during and after a pregnancy can help a woman to interpret the changes in her body in a healthy way and maintain the improvements made during the pregnancy.

Pregnancy, child-bearing, and parenting are all stressful developmental phases, placing a woman at increased risk for eating issues (Crow et al., 2008). In addition to the bodily transformations, these transitions usher in markedly different social roles and daily routines. Each new life stage, whether becoming a parent or facing the end of one's reproductive life, brings with it distinct demands, sources of satisfaction and stress, as well as changes in relationships. When life is shifting rapidly, creating ambiguity, uncertainty, and self-doubt, the natural human instinct is to find something that provides a sense of stability or control. An eating disorder can become the answer, promising a woman that transforming her body will transform her life, solving all the dilemmas she faces as she moves forward through adult development (Maine & Kelly, 2005). The paradox emerges: a life-threatening illness becomes a means of coping with the complexities and dilemmas of the ageing process.

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Adult eating disorder symptoms: similarities and differences

As with young women, eating disorders come in different shapes, sizes, and severities, from Anorexia Nervosa to Bulimia Nervosa, Feeding and Eating Disorders Not Elsewhere Classified (NEC), Binge Eating Disorder, and subclinical or partial syndrome variations, including orthorexia, potentially leading to significant nutritional depletion, physical problems, depression, anxiety, and social isolation (Maine, 2010). Our clinical experience suggests that adult eating-disordered women often fall into the NEC or partial syndrome categories. This situation makes it more difficult for them to self-diagnose and seek treatment, especially given how the self-help literature and magazine articles tend to focus on extreme examples, including frightening images of skeletal women with anorexia, or bulimia only depicted via self-induced vomiting. The popular press systematically excludes symptoms such as exercise abuse, laxatives, or chronic restricting without significant weight loss. Medical journals and opinions reflect this same bias and systematically overlook the sub-acute or partial syndrome presentations that are so frequent in midlife and ageing women.

The symptoms of many adult female patients evolve over time, having initially been more purely restricting anorexic or more prominently bulimic. Gradually, they may have begun to eat more or reduce or stop vomiting, and even to reach a stable, 'normal' weight. Nonetheless,

their relationship with food and their bodies is still disordered and a source of great distress. They may be engaging in eating disorder symptoms less severely or less frequently, so they are convinced that they no longer 'have it', yet their behaviours and thoughts about food, weight, and their bodies are still distracting, obsessive, critical, and unhealthy. Such a patient might say, 'But I eat now', while eating far less than her metabolic needs require, or might believe she is no longer purging when she has substituted gruelling hours of obsessive exercise or laxative abuse for vomiting (Maine, 2010). In this era of 'green living', plant-based, vegan, or gluten-free diets may disguise orthorexia, obsessive patterns of overly correct, and therefore increasingly restrictive, eating (Bratman, 2004).

Several different patterns emerge in the progression of symptoms in adult women with eating disorders. Some have struggled since adolescence and have never fully recovered. Others had an eating disorder in their early life (usually teens or pre-teens) or college years, but recovered, only to relapse later. Some have been preoccupied with food and weight for years, but had controlled their concerns and never fully exhibited symptoms or sought treatment. And finally, a small cohort of adult women faced with the challenges of adulthood begin to obsess about diet and body image for the first time in their lives and succumb to full-syndrome or partial syndrome eating disorders (Bulik, 2013; Maine, 2010; Maine & Kelly, 2005). Research in this area is sparse; however, Pryor (2008) reports an adult onset in 6% of the adult woman seen for eating disorder treatment over a 2-year period. Most experienced a chronic course of illness that persisted into midlife. In our clinical experience, many adult women with eating disorders demonstrate different symptoms at different points in their lives, moving from one symptom cluster or diagnostic category to another.

Cumella and Kally (2008) retrospectively reviewed the cases of 50 women treated in their residential programme whose symptoms began after age 40. On the Eating Disorder Inventory (EDI-2), this group had moderate severity of symptoms, but lower scores than younger patients on three variables: drive for thinness, bulimia, and body dissatisfaction; and higher scores on ineffectiveness, perfectionism, interpersonal distrust, and asceticism. They tended to exhibit the symptoms of restricting Anorexia Nervosa or Eating Disorders Not Otherwise Specified) (now called Feeding and Eating Disorders NEC), with only 8% meeting the criteria for Bulimia Nervosa, in contrast to 40% of younger inpatients. Rates of depression and anxiety disorders were in the moderate range, similar to that of younger patients. Minnesota Multiphasic Personality Inventory (MMPI) scores indicated greater denial among older patients, perhaps accounting for the lower severity they reported in both their eating disorder and co-morbid conditions. The older patients indicated a higher frequency of sexual abuse (64%) than in the general population or in younger patients. Eighteen per cent of late onset women reported substance abuse with a preference for more sedating substances such as alcohol, sedatives, marijuana, and opioids, and less stimulant use than in the younger patients. Twenty-two per cent reported a history of self-harm and 28% had attempted suicide. Self-harm occurred less in this sample than in eating-disordered women in general, where the rate is as high as 45%. Cumella and Kally speculate that this may reflect generational differences in self-harm behaviour. Although limited by being a retrospective review of patients seeking treatment in a faith-based facility, this review suggests that older women with eating disorders may have different but very serious concerns that need to be a priority in treatment and that they tend to underreport their distress.

Greater than the sum of the parts: personality, culture, and family

Despite different ages and stages of their lives, women suffering from disordered eating, eating disorders, and body image distress share many common experiences. Their personality characteristics include: perfectionism, low self-esteem, and chronic feelings of inadequacy. They tend to

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focus on meeting the needs of others rather than on their own needs and desires, having frequently played the role of peacemaker in their original family and continuing this role in other relationships. Ambivalent about their power and place as women, they must navigate a path in an overwhelming consumer culture that teaches them to want and to need, but simultaneously keeps them from knowing their true wants and needs. Young or old, they are constantly bombarded by strict and unrealistic media images of beauty, by the myriad sources and marketing of body-change technology (e.g. pills, surgeries, exercise equipment, and 'cosmeceuticals') and misinformation from the diet industry (Maine & Kelly, 2005).

Regardless of the patient's age, our clinical work often reveals an intergenerational pattern of body image distress and preoccupation, restrictive dieting, and various attempts to reject and transform their bodies to meet unattainable ideals. Women struggling with eating and body image problems describe how their families unwittingly contributed to these issues, depicting grandmothers and mothers who dieted chronically, exercised excessively, and even pursued cosmetic plastic surgery. Some report a similar preoccupation with weight, shape, exercise, and appearance in their fathers, grandfathers, brothers, and other male relatives, as well as highly critical comments from these important male figures about women's bodies. Kearney-Cooke (2004) traces the development of body image, demonstrating how women unconsciously internalise their family's messages about food and shape. Thus, pathogenic attitudes and behaviours related to body image, weight management, and food seen in women with eating disorders are handed down from one generation to the next.

For many women, the focus on appearance and youth intensifies as their bodies progress through the natural ageing process that includes weight gain, greying hair, and wrinkled skin. If their mothers, grandmothers, aunts, or other 'role models' dieted and criticised themselves throughout their lives, they are likely to follow suit. The dominant culture reinforces the intergenerational transmission of body dissatisfaction and unhealthy weight control practices because it emphasises that the paragon of control is embodied in weight loss and thinness (Tantillo & Kreipe, 2006).

Critical differences across the lifespan

Adult women exhibit significant differences from their younger peers with eating disorders, some of which create barriers to treatment. Typically, they report deep shame and embarrassment for their problems, repeating the lament of 'having a teenager's problem', chastising themselves that they 'should know better' and that they 'don't deserve' the therapist's attention (Maine, 2010; Maine & Kelly, 2005; Samuels & Maine, 2012). They have been symptomatic longer, so the habit rigidity (Strober & Johnson, 2012) and subsequent impact on their identity make change seem remote. Seeking treatment, an act of self-care, may drastically disrupt the equilibrium of decades devoted to taking care of the needs of others, and, therefore, is frightening and disorganising.

Although often painfully aware of the costs of their eating disorder, including lost jobs or marriages, and health issues such as dental problems, broken bones, and chronic weakness or fatigue, women tend to have great difficulty admitting the need for help. They are used to their symptoms and the secrecy with which they guard their eating disorder. Quite simply, they have logged in more years, and even decades, speaking the language of fat, i.e. the tendency to translate any difficult emotion into feeling 'fat' (Friedman, 1997). 'Fat' is the lens through which they see themselves and experience life, leaving them unsure about who they would be and what life would be like without the familiar cloak of their eating disorder. Social Pain Overlap Theory tells us that the social pain of isolation or exclusion and physical pain register in the same region of the brain (Eisenberger & Lieberman, 2004). This suggests that years of self-identified 'fat' thoughts and

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'fat talk' may truly intensify the shame-based isolation described by our adult patients. Perhaps the language and pain of 'fat' further the secrecy of body despair in adult women, prolonging the disorder and delaying attempts at recovery. With little or no practice living a life without illness, they become terrified at the prospect of change, believing that the eating disorder defines them and may possibly be the only quality that makes them visible and/or acceptable to others.

Adult women with eating disorders also have many other responsibilities that get in the way of treatment – a job, a family, relationships, ageing parents and other family members depending on them; community involvement; their religious affiliation; or other commitments. Since women are socialised to psychologically grow in the context of their connections with others and to see the value of fostering those connections (Miller & Stiver, 1997), they can feel conflicted about focusing on their own needs while caring for others. Also, the combined effects of the biological impact of starvation on the brain (Keys, Brozek, & Hensheo, 1950), reasoning errors and cognitive distortions (Tyson, 2010), and the shame and secrecy associated with eating disorders can make it very challenging to enter treatment and strike a balance between self-care and care for others.

The experience of parenting, especially mothering daughters, is often what brings women into treatment (Maine & Kelly, 2005, Samuels & Maine, 2012). As they watch them grow, and approach puberty, they want their children to avoid the pain that disordered eating and body disparagement bring and they seek to stop the cycle from repeating itself. This is a strong motivation and one that can be mined to the advantage of both the mother and the children.

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The ageing body

Adult women also begin to experience increased anxiety about appearance and health due to the ageing process and become aware of the loss of their social status and sexual attractiveness as they leave their 20s behind. The medical and pharmacological promotion of cosmetic plastic surgery and anti-ageing techniques add to the cultural fascination with youth, making it more and more difficult for women to embrace the normal transformation of an ageing body (Zerbe, 2013). The dramatic rise in extreme dieting in adult women as they exit the reproductive years may mark another high-risk period for the onset or re-activation of disordered eating, or full-syndrome eating disorders. Recognition of later life developmental tasks is needed. Women who either emphasise or deny the impact of the ageing process are at increased risk for disturbances of eating, body image, or unhealthy attention to weight and activity levels. Identification of the developmental tasks and risk factors relative to women's experience of ageing is imperative to both clinical interventions and the prevention of eating disorders.

Progressing through adulthood, most women encounter the competing demands of the 'sandwich generation'. While still caring for children, they are also responsible for elderly parents and other loved ones. Jobs, finances, parenting, marriage/relationships, and managing homes may consume all their resources. With little time to attend to their own health care and emotional needs, women easily overlook a developing or recurring eating disorder. If they do seek medical attention, frequently, their symptoms are investigated through the lens of later life medical conditions. For example, amenorrhoea or menstrual irregularities may be seen as signs of menopause. Severe reflux or other gastro-intestinal difficulties affecting appetite and digestion concerns may be treated with medications and never acknowledged as part of an eating disorder. Fractures may be solely attributed to osteopenia or osteoporosis, ignoring the role of the eating disorder. Coronary and Arterial Diseases and chronic migraines may also only be treated medically with no examination of an underlying eating disorder. Older women may have developed additional medical complications associated with ageing, but the health care community rarely inquires about dietary concerns or disordered eating, ignoring potentially critical information. While mental health

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clinicians are ill-prepared to address these concerns, medical providers have even less training and exposure to late-life eating disorders. Eating disorders may go undetected until substantial medical and psychological consequences have developed (Sim et al., 2010).

Medical issues for adult women with eating disorders

Regardless of age, eating disorders affect every system in the body. Electrolyte imbalances create risk for cardiac arrhythmias and arrest, while endocrine dysfunction leads to menstrual irregularities, decreased bone mineral density, increased risk for osteopenia and osteoporosis, and a compromised immune system (Mehler & Andersen, 2010; Zerbe, 1999). Eating disorders also cause some unique medical issues for adult women. Depletion of fat stores exacerbates the declining oestrogen level, intensifying menopausal symptoms. The natural neuromuscular decline associated with ageing can accelerate as dieting causes muscle-wasting and reduces the metabolic rate (Holt, 2005). Adults with eating disorders can suffer medical complications quickly, despite long-term medical stability and normal laboratory values, even resulting in sudden death (Carney & Andersen, 1996; Herzog, Deter, Fiehn, & Petzold, 1997). In the elderly, dieting is especially risky (Gupta, 1995; Lewis & Cachelin, 2001), as the mortality risk associated with low weight is greater as people age (Miller & Wolfe, 2008; Tayback, Kumanyika, & Chee, 1990). The cognitive impairment secondary to dieting may also be greater in older patients (Lewis & Cachelin, 2001).

Despite the significant number of adult women suffering from eating disorders, physicians tend to see them as a young person's problem. Based on what we now know, medical providers need to pay special attention to women during and post child-bearing years. All health care professionals, but especially providers in primary care and obstetrics and gynaecology, should be trained to screen, identify, and appropriately treat women with the full range of disordered eating. Adding the following simple screening questions to routine medical visits would help to identify cases and refer for appropriate treatment:

- Has your weight fluctuated during your adult years?
- Are you trying to 'manage' your weight?
- If so, how?
- What did you eat yesterday?
- How much do you think or worry about weight, shape, and food? (Maine, 2010)

Conclusions and future directions for treatment

Adult women with eating disorders often experience an onset or exacerbation of symptoms during developmental transitions including entry to college, career, marriage, pregnancy, divorce, menopause, midlife, retirement, and their later years. Primary care providers who routinely see women through these times of transition must understand and recognise the risk factors for eating disorders, the effect of environmental stressors on these risk factors in producing illness, as well as eating disorder signs and symptoms. In addition to improving the awareness and skills of primary care and mental health providers regarding the increasing incidence of eating disorders in adult women, the field needs to provide more treatment options that meet the requirements of this special group of patients. As adult women may not consider leaving their families and their responsibilities for a protracted period of time, more specialised outpatient options are critical. Additional challenges include insurance reimbursement and access to the appropriate level and type of care, and longitudinal research to track the most effective outreach and treatment

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programmes for adults. These programmes should include support and education for eating-disordered women in their role as mothers to enable them to act as healthy role models and foster healthy home environments for their children. Their partners should also receive psychoeducation about eating disorders and be included in treatment. These women have often remained secretive, shamed and isolated for many years, making group therapy experiences specifically designed for adults with eating disorders another critical service. Too often, these essentials are ignored.

Zerbe (2013) reminds us that, beyond the education and interventions offered, clinicians also need to ask patients for the narrative details of their lives and the role the eating disorder has played, as these stories will open our window on the world of adult eating disorders. Until then, attempts at understanding and treating these deadly disorders will be incomplete.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Exhibit 19

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Summary of Experience and Qualifications

Twenty five years experience developing innovative behavioral health care services and products in private and public sectors with an emphasis on advanced clinical design and sound business planning. History of success in start-up and turn-around situations through concentrated focus on strategic and market analysis, team building, and contract negotiation. A natural leader with consistent energy, good humor, and a thorough understanding of taking advantage of windows of opportunity.

Professional Experience

2003 to Present: President and CEO, Walden Behavioral Care, LLC.

Development of 45 bed private psychiatric hospital providing inpatient partial hospital and intensive outpatient services to individuals with a wide range of psychiatric illnesses including highly specialized treatment of individuals with eating disorders. This hospital is the only new facility of its kind licensed by the Department of Mental Health in the Commonwealth of Massachusetts in over ten years and has rapidly garnered local and national attention for its unique service offerings and pleasant physical surroundings.

1997 to Present: *Principal*, Koman Associates, Winchester, Ma.

Independent consulting firm providing professional assistance to public and private entities to plan, fund, develop, and deliver behavioral health care and related services. Major projects include: development of managed care models for severely mentally ill populations; assessment of administrative and clinical readiness for implementation of Medicaid managed care; management reorganization of hospital-based and community-based systems of care; strategic planning and due diligence related to acquisition scenarios; and time limited and open ended management coaching and support.

1990-1997: *Co-founder, President and C.E.O.*, Choate Integrated Behavioral Care, Inc.,

Stoneham, MA.

1990: Started Choate Health Systems, Inc. - owner and operator of psychiatric hospitals.
1991: Started Choate Health Management, Inc. - owner and/or manager of innovative behavioral health services including acute and sub-acute alternatives to hospitalization, contract management of general hospital psychiatric programs, consultation services to providers and payers (managed care companies, HMO's, state government, private business) and unbundled care management services.
1992: Started Choate Psychiatric Associates, Inc.- multi-disciplinary behavioral group practice.
1995: Sold CHM and CPA to Merit Behavioral Care, Inc.

Taken together, the three Choate entities grew from start-up in 1990 to approximately 40 million dollars in revenue in 1996 and served some 30,000 consumers annually through treatment programs and managed care services operating in ten states.

1989-1990: *President*, Charles River Health Management, Inc., Brighton, MA.
1987-1989: *Vice-President*, Charles River Health Management, Inc., Brighton, MA.
1985-1987: *Executive Director, Contracts Division*, Charles River Hospital, Wellesley, MA.

Conceived and implemented the expansion of a traditional, hospital-based behavioral treatment program into a multi-site, multi-level system of care for disadvantaged children and adolescents. Funded initially as a public sector demonstration project, this effort achieved numerous objectives: first to "privatize" a state hospital service in Massachusetts; first to develop a full continuum of care under one clinical and administrative umbrella; first to implement home health technology in a continuum of this type; first major venture of the Department of Mental Health with a proprietary hospital corporation; and first to implement consumer feedback and outcome data in the treatment and administrative design. In addition, this division (later, a corporate subsidiary) grew from its initial contract in 1985 to approximately 10 million dollars in revenue from contracts and other services in 1990 and was profitable in every year of operation.

1981-1985: *Director, Adolescent Program*, Charles River Hospital, Wellesley, MA.

Chief Psychologist and Administrator of 15-bed adolescent unit of proprietary hospital corporation. Co-designed and developed unique family treatment oriented program. Provided direct treatment in individual, family and group psychotherapy. Initiated multiple family group therapy program. Member of hospital senior management team. Initiated research program to assess consumer and referent satisfaction and implemented programmatic changes to incorporate findings in clinical design. Maintained census in excess of 95% for all years of operation.

1982-1997: *Private Practice, Clinical Psychology*, Winchester, MA.

Education

Ph.D., Clinical Psychology, Duke University, Durham, NC, 1981
Bachelor of Science, Phi Beta Kappa, Trinity College, Hartford, CT, 1976

Licensure, Certifications and Specialty Areas

Certified Health Service Provider in Massachusetts, license # 3046.
Clinical practice focus - family therapy, treatment of addictions, treatment of adolescents, pain management and hypnosis.

Published: Handbook of Adolescents and Family Therapy, Mirkin, M. and Koman, S., Gardner Press, New York, 1986.

Featured speaker in following areas:
- The future of behavioral health care: carve in vs. carve out, vertical vs. horizontal integration, and performance-based reimbursement.
- Developing systems of care in the age of managed care.
- Integrating clinical programs into a system of care.
- New roles for psychologists in the new Millenium.

Professional Affiliations

American Psychological Association
Governing Board: Committee for the Advancement of Professional Practice
Liaison to Task Force on Serious Mental Illness

Massachusetts Psychological Association
American Family Therapy Academy
American Orthopsychiatric Association

Community Activities

Chairman, Board of Directors, Twelve Step Education of New England (1998-2006):
This private, non-profit corporation develops supportive residential environments for individuals recovering from substance abuse disorders. Involved in all aspects of agency development.

Clinical Advisor/Clinical Counselor, A Better Chance (ABC), Winchester, Ma. (1994-present):
This community based non-profit corporation is a chapter of the national ABC, a residential academic program for promising but at-risk youth ages 14-18. Provision of bi-weekly group therapy for students and as needed consultation to residential advisors, host families and Board of Directors.

JAMES GREENBLATT, MD

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EDUCATION

MD George Washington University School of Medicine — May 1985
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BS Bates College — May 1980
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Major: Biology

CLINICAL TRAINING

John Hopkins University School of Medicine — 1988-1990
Baltimore, MD
- Child and Adolescent Psychiatry Fellowship
- Chief Resident: July 1989- June 1990

George Washington University Medical Center — 1986-1988
Washington, DC
- Psychiatry Residency

Sinai Hospital — 1985-1986
Baltimore, MD
- Pediatric Internship

PROFESSIONAL EXPERIENCE

Chief Medical Officer, Vice President of Medical Services — January 2014 – Present
Walden Behavioral Care
Waltham, MA

Medical Director of Eating Disorder Services — October 2012 – December 2013
Walden Behavioral Care
Waltham, MA

Medical Director — July 1993 – Present

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Child and Adult Group Practice
Waltham, MA

Chief Medical Officer Aug. 2003 – May 2011
Walden Behavioral Care
Waltham, MA

Chief of Psychiatry Aug. 2002 – Aug. 2003
Waltham Hospital
Waltham, MA

Medical Director Sept. 2000 – Dec. 2001
Charles River Hospital
Wellesley, MA

Child Psychiatrist June 1996 – June 1998
Harvard Vanguard Medical Associates
Wellesley, MA

Medical Director: Child & Adolescent Day Treatment Program Sept. 1992 – June 1996
Holly Hill Hospital-Pathways Program
Rocky Mount, North Carolina

Medical Director: Child and Adolescent Psychiatry Sept. 1991 – Sept. 1992
Coastal Plain Hospital
Rocky Mount, North Carolina

Child Psychiatrist Aug. 1990 – Sept 1991
Aspen Hill Hospital
Flagstaff, Arizona

HONORS AND CERTIFICATIONS

Medical License (Number: 70333) 1989
Commonwealth of Massachusetts

American Board of Psychiatry and Neurology 1991

American Board of Psychiatry and Neurology Child and Adolescent 1993

ACADEMIC AFFILIATIONS

Assistant Clinical Professor Feb. 2006 – Present
Tufts University School of Medicine
Department of Psychiatry

Clinical Faculty Member 2001 – 2003
Harvard Medical School
Department of Psychiatry

TRAINING OF GRADUATE/POST-DOCTORAL STUDENTS

Child and Adolescent Psychiatry Clinical Rotation Supervisor Sept. 2012 – Dec. 2012
Children's Hospital: Waltham

PUBLICATIONS

Books

Greenblatt, J. M., *Answers to Appetite Control: New Hope for Binge Eating and Weight Management,* Boston, MA: James Greenblatt, 2014.

Greenblatt, J. M., *The Breakthrough Depression Solution: A Personalized 9-Step Method for Beating the Physical Causes of Your Depression,* North Branch, MN: Sunrise River Press, 2011.

Greenblatt, J. M., *Answers to Anorexia: A Breakthrough Nutritional Treatment that is Saving Lives*, North Branch, MN: Sunrise River Press, 2010.

Papers

Greenblatt JM, Sussman C, Jameson M, Yuan L, Hoffman DA, & Iosifescu DV. Retrospective chart review of a referenced EEG database in assisting medication selection for treatment of depression in patients with eating disorders. *Neuropsychiatric Disease and Treatment*, 2011;7(1): 529 – 541

Hoffman DA, Schiller M, Greenblatt JM, & Iosifescu DV. Polypharmacy Or Medication Washout: An Old Tool Revisited. *Neuropsychiatric Disease and Treatment*, 2011 [*In Press*]

NOTABLE DISTINCTIONS AND AWARDS

2011 IBPA *Benjamin Franklin Award* Finalist in the Nutrition/Health/Wellness Category for *Answers to Anorexia*

The Breakthrough Depression Solution translation into Japanese in Fall 2013 by Dr. Akira Chimura

The Breakthrough Depression Solution translation into Chinese in Fall 2013 by REDOX Biomedicine Inc.

RECENT PRESENTATIONS AND INVITED LECTURES

Presentation, *Malnutrition and Technology: Understanding Suicide Risk in Adolescents with Eating Disorders*, Massachusetts Department of Public Health, April 16, 2014.

Presentation, *Malnutrition and Suicide: Understanding Suicide Risk in Adolescent and Adults with Eating Disorders*, IAEDP Sympsoium 2014, March 2, 2014.

Physician Grand Rounds, *Advances in the Treatment and Prevention of Eating Disorders,* Baystate Medical Psychiatry Grand Rounds, January 7, 2014.

Seminar, *Aging: Treatment Perspectives and Challenges*, Harvard Medical School CME Conference, November 1, 2013.

Presentation, *Functional Medicine Approach for the Treatment and Prevention of Depression*, REDOX Biomedicine, October 17, 2013.

Seminar, *Integrative Medicine for the Treatment of Mood Disorders*, Japanese Society for Orthomolecular Medicine, October 13, 2013.

Seminar, *Integrative Treatments for Mental Illness*, Integrative Medicine for Mental Health Conference, September 20, 2013 to September 22, 2013.

Presentation, *Integrative Medicine for the Treatment of Depression,* Harbor Family Services 2nd Annual Conference, August 2, 2013.

Seminar, *A Biomedical Model of the Treatment and Prevention and Mental Illness*, International College of Integrative Medicine 56th Congress, March 15, 2013.

Seminar, *Traditional Psychopharmacology and Nutritional Augmentation: How They Work Together,* Harvard Medical School CME Eating Disorder Conference, December 7, 2012.

Seminar, *Integrative Medicine for Mental Health*, Integrative Medicine for Mental Health London Conference, November 18, 2012.

Seminar, *Addicted to Food: Orthomolecular Solutions to Binge Eating,* University of Toronto Medical School sponsored presentation, October 19, 2012.

Seminar, *Integrative Medicine for Mood and Anxiety Disorders*, Integrative Medicine for Mental Health Conference 2012, September 21, 2012.

Seminar, *Integrative Medicine for Eating Disorders*, Integrative Medicine for Mental Health Santa Fe Conference, September 21, 2012.

Seminar, *Utilizing Nutritional Strategies with the Use of Antidepressants: Augmenting their Effectiveness and Successful Tapering Off Protocols*, Integrative Medicine for Mental Health Conference 2012, September 22, 2012.

Seminar, *Addicted to Food: Integrative Protocols for Binge Eating*, Integrative Medicine for Mental Health Conference 2012, September 22, 2012.

Seminar, *Misplaced Blame: The Role of Dietary Fats in the Treatment and Prevention of Eating Disorders,* International Association of Eating Disorders Professionals Conference, September 14, 2012.

Seminar, *Inflammation and Neuropsychiatric Illness: Treatment and Testing Protocols*, 2012 Orthomolecular Medicine Today Conference: Vancouver, April 28, 2012.

Seminar, *Targeted Nutritional Therapies for the Treatment and Prevention of Anorexia Nervosa*, 2012 Nutrition Health Conference, April 17, 2012.

Seminar, *Integrative Medicine for the Treatment of Depression*, Canadian Society of Orthomolecular Medicine sponsored seminar, October 29, 2011.

Seminar, *Malnourished Minds: The Link between Nutrition and Depression*, Canadian Society of Orthomolecular Medicine sponsored seminar, October 28, 2011.

Seminar, *Nutritional Augmentation Strategies for Depression in Patients with Eating Disorders*, 2011 NEDA National Conference, October 15, 2011.

Seminar, *Malnourished Minds: Integrative Medicine for Mood Disorders*, Cross Country Education sponsored seminar series, September 13-15 and October 4-6, 2011.

Seminar, *Integrative Medicine for Mental Health*, 2nd Annual Integrative Medicine for Mental Health Conference, September 17-18, 2011.

Presentation, *Is Suicide Preventable? Examining Nutritional Markers as Risk Factors for Suicide in Patients with EDs*, 2011 MEDA Conference, May 20, 2011.

Presentation, *An Orthomolecular Approach to Suicide Prevention*, Orthomolecular Medicine Today 40th Annual International Conference, April 29, 2011.

Seminar, *Integrative Medicine for Mental Health*, Integrative Medicine for Mental Health Conference, July 10 & 11, August 14 & 15, November 6 & 7, 2010.

Seminar, *Integrative Medicine for Anxiety, Mood and Eating Disorders*, Canadian Society of Orthomolecular Medicine sponsored seminar, October 30, 2010.

Workshop, *Integrative Medicine for the Treatment of Eating Disorders*, Full day professional workshop, September 25, 2010.

Presentation, *referenced-EEG: New Directions in the Treatment of Eating Disorders*, 2010 MEDA Conference, April 30, 2010.

Presentation, *Neuroactive Peptides in Food: A New Model for the Treatment and Prevention of Eating Disorders*, AHMA/ICIM Spring Conference, March 17, 2010.

Presentation, *Nutritional and Orthomolecular Interventions in the Treatment of Anorexia Nervosa*, Orthomolecular Medicine Today 38th Annual International Conference, May 1, 2009.

Presentation, *Nutritional Interventions in the Treatment of Anorexia Nervosa*, University of Miami Integrative Medicine Symposium & Expo, April 17, 2009.

Workshop, *Malnourished Minds: Integrative and Orthomolecular Treatments for Depression*, Given at University of Miami, Medical Wellness Center, November 7, 2008.

Presentation, *Referenced EEG for Patients with Treatment Refractory Eating Disorders*, National Council for Community Behavioral Healthcare, 38th Annual National Conference, May 2, 2008.

Presentation, *Integrative Treatments for Depression*, Complementary and Alternative Medicine Symposium at University of Miami Medical School, April 29, 2008.

Physician Grand Rounds, *Eating Disorders and Substance Abuse*, Grand Rounds at Children's Hospital Boston, Division of Adolescent Medicine, Outpatient Eating Disorders Program, March 4, 2008.

Physician Grand Rounds, *Integrative Therapies in the Treatment of Depression and Mood Disorders*, Bournewood Hospital Grand Rounds, January 28, 2008.

Paula C. Vass, MSW, LICSW
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Education:

Masters of Business Administration, expected graduation 2015
Concentration in Management
Bentley University, Waltham, MA

Master of Social Work, 1997
Salem State College School of Social Work
Children and Family Services Concentration
Salem, MA

BS Human Services, 1993
Lasell College, Newton, MA

Experience:

Vice President of Clinical Operations 6/12 to Present
Walden Behavioral Care
Waltham, MA

- Executive Member of the Senior Management Team
- Provide direct oversight of the operational management team (nursing, admissions, social work, utilization management, expressive therapies, residential director, and ambulatory program directors)
- Management of approximately a 22million dollar budget. Increased net revenue in 2013 by 5%
- Increased census from 84% in 2012 to 95% in 2013
- Lead the development of the clinical operations throughout the organization
- Strategize with the CEO, CFO, Marketing and Human Resources for the growth and development of the organization
- Develop clinical relationships with collaborative organizations who have interest in the organization (Managed Care Organizations, Colleges, Other Clinical organizations)

Assistant Vice President of Clinical Operations 11/08 to 6/12
Walden Behavioral Care,
Waltham, MA

- Work with executive team on multiple projects (budgets, forecasting, human resources, clinical developments)

- Collaboration with Chief Medical Officer and Vice President on a daily basis regarding the clinical practices within the organization
- Assist marketing as an external representative for the organization
- Developed relationships with managed care companies to be the center of excellence
- Hired and mentored Assistant Director of Social Work
- Developed, hired and mentored Utilization review social worker
- Collaborated in the development of the adolescent track
- Directly continue to oversee admissions and social work throughout the organization
- Supervises the Partial day program, Intensive Outpatient programs and the Residential program
- Provide clinical assistance and consultation throughout the organization on a daily basis.

Director of Social Work and Admissions 8/1/05 to present
Walden Behavioral Care,
Waltham, MA

- Provide supervision to the social work staff
- Manage the social work budget
- Provide guidance, leadership and management to the social work staff
- Administer utilization review committee
- Administer clinical case conferences
- Assist in Program Development
- Manage the census of the organization
- Supervise the intake coordinator staff
- Supervise the evaluations daily that occur in the admissions office.
- Manage the budget of the admissions department

Outpatient Therapist, 4/05 to 6/09
Comprehensive Psychiatric Resources, Inc.
Waltham, MA 02451

- Provide individual therapy on an outpatient basis; specializing in eating disorders, college age population, and family treatment
- Practice within a CBT/DBT treatment model
- Consultation with various mental health providers
- Work directly with child/adult psychiatrists

Psychiatric Triage Clinician/Case Management, 11/03-3/05
Walden Behavioral Care
Waltham, MA 02451

- Evaluator of psychiatric, substance abusing and eating disorder patients
- Determine level of care for patients
- Consultations with psychiatrist and other mental health providers

- Triaging phone calls
- Completing written evaluations of each patient including diagnosis and mental status exam
- Present clinical rational to insurance companies for preauthorization
- Provide ongoing case management for inpatient psychiatric patient, inpatient eating disorder patients and partial hospitalization patients
- Conduct concurrent insurance reviews for reimbursement
- Complete written psychosocial evaluations and treatment plans

Other Experience:

- ***Clinical Psychiatric and Addictions Evaluator, 3/98 to 6/03*** (hospital closure)
  Deaconess Waltham Hospital, Waltham, MA
- ***Supervisor, Assessment Worker, Intake Work and Case Manager 1993 to 1999***
  Department of Social Services, Salem, MA

Associations:

- NASW member since 1996
- MEDA
- Provider Advisory Committee, Beacon Health Strategies

Other Academics:

- Harvard Extension, Fall 2011
  Business Writing Course

Rebekah Bardwell Doweyko, M.Ed., LPC

Licensed Professional Counselor (Lic. # 002067)
99 Turkey Hill Road
Chester, CT 06412
(860) 322-4364
BekahBard@gmail.com

Summary of Skills

Successful professional record encompassing 14 years of experience including comprehensive program development, supervision, intense individual, group, couples, and family therapy; academic support, crisis counseling, utilization management and care management. Ability to demonstrate standards of practice in accordance with JCAHO, Medicaid and Medicare regulations. Additional areas of experience include: Meal Support Therapy, CBT, DBT and Art Therapy as well as impeccable documentation skills. Hand selected to participate in the Emmy Nominated HBO Documentary "THIN", syndicated Florida local TV segment, "Ask The Specialist" and CT local TV segment WHPX-TV "For The Record" with Shawn Murphy. Subject of published book titled "One Life", author of foreword for published book titled "Maintaining Recovery from Eating Disorders". Areas of concentration: Eating Disorders, Substance Abuse, Depression, Anxiety, Bipolar Disorder, Severe sexual/physical trauma, Dissociative Identity Disorder, Schizophrenia and Academic Challenges.

Professional Experience

Walden Behavioral Care *South Windsor, CT* 07/13-present
Program Director

- Responsible for all clinical and administrative oversight of Walden's partial hospitalization and intensive outpatient programs for adults and adolescents with eating disorders.
- Interviews and hires all program staff.
- Manages facility budget.
- Collaborates with ECHN and medical staff to implement program activities and treatment services.
- Complies with all organizational and regulatory agency standards.
- Oversees training of all clinical staff and interns as well as all office professional activities.
- Supervises program clinicians and staff in day-to-day operations.
- Participates in/facilitates across site treatment team, curriculum, operations, and training meetings.
- Provides outreach and consultation with other Walden programs, outpatient providers, and the surrounding communities
- Implemented new Binge Eating Program for South Windsor site.
- Developed and implemented an Alumni Support Group for S. Windsor site.

Connecticut Behavioral Health Partnership *Rocky Hill, CT* 02/11-07/13
Intensive Care Manager 07/12-07/13

- Assisted providers in treatment and discharge planning for members that have been identified as high utilizers of Inpatient Hospitalization, Inpatient Detox, or for those who are determined to need a higher touch to assist with Emergency Department discharge planning using a multidisciplinary team approach.
- Designated Eating Disorder specialist managing cases with complex Eating Disorder issues with a focus on education, utilization review, and appropriate treatment and discharge planning.
- Met with Providers and members to discuss a member's history and current course of treatment in order to collaborate on the most appropriate treatment and discharge plan.
- Provided coverage as an interim ICM for children at PRTF Boys and Girls Village.
- Lead of CORE Clinical Training program as a member of the Training and Development Committee for 2013.
- Presented on outcome of Intensive Care Management Strategic Planning Group in Town Hall Meeting.
- Conducted a Clinical Training on Eating Disorders, Clinical Documentation and ICM Referral criteria to Clinical Staff.
- Represented the Clinical Department in McKesson Rounds in order to facilitate communication between McKesson nurses and Clinical staff to ensure that our members were receiving continuity of care.
- Reviewed literature and advised Achieve Solutions Managing Editor on relevant Eating Disorder material for inclusion into Monthly Mental Health Topic for public sector.
- Region 2 Trainer for new staff.
- Participated in complex case rounds to discuss length of stay, appropriateness of interventions, recommendations, utilization of resources, treatment planning and discharge planning with M.D. in order to maintain continuity of care.

- Contributed to planning employee events as an active member of the CARES team.

Clinical Care Manager 02/11-07/12

- Performed clinical reviews and aftercare planning for Medicaid members including evaluation, assessment and determination of appropriate levels of care.
- Assessed effectiveness of level of care, medications, treatment planning and discharge plans.
- Collaborated with providers, specifically Yale Pediatric and Adolescent Inpatient providers to improve treatment planning and discharge plans with the outcome of decreasing length of stay according to quarterly reports.
- Collaborated with providers to determine alternate levels of care when appropriate, and to facilitate transfers to network facilities and providers whenever possible.
- Facilitated coordination of care with Intensive Care Managers to assure continuity of care.
- Evaluated clinical appropriateness of treatment using professional knowledge within VO clinical and worksite guidelines.
- Rendered certification decisions and seek consultations with Psychiatrists via consult or rounds for non-certification decisions.
- Selected to join IICAPS team with an outcome in reducing length of stay and increasing the number of providers eligible for bypass program.

Private Practice * Chester, CT and Fort Lauderdale, FL* 07/07-7/2013
Psychotherapist

- Focused Child/Adolescent/Adult/Family practice on the mission of empowering people and families to change their lives.
- Specialized in Eating Disorders and Addictions.
- Lead support group for those pre and post Bariatric Surgery
- Composed the foreward for published book "Maintaining Recovery from Eating Disorders" by Naomi Feigenbaum.
- Participated in the on-line review of abstracts for the iaedp™ (International Association for Eating Disorder Professionals) Symposium 2011.
- Educated Pine Crest High School Students on Eating Disorders.
- Educated parents at the Jewish Community Center on promoting healthy body image in the home.
- Educated the Gay and Lesbian student community at the Gay and Lesbian Community Center (GLCC) on Eating Disorders and Substance Abuse in the LGBT community.

Hollywood Pavilion IOP *Hollywood, FL* 05/09-02/11
Founder and Program Director for Intuitive Eating Program

- Founded and worked as Program Director of The Intuitive Eating Program.
- Developed Intuitive Eating Program for IOP level of care.
- Hired and trained staff and Registered Dietician for Intuitive Eating Program.
- Marketed for Eating Disorder program.
- Designed Men's, Women's and pre/post Bariatric surgery curriculum and support groups.
- Recipient of Service Excellence Award
- Lead weekly individual Treatment Team meetings.
- Provided group therapy in an Intensive Outpatient setting for patients with severe mental illness.
- Performed case management of Medicare patients, including ongoing assessment of goals, overall direction of treatment, handling of clinical crises, and utilization management.
- Executed Baker Acts and State mandated victim reports.
- Conducted comprehensive treatment planning, reporting and communication within a team approach including the ability to carry out peer reviews with identified insurance companies in order to advocate for the support of a patient's treatment needs.

The Renfrew Center *Coconut Creek, FL* 12/05-05/09
Eating Disorder Specialist/Primary Therapist

- Provided intense individual, couples, and family therapy for a caseload of eight women and adolescents struggling with Eating Disorders.
- Conducted a multitude of groups in alternative therapeutic modalities to accommodate treatment spectrum including DBT, CBT, art therapy, substance abuse tracks, spirituality tracks, sexuality groups, body image, and family support groups.
- Provided academic planning support/correspondence for high-school and college-aged students who maintained enrollment despite being in treatment.
- Managed patient milieu, including ongoing assessment of goals, overall direction of treatment, and handling of any clinical crises.
- Performed state mandated victim reports.
- Trained and supervised Post-Doctoral residents, practicum students, and interns.
- Maintained comprehensive treatment planning, reporting and communication within a team approach including the ability to carry out peer reviews with identified insurance companies in order to advocate for the support of a patient's tx needs.
- Designed, presented, and implemented new Meal Support Therapy program, and Intimacy and Sexuality groups.
- Selected to participate in Family Weekend and Training Needs Performance Improvement Teams.

The Renfrew Center *Coconut Creek, FL* 11/03 - 06/07
IOP Therapist

- Facilitated psychotherapy groups for women with Eating Disorders needing intensive outpatient treatment addressing issues such as body image, trauma, identity, interpersonal relationships, self-esteem, and Eating Disorder symptomotology.
- Specialized in Eating Disorders and Substance Abuse
- Facilitated weekly Multi-Family Therapy groups.
- Provided meal support including redirecting ritualistic behaviors, monitoring conversation, and encouraging completion of the meal.
- Case management of patients included documentation, ongoing assessment of goals, and handling of any clinical crises.

The Caron Renaissance Institute of Boca Raton *Boca Raton, FL* 08/05-12/05
Substance Abuse Specialist

- Trained in and proficient in applying The Psychodynamic Approach to Addiction Treatment.
- Participated in Family Weekend, an intense three-day workshop for patients and their families.
- Provided case management and linking services in a way that provides the patient opportunities to make choices, and experience consequences, thus creating self-accountability. Individual/family therapy, grief counseling, crisis intervention, assessment/diagnosis, and treatment planning.
- Responded to emergency 24 hour a day on call services.
- Facilitated specialized groups such as Body Image, Relapse Prevention, HIV, Hepatitis C, and Life Management.
- Implemented addictions model, 12-step program, and relapse prevention.
- Provided educational in-services on various aspects of addiction and therapy covering physiological, biological, psychological approaches

The Renfrew Center *Coconut Creek, FL* 02/03-08/05
Counselor - Evening/Weekend Manager

- Supervised 20 counselors and psychiatric technicians for the purpose of maintaining consistency and accuracy for client needs, interviewing prospective employees, scheduling, chairing employee meetings, and maintaining productive employee relations.
- Provided clinical support and supervision to mental health technicians in order to facilitate quality of care and "best practice" standards that are congruent with the individualized treatment plan of each patient.
- Worked with the counseling center at Florida Atlantic University to provide education to students to promote mental health.
- Designed, presented, and implemented Real-Life Excursion group for women and adolescents with Eating Disorders, a group which continues to be a favorite among the patients, in order to facilitate the transition from inpatient treatment back into the community.
- Designed and implemented an Advocacy tradition where the higher level patients share their stories of experience, strength, and hope with other patients.
- Facilitated daily psychotherapeutic groups such as body image, assertiveness, self-esteem, advocacy, anger expression, team building, women's issues, tools for coping, exercise, self-nurturance, and substance abuse.
- Documented and planned for continued care using the DAP format.
- Provided 1:1 care for individuals in crisis needing intervention.

Alternatives In Treatment * Boca Raton, FL*
Primary Therapist Intern 1/02-10/02

- Completed assessments of functioning, diagnoses, and development of treatment plan.
- Provided family therapy, group therapy, and psychotherapy to adults in treatment for chemical dependence.
- Negotiated with commercial insurance companies for the purpose of obtaining client reimbursement.
- Designed individualized treatment plans, integrated summaries, progress notes, discharge summaries, and aftercare plans for individual clients.
- Increased patient base by 75% over an eight month period.

Women In Distress * Fort Lauderdale, FL * 09/00-05/01
Primary Therapist Practicum Student

- Facilitated individual and group therapy for children, adolescent, and adult victims of Domestic Violence.
- Provided services such as intakes, individual and group sessions, documentation, and correspondence with The Department of Children and Families.
- Completed a 20-hour training course in Domestic Violence.
- Conducted individual counseling, crisis intervention, and on-site family therapy.
- Assisted clients through appropriate legal channels.
- Completed case-notes, patient reports, telephone contacts, agency liaison, and treatment planning.
- Presented patient cases at treatment team meetings; including high-risk assessment, medication advocacy, suicidal precautions, continuity of care, and family involvement.

The Renfrew Center * Coconut Creek, FL* 10/99 -10/01
Psychiatric Technician

- Provided services for adolescents and women with Eating Disorders, Depression, Anxiety, Trauma, and other various mental health issues.
- Responsibilities included: Admitting new patients, signing consent forms, taking weights and vital signs, monitoring meals, and facilitating group sessions.

Education, Certification, and Training

Licensed Professional Counselor-CT#-002067

Pending Certification Alcohol and Drug Counselor * Completed supervision and cluster courses required for FL certification

INTERNSHIP (01/2002 – 10/2002)
Alternatives in Treatment

PRACTICUM (09/2000 – 05/2001)
Women In Distress

Florida Atlantic University * Boca Raton, FL
Masters of Education in Mental Health Counseling GPA: 3.9
Bachelors of Arts in Psychology

Publications

- Foreword for "Maintaining Recovery From Eating Disorders" by Naomi Feigenbaum
- Therapy techniques and interventions highlighted in "One Life" by Naomi Feigenbaum
- "Relationship Do's and Don'ts" in Psychology Today by Dr. Jamie Long

Television & Film

- Appeared in "THIN"-Emmy Nominated HBO Documentary directed by Lauren Greenfield-2005
- Selected to participate in "Ask The Specialist"-Vision Broadcast Network-2009
- Interviewed for WHPX-TV segment "For The Record with Shawn Murphy"-2014

Presentations

- Tolland County Dental Society-Eating Disorders, Dental Complications and how to support/refer for services-10/2014
- Value Options-Eating Disorders and DSM-V changes-6/2014
- SCSU Counseling Society-Eating Disorders, DSM V Diagnoses and Walden's Services-5/2014
- ECHN Community Continuing Education-Eating Disorders: signs and symptoms and Walden's Services-4/2014
- Middlesex Hospital-Psychiatry Residents- Eating Disorders and Walden Services-12/2013
- Manchester Memorial Hospital-Inpatient Behavioral Health Unit Staff- Eating Disorders and Walden Services-10/30/2013
- UCONN-Student Health Center Staff- Eating Disorders and Walden Services-10/10/2013
- John Dempsey- Inpatient Behavioral Health Unit Staff-Eating Disorders and Walden Services-9/2013

- Peer Specialist Staff-CTBHP-Clinical Documentation-02/2013
- Clinical Staff -CTBHP – Eating Disorders 101 and using the Eating Disorder Complex - 09/2012
- Town Hall Meeting-CTBHP-ICM strategic planning group overview- 08/2012
- Hollywood Pavilion-Intuitive Eating Program and Eating Disorder Intervention – 12/2010
- Post Bariatric Surgery patients Memorial Hospital: Binge Eating Disorder and Intuitive Eating – 02/2010
- Employee Assistance Professionals of South Florida- Eating Disorders and Intuitive Eating- 01/2010
- Pine Crest High School - *Investigating* THIN: Eating Disorders 101 - 03/2009 & 02/2010
- Jewish Community Center – Promoting Healthy Body Image in The Home – 11/2008
- Gay and Lesbian Community Center (GLCC) – Eating Disorders in Gay Men and Lesbian Women – 08/2007

Special Honors

- Awarded Connecticut Hospital Association's Community Service Award for 2013 as part of CCT of Middlesex Hospital
- Inducted into Chi Sigma Iota, The International Honor Society in Mental Health Counseling.
- Dean's List recipient

Affiliated Associations

- American Counseling Association
- International Association for Eating Disorder Professionals

Interests

- Member of Alpha Xi Delta sorority- Vice President and Rho Chi
- Scuba Diving-PADI certified
- Intramural Softball
- Figure Skating
- WAKA Kickball

Lawrence R. Behan

5 Mallard Road Acton, MA 01720
LRBehan@earthlink.net (978) 621-1072

Executive Profile

Seasoned finance and administration executive with significant healthcare experience in both the private and public sectors. Technology-savvy, solutions-oriented leader with record of achievement in the following areas:

- Budgets & Forecasting
- Strategic Planning
- Controllership & Audit
- IT Systems & Strategies
- Administration & Billing Operations
- Facilities Management

Professional Experience

Walden Behavioral Care, Inc. – Waltham, MA 2012 – present

VICE PRESIDENT ADMINISTRATION & FINANCE - CHIEF FINANCIAL OFFICER

Member of Executive Team reporting to CEO, manage all fiscal, administration, facilities and information technology operations of a privately held, for-profit $25M specialty behavioral healthcare organization. Provide operational support to clinical programs delivering services within a full continuum of care including inpatient, residential, partial hospitalization and intensive outpatient milieus. Populations served include female and male adolescents and adults with eating disorders (anorexia to obesity) and other psychiatric issues including mood disorders, depression, bipolar and obsessive compulsive disorder.

- Daily operational and strategic leadership on all aspects of patient billing, revenue cycle management, monthly accounting processes. Lead communication and analysis of financial results, operational metrics with Executive Team and clinical leadership. Manage all audit relationships, including consolidated corporate, 401k, Medicare/Medicaid cost report submissions.
- Increased liquidity and cash availability via comprehensive reorganization of Patient Billing department, reducing DSO by 5 days. Company is current on state and federal tax payments for first time in its history.
- Review reimbursement contracts with commercial insurance payers; negotiate individual case agreements with clinical leadership.
- Executive sponsor for the implementation of company's first electronic health record and billing software platform. Led vendor evaluation and selection process, negotiated contracts. Project on track to meet ICD-10 implementation deadline.
- Provide financial and operational models for all new business development initiatives. Developed five-year projections and strategic planning roadmap for company expansion. Negotiated purchase and sale agreement on 29 acre site for proposed for new inpatient and residential campus.
- Developed operating agreement for joint venture with minority partner, a healthcare network in Connecticut. Assure timely reporting and communication between entities, lead quarterly board meetings.
- Manage relationships with banking partners. Successfully increased revolving line of credit from $1M to $2.5M with no change in covenants. Negotiated the removal of CEO's personal guarantee as security collateral on lending agreement.
- Sourced investment banking partner and lead executive process to develop prospectus seeking minority capital raise in private equity markets. Secured $6M in mezzanine debt from private equity partner. Recapitalized balance sheet and retired all sub debt and final principal tranche of original investor three months early.
- Implemented company 401k plan that meets Safe Harbor requirements, including company match.
- Developed budget process that incorporates operational expense metrics to meet seasonal and variable staffing models.

University of Massachusetts Medical School – Worcester, MA 2011 – 2012
Department of Psychiatry

SENIOR DIRECTOR - SENIOR ACADEMIC ADMINISTRATOR

Reporting to the Chair of Psychiatry, responsible for the management of all financial and administration operations supporting the clinical, research and teaching missions of a complex academic department, with over 2,000 staff, 300 faculty and a $60M medical center service line. Direct oversight of 50+ staff in the following business units: Academic Research Administration, Clinical Administration, Communications, Continuing Medical Education, Global Initiatives, Foundation and Community Engagement.

- Direct the development and management of the department's finances related to the Medical School, Medical Group and UMass Memorial Psychiatric Service Line. Responsible for the annual budget, integrating school and clinical finances to ensure all activities are appropriately resourced.
- Nominated by the Dean and the Vice Chancellor for Administration and Finance to serve on Consolidated Service Evaluation Council, an initiative charged by the Chancellor to examine business processes and recommend university-wide opportunities for operational efficiencies.
- Oversee all Faculty and Staff recruitment activities and timely preparation of performance and merit documentation. Liaise with Vice Provost of Faculty Affairs on faculty promotions and tenure tracking.
- Redesigned department recruitment processes linking clinical and school systems. Created database for vacancy notification, budgetary approvals, signature routing, search committee standards, CV tracking, statistical compilation for EEO/Diversity, credentialing of clinical hires, and all on-boarding tasks.
- Oversee the department's internal and external communication strategy, including web, print and social media. Manage the department annual report process, including content and statistical validation.
- Developed strategies for department philanthropy plan, building upon Medical Center's 'Grateful Patient' campaign. Linked public forum topics and quarterly newsletter to potential philanthropy initiatives. Created draft for future capital campaign planning, case statements and fundraising goals.

Commonwealth of Massachusetts – Boston, MA 2003 – 2011

Department of Mental Health 2006 – 2011

DEPUTY COMMISSIONER and CHIEF FINANCIAL OFFICER

Manage the financial, administrative and technology infrastructure of a $650M state health care agency with over 30 offices, 5 community mental health centers and 3 inpatient hospitals totaling 3,500,000 square feet on over 500 acres. Direct a team of executives overseeing 100 staff providing finance, human resources, information technology and facilities services (including food service and campus security) to 3,500 employees and 25,000 clients. Over $100M in annual revenues generated via direct insurance billing, Rehab Option and Home & Community Based Waiver.

- Developed multi-year strategy and prepared budgets that provide maintenance of agency operations in critical service delivery areas. Direct ownership of entire agency expense and revenue accounting, federal grant reporting, trust funds and all statutory reporting requirements including GAAP, GASB, ARRA.
- Drafted proposal resulting in Governor's recommendation of $14M in Federal Stimulus funding for community placements.
- Implemented work group that developed updated agency Internal Control Plan. Plan defines financial operational processes, segregation of duties and managerial responsibilities, resulting in clean audit findings by several oversight agencies.
- Negotiate contracts with several academic research institutions providing psychiatric residency training services and ongoing attendant physician workforce.

- Member of Executive Management Team, provide fiscal guidance and routine reporting to Legislative committees, Statewide Advisory Council, program operations and stakeholder industry groups. Manage external audits and interagency relationships.
- Successfully secured lease financing and implemented a complete upgrade of the agency's aging technology infrastructure, including 4,000 desktop computers, 25 application servers, 100 file servers.
- Directed the implementation of an enterprise wide electronic medical record technology platform.
- Implemented utilization review process for over $300M in purchase-of-service vendor contracts. Reduced year end reversions by $400K through realignment of service resources.
- Led internal team that developed agency Business Continuity/Disaster Recovery plan. Collaborated with MEMA and FEMA on communication and deployment strategies.
- Launched pilot site for industrial bio-diesel fuel program at one of the agency's largest physical plants. Site received Green Pioneer Award as second largest user of bio-diesel fuel among award winners, and the only recipient to use the fuel for heating purposes.
- Directed the internal master planning team in conjunction with Division of Capital Asset Management (DCAM) on multiple ongoing capital projects, including:

  - bond funding, design and construction of a new psychiatric hospital in Worcester ($280M)
  - renovation of inpatient units at Solomon C. Fuller Community Mental Health Center ($10M)
  - purchase and renovation of several free standing properties for reuse as residential group homes

Committee for Public Counsel Services

CHIEF FINANCIAL OFFICER 2003 - 2006

Member of the Executive Management Team, reporting to Chief Counsel. Manage several professional and support teams (20+ staff) for a $170M state agency providing court assigned legal representation to indigent clients. Direct the day-to-day operations in finance, administration, facilities and information technology services for 400 employees and 30 statewide offices.

- Developed several balanced budgets that meet the agency's core mission, despite a 15% cut in operational appropriations. Provide accurate and timely financial information to Committee and Chief Counsel.
- Direct the opening of 15 new district offices including RFP design, bid selection, construction build-out, furniture/equipment install and final occupancy. Successfully negotiated amendments to several office leases, saving 12% ($850K) in rent expense over the term.
- Managed the design and implementation of a secure web portal processing over 250,000 invoices annually from more than 3,000 third party vendors, eliminating a paper intensive process.
- Developed charter and reporting process for a 501(c)(3) entity providing funding mechanism for Youth Advocacy & Juvenile Justice Program within several inner city public defender offices.
- Created comprehensive data analysis unit providing critical real-time information for expense forecasting. Prepare and analyze monthly reporting against legislative appropriations.

Davox Corporation (now known as Aspect Software) – Westford, MA 2000 - 2002

DIRECTOR OF INTERNATIONAL FINANCE & OPERATIONS

Reporting to EVP, managed the international business and finance operations for a $100M software company with operating subsidiaries in 10 countries. Managed all non-US finance and sales operational activities and developed an infrastructure that helped increase international revenues by 25% to $34M.

- Established new subsidiary offices in six countries (Australia, Japan, India, Holland, Germany, and Brazil). Managed the local regulatory incorporation process, banking and statutory tax setup, staff hiring, facilities build-out, purchasing, IT infrastructure and HR. Routine global travel as primary liaison at Corporate HQ for all international finance, operations and logistics issues.
- Developed international operations employee policies and procedures. Established sales quotas, designed compensation plans and implemented benefit programs for new subsidiary operating units.
- Prepared Quarterly Business Review and delivered routine presentations to Board of Directors. Analyzed proposed international acquisitions/divestitures and developed financial decision models.
- Managed the annual international financial planning and budget process. Developed metrics to analyze performance and monitor variance to strategic operating plan. International project director for Hyperion Pillar budgeting platform software implementation.

Global Knowledge Network, Inc. - Burlington, MA 1998 - 2000

ASSISTANT TREASURER

Reporting to Vice President, directed a global treasury and risk management operation for a $200M technology education company, with subsidiaries in 18 countries. Managed staff at the Corporate and European Finance Centers and acted as liaison to private equity partners' treasury group (Welsh, Carson, Anderson & Stowe).

- Managed all global banking relationships, insurance programs (liability, casualty, Directors & Officers), hedging and cash investing activities. Secured $10M in additional equity capital and increased Revolving Line of Credit. Implemented a global treasury IT system that increased working capital by 20% through cash concentration and foreign exchange management. Reduced bad debt and worldwide DSO by 10 days.
- Performed field audits and due diligence activities for several acquisitions valued over $100M. Implemented operational changes at an acquired subsidiary that mitigated a $2M risk exposure. Directed the conversion of a multi-site general ledger and budgeting enterprise wide software platform to corporate systems from an acquired subsidiary.

State Street Corporation - Boston, MA 1997

SENIOR CORPORATE TRUST MANAGER

W.R. Grace & Company - Lexington & Cambridge, MA 1990 - 1997

FINANCE MANAGER 1995 - 1997
CREDIT & COLLECTIONS MANAGER 1992 - 1994
TECHNICAL SPECIALIST 1990 - 1992

Nagog Development Company - Acton, MA 1986 - 1990

BUSINESS MANAGER

Education

Suffolk University Boston, MA	Masters in Business Administration Concentration in Finance	1997
Northeastern University Boston, MA	Bachelor of Science in Economics Certificate in Finance & Accounting	1995 1985

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Tel: (978) 658-2131 Fax: (978) 988-8833 Email: mmoran@kidsterrain.com

EXPERIENCE SUMMARY

An innovative ability to develop programs that meet the health care service demands and market those programs to meet the demands of the health care environment.

PROFESSIONAL HIGHLIGHTS

KidsTerrain **2000-Present**

PRESIDENT/CEO

Co-Founder of innovative child, parent, and teacher Communication Company for children aged 4-10. Authored and published 4 children's stories, developed an interactive web site, provide programs, workshops and seminars for children, parents and teachers dealing with issues ranging from self-esteem, bullying, stress management, communication and coping, to name a few.

Moran & Associates **1998 - Present**

PRINCIPAL

Providing consulting services to Providers, MCOs and Organizations on Managed Care Readiness, Clinical Trainings (MDs, Psychologists, RNs, and LICSWs), Proposal Development, Program Design and Development, Marketing and Sales, Network Positioning Opportunities, Reimbursement Strategies and Negotiations and MCO Vendor Selection. Providing training on stress management and specific wellness programs.

Choate Health Systems/Choate Health Management, Inc. 1990-1998

SENIOR VICE PRESIDENT, MARKETING AND PROGRAM DEVELOPMENT

- Maintained 90% of customer retention of current contracts.
- Secured 2nd out of state hospital management contract; after hours managed care support services contract for Pilgrim Behavioral Healthcare and subsequently, Harvard Pilgrim Healthcare; and several major consulting contracts both instate and out of state.
- Appointed Board Member of Association Ambulatory Behavioral Healthcare.
- Conducted managed care readiness assessments at 15 sites.
- Developed reimbursement strategies with the CFOs at 15 sites.

VICE PRESIDENT, MARKETING AND PROGRAM DEVELOPMENT

- Secured over 40 managed care contracts; 12 major management contracts; the 1st out of state hospital management contract; MHMA (Managed Medicaid) contract for Dual Diagnosis patients/clients; and the after hours managed care contract for MHMA and BCBSMA.
- Developed both a 3-year marketing plan for Choate with subsequent amendments and 15 marketing plans for each of the contracted management sites both instate and out of state.
- Developed an account manager position for the out-of-state providers.

- Directed the MIS Task Force in establishing MIS needs, goals and objectives for the organization.
- Directed the development of extended systems of care management contracts for 2 major providers.
- Participated in the development of 15 systems of care for the psychiatric and chemical dependent patient population.
- Directed an effective customer retention program resulting in retaining 100% of the original customers over several years.
- Developed marketing strategies in terms of feasibility, desirability, and cost benefit to the organization.
- Participated in managed care training programs for Choate staff.
- Developed all communication and marketing materials for the organization.
- Participated in the development and implementation of a case rate pilot project with Mental Health Management of America (MHMA).
- Chaired the MIS Task Force.
- Developed a rate schedule for all managed care contracts.
- Chaired Child & Adolescent Task Force.

CHIEF OPERATING OFFICER

- Developed staffing patterns for 8 alternative delivery systems.
- Managed a staff of 75 and a $4ml. budget.
- Directed several task force groups, i.e. Managed Care Utilization Review and Quality Assurance.
- Ensured the delivery of high quality patient care and developed appropriate training programs for staff.
- Monitored the process of transition of patients from one system of care to another.
- Provided managed care training throughout the organization and positioned the organization to be managed care ready.

BlueCross/BlueShield of MA, Inc., Boston, MA 1979 - 1990

DIRECTOR, BENEFIT MANAGEMENT PROGRAMS

- Directed all of the company's utilization management programs.
- Managed an $11 million dollar budget and a staff of 180.
- Developed new programs for cost containment.
- Developed a corporate strategic plan for utilization review.
- Directed the benefit management programs for major product lines.
- Developed and directed a specialized unit for the review of psychiatric and substance abuse treatment. This program was evaluated by a National Medical Audit firm and was compared to the best program audited by the National firm.
- Developed a comprehensive utilization management program for major national accounts.

- Participated in several national task forces on psychiatric/chemical dependency process; guideline development and implementation; individual case management protocols and discharge planning initiatives.

MANAGER, MASTER HEALTH/PLUS

- Managed the first freedom of choice managed care program for BlueCross/BlueShield of MA, Inc.
- Effectively performed centralized management of over 70 professionals located in nine regional offices.
- Managed a budget in excess of $3 million dollars.

ASSISTANT MANAGER, SUPERVISOR
AND MEDICAL REVIEWER POSITION

Additional Experience

- Charge Nurse, McLean Hospital.
- Director of Health Services for 5 communities under the Head Start Program.
- School nurse and staff nurse positions (specializing in pediatrics and psychiatry).

Education

- Emmanuel College, Boston, MA 1992
  - Master of Science, Health Services Administration
- Emmanuel College, Boston, MA 1978
  - Bachelor of Science in Psychology
- Catherine Laboure' School of Nursing, Boston, MA
  - Diploma in Nursing
- Graduate courses in counseling.
- Course work in management practices and performance management.

Publications

- Best, L., Hartman, E., and Moran, M. (1996) "How One Managed Care Organization Collaborated with Providers to Create a Public Sector Continuum of Care". Continuum The Journal of the Association for Ambulatory Behavioral Healthcare. Volume 3, 2, Pgs. 73-84. San Francisco; Jossey-Bass, Inc.

Kiser, L., Moran, M. Access to the System of Care, The Integrated Behavioral Health Continuum, Theory and Practice. Edited by Kiser, Laurel J, Lefkovitz, Paul M, Kennedy, Lawrence L. Washington, DC, London, England, American Psychiatric Publishing, Inc., 2001, p 69-89.

Associations

- Suffolk University Task Force to develop marketing healthcare curriculum for both undergraduate and graduate programs. 1995 - 1997
- American Association Partial Hospitalization Task Force to develop levels of care for outpatient programs. 1992
- BlueCross/Blue Shield Association National Committee on Second Surgical Opinion Programs. 1986-1988
- BlueCross/BlueShield Association National Committee on Psychiatric/Chemical Dependency Programs. 1984-1989

Memberships

- Woburn Coalition on the Prevention of Drug & Alcohol Abuse in Adolescents 1990-1995.
- American Hospital Association Marketing and Public Relations Organization.
- Winchester Elders Professional Group 1990-1998.
- Museum of Fine Arts.
- Kennedy Library.
- National Association of Female Executives.
- Employee Assistance Programs Association (EAPA) 1990-1998.
- Association of Ambulatory Behavioral Healthcare (AABH).

Faculty

- Association Ambulatory Behavioral Healthcare (AABH). 1991- 1998
- Institute for Behavioral Health (IBH). 1995

Special Review Panel Member

- U. S. Healthcare 1993-1997.
- Utilization Management Associates, Inc. 1994-1996.

Participant

Office of Managed Care (OMC) with the Center for Substance Abuse Prevention (CSAP), Washington, D.C.- Train the Trainer Program 1993-1998.

Consultant

- William M. Mercer, Inc. 1992-1995
  San Francisco, California.

Board Member

- Network Defenders, Inc. Marlborough, MA. 1995 -1997.
- Association of Ambulatory Behavioral Healthcare. 1994 -1997.

Presentations

Parent Teacher Communication; Listening and Talking With Kids; Teachers and Parents Find Their Magic; Play Dates: Inclusion vs. Exclusion; Stress Management - KidsTerrain -Multiple Parent & Teacher Workshops In MA – January 2002 to March, 2004.

Winter Wellness – Quadrant Health Strategies- Concord, MA – October 29, 2001.

Joining or Forming A Network: Making It Happen – Association of Ambulatory Behavioral Healthcare, - Alexandria, VA. – February, 1998.

Managed Care Preparedness – Grand Rounds, The Waterbury Hospital, - Waterbury, CT –January 1998.

Developing Integrated Behavioral Healthcare Networks - Association of Ambulatory Behavioral Healthcare - New Orleans, Louisiana - February 1997.

Establishing a Successful Continuum of Ambulatory Mental Health Services - Association of Ambulatory Behavioral Healthcare - Fort Worth, Texas -November 1996.

Managed Care & Patient Care - Are They Mutually Exclusive? - Association of Ambulatory Behavioral Healthcare - Minneapolis, Minnesota - August 1996.

Medicare Managed Care - Public & Private Integration - Institute for Behavioral Healthcare - May 1996.

Keynote-Systems of Care-Ohio-Association of Ambulatory Behavioral Healthcare May 1996.

Establishing a Successful Continuum of Ambulatory Mental Health Services - American Association for Partial Hospitalization, Inc. - Philadelphia, Pennsylvania - 1996.

Establishing a Successful Continuum of Ambulatory Mental Health Services - American Association for Partial Hospitalization, Inc. - San Francisco, California - 1995

How to Structure and Manage Medicare Systems of Care - Institute of Behavioral Health, Dallas, Texas – 1995.

Managed Care: Mandate or Choice, American Association of Partial Hospitalization, Inc. Denver, CO – 1995.

Establishing a Successful Continuum of Ambulatory Mental Health Services - American Association for Partial Hospitalization, Inc. - Boston, Massachusetts - 1995.

Establishing a Successful Continuum of Ambulatory Mental Health Services - CA American Association for Partial Hospitalization, Inc. - Sacramento, California - 1995.

Developing Systems of Care - Beverly Hospital - Beverly, Massachusetts – 1995.

Integrated Systems of the Future - National Association of Social Workers (NASW) - Empowering Social Workers in the Changing Health Care Environment - Boston, Massachusetts - 1994

Systems of Care for Children and Adolescents - Orthopsychiatric Conference, Washington, D.C. 1994.

Establishing a Successful Continuum of Ambulatory Mental Health Services - American Association for Partial Hospitalization, Inc. - Fort Lauderdale, Florida 1994.

Establishing a Successful Continuum of Ambulatory Mental Health Services - American Association for Partial Hospitalization, Inc. - Atlanta, Georgia 1994.

Focus Applications of CQI in Psychiatric Services National Association Quality Assurance Professionals New York City, 1993.

Alternative Delivery Systems - Development and Implementation - Instate and Out of State provider groups. 1992-1993.

The Choate System of Care - The Winchester Senior Center Professional Groups - Winchester, MA - 1992.

Level of Care Guidelines - Mass Hospital Assoc. 1982-1984.

CURTIS P. GARRY

27 Fuller Street, Waltham, MA 02453
CurtisPatrickGarry@gmail.com
(508)-847-0664

OBJECTIVE

Seeking a Director of Quality Improvement Position in the Behavioral Healthcare Industry

WORK EXPERIENCE

Walden Behavioral Care – Waltham, Massachusetts
Manager of Quality Improvement / Safety Officer / Human Rights Officer **May 2014 – present**

Manager of Quality Improvement:

- Responsible for developing and administering the Walden Behavioral Care quality improvement program in accordance with Joint Commission, DMH, DPH, DCF, CMS, EEC, and other various contractual requirements, and organizing quality improvement efforts across the continuum of care to promote the effective use of outcome measurements to guide the development of Walden's system of care. These quality and compliance activities involve a 47 bed hospital, a residential program, partial hospitalization programs, and intensive outpatient and standard outpatient mental health treatment facilities, in both Massachusetts and Connecticut.
- Chair of the Quality Council. The Quality Council tracks and trends the planned activities and the core performance indicators defined in the Quality Improvement Work Plan. These indicators target high volume, problem-prone areas to continually improve service delivery and the quality of care. The Council monitors program performance against specific performance metrics, and supports and collaborates with subcommittees to initiate quality improvement interventions when appropriate. The Quality Council coordinates with seven other medical committees to support them in analyzing data, identifying trends and opportunities, and making sound decisions.
- Chair of the Customer Service Committee. The Customer Service Committee is responsible for moving the organization to an exceptional level of customer service. The committee includes representatives from a wide variety of programs, locations and disciplines. This committee works on identifying core customer service principles for Walden, specific expectations around customer service, tools and protocols for training staff and other tasks.
- Participates on several other committees to support hospital activities, including but not limited to, Medical Executive Committee, Utilization Review, Pharmacy and Therapeutics, Medical Records, and Infection Control.
- Lead in preparation for various licensing visits in both the inpatient, residential and ambulatory settings.
- Completed the Joint Commission Intracycle Monitoring with various members of leadership and management. Was responsible for putting together corrective action plans and submitting results to the Joint Commission.
- Assisted in the implementation of Netsmart, an electronic medical record, as a member of the Core Implementation Team. Facilitated implementation planning, participated in the training of the clinical staff as one of the Netsmart super-users and worked closely with Information Technology to ensure a smooth transition from paper records to the electronic medical record.
- Implemented PolicyTech, a policy management software, and managed the software following implementation.
- Lead investigator in all serious incidents, complaints, and human rights violations. Engaged in frequent communication on such matters with the Department of Mental Health Director of Licensing.
- Developed and implemented a custom patient satisfaction survey. Responsible for the updating of data and reporting to various groups / committees.

- Supervised several interns in the Quality Department and provided instruction and guidance to them.

Safety Officer:

- Chair of the Safety Committee. The Safety Committee is responsible for measuring and assessing all aspects of the safety and risk management programs. As the Safety Officer, responsible for the safety program on a daily basis, and reports on data collected from risk identification reports, noting any trends, significant variances from clinical practice, or issues of concern relating to the safety of patients, staff or visitors in accordance with the written risk management program.
- Supervised members of the Facilities Department. Work with them to address any environmental improvements that are necessary. Provide support and guidance on environmental decisions. Conduct monthly Environmental Tours with Facilities Specialist.
- Plan emergency / evacuation drills semiannually. Confirm fire drills are completed once per quarter per shift and are documented. Complete Hazard Vulnerability Analysis annually. Update Environment of Care Plan and Emergency Operations Plan annually. Track building, fire, and other external inspections to confirm they are completed within required timeframes.
- Member of the Local Emergency Planning Committee. This group is responsible for developing proper response to possible disasters, mass casualty incidents or other emergencies related to chemical spills/releases. Such incidents could threaten the public safety of residents in the City of Waltham and surrounding communities.

Human Rights Officer:

- Chair of the Human Rights Committee. The Human Rights Committee actively participates in Walden's strategic plan for the prevention and minimization of clinical restraints and seclusion, and advocates for patients in resolving complaints, developing policies and procedures, and training staff. All restraints are reviewed by this group.
- Regularly meets with patients to assist, advocate for, and educate them of their patient rights and how to exercise them. Responsible for informing, training, and assisting patients in the exercise of their rights, and to assist patients in obtaining legal information, advice and representation through appropriate means, including referral to attorneys or legal advocates when appropriate.
- Educates staff upon orientation and annually on patient rights.
- Responds to patient complaints and files complaints on behalf of patients. Investigates these complaints and maintains the complaint log. Ensures that DMH incident reporting mandates are met.

Franciscan Hospital for Children – Brighton, Massachusetts
Risk Analyst **January 2013 – April 2014**

- Responsible for management of the organization's risk management program in accordance with the American Society for Healthcare Risk Management guidelines. Performs risk detection, assessment, prevention and appraisal. Analyze and manage data with the objective of ensuring quality patient services. Coordinate and facilitate risk management activities with Franciscan Hospital for Children staff members, medical staff, administrative and legal counsel. Facilitate performance improvement process as it pertains to risk management activities, formulate policies and procedures, educate, and serve as a resource for the organization for Joint Commission, federal and state regulations related to compliance and patient safety.
- Chair of the Quality and Safety Committee. Committee responsibilities include, review all patient safety and worker's compensation reports. Monitor compliance with Culture of Safety Plan, grievance procedures, and policy and procedures for communicating unexpected outcomes. Ensure necessary external reporting is performed (Department of Public Health, Food and Drug Administration, Centers for Medicare and Medicaid Services, etc.). Develop and make recommendations for education and training.
- Manage the incident reporting system using the risk management module of Meditech.
- Lead Root Cause Analysis on incident reports identified as requiring further review; participate in failure mode and effects analysis.

- Created and implemented a policy on Root Cause Analyses; assist in the creation and implementation of other various policies on an ongoing basis.
- Lead in the preparation of the Joint Commission triennial accreditation survey in 2013; participated in the Joint Commission survey in December 2013 and the Centers for Medicare and Medicaid Services' validation survey in January 2014.

Performance Improvement Systems Coordinator **November 2009 – January 2013**

- Provided essential support to the mission and goals of Franciscan Hospital for Children and the functions of the Performance Improvement department.
- Assisted in the development and coordination of performance improvement reports to the Performance Improvement Committee.
- Managed the organization's online policy management system using PolicyTech.
- Assisted in the planning and coordination of the Joint Commission triennial accreditation survey in 2011.

University of Massachusetts Memorial Health Care – Worcester, Massachusetts **Summer 2008**

- Intern in the Quality and Patient Safety Department.
- Created an educational tool for physicians to improve the quality of the organization.
- Participated in performance improvement initiatives as a member of the Performance Improvement Committee and demonstrated the use of quality improvements in daily operations.

EDUCATION

University of Connecticut – Storrs, Connecticut May 2009
BS in Business Administration
Major: Health Care Management
Cumulative GPA: 3.4

Department of Mental Health Licensing Division, Human Rights Officer Training July 30, 2014
Westborough State Hospital, 167 Lyman Street, Westborough, MA

SPECIAL SKILLS

Crisis Prevention Institute Certification September 24, 2014 – September 24, 2015

- Trained to safely manage disruptive and assaultive patient behavior.

Cardiopulmonary Resuscitation (CPR) Certification November 24, 2014 – November 24, 2016

- Trained to administer CPR and on the use of an Automated External Defibrillator (AED).

Massachusetts Notary Public August 13, 2014 – August 13, 2021

- Sworn in as a Notary Public of Massachusetts. Can witness and authenticate the execution of healthcare documents.

LEADERSHIP EXPERIENCE AND ACTIVITIES

- Massachusetts Society for Health Care Risk Management (MSHRM), member (January 2011 – May 2014)
- Attend annual seminars held by MSHRM to improve risk management analytical skills (2010 – May 2014)
- University of Connecticut Health Care Management Society, member (2008-2009)
- Husky's Away from Home Program for out of state students, peer mentor (2007)
- University of Connecticut's Relay for Life (2005-2009)

CHARLES R. ROSSIGNOL

63 Laurel Drive, Hudson, MA 01749
Phone: 978-568-1660 / Cell: 978-314-1660
email: *crossignol@waldenbehavioralcare.com*

EXECUTIVE-LEVEL HEALTHCARE SERVICES LEADER

Successful track record of executive management experience in areas of operations, finance and administration, service development and startup in for-profit and non-profit behavioral healthcare business sectors. Data driven. Growth focused. Results oriented.

Key strength areas:

- Financial / Operations turnaround expertise.
- CEO / Executive-level Leadership, Interim executive leadership.
- Quality Improvement, Joint Commission / Regulatory Compliance

PROFESSIONAL HIGHLIGHTS

AVP - Business Development, Walden Behavioral Care (WBC), Waltham MA (2011-Present)
Member of WBC leadership team. Coordinate new WBC service initiatives. Opened/ expanded four licensed OP clinic sites, with four additional sites in MA and CT in development.

Boston Behavioral – Consultant (2003-2012). Highlights with selected clients:

- *Staffing productivity analyses* – over $750K in annual savings for CA county hospital;
- *Operations Improvements* with selected hospital and clinic clients: IP laboratory service savings – 63% (approx. $164K annually). OP clinic salaries and benefits savings - 14%, while adding 3 service contracts and improving regulatory compliance. Increase IP census 24% for hospital client in 30 days.
- *Development:* Creation/development of new MA OP mental health clinics.
- *Compliance:* Multi-year regulatory (CMS/DMH/DPH) and accreditation (JC) compliance for private psych services provider in areas of: Environment of Care / Safety / QI / Info. Mgmt.

CEO – Arbour HRI Hospital, Brookline, MA (1999-2003).

- Financial turnaround; continuously improving financial performance throughout tenure, earning $1.2M Net Income on $10M Net Revenue (2003).
- Increased admissions (18%) and staff efficiency (26%); reduced A/R (24%).

Group Vice President – Pioneer Behavioral Health, Peabody, MA (1997-1999).

- Improved net revenues / cash receipts, reduced gross A/R 13%, increased staff output 10% for multisite long term care service providers in NY.
- Increased psychological services contracts (6) in CT.

Vice President – Operations – Choate Health Management, Stoneham, MA (1991-1997).

- Opened new psychiatric hospital. JCAHO accreditation and 90% occupancy in 100 days.
- Developed/managed exclusive state-wide service contracts, staff training and QI.
- Developed company's first OP provider network.

Selected other operations improvements for medical/behavioral service providers.

EDUCATION: **Master of Business Administration, Northeastern University, Boston, MA.** Concentration: Healthcare. Graduated first in program.
Bachelor of Arts - Psychology, Framingham State University, Framingham, MA. Graduated Magna Cum Laude.

AFFILIATIONS: **American College of Healthcare Executives**

Bridget A. Hastings MS, RD, CD-N
860-917-7618 • bhastin@gmail.com

Education:

Master of Science Degree, New York University, New York, NY, May 2013
Clinical Nutrition
Bachelor of Science Degree, Ithaca College, Ithaca, NY, May 2010
Health Sciences: Nutrition Emphasis with minor in Sport and Exercise Psychology

Professional Experiences:

NewYork-Presbyterian Hospital, New York, NY
Registered Dietitian (full-time temporary position) **July 2013-current**

- Cover two in-patient psychiatric units at NewYork-Presbyterian Hospital: Westchester Division
- Eating disorder in-patients (The Outlook: Eating Disorder Unit):
  - Screen and assess nutritional status and develop plans and goals of care for both adolescents and adults
  - Provide recommendations to medical teams for diet orders (oral and enteral), calorie and protein needs, and plans and goals of care for each patient
  - Monitor clinical indicators such as labs, hydration status, kidney function, signs of refeeding, and weights
  - Provide recommendations for initiation and adjustments of enteral feedings
  - Develop and teach lesson plans for Nutrition Learning and Meal Planning groups
  - Provide one-on-one counseling
  - Collaborate daily with the multidisciplinary team
- Psychiatric in-patients (The Women's Unit):
  - Screen and assess nutritional status of psychiatric in-patients through interviews and physical assessment
  - Provide recommendations to medical teams for diet orders, calorie and protein needs, and plans and goals of care for each patient at nutritional risk and determined to be malnourished
  - Provide recommendations on how patients can improve their nutritional status
  - Educate individuals on weight management/weight loss principles and therapeutic diets such as heart healthy and diabetic
  - Honor patient food preferences using CBORD

Nutrition Fellow **February 2013-July 2013**

- Nutrition Fellow experience included at The Outlook (in-patient Eating Disorders unit at NewYork-Presbyterian Hospital: Westchester Division) and New York State Psychiatric Institute
- Teaching assistant for New York University's Eating Disorders M.S. class
- Using CBORD, performed complete nutrient analyses of diets used at NewYork-Presbyterian Hospital: Westchester Division

Dietetic Intern **February 2012-Feburary 2013**

- Completed entry-level rotations in: behavioral health, cardiac, digestive disease, endocrine, foodservice, medicine/surgical, neurology/rehabilitation, oncology
- Completed advanced-level rotations in: adult nutrition support/ICU, ambulatory care nutrition, burn unit, pediatrics, pediatric nutrition support/ICU, renal, research, staff relief
- Screened and assessed nutrition status of acute care patients through interviews and physical assessment
- Provided recommendations to medical teams for diet orders, calorie and protein needs, and plans and goals of care for each patient at nutritional risk and determined to be malnourished
- Conducted education and counseling for targeted populations, both individuals and groups
- Collaborated daily with the multidisciplinary team

The Richter Reco with Sharon Richter, RD, New York, NY
Intern **April 2011-Februrary 2012**

- Researched various nutrition topics and compiled the information into a handout for the RD to use with clients and on her blog, i.e. healthy kid-friendly recipes, post-workout foods, protein powders

New York University Stern School of Business: Marketing Department, New York, NY
Research Assistant **September 2010-December 2011**

- Assisted in data gathering for Ph.D. student research studies
- Processed and coded data from study results

New York University Langone Medical Center, New York, NY
Volunteer **September 2010-July 2011**

- Distributed nutrition education handouts to patients which contained an explanation of their diet order(s)
- Communicated with dietitians to answer patient dietary questions and solve foodservice issues
- Entered food supplies from invoices into the CBORD program used for tracking inventory

St. Francis Hospital and Medical Center, Hartford, CT
Volunteer **Summer 2010**

- Identified common allergens in cafeteria food options and created allergy signage for cafeteria
- Modified the department policy and procedure manual
- Completed inventory analysis on items such as patients' food, snacks, and nutritional supplements

Nutrition Energy with Lauren Antonucci, MS, RD, New York, NY
Intern **Summer 2009**

- Created handouts for clients on topics relating to nutrition, i.e. diabetes, fish oil supplementation
- Assisted with presentations for running groups, sports teams, and with clients during private sessions

Women, Infants, and Children (WIC) of Tompkins County, Ithaca, NY
Intern **Spring 2009, Summer 2008**

- Planned the "Stay Fit With Your Kids" Healthy Lifestyle Project of Summer 2009:
  - Budgeted grant money to purchase game/fitness supplies (i.e. bean bags, chalk, jump rope) to give to WIC participants
  - Devised a system to help WIC families set goals to play fitness games with their children using given supplies, as well as a system to track their progress
- Evaluated nutrition education handouts using the Nutrition Education Materials Review & Evaluation Form Summary
- Communicated with WIC participants to help them set "Healthy Action Goals"

Cornell Cooperative Extension of Tompkins County, Ithaca, NY
Employee **Summer 2008**

- Assisted the Extension's once a week cooking class or activity for Community Supported Agriculture (CSA) share participants

Credentials:

Registered Dietitian with the Academy of Nutrition and Dietetics (Identification #1062056)
Dietitian/Nutritionist Certification in the State of Connecticut (Certificate #001185)

Skills:

Highly proficient in Microsoft Office, Eclipsys, CBORD (general use and nutrient analysis), SPSS

Professional Affiliations:

Academy of Nutrition and Dietetics

Exhibit 20

Treatment of Patients With Eating Disorders, Third Edition

http://www.psychiatryonline.com/content.aspx?aID=138866

DOI: 10.1176/appi.books.9780890423363.138660

II. FORMULATION AND IMPLEMENTATION OF A TREATMENT PLAN

A. Psychiatric Management

Psychiatric management includes a broad range of therapeutic actions that are performed by the psychiatrist or that the psychiatrist ensures are provided to all patients with eating disorders in combination with other specific treatment modalities. Psychiatric management begins with the establishment of a therapeutic alliance, which is then enhanced by empathic comments and behaviors, positive regard, reassurance, and support. Basic psychiatric management includes support through the provision of educational materials, including self-help workbooks (4), information on community and Internet resources (5, 6), and direct advice to patients and their families (when they are involved) (7). It is important to caution patients and families about Internet sites that encourage eating disorder lifestyles ("pro-ana" sites). Although many service providers have made attempts to police and encourage elimination of these sites, they still continue to appear, to the concern of families and professionals (8, 9). In some settings, judicious use of e-mail contact with patients has been increasingly used (5, 10). Some resources for patients and families are presented in Table 1.

1. Establish and maintain a therapeutic alliance

At the very outset and through ongoing interactions with the patient, it is important for clinicians to attempt to build trust, establish mutual respect, and develop a therapeutic relationship that will serve as the basis for ongoing exploration and treatment of the problems associated with the eating disorder. Eating disorders are frequently long-term illnesses that can manifest themselves in different ways at different points during their course; treating them often requires the psychiatrist to adapt and modify therapeutic strategies. Many patients with anorexia nervosa are initially reluctant to enter treatment and may feel invested in their symptoms. Many are secretive and may withhold information about their behavior because of shame. During the course of treatment, they may resist looking beyond immediate symptoms to possible coexisting psychiatric disorders, comorbid psychopathology, and underlying psychodynamic issues. Conversely, some patients may resist discussing eating disorder symptoms and want to focus on only "core issues," apparently to avoid relinquishing their symptoms. Psychiatrists should be mindful of the fact that the recommended interventions create extreme anxieties for individuals with anorexia nervosa. Encouraging patients to gain weight asks them to do the very thing of which they are most frightened. Patients may believe that the psychiatrist just wants to make them fat and does not understand or empathize with their underlying emotions. Consequently, by recognizing and acknowledging an awareness of

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patient anxieties, psychiatrists can assist in building the therapeutic alliance. The clinician may foster rapport by letting patients know that eating disorder symptoms often serve a number of important functions, such as providing a sense of accomplishment or a way to feel looked after or protected (11, 12). Addressing patients' resistance to treatment and enhancing their motivation for change may be important in allowing therapy to proceed through impasses as well as helping to ameliorate factors that serve to aggravate and maintain eating disorders (13–18). Finally, letting patients know that full recovery from anorexia nervosa takes time (19) may help build rapport, as the patient senses that the clinician is not expecting a magical, rapid turnaround, which the patient may sense is unrealistic.

2. Coordinate care and collaborate with other clinicians

Professionals from several disciplines may collaborate in the patient's care. The specific role of each professional may vary with the organizational structure of the eating disorders program and the professional qualifications of those working within the program. The psychiatrist may assume the leadership role in the patient's treatment program or the patient's treatment team or work collaboratively on a team led by other health professionals, including other physicians or psychologists. Registered dietitians with specialized training in eating disorders often provide nutritional counseling. Therapists from a variety of professional fields may provide family, individual, or group psychotherapy, including CBT. Other physician specialists and dentists may be consulted for management of acute and ongoing medical and dental complications. Often in the treatment of children and adolescents, school coaches, teachers, and school counselors may be asked to collaborate in a patient's treatment. In treatment settings where staff do not have the training or experience to deal with patients with eating disorders, the provision of education, supervision, and leadership by a qualified psychiatrist can be crucial to the success of treatment.

Although a variety of management models are used for adult patients with eating disorders, no data exist on their comparative efficacies. Psychiatrists who choose to manage both general medical and psychiatric issues should have appropriate medical backup to treat the medical complications associated with eating disorders. Some programs routinely arrange for interdisciplinary teams to manage treatment (sometimes called *split management*). In this model, the psychiatrist handles administrative and general medical requirements, prescribes medications when clinically necessary and appropriate, and recommends interventions aimed at normalizing disturbed cognitions and eating and weight-reducing behaviors. Other clinicians then provide individual and/or group psychotherapeutic interventions (e.g., CBT, psychodynamic psychotherapy, family therapy). For this management model to be effective and to avoid reinforcing some patients' tendencies to play staff off each other (i.e., split the staff), all personnel must work closely together and maintain open communication and mutual respect.

For children and adolescents, the recommended treatment model is the team approach (3). In this interdisciplinary management approach, general medical care clinicians (e.g., specialists in internal medicine, pediatrics, adolescent medicine, or nutrition) manage general medical issues, such as nutrition, weight gain, exercise, and eating patterns, whereas the psychiatrist addresses the psychiatric issues (3, 20, 21). The biopsychosocial nature of anorexia nervosa and bulimia nervosa dictates the need for interdisciplinary treatment, and each aspect of care

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must be developmentally tailored to the treatment of adolescents (22). In unusual circumstances, psychiatrists may be qualified to act as the primary provider of comprehensive medical care.

When a patient is managed by an interdisciplinary team in an outpatient setting, communication among the professionals is essential so that all team members have a clear understanding of each other's responsibilities and approaches. For example, in team management of outpatients with anorexia nervosa, one professional must be designated to consistently monitor weights so that this essential function is not inadvertently omitted from care.

3. Assess and monitor eating disorder symptoms and behaviors

It is important for the psychiatrist to carefully assess the patient's eating disorder symptoms and behaviors (23). Such an assessment will assist the clinician in identifying target symptoms and behaviors that will be addressed in the treatment plan as well as determining whether a DSM-IV-TR diagnosis of anorexia nervosa or bulimia nervosa is present (Tables 2 and 3).

It is important to note that a significant number of patients are relegated to the heterogeneous diagnostic group referred to as eating disorders not otherwise specified because they have not been amenorrheic for 3 months and consequently do not meet current criteria for anorexia nervosa. In terms of their clinical course, treatment response, or level of impairment, such patients do not differ from those who fulfill the DSM-IV-TR criteria for anorexia nervosa (24, 25). These observations have important implications with respect to making clinical treatment decisions. They also imply that patients with continued menses who fulfill other criteria for anorexia nervosa should be eligible for the same levels of care as patients with anorexia nervosa.

Obtaining a detailed report of food intake during a single day in the patient's life or using a calendar as a prompt may help elicit specific information about a patient's eating behaviors, particularly regarding perceived intake. A clinician may also obtain useful information by sharing a meal with the patient or observing the patient eating a meal; in this way, the clinician can observe any difficulties the patient may have in eating particular foods, anxieties that erupt in the course of a meal, and rituals concerning food (such as cutting, separating, or mashing) that the patient feels compelled to perform.

It is important to explore the patient's understanding of how the illness developed and the effects of any interpersonal problems at the onset of the eating disorder. A family history should be obtained regarding eating disorders and other psychiatric disorders, alcohol and other substance use disorders, obesity, family interactions in relation to the patient's disorder, and family attitudes toward eating, exercise, and appearance. It is essential that the clinician avoid articulating theories that imply blame or permit family members to blame one another or themselves for the patient's disorder. No evidence exists to prove that families cause eating disorders. Furthermore, blaming family members harms their psychological well-being and often impairs their desire, willingness, and capacity to be helpful to patients and to participate actively and constructively in treatment and recovery. Rather, the point is to identify family stressors whose amelioration may facilitate recovery.

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In the assessment of young patients, it is always helpful to involve parents and, whenever appropriate, school and health professionals who routinely work with children. The complete assessment usually requires several hours. Even when directly questioned, patients and their families may not initially reveal pertinent information about sensitive issues; important information may be uncovered only after a trusting relationship has been established and the patient is better able to accurately identify inner emotional states.

Formal measures are available for the assessment of eating disorders, including self-report questionnaires and semistructured interviews. Examples are listed in Table 4. Clinical decisions about a diagnosis cannot be made on the basis of self-report screening instruments. Patients who are identified on initial screening as likely to have an eating disorder must be followed up in a second-stage determination by trained clinical interviewers. The instruments shown in Table 4, used by clinicians to interview patients in a structured format, are generally taken as "gold standards" to determine clinical diagnoses.

4. Assess and monitor the patient's general medical condition

A full physical examination should be performed by a physician familiar with common findings in patients with eating disorders, with particular attention to vital signs; physical status (including height and weight); heart rate and rhythm; jugular venous pressure; heart sounds (especially midsystolic clicks or murmurs from mitral valve prolapse); acrocyanosis; delayed capillary refill; lanugo; salivary gland enlargement; scarring on the dorsum of the hands (Russell's sign); evidence of self-injurious behaviors, such as ecchymoses, linear scars, and cigarette burns; muscular weakness; indications of muscular irritability due to hypocalcemia, such as in Chvostek's and Trousseau's signs; and gait and eye abnormalities (40–43). The patient should also be referred for a dental examination if necessary or indicated by the patient's history (44). In younger patients, examination should include growth pattern and sexual development, including sexual maturity rating, as well as general physical development. The use of a growth chart of standardized values for pediatric populations may allow the clinician to identify patients who have failed to gain weight and have growth retardation (3, 45); such charts are available on the web site of the CDC (http://www.cdc.gov/growthcharts/).

BMI, in conjunction with weight and height, has gained increasing attention in research and clinical settings as a tool for assessing eating disorder patients. BMI is calculated as weight (in kilograms) divided by height (in meters squared) and is particularly useful for comparing groups according to index percentiles that take into account height, sex, and age (46). It is important to remember that BMI is a calculation based only on height and weight and does not provide any further measure of body composition. Except in individuals who are extremely under- or overweight, it is often not useful in estimating nutritional status. Furthermore, considerable debate in the scientific community exists about appropriate BMI ranges for various ethnic groups. Among Caucasian women, for example, the range of a healthy BMI may be higher than for some groups of Asian women (47). Adults with a BMI <18.5 kg/m^2 are considered to be underweight. In addition, abnormal muscularity, body frame size, fluid status, marked constipation, and fluid loading can decrease the validity of BMI as an indicator of the patient's nutritional status (48–52). In children and adolescents, an age-adjusted BMI is

used (see http://www.cdc.gov/nccdphp/dnpa/bmi/00binaries/bmi-tables.pdf). Children with a BMI <5th percentile for age are considered to be underweight.

Commonly found signs, symptoms, and associated laboratory abnormalities for anorexia nervosa and bulimia nervosa are shown in Table 5 and Table 6, respectively. Although patients treated in outpatient practice may report few symptoms and show few obvious physical signs or abnormal laboratory test results, significant occult abnormalities may be present (e.g., in bone, heart, and brain).

The need for laboratory analyses should be determined on an individual basis depending on the patient's condition or when necessary for making treatment decisions (43). Some of the laboratory assessments that may be indicated for patients with eating disorders appear in Table 7.

5. Assess and monitor the patient's psychiatric status and safety

In addition to assessing patients' physiological and nutritional status as well as their behaviors, cognitions, and emotions associated with eating and exercise, it is essential that clinicians attend to the overall psychiatric status and safety of patients. Associated psychiatric issues that bear close monitoring include historical evidence, signs, and symptoms related to psychiatric conditions that are often comorbid with eating disorders (e.g., mood, anxiety, and substance use disorders) as well as personality traits and personality disorders that greatly influence patients' clinical course and outcome (78–82). Patients' motivational status also bears monitoring, as it is likely to determine their capacity to engage in treatment (15). Safety issues for patients with eating disorders include both physiological and psychiatric parameters. Many of the physiological safety parameters are described in Section II.B.1, "Choice of a Treatment Site." Clinicians must be vigilant regarding shifts in patients' weight, blood pressure, pulse, other cardiovascular parameters, and behaviors that are likely to provoke physiological decline and collapse. General psychiatric safety issues that bear constant attention include suicidal ideation and suicide attempts as well as impulsive and compulsive self-harm behaviors (83, 84).

6. Provide family assessment and treatment

The available evidence affirms the importance of family involvement and treatment in the management of children and adolescents with anorexia nervosa (85–87). In addition, clinical consensus supports the value of family assessment and involvement in the treatment of both younger and older patients with other eating disorders (88, 89). Since eating is a quintessential family activity, the opportunity to observe patterns of family interaction around the eating and particularly around the eating problems can be useful in assessment (89a). Family members can provide useful perspectives on factors contributing to the onset of the disorders and issues that may aid or hamper efforts at recovery. Family members are often distressed by difficulties in understanding and interacting with the patient. Clinicians need to empathically listen to family members, advise them on their interactions with the patient, and, when indicated, involve them in conjoint or individual treatment so that the patient and family all stand the best chance of achieving a good outcome (90). Patients with anorexia nervosa who are in a relationship may present with a higher motivation to change (91), and the

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involvement of spouses and partners in treatment may be highly desirable. Families of adolescents with anorexia nervosa may be directed to the Maudsley approach, which focuses on the family as a resource for recovery and puts parents in charge of refeeding their affected child (87, 92, 93). Although this approach is promising, additional data are required to determine if it is the best approach for adolescents with anorexia nervosa.

B. Developing a Treatment Plan for the Individual Patient

1. Choice of a treatment site

Services available for the treatment of eating disorders can range from intensive inpatient settings (in which subspecialty general medical consultation is readily available) to residential and partial hospitalization programs to varying levels of outpatient care (in which the patient can receive general medical treatment, nutritional counseling, and/or individual, group, and family psychotherapy). Because specialized programs are not available in all geographic areas and financial considerations are often significant, access to these programs may be difficult. The resources listed in Table 1 may provide guidance to patients and families for accessing suitable programs.

Pretreatment evaluation of the patient is essential for determining the appropriate treatment setting. Patient weight, rate of weight loss, cardiac function, and metabolic status are the most important physical parameters for making this choice. Eating disorders should be recognized and early treatment implemented as soon as possible after the onset of symptoms. This is especially true in children, adolescents, and young adults, to avoid the disorder becoming chronic.

As a general rule, patients who weigh less than approximately 85% of their individually estimated healthy weights have considerable difficulty gaining weight outside of a highly structured program that includes inpatient care; such a program may be medically and psychiatrically necessary even for patients above that weight level. It is important to underscore that these are individually estimated healthy weights, not weights simply listed in a standard insurance table. Healthy weight estimates for a given individual must be determined by that person's physicians on the basis of historical data (e.g., growth charts) (3) and, for women, the weight at which healthy menstruation and ovulation resume, which may be higher than the weight at which menstruation and ovulation became impaired (94–96).

It is equally important that the decision to hospitalize a patient be based on psychiatric and behavioral factors, including a rapid or persistent decline in oral intake; a decline in weight despite maximally intensive outpatient or partial hospitalization intervention; the presence of additional stressors, such as dental procedures, that may interfere with the patient's ability to eat; the weight at which the patient was medically unstable in the past; and co-occurring psychiatric problems that merit hospitalization. The degree of a patient's denial and resistance to participate in his or her own care in less supervised settings is critical in deciding whether to hospitalize the patient. Once weight loss is severe enough to indicate the need for immediate hospitalization, treatment may be less effective, refeeding may entail greater risks, and prognosis may be more problematic than if intervention had been provided earlier. Because cortical gray matter deficits result from malnutrition and persist after refeeding (97–

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99), earlier (rather than later) interventions may be important to minimize the persistent effects of these physiological impairments. Therefore, hospitalization should occur before the onset of medical instability as manifested by vital signs, physical findings, or laboratory test results outside of the normal range.

Vital sign changes that indicate a need for immediate medical hospitalization include marked orthostatic hypotension, with an increase in pulse of 20 bpm or a drop in blood pressure of 20 mmHg standing; bradycardia, with a heart rate <40 bpm; tachycardia, with a heart rate >110 bpm; or the patient's inability to sustain his or her body core temperature (e.g., body temperatures <97.0°F) (3). Most severely underweight patients, particularly those with physiological instability, require inpatient medical management and comprehensive treatment to support their weight-gaining efforts. To avert potentially irreversible effects on physical growth and development, many children and adolescents require inpatient medical treatment, even when weight loss, although rapid, has not been as severe as that suggesting a need for hospitalization in adult patients (3). If children refuse fluids or food out of concern about gaining weight, they may become dehydrated quickly. Also, a child's small size may mean that relatively smaller reductions in weight will result in greater physiological danger.

In determining a patient's initial level of care or suitability for change to a different level of care, expert consensus indicates that it is important to consider a patient's overall clinical and social picture rather than simply rely on weight criteria. Furthermore, weight level per se should never be used as the sole criterion for discharge from inpatient care. Patients need to both gain healthy body weight and learn to maintain that weight prior to discharge; patients who reach a healthy body weight but are discharged before this learning occurs are likely to immediately decrease their caloric intake to excessively low levels that are often insufficient to sustain their healthy body weight. Assisting patients in determining and practicing appropriate food intake at a healthy body weight is likely to decrease the chances of their relapsing. Patients who are medically stabilized on acute medical units will still require inpatient treatment for eating disorders if they do not meet biopsychosocial criteria for partial hospitalization programs or if no suitable partial hospitalization program for eating disorders treatment is accessible because of geographic or other reasons. Patients with inadequate motivation or support who are discharged from inpatient to partial hospitalization programs before they are clinically ready often have high rates of early relapse, greater struggles with recovery, and slower rates of progress, necessitating longer future inpatient stays.

In shifting between levels of care, it is important to establish continuity of care. Stepping down from one level of care to a less intensive level may be destabilizing for a patient and can be even more so when this involves a change in physician, therapist, or treatment team. At times, patients may erroneously conclude that moving to a less restrictive treatment setting means that they are suddenly fully improved. The patient's ability to continue treatment with familiar and trusted staff in a partial hospitalization or outpatient setting may contribute to the success of aftercare planning. Consequently, if the patient is moving from one treatment setting or locale to another, transition planning requires that the care team in the new setting or locale be identified and that specific patient appointments be made. It is preferable that a specific clinician on the team be designated as the primary coordinator of care to ensure continuity and attention to important aspects of treatment. Guidelines for treatment settings are provided in Table 8.

Although most patients with uncomplicated bulimia nervosa do not require hospitalization, indications for hospitalization can include severe disabling symptoms that have not responded to adequate trials of outpatient treatment, serious concurrent general medical problems (e.g., metabolic abnormalities, hematemesis, vital sign changes, uncontrolled vomiting), suicidality, psychiatric disturbances that would warrant patients' hospitalization independent of the eating disorder diagnosis, or severe concurrent substance use.

Legal interventions, including involuntary hospitalization and legal guardianship, may be necessary to address the safety of patients who are reluctant to receive treatment but whose general medical conditions are life threatening (102). On a short-term basis at least, outcomes for those patients who are hospitalized involuntarily are comparable with outcomes of those hospitalized voluntarily with respect to rates of weight restoration (103). The decision to hospitalize on a psychiatric versus a general medical or adolescent/pediatric unit depends on the patient's general medical status, the skills and abilities of local psychiatric and general medical staff, and the availability of suitable programs to care for the patient's general medical and psychiatric problems (104). There is evidence to suggest that patients treated in specialized inpatient eating disorder units have better outcomes than patients treated in general inpatient settings where staff lack expertise and experience in treating patients with eating disorders (105).

Partial hospitalization and day hospital programs are being increasingly used in attempts to decrease the length of inpatient stays or even in lieu of hospitalization for individuals with milder symptoms. However, such programs may not be appropriate for patients with lower initial weights. The failure of outpatient treatment is one of the most frequent indications for the more intensive treatment provided in a day, partial hospitalization, or inpatient program. In deciding whether a patient requires a partial hospitalization program, the patient's motivation to participate in treatment and ability to work in a group setting should be considered (106, 107). A growing body of evidence suggests that partial hospitalization outcomes are highly correlated with treatment intensity and that more successful programs involve patients at least 5 days/week for 8 hours/day (101).

Patients who are considerably below their healthy body weight but who are highly motivated to adhere to treatment, have cooperative families, and have brief symptom duration may benefit from treatment in outpatient settings, but only if they are carefully monitored and if they and their families understand that a more restrictive setting may be necessary if persistent progress is not evident within a few weeks (108, 109). Careful monitoring includes at least weekly (and often twice or thrice weekly) weight determinations done immediately after the patient voids and while the patient is wearing the same class of garment (e.g., hospital gown, standard exercise clothing). Measurement of urine specific gravity, orthostatic vital signs, oral body temperature, and, in purging patients, electrolytes may also need to be monitored on a regular basis. Although child and adolescent patients treated in the outpatient setting can remain with their families and continue to attend school or work, these advantages must be balanced against the risks of failure to progress in recovery.

2. Choice of specific treatments for anorexia nervosa

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Anorexia nervosa is a complex, serious, and often chronic condition that may require a variety of treatment modalities at different stages of illness and recovery. Specific treatments include nutritional rehabilitation, psychosocial interventions, and medications. The aims of treatment are to 1) restore the patient to a healthy weight (associated with the return of menses and normal ovulation in female patients, normal sexual drive and hormone levels in male patients, and normal physical and sexual development in children and adolescents); 2) treat the patient's physical complications; 3) enhance the patient's motivation to cooperate in the restoration of healthy eating patterns and participate in treatment; 4) educate the patient regarding healthy nutrition and eating patterns; 5) help the patient reassess and change core dysfunctional cognitions, attitudes, motives, conflicts, and feelings related to the eating disorder; 6) treat the patient's associated psychiatric conditions, including deficits in mood and impulse regulation, self-esteem, and behavior; 7) enlist family support and provide family counseling and therapy where appropriate; and 8) prevent the patient from relapsing.

a) Nutritional rehabilitation

The goals of nutritional rehabilitation for seriously underweight patients are to restore weight, normalize eating patterns, achieve normal perceptions of hunger and satiety, and correct biological and psychological sequelae of malnutrition (110, 111).

Healthy target weights should be established as part of the initial treatment plan and discussed explicitly with the patient, but with considerable sensitivity to how generally fearful patients are of gaining weight. On occasion it may be judicious to delay this discussion until the patient is less likely to be terrified of his or her ultimate weight goal. In general, a healthy goal weight for female patients is the weight at which normal menstruation and ovulation are restored and, for male patients, the weight at which normal testicular function is resumed. For female patients who previously had a healthy menses and ovulation, the clinician can estimate their healthy weight as approximately the same weight at which full physical and psychological vigor were present. In one study of 100 adolescent patients with anorexia nervosa (94), the resumption of menses occurred at a weight approximately 4.5 pounds greater than the weight at which menses was lost; at 90% of healthy weight, 86% of patients resumed menses. In children and adolescents, growth curves should be followed and are most useful when longitudinal data are available, given that extrapolations from cross-sectional data at one point in time can be misleading. Therefore, for most clinical work, it is reasonable to simply weigh patients and gauge how far they are from their individually estimated healthy body weight (112). Bone age may be accurately estimated from wrist X-rays and nomograms. In conjunction with bone measurements, menstrual history in adolescents with secondary amenorrhea, mid-parental heights, and assessments of skeletal frame, CDC growth charts (available at http://www.cdc.gov/growthcharts/) may be used to accurately estimate individually appropriate ranges for "expected" weights for current age and to set individually realistic expectations and goals for weight and height for patients up to age 20 years.

For individuals who are markedly underweight and for children and adolescents whose growth is substantially less than that predicted by growth curves, hospital-based programs for nutritional rehabilitation should be considered. For those in inpatient or residential settings, the weight at which it is appropriate to discharge a patient may vary in relation to the patient's healthy target weight and will depend on the patient's ability to feed him- or herself,

the patient's motivation and ability to participate in aftercare programs, and the adequacy of aftercare, including partial hospitalization. In general, the closer a patient is to his or her healthy body weight before discharge, the less the risk he or she has of relapsing and being readmitted. Having patients maintain their weight for a period of time before they are discharged from inpatient treatment probably decreases the risk of their relapsing as well.

Refeeding programs should be implemented in nurturing emotional contexts. Staff should convey to patients their intention to take care of them and not let them die even when the illness prevents the patients from taking care of themselves. Staff should clearly communicate that they are not seeking to engage in control battles and have no punitive intentions when using interventions that the patient may experience as aversive. Some positive reinforcements (e.g., privileges) and negative reinforcements (e.g., required bed rest, exercise restrictions, restrictions of off-unit privileges) should be built into the program; negative reinforcements can then be reduced or terminated and positive reinforcements accelerated as target weights and other goals are achieved.

As patients work to achieve their target weights, their treatment plan should also establish expected rates of controlled weight gain. Clinical consensus suggests that realistic targets are 2–3 lb/week for hospitalized patients and 0.5–1 lb/week for individuals in outpatient programs, although an intensive partial hospitalization, stepped-down program has reported gains of up to 2 lb/week (113). Occasionally some patients may gain as much as 4–5 lb/week, but these individuals must be carefully monitored for refeeding syndrome and fluid retention. Dietitians can help patients choose their own meals and provide a structured meal plan that ensures nutritional adequacy and inclusion of all the major food groups. Formula feeding may have to be added to achieve large caloric intake. Some authorities advocate that the amount of solid food eaten should not exceed the amount that patients would ordinarily be eating at their target weight. Expanding cuisine options is important to avoid the severely restricted food choices frequently seen in eating disorder patients. Legitimate food allergies and patients' religious and cultural practices must be considered and discussed to limit patient rationalizations for restricted eating. Intake levels should usually start at 30–40 kcal/kg per day (approximately 1,000–1,600 kcal/day). During the weight gain phase, intake may have to be advanced progressively to as high as 70–100 kcal/kg per day for some patients; many male patients require a very large number of calories to gain weight. Patients who require significantly higher caloric intakes may be discarding food, vomiting, or exercising frequently or they may engage in more nonexercise motor activity such as fidgeting; others may have a truly elevated metabolic rate. Patients requiring much lower caloric intakes or those suspected of artificially increasing their weight by fluid loading should be weighed in the morning after voiding while they are wearing only a gown; their fluid intake also should be carefully monitored. Assessing urine specimens obtained at the time of weigh-in for specific gravity may help ascertain the extent to which the measured weight reflects excessive water intake.

Particularly in residential or hospital treatment programs, it may initially be difficult to obtain the cooperation of patients who do not wish to be there. In addition, many patients have delayed gastric emptying that initially impairs their ability to tolerate 1,000 calories/day. Under such circumstances, it is often more effective to begin with 200–300 calories above the patient's usual caloric intake (e.g., a patient consuming 400 calories/day may need to start at 600–700 calories/day). During hospitalization, giving patients a liquid feeding formula in the

early stages of weight gain and then gradually exposing them to food and slowly increasing their activity level can be a very effective strategy for inducing weight gain (114). As patients are able and as their cooperation improves, a 2–3 lb/week gain in residential or hospital programs can be expected without compromising the patients' safety.

In addition to an increased caloric intake, patients also benefit from vitamin and mineral supplements. Serum potassium levels should be regularly monitored in patients who are persistent vomiters. Hypokalemia should be treated with oral or intravenous potassium supplementation and rehydration.

Physical activity should be adapted to the food intake and energy expenditure of the patient, taking into account bone mineral density and cardiac function. For the severely underweight patient, exercise should be restricted and always carefully supervised and monitored. Once a safe weight is achieved, the focus of an exercise program should be on physical fitness as opposed to expending calories. The focus on fitness should be balanced with restoring patients' positive relationship with their bodies—helping them to take back control and get pleasure from physical activities rather than being compulsively enslaved to them. An exercise program should involve exercises that are not solitary, are enjoyable, and have endpoints that are not determined by time spent expending calories or changing weight and shape. Sports such as soccer, basketball, volleyball, or tennis are examples (115).

Staff should help patients deal with their concerns about weight gain and body image changes, given that these are particularly difficult adjustments for patients to make. In fact, there is general agreement among clinicians that distorted attitudes about weight and shape are the least likely to change and that excessive and compulsive exercise may be one of the last of the behaviors associated with an eating disorder to abate. Although it is by no means certain that patients' abnormal eating habits will improve simply as a function of weight gain (116), there is considerable evidence to suggest that other eating disorder symptoms diminish as weight is restored with nutritional rehabilitation. For example, clinical experience indicates that with weight restoration, food choices increase, food hoarding decreases, and obsessions about food decrease in frequency and intensity, although they do not necessarily disappear.

Providing anorexia nervosa patients who have associated binge eating and purging behaviors with regular structured meal plans may also enable them to improve. For some patients, however, giving up severe dietary restrictions and restraints appears to increase binge-eating behavior, which is often accompanied by compensatory purging.

As weight is regained, changes in associated mood and anxiety symptoms as well as in physical status can be expected (117). Clinicians should advise patients of what changes they can anticipate as they start to regain weight. In the initial stages, the apathy and lethargy associated with malnourishment may abate. However, as patients start to recover and feel their bodies becoming larger, and especially as they approach frightening magical numbers on the scale that represent phobic weights, they may experience a resurgence of anxious and depressive symptoms, irritability, and sometimes suicidal thoughts. These mood symptoms, non-food-related obsessional thoughts, and compulsive behaviors, although often not eradicated, usually decrease with sustained weight gain.

Weight gains result in improvement in most of the physiological complications of semistarvation, including improvement in electrolyte levels, heart and kidney function, and attention and concentration. Initial refeeding may be associated with mild transient fluid retention, and patients who abruptly stop taking laxatives or diuretics may experience marked rebound fluid retention for several weeks, presumably from salt and water retention caused by elevated aldosterone levels associated with chronic dehydration. Refeeding edema and bloating occur frequently.

Patients may experience abdominal pain and bloating with meals from the delayed gastric emptying that accompanies malnutrition. Constipation, which may be ameliorated with stool softeners, can progress to obstipation and, rarely, acute bowel obstruction. As weight gain progresses, many patients also develop acne and breast tenderness. Many patients become unhappy and demoralized about resulting changes in body shape. Management strategies for dealing with these milder adverse effects include careful refeeding, frequent physical examinations, and forewarnings to patients about mild refeeding edema.

A severe refeeding syndrome may occur when severely malnourished patients (generally those weighing <70% of their healthy body weight) are re-fed too rapidly, particularly in the context of enteral or parenteral feedings but also with vigorous oral refeeding regimens. This syndrome consists of hypophosphatemia, hypomagnesemia, hypocalcemia, and fluid retention. Thiamine deficiency may also be seen as a feature of this syndrome. In some case series, the refeeding syndrome has been reported to occur in roughly 6% of hospitalized adolescents (118). Excessively rapid refeeding and nasogastric or parenteral feeding may be particularly dangerous because of their potential for inducing severe fluid retention, cardiac arrhythmias, cardiac failure, respiratory insufficiency, delirium, seizures, rhabdomyolysis, red cell dysfunction, and even sudden death, especially in the lowest-weight patients (118, 119). In such cases, phosphorus, magnesium, and/or potassium supplementation will be necessary (118, 120). In one series of hospitalized adolescents, moderate hypophosphatemia occurred in 5.8% and mild hypophosphatemia in 21.7% of patients, requiring some degree of phosphorus replacement in 27.5% of these patients (120).

Besides monitoring of mineral and electrolyte levels, general medical monitoring during refeeding should include assessment of vital signs, monitoring of food and fluid intake and output (if indicated), and observation for edema, rapid weight gain (associated primarily with fluid overload), congestive heart failure, and gastrointestinal symptoms. For children and adolescents who are severely malnourished (weigh <70% of their standard body weight), cardiac monitoring, especially at night, may be advisable (120).

Some patients are completely unable to recognize their illness, accept the need for treatment, or tolerate the guilt that would accompany eating, even when performed to sustain their lives. On the rare occasions when staff have to take over the responsibilities for providing life-preserving care, nasogastric feedings are preferable to intravenous feedings. In some programs, supplemental overnight pediatric nasogastric tube feedings have been used to facilitate weight gain in cooperative patients. This practice is not routinely recommended at present, although it appears to be well tolerated, may slightly decrease hospital stays in children, and may be experienced positively by some patients, particularly younger patients, who may feel relieved to know that they are being cared for and who, while they cannot bring

themselves to eat, are willing to allow physicians to feed them (121). If used, such interventions should never supplant expectations that the patient will resume normal eating patterns on his or her own. Total parenteral feeding is required only rarely and for brief periods in life-threatening situations.

Forced nasogastric or parenteral feeding can each be accompanied by substantial dangers. When nasogastric feeding is necessary, clinical experience suggests that continuous feeding (i.e., over 24 hours) may be less likely than three to four bolus feedings a day to result in metabolic abnormalities or patient discomfort and may be better tolerated by patients. As an alternative to nasogastric feedings, in very difficult situations where patients physically resist and constantly remove their nasogastric tubes, gastrostomy or jejunostomy tubes may be surgically inserted. As described above, rapid refeeding can be associated with the severe refeeding syndrome, and infection is always a risk with parenteral feedings in emaciated and potentially immunocompromised patients with anorexia nervosa. Consequently, these interventions should not be used routinely but should be considered only when patients are unwilling or unable to cooperate with oral feedings or when the patients' health, physical safety, and recovery are being threatened. In situations where involuntary forced feeding is considered, careful thought should be given to clinical circumstances, family opinion, and relevant legal and ethical dimensions of the patient's treatment.

If using interventions that patients with anorexia nervosa may experience as coercive, the clinician should consider the potential impact on the therapeutic relationship, especially since maintaining a sense of control is often a key dynamic in these patients. The setting of limits is developmentally appropriate in the management of children and adolescents and may help shape the patient's behavior in a healthy direction. It is essential for caregivers to be clear about their own intentions and empathic capacities regarding the patient's impression of being coerced. Caregivers should not be seen as using techniques intended to be coercive. Rather, caregivers' interventions should always be clearly seen as components of a general medical treatment required for the patient's health and survival.

During the last few years, there has been considerable debate about the ethics of involuntarily feeding patients with anorexia nervosa (122, 123). There is general agreement that children and adolescents who are severely malnourished and in grave medical danger should be re-fed, involuntarily if necessary, but that every effort should be made to gain their cooperation as cognitive function improves.

Ethical as well as clinical dilemmas often confront clinicians dealing with adult patients with chronic anorexia nervosa and their families. The general principles to be followed are those directing good, humane care; respecting the wishes of competent patients; and intervening respectfully with patients whose judgment is severely impaired by their psychiatric disorders when such interventions are likely to have beneficial results (124, 125).

b) Psychosocial interventions

The goals of psychosocial interventions in patients with anorexia nervosa are to help them 1) understand and cooperate with their nutritional and physical rehabilitation, 2) understand and change the behaviors and dysfunctional attitudes related to their eating disorder, 3) improve their interpersonal and social functioning, and 4) address comorbid psychopathology and

psychological conflicts that reinforce or cause them to maintain eating disorder behaviors. Efforts to achieve these goals often benefit from an initial enhancement of a patient's motivation to change along with ongoing efforts to sustain this motivation.

(i) Acute anorexia nervosa

Few controlled studies offer guidance for the psychosocial treatment of anorexia nervosa. Clinical consensus suggests that during the acute refeeding and weight gain stages, it is beneficial to provide patients with individual psychotherapeutic management that is psychodynamically informed and that provides empathic understanding, explanations, praise for positive efforts, coaching, support, encouragement, and other positive behavioral reinforcement. During all phases of treatment, seeing patients' families is also helpful, particularly for children and adolescents, for whom controlled trials suggest that family treatment is the most effective intervention (86, 126). For patients who initially lack motivation, their awareness and desire for recovery may be increased by psychotherapeutic techniques based on motivational enhancement, although solid evidence for this contention is lacking.

At the same time, clinical consensus suggests that psychotherapy alone is generally not sufficient to treat severely malnourished patients with anorexia nervosa. Although the value of establishing and maintaining a psychotherapeutically informed relationship is clearly beneficial and psychotherapeutic sessions to enhance patient motivation and further patient weight gain are likely to be helpful, the value of formal psychotherapy during the acute refeeding stage is uncertain (127). Attempts to conduct formal psychotherapy may be ineffective with starving patients, who are often negativistic, obsessional, or mildly cognitively impaired, presumably in relation to the known cortical atrophy seen in nutritionally compromised patients. One study documented the difficulty researchers have had in initiating and sustaining cognitive-behavioral therapies for patients with anorexia nervosa (128).

Most nutritional rehabilitation programs incorporate emotional nurturance and one of a variety of behavioral interventions that link exercise, bed rest, and privileges with target weights, desired behaviors, and informational feedback. Several studies of individual therapy have shown modest success, sometimes in only a small percentage of patients (7, 85). In one controlled trial, nonspecific supportive clinical management appeared to be at least as effective as CBT or IPT in some patients. However, 70% of patients either did not complete or made only small gains from the active psychotherapies they received (7). In this study, clinical management included education, care, support, and the fostering of a therapeutic relationship designed to promote adherence to treatment through the use of praise, reassurance, and advice.

The accumulated evidence strongly supports the value of family therapy for the acute treatment of children and adolescents in outpatient settings. Studies show that whether patients and parents are seen together or are treated separately in ongoing treatment, the results are better than when families are not involved at all (86, 126). This approach begins with the therapist's attempting to unite the parents in developing a consistent approach to refeeding, sympathizing with their plight, and explicitly disclaiming the notion that the parents have caused the eating problem. When families are involved in treatment, sibling subsystems

can be engaged to support the affected sibling. Parents can determine for themselves how best to refeed their child with anorexia nervosa with the therapist's ongoing support and consultation. For some outpatients, a short-term course of family therapy may be as effective as a long-term course; however, a shorter course of therapy may not be adequate for patients with severe obsessive-compulsive features or nonintact families (129). In these studies (129), inpatient care was used briefly for medical stabilization. For adolescents treated in inpatient settings, participation in family group psychoeducation may help promote weight gain and may be as effective as more intensive forms of family therapy (130).

(ii) Anorexia nervosa after weight restoration

Clinical consensus suggests that psychotherapy can be helpful for patients with anorexia nervosa once their malnutrition has been corrected and they have begun gaining weight (131). Because of the enduring nature of many of the psychopathological features of anorexia nervosa and the patient's need for support during recovery, ongoing individual psychotherapeutic treatment is frequently required for at least 1 year and may take many years (132, 133).

Although there have been few formal studies of its effectiveness (134, 135), psychotherapy is generally thought to help patients understand 1) what they have been through; 2) developmental, familial, and cultural antecedents of their illness; 3) how their illness may have been a maladaptive attempt to cope and emotionally self-regulate; 4) how to avoid or minimize the risk of relapse; and 5) how to better deal with salient developmental and other important life issues in the future. At present there is no absolute weight or percentage of body fat that indicates when a patient is actually ready to begin formal psychotherapy. In addition, patients often display improved mood, enhanced cognitive functioning, and clearer thought processes once their nutritional status has significantly improved and even before they make substantial weight gains.

Little evidence from controlled studies exists to guide clinicians in the use of specific therapies for adults with anorexia nervosa. Nonetheless, some data are emerging in support of individual CBT (136–138) for helping patients maintain healthy eating behaviors and CBT or IPT for inducing cognitive restructuring and promoting more effective coping (139, 140). After a patient has begun to gain weight, CBT may be helpful in reducing the risk of relapse and improving outcome, as demonstrated in a small randomized controlled trial (136). In that study, patients who received CBT were more likely to remain in treatment (78%) and have a good outcome after a year (44%) than those assigned to nutritional counseling (7%).

Many clinicians also use psychodynamically oriented individual or group psychotherapy to address underlying personality disorders that may hamper treatment and help sustain the illness and to foster psychological insight and maturation in patients who have made strides toward weight restoration (141–148). Clinical consensus suggests that psychosocial interventions should incorporate an understanding of the patient's developmental traumas, cognitive development, psychodynamic conflict and defense styles, disorders of self-esteem, self-regulation, and "sense of self," as well as other psychological deficits, the presence of other psychiatric disorders, and the complexity of family relationships (149–152). Although studies of psychotherapies focus on different interventions as distinctly separate treatments,

in practice there is frequent overlap among treatments. Indeed, most experienced clinicians report using interventions that cross theoretical boundaries when treating patients with eating disorders (153).

In adolescents, controlled studies have shown that for patients who are younger than age 19 years, have been ill for 3 years or less, and have restored their weight, family therapy is more beneficial than individual therapy, whereas individual therapy is more beneficial for patients with later-onset disorders (154). At 5-year follow-up of patients who received these therapies, much of the improvement could be attributed to the natural outcome of the illness, but it was still possible to detect long-term benefits of the psychological therapies (155).

Regardless of the clinical or theoretical approach used in treatment, some patients with eating disorders challenge clinicians' understanding and in some instances provoke countertransference reactions, particularly in response to patients' communications of aggression and defiance (140, 147, 156–162). Clinical consensus suggests that eating disorders are often difficult to ameliorate with short-term interventions, at least in older adolescents and adults; for this reason, clinicians often feel they have not done enough to change the patient's plight. Countertransference feelings often include beleaguerment, demoralization, and excessive need to change patients with a chronic eating disorder. At the same time, when treating patients with chronic illnesses, clinicians need to understand the longitudinal course of the disorder and that patients can recover even after many years of symptoms. Such awareness may help clinicians maintain a degree of therapeutic optimism and deal with the feelings of pessimistic demoralization that may arise (13, 163).

Some observations suggest that the gender of the clinician may play a role in the particular kind of countertransference reactions that come into play (156, 157). A patient's concerns about the gender of a clinician may be tied to concerns about potential boundary violations and should be attended to when selecting clinicians, including psychiatrists (164, 165). In addition, cultural differences between patients and clinicians or patients and other aspects of the care system may also influence the course and conduct of treatment and require attention. Ongoing processing of one's countertransference reactions, sometimes with the help of a supervisor or consultant, can be useful in helping the clinician persevere and reconcile intense, troublesome countertransference reactions.

When a patient with an eating disorder has been sexually abused or has felt helpless in other situations of boundary violations, this may stir up needs in the clinician to rescue the patient, which can occasionally result in a loosening of the therapeutic structure, the loss of therapeutic boundary keeping, and a sexualized countertransference reaction. In some cases, these countertransference responses have led to overt sexual acting out and unethical treatment on the part of the clinician that have not only compromised treatment but also severely harmed the patient (166). The maintenance of clear boundaries is critical in treating all patients with eating disorders, not only those who have been sexually abused but also those who may have experienced other types of boundary intrusions regarding their bodies, eating behaviors, and other aspects of the self by family members or others. Regular meetings with other team members and/or formal supervision can also help clinicians avoid boundary violations with eating disorder patients. Particularly with some adolescents, a clinician's obvious warmth and direct educational approach may facilitate initiating and sustaining the

patient's trust. However, the license to be informal may create a climate in which a clinician is at a greater risk to violate therapeutic boundaries; such an occurrence must be consistently and carefully prevented. At the same time, according to some clinicians, a clinician's excessively rigid, cold manner and formal distancing behaviors (e.g., avoiding even benign pats on the shoulder that a patient might seek for reassurance) may be disconcerting to some patients and inhibit them from fully engaging in treatment.

Some clinicians use group psychotherapy as an adjunctive treatment for anorexia nervosa; in such cases, however, caution must be taken that patients do not compete to be the thinnest or sickest patient in the group or become excessively demoralized by observing the ongoing struggles of other patients in the group. For that reason, clinicians sometimes prefer heterogeneous groups that combine patients with bulimia nervosa and those with anorexia nervosa. Although there has been little formal study of group psychotherapy in the treatment of anorexia nervosa, one naturalistic study suggests that CBT may have promise (137).

Some clinicians consider that eating disorders may be usefully treated through addiction models, but no data from short- or long-term outcome studies using these methods have been reported. Literature from Anorexics and Bulimics Anonymous and Overeaters Anonymous emphasizes that these programs are not substitutes for professional treatment. These organizations specifically recommend that members seek appropriate medical and nutritional guidance. Nevertheless, there are concerns about zealous and narrow application of the 12-step philosophy in addiction-oriented programs for eating disorders. Programs that focus exclusively on abstaining from binge eating, purging, restrictive eating, and exercise (e.g., 12-step programs) without attending to nutritional considerations or cognitive and behavioral deficits have not been studied and therefore cannot be recommended as the sole treatment for anorexia nervosa. Clinicians frequently report encountering patients who, while attempting to resolve anorexia nervosa by means of a 12-step program alone, might have been greatly helped by concurrent conventional treatment approaches such as nutritional counseling and rehabilitation, medications, and psychodynamic or cognitive-behavioral approaches. By limiting their attempts to recover to their participation in a 12-step program alone, patients not only deprive themselves of the potential benefits of conventional treatments but also may expose themselves to misinformation about nutrition and eating disorders offered by well-intended nonprofessionals participating in and sometimes running these groups. Attempts have been made to integrate traditional and 12-step approaches into treatment; such approaches can offer a strong sense of community, but the effectiveness and potential adverse effects of these combined interventions have not been systematically studied (167). It is important for programs using a 12-step model to be equipped to care for patients with the substantial psychiatric and general medical problems often associated with eating disorders.

Selective support groups led by professionals and advocacy organizations may be beneficial as adjuncts to other psychosocial treatment modalities. However, clinicians should remain cognizant of the idiosyncratic recommendations made in some self-help groups. Sometimes, participants or leaders will eschew clinician-recommended treatments such as psychotropic medication or insist that a participant follow a particular kind of meal structure. These recommendations may conflict with other treatment recommendations and potentially increase the patient's resistance to treatment.

Patients and their families are increasingly using online web sites, news groups, and chat rooms as resources. Although substantial amounts of worthwhile information and support are available in this fashion, the lack of professional supervision of these sources may sometimes lead to misinformation and unhealthy dynamics among users. Clinicians should ask patients about their use of electronic support and other alternative and complementary approaches and be prepared to openly and sympathetically discuss the information and ideas they and their families have gathered from these sources.

As with any form of intervention, various psychosocial interventions may generate adverse effects; however, these have not been systematically studied with regard to treating anorexia nervosa. Some that have been observed by clinicians, patients, and families include 1) fostering negative attitudes in patients and/or families toward health care professionals without adequate discussion and reflection, thereby increasing the risk that patients will drop out of treatment and become less willing to seek or engage in professional treatment; 2) delaying referral to more appropriate interventions; and 3) generating burdensome costs without reasonable or expected benefits (13, 168).

Patients often have difficulty with certain elements of psychotherapy. For example, among patients receiving CBT, some are quite resistant to self-monitoring, whereas others have difficulty mastering cognitive restructuring. Most patients are initially resistant to changing their eating behaviors, particularly when it comes to increasing their caloric intake or reducing exercise. However, the complete lack of acceptance of a psychotherapeutic approach appears to be rare, although this has not been systematically studied.

Management strategies to deal with potential negative effects of psychotherapeutic interventions include 1) conducting a careful pretreatment evaluation, during which the therapist must assess and enhance the patient's level of motivation for change and determine the most appropriate therapeutic approach and format (e.g., individual versus group); 2) being alert to a patient's reactions to and attitudes about the proposed treatment and listening to and discussing the patient's concerns in a supportive fashion; 3) ongoing monitoring of the quality of the therapeutic relationship; and 4) identifying patients for whom another treatment should be co-administered or given before psychotherapy begins (e.g., substance use disorder treatment for those actively abusing alcohol or other drugs, antidepressant treatment for patients whose depression makes them unable to become actively involved, more intensive psychotherapy for those with severe personality disorders, group therapy for those not previously participating). Alternative strategies may be necessary to facilitate the therapeutic process and prevent the abrupt termination of therapy (13). As with all therapeutic interventions, it is essential that the therapist be alert to potential countertransference phenomena toward these often difficult-to-treat patients. If unresolved, these reactions have a high potential for disrupting or hastening the termination of treatment.

(iii) Chronic anorexia nervosa

Available studies of patients with chronic anorexia nervosa typically show a lack of substantial clinical response to psychotherapy. For example, in the study of Dare et al. (85), 84 patients, ill for an average of 6.3 years and with an initial average BMI of 15.4 kg/m^2, were assigned to one of three individual psychotherapies or a control group. The results after 1 year of

psychotherapy were modest in all groups, although the psychoanalytic psychotherapy and family therapy groups fared better than those in the low-contact, routine-care control group. Nevertheless, many clinicians report seeing patients with chronic anorexia nervosa who, after many years of struggling with their disorder, experience substantial remission; thus clinicians are justified in maintaining and extending some degree of hope to patients and families.

For patients whose anorexia nervosa continues to be resistant to treatment despite substantial trials of nutritional rehabilitation, medications, and hospitalizations, more extensive psychotherapeutic measures may be undertaken in a further effort to engage and help motivate them or, failing that, as compassionate care. This difficult-to-treat subgroup may represent an as-yet poorly understood group of patients with malignant, chronic anorexia nervosa. Efforts to understand the unique plight of such patients may sometimes lead to engagement in the therapeutic alliance, thereby allowing the nutritional protocol to be initiated (125, 141, 142, 169, 170). With patients who have difficulty talking about their problems, clinicians have reported a variety of nonverbal therapeutic methods, such as creative arts and movement therapy programs, to be useful (171), but these methods have not been formally studied. At various stages of recovery, occupational therapy programs may also enhance self-concept and self-efficacy (172, 173), but again these programs have not been formally studied.

c) Medications

Although psychotropic medications should not be used as the sole or primary treatment for anorexia nervosa, they have been used as an adjunct treatment when nutritional rehabilitation programs alone are ineffective in restoring patients' normal weight or when patients demonstrate significant comorbid psychopathology such as disabling obsessive-compulsive, depressive, or anxiety symptoms. However, because anorexia nervosa symptoms and associated features such as depression may remit with weight gain, decisions concerning the use of medications should be deferred if possible until patients' weight has been restored. The decisions about whether to use psychotropic medications and which medications to choose will be determined by the remaining symptom picture (e.g., antidepressants are usually considered for those with persistent depression, anxiety, or obsessive-compulsive symptoms and for bulimic symptoms in weight-restored patients; second-generation antipsychotics are usually considered for those with severe, unremitting resistance to gaining weight, severe obsessional thinking, and denial that assumes delusional proportions). Many patients with anorexia nervosa are extremely reluctant to take medications and often refuse those that they know to specifically affect weight. These issues must be discussed sympathetically and comprehensively with patients and, for children and adolescents, with their families.

(i) Antidepressants

The efficacy of SSRI antidepressants for anorexia nervosa appears to vary with the phase of treatment. On the basis of several studies, fluoxetine does not appear to confer significant benefits during weight restoration (174, 175), nor did citalopram increase the rate of weight gain in a small study (176). In contrast, in weight-restored patients, fluoxetine in dosages of up to 60 mg/day may decrease relapse episodes and has been associated with better maintenance of weight and fewer symptoms of depression (177). However, for weight-

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restored patients with anorexia nervosa who are receiving CBT to help prevent relapse, adding fluoxetine to their treatment does not further decrease the risk of relapse (138).

Although higher dosages of fluoxetine have been found to impair appetite and cause weight loss in normal-weight and obese patients, this effect has not been reported in anorexia nervosa patients treated with lower dosages. Many clinicians report that malnourished depressed patients are less responsive to the beneficial effects of tricyclics, SSRIs, and other antidepressant medications than normal-weight depressed patients. These findings are consistent with those showing that SSRIs are not as effective for depression, when patients without an eating disorder undergo dietary restrictions (178, 179).

Malnourished patients are also much more prone to the side effects of medications. For example, the use of tricyclic antidepressants may be associated with greater risk of hypotension, increased cardiac conduction times, and arrhythmia, particularly in purging patients whose hydration may be inadequate and whose cardiac status may be nutritionally compromised. Given the availability of other antidepressant treatments, tricyclic antidepressants should be avoided, particularly in underweight patients and in patients who are at risk for suicide. In patients for whom there is a concern regarding potential cardiovascular effects of medication, medical specialty consultation can help evaluate the patient's status and advise on the use of medication. With all antidepressants, strategies to manage side effects include limiting the use of medications to patients with persistent depression, anxiety, or obsessive-compulsive symptoms; using low initial doses in underweight patients; and remaining vigilant about early manifestations of side effects.

Several other antidepressants have also been associated with significant side effects that are of relevance to the treatment of anorexia nervosa patients. Bupropion has been associated with an increased likelihood of seizures in patients with bulimia nervosa (180, 181); although the reason for this is unknown, it is suspected that patients with anorexia nervosa, binge-purge type, may also be at increased risk for seizures. Thus, this medication is not recommended for patients with anorexia nervosa, particularly those who purge. Mirtazapine, an antidepressant associated with weight gain, has also been associated with neutropenia. In addition, the only published case report of using mirtazapine to treat anorexia nervosa described a patient also taking fluvoxamine who developed the serotonin syndrome (182). Thus, mirtazapine may not be suitable for use in underweight anorexia nervosa patients.

Clinicians must attend to the black box warnings concerning antidepressants and conduct appropriate informed consent with patients and families if antidepressants are to be prescribed (183–189).

(ii) Antipsychotics

It has been suggested that antipsychotic medications, particularly second-generation antipsychotics, can be potentially useful during the weight-restoration phase or in treatment of other associated symptoms of anorexia nervosa, such as marked obsessionality, anxiety, limited insight, and psychotic-like thinking. Although no controlled studies have been reported in patients with anorexia nervosa, controlled trials of olanzapine and risperidone are under way. Evidence from case reports, case series, and open-label uncontrolled trials suggests that the second-generation antipsychotic olanzapine may promote weight gain in adults and in

adolescent patients (190–193) and that olanzapine (190–194) and quetiapine may improve other associated symptoms (195–197). A small open-label study of low-dose haloperidol also showed improved insight and weight gain in severely ill patients (198). The quality of the available evidence on using antipsychotic medications is also limited by the fact that studies rarely include male patients and have included only small numbers of adolescents; in addition, only case reports are available regarding prepubertal children. If antipsychotic medications are used, the possibility of extrapyramidal symptoms, especially in debilitated patients, should be considered and routinely assessed. Also, appropriate attention must be given to the potential adverse impact of these medications on insulin sensitivity, lipid metabolism, and length of QTc interval.

(iii) Other medications and somatic treatments

Other somatic treatments, ranging from vitamin and hormone treatments to ECT, have been tried in uncontrolled studies. None has been shown to have specific value in the treatment of anorexia nervosa symptoms (199).

Other medications have been used to address associated features of anorexia nervosa. For example, antianxiety agents have been used selectively before meals to reduce anticipatory anxiety concerning eating (200, 201), and pro-motility agents, such as metoclopramide, are commonly offered for the bloating and abdominal pains that result from gastroparesis and that contribute to the premature satiety seen in some patients. However, before prescribing metoclopramide, clinicians should consider the fact that extrapyramidal symptoms are more likely to be seen in underweight anorexia nervosa patients.

In anorexia nervosa patients with prolonged amenorrhea, hormone replacement therapy (HRT) is frequently prescribed to improve patients' bone mineral density. However, no good supporting evidence exists to demonstrate the efficacy of this treatment (202, 203). In women with anorexia nervosa, the evidence supporting the use of HRT is marginal at best. HRT has not been demonstrated to increase bone mineral density over and above standard treatment in adults (204) or in adolescents (203). Only in a subset of very-low-weight women (<70% average body weight) did it prevent further bone loss (204). Estrogen can cause the fusion of the epiphyses and should not be administered to girls before their growth is completed (3). HRT usually induces monthly menstrual bleeding, obscuring the major sign that indicates weight normalization in women. This, in turn, may cause the patient to misunderstand that her body is functioning normally and therefore contribute to denial of the need to gain more weight. Clinicians stress that efforts should be made to allow patients to increase their weight and achieve resumption of normal menses before they are offered estrogen (205). There is no indication for the use of biphosphonates such as alendronate in patients with anorexia nervosa. In fact, long-term use of alendronate may oversuppress bone turnover (206). Thus, the recommended treatment for low bone mineral density includes weight gain and calcium with vitamin D supplementation (207).

3. Choice of specific treatments for bulimia nervosa

The aims of treatment for patients with bulimia nervosa are to 1) reduce and, where possible, eliminate binge eating and purging; 2) treat physical complications of bulimia nervosa; 3)

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enhance the patient's motivation to cooperate in the restoration of healthy eating patterns and participate in treatment; 4) provide education regarding healthy nutrition and eating patterns; 5) help the patient reassess and change core dysfunctional thoughts, attitudes, motives, conflicts, and feelings related to the eating disorder; 6) treat associated psychiatric conditions, including deficits in mood and impulse regulation, self-esteem, and behavior; 7) enlist family support and provide family counseling and therapy where appropriate; and 8) prevent relapse.

a) Nutritional rehabilitation and counseling

Bulimia nervosa is associated with nutritional chaos characterized by alternating cycles of dietary restriction, bingeing, and purging. A primary focus for nutritional rehabilitation is to help patients develop a structured meal plan that will allow them to reduce the episodes of dietary restriction and the urge to binge and purge. Nutritional intake should be sufficient to promote satiety. Because most bulimia nervosa patients who have been studied are of normal weight, nutritional restoration will not be a central focus of treatment. However, normal body weight (or normal BMI) does not ensure normal body composition, nor does it ensure that nutritional intake is appropriate. In addition, even if their weight is within statistically normal ranges, many patients with bulimia nervosa weigh less than their appropriate biologically determined set points (or ranges) and may have to gain some weight to achieve physiological and emotional stability. Although many patients with bulimia nervosa report irregular menses, improvement in menstrual function has not been systematically assessed in the available outcome studies. Thus, even among patients of normal weight, nutritional counseling may be a useful adjunct to other treatment modalities in reducing behaviors related to the eating disorder, minimizing food restrictions, increasing the variety of foods eaten, and encouraging healthy but not compulsive exercise patterns (208). Those patients for whom some weight gain is indicated similarly require the establishment of a pattern of regular, non-binge meals, with attention on increasing their caloric intake and expanding macronutrient selection. Patients with bulimia nervosa who are overweight or obese have not been well studied.

b) Psychosocial interventions

The goals of psychosocial interventions for patients with bulimia nervosa vary and can include the following: reducing or eliminating binge eating and purging behaviors; improving attitudes related to the eating disorder; minimizing food restriction; increasing the variety of foods eaten; encouraging healthy but not compulsive exercise patterns; treating co-occurring conditions and clinical features associated with eating disorders; and addressing themes that may underlie eating disorder behaviors such as developmental issues, identity formation, body image concerns, self-esteem in areas outside of those related to weight and shape, sexual and aggressive difficulties, affect regulation, sex role expectations, family dysfunction, coping styles, and problem solving. Consequently, psychosocial interventions should be chosen on the basis of a comprehensive evaluation of the individual patient and take into consideration the patient's cognitive and psychological development, psychodynamic issues, cognitive style, comorbid psychopathology, and preferences as well as age and family situation.

With respect to short-term interventions for treating acute episodes of bulimia nervosa in adults, the available evidence indicates that CBT is the most efficacious. CBT may effect

improvements in psychological functioning of bulimia nervosa patients as well as ameliorate binge eating and purging symptoms. For example, studies have shown that bulimia nervosa patients who improved with CBT also showed improvements in self-directedness and harm avoidance (209, 210). Among patients who do not initially respond to CBT, a small number do respond to IPT or fluoxetine (211) or other modes of treatment such as family and group psychotherapies. Some controlled trials (212) have also shown the effectiveness of IPT as an initial therapy. Behavioral techniques, such as planned meals and self-monitoring, may also be helpful for managing initial symptoms and interrupting binge-purge behaviors (213, 214). It should be pointed out that these study results may not be generalizable to typical clinical situations. For example, to maximize the "clean" experimental nature of some of the CBT/IPT controlled studies mentioned above, the CBT intentionally avoided dealing with interpersonal issues and the IPT intentionally avoided talking about eating issues, which is quite different than how these therapies are conducted in clinical practice (215). It is also possible that the narrow inclusion criteria of some studies limit the generalizability of the study results (216).

Some clinical reports indicate that psychodynamic and psychoanalytic approaches in individual or group format are useful once bingeing and purging symptoms improve (217–219). These approaches address developmental issues; identity formation; body image concerns; self-esteem; conflicts surrounding sexuality, anger, or aggression; affect regulation; gender role expectations; interpersonal conflicts; family dysfunction; coping styles; and problem solving. In a recent naturalistic study of treatment as practiced by experienced clinicians in the community, both CBT and psychodynamic psychotherapy led to decreased rates of bingeing and purging similar to those seen in controlled trials (roughly 50%). However, although CBT has been reported to be associated with a more rapid remission of eating symptoms, some therapists note that more integrative treatments that include psychodynamic approaches are useful in targeting both eating symptoms and broader personality, comorbidity, and quality-of-life issues (153).

Some bulimia nervosa patients, particularly those with concurrent personality pathology or other co-occurring disorders, may require substantially longer treatment. In one study, the clinicians reported that their average CBT treatment for bulimia nervosa lasted 69 sessions (81). However, just how closely these clinicians adhered to formal CBT methods is unknown. Also unknown is how the length and characteristics of the treatments varied according to other clinical dimensions of these patients. Exactly what is required over the long run to best help patients resolve lingering preoccupations with body image and the more subtle but impairing psychological dimensions that may be associated with eating disorders requires additional study. These concerns are often approached in practice through a variety of longer-term psychotherapies.

Family therapy should be considered whenever possible, especially for adolescents still living with parents or for older patients with ongoing conflicted interactions with parents. Patients with marital discord may benefit from couples therapy.

A variety of self-help and professionally guided self-help programs have been effective for a small number of patients with bulimia nervosa (220–222) and have been piloted in some stepped-care approaches. Several innovative online programs are currently being studied (5). Support groups and 12-step programs such as Overeaters Anonymous may be helpful as

adjuncts to initial treatment of bulimia nervosa and for subsequent relapse prevention but are not recommended as the sole initial treatment approach for bulimia nervosa (168, 223). As noted above, these support organizations emphasize in their literature that their programs are not substitutes for professional treatment and specifically recommend that members seek appropriate medical and nutritional guidance. However, clinicians should remain cognizant of the idiosyncratic recommendations made in some self-help groups.

Patients with bulimia nervosa occasionally have difficulties with certain elements of psychotherapy similar to what was discussed above for patients with anorexia nervosa. Possible adverse effects of psychotherapeutic and psychosocial interventions, steps that clinicians might take to minimize negative therapeutic reactions, and issues concerning countertransference (as discussed in Section II.B.2.b) apply to the treatment of patients with bulimia nervosa.

c) Medications

Antidepressants are effective as one component of an initial treatment program for most bulimia nervosa patients. Although various classes of antidepressant medications can reduce symptoms of binge eating and purging, SSRIs have the most evidence for efficacy and the fewest difficulties with adverse effects (224–226). To date, the only medication approved by the FDA for the treatment of bulimia nervosa is fluoxetine. The only other SSRI shown to be effective is sertraline, which was studied in a small randomized controlled trial (227). Available studies also suggest that antidepressants may be helpful for patients with substantial symptoms of depression or anxiety, obsessions, or certain impulse disorder symptoms or for patients who have not responded or had a suboptimal response to previous attempts at appropriate psychosocial therapy (228, 229). Dosages of SSRIs that are higher than those used for depression (e.g., fluoxetine 60 mg/day) are more effective in treating bulimic symptoms (224, 226, 230), but high dropout rates may also be seen in patients using these drugs (226). A small open trial demonstrated the safety and effectiveness of 60 mg/day of fluoxetine for treating bulimia nervosa in adolescents (225). Thus, many clinicians initiate fluoxetine treatment for bulimia nervosa at the higher dosage, titrating downward if necessary to manage side effects. Tricyclic and MAOI antidepressants are rarely used to treat bulimia nervosa, but if they are used, the dosages are similar to those used to treat depression (231).

Often, several different antidepressants may have to be tried sequentially to identify the specific medication with the optimum effect in a particular patient. In the bulimia nervosa patient whose symptoms do not respond to medication, it is important to assess whether the patient has taken the medication shortly before vomiting. Correlations between serum levels and response have not been identified; however, if serum levels of the medication are available, they may help determine whether presumably effective levels of the drug have actually been achieved. Treatment adherence will also enhance the patient's response to treatment, and subtle interpersonal and psychodynamic factors in the physician-patient relationship may contribute to treatment resistance if left unaddressed (232).

As in most clinical situations, careful education of the patient regarding possible side effects of medications and their symptomatic management (e.g., stool softeners for constipation) is important. Side effects vary widely across studies depending on the type of antidepressant

medication used. In the multicenter fluoxetine trials (224, 230), sexual side effects were common, and at the dosage of 60 mg/day, insomnia, nausea, and asthenia were seen in 25%–33% of patients. For the tricyclic antidepressants, common side effects include sedation, constipation, dry mouth, and, with amitriptyline, weight gain (233–238).

The toxicity and potential lethality of tricyclic antidepressant overdosage also dictate caution in prescribing this class of drug for patients who are at risk for suicide. Practitioners should also avoid prescribing MAOIs to patients with chaotic binge eating and purging behaviors. The risk of spontaneous hypertensive crises in patients with bulimia nervosa taking MAOIs is not insignificant (239). This risk and the importance of eating a tyramine-free diet while taking MAOIs should be discussed with patients for whom this type of medication is contemplated.

There are few reports on the use of antidepressant medications in the maintenance phase of treating bulimia nervosa patients. Although there are data indicating that fluoxetine can be effective in preventing relapse in these patients (226), other data suggest that high rates of relapse occur while antidepressants are being taken and possibly higher rates are seen when the medication is withdrawn (240). In the absence of more systematic data, most clinicians recommend continuing antidepressant therapy for a minimum of 9 months and probably for 1 year in most patients with bulimia nervosa.

Clinicians must attend to the black box warnings concerning antidepressants and conduct appropriate informed consent with patients and families if these medications are to be prescribed (183–189).

For patients with bulimia nervosa who require mood stabilizers, the use of lithium carbonate is problematic, because lithium levels may shift markedly with rapid volume changes. Lithium is not effective in the treatment of bulimia nervosa (241). Both lithium carbonate and valproic acid frequently lead to undesirable weight gains that may limit their acceptability to bulimia nervosa patients. Selecting a mood stabilizer that avoids these problems may result in better patient adherence and medication effectiveness. Topiramate is not an effective mood stabilizer but may be potentially useful for bulimia nervosa and binge eating disorder (242, 243). However, in contrast to the low rates of adverse effects observed in clinical trials with topiramate, practitioners have reported several patients experiencing adverse effects with the drug, such as word-finding difficulties and paresthesias in a sizable minority of patients, although these may have been related to excessively rapid rates of dosage increases (242, 243). Also of note, patients receiving topiramate for bulimia nervosa lost an average of 1.8 kilograms, so this medication may be problematic for normal- to lower-weight individuals (243). No data are available regarding the use of these medications for treating bulimia nervosa or binge eating in children or adolescents, but safety and tolerability data have been reported for children and adolescents with other disorders for which lithium (244), valproic acid (245), and topiramate (246) have been prescribed.

Several case reports indicate that methylphenidate may be helpful for bulimia nervosa patients with concurrent ADHD (247–249). In these situations, particular attention should be given to a range of potential adverse effects, including abuse.

d) Combinations of psychosocial interventions and medications

Although not all psychotherapies have been well studied, there is general consensus among clinicians regarding the efficacy of a combined psychotherapeutic/medication approach; such an approach is worth considering when initiating treatment. In some research, the combination of antidepressant therapy and CBT has resulted in the highest remission rates of bulimia nervosa (250–252). Other studies suggest that target symptoms such as binge eating and purging and attitudes related to the eating disorder generally respond better to CBT than to pharmacotherapy (253–255), with at least two studies (251, 254) showing that the combination of CBT and medication is superior to either alone. Two of the studies suggested a greater improvement in mood and anxiety variables when antidepressant therapy is added to CBT (251, 253, 256). Of note, some experienced clinicians do not find rigidly defined and doctrinally practiced CBT to be as useful as methods that integrate CBT with other psychotherapeutic techniques. This may be due to several factors, including clinician inexperience or discomfort with the methods of CBT or differences among patients seen in the community and those who have participated as research subjects in these studies (81, 153).

e) Other treatments

Bright light therapy has been shown to reduce binge frequency in several controlled trials (257–259). Case reports suggest that repeated transcranial magnetic stimulation may be effective in treating patients with major depression and bulimia nervosa (260, 261). One controlled trial (719) showed odansetron, a peripheral 5-hydroxytryptamine type-3 (5-HT_3) receptor antagonist that reduces vagus nerve activity, to be effective in decreasing symptoms of bulimia nervosa, and its use may be considered in unusual circumstances.

4. Eating disorder not otherwise specified

The eating disorder not otherwise specified (EDNOS) category is a conceptually problematic one and comprises a clinically heterogeneous group of diagnoses (262, 263). This "everything else" category currently consists largely of individuals with subsyndromal anorexia nervosa or bulimia nervosa who do not meet DSM-IV-TR criteria of being 15% below expected weight or who binge and purge slightly less than twice per week. Such individuals merit treatment similar to that of full-syndrome patients. In addition, the EDNOS category lumps together normal-weight patients who purge, individuals who chew and spit out their food without swallowing it to prevent weight gain, and patients with binge eating disorder. Also perhaps suitable for this "other" category are individuals who experience psychiatric impairment related to the abuse of diet pills and diuretics (264), individuals who are obsessively preoccupied with liposuction (265) to deal with issues of shape and weight, and certain new-onset postgastrectomy eating disorder patients (266). The EDNOS diagnosis covers a wide spectrum, so no easily generalizable comments can be made for the entire group regarding course or prognosis (267). In addition, over time, considerable movement occurs from one eating disorder diagnostic category to another, including EDNOS (263).

Binge eating disorder is the most discrete and well-studied EDNOS subgroup. Although binge eating disorder is currently not an approved DSM-IV-TR diagnosis, research criteria listed in DSM-IV-TR consist of disturbances in one or more of the following spheres: behavioral (e.g., binge eating), somatic (obesity is common, although not required), and psychological (e.g., body image dissatisfaction, low self-esteem, depression). Empirically supported strategies for

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the treatment of binge eating disorder include nutritional counseling and dietary management; individual or group behavioral, cognitive behavioral, dialectical behavioral, psychodynamic, or interpersonal psychotherapy; and medications. In reviewing the available information on treating binge eating disorder, it is important to consider the focus of treatment. Most programs using nutritional rehabilitation and counseling focus on weight loss as the primary outcome, whereas studies of psychotherapy and medication generally consider reduction of binge eating as the primary outcome measure, with weight loss as a secondary outcome. Clinical consensus suggests that psychodynamic psychotherapy may also be helpful to reduce binge eating in some patients.

a) Nutritional rehabilitation and counseling: effect of diet programs on weight and binge eating symptoms

The literature on treating binge eating disorder suggests that 1) behavioral weight control programs incorporating low- or very-low-calorie diets may help patients lose weight and usually reduce symptoms of binge eating; 2) at least some degree of weight gain often follows weight loss; 3) weight gain after weight loss may be accompanied by a return of binge eating patterns; and 4) various combinations of diets, behavior therapies, non-weight-directed psychosocial treatments, and even some "nondiet/health at every size" psychotherapy approaches may be of benefit in reducing binge eating and promoting weight loss or stabilization in various circumstances (268).

Some believe that patients with a history of repeated weight loss followed by weight gain ("yo-yo" dieting) or patients with an early onset of binge eating might benefit from following programs that focus on decreasing binge eating rather than losing weight (269, 270). However, at this point, there is little empirical evidence to suggest that obese binge eaters who are primarily seeking weight loss should receive different treatment than obese individuals who do not binge eat.

b) Other psychosocial treatments: effects on binge eating disorder

CBT is the most widely studied treatment for binge eating disorder, and there is substantial evidence supporting its efficacy for behavioral and psychological symptoms, whether it is delivered in the individual or group format. IPT and dialectical behavior therapy have also been shown to be effective for behavioral and psychological symptoms and can be considered as alternative therapies. There is less consensus regarding the long-term effects of treatment; however, some studies suggest that most patients continue to show behavioral and psychological improvement at 1-year follow-up (271, 272). There is a substantial body of evidence supporting the efficacy of self-help and guided self-help CBT treatment programs (273–277) and their use as an initial low-burden step in a sequenced treatment program.

Because severe dieting may disinhibit eating and lead to compensatory overeating and binge eating (278), and because chronic calorie restriction can also increase symptoms of depression, anxiety, and irritability (279), alternative therapies have been developed that use a "nondiet" approach and focus on self-acceptance, improved body image, better nutrition and health, and increased physical movement (280–282). Addiction-based 12-step approaches,

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self-help organizations, and treatment programs based on the Alcoholics Anonymous model have been tried, but no systematic outcome studies of these programs are available.

In sum, there appear to be several good psychotherapeutic options for treating binge eating disorder when a reduction in binge eating is the primary goal. Weight loss, particularly in the long term, is a much more elusive goal, not only for obese patients with binge eating disorder but for obese patients in general. However, several studies suggest that at least for some patients at certain stages of recovery, behavioral weight control may be a useful treatment component. Also, because studies have found that binge eating may begin before obesity or dieting (283), specific approaches are needed for nonobese patients struggling with binge eating symptoms. The optimal sequencing of treatments—that is, whether the treatment of binge eating should precede or occur concurrently with weight control treatment—has yet to be definitively determined.

c) Medications

There is substantial evidence to suggest that treatment with antidepressant medications, particularly SSRI antidepressants, is associated with at least a short-term reduction in binge eating, in most cases without substantial weight loss. The dosage of medication is typically at the high end of the recommended range. The appetite-suppressant medication sibutramine also appears to be effective in suppressing binge eating, at least in the short term, and is additionally associated with significant weight loss (284). Heart rate and blood pressure need to be monitored closely in patients taking sibutramine, and the medication should be discontinued if there are significant elevations in these parameters, although these side effects seem to be uncommon (285). Finally, the anticonvulsant medication topiramate appears to be effective in reducing binge eating and promoting weight loss in the short (286) and long (287) term, although side effects such as cognitive problems, paresthesias, and somnolence may limit its clinical utility for some individuals. The anticonvulsant zonisamide may produce similar effects (288). Dexfenfluramine, although effective for reducing binge eating (289), has been removed from the market because of increased risk of primary pulmonary hypertension and heart valve abnormalities. Patients who report having used fenfluramine and phentermine in the past should be screened for potential cardiac and pulmonary complications.

It is important to note that in several studies, the placebo response rate has been reported to be quite high. The clinical implications of this finding are that controlled studies are extremely important, as a positive response in an open study may be nonspecific, and short-term beneficial responses to treatment should be viewed cautiously, given that a transient "honeymoon" effect of initiating treatment is common.

d) Combined psychosocial and medication treatment strategies

There have been few studies of combined treatment for binge eating disorder, so the clinical recommendations are preliminary. Overall, it appears that for most patients, the addition of antidepressant medication to behavioral weight control and/or CBT does not significantly augment binge suppression but may confer additional benefits in weight reduction (290–294). One study reported that the addition of the weight-loss medication orlistat to a guided self-help CBT program yielded additional weight loss (295). Another study found that fluoxetine in

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the setting of group behavioral treatment did not augment binge cessation or weight loss but did reduce depressive symptoms (294). Thus, the addition of medication to psychotherapy for binge eating disorder is not, in most cases, associated with additional benefit on the core symptom of binge eating, perhaps because psychosocial treatments are quite effective for this symptom. However, medication augmentation may have additional benefits.

e) Treatment strategies for night eating syndrome

The phenomenon of wakeful nighttime eating, variously characterized as night eating syndrome, nocturnal eating/drinking syndrome, or nocturnal sleep-related eating disorders, is currently an area of active research (296). Although formal agreed-upon definitions for these syndromes do not yet exist, the construct of night eating syndrome, first described by Stunkard et al. (297), generally includes morning anorexia, evening hyperphagia, and insomnia. In contrast, the construct of nocturnal eating/drinking syndrome emphasizes a sleep disorder with recurrent awakenings often accompanied by eating or drinking, and the construct of nocturnal sleep-related eating disorders adds to this a reduced level of awareness or recall of nocturnal eating episodes. Sleep-related eating disorders, including somnambulism, have reportedly been induced by risperidone, olanzapine, and bupropion, among other medications (298–300). The literature does not, at this point, support the recommendation of particular treatments for these disorders. However, there is preliminary evidence supporting the utility of progressive muscle relaxation (301) and sertraline (302, 303). Further studies of the phenomenology and treatment of these disorders are needed.

Exhibit 21

Walden Behavioral Care, LLC
Policies and Procedures

Partial Hospital and
Intensive Outpatient

This Manual has been reviewed and approved
By the Governing Body and Medical Director

Stuart L. Koman, Ph.D./Date
Chief Executive Officer
Governing Body

James Greenblatt, MD/ Date
Medical Director

3/16/15

Walden Behavioral Care, LLC
Policies and Procedures

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James Greenblatt, MD/ Date
Medical Director

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POLICIES AND PROCEDURES	PHP/IOP
Consent to Treatment (Treatment of Patients less than 18 Years of Age)	**Policy #: 1.1**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY:

Consent to treatment for patients less than 18 years of age will be obtained from the patient's parent or guardian or from the patient directly if he/she is an emancipated minor.

PROCEDURE:

1. Consent to Treatment should be obtained from a minor's parent or guardian prior to the initiation of treatment. Guideline: The consent form must be signed prior to or during the first face-to-face contact with the client by clinic staff. The consent form may describe the range of services that may be provided, such as individual therapy, family therapy, group therapy, psychiatric evaluation and medication management.

2. Parents or guardians receive a written description of prescribed medication and possible side-effects and contraindications, and sign an acknowledgment that they have received this information.

3. Patients do not participate in experimentation, or clinical trials. Informed consent for participation in research is obtained.

4. In the instance where the consulting psychiatrist or clinical nurse specialist prescribes medication to a minor under the age of 18, Informed Consent will be obtained. The prescriber will document this consent in the patient's medical record. This includes seeking consent anytime a new medication is prescribed or a medication is discontinued.

5. Conflicts or ambiguous situations between a minor and his/her parent or guardian should be reviewed on a case by case basis with the Program Director or designee. The Walden attorney will be consulted as needed. These situations may include the following:

    a) The patient consents to medically necessary treatment which the parent or guardian will not allow
    b) Parent or guardian gives informed consent for medically necessary treatment which patient is refusing

6. An emancipated minor can give Informed Consent for all types of treatment without the physician's contacting a parent or guardian.

7. For the purposes of psychiatric services, an emancipated minor is defined as a person under the age of 18 for whom at least one of the following applies:
    a) Married, widowed or divorced
    b) A parent
    c) A member of the armed forces
    d) Living apart from and financially independent from his/her parent or guardian.

POLICIES AND PROCEDURES	PHP/IOP
Release of Medical Records	**Policy #: 1.2**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 24, 2013

POLICY:

It is the policy of Walden to acknowledge the patient's request for access to his/her medical record.

It is also the policy of Walden to protect the patient's confidentiality in regard to requests for medical records from third parties.

PROCEDURE:

1. If a client in a Walden outpatient program requests to see his/her medical record, the Program Director shall be informed of the request.
2. The Program Director may offer to read or interpret the record when necessary to the understanding of the patient.
3. A patient shall not be denied access because the patient has declined the offer by Program Director to read or interpret the record.
4. If the patient independently reviews his/her record, the staff will offer an opportunity to process the information.
5. A patient's record may only be disclosed to a patient's attorney with the signed permission of the patient.
6. A record may also be released in response to a court order, which specifies release of mental health information.
7. If a patient requests a copy of his/her record after discharge, the following steps shall occur:
    a. The patient sends a written request to the Medical Records Department.
    b. The patient may request and obtain his/her complete medical record or designated sections.
    c. The Program Director will be notified of the request for the record.
8. Medical Records will make the patient's record available within a timely manner of the request.
9. There may be costs associated with making and sending copies of medical which will be reviewed with the person requesting their records prior to copies being made to allow them to decide if they wish to proceed and pay the associated fees.
10. When a minor requests to inspect or obtain a copy of his/her record, the Program Director should be consulted. As needed, assistance should be sought from the hospital attorney.
11. The informed, written consent of the patient must be obtained prior to the release of medical records to a third party.

POLICIES AND PROCEDURE	PHP/IOP
Client/Family Grievance Process	**Policy #**
Prepared by:	**Effective:**
Approved by:	**Revised:**

Policy:

Client/Family
Grievance Process

(To be included in parent packet and parents will sign that they have received and read)

Walden Behavioral Care supports the right of the patient to make a complaint. A Grievance Form and Confidential Grievance Box are available to all patients. Any staff member can assist the patient in filing a complaint. In addition, the Program Director is available to discuss any concerns or complaints a patient may have related to his or her rights.

Procedure:

1. The Client/Family Grievance policy and procedures are explained to clients and family members during the intake process by agency staff.
2. The client is requested to sign a copy of the agency's grievance policy, acknowledging that they have been made aware of the policy,
3. If the child is unable to sign his/her name, the legal guardian must sign the policy, acknowledging that they, as well as the child, have been made aware of the policy.
4. A secure locked complaint box with a mail slot is located in each patient area.
5. Complaint forms are available next to the complaint box and may be inserted into the complaint box.
6. Complaints will be accepted in any form.
7. The Program Director is notified when a complaint is written, if the complaint is in regard to the Program Director, an administrative representative will be notified.
8. The Program Director will meet with the complainant or reach out via telephone to discuss the complaint. This discussion will include a determination of what the complainant would like to see happen to resolve the complaint.
9. The Program Director will share the complaint with the Director of Human Resources, Quality Manager and other WBC senior clinical or administrative executive as appropriate.
10. As needed an investigation will be made by the Director of Human Resources, Quality Manager and other WBC senior clinical or administrative executive. A determination will be made if the degree of the complaint meets requirement to notify the Department of Children and Families or the Department of Public Health or other regulatory agency.
11. A plan of action is formulated by the Program Director, Director of Human Resources, Quality Manager and/or other WBC senior clinical or administrative executives as to the actions Walden Behavioral Care will make to resolve the complaint.
12. The Director of Human Resources, Quality Manager and/or other WBC senior clinical or administrative executives will meet with the complainant and notify him/her of the complaint resolution.
13. Grievances and their dispositions are recorded in the child's case record.

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I have read and understand the Client/Family grievance policy and procedures.

Client's Printed Name	Client's Signature	Date

Guardian's Printed Name & Relationship	Guardian's Signature	Date

I have provided an explanation of the Grievance policy to the child and/or guardian

Agency Staff Printed Name & Title	**Signature**	**Date**

Walden Behavioral Care

Grievance Form (to be used by clients and/or Families)

Name of involved complainant(s):

Date of occurrence of described grievance:

Program attending at time of grievance:

Nature of grievance:

Patient Right that was violated:

Staff Involved:

Desired Outcome:

Printed Name	Signature	Date

Grievance Investigation Report- Management use only (included in employee policy and procedures manual)

Complainant:

Date Complaint Filed: Date Response Due:

Complaint received by: Letter Phone Call In Person Complaint Form Survey

Acknowledgement to complainant by: Letter Phone Call

Principal Patient(s) Interviewed:

Investigator/Fact Finder:

Staff interviewed

Findings

Recommendations

If applicable, extension request to DCF Follow-up letter(s) sent: To Complainant/DCF

Date:

Signatures

Investigator/Fact Finder_ Human Rights Officer _

VP of Clinical Operations/ CEO

POLICIES AND PROCEDURES	
Employee Grievance Process	**Policy #: 1.3.2**
Prepared by:	**Effective:**
Approved by:	**Revised:**

POLICY:

Employee Grievance Policy

(To be included in employee policy and procedures)

Walden Behavioral Care has a framework to provide consumers, staff, and families a policy for reporting complaints or concerns related to patient care, quality of services, perceived human rights violations, and safety issues. Walden Behavioral Care is accountable to report complaints as defined above both internally to Walden Behavioral Care (WBC) administration and externally, if appropriate by criteria, to the Department of Public Health and Department of Children and Families when applicable.

PROCEDURES:

1. All formal complaints shall be put into writing using the Grievance Form and forwarded to the Program Director.
2. The information called for on the complaint form will include demographic information, date, time, and location of the incident, a concise description of the event for which a complaint has been lodged, person(s) involved including the complainant.
3. Investigation of complaints will begin within 24 hours of receipt and must be completed within 30 days.
4. The Program Director will meet with the complainant, and conduct an investigation including a review and analysis of the complaint. Thereafter, the Program Director will meet with the person(s) named in the complaint and any other person(s) involved.
5. After these meetings, the Program Director will report their findings, which will include information from the person(s) involved.
6. In the event that the Program Director is not available or if the complaint involves the Program Director, a WBC Administrative Representative shall assume this role.
7. The Program Director will determine whether or not corrective action will be appropriate.
8. All final determinations will be reported to the Quality Council for appropriate logging and tracing.
9. Recommendations for disciplinary action against an employee, as well as the employee's appeal rights, will be carried out in accordance with approved Program Policies and Procedures.

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10. The Program Director will maintain communication with the complainant throughout the investigation process.
11. Patient's Rights will be included in each program handbook.
12. All staff will be informed of patients' rights and the grievance/investigation process as part of orientation.
13. Staff will forward documentation of the grievance on the Grievance Form per policy (see attached Grievance Form).
14. The Program Director for Walden Behavioral Care will be identified by name and phone number. This information will be posted in the clinic and included in each handbook and this individual will assist patients in completing and forwarding complaints as is needed.
15. Patients will be informed of grievance procedures upon admission.
16. The complaint forms will be visible and readily available.

POLICIES AND PROCEDURES	PHP/IOP
Staff Qualifications	**Policy #: 1.4**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY:

Walden procedures enable the client, or his or her family, to receive information regarding the educational and professional background of the treating clinician.

PROCEDURE:

1. Upon request, treating clinicians will provide information about the educational and professional qualifications that equip them to treat eating disorder patients in Walden programs.

2. Walden clinicians wear photo identification badges that clearly state their titles and professional credentials.

POLICIES AND PROCEDURES	PHP/IOP
Granting Clinical Privileges	**Policy #: 1.4.2**
Prepared by:	**Effective:**
Approved by:	**Revised:**

Policy:

Clinical privileges will be granted according to education, training and experience. Administrative staff will be required to hold a BA or HS Diploma with specific administrative experience. Clinicians will be required to have at minimal a terminal Master's Degree in the field of Mental Health Counseling, Marriage and Family Therapy or Social Work that is license eligible in the State of CT; and/or a Doctoral Degree in Clinical Psychology or Counseling Psychology that is license eligible in the State of CT. Psychiatry services will be provided by an M.D. that is Board Certified in Adolescent and/or Adult Psychiatry and eligible to take the Board exam. The AVP of HR will screen all candidates via telephone to ensure they hold the basic requirements. The Program Director and AVP of HR will invite screened candidates to an initial interview process where the candidates resume and qualifications will be reviewed and discussed. Staff will be required to furnish applicable college transcripts prior to acceptance of employment

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POLICIES AND PROCEDURES	PHP/IOP
Staff Training and Development	**Policy #: 1.4.3**
Prepared by:	**Effective:**
Approved by:	**Revised:**

POLICY:

Walden staff will complete a minimum of 10 hours of training yearly provided on site by Walden Behavioral Care. Staff will be required to sign in during these trainings. Topics below will include but will not be limited to:

1. Eating Disorders Introduction: "It's not about the food"-DSM Diagnoses, Medical Complications, Statistics.
2. Body Tracings
3. DBT with Eating Disorders
4. CBT with Eating Disorders
5. Growth Charts
6. Substance Abuse and Eating Disorders
7. Trauma and Eating Disorders
8. Psychopharmacology and Eating Disorders
9. LGBTQ population and Eating Disorders
10. SIB and Eating Disorders

POLICIES AND PROCEDURES	PHP/IOP
Request to be Absent from Program	**Policy #: 1.5**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

Walden Partial Hospitalization Program is 30 hours each week, Monday through Friday. Patients are expected to arrive on time and attend the entirety of the program day.

PROCEDURE

1. Patients agree to arrive on time for program and remain in program until the end of the day. If not able to do so, the patient agrees to contact the PHP as early in the day as possible, and prior to the start of treatment.

2. If a patient must be absent, arrive late, or leave early from program on any given program day due to outpatient appointments or scheduling conflicts, he or she must fill out a 2-day request form at least 2 days prior to the event, requesting permission to take this day off. Walden case managers reserve the right to approve or deny these requests depending on treatment relevance and appropriate continuation of treatment. Case Managers will meet with patients to discuss scheduling issues as needed.

3. If a patient requests to take two consecutive days off for appointments (or any other reason), the patient's Case Manager will meet with the patient to stress the importance of attendance and work with this patient around any scheduling problems. Case Managers reserve the right to grant two consecutive absences in certain circumstances in which it is felt that these absences will be beneficial for the patient's recovery and will not interfere with treatment.

4. If a patient has two *unexcused* absences from PHP, the Treatment Team will work with the patient to determine if remaining in PHP is indicated.

POLICIES AND PROCEDURES	PHP/IOP
Absentee Patients	**Policy #: 1.6**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

Patients with unexplained absences during program hours will have a clinical case review by the treatment team to determine clinical safety and appropriate responsiveness.

PROCEDURE

1. Upon admission, patients provide identifying information and emergency contact information.
2. When a patient has not shown up for program or is discovered as missing during program hours, staff will notify the Program Director.
3. The Program Director and treatment team members will convene to review the case to determine the clinical safety of the patient.
4. Staff will first attempt to contact the patient using the contact information given upon admission.
5. If a missing patient is unable to be reached and is clinically determined to be in imminent danger of harming herself or others, staff will notify the local Police Department and the identified patient's emergency contact and/or legal guardian.
6. If a missing patient is unable to be reached and the treatment team has determined that she is likely not in imminent danger of harming themselves or others, staff will leave a message for the patient requesting the patient call back with their whereabouts and reason for absence. If Release of Information forms have been provided by the patient, staff will notify the missing patient's outpatient treatment team and, if indicated, family contacts.
7. If a missing patient has not called the program to explain their absence and has not attended program for 2 consecutive days, they will be discharged by the treatment team.

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POLICIES AND PROCEDURES	PHP/IOP
Inclement Weather Policy	**Policy #: 1.7**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

The Partial Hospitalization Program will officially close the program during inclement weather based upon the Public Schools being closed for that city or town.

PROCEDURE

1. If Public Schools are closed due to inclement weather, the PHP will close.
2. If Public Schools are delayed one or two hours, the PHP will also delay the start of its program one or two hours.
3. Patients and staff are instructed to watch or listen for the "no school" or "school delayed" announcements on local news station or radio station for the community where the program resides.
4. Patients and staff are advised to use their own discretion in the event that Public Schools *do not* close and the weather conditions are unfavorable in their own surrounding community.

POLICIES AND PROCEDURES	PHP/IOP
Patient Responsibilities	**Policy #: 1.8**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

Patients in the Outpatient continuum are given information about their responsibilities while receiving care, treatment, and services.

PROCEDURE

- Upon admission into the Outpatient Continuum, clients are oriented to the program by staff. During this time staff will explain the guidelines, responsibilities, and expectations of the program, and patients are given the opportunity to ask questions.
- Patients receive a written participation guideline and contract to sign and return to staff within their first day of treatment. Patients also receive copies of these guidelines to keep.
- These guidelines and contracts define patient's responsibilities while in program, including but not limited to the following responsibilities:
    - To provide information to assist with treatment, especially involving self-injury or other dangerous behaviors
    - To continue meeting with outpatient providers, including PCP, therapist, nutritionist, and psychiatrist as applicable
    - To follow group guidelines, meal protocol, and any other instructions established by program staff
    - To self-administer all medications during program hours
    - To show respect and consideration to other clients and staff, as well as respect confidentiality of others
- Upon admission into the Outpatient Continuum or change in level of care, patients sign a Financial Responsibility Agreement detailing their insurance benefits and coverage and any co-pay or deductible they must meet. A copy of this document is given to the patient and the original is sent to the business office.

POLICIES AND PROCEDURES	PHP/IOP
Group Guidelines	**Policy #: 1.9**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

The guidelines below have been developed to create a safe and respectful space for the community and to honor the sanctity of the therapeutic experience. Patients and staff are asked to adhere to these guidelines to support the therapeutic benefit of groups.

- Patients and staff are to be on time for groups. Groups will start and end on time.
- If a patient is called out of a group by staff, he or she is to return to group if it is still in session.
- All staff and patients must respect the confidentiality, privacy, and anonymity of all group members by not disclosing any information outside of the program that could identify someone.
- Food and drink of any kind are not permitted during group time.
- All cell phones are to be turned off before the group begins.
- If a patient needs to leave group for any reason, he or she must inform the group leader prior to leaving the group.
- Patients are encouraged to give feedback to one another (such as support, validation, identifying with another's experience, or having a personal reaction to what was said). Patients are asked to use "I" statements rather than "you" statements or generalizations.
- Patients are asked to be mindful of not sharing details related to eating disorder behaviors such as numbers and specific foods.
- Patients are asked to be mindful of not sharing details related to other self-injurious behaviors or personal trauma history.

POLICIES AND PROCEDURES	PHP/IOP
Treatment Compliance/Behavioral Expectations	**Policy #: 1.10**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

1. Patients are expected to attend all scheduled sessions and to actively participate in all modalities of treatment. Every effort will be made to facilitate patient involvement in treatment. However, patients who are non-compliant with the Treatment Team's recommendations and/or their treatment program will be discharged from the program.
2. Patients who are not responding to the current level of treatment (i.e., no decrease in symptoms) may be provided a referral to a more appropriate level of care.
3. Patients are expected to provide their own transportation to and from treatment at the scheduled times. If a child is dropped off alone at the clinic, or allowed to leave the clinic alone, the parent/legal guardian must sign a written transportation agreement detailing the arrangements for arrival and departure.

Behavioral Expectations:

1. Appropriate language is expected at all times. Patients will be redirected to use appropriate language to communicate their thoughts and feelings. Verbal abuse or name calling directed toward staff or other patients is not permitted.
2. If group therapy sessions become too intense or difficult for an individual to handle, he or she can self-impose a "time out" in order to re-group. However, patients are encouraged to remain and share their feelings with the group. If a time out is needed, the patient will be asked to address this issue with his or her case manager. Staff may also impose a time out for a patient if the patient is acting inappropriately and is not responding to redirection.
3. The use of alcohol and other mind/mood altering substances is prohibited prior to or during treatment. The use of alcohol outside of the program is not recommended if taking any psychotropic medications, if under the age of 21, if chemically dependent, or if otherwise identified as a targeted behavior.
4. Weapons, knives, etc., are not allowed on hospital premises.
5. Treatment center romances are not allowed. Romantic relationships between patients can be detrimental to treatment and can prevent both individuals as well as the group from addressing issues.
6. In the event that a patient becomes medically or psychiatrically unstable, the treatment team will work closely with her and her team to determine the most appropriate treatment, one of which may be a transition to an alternate level of care.
7. If a patient becomes medically or psychiatrically unstable outside of PHP hours, she agrees to contact her medical and/or psychiatric providers or go to a local Emergency Room.
8. If a patient is experiencing difficulty with self-injurious behaviors and/or substance abuse, the PHP team will work closely with the patient and her providers to assist her in interrupting this behavioral pattern. Depending on severity, the PHP team will consider a higher level of care to ensure the patient's safety.
9. Patients agree to be in weekly or bi-weekly outpatient therapy for the duration of the PHP participation.

10. Patients agree to medical monitoring as recommended by their PCP/NP for the duration of the program. This will include a "blind weight," checking vitals and blood work as indicated. Patients must agree to have "blind, spot weight" in hospital gown if deemed necessary by the Treatment Team.
11. Patients agree to authorize releases so that Walden may communicate with outpatient providers.
12. Patients agree to refrain from using the bathroom except during scheduled bathroom breaks. Patients agree not to use other bathrooms in the hospital. Additionally, staff members monitor all bathroom breaks.
13. All patients sign in and out each day in the PHP logbook. Signing out each day is contracting for safety. If a patient is unable to contract for safety, he or she agrees to notify PHP staff immediately and agree to further evaluation.
14. Patients assume responsibility for taking all medications as prescribed. All medications should be taken before or after treatment hours when possible.
15. Patients agree to attend and complete all meals, snacks, and groups.
16. If a patient has two unexcused absences from the PHP, the Treatment Team will work with you to determine if remaining in PHP is indicated.
17. Patients agree NOT to exercise while in PHP.

The following are considered to interfere with treatment and will not be tolerated during program participation:

- TARDINESS
- UNEXCUSED ABSENCE
- RESTRICTING DURING THERAPEUTIC MEALS
- INTENTIONAL WEIGHT LOSS
- MANIPULATING WEIGHT
- REFUSING WEIGH-IN
- HIDING FOOD
- VOMITING DURING TREATMENT
- EXERCISING AGAINST MEDICAL ADVICE
- SELF-INJURIOUS BEHAVIORS
- BREACHING CONFIDENTIALITY
- NOT COMPLETING DAILY FOOD DIARY CARDS/MEAL PLANNING SHEETS
- EXCESSIVE INTERRUPTING OF PEERS/STAFF
- INAPPROPRIATE CONVERSATIONS
- INAPPROPRIATE DRESS/ATTIRE
- GIFT GIVING TO STAFF OR OTHER PATIENTS

POLICIES AND PROCEDURES	PHP/IOP
Behavior Management: Prohibited Procedures	**Policy #: 1.11**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

Walden prohibits abusive, corporal, humiliating or frightening punishment and behavioral management procedures. Staff is responsible for the control, supervision and discipline of children.

PROCEDURE

The following specified procedures are prohibited:

- Any procedure that physically hurts or is a psychological risk to the client
- Procedures that deny any basic needs, such as nutritional diet, water, shelter, and essential, safe, and appropriate clothing
- Corporal punishment
- Fear-eliciting procedures
- Any behavior management and treatment intervention that is implemented by another client.
- Mechanical restraint and seclusion.
- Any behavior that is humiliating or designed to cause embarrassment or shame in a patient.

POLICIES AND PROCEDURES	PHP/IOP
No Smoking Policy	**Policy #: 1.12**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

Walden Behavioral Care will encourage smoking cessation in program participants.

PROCEDURE

The No Smoking Policy applies to all programs within Walden (Walden). It is intended to reduce risks a) to people who smoke, including possible adverse effects on care, treatment and services, b) of passive smoke for others, and c) of fire.

- Patients who smoke or use other tobacco products are encouraged to begin smoking or other cessation efforts, and may use prescribed lozenges to do so.
- Adults (18 and older) are permitted to smoke during program breaks.
- Patients under age 18 are not permitted to smoke during program hours

POLICIES AND PROCEDURES	PHP/IOP
Bathroom Policy	**Policy #: 1.13**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

Bathrooms in IOP and PHP programs will be kept unlocked, however all patients using the bathroom will be monitored by staff as a deterrent to engaging in eating disordered behaviors. This policies is designed to provide support and safety.

PROCEDURE

1. The PHP/IOP bathroom will be kept unlocked at all times, however staff will try to limit access to the bathrooms to designated times and times when patients can be monitored appropriately.
2. Designated bathroom times include (8:00 – 8:30am), morning snack (10:30), and lunch (12:00 – 12:30). During these designated times, any patients needing to use the bathroom may do so. Staff will monitor these designated bathroom breaks by standing outside the door and asking patients to engage in conversation. Staff may also choose to ask patients not to flush the toilet until staff has inspected it.
3. Staff may also choose to use the "buddy system" when patients use the bathroom. In these situations patients may be offered the choice of using the bathroom with another patient who the staff feels may be appropriate to accompany the other patient.
4. If a patient cannot wait until a designated time, he or she may come to staff and ask to use the bathroom. Staff will ask the patient to leave the door cracked open as a deterrent to engaging in behaviors. Staff will also ask the patient not to flush.

POLICIES AND PROCEDURES	PHP/IOP
Communication of Patient Rights	**Policy #: 1.14**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 24, 2013

POLICY

Staff respects the rights granted to patients according to all regulatory and accreditation requirements and informs patients of their rights in a manner and language that promotes understanding of those rights.

PROCEDURE

Staff review the following rights with patients and document this communication in the case record:

(1) The right to receive humane and dignified treatment at all times with respect to personal dignity and privacy;
(2) The right to procedures which ensure that a client's privacy is protected and ensures the confidentiality of patient information at all times;
(3) The right to give informed consent to any treatment or service prior to that service being implemented (documentation of informed consent must be obtained from the all adult clients or their legal guardian for treatment of the adolescent client prior to service delivery);
(4) The right of patients to be informed of their rights in a manner and language that promotes understanding of those rights;
(5) The right to have treatment plans reviewed to ensure that the treatment is consistent with the rights of the client and the philosophy of the clinic. All treatment plans shall meet accepted ethical standards;
(6) The right of clients to request access to inspect their medical records and to receive a copy upon request;
(7) The right to have all rules and requirements regarding conduct reviewed with the client;
(8) The right for the client or their family, upon request, to be provided with information regarding the professional education and experience of the treating clinician;
(9) The right to file a complaint or grievance in regards to treatment, services, staff members or any aspect of the program without fear of retribution or barriers to service as a result of the filing, and to have the complaint or grievance investigated and necessary actions taken within a reasonable timeframe;
(10) The right to have all fees and costs disclosed prior to beginning services, as well as the right to receive an itemized bill or other statement of charges submitted to any third party by the facility for their care and services.

References:

- Massachusetts General Laws, Chapter 111, Section 70E
  (as required per the Massachusetts Department of Public Health, Division of Healthcare Quality's licensing regulations for Outpatient Mental Health Clinics)
- Connecticut Department of Mental Health and Addiction Services
- Connecticut Department of Children and Families agency regulations for Licensure of Outpatient Psychiatric Clinics for Children, Section 17a-20-35

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POLICIES AND PROCEDURES	PHP/IOP
Patient Confidentiality	**Policy #: 2.1**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 24, 2013

POLICY:

To maintain confidentiality regarding patients admitted to Walden

To abide by Federal Confidentiality Regulations for Mental Health patients.

To prevent disclosure of any information to any person, organization or institution without the expressed authorization of the patient.

Staff will be oriented to the issues and regulations concerning patient confidentiality.

PROCEDURE:

1. Privacy of patients admitted for the treatment of mental health or substance abuse issues are protected by the Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule and Federal Regulation 42 C.F.R. Part 2. (Employee/volunteer Confidentiality Policy)
2. All staff will be oriented to the confidentiality policy and will sign the "*Statement of Confidentiality*" (see attached) at the beginning of employment.

3. Without the patient's specific written authorization, only those individuals directly responsible for the clinical or administrative aspects of a patient's care may access the patient's demographics and/or other medical information. These individuals may include physicians, nurses, clinicians, counselors, social workers and other support personnel who must access information to serve the patient and to tend to the administrative aspects of patient care.

4. Patient information will only be released if the patient has given written consent granting authorization to a specific person or facility. The written consent must specify the type of information that may be released. The duration of the consent will not be longer than is necessary to fulfill the purpose for which it was given. A patient's consent to release information is filed in the medical record.

5. A guardian or parent of a minor has the authority to give written consent for release of information.

6. A patient may revoke consent at any time verbally or in writing. In situations when not having information could result in a patient being at risk to harm him/her self or others, confidentiality may be breached and the reasons will be clearly documented.

7. Therefore it may be necessary to contact the patient's family, outpatient providers, and other collateral contacts to ensure the patient's safety and establish appropriate treatment.

8. In situations where mandated reporting is appropriate, confidentially may be compromised and the patient will be informed. The situations in which a patient's confidentiality may be compromised are as follows:

    a) Suspected Child Abuse
    b) Suspected Elder Abuse
    c) Suspected Disabled Person Abuse
    d) Protection of a potential victim or property
    e) When the patient has expressed plans to harm themselves or others

9. A patient still maintains his or her right to confidentiality even when law enforcement agencies are requesting information. Law enforcement officers are not permitted access to any areas in the program or service area without permission by the Program Director. A staff member should not accept a court order or subpoena unless approved by the Program Director. Law enforcement officers should be directed to the Program Director, or the Vice President of Clinical Operations, or other member of senior leadership if they can't be reached. The Director will then contact the treatment team to decide on the best approach to handle the situation. If a patient does consent for staff to communicate with a law enforcement officer, written consent should be obtained.

10. The following guidelines are to be used when responding to telephone inquiries regarding patients: Individuals requesting information on patients should be told:

    "I am sorry, we are prohibited by law from giving any information including whether or not an individual is or has been a patient in this program. If you wish to have information on a certain individual, I would suggest that you call his/her family." or "I can neither confirm nor deny that person's presence but we suggest you call a family member or close friend"

11. If someone expresses a strong desire to contact the person and shares enough information as to convince you that they are certain of the patient's presence then you may offer to take their number without confirming patient status and give it to the patient to return the call.

12. Phone calls from family, aware of and involved in the patient's admission, requesting practical information should be answered in a helpful manner. If these individuals request clinical information, they should be referred to the assigned clinician or designated member of patient's treatment team who will insure that the patient consents to a release of information prior to speaking with the caller.

13. Breaches of confidentiality should be reported to the Program Director. If a breach in confidentiality is proven, disciplinary action may be taken up to and including immediate termination.

Attachment: *Statement of Confidentiality*

Statement of Confidentiality

In accordance with the Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule and Federal Drug Abuse Prevention, Treatment, and Rehabilitation Act 42 C. F.R. Part 2, Subchapter A regarding Confidentiality of Drug Abuse and Mental Health Records:

I will:

1. NOT discuss any patient or any information pertaining to any patient with anyone else, including my family members at any time.
2. NOT discuss any patient or any information pertaining to any patient with any other staff member who is not directly working with the patient.
3. NOT discuss any patient or information pertaining to any patient in any place where it may be overheard by anyone, staff or patients.
4. NOT mention a patient's name or admit, directly or indirectly, that any person is a patient at the facility, except to those who are authorized to have this information. Such authorization must be explicit and where necessary, in writing.
5. NOT discuss any behavior by a patient, which has been observed, or learned as a result of my services at the facility, except to those authorized to have this information.
6. NOT contact any individual or agency outside the facility to obtain personal information about a patient.
7. NOT continue a relationship with a discharged patient unless expressly authorized to do so in the course of my duties.
8. NOT release any medical / psychiatric or substance abuse information.

I understand that the penalty for violation of the Federal Regulation shall be a fine of not more than $500 in the case of a first time offense, and not more than $5,000 in the case of each subsequent offense.

Violation of this policy is grounds for termination of services to Walden.

Signature:_____ **Date**_____

Independent Contractor (print): _____

Service: _____

POLICIES AND PROCEDURES	PHP/IOP
Information Privacy	**Policy #: 2.2**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 24, 2013

POLICY

The Outpatient Continuum maintains information privacy and confidentiality according to laws set forth by the Health Insurance Portability and Accountability Act (HIPAA).

PROCEDURE

1. All employees, physicians, health care personnel, students, and volunteers are responsible for protecting patient information and client confidentiality.

2. Information protected under HIPPA regulations includes any health information that identifies or can be used to identify a patient including but not limited to, the client name, address, date of birth, medical record number, insurance numbers, social security numbers, license numbers, phone numbers, e-mail addresses, etc…

3. Upon admission into the program, patients

   a. Receive and sign an acknowledgement of receipt of privacy notice and consent to treat and disclose health information
   b. Receive and sign forms to authorize the use or disclosure of protected health information to outside parties specified by the patient

4. Under the Federal *Minimum Necessary* Rule, employees, physicians, health care personnel, students, and volunteers have access only to the information needed to fulfill their assigned duties. Only information used for treatment, payment, and operations can be shared.

5. Personal identifiers are removed to the extent possible for uses and disclosures of clinical/service information, consistent with maintaining the usefulness of the information.

6. Protected clinical/service information is used for the purposes identified or as required by law or regulation and not further disclosed without patient authorization.

7. All employees, staff, students, and volunteers are made aware of this policy during their orientation to the program. Violations of this policy can result in fines, penalties, and disciplinary action including termination, or imprisonment for representatives of the agency as well as individuals responsible for violations to this policy.

POLICIES AND PROCEDURES	PHP/IOP
Information Security and Data Integrity	**Policy #: 2.3**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 24, 2013

POLICY

Walden maintains information security consistent with laws and regulations, including data integrity.

In anticipation of an unplanned disaster, every attempt will be made to safeguard medical records, documents and other storage medium in structurally safe; fire-resistant, and water resistant storage environments. General safeguarding will ensure that combustible or hazardous chemicals are maintained in a supervised environment with minimal risk for damage to hospital property.

PROCEDURE

1. Patients' clinical records are kept on file in the medical records office of the PHP/IOP Program. This office is kept locked during non-business hours or anytime the office is to be left unattended regardless of the amount of time.
2. The main entry to the Outpatient Program is kept locked during non-business hours.
3. Staff is not permitted to remove clinical records from the program area.
4. Any copies of clinical records made for reference or faxing are subsequently shredded to eliminate security risk.
5. Staff computers require a staff identification and password for log-in. Computers must be logged off when not in use or attended to minimize security risk by unauthorized users. Passwords are required to be changed at set intervals.
6. All progress notes are dated and timed, and require an authorized staff signature.
7. Medical records will be maintained in permanent storage in shelving units that are raised from the floor to prevent water damage. Should flooding or water damage occur, every attempt will be made to remove medical records from the area.
8. If records cannot be removed prior to damage, the Director of Medical Records and the Administrative Team will meet to determine what recovery mechanisms are feasible based on age and type of records, insurance coverage, costs and long-term damage.
9. An alternate site for record storage will be considered if needed. Arrangements with local storage facilities may be initiated as determined by Administration. Confidentiality and security will be maintained if storage in alternate locations is necessary.
10. A revised retention plan may be developed based on what records are recoverable. Legal opinions will be solicited as needed.
11. For further details around information security and data integrity, please refer to *The Medical Records Policy and Procedure Manual.*

POLICIES AND PROCEDURES	PHP/IOP
Fax Policy	**Policy #: 2.4**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 24, 2013

POLICY

Patients and staff will use the fax machine as a mode of communication and in a responsible manner.

PROCEDURE

PATIENT USE:

1. Patients may request to use the fax machine to transmit documents relating to their treatment and/or discharge plan.
2. These requests must be cleared through a member of the team, and items over five (5) pages must come to the attention of the Program Director for their approval.
3. A staff member will transmit the documents.
4. Patients are never allowed to use or be near fax machines without a staff member present.

STAFF USE:

1. All materials faxed will be sent with an attached Walden Fax Cover Sheet. The Fax Cover Sheet will become part of the medical record as evidence of such information being transmitted to identified parties.

2. Patient-related documents will be faxed only after the patient's written consent has been obtained.

POLICIES AND PROCEDURES	PHP/IOP
Tape Recordings/Photographs	**Policy #: 2.5**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

To assure confidentiality, patients and visitors may not make audiotape or video recordings, nor are photographs of patients permitted in the program.

Staff may record working and educational sessions under specified conditions and with administrative approval.

Tape recordings never serve as permanent treatment records and therefore are not retained.

PROCEDURE

1. Patients are informed that tape or video recorders and cameras are not allowed in programs.
2. Patient(s) will sign Release of Information when recordings are approved for educational purposes.
3. A staff member may record a work session, such as an educational session, by placing the recorder in an area not inhabited by patients while the recording is being made.

POLICIES AND PROCEDURES	PHP/IOP
Destruction of Protected Health Information	**Policy #: 2.6**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 24, 2013

POLICY & PROCEDURE:

Per federal requirements, mental health records will be maintained by Walden for 20 years before they may be destroyed

If the following documents containing Protected Health Information are no longer true or applicable, staff may shred them in the program's document shredder device:

- Copies of Medical Records (original must be maintained)
- Census sheets
- Claims/Reports

For further details around information security and data integrity, please refer to *The Medical Records Policy and Procedure Manual* or contact the Director of Health Information Management.

POLICIES AND PROCEDURES	PHP/IOP
Patient Confidential Telephone Access	**Policy #: 2.7**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

Patients shall have confidential access to telephone service.

PROCEDURE

1. Patients may request access to a telephone to make treatment or service related calls, in a setting which provides reasonable confidentiality for the Patient.
2. Patients may make a request for telephone access to any staff person on-site at the clinic when the request is made. Staff will check with the clinical staff to determine the optimal location for telephone access.
3. Clinic staff will accommodate the patient by providing confidential access to a telephone. Such access should be made available in an area which is away from other patients in the treatment setting to the extent possible.
4. Clinic staff must ensure that the area promotes confidentiality of Protected Health Information (PHI) for both the patient using the telephone, and other patients being treated at the clinic location.

POLICIES AND PROCEDURES	PHP/IOP
Response to Homicidal Threat by Patient	**Policy #: 3.1**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

When a patient at Walden makes a verbal or written threat directed at another person, it is the responsibility of the Walden staff to take adequate steps to protect the threatened parties.

Licensed mental health professionals have a duty to warn and protect potential victims.

PROCEDURE

1. If a patient has explicitly-stated to a staff member an "intention to kill or inflict serious bodily harm upon a reasonably identifiable victim and the patient has the apparent intent and ability to carry out the threat, or if a patient has a history of physical violence and presents a clear and present danger to another" the Walden staff must take reasonable steps to protect the identified individual(s).

2. The involved staff member will immediately inform the Program Director and attending psychiatrist/, or Vice President of Clinical Services if they can't be reached, in order to assess the immediacy of the problem.

3. Once the immediacy of the problem has been determined, appropriate plans will be formulated to protect the threatened party.

4. If given adequate time:

    a. A clinical-legal conference may be convened to determine the threatening patient's access, opportunity and motive, as well as current mental status. This may include medical, legal, nursing, and social service staff.
    b. An appropriate treatment plan will be developed to protect the threatened individual(s). This plan may include, but is not limited to the following:
        i. Notifying the threatened parties by telephone or registered mail.
        ii. Insuring increased security for the threatening patient by any or all of the following:
            1. Provide counseling intervention
            2. Findings from the clinical-legal conference and interventions must be documented in the patient's medical record.

5. If risk is determined to be imminent, then immediate steps must be taken to protect the threatened individual(s). These steps may include, but are not limited to the following:

a. Notify the appropriate law enforcement agency in the area in which the potential victim resides. Gain their assistance in warning and protecting potential victim(s).
b. Notify the appropriate law enforcement agency in the area in which the patient resides. Gain their assistance in locating the patient.
c. Take appropriate steps as necessary to initiate proceedings for involuntary hospitalization. This may include notifying the police to place an A.P.B. and committing patient to an inpatient psychiatric unit.
d. Notify the Program Director.
e. Complete documentation of the above process should be carried out so as to indicate the efforts of staff.

Attachment A: *Threat Assessment Report Form*
Attachment B*: Threat Assessment Team Follow-Up*

000356

Attachment A

Walden, LLC
Threat Assessment Report Form

Complete when an employee:

1. Believes they have witnessed or become aware of an act of violence or a threatening behavior including physical assaults and actions or statement which either directly or indirectly, by words, gestures, symbols, intimidation, coercion, carrying a firearm or weapon, gives reasonable cause to believe that the personal safety of the affected individual or others may be at risk.
2. Is the recipient of threatening and or violent behavior as defined above.

Complete the following:

Date: _____ Specific location: _____

Day of the week: _____ Time: _____

Assailant: Female _____ Male _____

Violence directed towards: Patient _____ Staff _____ Visitor _____ Other _____
Assailant is: Patient _____ Staff _____ Visitor _____ Other _____

Assailant's name: _____
Armed _____ Unarmed _____
Weapon: _____

Predisposing Factors:

_____ Intoxication _____ Dissatisfied with care/waiting time

_____ Grief reaction _____ History of prior violence

_____ Gang related _____ Other: Describe: _____

Description of Incident: Physical Assault _____ Verbal Assault _____

Other _____ Describe: _____

Injuries: Yes _____ No _____

Extent of injuries: _____

Threat Assessment Form continued

Detailed description of incident:

Did any person leave the area because of the incident: Yes ___ No ____ Unknown ___

Who was present at the time of incident: Other employees: please name:

Was police department called: Yes _____ No _____

Was Assailant arrested? Yes _____ No _____

Termination of Incident:

Incident diffused: Yes _____ No _____

Disposition of assailant:

Remained on premises _____ Escorted off premises _____ Left on his/her own: _____

Were restraints used Yes _____ No _____

Report completed by: _____ **Date:** _____

Director notified: _____ **Date:** _____

Additional comments:

Attachment B

Walden, LLC
Threat Assessment Team Follow-Up

Date Received: _____ **Time:** _____

Follow-up classification:

Immediate: _____ Urgent _____ Non Urgent _____

Urgent classification will be addressed within 1-2 business days. Non-urgent at monthly meetings.

Team members present:

Evaluation:

Actions/Responsible person(s):

Outcome:

POLICIES AND PROCEDURES	PHP/IOP
Reporting Suspected or Known Child Abuse or Neglect	**Policy #: 3.2**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 24, 2013

POLICY

It is the policy of the Walden Behavioral Care (WBC) to render good and compassionate care to all patients. In the case of children it extends to being aware of their social and emotional needs and taking care to comply with laws and regulations regarding the welfare of children. This includes Walden Behavioral Care's duties under Chapter 119, Section 51A of the Massachusetts General Laws (reporting of suspected child abuse and neglect).

1. Definitions of Child Abuse and Neglect (from the guidelines from the Commonwealth of Massachusetts Department of Children and Families):
    a. A person under the age of 18 is considered to have a reportable condition if there is reasonable cause to believe that he or she is suffering from a serious physical emotional injury resulting from:
        i. Abuse
        ii. Neglect
        iii. Sexual abuse, the commission of any act by a caretaker with a child, which constitutes a sexual offense under the criminal laws of the Commonwealth.
        iv. Positive toxic screen of mother's or child's blood at birth.
    b. Abuse means the non-accidental commission of any act by a caretaker that causes or creates a substantial risk of harm or threat of harm to a child's well-being. .
    c. Neglect means failure by a caretaker, either deliberately or through negligence (including inability), to take actions necessary to provide a child with minimally adequate food, clothing, shelter, medical care, supervision or other essential care.
    d. Serious Physical Injury means
        i. death, of
        ii. fracture of a bone, subdural hematoma, soft tissue swelling, impairment of any organ, burn, skin bruising, and other non-trivial injury including malnutrition or
        iii. failure to thrive
    e. Serious Emotional Injury means an extreme pathological emotional condition such as a severe state of anxiety, depression, or withdrawal.

Caretaker means a child's parent, guardian, any other household member or any other person entrusted with the responsibility for a child's health or welfare, whether in the child's home, a relative's home, a school setting, a day care setting including babysitting, a foster home, a group care facility, or any other comparable residential setting. '.

Reporting Suspected Child Abuse and Neglect Under. Section 51A

The purpose of Section 51A is the protection of a child under the age of 18 from serious physical or emotional injury resulting from abuse inflicted upon him or her, including sexual abuse, or from neglect, including malnutrition, or whose blood shows evidence of toxic substances at birth.

1. If any mandated reporter including physician, medical intern, hospital personnel engaged in the examination, care or treatment of persons, medical examiner, psychologist, emergency medical technician, dentist, nurse, chiropractor, podiatrist, osteopath, public or private school teacher, education administrator or, guidance or family counselor, day care worker, probation officer, social worker, foster parent, fire fighter, or police officer who, in his/her professional capacity shall have reasonable cause to believe that child is suffering from the above, then he or she is required to report the case either directly to the Massachusetts Department of Children and Families or to notify a designated agent of the institution where he or she works (this means following the guidelines under section IV, Persons Responsible for Evaluations of Suspected Child Abuse and Neglect Cases).

2. If any mandated reporter required under Section 51A has reasonable cause to believe that a child has died as a result of an of the conditions listed above, the Massachusetts Department of Children and Families must be notified verbally, then in writing. The District Attorney for the country in which the death occurred and the District Medical Examiner in the country where the child's body is located must be notified.

3. No mandated reporter shall be liable in any civil or criminal action by reason of submitting a report. No other person making a report shall be liable in any civil or criminal action by reason of submitting a report if it was made in good faith.

4. Any person is required to report suspected child abuse or neglect and deaths suspected to be caused by child abuse or neglect may be punished by a fine of not more than one thousand dollars if he or she fails to report.

5. Only those personnel involved in the child's care shall have access to any information relating to a case of suspected child abuse or neglect. Health personnel, in discussing such a case, should use their best efforts to maintain the family's right to confidentiality.

PROCEDURE

Person Responsible: All mandated reporters

Action:

Persons Responsible for Evaluation of Suspected Child Abuse Offense Cases.

When a physician, nursing, or other staff involved in patient care suspect possible child abuse or neglect, the patient's treatment team should be contacted to evaluate further.

Procedures Regarding the Reporting of Suspected Child Abuse and Neglect,

When a child abuse or neglect is suspected or when there is any question as to the ability of an expectant mother, mother of a newborn, or parent(s) or caretaker(s) to provide adequate care to the child, proceed with the following:

1) Notify attending physician and/or child's primary physician if he or she is not already aware of situation.

2) Notify the Program Director.

3) The Program Director will notify the WBC Chief Medical Officer outside of normal business hours, the Program Director will contact the WBC administrator on call.

4) The child's situation is evaluated by the physician, nurse, and/or social worker assigned to the case.

5) When it appears from physical examination by the attending physician or social history data that the child has been abused and/or neglected, or is in danger of being abused and/or neglected, the mandated reporter will:

6) Verbally notify the Massachusetts Department of Children and Families to initiate an investigation (phone in a 51A Report).

7) If the mandated reporter is someone other than the social worker, all information will be provided to the social worker who will complete a written report within 48 hours. Reports should be made to the area or regional office covering the residence of the parent(s) or person(s) responsible for the child. Offices are staffed between 9 am and 5 pm weekdays. To make a report at any other time, including after 5 p.m. and on weekends and holidays, please call the Child-At-Risk Hotline at 1-800-792-5200.

   As a mandated reporter you are also required by law to mail or fax a written report to the Department within 48 hours after making the oral report. The form for filing this report can be obtained from your local DCF Area Office or from the DCF website: www.mass.gov/dcf.

Massachusetts Department of Children and Families Reporting Offices

CENTRAL OFFICE
Angelo McClain, Commissioner
600 Washington Street
Boston, MA 02111
(617) 748-2000 operator
(617) 748-2400 auto attendant
Fax: (617) 261-7435
Website: www.mass.gov/dcf

BRAINTREE

Regional Office
141 Main Street
Brockton, MA 02401
(508) 894-3700
fax (508) 554-7878

Coastal Area Office
541 Main St.
South Weymouth, MA 02190
(781) 682-0800
fax (781) 337-4587

WALTHAM

Cambridge/Somerville Area Office
810 Memorial Drive
Cambridge, MA 02139
(617) 520-8700
fax (617) 354-0243

Arlington Area Office
30 Mystic St.
Arlington, MA 02474
(781) 641-8500
fax (781) 646-5172

WORCESTER
Worcester East Area Office
121 Providence St., Suite 200
Worcester, MA 01604
(508) 929-2000
fax (508) 754-9803

Worcester West Area Office
121 Providence St., Suite 200
Worcester, MA 01604
(508) 929-2000
fax (508) 929-2161

NORTHHAMPTON

Regional Office
140 High St., 5th Floor
Springfield, MA 01105
(413) 452-3350
fax (413) 781-4482

Holyoke Area Office
261 High St.
Holyoke, MA 01040
(413) 493-2600
fax (413) 533-9355

Greenfield Area Office
143 Munson St., Unit 4
Greenfield, MA 01301
(413) 775-5000
fax (413) 773-5773

8) It is necessary to provide the following information when filing a 51A report: name, address, phone number, age of child name, address, phone number of male and female parent or guardian name, address, phone number, and relationship to child of person accompanying child to E.R, etc. nature and extent of the injury, abuse, maltreatment or neglect, including prior evidence of same, source of this information if not observed firsthand the action that has been taken thus far to treat, shelter or otherwise assist the child to deal with this situation any other information that might be helpful in establishing the cause of injury and/or person responsible for it.

9) The original ABUSE/NEGLECT REPORT should be sent to the Massachusetts Department of Children and Families. A copy should be sent to the Program Director. A copy should not be placed in the medical record. ;

10) It should be documented in the record that a 51A was phoned in to the Massachusetts Department of Children and Families and on what date that a written report has or will be sent in within 48 hours.

11) When a 51A report is filed:

(1) The Massachusetts Department of Children and Families begins an evaluation and investigation

(2) The Massachusetts Department of Children and Families must complete the investigation within 24 hours of a case they deem as an "emergency" and 10 days to complete the investigation of a "non-emergency" case.

(3) When the investigation is completed, the mandated reporter will be notified within 7 days after the completion of the investigation as to whether the Massachusetts Department of Children and Families substantiated the report, along with the services they intend to provide to the family, such as day care, babysitting, homemaking, counseling, case management, etc. This written report from the Massachusetts Department of Children and Families to be attached to the copy of the 51A Report.

12) Where death may have resulted from child abuse or neglect:

13) The administrator on duty should be contacted immediately.

14) The administrator, along with the Chief Medical Officer, Vice President of Clinical Services and Program Director will decide who is to:

(1) File a verbal and written report with the Massachusetts Department of Children and Families,

(2) Notify the Medical Examiner, of the time, place, manner, circumstanced alleged cause of death,

15) Notify the police in the city/town in which the child resided.

POLICIES AND PROCEDURES	PHP/IOP
Reporting Suspected or Known Abuse of an Intellectually Disabled Person	**Policy #: 3.3**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 24, 2013

POLICY

It is the policy of the Walden Behavioral Care to render good and compassionate care to all patients. In the case of the disabled persons, this extends to being aware of their social and emotional needs and taking care to comply with laws and regulations regarding their welfare. This includes Walden Behavioral Care's duties under Chapter 19 C of the Massachusetts General Laws (Disabled Person Protection Commission).

PROCEDURE:

The same guidelines for reporting suspected elder abuse apply to disabled persons (see Policy & Procedure for Suspected Elder Abuse in this manual) with the exception of the following:

1. "Disabled person" is defined as a person between the ages of eighteen (18) and fifty-nine (59) inclusive, who is mentally retarded (as defined by M.G.L. C. Ill S 1), or who is otherwise mentally or physically disabled, and as a result of such mental or physical disability' is wholly or partially dependent on others to meet his daily needs.

2. Mandated reporters must notify the Disabled Person Protection Commission (DPPC) orally of any reportable condition immediately upon becoming aware of such a condition, and in writing within 48 hours after the oral report (see Attachment A-19 C report). Reports may be made during regular business hours to be DPPC at 413-586-4948. For reporting cases after hours, weekends or on holidays, call 413-537-8169.

3. Upon Receipt of a report of abuse, the DPPC must conduct an investigation within 24 hours if there appears to be immediate danger of further abuse, and within 10 days of all other cases. The DPPC may arrange for protective services as well as petition the court for appointment of a guardian or conservator.

POLICIES AND PROCEDURES	PHP/IOP
Reporting Suspected or Known Elder Abuse	**Policy #: 3.4**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

It is the policy of the Walden Behavioral Care to render good and compassionate care to all patients. In the case of elderly persons this extends to being aware of their social and emotional needs and taking care to comply with laws and regulations regarding their welfare. This includes the Walden Behavioral Care's duties under Chapter 19A, a, Section 15(a) of the Massachusetts General Laws as amended by Chapter 604 of the Acts of 1982 (reporting of suspected elder abuse).

PROCEDURE

Person Responsible: All mandated reporters. Refer to Section 11, A.

Definition of Elder Abuse (from guidelines from the Department of Elder Affairs)

1. "Reasonable Cause to Believe" means having a basis for judgment that rests on specific facts, either directly observed or obtained from reliable sources, and that supports a belief that a particular event probably took place or a particular condition probably exists

2. Abuse: An act or omission which results in serious physical or emotional injury of an elder or financial exploitation of an elder; provided, however, that no person shall be considered to be abused for the sole reason that such person is being finished or relies upon treatment in accordance with the tenets and teachings of a church or religious domination by a duly accredited practitioner thereof Acts or omissions include any of all the following:

3. Physical Abuse: The non-accidental infliction of serious physical injury to an elder or the threat of serious physical injury in which the Protective Services Agency has reasonable cause to believe that an individual may have the intent and capacity to carry out the threatened serious physical injury. Serious physical injury shall be determined by consideration of the following factors:
    a. the elder's physical condition;
    b. the type, size, shape, number and location of physical injuries;
    c. the circumstances under which the injury occurred including the potential for serious injury in the actual incident;
    d. the emotional impact on the elder,
    e. The potential for escalation of abuse.

4. Sexual Abuse: Sexual assault, rape, sexual misuse, or sexual exploitation of an elder or threats of sexual abuse where the individual has the intent and capacity to carry out the threatened sexual abuse.

5. Emotional Abuse: The non-accidental infliction of serious emotional injury to an elder. Emotional Abuse must establish a relationship between abusive actions, behaviors, or language and a resulting effect on the emotional state or functioning of the elder. Serious emotional injury includes:
    a. An extreme emotional reaction or response such as a severe state of anxiety, fear, depression or withdrawal,
    b. Development of post-traumatic stress disorder including but not limited to symptoms resulting from being forced to engage in sexual relations by force, threat, or force and duress;
    c. Symptoms of an emotional reaction or response resulting: in threats to harm or financially exploit.

6. Neglect

7. The failure or refusal by a caretaker to provide one or more of the necessities essential for physical well-being, such as food, clothing, shelter, personal care, and medical care, which has resulted in or where there is substantial reason to believe that such failure or refusal will immediately result in physical harm to an elder.

8. Neglect shall be determined by consideration of each of the following factors:
    a. The elder's ability to meet her/his own needs;
    b. A history of dependence on a caretaker as defined in 651 GMR 5.02;
    c. The elders capacity to consent,
    d. The expectation or desire of the elder of continuing to receive care provided by the caretaker.
    e. The seriousness of physical harm resulting from neglect shall be determined by consideration of the above factors.

9. Financial Exploitation

10. The non-accidental act or omission by another person without the consent of the elder causing:
    a. Substantial monetary or property loss to the elder or
    b. Substantial monetary or property gain to the other person which gain would otherwise benefit the elder, but for the act or omission of the other person.
    c. Financial exploitation may be result from consent obtained as a result of misrepresentation, undue influence, coercion or threat of force by the other person. Financial exploitation may not result from a bona fide gift or from any act or practice by another person in the conduct of a trade or commerce.

11. Serious Abuse:

12. As stated in Section 18 (a) of the Elder Abuse Law, the term "Serious Abuse" means abuse which the Department or its designated agencies determine may constitute a violation of criminal law of the Commonwealth.

13. These acts include but are not limited to the following: murder, first degree murder, second degree murder, felony murder, manslaughter, assault, battery, mayhem, rape, imprisonment, kidnap in extortion, robbery, assault and battery with a dangerous weapon, poison, larceny by stealing, attempt to murder, attempt to rape, attempt to extort, attempt to commit crimes. Extremely annoying telephone calls may also be added to "Serious Abuse". The Department or its designed agency must report these cases to the district attorney of the country within which the elderly person resides within 48 hours. The district attorney may investigate and decide whether to initiate criminal proceedings. Walden Behavioral Care may also wish to notify the district attorney's office. If it is felt that this would be appropriate, this must be discussed with administration and legal counsel.

The Elder Abuse Law (Sections 14-26 of Chapter 19A of the General Law "An Act Providing Further Protection of Elderly Persons"

1. Reporting Requirements :
   a. Any mandated reporter: physician, medical intern, dentist, nurse, probation officer, social worker, policeman, licensed psychologist, coroner, registered physical therapist, registered occupational therapist, osteopath, podiatrist, executive director of a homemaker service agency who has reasonable cause to believe that an elderly person is suffering from or has a verbal report of such information or cause a report to be made to the department or its designated agency shall within forty-eight hours make a written report to the department or its designated agency. Any person so required to make such reports who fails to do so shall be; punished by a fine of not more than one thousand dollars.
   b. The executive director of a home care corporation, licensed home health agency or homemaker service agency shall establish procedures within such agency to ensure that homemakers, home health aides, case managers or other staff of said agency who have reasonable cause to believe that an elderly person has been abused shall report such case to the executive director of the corporation or agency. The executive director shall immediately make a verbal report of such.
   c. In addition to a person required to report under the provisions of subsection (a) of this section, any other person may make sure a report to a department or its designated agency, if any such person has reasonable cause to believe that an elderly person is suffering from or has died as a result of abuse.
   d. No person required to report pursuant to the provisions of subsection (a) shall be liable in any civil or court action by reason of such report. No other person making such report pursuant to the provisions (b) or (c) shall be liable in any civil or criminal action by reason of such report if it was made in good faith. No employer or supervisor may discharge, demote, transfer, reduce pay, benefits or work privileges, prepare a negative work performance evaluation, or take any other action detrimental to an employee or

supervisee who files a report in accordance with provisions of this section by reason of such report.

2. Definition in the Elder
    a. "Abuse" an act or omission which results in serious physical or emotional injury to an elder person, provided, however, that no person shall be considered to be abused or neglected for the sole reason that such person is being finished or relies upon treatment in accordance with the tenets and teachings of a church or religious denomination by a duly accredited practitioner thereof
    b. "Caretaker" the person responsible for the care of an elderly person, which responsibility may arise as the result of a family relationship, or by a voluntary or contractual duty undertaken on behalf of an elderly person, or may arise by a fiduciary duty imposed by law.
    c. "Department". The Department of Elder Affairs.
    d. "Elderly person" is an individual who is sixty years or over.
    e. "Protective Services" services which are necessary to prevent, eliminate; or remedy the effects of abuse to an elderly person.
    f. Immunity of Mandated Reporter
        i. No mandated reporter shall be liable in any civil or criminal action by reason of such report. No other person in a report shall be liable in any civil or criminal action by reason of submitting a report if it was made in good faith.
    g. Designated Agency
        i. "Designated Agency" is Highland Valley Elder Services Inc. for the town of Northampton. The Department of Elder Affairs is responsible for designating the protective services agency.

Procedure Regarding the Reporting of Suspected Elder Abuse

When elder abuse is suspected or when there is a serious question as to the ability of the caretaker to provide adequate care to the elderly person (if he/she is unable to care for him/herself which places the elderly person at risk of suffering a serious physical or mental injury) proceed with the following:

1) Notify the treatment team.
2) The case manager will notify the Program Director when he/she is involved.
3) The Program Director will be available to any staff member wishing to discuss a possible elder abuse case.
4) When it appears from physical examination by the attending physician or social history data that the elderly person has been, abused or is in danger of being abused, the mandated reporter will:
5) Notify the appropriate designated agency. For patients living in Franklin and Hampshire Counties, Highland Valley Elder Services is the designated agency. The mandated reporter will verbally notify them to initiate an investigation.
6) If the mandated reporter is someone other than the case manager, all information will be provided to the social worker who will complete the Elder Abuse Mandated Reporter Form (see attachment A) within 48 hours.

For Franklin and Hampshire Counties reports should be made to:
Highland Valley Elder Services
320 Riverside Dr, Northampton, Ma 1-800-322-0551

7) The original written report should be sent to. Highland Valley Elder Services. A copy should not be placed in the patient's medical record.
8) It should be documented in the medical record that an elder abuse report was phoned in to the Highland Valley Elder Services, Inc. and on what date and that a written report has or will be sent within 48 hours.
9) If the Treatment Team is not available, the staff person who suspects abuse/neglect should follow the procedure.
10) Once an elder abuse report is filed, it is extremely important for the case manager involved in the case to work with the Protective Services worker while the elderly person is hospitalized in order to coordinate an appropriate discharge plan. The case manager will communicate the above information to the elderly person's physician.
11) If a mandated reporter finds evidence for filing an elder abuse report and learns that a report has previously been filed on this elderly person, the mandated reporter should file a new report, both verbal and written.
12) If an Elder Abuse report is filed, the elderly person should be told that a protective services worker will be contacting him/her to discuss his/her situation. On a case-by-case basis, it is recommended to notify the caretaker that a report has been filed. The person to discuss this will be decided on a case by case basis taking into consideration that has been most involved and has the most knowledge of the case, who has established the best relationship with the elderly person and caretaker, who filed the report, and the availability of staff involved. In most cases, the case manager will discuss this whenever he/she has been involved. The discussion should focus on the caretaker's needs as well as the elderly person's and the fact that this is not as punitive action, but an expression of concern. Those involved should be advised that filing the report initiates an evaluation regarding the care and safety of the elderly person and may result in the provision of additional support and services to help alleviate the stress, i.e., arrange for homemaker, home health aide, legal assistance, etc. It should be documented in the medical record if the caretaker was notified of the report being filed.

When an elder abuse report is filed:

1) Highland Valley Elder Services, Inc. is responsible for sending a protective services worker to conduct their initial assessment and make recommendations for a discharge plan.
2) If the reporter receives any written response from Highland Valley Elder Services, Inc. to the elder abuse report indicating the findings of the investigation, this should be attached to the copy of the elder abuse report.
3) According to Section 17 of the Law, a protective services agency (West Suburban Elder Services, Inc.) is authorized:
    a. To receive and investigate reports of abuse.
    b. To furnish protective services to an elderly person with his or her consent.
    c. to petition the court for appointment of a conservator of guardian or for issuance of an emergency order for protective services (if there is reasonable cause to believe that an elderly person is suffering from abuse and lacks the capacity to consent to the provision of protective services)

    d. to furnish protective services to an elderly person on an emergency basis as

hereinafter provided

e. to furnish protective services to a protected person with the consent of such person's guardian or conservator
f. to serve as conservator, guardian, or temporary guardian of a protected person

Where death may have resulted from elder abuse:

1) The Program Director should be contacted immediately.
2) The Program Director along with the physician case manager will decide who is to file a verbal and written elder abuse report.
3) If Highland Valley Elder Services, Inc. has reasonable cause to believe that an elderly person has died as a result of abuse; the death shall immediately be reported by Highland Valley Elder Services, Inc. to the district attorney of the county in which the elderly person resided.
4) Walden Behavioral Care may also wish to notify the district attorney's office. If it is felt that this would be appropriate, this must be discussed with WBC administration and legal counsel.

Procedure Regarding the Reporting of Suspected Elder Abuse of a Nursing Home Resident

If a nursing home resident seeking treatment at Walden Behavioral Care presents with signs of abuse or neglect, a report must be made to the Department of Public Health, Health Care Quality Division at 1-(800V4620-5540 during business hours. After 5:00 p.m., on weekends and holiday call (617V522-3700. A written narrative describing the circumstances should follow within 48 hours. (There are no forms for this written report.) Written reports should be sent to:

Department of Public Health
Division of Health Care Quality
Complaint Unit - 5h Floor
10 West St.
Boston, MA 02111

Procedure Regarding the Reporting of Suspected Elder Abuse of a Resident Living in Assisted Living Facility

A report must be made to the Assisted Living Ombudsman at (617)222-7492. If it is after business hours, leave a message and also contact the police department where the facility is located.

POLICIES AND PROCEDURES	PHP/IOP
Assessment and Admission of Patients	**Policy #: 4.1**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 25, 2013

POLICY

The process for assessment and admitting patients is to gather all relevant clinical information. Referred patients are assessed for the most therapeutic intervention in the least restrictive setting. Patients who are not admitted are referred to appropriate services.

PROCEDURE

1. The following paperwork should be available to the program upon admission:
    a. Face Sheet (White Copy)
    b. Tracking Sheet (White Copy)
    c. Ed Addendum
    d. Clinical Assessment
    e. Disclosure Forms
    f. Privacy Notice
    g. EDE-Q Survey and Scoring Sheet
    h. Binge/Night Surveys and Scoring Sheets
    i. Labels
    j. Vital signs, weight, height, and lab work are assessed and appropriate level of care is determined based on the client's history and current symptoms.
    k. Information obtained during the triage assessment is also reviewed as part of the level of care assessment.

2. The process of admitting and evaluating a patient involves the patient's outpatient team. Every attempt is made to contact the patient's providers and collateral contacts (including Primary Care Physicians - PCP) as part of the evaluation process. For all new admissions to PHP or IOP programs a PCP Collaboration Letter will be sent to the patient's Primary Care Physician.

3. Every effort is made to contact the patient's Primary Care Physician (PCP) following a Level of Care Assessment providing the patient has signed a release of information. Every effort is made to review prior assessments, medical records, and other available documentation as part of the assessment.

4. For PHP programs, a Walden physician, nurse practitioner/clinical nurse specialist or the admissions department needs to sign off on admission lab results, fax them to the patient's PCP, and check the box on the Initial Clinical Evaluation indicating this has been done. For IOP programs the Admissions Department will fax lab results to the patient's PCP and check the box on the Initial Clinical Evaluation indicating this has been done.

5. Upon starting treatment in the outpatient program, the following assessments are completed by the patient's case manager, the program dietician, and the program psychiatrist/CNS and added to the Assessment section of the patient's chart:
    a. Psychosocial Assessment
    b. Nutrition Assessment
    c. Psychiatric Assessment
    d. Health Screening Questionnaire
    e. Suicide Assessment Form (completed for all program admissions by medical staff.
    f. Lab work requested as necessary

4. All insurance related information is documented on the "Insurance Tracking Sheet." The top copy of the triplicate form becomes part of the Medical Record; the bottom portion is transferred to the business office. The middle portion of the "Insurance Tracking Sheet" is kept as part of this file.

5. A copy of the final Initial Clinical Evaluation Form is kept in the patient files.

6. The middle portion of the "Insurance Tracking Sheet" is kept as part of this file.

7. Requested documentation is faxed to payers providing the patient has signed a release of information.

8. All correspondence sent or received by the program will be printed and stored in the patient record. This includes mail, faxes and e-mails that are sent or received and contain information related to the patient.

9. The following paperwork should be provided to the Business Office in Waltham:
    a. The original copy of the following documents should be mailed:
        i. Face Sheet (Yellow Copy)
        ii. Tracking Sheet (Yellow Copy)
        iii. Any Insurance Checking Paper Work
        iv. Financial Agreement (White Copy)
    b. Any deposits receipts from any deposits to the Walden Bank Account should be faxed to the Business Office in Waltham.

POLICIES AND PROCEDURES	PHP/IOP
Medical Monitoring	**Policy #: 4.2**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** August 1, 2012
Approved by: Dr. Jim Greenblatt, MD, Chief Medical Officer	**Revised:** October 25, 2013

POLICY:

To ensure integrated treatment, Walden collaborates with the patient's outpatient team, including their Primary Care Providers (PCPs). When necessary, WBC staffs provide referrals to assist patients in establishing outpatient teams and for continuity of care.

PROCEDURE:

Upon admission, all patients sign a release of information to allow WBC staff to coordinate their care with their PCP. In addition the PCP Collaboration Letter and lab results are sent to the PCP when any patient is admitted. PHP patients also complete a Health Screening Questionnaire.

The PCP's role includes:

- Following up on the Health Screening Questionnaire concerns.
- Collaborating with the Walden MD/NP to consider the patient's eating disorder symptoms and determining visit frequency and appropriate blood work and toxicology **screens.**
- Collaborating with the Walden MD/NP to consider the patient's eating disorder symptoms and determining visit frequency and appropriate blood work.
- Walden will recommend to the PCP that weekly blood work be ordered for the patient when they are a PHP patient; only if acute medical concerns exist for IOP patients.
- Collaborating with the Walden MD/NP to consider the patient's substance abuse risk and determining the of any necessary toxicology **screens.**
- Monitoring vital signs and blood work and faxing updated vital signs and labs.
- Supporting program attendance when scheduling appointments. Scheduling adult patients within one week, if they have not been seen within three months. Scheduling adolescent patients within one week.

The Walden MD/NP's role includes:

- Recommending a PCP familiar with eating disorders, if the patient does not have one.

- Reviewing the Health Screening Questionnaire with the patient.
- Monitoring patients' vital signs and weight twice a week.
- Collaborating with the PCP to consider the patient's eating disorder symptoms and determining visit frequency and appropriate blood work.
- Collaborating with the PCP to consider the patient's substance abuse risk and determining if there is need for any necessary toxicology **screens.**
- Reviewing blood work results when they are obtained from PCP and consulting with PCP about further medical evaluation. Ordering required blood work or other labs weekly for PHP patients if the PCP is not available to do so; only if acute medical concerns exist for IOP patients.
- Sending copies of blood work or lab results to the PCP if they do not already have this.
- Reassessing patients in the program for 30 days using the Health Screening Questionnaire. If the Health Screening Questionnaire indicates the need for further evaluation, refer the patient to their PCP, and review the outcome of this visit.

Changes In Medical Status:

Any precipitous changes in weight will be brought to the attention of the program director and the attending MD /NP. Thereafter, the MD/NP or Program Director in consultation with the MD/NP will meet with patient to evaluate the severity of his or her eating disorder symptoms and/or any possible substance abuse issues. The Program Director and/or MD/NP will contact the PCP regarding the change in status, and coordinate a plan for medical oversight.

Acute Medical Instability:

If the Program Director, the attending MD/NP and the PCP determine that the patient is, (or at risk to be), acutely medically unstable, their PCP will be contacted and they will make the determination for follow-up medical care including any laboratory or blood work, if necessary. The team will request that the results of this evaluation be shared with the Walden treatment team who will work with the PCP to determine if the patient requires a higher level care, or a medical admission. If the PCP can't be reached and there is concern about the medical stability of the patient, they will immediately be referred to the emergency room for evaluation and any necessary medical care.

HEALTH SCREENING QUESTIONNAIRE (HSQ)

Assess your health needs by marking all true statements.

The purpose is to identify individuals who may be at physical risk for participating in the PHP level of care and may need further medical assessment by their own PCP.

The questions were designed, in consultation with occupational health physicians, to identify individuals whose health may be at risk. The HSQ is not a medical examination. Any medical concerns you have that place you or your health at risk should be reviewed with your personal physician prior to admission in the PHP.

Check 'Yes' or 'No' in response to the following questions:

Y □ N □ 1) During the past 12 months have you at any time (during physical activity or while resting) experienced pain, discomfort or pressure in your chest?

Y □ N □ 2) During the past 12 months have you experienced difficulty breathing or shortness of breath, dizziness, fainting, or blackout?

Y □ N □ 3) Do you have a blood pressure with systolic (top #) greater than 140 or diastolic (bottom #) greater than 90?

Y □ N □ 4) Have you ever been diagnosed or treated for any heart disease, heart murmur, chest pain (angina), palpitations (irregular beat), or heart attack?

Y □ N □ 5) Have you ever had heart surgery, angioplasty, or a pace maker, valve replacement, or heart transplant?

Y □ N □ 6) Do you have a resting pulse greater than 100 beats per minute?

Y □ N □ 7) Do you have any arthritis, back trouble, hip /knee/joint /pain, osteoporosis, or any other bone or joint condition?

Y □ N □ 8) Do you have personal experience or doctor's advice of any other medical or physical reason that would prohibit you from participating in all the groups including yoga here at Walden?

Y □ N □ 9) Has your personal physician recommended against exercise because of asthma, diabetes, epilepsy or elevated cholesterol or a hernia?

Y □ N □ 10). Do you smoke regularly?

PATIENT SIGNATURE:_____

DATE_____

Psychiatrist/Medication Management	PHP/IOP
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Policy #: 4.2.1**
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Effective:** Aug. 15, 2012
POLICY During their stay in PHP, patients will meet with the Walden psychiatrist or APRN who will complete a psychiatric evaluation and recommend medications or prescribe medications as needed.	**Revised:**

PROCEDURE

1. Upon admission, a patient's case manager will schedule an initial appointment with the program's psychiatrist/APRN.
2. The program psychiatrist/APRN will complete an initial psychiatric assessment, which will be kept in the patient's chart. In the case that a psychiatric assessment has been completed within another level of care at Walden within the past 30 days, the psychiatrist will review and initial the previous psychiatric assessment.
3. Any updates to the Initial Psychiatric Assessment are reflected through progress notes and treatment plan changes.
4. Patients are asked to sign a release of information form for their outpatient psychiatrist, so Walden staff can coordinate an appropriate continuum of care.
5. The Program Psychiatrist/APRN will verify with each client the prescribed medications they are taking upon initial assessment, including the dosage, frequency, and the reason for taking the medication.
6. All medications shall be noted in the Initial Psychiatric Assessment in the client's record. Any changes in medication will be noted in progress notes. The chart shall specify for each client:
    a. The type and dosage of medications.
    b. The condition for which the medication is prescribed
    c. When and how the medication is to be administered.
    d. Any contraindications or allergies; and special instructions including steps to take if a dose is missed.
    e. Informed consent
    f. Signed by the parent / guardian acknowledging that they have been provided with a written description of the medication including possible side effects and contraindications.
7. If medications are prescribed by the PHP psychiatrist/APRN, patients are responsible for medication compliance. See "Self Administration of Medication" below.
8. If adverse reactions to medications are experienced, he or she must discuss this with the PHP psychiatrist, or 911 will be called if necessary.
9. If a patient wishes to make a change in prescription, he or she must discuss this with his or her outpatient psychiatrist, and the PHP psychiatrist/APRN will consult as needed.
10. The PHP does not supply routine medications to patients, including over-the-counter medications. Therefore, patients will be expected to have taken their required medications prior to attending PHP.
11. Prescription medication and/or over-the-counter medications are NEVER allowed to be shared with, borrowed from, or shown to other patients in treatment.

POLICIES AND PROCEDURES	PHP/IOP
Self-Administration of Medication	**Policy #: 4.2.2**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

All patients admitted to the Outpatient Continuum will have the responsibility to self administer prescribed and approved over the counter medications.

PROCEDURE

1. Patients will meet with the Program Psychiatrist/APRN for an initial assessment while in the program. If the patient has an outpatient psychiatrist established, his or her outpatient psychiatrist will prescribe medications for the patient's use while in the PHP. If a patient does not have an outpatient psychiatrist established, he or she will be followed by the Program Psychiatrist/APRN until one is established.

2. Prescriptions written by the Program Psychiatrist/APRN may be filled by the patient at his or her local pharmacy. Patients are responsible for filling their own prescriptions.

3. During program hours, patients are responsible for self-administering their own prescription or approved over-the-counter medications. Non-compliance with prescribed medications is considered to be therapy interfering behavior.

4. Patients are responsible for monitoring their supply of medication and must inform their outpatient psychiatrist when refills are needed prior to exhausting their medication supply. Medication refills will only be called in by the PHP psychiatrist under emergency circumstances.

5. All patients must be capable of medication self-administration to be considered for admission to the PHP.

POLICIES AND PROCEDURES	PHP/IOP
Adolescent Medication Self-Administration	**Policy #: 4.2.3**
Prepared by:	**Effective:**
Approved by:	**Revised:**

POLICY:

Adolescent patients (under the age of 18) will only be permitted to self-administer medication when circumstances are that the medication is needed in order to prevent potential lethality.

In order for a patient (under the age of 18) to self-administer medication for any airway constricting disease, lethal allergy, or for a diabetic patient to self-administer insulin injections:

- Parent/guardian must complete and sign the Medication Self-Administration Consent form.
- Parent/guardian or Physician prescribing the medication must provide a signed order of medication. This should include:
    - Purpose of medication
    - Prescribed dosage
    - Times or special circumstances to which the medication is to be administered.
    - That the patient is capable of self-administering the medication as prescribed.
- Medication should be contained in the original and labeled container.
- Medication should be carried on the patient at all times.

The requirements above are fulfilled, and the patient with an airway constricting disease, lethal allergy, or insulin may possess medication while receiving treatment in the Adolescent Partial Hospitalization Program or Intensive Outpatient Program within Walden Behavioral Care. If the patient is observed to over-abuse the administration of such medications, the ability to self-administer said medication will be withdrawn.

PROCEDURE

1. Parent/Guardian will complete the Medication Self-Administration Consent Form
2. Physician will complete and sign a written order stating that the patient is capable of self-administering the required medication.
3. Patient will self-administer the medication only as prescribed and under staff supervision.
4. Diabetic patients will keep a detailed log of blood sugar level and insulin administered.
5. Patients will keep medications on their person at all times.

000379

POLICIES AND PROCEDURES	PHP/IOP
Adverse Drug Reactions	**Policy #: 4.2.4**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

The Outpatient Continuum responds to actual or potential adverse drug events and mismanagement of medication by the patient.

PROCEDURE

6. Patients in the Outpatient Continuum are expected to be followed by an outpatient psychiatrist who will prescribe medications for the patient's use. If a patient does not have an outpatient psychiatrist established, he or she will be followed by the Program Psychiatrist until one is established.

7. In the case of an adverse drug event or mismanagement of medication by the patient, staff will consult with the Medical Director and 911 will be called if necessary.

8. The patient's outpatient psychiatrist and PCP will be notified by staff of the adverse drug event.

POLICIES AND PROCEDURES	PHP/IOP
Patient-Specific Information for Medication Management	**Policy #: 4.2.5**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

The Outpatient Continuum provides readily accessible patient-specific information to those involved in the medication management of patients, namely the Program Psychiatrist.

PROCEDURE

1. Information including the patient's age and gender can be found on the Patient Face Sheet of the patient's chart.

2. The patient's current medications, past medication use, drug and alcohol use or abuse, diagnosis, co morbidities, concurrently occurring conditions, allergies and past sensitivities can be found in the Assessment section of the patient's chart.

3. The patient's weight, height, any relevant laboratory values, and pregnancy/lactation status can be found in the Graphic section of the patient's chart.

POLICIES AND PROCEDURES	PHP/IOP
Medication Management and the Use of Psychopharmacologic Drugs	**Policy #: 4.2.6**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

Patients in the Outpatient Continuum are responsible for self-administering their own medication as prescribed by their outpatient psychiatrist, or as prescribed by the Program Psychiatrist in the case that they do not yet have an outpatient psychiatrist. The use of psychopharmacologic drugs is monitored as needed by the Outpatient Continuum.

PROCEDURE

1. If a patient is prescribed multiple psychopharmacologic agents by the Program Psychiatrist/APRN, the effects of these drugs are monitored and recorded in the patient's chart in continuing follow-up sessions. Patients who are prescribed multiple psychopharmacologic agents by their outpatient psychiatrist are expected to follow up with and be monitored by their outpatient psychiatrist.

2. If the Program Psychiatrist/APRN prescribes the use of high-dose pharmacotherapy, the effects will be monitored and recorded in the patient's chart in continuing follow-up sessions.

3. Patients are encouraged, if they have not already done so, to establish an outpatient psychiatrist as soon as possible as part of the expectation of establishing a thorough outpatient team. Program staff will help with this process as needed by giving referrals. As soon as an outpatient psychiatrist is established and an initial appointment is completed, the responsibility for medication management is transferred from the Program Psychiatrist/APRN to the patient's outpatient psychiatrist. After a release is signed, the Program Psychiatrist/APRN will be in contact with the outpatient psychiatrist as needed to give relevant clinical information.

4. If tardive dyskinesia is identified or suspected, the patient is encouraged to follow up with his or her outpatient psychiatrist. In the case of a patient who does not have an outpatient psychiatrist established, the Program Psychiatrist/APRN or Medical Director will be contacted. Numbers for the Program Psychiatrist/APRN and Medical Director are posted by the phone in the staff office.

POLICIES AND PROCEDURES	PHP/IOP
Nutritional Management	**Policy #: 4.3**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

PHILOSOPHY

Our philosophy is based on an understanding of the importance of individuals with eating disorders learning to make food choices which support normal eating and optimum health. The Walden Outpatient Continuum is designed to provide a safe and healing environment for participants to relearn the sensations of hunger and fullness and to become increasingly comfortable with freedom over their food and activity choices. We emphasize mindfulness as a means toward restoring overall balance to learn effective ways of nurturing mind and body, thereby giving participants the needed tools to learn to eat intuitively.

We believe that imposing external structures may be an essential step in the treatment process. We begin by regulating eating and move towards teaching skills for self-regulation. We take the approach of guiding participants to develop insights into the root of the problem and develop effective coping skills to restore biochemical and physiological well-being. By teaching skills in making food choices in a safe environment that supports change and growth, we assist patients in the process of discontinuing the use of eating disordered behaviors to cope with uncomfortable situations or feelings.

Primary goals of the program:

- Restoring biochemical functioning and nutritional balance
- Establishing and maintaining a pattern of regular, adequate food intake
- Challenging destructive behaviors such as binging, purging, restricting or excessive exercise
- Empowering patients with skills to continue healthy patterns of self-care upon discharge

PROCEDURE

1. Patients will meet with the staff dietitian within 48 hours of admission to establish a meal plan, set nutritional goals, and become oriented to the nutritional guidelines used in the PHP. If patients have a meal plan that has been prescribed from another dietitian or from within another level of care at Walden, they are asked to bring it with them on their first day of treatment.

2. The complete nutrition assessment evaluates each patient's patterns of eating, biochemical and anthropomorphic data. The assessment incorporates each patient's medical and psychological profiles to determine appropriate goals for the treatment program and beyond.

3. Individual meal plans are based on the concept of balanced meal composition, and are developed by each patient with the help of a registered dietitian.

4. Patients are asked to sign a release of information form for their outpatient nutritionist so Walden staff can coordinate an appropriate continuum of care. The PHP dietitian will collaborate with the patient's current dietitian as needed during treatment and prior to discharge for continuum of care arrangements.

5. The staff dietitian will meet with patients once a week to adjust the meal plan as needed, to promote progress towards established goals, and to review individual progress.

6. Patients are expected to meet with their outpatient nutritionist on an as needed basis while enrolled in the PHP.

7. Vegetarian choices are offered by the PHP, and any diagnosed food allergies are taken into account.

8. During the course of treatment patients are expected to assume greater freedom and responsibility in making food choices outside of the PHP setting.

9. Group nutrition therapy sessions are scheduled once a week to address concerns and feelings patients have about foods, nutrition and eating behaviors. Topics include normalized eating, food and brain chemistry, effects of starvation and other behaviors, mindfulness and relapse prevention, nutrition myths, science of healthy eating, and overcoming food phobias.

POLICIES AND PROCEDURES	PHP/IOP
Case Management	**Policy #: 4.4**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

All patients will have a case manager assigned as a member of their Multidisciplinary Treatment Team to assist in the coordination and implementation of each patient's treatment plan and discharge plan.

PROCEDURE

1. The case manager will be an integral member of the Multidisciplinary Treatment Team.
2. The case manager will meet individually as well as with other members of the treatment team and the patient to assess the patient's current status and develop a comprehensive treatment plan with the patient.
3. The case manager will complete a psychosocial evaluation within 48 hours of admission.
4. The case manager will obtain necessary releases of information and will contact family, supports and outpatient providers approved by the patient.
5. The case manager will work with these contacts to obtain additional information, provide support and education to family members and clinical information to providers in order to facilitate continuity of care.
6. The case manager will be available for daily individual sessions with the patient to continue to assess the patient's needs and provide support and interventions to assist in the patient's recovery.
7. The case manager will provide family meetings, when appropriate, to provide support and psycho-education to assist the patient and family in developing new methods to address the patient's illness or family dynamics.
8. The case manager will assist in coordinating communication/meetings between the patient and outpatient providers.
9. The case manager will document all individual and family meetings, as well as any other pertinent information, in the patient's medical record. Each note will provide an evaluation of the patient based on the patient care goals and the patient's plan for care, treatment and services.
10. The case manager will provide utilization review (UR) with managed care to ensure continuation of benefits for appropriate level of care.
11. The social worker /case manager will document the results of each UR on the insurance tracking sheet in the patient's medical record.
12. The case manager will work with the patient and treatment team to develop a comprehensive discharge plan, as outlined in the discharge planning policy.
13. The case manager will review the discharge plan with the patient and family, as well as with the patient's outpatient providers.
14. A copy of the discharge plan will be placed in the patient's medical record.

In addition to working with individual patients, the case manager may lead therapeutic milieu groups.

POLICIES AND PROCEDURES	PHP/IOP
Psychosocial Assessments	**Policy #: 4.4.1**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

All patients entering the Outpatient Continuum will have a psychosocial assessment completed upon admission to the program. When indicated, additional psychosocial data will be collected by a PHP or IOP Case Manager while the patient attends the Outpatient Continuum.

PROCEDURE

- When beginning treatment in the Outpatient Continuum, each client is assigned a case manager who completes a psychosocial assessment with the patient.
    - Patients referred directly from admissions are assessed with a Psychosocial Assessment by their case manager within 24 – 48 hours of admission.
    - All patients admitted to the Outpatient Continuum from Inpatient or Residential levels of care have had a psychosocial assessment completed. If this previous assessment was completed within the past 30 days, it will be reviewed and initialed by the PHP case manager and referenced while the patient is in PHP. If this previous assessment was completed more than 30 days prior to the patient's admission to PHP, another Psychosocial Assessment must be completed.
- Information gathered during the psychosocial assessment includes at least the following:
    - History of present illness
    - Environment and living situation
    - Salient personal history
    - Marital status, social supports, and family circumstances
    - Employment
    - Leisure and recreation
    - Religion and spiritual orientation
    - Childhood history
    - Military service history, if applicable
    - Financial issues
    - Sexual history
- When addressing bereavement, the psychosocial assessment includes the social, spiritual, and cultural variables that influence the perceptions and expressions of grief by the patient or family.
- The case manager will follow the case with one individual session per week. Additional information from these meetings pertaining to the psychosocial assessment is recorded in Progress Notes and Tracking Summaries in the patient's chart.

POLICIES AND PROCEDURES	PHP/IOP
Treatment Plans	**Policy #: 4.4.2**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 25, 2013

POLICY

All patients in the PHP are evaluated by a designated case manager within their 48 hours of treatment. During this meeting a treatment plan is created that specifies the patient's goals and plan of treatment during their stay in program.

PROCEDURE

1. Upon arrival to PHP, new patients are assigned to a Case Manager (CM) who will follow their case during their stay in program. CMs meet with a new patient within the first 48 hours of a patient's arrival to program to conduct a psychosocial assessment and create a treatment plan.

2. A treatment plan is filled out by the CM in collaboration with the patient. The treatment plan specifies 1-2 problems or target behaviors that will be addressed while the patient is enrolled in program. The treatment plan also establishes short-term and long-term goals, and what will be included in the treatment.

3. Once completed, the treatment plan is signed by the Program Director or his/her designee, the CM, the treatment team, and the patient. The Program Director designee may be any independently licensed member of the treatment team. All children who are capable of signing their names should sign the treatment plan.

4. Initial treatment plans are reviewed and updated by the treatment team weekly in treatment planning meetings.

5. Initial treatment plans are reviewed and updated weekly, or as clinically indicated.

6. The treatment plan shall not include any special treatment procedures. Any use of special treatment procedures requires prior approval by the Medical Executive Staff, and will be consistent with state statutes and regulations, and shall receive prior approval by the state licensing authorities (DCF and DPH).

POLICIES AND PROCEDURES	PHP/IOP
Preparation of Adequate Case Records	**Policy #: 4.5**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 25, 2013

POLICY:

An organized written record for each patient shall be maintained which contains current information sufficient for identification and assessment for the provision of appropriate care, treatment and other applicable services.

PROCEDURE:

Each patient record shall contain the following:

- Documentation of advisement of patient rights
- Social or family background
- Next of kin or other designated individual to be notified in the event of an emergency
- Physical examination inclusive of medical history when indicated
- Substance abuse history, if applicable
- Educational background
- Employment history
- Referral source summary to include reason for referral and medications at time of referral
- Legal history
- Releases and notations of release of information
- Documentation, at the time of admission, or an initial assessment which identifies the patient's appropriateness for participation in the facility.
- Comprehensive written assessment which shall be written within 48 hours of admission, and include identification of individual needs of the patient as well as the approaches to meet each identified need. An individualized treatment plan, based on the comprehensive assessment shall be developed and reviewed.
- Progress notes which document services provided to the patient and progress made towards goals and objectives in accordance with the individualized care plan. Each note shall be entered in ink by a direct care staff member or consultant and shall be dated, legible, signed by the person making the entry and his or her position title.
- Current list of all medications and instructions for administration.
- Documentation of the periodic individualized care plan review. Such documentation shall include the date of the review, person conducting the review and any changes in the individualized care plan as the result of the review.
- Copies of any mail, faxes or e-mail that contains information regarding the patient or the patient's care.

- Each patient record shall contain an individualized care plan which must include:
  1. Specific objectives which are related to stated goals;
  2. Name of assigned staff person to develop and monitor the individualized care plan;
  3. Description of the type and frequency of services to be provided;
  4. Provision for periodic review by designated staff member;
  5. Description of supportive services determined to be needed;
  6. Signatures of the counselor or other staff person formulating the individualized care plan.

- Discharge summary which has been written within fifteen days of the individual patient's discharge date. This summary shall:
  1. Indicate the patient's progress towards the established individualized care plan goals;
  2. Address original reason for referral;
  3. Describe the type, frequency and duration of treatment or services;
  4. Specify reasons for discharge; and
  5. Identify expectations for future functioning.
  6. Patient records shall be stored in a secure manner and shall be accessible only to authorized persons. Originals or copies of these records shall be retained for at least seven years following discharge. The method of destruction of any such records shall be either incineration or shredding.

POLICIES AND PROCEDURES	PHP/IOP
Clinical Supervision and Treatment Team Meetings	**Policy #: 4.6**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY:

Independently licensed mental health professionals supervise the work of unlicensed professionals and behavioral health interns, through individual and group meetings, and in multi-disciplinary treatment team rounds. Walden does not use volunteers.

PROCEDURE:

Interns will receive one hour of weekly supervision from their licensed supervisor. A multi-disciplinary treatment team meets weekly to review progress and update the patient's treatment plan, and is available as appropriate for the clients' needs. The multi-disciplinary team includes independently licensed mental health professionals, and may also include other related mental health professionals as necessary, for the provision of intake, evaluation, diagnostic and treatment services.

POLICIES AND PROCEDURES	PHP/IOP
After-Hours Emergency Coverage	**Policy #: 4.7**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY:

Each facility makes arrangements for the delivery of the services it provides during the hours when it is not open, at least through an answering service referring patients to another provider of the same services that is as geographically close as possible and that is open at those hours.

PROCEDURE:

1. During hours in which the clinic is not operating, patients and family members should:
   - **Dial 911.** Dialing 911 will connect the caller to local fire and police responders. They can provide emergency information to direct the caller to the nearest emergency medical services, or provide emergency service response directly to the caller's location.
   - **Contact outpatient therapist and/or treatment team**

2. These arrangements shall be reflected in participation guidelines available to all the clinic's patients.

000391

POLICIES AND PROCEDURES	PHP/IOP
Admissions Wait Lists	**Policy #: 4.8**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

Policy

Walden maintains a wait list for admissions to the Adolescent Intensive Outpatient Program (IOP). Other programs do not use wait lists.

Procedure

1. Adolescents seeking intensive outpatient services may be placed on a wait list for up to two weeks, or as coordinated with their outpatient providers.

2. Individuals stepping down from higher levels of care receive priority on the wait list.

3. Individuals who seek services when the program is full will be referred to community based providers, or a higher level of care.

4. Wait-listed individuals will receive information about who to call in the event of an emergency.

POLICIES AND PROCEDURES	PHP/IOP
Change in Level of Care	**Policy #: 5.1**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

This policy is to ensure that patients are transferred in a uniform manner. This policy ensures that transitions from one level of care to another will be done efficiently and in the best interest of the patient. The clinical team will have already come to a preliminary agreement with the patient and family on the recommended next level of care.

PROCEDURE

1. The sending team determines change in level of care and makes the recommendation. The team social worker verifies that the patient is eligible for insurance benefits for the change in level of care. Note: The Social Worker or Utilization Reviewer must be aware of benefit days remaining.
2. The social worker notifies the program director of the potential change in level of care and presents a brief clinical summary. A minimum of 48 hours advance notice should be provided by the sending program to admissions and the receiving program.
3. Social work contacts the admissions department to determine bed/slot availability. (All attempts will be made by the admissions department to provide level of care requested).
4. Admissions Department notifies the receiving program of the transfer.
5. For step ups and step downs the sending program calls the on call doctor for approval of admission
6. For step ups and step downs the program calls the charge nurse to give report.
7. For step ups and step downs the program will give regular updates to the admissions department regarding the status of the transfer
8. Nursing writes a transfer/discharge note in the chart.
9. If patient is discharging to any outpatient program (Partial, IOP, etc.) at Walden, the social worker discharging the patient is responsible for contacting the outpatient program, providing clinical information and determines the start date. The discharging facility is sends the clinical paperwork to the program one day prior to the patients start date.
10. Insurance authorization is obtained and documented.
11. Patient and/or family is notified of the status of change in level of care. (This is to assume that the patient and family have been involved in the transfer prior to this notice)
12. Social work completes the change in level of care form.

Documents to Accompany Patients to all Programs:

- Face Sheet
- Tracking Sheet
- New Labels
- Completed Change in LOC Form
- Medication Reconciliation Form
- Transfer Order/ Discharge Order
- Most Recent Lab Results
- Most Recent Meal Plan
- Graphic Data
- Copies of Assessments
    - Initial Clinical Evaluation
    - History and Physical Evaluation
    - Patient Centered Nursing Assessment
    - Psychiatric Evaluation
    - Risk Assessment
    - Psychosocial Assessment
    - Initial Clinical Evaluation
    - Eating Disorder Behavior Addendum
    - Nutrition Assessment
    - Trauma Assessment
- EDE-Q
- Treatment Plans

POLICIES AND PROCEDURES	PHP/IOP
Discharge Planning	**Policy #: 5.2**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

The Multidisciplinary Treatment Team will work with the patient to evaluate the patient's needs and develop an appropriate discharge plan. Although the discharge planning process begins at the time of admission, the plan may be revised if the patient's needs and goals change during PHP treatment. Readiness for discharge should be based on sufficient completion of short and long term treatment goals (established in the patient's treatment plan) to ensure ability to function safely at a lesser level of care.

PROCEDURE

1. The Multidisciplinary Treatment Team will assess the patient's potential discharge needs during the initial treatment planning process with the patient.

2. The case manager provides a key role in patient discharge planning and provides primary leadership regarding all discharge planning initiatives. In addition, the case manager will include an evaluation of the patient's anticipated discharge needs in the psychosocial assessment which will be completed within 24 - 48 hours of admission. Areas to be assessed should include the psychiatric and physical needs of the patient, family relationships/support systems, financial concerns, housing or placement issues, spiritual and cultural needs, educational needs/vocational needs and accessibility to community resources.

3. With the patient's permission, the treatment team will also collaborate with the patient's family, social supports, and/or outpatient therapeutic supports to obtain additional information which may help to clarify discharge needs, and address any concerns or educational needs of these supports.

4. The case manager will develop a discharge plan utilizing the input of the patient, treatment team and outside supports approved by the patient.

5. Recommendations for specific types of aftercare will be explained and any questions or concerns will be addressed.

6. Changes to the plan will be made if the patient's needs change prior to discharge.

7. The case manager will review the discharge plan with the patient, as well as with any appropriate outside supports designated by the patient.

8. The patient will receive a written copy of the disposition plan, including all scheduled appointments as well as any additional recommendations.

9. A copy of the disposition plan will be included in the patient's medical record.

10. The attending psychiatrist will provide the patient with prescriptions for any newly ordered and/or needed medications ONLY if he has been following the patient in the absence of an established outpatient psychiatrist.

11. A dictated discharge summary, written by the patient's case manager, will be completed and in the medical record within 15 days.

12. Effectiveness of discharge planning will be evaluated by review of all readmissions, patient surveys and surveys to outside agencies.

POLICIES AND PROCEDURES	PHP/IOP
Case Management Discharge Planning	**Policy #: 5.3**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

Each patient is assigned a case manager. Continuity of care is an important social work principle and is demonstrated through the case manager's integral role in case management and discharge planning.

PROCEDURE

1. Each patient will be assigned to a case manager.
2. The case manager will complete a psychosocial assessment within 24 – 48 hours of admission.
3. The psychosocial assessment will include an assessment of potential aftercare needs and reflect a tentative discharge plan, including referrals to appropriate community based agencies or programs.
4. Through collaboration with the patient, the treatment team, the family, therapeutic and social supports, the case manager will further refine and develop the discharge plan. Issues regarding significant relationships, physical and psychiatric needs, financial needs, housing or placement needs, personal supports, spiritual or cultural needs, and accessibility to community resources will be assessed.
5. The case manager also has the opportunity to assess the patient in the context of the milieu groups which he/she leads.
6. The case manager will meet with the patient and family with the patient's permission to obtain additional information which may clarify discharge needs.
7. The case manager will also provide education and support to the patient and family to:
    a) Prepare the patient and family for the transition to the next level of care,
    b) Address how the next level of care will continue the patient's treatment,
    c) Address any questions or concerns about aftercare and dealing with issues which may arise,
    d) Review progress made and patient and family strengths.
8. The case manager will provide the patient with a written plan of follow-up appointments and recommendations.
9. The case manager will provide appropriate clinical information to the patient's aftercare providers.

POLICIES AND PROCEDURES	PHP/IOP
Unplanned Discharges	**Policy #: 5.4**
Prepared by: Colleen O'Brien, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY

It is the policy of the Partial Hospitalization Program at Walden to have a formal system in place in the case of unplanned discharges. The circumstances in which an unplanned discharge occurs are identified.

Circumstances that may present for an unplanned discharge include, but are not limited to the following:

1) Patient no longer meets Partial level of care but is not compliant with the program recommendation of a higher level of care, such as Inpatient or Residential.
2) Two Consecutive Absences
3) Patient is non-compliant in other areas of the program's guidelines in ways that interfere with treatment.
4) Lack of insurance benefits.

PROCEDURE

Non-compliance with recommendation for higher level of care

1. When a patient is assessed by the team for appropriateness at the Partial level of care (see "Changes in Level of Care") and is found to no longer meet Partial level of care based on established criteria, the team recommends a transition to a higher level of care. This higher level of care may include the Inpatient or Residential programs at Walden, or another facility altogether.
2. The patient is informed that he or she no longer meets Partial level of care, and the recommendation and rationale for a higher level of care is explained. If the patient refuses to transition to a higher level of care, the patient is informed that he or she cannot continue to be treated in the Partial Hospitalization Program and will be discharged unplanned.
3. The patient is assessed by the psychiatrist or designee for potential risk factors. If the psychiatrist's or designee's assessment indicates that there is no acute risk to self or others, but still concludes that the patient would benefit from further treatment at a higher level of care, the psychiatrist will explain the recommendation and rationale to the patient.
4. If the patient still refuses a higher level of care, the patient will be asked to sign the disposition plan form in the presence of a witness who is a member of the staff. Another patient cannot be asked to witness this signature.

Two Consecutive Absences

1. If a patient is absent from program for two consecutive program days (not including weekends or holidays in which the program is closed) the program reserves the right to administratively discharge the patient.
2. On the second day of absence, the patient is contacted and informed of potential discharge. If the patient does not respond or does not return the call by 5:00pm on the second day of absence, he or she is administratively discharged and the discharge summary reflects this decision in the patient's chart.
3. If the patient contacts the program before 5:00pm and agrees to come in to treatment on the following day, the Case Manager will meet with the patient the following day to assess motivation and commitment to treatment. If the Case Manager deems these absences as excused absences and concludes that the patient is committed to treatment, and if the patient contracts to attend full days of treatment 5 days a week unless otherwise noted, the patient may be allowed to continue treatment in the Partial Hospitalization Program.
4. If a patient requests to take two consecutive days off for appointments (or any other reason), the patient's Case Manager will meet with the patient to stress the importance of attendance and work with this patient around any scheduling problems. Case Managers reserve the right to grant two consecutive absences in certain circumstances in which it is felt that these absences will be beneficial for the patient's recovery and will not interfere with treatment.

Administrative Discharge for Non-Compliance with Program Guidelines

A patient who is assessed to be behaviorally inappropriate to continue in the EDS, who is not able to respond to limit setting, intervention or treatment plans, or who is unable to comply with the program's guidelines and parameters for patients, or contractual agreements will be administratively discharged. Confrontation of inappropriate behaviors or non-compliance with treatment issues is necessary to prevent non-therapeutic enabling processes that occur when issues of non-compliance are not addressed. Administrative discharge is at staff request and considered a treatment team decision. Behavioral inappropriateness will be identified as infractions of the program's guidelines and parameters for patients, or non-compliance with patients' contractual agreements.

No patient who is considered by the attending physician to be medically at risk will be administratively discharged. No patient whose mental status requires active intervention will be administratively discharged, e.g. active suicidal or homicidal ideation.

An administrative discharge will not prevent the treatment team from making suggestions for the patient regarding continuing care.

In the case of administrative discharge, the following steps are to be taken:

1. Notify Program Director (or designee) of patient's non-compliance.
2. Program Director or the Treatment Team on duty will assess patient's non-compliance.
3. Treatment Team will assess the patient's mental status and medical stability.
4. Program Director will assess necessity for a psychiatrist to be present in order to determine mental status and disposition.
5. Program Director will give orders for disposition/discharge.
6. Notify administration if safety may be an issue. Inform administration of patient's status and unit's plan for disposition and decide if additional security is needed before approaching the patient.
7. Staff will notify appropriate persons of patient's discharge abiding by the laws of confidentiality, or where the treatment facility is legally responsible for notification.
8. Documentation responsibilities on the medical record:

a. Issues of non-compliance leading up to incident.
b. Psychiatrist's name.
c. Date and time psychiatrist was notified.
d. Interventions used; outcomes of these.
e. Condition of patient, i.e. mental status, medical status.
f. Decisions for disposition.
g. Final disposition – continuing care plans or recommendations.

Lack of Insurance Benefits

In the situation where a patient is unexpectedly denied further care by his or her insurance company and is unable to self-pay, the patient will need to be discharged unplanned from the Partial Program and the following steps will be taken.

1. Case Manager will meet with patient to discuss discharge plan and disposition. Care will be taken to assess patient's mental status and potential risk factors of unexpected discharge.
2. Case Manager and patient will create a discharge plan including follow-up appointments with the patient's outpatient team (therapist, psychiatrist, nutritionist, and PCP). Case Manager and patient will address signs and symptoms of relapse and review coping skills and safety strategies patient has learned while in program.
3. Patient will be asked to sign the disposition form in the presence of a witness who is a member of the staff. Another patient cannot be asked to witness this signature.

POLICIES AND PROCEDURES	PHP/IOP
Environment of Care	**Policy #: 6.1**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 25, 2013

POLICY

The Outpatient Continuum maintains a safe environment, and conducts environmental tours of its treatment spaces a minimum of quarterly to ensure that it is safe and appropriate for the services it provides to its patients.

PROCEDURE

The Program Director is responsible to ensure compliance with the following procedures.

1) Environmental Tours. Environmental safety / hazard surveillance tours of the treatment areas of the Outpatient Continuum are conducted minimally on a quarterly basis, but more frequently when necessary, for compliance with safety rules and regulations. Tours will be conducted by the Program Coordinator or designee. Tour inspections are documented and recorded in the Environmental Tour binder.

2) Records and Follow-Up. The Program Coordinator maintains records of environmental tours and updates the date the tour was completed in the Coordinator Fire Ext – Environmental Tour Log in the Quality folder of the H Drive. The Program Director and Coordinator follow up with relevant Walden facilities staff to ensure that all issues are properly and timely addressed.

3) Reporting. Copies of Tour results are scanned and sent to the Director of Quality Improvement/Safety Officer for additional review within 3 business days of their completion. Results of Environmental Tours are reported at each bi-monthly Safety Committee meeting by the Director of Quality Improvement/Safety Officer.

POLICIES AND PROCEDURES	PHP/IOP
Reporting Environmental Conditions	**Policy #: 6.2**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 25, 2013

POLICY

The Outpatient Continuum establishes and implements the following processes for reporting and investigating conditions in the environment.

These conditions include any event or incident that is out of the norm and may cause injury or harm to the patient, staff, or organization. Examples include but are not limited to:

- Accidental or purposeful injury to staff or patients
- Medical incidents involving patients
- Damage to property
- Occupational illnesses to staff
- Security incidents
- Hazardous materials and waste spills, exposures, or other related incidents
- Fire safety, utility systems, or equipment management problems, deficiencies, failures, or use errors
- Arrival of patients to the program under the influence
- Theft

PROCEDURE

In the event of an incident in the environment during program hours, the following procedures are to be followed:

1. Staff observing the incident will immediately notify the Program Director and the PHP attending Psychiatrist with concerns related to medical safety after they ensure the immediate safety of patients.

2. Staff will also notify the Program Director when completing an incident report to obtain further direction regarding the situation.

3. Staff will complete an incident report form and place it in the Program Director's mail box.

4. The Program Director will file a copy of this form and send the original to the Director of Quality Improvement or other designee at Walden.

5. The Program Director and any other appropriate staff will plan and implement an appropriate action to resolve the incident.

POLICIES AND PROCEDURES	PHP/IOP
Medical Equipment	**Policy #: 6.3**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 25, 2013

POLICY

Medical equipment used in the provision of care is properly maintained and inspected routinely.

PROCEDURE

1. Responsible Designated Staff:

   Each unit / program will have a designated staff person to be in charge of inventory. For the Outpatient Continuum, that person is the Program Coordinator or designee. The Safety Officer will maintain the Master Inventory List.

2. New Equipment

   - Prior approval must be obtained from the Program Director.
   - The Safety Officer is to be notified at the time of the order and when the equipment arrives. The Safety Officer adds the item(s) to the Master Inventory List.
   - The Safety Officer or his/her designee will put a fix asset tag on the item(s), assign a number, and add the item(s) to their list.

3. Damaged or Broken Equipment
   - Staff will label broken equipment with signage to note the date and a brief description of what is wrong with the item. Store the broken equipment in an area removed from patient care.
   - Notify Safety Officer of the broken equipment.
   - If we are unable to repair the item, we will remove it from the inventory and order a replacement.

4. A minimum of annually our medical equipment is inspected by an outside contracted vendor. Documentation of these inspections are maintained by the Safety Officer.

5. Annual Inventory: On an annual basis, the designated staff will inventory their unit's medical equipment. Any missing items will be identified and reported to the Safety Officer. He or she will note this on the Master Inventory List. If items are found that belong to other units via their color code, they will be returned at this time.

POLICIES AND PROCEDURES	PHP/IOP
Food Safety **Refrigerators: Temperature Monitoring and Cleaning**	**Policy #: 6.4**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 25, 2013

POLICY

The Outpatient Continuum (Partial Hospitalization and Intensive Outpatient Programs) will maintain service refrigerators to be clean and operating at correct temperature levels.

PROCEDURE

1) Refrigerators will be cleaned weekly by staff.

2) Staff food which is acquired from outside the program and stored in the refrigerators must be dated and marked with staff's initials, unless an expiration date is already identified on the food container AND the food container is unopened.

3) Community food used by patients for daily snacks or other purposes *that are unopened* in their original packaging need not be labeled. Any community food used by patients that has been opened must be covered and then labeled with the date it was opened, an expiration date of no more than7 days later, and staff initials.

4) Undated or expired food will be discarded on a weekly basis in conjunction with the scheduled cleaning. Any uncovered food found in the fridge will be discarded immediately.

5) Temperature logs will be maintained on all refrigerators.

   a) The Program Director will assign staff to record the temperature of the refrigerator and freezer for each refrigerator used for client food at Walden Place. Temperatures will be recorded on a daily basis.

   b) When temperatures are above the range noted on the logs (40 degrees F for the refrigerator, and 0 degrees F for the freezer), the incident will be reported to both the Program Director and the Executive Assistant on the same day.

   c) In these situations when temperatures are above acceptable ranges, the fridge or freezer temperature setting will be adjusted and then door will remain closed for 15 minutes and then the temperature will be re-checked. If the temperature is still above acceptable ranges, then items within the defective refrigerator must be moved to another refrigerator and freezer until the unit is repaired.

   d) The Program Director will maintain copies of all completed logs.

6) Problems with completion of these procedures must be reported to the Program Director.

000404

POLICIES AND PROCEDURES	PHP/IOP
Medical Emergencies	**Policy #: 6.5**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 25, 2013

POLICY

Staff will respond to all medical, psychiatric, facility and milieu safety concerns in an effective and timely manner. Staff will follow the procedures below for the following types of emergencies.

PROCEDURE

Staff should utilize the following procedures to respond to the identified emergency:

a) **Medical Incident** *(medication concerns or medical / physical symptoms):*

- Consult the Program Director for triage and assessment.
- The clinic Medical Director should be consulted as necessary regarding case concerns, acute medication concerns or symptoms. Contact information is posted on staff bulletin board.
- First Aid kit is available in the Staff Room. In the event that first aid or CPR services are necessary for any client or other staff person, staff members are instructed to provide them using all resources available.
- If a major medical emergency occurs for either patients or staff (e.g. client collapse, serious injury, choking), call 911 and notify the Program Director.
- Anytime CPR is used 911 must be called even if the person regains consciousness and seems to be responding normally.

b) Psychiatric Incident *(e.g. self-injurious behavior, suicidal or homicidal ideation or attempt, decompensation in psychiatric condition, psychiatric medication concerns):*

- Consult with the Program Director or clinic Medical Director.
- If an incident occurs which requires an immediate emergency response to protect the client, call 911.

c) Facility Issue *(e.g. fire, maintenance concerns, power outages or electrical concerns, property destruction, appliance failure, water problems):*

- If there is a fire, activate the fire alarm, and dial 911 to report the fire.
- For other facility issues which are not life-threatening, contact the Program Director.
- Follow protocols for facility evacuation if necessary.

d) Milieu Issue (e.g. intimidating, threatening, or violent behaviors by a patient or visitor; staffing concerns; theft; illegal activity):

- Contact and consult with the Program Director
- If patient safety is at immediate risk, call 911 and the Program Director.

3) Staff orientation and training.

Staff are oriented and trained in these procedures as part of their orientation process for work in the clinic.

000405

POLICIES AND PROCEDURES	PHP/IOP
Mental Health Emergencies	**Policy #: 6.6**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 25, 2013

POLICY:

Walden plans for emergency mental health situations, and provides specific guidelines to staff.

PROCEDURE:

1. The first person to discover the mental health emergency should call for help and tell the next person arriving to call *Code Green.* The next person arriving should contact the administrative office to call 911 and alert other program staff to the need for Code Green support.

1. The senior staff person where the mental health emergency is located will:

    a. Be responsible for coordination of the mental health emergency.

    b. Assign roles to responding staff, which may include using de-escalation techniques, contacting family, consulting the physician and case manager.

    c. Physical restraint will not be used, but the patient will be supervised until the event is resolved.

    d. Provide a verbal report to the Program Director, who will determine if the patient requires transfer to a more intensive level of care.

    e. If the patient is being sent for a psychiatric evaluation or emergency services are responding to the scene, a staff member will remain with the patient at all times until outside assistance arrives or the person is transported.

    f. Complete an incident report.

POLICIES AND PROCEDURES	PHP/IOP
Fire Safety	**Policy #: 6.7**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 25, 2013

POLICY

The Outpatient Continuum manages fire safety risks through the following procedures. The Program Director is responsible for ensuring compliance with the following procedures. Although Walden emphasizes preventative measures, the danger of fire always exists. Every employee is expected to be knowledgeable and be capable of immediate response to a situation of fire.

Fire safety equipment, including fire extinguishers, are inspected monthly by staff. A log of satisfactory or not satisfactory is kept on a monthly basis, and a case of "not satisfactory" must be reported to the Safety Officer so the extinguishers could be scheduled for service.

PROCEDURE

1. There are fire extinguishers located in all kitchens/dining rooms and in other areas throughout each facility, to be utilized to contain the fire while waiting for the fire department. There are pull stations located throughout the building. Extinguishers and pull stations are indicated on all evacuation maps posted throughout the facility.

2. Smoke detectors are also located throughout the clinic space. Activation of any smoke detector or the pull station automatically notifies, and is connected to, the Fire Department.

3. The Person in Charge (PIC) is the most senior clinical or administrative person on-site within the Outpatient Continuum at the time of the emergency. The PIC will assign instructions to all staff for evacuating the building, as necessary. All staff and patients are to follow the instructions of the PIC.

4. In the event of a real fire, the PIC or other designated staff person will complete the following:
    a. **Dial 911** to report the fire or other emergency. This call notifies both the police and fire departments.
    b. Immediately move clients and staff to safety. All staff and patients follow the direction of the PIC.
    c. The PIC will take special care to assign staff to aid handicap patients to follow all emergency procedures. Of particular importance is assigning staff to assist handicapped clients to evacuate the building if necessary.

5. In case of fire within a treatment room, responsible staff designated by the PIC may try to extinguish the fire by:
    a. Pulling pin
    b. Squeezing handle
    c. Direct at base of fire to extinguish

6. At the direction of the PIC or the Fire Department, the building may be evacuated. Target time for program evacuation is two and a half (2 ½) minutes. When evacuating the building, the PIC implements the following procedures:
    a) Prior to evacuation, all patients are gathered together with staff.
    b) Copies of each patient's Face Sheet are kept on record in the Group Notes Binder, located in the staff office. Information on the Face Sheet includes patient name, address, contact information, and emergency contact information. The PIC or designated person is responsible for obtaining this binder during an emergency and taking it with them when evacuating so it can be used to account for all patients. Once gathered together, all patients and staff are accounted for.
    c) If necessary and appropriate to evacuate, the PIC selects a distinct evacuation route to utilize, based upon safety. A fire map designating specific fire exit routes is located on the inside of the main door, and in treatment spaces and office areas.
    d) As areas of the facility are checked to ensure that there are no patients or staff present in those rooms/areas, the doors are closed prior to evacuating if it is safe to do so. This would slow the spread of fire and also lets staff know that these rooms have been cleared.
    e) Area of Safe Refuge. At the direction of the PIC, all patients and staff move together to an area designated by the PIC as an area of safe refuge. One staff is assigned to lead the group, and one to follow at the rear of the group. Unless otherwise recommended, the area of safe refuge within the program space is always **the waiting area near the main entrance/exit of the program**. Once at the safe area of refuge, all patients and staff are again accounted for.
    f) Building Evacuation. The PIC will identify the location to which patients will be evacuated. This evacuation plan is based on the recommendation of the Fire Department. In case of a full evacuation, patients and staff should evacuate to **the parking lot outside of the front of the building.**
    g) All patients and staff remain at this location until instructed by the Fire Department that it is safe to return to the building.
    h) The PIC directs the safe return of patients to the program when appropriate and authorized by the Fire Department.
    i) If unable to re-enter the building due to safety concerns, patients are instructed to go home. Patients will be contacted by the Program Director regarding continuation of services, either triaged elsewhere or provided through Walden at a different location until further notice.

7. After the emergency, an incident report documenting the incident is filed by the PIC. Copies of all incident reports are kept on file in the staff office.

8. Copies of this plan are available to all staff and reviewed with each staff person for their facility during their orientation.

POLICIES AND PROCEDURES	PHP/IOP
Fire Drills	**Policy #: 6.8**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 25, 2013

Policy

Walden Behavioral Care ensures that its staff is fully knowledgeable regarding its procedures pertaining to fire preparedness. IOP and PHP locations conduct fire drills a minimum of quarterly. The following procedures are to be followed.

Procedures:

1) Walden Behavioral Care (WBC) will conduct quarterly fire drills in its outpatient programs.

2) Unless otherwise planned, all drills are unannounced.

3) Staff working in all areas of the program participates in drills, as required by the WBC Fire Plan.

4) All drills are critiqued to identify deficiencies and opportunities for improvement.

5) The effectiveness of fire response training according to the fire plan is evaluated at least annually.

6) The dates in which all fire drills are completed are entered into the Coordinator Fire Ext – Tour Log located in the Safety folder of the QI folder on the H Drive.

7) During fire drills, staff knowledge is evaluated, including the following:
   a) When and how to sound fire alarms (where such alarms are available)
   b) When and how to transmit for offsite responders
   c) Containment of smoke and fire
   d) Transfer of patients to areas of refuge
   e) Fire extinguishment
   f) Specific fire response duties
   g) Preparation for building evacuation

Attachments (3): Fire Safety Q&A, File Drill Report Log, Fire Drill Instructions

Fire Emergency Orientation and Training
Fire Safety Questions and Answers

1. **When and how to sound fire alarms (where such alarms are available)?**
   Answer: The fire alarm should be activated whenever there is the observation of fire within any patient care area of Walden. It may also be activated when there is the presence of smoke. Smoke and fire detectors automatically respond to the presence of heat or smoke. Activation of the detectors triggers automatic notification to building personnel at the Fire Command Center in the building, and also to the Fire Department. Activation of any pull stations will also activate the fire alarm.

2. **How do you transmit a fire alarm to offsite responders?**
   Answer: The fire alarm system of smoke and heat detectors is automatically connected to offsite responders such as the local Fire Department. You may also call 911 to notify community emergency responders.

3. **How is smoke and fire contained?**
   Answer: Fire is contained at a number of levels.
   a) Patient room doors are closed, and are fire rated to diminish fire transmission.
   b) Hallway doors are fire doors, and must be closed to prevent the transmission of fire and smoke from one apartment unit to any other area.
   c) Floors, walls and ceilings are also fire rated to prevent fire and smoke transmission from one floor to another.

4. **How are fires extinguished?**
   Answer: Fire is extinguished by several methods
   a) Automatic sprinklers are activated in the area of the fire to suppress it.
   b) Fire extinguishers may be used by staff to apply to the base of small fires.
   c) The Fire Department, upon arrival, may attach fire hoses to standpipes located within the building for access to water to extinguish the fire.

5. **What is the process of transferring patients to areas of refuge?**
   Answer: In a fire emergency, or when the fire alarm sounds, staff must remove patients from the area of the fire to an area of safe refuge. This area can be an area within the building identified as a safe from fire (e.g. building lobby), or within the exit area at the end of the fire evacuation route. When instructed by the fire department, all occupants to evacuate the building, patients and staff may evacuate to the main hospital building for refuge.

   The process by which this occurs is as follows:
   a) Staff is assigned specific duties in each evacuation type by the Person in Charge.
   b) In a Horizontal Evacuation, the area of safe refuge is an internal space which is on the same floor as the program, but in the direction away from the fire and in the direction of a fire exit.
   c) In a Complete Evacuation, all are evacuated from the building to a safe area away from the building at the direction of the Person in Charge, or the Fire Department.

6. **What are some specific fire response duties?**
   Answer: The Person in Charge (PIC) is the most senior staff member on site at the time of the fire emergency. During business hours, it will be assigned to one of the staff who is working in the program. The PIC will assign some staff to each of the following duties:
   a) Notify the Walden Clinic Administrator, or PIC of the emergency. The clinic administrator will determine the need to evacuate.
   b) Gather patients together. Some staff will be assigned to gather all patients together and proceed to an area of safe refuge, and to account for all patients.
   c) The Person in Charge directs the evacuation. This includes the gathering of patients, managing the departure of patients and staff to the area of safe refuge, through to Complete Evacuation if necessary.
   d) The Person in Charge will follow the direction of the Fire Department upon its arrival. Follow Fire Department and the Person in Charge instruction regarding if and when the apartment units may be re-occupied.

7. **How are patients prepared for evacuation?**
   Answer: Follow the direction of the Person in Charge. This person will assign staff to account for each patient, and to escort patients from the site of the fire to the area of safe refuge. No patients proceed through any evacuation unassisted or unsupervised. Reassure patients that they are safe, and instruct them to follow the direction of the Person in Charge.

8. **What does RACE stand for?**
   Answer:
   a) R = RESCUE anyone in immediate danger.
   b) A = ALARM. Pull the fire alarm box.
   c) C = CONFINE. Confine the fire by closing all doors and windows in the area of the fire.
   d) E = EXTINGUISH. After evacuating patients and staff, extinguish the fire if safe to do so.

000411

FIRE DRILL REPORT LOG

PHP/IOP

Date: _____ Time: _____

Location: _____

Evacuation Type:

_____ Partial _____ Horizontal _____ Vertical _____ Complete

All Clear Time: _____

Staff Involved:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

Outcome / Comments:

Signed: _____
Program Director or Designee

000412

Walden Behavioral Care
Fire Plan and Evacuation Instructions

If you observe a fire emergency or natural disaster in your area which could result in a need for evacuation, notify the Person In Charge (PIC), the most senior clinic staff person on-site at the time of the emergency. The PIC or other designated staff person will complete the following:

a) **Dial 911** to report the fire or other emergency. This call notifies both the police and fire departments.
b) Immediately move patients and staff to safety. All staff and clients follow the direction of the PIC.
c) Notify the Vice President of Clinical Operations or other member of senior leadership

In case of fire within a treatment room, responsible staff designated by the PIC may try to extinguish the fire by:

a) Pulling pin
b) Squeezing handle
c) Sweeping the extinguisher from side-to-side directly at the base of the fire

At the direction of the PIC or the Fire Department, the building may be evacuated. Target time for program evacuation is two and a half (2 1/2) minutes. When evacuating the building, the PIC implements the following procedures:

j) Prior to evacuation, all patients are gathered together with staff.
k) Copies of each patient's Face Sheet are kept on record in the Group Notes Binder, located in the staff office. Information on the Face Sheet includes patient name, address, contact information, and emergency contact information. The PIC or designated person is responsible for obtaining this binder during an emergency and using it to account for all patients. Once gathered together, all patients and staff are accounted for.
l) A staff person walks through the program checking each room if it is safe to do so and ensures that each room is empty of people and then closes the door. This helps to prevent the spread of fire as well as allows staff to be aware of which rooms have been cleared.
m) If necessary and appropriate to evacuate, the PIC selects a distinct evacuation route to utilize, based upon safety. Elevators are never used during a fire or evacuation. A fire map designating specific fire exit routes is located on the inside of the Group Rooms, Dining Room and Reception Area.
n) Area of Safe Refuge. At the direction of the PIC, all patients and staff move together to an area designated by the PIC as an area of safe refuge. One staff is assigned to lead the group, and one to follow at the rear of the group. The area of safe refuge is within the program space **in the Waiting Rooms at the clinic entrance**. Once at the safe area, all clients and staff are again accounted for.
o) Building Evacuation. The PIC will identify the location to which patients will be evacuated. This evacuation plan is based on the recommendation of the Fire Department. In case of a full evacuation, the first location to which patients and staff should be evacuated is to the **parking lot in the front of the building**.

000413

POLICIES AND PROCEDURES	PHP/IOP
Emergency and Disaster Preparedness	**Policy #: 6.9**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 25, 2013

POLICY:

The Facility Director submits an *Emergency Preparedness Plan* to the Governing Body for review and adoption. It defines appropriate intervention in the event of an emergency or disaster. This plan is reviewed on an annual basis and updated as needed.

PROCEDURE:

Each facility shall establish written policies and procedures governing appropriate intervention in the event of an emergency or disaster. Such procedures shall require:

- Documented orientation of all staff, and volunteers in the use of fire extinguishers.
- Orientation of all staff, including volunteers, and patients to the written evacuation plan and the diagram of the facility exit routes.
- There shall be documentation of staff orientation to emergency and disaster procedures.
- Fire plans and procedures shall be posted in conspicuous areas throughout the facility.
- Emergency and disaster drills shall be conducted on a monthly basis for all residential facilities and on a quarterly basis for all non-residential treatment facilities.
- Each facility shall have a plan for assigning staff specific duties in the event of disaster or emergency.
- Each facility shall develop and implement a written plan for the checking of first aid supplies on a monthly basis. The plan shall specify the first-aid supplies to be stocked, the required amounts of each supply and position title of any staff person responsible for the audit. The facility shall document when first aid supplies are checked.
- Fire extinguishers are checked by staff on a monthly basis and inspected by an external company and serviced as needed on an annual basis.
- Each facility shall have written plans to provide appropriate services for their patients in the event the facility becomes unusable due to disaster or emergency.

POLICIES AND PROCEDURES	PHP/IOP
Visitor Policy	**Policy #: 6.10**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 25, 2013

POLICY

During the PHP day from 8:30am until 2:30pm, there are no specified visiting hours. In order to minimize unauthorized entry into the program space, the main entry door to the Outpatient Continuum will be locked at all times, unless the program entrance is monitored by staff.

PROCEDURE

1. Any non-patient who is not enrolled in the PHP and is not staff is considered a visitor.
2. The main entry door to the Outpatient Continuum is locked at all times, unless the entrance is being directly monitored by staff. If the door is unlocked for any reason, a staff member must be present by the main entrance to actively monitor any entry during the unlocked period.
3. Any person who is assisting a patient with transportation, i.e. dropping off or picking up a patient from program, should agree to meet the patient in the main entrance of the program, rather than entering the treatment spaces.
4. Any visitor coming onto the floor is arriving for a scheduled family meeting that has been planned in advance with the case manager and patient involved.
5. If an unplanned visitor is asking about a particular patient or staff, staff is to refer to the rules of confidentiality until a release of information for the visitor can be established. The unplanned visitor must show identification prior to entering the program space.
6. Any visitor to the program for any reason will be accompanied by staff at all times once they leave the waiting area and enter treatment areas.

POLICIES AND PROCEDURES	PHP/IOP
Staff Identification	**Policy #: 6.11**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 25, 2013

POLICY

All staff (including student interns) working in the Outpatient Continuum must wear proper identification in the form of a staff I.D. Staff is to keep this I.D. on them at all times as a means of conveying their employment and role at Walden.

PROCEDURE

1. All staff will be provided a photo I.D. card at hire. This ID, along with photograph, includes the employee's full name, department and/or title.

2. I.D.'s will be worn by staff at all times while in treatment areas or with patients and will be worn above the waist in plain view of others.

3. In the event this ID is lost or stolen, the employee will report to their immediate supervisor, and a replacement will be furnished as soon as possible.

POLICIES AND PROCEDURES	PHP/IOP CT PHP and IOP
Incident Reporting	**Policy #: 6.12**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 25, 2013

Policy:

The Outpatient Continuum establishes and implements the following processes for reporting and investigating conditions in the environment.

These conditions include any event or incident that is out of the norm and may cause injury or harm to the patient, staff, or organization. Examples include but are not limited to:

- Accidental or purposeful injury to staff or patients
- Medical incidents involving patients
- Damage to property
- Occupational illnesses to staff
- Security incidents
- Hazardous materials and waste spills, exposures, or other related incidents
- Fire safety, utility systems, or equipment management problems, deficiencies, failures, or use errors
- Arrival of patients to the program under the influence
- Theft

Procedures:

In the event of an incident in the environment during program hours, the following procedures are to be followed:

1. Staff observing the incident will immediately notify the Program Director and the PHP attending Psychiatrist with concerns related to medical safety.
2. Staff will also notify the Program Director when completing an incident report to obtain further direction regarding the situation.
3. Staff will complete an incident report form and place it in the Program Director's mail box.
4. The Program Director will file a copy of this form and send the original to the Director of Quality Improvement.
5. The Program Director and any other appropriate staff will plan and implement an appropriate action to resolve the incident.

POLICIES AND PROCEDURES	PHP/IOP
Security	**Policy #: 6.13**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 25, 2013

Policy

Walden Behavioral Care will maintain a safe environment within its clinic setting, to ensure the protection of patients, staff and visitors. The following procedures are to be followed.

Procedures

1) **Staff identification.** Staff is expected to wear or carry staff identification badges on their person at all times. These should remain in full view of others and worn above the waist at all times when in the program.

2) **List of Authorized Staff.** The clinic maintains list of staff authorized to:
   a) work within treatment and program spaces
   b) have access to medical records

3) **Access to program spaces.** Only authorized individuals are able to access program and treatment spaces. Authorized individuals include:
   a) Staff of Walden Behavioral Care – including direct care and support staff who ensure smooth clinic operations
   b) Patients who are participating in treatment programming
   c) Family members / significant others who are specifically identified as part of the patient's support system and treatment program
   d) Representatives of landlord, including administrative, utility and environmental services staff, provided they do not intrude on patient treatment activities and possess proper identification.

   Any visitor to the program for any reason will be accompanied by a staff member at all times when in the treatment areas of the program.

4) **Continuous Observation.** The reception desk is provided with window observation into the waiting area, and is staffed or monitored during all program hours. Any occurrence of any incident which jeopardizes the security of patients, staff or visitors will be brought to the attention of the program director. If necessary, 911 may be contacted for additional safety intervention.

5) **Medical Records.** Medical records are kept behind a locked door for security purposes. Only authorized staff are allowed access to patient medical records. While medical records may be reviewed within a staff office, records may not be kept in any office overnight.

6) **Confidentiality.** Staff are oriented and trained in HIPAA regulations and confidentiality requirements, and are aware of policies regarding patient privacy and confidentiality in documentation, conversation and practice.

POLICIES AND PROCEDURES	PHP/IOP
Housekeeping	**Policy #: 6.14**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 25, 2013

Policy

Walden Behavioral Care will maintain a clean environment within its clinic setting, to ensure the protection of patients, staff and visitors. The following procedures are to be followed regarding housekeeping services.

Procedures

1) **Provision of services.** Housekeeping services are provided during non-business hours by a service managed by the landlord or building manager. No patients are within the clinic space during the provision of housekeeping services.
2) **Storage of Chemicals.** Housekeeping staff store all housekeeping chemicals, cleaning equipment and supplies outside of the clinic space itself. No storage of any cleaning chemicals or supplies is provided within the clinic space.
3) **Housekeeping staff identification.** Housekeeping staff must maintain identification to substantiate that they are a duly employed member of the housekeeping service.
4) The clinic **cleaning schedule** is to be followed for maintaining a clean and safe environment. ***(See attachment, "Cleaning Specifications")***

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CLEANING SPECIFICATIONS
GENERAL HOUSEKEEPING

TENANT SUITES, PUBLIC AREAS

Daily

1. Empty wastebaskets and replace liners as needed.
2. Collect recycle paper and cardboard and place at designated area.
3. Spot clean interior glass in partitions, doors, directories, and the main entrance.
4. Clean and sanitize water fountains.
5. Wash and clean both sides of glass entrance doors.
6. Fill all soap and paper towel dispensers

Weekly

1. Spot clean by damp wiping fingerprints, smears, and smudges on doors, frames, light switches, handles, glass surfaces, and walls.
2. Low dust to hand height all horizontal surfaces of equipment, ledges, and sills.
3. Dust all horizontal surfaces of desks, chairs and tables.
4. Remove cobwebs from ceilings and walls.

Monthly

1. Dust all telephones
2. Dust exposed filing cabinets, bookcases, and shelves.
3. Dust all pictures, frames, charts, graphs, wall hangings, partitions, and doors.
4. Dust or vacuum clean all heating and air conditioning vents –semi annually

REST ROOMS

Note: Cleaning to meet Dept. of Public Health Requirements

Daily

1. Clean, sanitize and polish all fixtures, (toilet bowls, urinals, sinks, using a germicidal detergent solution).
2. Clean and polish all chrome fittings and bright work including shelves, flusho-meters, and metal dispensers.
3. Clean and sanitize both sides of every toilet seat, using a germicidal detergent.
4. Clean and polish all glass and mirrors.
5. Empty all trash containers and disposals; insert liners as required. Waste and refuse will be removed to the designated area.
6. Refill all dispensers (napkins, soap, tissue, towels, liners, cups).
7. Remove spots, stains, and splashes from wall areas, shower curtains, shower enclosures, etc.
8. Dust and spot clean all toilet partitions, tile walls, dispensers, and receptacles.
9. Dust mop and wet mop floors, using a germicidal/fungicide detergent solution or.05 chlorine solution.

Weekly

1. Clean soiled doors, frames, light switches, kick and push plates, handles, etc.
2. Wash and sanitize partitions, tile walls, and enamel surfaces.
3. Low dust all horizontal surfaces to hand height. Low dusting includes sills, ledges, moldings, shelves, frames, partitions, etc.

000420

TENANT SUITES, PUBLIC AREAS

Monthly

1. High dust above hand height all horizontal surfaces.

Quarterly

1. Dust exterior of light fixtures.

DINING ROOM / KITCHENETTE

Daily

1. Sweep and mop floors.
2. Vacuum carpet.
3. Empty trash and replace liners.
4. Wipe tops of tables.
5. Clean sink if empty and wipe counters.

Weekly

1. Wash splash marks from walls and cabinets.
2. Dust chairs.

Semi-annually

1. Vacuum ceiling vents.

ELEVATORS

Daily

1. Vacuum clean carpet.
2. Clean and polish walls and bright work

Quarterly

1. Dust light fixtures and fan grilles.

FLOOR MAINTENANCE

Carpeted Floor Surfaces

Daily

1. Spot clean carpets, inspecting for spots and stains. Remove where possible.
2. Vacuum clean all exposed main carpeted traffic lanes, and individual office areas as required upon inspection.

Weekly

1. Vacuum carpet completely, all areas

CLEANING SPECIFICATIONS
GENERAL HOUSEKEEPING (continued)

TENANT SUITES, PUBLIC AREAS

*Landlord shampoos carpeted common areas twice (2) times per year. Tenant is responsible for carpet shampooing in tenant suites.

Vinyl and Ceramic Tile Floors

Daily

1. Dust mop and wet mop floors.

Semi Annually

1. Strip and refinish all VCT flooring
2. Machine scrub all ceramic tile floor surfaces.

Stairway

Daily

1. Police for litter.
2. Spot clean spills with damp mop.

Weekly

1. Damp mop stairs and landings.

PLEASE NOTE: Tenants are responsible for proper removal and disposal of all medical waste. All medical waste must be clearly marked and placed in an acceptable container prior to disposal. Each facility has a contract with a qualified medical waste company to pick up and dispose of any medical waste as needed.

000422

POLICIES AND PROCEDURES	PHP/IOP
Annual Program Evaluation	**Policy #: 7.1**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 25, 2013

POLICY:

Each program annually documents goals and objectives appropriate to the population served and program model.

PROCEDURE:

Each program establishes a program evaluation process, which determines the degree to which documented goals and objectives are being met. Documentation of corrective action shall be based on this evaluative process.

The annual evaluation shall include a Policy and Procedure review by the Director of Quality Improvement, who will forward any revisions to the Program Directors and appropriate regulatory authorities. Copies of the most updated Policy and Procedure Manuals will be stored on the W drive in the Policies folder.

POLICIES AND PROCEDURES	PHP/IOP
Outcomes Reporting	**Policy #: 7.2**
Prepared by: Dennis Theriault, Director of Quality Improvement	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:** October 25, 2013

Policy:

The Outcomes Measurement Program is implemented in all programs and the results are evaluated a minimum of annually.

Procedure:

Each patient receives an Eating Disorder Examination-Questionnaire (EDE-Q) upon admission and discharge from each level of care. Scores are reported and tracked via the Quality Improvement Dashboard. In this tracking log the person entering the data also indicates any reason for a discharge EDE-Q not getting completed, such as refusal of the client to participate or someone who abruptly leaves treatment and does not have the opportunity to have it completed.

000424

POLICIES AND PROCEDURES	PHP/IOP
Fiscal Operations	**Policy #: 8.1**
Prepared by: Larry Behan, Chief Financial Officer	**Effective:** Aug. 15, 2012
Approved by: Dr Jim Greenblatt, MD, Medical Director	**Revised:**

POLICY:

Walden Behavioral Care manages its fiscal operations according to generally accepted financial practices customary within the healthcare industry. These practices are summarized below. The Chief Financial Officer (CFO) is responsible for departmental compliance with these practices.

PROCEDURES:

1. Annual Budget. The CFO leads and coordinates the budget development process for the company and its service components.
   a) Preparation: Preparation includes analyses of prior year service utilization, market changes affecting anticipated service utilization, rates and anticipated rate changes, impact of competitors, service delivery costs (e.g. staffing, supplies and equipment, food, etc.). The CFO obtains the input of senior operations, clinical and marketing executives throughout the preparation process. Upon completion of preparation activities, a draft budget is prepared for formal review at the senior management level.
   b) Approval: Discussion following budget preparation of the service component is completed, and further modifications to the budget may be made. Following this discussion and desired revisions, formal budget approval is recommended by senior management to the governing body, and the budget approval by the governing body is subsequently granted. All budget revisions during the fiscal year are reviewed and approved by the governing body.

2. Identification of Revenues and Expenditures. Each budget provides details of revenue sources (by payer mix and service type) and expenditures. Expenses are delineated by unique line items – e.g. salaries and benefits, supplies, travel, etc.

3. Identification of Fiscal Year. Each service component budget is prepared for an identified fiscal year, usually the next fiscal, calendar year following a budget cycle. The fiscal year is identified on the budget worksheets.

4. Annual Audits. Audits of company financial information and reports are conducted annually, following the close of a fiscal year. Audits are completed by a reputable independent certified public accounting firm knowledgeable in accounting and auditing practices, and follow generally accepted practices for completing such audits.

Exhibit 22

DRAFT

February 26, 2015

Yale New Haven Shoreline Medical Center
111 Goose Lane
Guilford, CT 06437-2115

The following is a transfer agreement between Walden Behavioral Care LLC d/b/a Walden Behavioral Care – Guilford CT, Walden's service site at 157 Goose Lane, Guilford CT, and Yale New Haven Shoreline Medical Center (YNHSMC), located at 111 Goose Lane, Guilford CT. Please note the following:

TRANSFER AGREEMENT

This document represents a written agreement between Walden Behavioral Care LLC d/b/a Walden Behavioral Care – Guilford CT (hereafter referred to as Walden) and YNHSMC. When emergency treatment beyond those services provided by Walden may be necessary for Walden patients, Walden may transfer such patients to YNHSMC's 24-hour emergency medical facility located at 111 Goose Lane, Guilford CT for emergency services treatment. Unless otherwise directed, Walden patients will be directed to the Emergency Services Department (ED) at YNHSMC. Such transfers will be completed through ambulance resources which Walden may contact via 911 emergency responders. Walden will make reasonable attempts to notify YNHSMC's ED in advance of such transfers. YNHSMC and Walden will work collaboratively to implement aftercare plans which meet the clinical needs of the patient.

This agreement is effective February 26, 2015, and will remain in effect indefinitely, unless either party desires to modify or discontinue it. This agreement may be modified or discontinued by either party with 60 days' notice. Such notices should be directed to:

FOR: Walden Behavioral Care
Stuart L. Koman, PhD
President and Chief Executive Officer
Walden Behavioral Care

For: YNHSMC

Accepted by:

Stuart L Koman, PhD (date)

Accepted by:

(date)

Exhibit 23

The Joint Commission



HELPING HEALTH CARE ORGANIZATIONS HELP PATIENTS

Quality Check

What the Gold Seal of Approval™ Means

Search Results:

For name/number "WBC Connecticut East" and the state of "CT", yielded 1 health care provider.

Organization	Accreditation/ Certification	Special Quality Awards
Walden Behavioral Care, LLC DBA: Walden Behavioral Care Waltham, MA 02453 781-647-6767	The Joint Commission The Gold Seal of Approval™ **Accredited Programs** • Hospital • Behavioral Health Care	2012 *Top Performer on Key Quality Measures®* • Hosp-Based Inpt Psych

Also provides care at:

WBC Connecticut East, LLC
2400 Tamarack Ave, Suite 203
South Windsor, **CT** 06074

The Joint Commission obtains information about accredited/certified organizations not only through direct observations by its employees **...Read more.**

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The Joint Commission



HELPING HEALTH CARE ORGANIZATIONS HELP PATIENTS

Quality Check

What the Gold Seal of Approval™ Means

Search Results:

For name/number "Walden Behavioral Care", yielded 1 health care provider.

Organization	Accreditation/ Certification	Special Quality Awards
Walden Behavioral Care, LLC DBA: Walden Behavioral Care Waltham, MA 02453 781-647-6767	The Joint Commission The Gold Seal of Approval™ **Accredited Programs** • Hospital • Behavioral Health Care	2012 *Top Performer on Key Quality Measures®* • Hosp-Based Inpt Psych

Also provides care at:

Walden Behavioral Care - Braintree
150 Grossman Drive Suite 404
Braintree, MA 02184-4952

Walden Behavioral Care - Peabody
2 Corporation Way – Suite 260
Peabody, MA 01960

Walden Behavioral Care - Worcester
335 Chandler Street
Worcester, MA 01602

Walden Behavioral Care Northampton
DBA: Walden Behavioral Care, LLC
109 Main Street
Northampton, MA 01060

Walden Behavioral Care, LLC
DBA: Walden Place
60 Hope Ave
Waltham, MA 02453

Walden Behavioral Care, LLC
51 Sawyer Road 6th Floor
Waltham, MA 02451

The Joint Commission obtains information about accredited/certified organizations not only through direct observations by its employees **...Read more.**

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Walden Behavioral Care, LLC

Waltham, MA

has been Accredited by

The Joint Commission

Which has surveyed this organization and found it to meet the requirements for the

Behavioral Health Care Accreditation Program

March 19, 2013

Accreditation is customarily valid for up to 36 months.

Rebecca J. Patchin, MD
Chair, Board of Commissioners

ID #389827
Print/Reprint Date: 01/29/2015

Mark R. Chassin, MD, FACP, MPP, MPH
President

The Joint Commission is an independent, not-for-profit national body that oversees the safety and quality of health care and other services provided in accredited organizations. Information about accredited organizations may be provided directly to The Joint Commission at 1-800-994-6610. Information regarding accreditation and the accreditation performance of individual organizations can be obtained through The Joint Commission's web site at www.jointcommission.org.

000431

Exhibit 24

STATE OF CONNECTICUT

Department of Public Health

LICENSE

License No. 0529

Psychiatric Outpatient Clinic for Adults

In accordance with the provisions of the General Statutes of Connecticut Section 19a-493:

WBC Connecticut East LLC of Waltham, MA, d/b/a Walden Behavioral Care is hereby licensed to maintain and operate a Psychiatric Outpatient Clinic for Adults.

Walden Behavioral Care is located at 2400 Tamarack Ave, South Windsor, CT 06074 with:

Stuart L. Koman, PhD as Executive Director,
Jennifer Smith, LCSW as Director.

This license expires **June 30, 2016** and may be revoked for cause at any time.

Dated at Hartford, Connecticut, August 15, 2012. INITIAL

Jewel Mullen, MD, MPH, MPA
Commissioner

000432-1

STATE OF CONNECTICUT
DEPARTMENT OF CHILDREN AND FAMILIES

This is to certify, that in accordance with the provisions of Sections 17a-20 of the Connecticut General Statutes, as amended, WALDEN BEHAVIORAL CARE CT EAST, LLC, located at 2400 Tamarack Avenue, Suite 203, in the TOWN OF SOUTH WINDSOR, CT, is hereby licensed as an OUTPATIENT PSYCHIATRIC CLINIC FOR CHILDREN to provide OUTPATIENT PSYCHIATRIC CLINIC services to children at the location(s) listed below *.

This license is issued effective AUGUST 15, 2014 for a period of 24 months and is conditional upon compliance with all regulations of the Department of Children and Families and may be revoked for cause at any time.

License No. OPCC-69
Signed in Hartford Connecticut the 1st day of October 2014.

James McPherson, Program Manager
Office of Legal Affairs

*2400 Tamarack Ave., Suite 203, South Windsor, CT 06074

000433

STATE OF CONNECTICUT

Department of Public Health

LICENSE

License No. 0057

Mental Health Day Treatment Facility

In accordance with the provisions of the General Statutes of Connecticut Section 19a-493:

WBC Connecticut East LLC of Waltham, MA, d/b/a Walden Behavioral Care is hereby licensed to maintain and operate a Mental Health Day Treatment Facility.

Walden Behavioral Care is located at 2400 Tamarack Ave, South Windsor, CT 06074 with:

Stuart L. Koman, PhD as Executive Director,
Jennifer Smith, LCSW as Director.

This license expires **June 30, 2016** and may be revoked for cause at any time.

Dated at Hartford, Connecticut, August 15, 2012. INITIAL

Jewel Mullen, MD, MPH, MPA
Commissioner

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Exhibit 25

WALDEN BEHAVIORAL CARE, INC.
AND SUBSIDIARIES

CONSOLIDATED FINANCIAL STATEMENTS
AND SUPPLEMENTARY INFORMATION

DECEMBER 31, 2013 AND 2012

WALDEN BEHAVIORAL CARE, INC. AND SUBSIDIARIES

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MARCUM
ACCOUNTANTS ▲ ADVISORS

INDEPENDENT AUDITORS' REPORT

Board of Directors and Stockholders
Walden Behavioral Care, Inc. and Subsidiaries

Report on the Financial Statements

We have audited the accompanying consolidated balance sheets of Walden Behavioral Care, Inc. and Subsidiaries as of December 31, 2013 and 2012, and the related consolidated statements of operations, changes in equity (deficit) and cash flows for the years then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

Marcum LLP ▪ 53 State Street ▪ 38th Floor ▪ Boston, MA 02109 ▪ **Phone** 617.742.9666 / 800.998.1040 ▪ **Fax** 617.742.3178 ▪ **marcumllp.com**

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Walden Behavioral Care, Inc. and Subsidiaries as of December 31, 2013 and 2012, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Report on Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements taken as a whole. The supplementary information at Schedules I through VI on pages 24-33 is presented for purposes of additional analysis and is not a required part of the consolidated financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the consolidated financial statements taken as a whole.

Marcum LLP

Boston, MA
February 14, 2014

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WALDEN BEHAVIORAL CARE, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

DECEMBER 31, 2013 AND 2012

	2013	2012
Assets		
Current Assets		
Cash and cash equivalents	$ 188,438	$ 38,088
Accounts receivable, less allowance for uncollectible accounts of $295,500 in 2013 and $141,250 in 2012	3,390,097	3,796,557
Inventories and other current assets	985,612	355,312
Deferred income taxes	178,172	120,828
Total Current Assets	4,742,319	4,310,785
Deferred Income Taxes	--	1,938
Deposits	65,219	65,219
Furniture, Equipment and Leasehold Improvements, net of accumulated depreciation and amortization of $811,966 in 2013 and $691,982 in 2012	521,233	298,088
	$ 5,328,771	$ 4,676,030

The accompanying notes are an integral part of these consolidated financial statements.

WALDEN BEHAVIORAL CARE, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

DECEMBER 31, 2013 AND 2012

	2013	2012
Liabilities and Stockholders' Deficit		
Current Liabilities		
Bank credit arrangement	$ 1,242,861	$ 777,495
Accounts payable	231,319	283,549
Accrued payroll and related withholdings	535,836	429,714
Accrued expenses	72,865	86,254
Accrued income taxes	58,750	337,711
Due to related party	234,759	234,759
Due to patients and third-party payors	472,451	602,733
Current portion of long-term debt	946,260	1,000,000
Total Current Liabilities	3,795,101	3,752,215
Deferred Income Taxes	89,975	--
Long-Term Debt - less current maturities	1,243,956	1,690,216
Total Liabilities	5,129,032	5,442,431
Equity (Deficit)		
Preferred stock, $.001 par value, 480,000 shares authorized, 346,667 shares issued and outstanding	347	347
Common stock, $.001 par value, 2,000,000 shares authorized, 713,857 shares issued and outstanding	714	1,407
Additional paid-in capital	2,699,647	2,748,953
Accumulated deficit	(2,465,732)	(501,268)
Treasury stock	--	(3,093,308)
Member's equity	(216,357)	(121,671)
Non-controlling interest in member's equity	181,120	199,139
Total Equity (Deficit)	199,739	(766,401)
	$ 5,328,771	$ 4,676,030

The accompanying notes are an integral part of these consolidated financial statements.

WALDEN BEHAVIORAL CARE, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS

FOR THE YEARS ENDED DECEMBER 31, 2013 AND 2012

	2013	2012
Operating Revenues		
Net patient service revenue	$ 20,947,589	$ 18,835,936
Other revenue	12,840	13,055
	20,960,429	18,848,991
Operating Expenses		
Direct patient care	10,873,462	9,757,951
Facility operations	2,843,870	2,664,017
Residential and other programs	851,783	798,224
Corporate operations	4,150,182	3,643,192
Interest expense	261,085	203,777
Provision for bad debts	292,944	174,396
Depreciation and amortization	119,984	72,328
	19,393,310	17,313,885
Income Before Provision for Income Taxes	1,567,119	1,535,106
Provision for Income Taxes	600,979	612,271
Net Income Before Non-Controlling Interest	966,140	922,835
Net Loss Attributable to Non-Controlling Interest	18,019	23,441
Net Income	$ 984,159	$ 946,276

The accompanying notes are an integral part of these consolidated financial statements.

WALDEN BEHAVIORAL CARE, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY (DEFICIT)

FOR THE YEARS ENDED DECEMBER 31, 2013 AND 2012

	Preferred Stock		Common Stock		Additional Paid-in	Accumulated	Treasury Stock		Total Stockholders'	Members'	Non-Controlling	
	Shares	Amount	Shares	Amount	Capital	Deficit	Shares	Amount	Deficit	Equity	Interest	Total
Balance - December 31, 2011	346,667	$ 347	1,407,431	$ 1,407	$ 2,748,953	$ (1,569,067)	693,574	$ (3,093,308)	$ (1,911,668)	$ (148)	$ --	$ (1,911,816)
Investment in subsidiary - non-controlling interest	--	--	--	--	--	--	--	--	--	--	222,580	222,580
Net income (loss)	--	--	--	--	--	1,067,799	--	--	1,067,799	(121,523)	(23,441)	922,835
Balance - December 31, 2012	346,667	347	1,407,431	1,407	2,748,953	(501,268)	693,574	(3,093,308)	(843,869)	(121,671)	199,139	(766,401)
Retirement of treasury stock	--	--	(693,574)	(693)	(49,306)	(3,043,309)	(693,574)	3,093,308	--	--	--	--
Net income (loss)	--	--	--	--	--	1,078,845	--	--	1,078,845	(94,686)	(18,019)	966,140
Balance - December 31, 2013	346,667	$ 347	713,857	$ 714	$ 2,699,647	$ (2,465,732)	--	$ --	$ 234,976	$ (216,357)	$ 181,120	$ 199,739

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The accompanying notes are an integral part of these consolidated financial statements.

WALDEN BEHAVIORAL CARE, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

FOR THE YEARS ENDED DECEMBER 31, 2013 AND 2012

	2013	2012
Cash Flows from Operating Activities		
Net income	$ 984,159	$ 946,276
Adjustments to reconcile change in net assets to net cash (used in) provided by operating activities:		
Provision for bad debts	292,944	174,396
Depreciation and amortization	119,984	72,328
Deferred income taxes	34,569	55,191
Non-controlling interest	(18,019)	(23,441)
Changes in operating assets and liabilities:		
Accounts receivable	113,516	(1,491,163)
Inventories and other current assets	(630,300)	(254,582)
Accounts payable	(52,230)	(25,665)
Accrued payroll and related withholdings	106,122	159,852
Accrued expenses	15,496	(18,406)
Due to related party	--	11,308
Accrued interest	(28,885)	13,798
Accrued income taxes	(278,961)	31,835
Due to patients and third-party payors	(130,282)	839
Net Cash Provided by (Used in) Operating Activities	528,113	(347,434)
Cash Flows from Investing Activities		
Investment in subsidiary by non-controlling interest	--	111,948
Purchases of furniture and equipment	(343,129)	(196,921)
Net Cash Used in Investing Activities	(343,129)	(84,973)
Cash Flows from Financing Activities		
Net borrowing (paydown) on bank credit arrangement	465,366	208,381
Proceeds from long-term debt	500,000	1,000,000
Payments on long-term debt	(1,000,000)	(1,000,000)
Net Cash (Used in) Provided by Financing Activities	(34,634)	208,381

The accompanying notes are an integral part of these consolidated financial statements.

WALDEN BEHAVIORAL CARE, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

FOR THE YEARS ENDED DECEMBER 31, 2013 AND 2012

	2013	2012
Net Change in Cash and Cash Equivalents	$ 150,350	$ (224,026)
Cash and Cash Equivalents - Beginning	38,088	262,114
Cash and Cash Equivalents - Ending	$ 188,438	$ 38,088
Supplemental Disclosures of Cash Flow Information		
Cash paid for interest	$ 289,970	$ 189,979
Cash paid for income taxes	$ 849,103	$ 526,150

Supplemental Disclosure of Non-Cash Investing Activity

In 2012, Walden Behavioral Care, Inc. sold an equity interest in WBC Connecticut for a total purchase price of $222,580 as follows:

Total purchase price	$ 222,580
Less - contribution of leasehold improvements	(110,632)
Cash received	$ 111,948

The accompanying notes are an integral part of these consolidated financial statements.

NOTE 1 – ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES

ORGANIZATION

Walden Behavioral Care, LLC (WBC LLC) was formed as a limited liability company in June 2003 and began operations in August 2003. Effective February 9, 2004, Walden Behavioral Care, Inc. was formed as a Delaware corporation and on that day, the managing members of WBC LLC exchanged their LLC membership interest of WBC LLC for stock in the newly formed corporation.

WBC LLC is a behavioral health care provider located in Waltham, Massachusetts, with ambulatory clinics located in Worcester and Northampton, Massachusetts, that offers clinical services including inpatient and outpatient eating disorder programs and inpatient and outpatient adult psychiatric programs to patients 13 years and older. The maximum inpatient capacity of the programs is 45 beds in a hospital setting and 18 beds in residential care.

On April 14, 2011, WBC Connecticut East, LLC (WBC Connecticut) was formed as a limited liability company, and began operations in 2012. WBC Connecticut provides an array of outpatient treatment programs for individuals ages 12 and older diagnosed with eating disorders. The primary program offerings include Partial Hospitalization Programs for adolescents and adults and Intensive Outpatient Programs for adolescents, adults and individuals with Binge Eating Disorder.

In 2012, WBC LLC established a new ambulatory clinic in Braintree, Massachusetts that offers a similar array of outpatient treatment programs for individuals ages 12 and older with eating disorders diagnoses. The primary offerings include Partial Hospitalization Programs for adolescents and adults and Intensive Outpatient Programs for adolescents, adults and individuals with Binge Eating Disorder.

On August 23, 2012, Walden Behavioral Care, Inc. entered into a Unit Purchase Agreement with Eastern Connecticut Health Network, Inc. (ECHN) whereby ECHN acquired an equity interest in WBC Connecticut. ECHN acquired 16,400 units in WBC Connecticut for a total purchase price of $222,580, representing a 16.174 percent interest in WBC Connecticut. The purchase price was partially satisfied by a contribution of leasehold improvements of $110,632, with the balance of $111,948 received in cash.

PRINCIPLES OF CONSOLIDATION

The accompanying consolidated financial statements include the accounts of Walden Behavioral Care, Inc. its wholly-owned subsidiary WBC LLC, and WBC Connecticut East, LLC (collectively, the Company). All significant intercompany transactions and balances have been eliminated from these consolidated financial statements.

NOTE 1 – ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

USE OF ESTIMATES

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reporting period. These estimates include assessing the collectability of accounts receivable, the extent of contractual allowances, and the estimated useful lives of long lived assets, among others. Actual results could differ from those estimates.

CASH AND CASH EQUIVALENTS

Cash and cash equivalents include investments in highly liquid debt instruments with original maturities of three months or less at date of acquisition. The Company had deposits in financial institutions that maintained FDIC deposit insurance for all non-interest bearing accounts per depositor and limiting coverage to $250,000 for all interest-bearing accounts through December 31, 2012. Beginning January 1, 2013, all non-interest bearing and interest-bearing accounts collectively have coverage up to $250,000 per financial institution. At times, balances held at each financial institution may exceed $250,000, which represents a credit risk to the Company. At December 31, 2013 and 2012, the Company had no cash in excess of FDIC insured limits.

FAIR VALUE OF FINANCIAL INSTRUMENTS

The carrying amount of the Company's financial instruments classified as current assets and current liabilities (cash and cash equivalents, accounts receivable, inventories and other current assets, accounts payable and accrued expenses) approximates fair value. The fair values of other financial instruments are disclosed in their respective notes.

INVENTORIES

Inventories, consisting primarily of medical supplies and pharmaceuticals, are stated at the lower of cost (first-in, first-out), or market value.

NOTE 1 – ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

FURNITURE, EQUIPMENT AND LEASEHOLD IMPROVEMENTS

Furniture, equipment and leasehold improvements are stated at cost. Depreciation of furniture and equipment is determined on a straight-line basis over the estimated useful lives of the related assets. The estimated useful life for furniture and equipment is 3 to 5 years. Major leasehold improvements are amortized over the lesser of the estimated useful lives or the term of the lease.

Maintenance and repairs that do not extend the lives of the assets are charged directly to expense as incurred. Upon disposition of equipment, the cost of the asset and the associated accumulated depreciation are eliminated from the related accounts and any resulting gain or loss is recognized as a component of income or loss.

LONG-LIVED ASSETS

The Company continually evaluates whether events and circumstances have occurred that may warrant revision of the estimated useful life of its long-lived assets or whether the remaining balance of its long-lived assets should be evaluated for possible impairment. If and when such factors, events or circumstances indicate that long-lived assets should be evaluated for possible impairment, the Company will determine the fair value of the asset by making an estimate of expected future cash flows over the remaining lives of the respective assets and compare that fair value with the carrying value of the assets in measuring their recoverability. In determining the expected future cash flows, the assets will be grouped at the lowest levels for which there are cash flows.

NET PATIENT SERVICE REVENUE, ACCOUNTS RECEIVABLE AND ALLOWANCE FOR UNCOLLECTIBLE ACCOUNTS

Patient accounts receivable and revenues are recognized when patient services are performed. Amounts received from third-party payors and patients are generally different from established billing rates of the Company, and these differences are accounted for as contractual allowances.

Net patient service revenue is reported at the estimated realizable amounts from patients, third-party payors, and others for services provided and include estimated retroactive adjustments under reimbursement agreements with third-party payors. Revenue under certain third-party payor agreements is subject to audit, retroactive adjustments, and significant regulatory actions.

NOTE 1 – ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

NET PATIENT SERVICE REVENUE, ACCOUNTS RECEIVABLE AND ALLOWANCE FOR UNCOLLECTIBLE ACCOUNTS (CONTINUED)

Provisions for third-party payor settlements and adjustments are estimated in the period the related services are provided and adjusted in future periods as additional information becomes available and as final settlements are determined. Laws and regulations governing the Medicare program are complex and subject to interpretation. As a result, there is at least a possibility that recorded estimates will change by a material amount in the near term. Adjustments to revenue related to prior periods increased (decreased) net patient service revenue by approximately $(53,000) and $275,000 in 2013 and 2012, respectively.

The Company grants credit without collateral to its patients, most of whom are local residents and are insured under third-party payor arrangements.

The provision for bad debts is based upon management's assessment of historical and expected net collections considering business and economic conditions, trends in health care coverage, and other collection indicators. Periodically throughout the year, management assesses the adequacy of the allowance for uncollectible accounts. The results of this review are then used to make modifications to the provision for bad debts to establish an appropriate allowance for uncollectible accounts. Accounts receivable are written off after collection efforts have been followed in accordance with the Company's policies.

CHARITY CARE

The Company provides care to patients who meet certain criteria under its charity care policy without charge or at amounts less than its established rates. Because the Company does not pursue collection of amounts determined to qualify as charity care, they are not reported as revenue. The amount of charges foregone for services furnished under the Company's charity care policy aggregated approximately $22,000 and $176,000 in 2013 and 2012, respectively.

NOTE 1 – ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

INCOME TAXES

The Company accounts for income taxes under the liability method whereby deferred tax asset and liability account balances are determined based on differences between financial reporting and tax bases of assets and liabilities and are measured using enacted tax rates and laws that will be in effect when the differences are expected to reverse. The Company provides a valuation allowance, if necessary, to reduce deferred tax assets to their estimated realizable value.

The Company's procedure related to the accounting for uncertainty in income taxes contains a two-step approach to recognizing and measuring uncertain tax positions (tax contingencies). The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit as the largest amount which is more than 50 percent likely of being realized upon ultimate settlement. The Company considers many factors when evaluating and estimating its tax positions and tax benefits, which may require periodic adjustments and which may not accurately forecast actual outcomes. As of December 31, 2013 and 2012, there were no amounts that had been accrued for uncertain tax positions. Generally, federal, state and local tax authorities may examine the Company's tax returns for three years from the date of filing.

RECLASSIFICATIONS

Certain amounts in the accompanying 2012 financial statements have been reclassified to conform to the 2013 presentation.

SUBSEQUENT EVENTS

The Company has evaluated subsequent events through February 14, 2014, which is the date these financial statements were available to be issued. All subsequent events requiring recognition as of December 31, 2013, have been incorporated into these consolidated financial statements.

NOTE 2 – BANK CREDIT ARRANGEMENT

The Company has available $2,500,000 under the terms of an operating line of credit agreement (the Line) with a bank. The agreement expires November 16, 2014 and carries an interest rate based on the bank's prime rate (3.25 percent at December 31, 2013).

As of December 31, 2013 and 2012 the Company had borrowed $1,242,861 and $777,495, respectively, under the Line. Availability under the agreement is limited to qualified accounts receivable as defined in the Line. The Line is secured by substantially all assets of the Company.

NOTE 3 – PREFERRED STOCK

The Company is authorized to issue two (2) classes of shares, designated as common stock and preferred stock. The total number of shares of preferred stock authorized to be issued is 480,000 shares at $0.001 par value per share (the Preferred Stock), which have been designated as Series A Preferred Stock.

The holder of the Series A Preferred Stock has the following rights and preferences:

VOTING

The holders of preferred stock are entitled to vote, together with the holders of common stock, on all matters submitted to stockholders for a vote. Each holder of Series A Preferred Stock is entitled to the number of votes equal to the number of shares of common stock into which each share of Series A Preferred Stock is convertible at the time of such vote.

DIVIDENDS

Dividends shall accrue on the Series A Preferred Stock from the original issue date of each respective holder. The annual dividend rates for the Series A preferred Stock are 8% per annum and such dividends are cumulative. Such accruing dividends shall be payable only when, as, and if declared by the Board of Directors and the Company is under no obligation to pay such accruing dividends. Accordingly, the Company has not recorded any accrued dividends on the preferred stock in the accompanying consolidated financial statements.

NOTE 3 – PREFERRED STOCK (CONTINUED)

LIQUIDATION PREFERENCE

In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Company, the holders of shares of Series A Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Company available for distribution to its stockholders before any payment is made to the holders of common stock an amount equal to the greater of (a) the Series A original issue price, plus any dividends accrued but unpaid or (b) such amount per share as would have been payable had all shares of Series A Preferred Stock been converted into common stock prior to such liquidation, together with any other dividends declared but unpaid.

CONVERSION

Each share of Series A preferred Stock is convertible, at the option of the holder and without the payment of additional consideration, into such number of fully paid and nonassessable shares of common stock as is determined by dividing the Series A Preferred Stock original issue price by the Series A Conversion Price, as defined in the Company's charter.

NOTE 4 – COMMON STOCK

As of December 31, 2013 and 2012, the Company has authorized 2,000,000 shares of $0.001 par value voting common stock.

As of December 31, 2012, treasury stock consisted of 693,574 shares of its common stock which was acquired from an investor at a total cost of $3,093,308. These shares were being held by the Company as treasury stock, and as collateral for the payment of a promissory note entered into with the investor as part of the Stock Redemption Agreement. The note payable to the former stockholder was repaid in 2013; accordingly, the shares held as treasury stock were retired.

NOTE 5 – STOCK-BASED COMPENSATION

COMMON STOCK OPTIONS

In 2010, the Company adopted the Walden Behavioral Care, Inc. 2010 Stock Incentive Plan (the 2010 Plan). The 2010 Plan allows for the grant of up to 97,357 options to purchase shares of common stock.

Grants under the 2010 Plan may be made to provide long-term incentives and rewards to those key employees who contribute to the long-term success and growth of the Company. The Board of Directors administers the 2010 Plan, which includes determining the participants in the Plan and the number of shares of common stock to be covered by each option, the fair value of the common stock, amending the terms of any option, and interpreting the terms of the 2010 Plan.

Under the 2010 Plan, stock option grants are generally subject to a three-year vesting schedule pursuant to which the options vest 33% on each anniversary of the grant date. The options generally terminate on the tenth anniversary of the grant date. In addition, vested options may be exercised for specified periods after the termination of the optionee's employment or other service relationship with the Company.

In 2010, the Company entered into a Stock Award and Incentive Compensation Agreement (the Agreement). Pursuant to the terms and conditions of the 2010 Plan and Agreement, the Company granted to a key employee, in consideration for services rendered, a stock award of 20,283 shares of the Company's common stock. The fair value of the stock was determined to be $2.50, which is the fair value of the common stock on the date of the Agreement. In addition, the key employee has an option to purchase an additional 20,283 shares of the Company's common stock, at an option price of $2.50, subject to the terms and conditions of the 2010 Plan and Agreement.

In 2011, the Company granted an incentive stock option to a key employee of 10,142 shares of the Company's common stock, at an option price of $2.50, subject to the terms and conditions of the 2010 Plan and Agreement.

In 2013, the Company granted an incentive stock option to a key employee of 10,142 shares of the Company's common stock, at an option price of $4.00, subject to the terms and conditions of the 2010 Plan and Agreement.

At December 31, 2013 and 2012, there was approximately $72,000 and $48,000, respectively, of unrecognized compensation costs, adjusted for estimated forfeitures, related to non-vested, share-based payments granted.

NOTE 5 – STOCK-BASED COMPENSATION (CONTINUED)

COMMON STOCK OPTIONS (CONTINUED)

The changes in the stock option plan are as follows:

	Number of options outstanding	Weighted average exercise price per share
Outstanding at January 1, 2012	30,425	2.50
Granted in 2012	--	--
Outstanding at December 31, 2012	30,425	2.50
Granted in 2013	10,142	4.00
Outstanding at December 31, 2013	40,567	2.88

The Company estimated the fair value of stock options granted in 2011 using a Black-Scholes valuation model with the following assumptions:

Risk free interest rate	3%
Expected dividend yield	0%
Expected life of options (yrs)	10
Expected volatility	50%

FAIR VALUE OF COMMON STOCK

The Company has granted common stock and common stock option awards to key employees. The Company's determination of the fair value of the underlying common stock is a significant aspect in accounting for these aforementioned stock option awards in accordance with generally accepted accounting principles.

The Company and its Board of Directors (the Board) determines the fair value of the common stock at each issuance of such stock option awards. The fair value of the common stock is determined by the Board at the measurement date of each of the aforementioned stock option awards based on a variety of different factors including, but not limited to, the Company's financial position and historical financial performance, the composition and ability of the current management team, the current climate in the marketplace, the illiquid nature of the common stock, the effect of rights and preferences of preferred shareholders, and the prospects of a liquidity event, among others.

NOTE 6 – LONG-TERM DEBT

Long-term debt consists of the following at December 31:

	2013	2012
Due to Related Parties		
Subordinated notes with interest at 12 percent, with interest paid monthly, and principal together with all remaining accrued interest due December 2014.	$ 395,152	$ 395,152
Subordinated note with interest at 12 percent, with interest paid monthly, and principal together with all remaining accrued interest due December 2014.	295,064	295,064
Subordinated note with interest at 10.5 percent, payable interest only to May 2014, thereafter in monthly principal and interest payments of $48,754 through maturity May 2017.	1,500,000	1,000,000
	2,190,216	1,690,216
Other Long-Term Debt		
Note payable to a former stockholder, with interest at 2 percent through August 2011, thereafter 3 percent through August 2012 and 4 percent through August 2013. Repayment terms called for annual payments of principal together with all unpaid and accrued interest through maturity August 2013.	--	1,000,000
	2,190,216	2,690,216
Less current portion	946,260	1,000,000
	$ 1,243,956	$ 1,690,216

NOTE 6 – LONG-TERM DEBT (CONTINUED)

The subordinated notes are due to stockholders of the Company and are subject to the terms and conditions of a subordination agreement dated September 2, 2010 relating to the line-of-credit agreement (see Note 2).

The note payable to the former stockholder was in connection with the Stock Redemption Agreement effective September 2, 2010. The shares of treasury stock acquired by the Company, and all assets of the Company, were pledged as collateral for the note.

Scheduled principal payments on long-term debt, including the additional principal added to the subordinated debt subsequent to year-end, at December 31, follows:

2014	$ 946,260
2015	476,948
2016	529,510
2017	237,498
	$ 2,190,216

NOTE 7 – COMMITMENTS AND CONTINGENCIES

LEASE COMMITMENTS

The Company leases space for its primary operating facility under a non-cancellable operating lease expiring October 2018, at a minimum annual rental of $1,111,500. The lease contains an option to extend the lease for one additional five year term. Taxes, insurance, and operating expenses are the Company's responsibility under the terms of the lease.

The Company leases space for its center in Northampton, Massachusetts under a non-cancellable operating lease expiring December 2014, at a minimum annual rental of $79,560. The original lease contained an option to extend for one additional year term, which was exercised during the year ended December 31, 2013. In connection with this lease, the Company has recorded a $4,766 security deposit in accordance with the lease terms. Taxes, insurance, and operating expenses are the Company's responsibility under the terms of the lease.

NOTE 7 – COMMITMENTS AND CONTINGENCIES (CONTINUED)

LEASE COMMITMENTS (CONTINUED)

The Company leases office space in Waltham, Massachusetts. The minimum annual rent is $114,672, with escalating rent payments until the expiration in February 2014. In connection with this lease, the Company has recorded a $33,446 security deposit in accordance with the lease terms. Taxes, insurance, and operating expenses are the Company's responsibility under the terms of the lease. The Company intends to extend this lease on a month-to-month basis beyond the expiration date.

The Company leases office space in Braintree, Massachusetts, at a minimum annual rental of $75,540, with escalating payments until the expiration in January 2019. In connection with this lease, the Company has recorded a $21,307 security deposit in accordance with the lease terms. Taxes, insurance, and operating expenses are the Company's responsibility under the terms of the lease.

The Company leases office space in Worcester, Massachusetts, at a minimum annual rental of $33,372, with escalating payments until the expiration in August 2019. In connection with this lease, the Company has recorded a $2,700 security deposit in accordance with the lease terms. Taxes, insurance, and operating expenses are the Company's responsibility under the terms of the lease.

The Company leases office space in South Windsor, Connecticut, at a minimum annual rental of $99,093, with escalating payments until the expiration in February 2017. Taxes, insurance, and operating expenses are the Company's responsibility under the terms of the lease.

The Company also leases office and other operating space under operating lease agreements expiring on various dates through November 2014, for use in its residential treatment program, at an aggregate annual rental of approximately $263,000. The Company has recorded aggregate security deposits of $3,000 in accordance with the lease terms. In addition, the Company leases office equipment under an operating lease agreement expiring November 2016 at an aggregate annual rental of approximately $40,600.

NOTE 7 – COMMITMENTS AND CONTINGENCIES (CONTINUED)

LEASE COMMITMENTS (CONTINUED)

Rental expense under the operating leases, recognized on a straight-line basis, amounted to $1,782,997 and $1,667,328 in 2013 and 2012, respectively.

Future minimum payments under these leases at December 31 are as follows:

2014	$ 1,621,639
2015	1,408,351
2016	1,441,602
2017	1,365,211
2018	1,172,659
Thereafter	36,118
	$ 7,045,580

OTHER COMMITMENTS

In March 2013, the Company entered into a Purchase and Sale Agreement (the Agreement) for the purchase of property located in Framingham, Massachusetts to be developed for use as an outpatient/inpatient treatment facility for eating disorders, obesity, mood disorders or other medical and psychiatric conditions. The total purchase price for the property is $6,250,000. In November 2013, the parties to the Agreement entered into an Amended and Restated Purchase and Sale Agreement (the Amended Agreement). The Amended Agreement expanded the anticipated use of the property to include the establishment of a non-profit educational program for the primary purpose of offering educational programs, including inpatient and outpatient components, to give patients the necessary life skills and effect behavior modification to treat eating disorders, obesity, mood disorders or other medical and psychiatric conditions. Total costs incurred under the proposed acquisition and related project totaled $562,236 as of December 31, 2013, included in inventories and other current assets in the accompanying consolidated balance sheet.

NOTE 8 – RELATED PARTY TRANSACTIONS

As of December 31, 2013 and 2012, the Company's debt included $2,190,216 and $1,690,216, respectively payable to the Company's stockholders or related parties. Accrued interest at December 31, 2013 and 2012 for these notes amounted to $13,125 and $8,750, respectively.

As of each of the years ended December 31, 2013 and 2012, the Company has accrued $223,451 of compensation for services provided by the Company's stockholders. These amounts are reported as due to related party at December 31, 2013 and 2012.

NOTE 9 – INCOME TAXES

The provision for income taxes at December 31 is comprised of the following:

	2013	2012
Current:		
Federal	$ 446,145	$ 441,170
State	120,265	115,910
Deferred		
Federal	22,379	42,836
State	12,190	12,355
	$ 600,979	$ 612,271

The income taxes shown differ from the amount that would result from applying federal and state statutory rates to income before income taxes because deferred income taxes are based on average tax rates. In addition, no tax benefit has been recognized for nondeductible operating expenses.

Effective September 1, 2010, the Company made a voluntary election to convert from its Subchapter S Corporation tax status and is now responsible for federal and state corporate income taxes. Accordingly, provision is now made for current and deferred corporate income taxes.

Deferred income taxes reflect the net tax effects of temporary timing differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes.

NOTE 9 – INCOME TAXES (CONTINUED)

The major components of deferred income taxes as of December 31 are as follows:

	2013	2012
Current:		
Allowance for doubtful accounts	$ 69,272	$ 11,928
Accrued expenses	108,900	108,900
	178,172	120,828
Noncurrent		
Property and equipment	(89,975)	1,938
	(89,975)	1,938
	$ 88,197	$ 122,766

WALDEN BEHAVIORAL CARE, INC. AND SUBSIDIARIES

SCHEDULE I – CONSOLIDATING BALANCE SHEET

DECEMBER 31, 2013

	MA	CT	Eliminations	Consolidated
Assets				
Current Assets				
Cash and cash equivalents	$ (9,071)	$ 197,509	$ --	$ 188,438
Accounts receivable, net	3,330,647	70,758	(11,308)	3,390,097
Inventories and other current assets	1,082,957	6,911	(104,256)	985,612
Investment in affiliate	100	--	(100)	--
Due from affiliate	295,000	--	(295,000)	--
Deferred income taxes	178,172	--	--	178,172
Total Current Assets	4,877,805	275,178	(410,664)	4,742,319
Deposits	65,219	--	--	65,219
Furniture, Equipment and Leasehold Improvements, net	354,067	167,166	--	521,233
	$ 5,297,091	$ 442,344	$ (410,664)	$ 5,328,771

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See independent auditors' report.

WALDEN BEHAVIORAL CARE, INC. AND SUBSIDIARIES

SCHEDULE I – CONSOLIDATING BALANCE SHEET (CONTINUED)

DECEMBER 31, 2013

	MA	CT	Eliminations	Consolidated
Liabilities and Stockholders' Deficit				
Current Liabilities				
Bank credit arrangement	$ 1,242,861	$ --	$ --	$ 1,242,861
Accounts payable	219,701	11,618	--	231,319
Accrued payroll and related withholdings	515,728	20,108	--	535,836
Accrued expenses	59,365	13,500	--	72,865
Accrued income taxes	58,750	--	--	58,750
Due to related party	224,309	126,014	(115,564)	234,759
Due to affiliate	--	295,000	(295,000)	--
Due to patients and third-party payors	461,210	11,241	--	472,451
Current portion of long-term debt	946,260	--	--	946,260
Total Current Liabilities	3,728,184	477,481	(410,564)	3,795,101
Deferred Income Taxes	89,975	--	--	89,975
Long-Term Debt - less current maturities	1,243,956	--	--	1,243,956
Total Liabilities	5,062,115	477,481	(410,564)	5,129,032
Stockholders' Deficit				
Preferred stock, $.001 par value, 480,000 shares authorized, 346,667 shares issued and outstanding	347	--	--	347
Common stock, $.001 par value, 2,000,000 shares authorized, 1,407,431 shares issued and outstanding	714	--	--	714
Additional paid-in capital	2,699,647	--	--	2,699,647
Accumulated deficit	(2,465,732)	--	--	(2,465,732)
Treasury stock	--	--	--	--
Members' equity	--	(35,137)	(100)	(35,237)
Total Stockholders' Deficit	234,976	(35,137)	(100)	199,739
	$ 5,297,091	$ 442,344	$ (410,664)	$ 5,328,771

See independent auditors' report.

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WALDEN BEHAVIORAL CARE, INC. AND SUBSIDIARIES

SCHEDULE I – CONSOLIDATING BALANCE SHEET

DECEMBER 31, 2012

	MA	CT	Eliminations	Consolidated
Assets				
Current Assets				
Cash and cash equivalents	$ (1,862)	$ 39,950	$ --	$ 38,088
Accounts receivable, net	3,584,333	223,532	(11,308)	3,796,557
Inventories and other current assets	365,436	8,258	(18,382)	355,312
Investment in affiliate	100	--	(100)	--
Due from affiliate	295,000	--	(295,000)	--
Deferred income taxes	120,828	--	--	120,828
Total Current Assets	4,363,835	271,740	(324,790)	4,310,785
Deferred Income Taxes	1,938	--	--	1,938
Deposits	65,219	--	--	65,219
Furniture, Equipment and Leasehold Improvements, net	149,715	148,373	--	298,088
	$ 4,580,707	$ 420,113	$ (324,790)	$ 4,676,030

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See independent auditors' report.

WALDEN BEHAVIORAL CARE, INC. AND SUBSIDIARIES

SCHEDULE I – CONSOLIDATING BALANCE SHEET (CONTINUED)

DECEMBER 31, 2012

	MA	CT	Eliminations	Consolidated
Liabilities and Stockholders' Deficit				
Current Liabilities				
Bank credit arrangement	$ 777,495	$ --	$ --	$ 777,495
Accounts payable	281,636	1,913	--	283,549
Accrued payroll and related withholdings	425,080	4,634	--	429,714
Accrued expenses	86,254	--	--	86,254
Accrued income taxes	337,711	--	--	337,711
Due to related party	223,451	40,998	(29,690)	234,759
Due to affiliate	--	295,000	(295,000)	--
Due to patients and third-party payors	602,733	--	--	602,733
Current portion of long-term debt	1,000,000	--	--	1,000,000
Total Current Liabilities	3,734,360	342,545	(324,690)	3,752,215
Long-Term Debt - less current maturities	1,690,216	--	--	1,690,216
Total Liabilities	5,424,576	342,545	(324,690)	5,442,431
Stockholders' Deficit				
Preferred stock, $.001 par value, 480,000 shares authorized, 346,667 shares issued and outstanding	347	--	--	347
Common stock, $.001 par value, 2,000,000 shares authorized, 1,407,431 shares issued and outstanding	1,407	--	--	1,407
Additional paid-in capital	2,748,953	--	--	2,748,953
Accumulated deficit	(501,268)	--	--	(501,268)
Treasury stock	(3,093,308)	--	--	(3,093,308)
Members' equity	--	77,568	(100)	77,468
Total Stockholders' Deficit	(843,869)	77,568	(100)	(766,401)
	$ 4,580,707	$ 420,113	$ (324,790)	$ 4,676,030

See independent auditors' report.

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WALDEN BEHAVIORAL CARE, INC. AND SUBSIDIARIES

SCHEDULE II – CONSOLIDATING STATEMENT OF OPERATIONS

FOR THE YEAR ENDED DECEMBER 31, 2013

	MA	CT	Eliminations	Consolidated
Operating Revenues				
Net patient service revenue	$ 20,165,753	$ 781,836	$ --	$ 20,947,589
Other revenue	47,568	1,921	(36,649)	12,840
	20,213,321	783,757	(36,649)	20,960,429
Operating Expenses				
Direct patient care	10,378,074	495,388	--	10,873,462
Facility operations	2,694,861	149,009	--	2,843,870
Residential and other programs	851,783	--	--	851,783
Corporate operations	4,028,947	157,884	(36,649)	4,150,182
Interest expense	261,085	--	--	261,085
Provision for bad debts	233,809	59,135	--	292,944
Depreciation and amortization	86,206	33,778	--	119,984
	18,534,765	895,194	(36,649)	19,393,310
Income (Loss) Before Provision for Income Taxes	1,678,556	(111,437)	--	1,567,119
Provision for Income Taxes	599,711	1,268	--	600,979
Net Income (Loss)	$ 1,078,845	$ (112,705)	$ --	$ 966,140

See independent auditors' report.

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WALDEN BEHAVIORAL CARE, INC. AND SUBSIDIARIES

SCHEDULE II – CONSOLIDATING STATEMENT OF OPERATIONS

FOR THE YEAR ENDED DECEMBER 31, 2012

	MA	CT	Eliminations	Consolidated
Operating Revenues				
Net patient service revenue	$ 18,551,784	$ 284,152	$ --	$ 18,835,936
Other revenue	24,363	--	(11,308)	13,055
	18,576,147	284,152	(11,308)	18,848,991
Operating Expenses				
Direct patient care	9,549,688	208,263	--	9,757,951
Facility operations	2,582,590	81,427	--	2,664,017
Residential and other programs	798,224	--	--	798,224
Corporate operations	3,533,433	121,067	(11,308)	3,643,192
Interest expense	203,777	--	--	203,777
Provision for bad debts	168,146	6,250	--	174,396
Depreciation and amortization	60,219	12,109	--	72,328
	16,896,077	429,116	(11,308)	17,313,885
Income (Loss) Before Provision for Income Taxes	1,680,070	(144,964)	--	1,535,106
Provision for Income Taxes	612,271	--	--	612,271
Net Income (Loss)	$ 1,067,799	$ (144,964)	$ --	$ 922,835

See independent auditors' report.

WALDEN BEHAVIORAL CARE, INC. AND SUBSIDIARIES

SCHEDULE III – CONSOLIDATING SCHEDULE OF EXPENSES

FOR THE YEAR ENDED DECEMBER 31, 2013

	MA	CT	Eliminations	Consolidated
Salaries and related expenses	$ 8,169,837	$ 437,614	$ --	$ 8,607,451
Pharmacy supplies and expenses	458,681	--	--	458,681
Dietary	662,224	4,406	--	666,630
DOCS/Medical coverage	494,687	45,525	--	540,212
Housekeeping	98,771	--	--	98,771
Laboratory fees	199,000	--	--	199,000
Medical supplies and expenses	122,637	3,131	--	125,768
Contract labor	56,645	--	--	56,645
Laundry and linen	44,464	--	--	44,464
Patient transportation	62,407	--	--	62,407
Patient medical services and other	8,721	4,712	--	13,433
Total Direct Patient Care	$ 10,378,074	$ 495,388	$ --	$ 10,873,462
Salaries and related expenses	$ 1,069,444	$ --	$ --	$ 1,069,444
Occupancy	1,075,564	106,194	--	1,181,758
Insurance	206,618	3,328	--	209,946
Medical supplies and expenses	33,280	--	--	33,280
Office supplies and expenses	73,529	5	--	73,534
Professional fees and contracted services	114,580	--	--	114,580
Repairs and maintenance	97,869	89	--	97,958
Quality and compliance	--	--	--	--
Telephone	9,822	1,439	--	11,261
Travel and entertainment	14,155	37,954	--	52,109
Total Facility Operations	$ 2,694,861	$ 149,009	$ --	$ 2,843,870

See independent auditors' report.

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WALDEN BEHAVIORAL CARE, INC. AND SUBSIDIARIES

SCHEDULE III – CONSOLIDATING SCHEDULE OF EXPENSES

FOR THE YEAR ENDED DECEMBER 31, 2013 (CONTINUED)

	MA	CT	Eliminations	Consolidated
Salaries and related expenses	$ 1,827,894	$ 33,715	$ --	$ 1,861,609
Employee benefits	801,358	25,747	--	827,105
Professional fees and contracted services	340,659	44,400	(36,649)	348,410
Marketing and website development	341,164	25,090	--	366,254
Office supplies and expenses	354,960	28,932	--	383,892
Occupancy	147,799	--	--	147,799
Legal and consulting	14,192	--	--	14,192
Recruitment and orientation	108,930	--	--	108,930
Telephone	41,105	--	--	41,105
Travel and entertainment	31,554	--	--	31,554
Auto expenses	19,332	--	--	19,332
Total Corporate Operations	$ 4,028,947	$ 157,884	$ (36,649)	$ 4,150,182
Occupancy	$ 548,949	$ --	$ --	$ 548,949
Dietary	112,123	--	--	112,123
Program services and supplies	22,663	--	--	22,663
DOCS/Medical coverage	40,830	--	--	40,830
Telephone and internet	36,951	--	--	36,951
Office supplies	32,194	--	--	32,194
Housekeeping	38,509	--	--	38,509
Laundry and linen	248	--	--	248
Repairs and maintenance	1,753	--	--	1,753
Travel expense	17,563	--	--	17,563
Total Residential and and Other Program Expenses	$ 851,783	$ --	$ --	$ 851,783

See independent auditors' report.

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WALDEN BEHAVIORAL CARE, INC. AND SUBSIDIARIES

SCHEDULE IV – CONSOLIDATED SCHEDULE OF EXPENSES

FOR THE YEAR ENDED DECEMBER 31, 2012

	MA	CT	Eliminations	Consolidated
Salaries and related expenses	$ 7,725,881	$ 187,647	$ --	$ 7,913,528
Pharmacy supplies and expenses	480,907	--	--	480,907
Dietary	530,097	1,968	--	532,065
DOCS/Medical coverage	355,598	11,625	--	367,223
Housekeeping	103,402	--	--	103,402
Laboratory fees	141,650	--	--	141,650
Medical supplies and expenses	109,440	4,560	--	114,000
Contract labor	8,742	--	--	8,742
Laundry and linen	49,268	--	--	49,268
Patient transportation	40,940	--	--	40,940
Patient medical services and other	3,763	2,463	--	6,226
Total Direct Patient Care	$ 9,549,688	$ 208,263	$ --	$ 9,757,951
Salaries and related expenses	$ 1,025,820	$ --	$ --	$ 1,025,820
Occupancy	1,100,283	49,547	--	1,149,830
Insurance	191,141	2,826	--	193,967
Medical supplies and expenses	28,336	--	--	28,336
Office supplies and expenses	77,930	2,510	--	80,440
Professional fees and contracted services	67,718	--	--	67,718
Repairs and maintenance	72,979	4,924	--	77,903
Quality and compliance	--	--	--	--
Telephone	9,194	364	--	9,558
Travel and entertainment	9,189	21,256	--	30,445
Total Facility Operations	$ 2,582,590	$ 81,427	$ --	$ 2,664,017

See independent auditors' report.

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WALDEN BEHAVIORAL CARE, INC. AND SUBSIDIARIES

SCHEDULE IV – CONSOLIDATED SCHEDULE OF EXPENSES

FOR THE YEAR ENDED DECEMBER 31, 2012 (CONTINUED)

	MA	CT	Eliminations	Consolidated
Salaries and related expenses	$ 1,651,087	$ 21,070	$ --	$ 1,672,157
Employee benefits	752,720	12,064	--	764,784
Professional fees and contracted services	362,220	53,576	(11,308)	404,488
Marketing and website development	252,622	13,150	--	265,772
Office supplies and expenses	156,992	21,207	--	178,199
Occupancy	140,065	--	--	140,065
Legal and consulting	96,996	--	--	96,996
Recruitment and orientation	27,632	--	--	27,632
Telephone	35,512	--	--	35,512
Travel and entertainment	38,338	--	--	38,338
Auto expenses	19,249	--	--	19,249
Total Corporate Operations	$ 3,533,433	$ 121,067	$ (11,308)	$ 3,643,192
Occupancy	$ 480,043	$ --	$ --	$ 480,043
Dietary	106,773	--	--	106,773
Program services and supplies	25,914	--	--	25,914
DOCS/Medical coverage	52,091	--	--	52,091
Telephone and internet	33,001	--	--	33,001
Office supplies	37,272	--	--	37,272
Housekeeping	35,427	--	--	35,427
Laundry and linen	750	--	--	750
Repairs and maintenance	1,215	--	--	1,215
Travel expense	25,738	--	--	25,738
Total Residential and and Other Program Expenses	$ 798,224	$ --	$ --	$ 798,224

See independent auditors' report.

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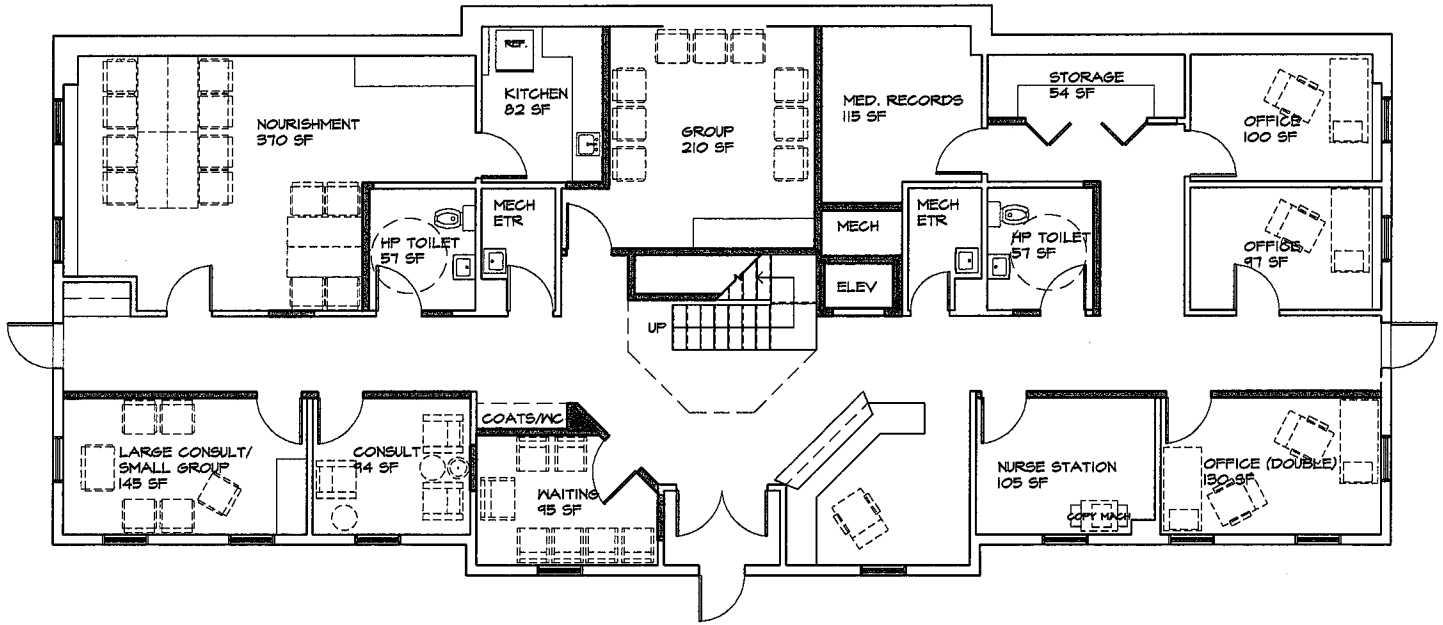
Exhibit 26



Existing Conditions

WALDEN BEHAVIORAL CARE

157 GOOSELANE
GUILFORD, CT

GMI ARCHITECTS

45 NEWBURY STREET - SUITE 503 BOSTON, MA
617 423 9399 02116
412A THAMES STREET BRISTOL, RI
401 396 9898 02809

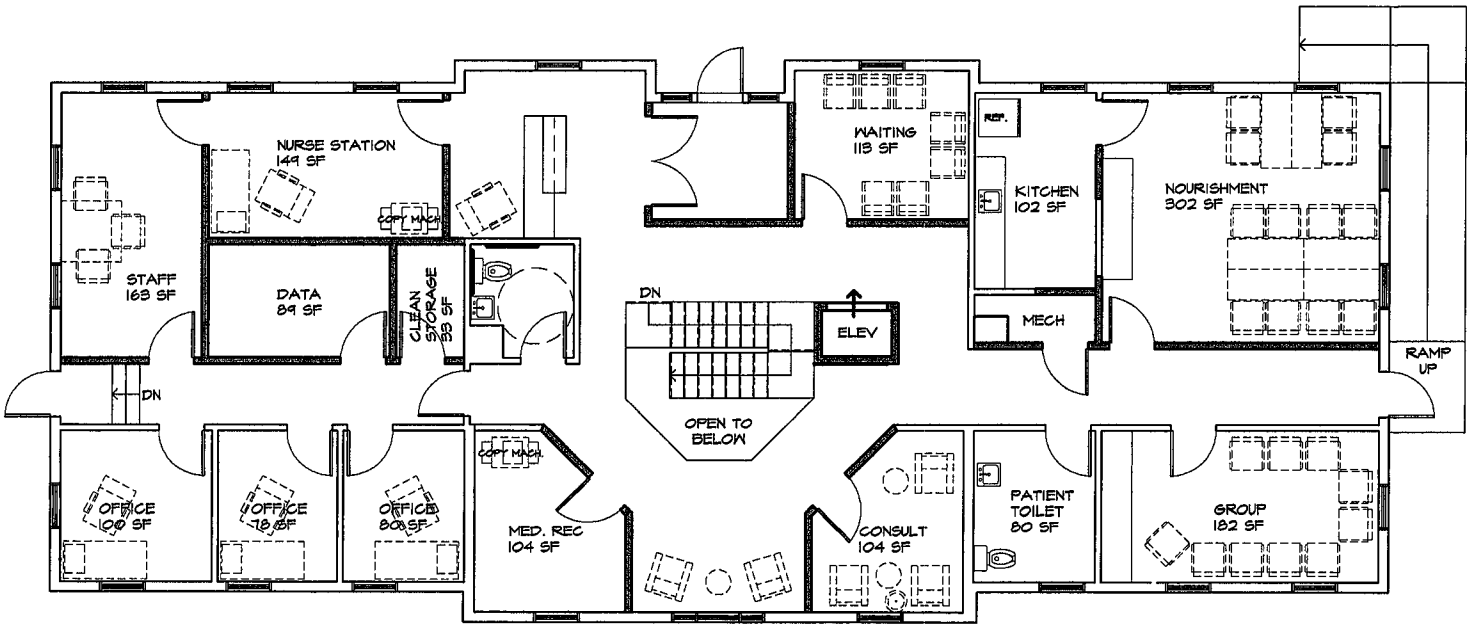
000472

SCHEMATIC
LOWER LEVEL
FLOOR PLAN

Job No. 14808
Scale 1/8" = 1'-0"
Date 01/05/18
Drawn By DT

SD1-1

EXISTING CONDITIONS



Existing Conditions

WALDEN BEHAVIORAL CARE

157 GOOSELANE
GUILFORD, CT

GMI ARCHITECTS

43 NEWBURY STREET - SUITE 503 BOSTON, MA
617 423 9399 02116

412A THAMES STREET BRISTOL, RI
401 396 9010 02809

000473

SCHEMATIC
UPPER LEVERL
FLOOR PLAN

Job No. 14002
Scale 1/8" = 1'-0"
Date 09/05/08
Drawn By DT

SD1-2

EXISTING CONDITIONS

O,R&L COMMERCIAL

October 8, 2014

Sent Via Email

Mr. Bob Pagani
Ms. Stephanie Cabral
Colliers International
864 Wethersfield Avenue
Hartford, Connecticut 06114

RE: REQUEST FOR LEASE PROPOSAL
157 Goose Lane
Guilford CT

O,R&L Commercial is pleased to offer this response to the RFP on behalf of the Pite Family LTD Partnership.

Square Footage:	Approximately 6,256	Parking:	Use is Behavioral Health Minimum 5/1000
Location:	In the Town of Guilford	Access:	On or near major roads
Employees:	10 with room to grow	Configuration:	Several offices, communal space for group room, and a dining area. Details TBD.
Occupancy:	Fall 2014	Look & feel:	Professional, not extravagant
Visitors:	Significant visitors to see clinicians	Internet access:	Fiber-optic circuits available

1. ***Site/Building Information:*** Building Address: 157 Goose Lane, Guilford, CT 06437
Year built: 1985+-
% of building currently leased: 0
New Construction or Existing. Existing
(if new construction please indicate timetable and outline process)
Preliminary site plan if available
Building management company: Pite Family LTD Partnership

2. ***Premises:*** Walden Behavioral Care will require approximately 6,000 square feet of contiguous usable space, subject to space planning. Please state the floor area and location which you propose to lease

Landlord response:
Entire Building 6,256 +- SF

3. ***Term:*** 7 year lease term to commence upon Certificate of Need (CON) approval from the Office of Health Care Access (OHCA).

4. ***Expected Occupancy and Rent Commencement:***

Assuming a January 1, 2015 Start date for Lease execution;
Tenant shall pay $3000 monthly beginning April 1, 2015 through July 1, 2015. Full rent to commence Upon Certificate of Need obtained from the state.
In the event Walden has not received a CON by July 1, 2015 then Walden shall pay $6,000 monthly to Landlord ongoing until receiving CON from the State of CT or until a maximum of $40,000 total payments to Landlord. Mutual consent will be required going forward beyond the $40,000 cap.
Should the tenant be denied a CON from the state this lease shall terminate upon Walden's notice to the Landlord of the inability to receive CON.

5. ***Rental Rate:***

Please indicate your base rental rate and estimated long term lease rate per square foot with escalators over term of lease.
Landlord response:
$16.00 per square foot NNN with 2.5% annual increases

6. ***Operating, Taxes & Utilities:***

Provide information for operating expense and tax information:
Landlord response:
Estimate for 2014 is $6.00 psf
Tenant is responsible for individually metered utilities and janitorial.

7. ***Rental Abatement:***

Please specify the amount of rental abatement you are willing to provide.
Landlord response:
Four Months Free rent including the two months of having the space off the market. Tenant is responsible for NNN charges during the last two months of the free rent period.

8. ***Moving Allowance:***

Please state your willingness to provide an allowance to offset any or all moving cost:
Landlord response:
Free rent period stated above shall serve as incentive.

9. ***Tenant Improvements:***

Walden Behavioral Care's requirement may entail retrofit, alteration, and refurbishment to the proposed space. Please indicate your proposed work letter, including allowances, to offset these costs.

If construction is required to be performed at Walden Behavioral Care's cost by Landlord, Walden Behavioral Care requires that Landlord will obtain not less than three (3) competitive bids. Walden Behavioral Care retains the right to obtain additional bids and to review and approve all bids.

Landlord response:
Landlord will provide a Tenant Improvement Allowance of $10 per rentable foot. Landlord may at landlords option offer the tenant improvement allowance as a rent credit.Tenant Improvements requiring a building permit must be approved in writing prior to construction.

WF 1/26/14

10. *Space Plans:*

Please indicate your willingness to work with Walden Behavioral Care's Architect.

Please indicate an amount Landlord is willing to provide to Tenant for Architects plans and actual construction documents. Walden Behavioral Care prefers to work with their current architect in the configuration of their space.
Landlord response:
Part of Tenant Improvement Allowance stated above.

11. *HVAC:*

Age of equipment:
Type of system: Gas Warm Air with Central Air
Type of heat:Upper Level heat is new, Lower level 8+- years. Air conditioning on upper level is 2+- years and lower level is 5+- years.
Normal hours of operation: 24 hours 7 days a week.
Notice required for after hour service, if any: None
Estimated cost, if any, for that service on an hourly basis None
Is supplemental HVAC currently available in the premises? If so, what type? N/A

12. *Option To Renew:*

Landlord will provide two(2) three-year options to renew the lease with six (6) months prior written notice at 95% of fair market value but not less than the preceding years annual rent.
Landlord response:
Landlord will require 9months written notice.
Landlord will offer Tenant an option to purchase the entire property for $3,250,000 at any time in the first three years of the initial term of the lease with three months prior written notice.

13. *Option To Expand:*

Walden Behavioral Care requests the first right of refusal on any contiguous and adjacent space.
Landlord response:
Landlord will offer Walden Behavioral a First Right of Offer on any space that becomes available in the complex.

14. *Cancellation Option:*

Tenant shall have a one time right to terminate the lease at the end of fourth year of the initial by notifying Landlord in writing 12 months in advance.
Walden Behavioral Care will pay the unamortized costs of tenant improvement allowance and real estate commissions.

15. *Parking:*

Please define the available parking ratio per 1,000 USF. Also define the number of reserved, designated visitor, and handicapped parking spaces available. Please state what, if any, cost there is for parking at your building.
Landlord response:
Approximately 31 open spaces are available.
Per the Landlord there are 21 spaces in front of the lower level of the building, 19 on the upper level shared with the dental building and 20+

MP 8/20/19

behind the dental building for upstairs tenants, employee and overflow parking. There has never been a parking issue at the building, even at 100% occupancy.

16. *Signage:* Walden Behavioral Care requires its standard lobby and/or floor signage and exterior door entrance signage to be approved at Landlord's expense. Exterior building signage shall be permitted when appropriate. Please explain any additional signage provisions at the site.

Landlord response:
Tenant may apply for approval from Town of Guilford for signage at entry and on building entryways. Tenant is responsible for cost and installation.

17. *Access/Security:* Walden Behavioral Care requires access to the premises Monday through Friday 8am-9pm, and 8am-1p on Saturdays, 52 weeks a year. Please provide a description and information of the safety systems for both building and parking facilities.
Landlord response:
The building is stand alone and Walden can operate at any hour necessary subject to any CON or town approval.

18. *Amenities:* Please list all amenities (i.e., restaurants, shops, lodging, health clubs, etc) that serve the building.
Landlord response: Several restaurants, shops and a health club located within a four block area.

19. *Security Deposit:* Walden Behavioral Care requires a waiver of any security deposit and will provide financials.
Landlord response: Subject to credit review of Tenant by Landlord.

20. *Ownership/Relationship Identification:* Please indicate owner of record of property and describe building management.
Landlord response:
The Pite Family LTD Partnership

22. *Building Tenants:* Please provide, on a separate sheet, a roster of the current tenants in the building.
Landlord response:
Petrick and Katz Family Dentistry, Adapted Wealth Management, Cynthia Hanrahan and Maria Sappe Psychotherapy.

23. *Brokerage Agreement:* Colliers International, Hartford Office as procuring Broker shall receive a full market commission from Landlord.
Landlord response:
Colliers will receive a commission of 5% of the first five years and 2.5% of years six and seven, 50% due and payable upon full execution of the lease and 50% upon rent commencement. Override commission is payable on lease only.

24. *Assignment or Subletting:* To Affiliates: Walden Behavioral Care requires the right to sublet or assign the premises to any related entity or affiliate without Landlord's approval or consent. Walden Behavioral Care requires, without it constituting an assignment or subletting, the right to issue and/ or to sell shares or to merge with other corporate entities (see questionnaire). To Third Parties: Walden Behavioral Care requires the right to assign or

sublease to non-related entities subject to Landlord's consent, not to be unreasonably withheld, conditioned, or delayed.
Landlord response:
Subject to attorney review.

25. ***Americans With Disabilities Act (ADA) Compliance & Occupational Safety and Health Act (OSHA):***

Walden Behavioral Care requires Landlord to be responsible and compliant for all base building codes (ADA, OSHA, etc.) at its sole cost and expense. Walden's licensed clinics must structurally comply with CT Department of Public Health and Department of Children and Families regulatory requirements. The buildout must conform to DPH and DCF regulations. Additionally, the facility will need to comply with Joint Commission environmental standards pertaining to Life Safety, Environment of Care, and Emergency Management. Walden is amenable to paying for additional testing of emergency, utility and life safety systems which are greater than those required by the town for compliance with local fire code.
Landlord response: Landlord will work with Tenant architect to remedy any identified existing non compliant code or ADA issues.

26. ***Subordination and Non Disturbance:***

Walden Behavioral Care requires either that its lease not be subordinate to any liens or financing or that an acceptable *Subordination and Non Disturbance* agreement be provided.
Landlord response:
Landlord has no mortgage on the property.

28. ***Hazardous Materials:***

Walden Behavioral Care requires that the Landlord represent and warrant that, there are no hazardous substances/toxic contaminants located in, on, or under the building, the property, or the premises and there has been no violation thereon of any law governing hazardous materials.
Landlord response:
No hazardous substances in the premises to the knowledge of Landlord.

Tenant hereby approves this Letter of Intent

Tenant: Walden Behavioral Care

By: _____ Date: 11-26-14

Title: Chief Financial Officer

Landlord hereby approves this Letter of Intent

Landlord: _____ Date: 11/26/14

COMMERCIAL LEASE AGREEMENT

THIS LEASE AGREEMENT (this "Lease"), made and entered into this ____ day of March, 2015 (the "Effective Date"), by and between **PITE FAMILY LIMITED PARTNERSHIP**, a Connecticut limited partnership having its principal office at 157 Goose Lane, Guilford, Connecticut 06437 (hereinafter referred to as "Landlord") and **WALDEN BEHAVIORAL CARE LLC**, a Massachusetts limited liability company having an office at 51 Sawyer Road, Waltham, MA 02453 (hereinafter referred to as "Tenant").

W I T N E S S E T H

1. LEASED PREMISES.

1.1 **Lease.** In consideration of the rent and covenants herein reserved and contained on the part of the Tenant to be paid, performed and observed, the Landlord does hereby lease, demise, and let unto the Tenant and the Tenant does hereby hire from the Landlord upon the terms, provisions, covenants and conditions hereinafter set forth, an office building known as and numbered 157 Goose Lane, Guilford, Connecticut (the "Building"). The Building is located on a parcel of land described on Schedule A attached hereto (the "Land"). The premises leased hereunder shall be a standalone building containing approximately six thousand two hundred fifty six (6,256) square feet of rentable area (hereinafter referred to as the "Leased Premises"). The Leased Premises are part of an office park located at 157 Goose Lane, Guilford, Connecticut known as the Sachem Hill Professional Center(the "Office Park"). The Leased Premises are leased together with (i) the right, in common with others, to use the parking spaces, access to and from Goose Lane, and walkways in the Office Park, and (ii) the right to use the utilities that service the Building.

1.2 **Tenant Improvement Allowance**. Landlord shall provide Tenant with a build-out allowance equal to $10 per square foot of the Leased Premises ($62,560) to be paid within thirty (30) days following the Commencement Date or, at Landlord's option, as a credit against Base Rent.

1.3 **Tenant's Preparatory Work**. Tenant shall have prepared plans (the "Plans") for the interior finish and other tenant improvements to the Leased Premises. The Plans shall be submitted to Landlord for its approval, which shall not be unreasonably withheld or delayed. Failure by Landlord to disapprove any submission or resubmission of the Plans within five (5) business days after submission or any resubmission shall constitute a Landlord delay. Any disapproval shall be accompanied by a specific statement of the reasons therefor.

Promptly after approval of the Plans Tenant shall commence Tenant's Work. Tenant shall perform Tenant's Work in a good and workmanlike manner using new materials and in compliance with all applicable laws. Promptly upon the commencement of Tenant's Work, Tenant shall furnish Landlord with a construction schedule letter setting forth the projected completion dates therefor and showing the deadlines for any actions required to be taken by Landlord during such construction. Tenant may from time to time during construction of Tenant's Work modify

such schedule. Landlord will cooperate with Tenant such that Tenant's Work shall proceed with as little delay and interruption as possible. Landlord shall sign promptly such applications and take such other actions as may be necessary for obtainment of necessary permits, approvals and authorizations so that Tenant's Work may proceed.

Tenant shall own and have title to all items of Tenant's Work until the expiration or sooner termination of the Lease. To the extent possible, Tenant shall insure such items of Tenant's Work for their full replacement value.

Tenant's Work shall be deemed substantially complete on the first day as of which Tenant's Work has been substantially completed in accordance with the Plans, as evidenced by a certificate from Tenant's architect, except for items of work (and, if applicable, adjustment of equipment and fixtures) which can be completed after occupancy has been taken without causing undue interference with Tenant's use of the Leased Premises (i.e. so-called "punch list" items), receipt of the CON (as defined below), and, if applicable, receipt of a temporary or permanent certificate of occupancy for the Leased Premises; provided, however, that if substantial completion of Tenant's Work is delayed solely as a result of any Tenant delays, then Substantial Completion shall be the date that Tenant's Work would have been completed but for such Tenant delays (the "Substantial Completion Date").

Notwithstanding the foregoing provisions, the Commencement Date of this Lease shall be determined in accordance with Section 2.1 and not by the Substantial Completion Date.

Notwithstanding the foregoing provisions, Tenant shall not commence any construction or renovations in the Leased Premises prior to the date that Tenant has received a final nonappealable CON.

1.4 **Condition of Building and Leased Premises**. Landlord represents that at Term commencement the Building and the Leased Premises, exclusive of Tenant's Work, and Tenant's permitted use thereof shall comply with all applicable Federal, State and local laws, ordinances, rules and regulations applicable thereto including but not limited to the Americans with Disabilities Act.

2. TERM OF LEASE.

2.1 **Initial Term**. The term of this Lease ("Initial Term") is seven (7) years commencing on the date Tenant receives a Certificate of Need for Tenant's proposed use of the Leased Premises ("CON") from the Connecticut Office of Health Care Access (the "Commencement Date"). In the event the Initial Term commences on a day that is not the first of the month, the Initial Term shall be seven (7) years plus that partial month preceding the next full calendar month. The Lease shall terminate on the last day of the eighty-fourth (84th) full calendar month after the Commencement Date (the "Termination Date").

2.2 **Renewal Terms**. Tenant may renew and extend the term of this Lease for two (2) additional terms of three (3) years each, the first renewal term commencing on the day immediately following the Termination Date and ending three (3) years thereafter ("First Renewal Term); and the second renewal term shall commence on the third (3rd) anniversary of the commencement of

the first Renewal Term and shall terminate on the third (3rd) anniversary of the second renewal term ("Second Renewal Term") (any one of the renewal terms being sometimes referred to as "Renewal Term" and all of them sometimes being collectively referred to as "Renewal Terms"). In order to exercise the Renewal Terms Tenant shall notify Landlord in writing of its intent to renew the lease for either of the Renewal Terms not later than nine (9) months before the end of the Initial Term and nine (9) months before the end of the First Renewal Term as applicable. All obligations, covenants and conditions contained herein shall continue for any and all Renewal Terms. Tenant shall not have the right to exercise its right to extend this Lease for the Second Renewal Term unless it has previously exercised its to extend the term of the Lease for the First Renewal Term.

2.3 **Lease Term**. Except as otherwise provided herein, any reference in this Lease to the "term of this Lease" or "Lease Term" shall mean the Initial Term and all Renewal Terms, if any, as applicable.

3. **BASE RENT.**

3.1 Preliminary Period. (a) Tenant shall be permitted to take occupancy of the Leased Premises on April 1, 2015 (as the same may be extended as hereinafter provided, the "Preliminary Period."). From April 1, 2015 to June 30, 2015, Tenant shall pay rent in the amount of Three Thousand Dollars ($3,000.00) per month due and payable on the first day of the month. During the Preliminary Period all the terms and conditions of this Lease shall apply, and Tenant shall not make any alterations or improvements to the Leased Premises without the Landlord's approval, which may be withheld in the Landlord's sole discretion.

(b) If the Tenant has not received the CON by July 1, 2015, then the Preliminary Period shall automatically be extended on the following terms. Commencing on July 1, 2015 Tenant shall pay rent in the amount of Six Thousand Dollars ($6,000.00) per month until the first to occur of the following: (i) February 28, 2016; (ii) Tenant receives approval of the CON; or (iii) the CON is denied. Additional extension of the Preliminary Period shall be subject to the approval of Landlord and Tenant in their sole discretion.

(c) If the CON is not received by Tenant prior to the end of the extended Preliminary Period, or if the CON is denied at any time either Landlord or Tenant shall have the right to terminate this Lease upon written notice to the other party. Upon such termination this Lease shall be null and void and neither Landlord nor Tenant shall have any obligations or rights hereunder. Tenant shall use diligent efforts to obtain the CON.

3.2 Initial Term. The total Base Rent ("Base Rent") payable during the Initial Term hereof shall be as set forth in the following schedule:

Lease Year	Annual Base Rent	Monthly Payment
1	$100,096.00	$8,341.33

2	$102,598.40	$8,549.87
3	$105,163.36	$8,763.63
4	$107,792.44	$8,982.70
5.	$110,487.26	$9,207.27
6.	$113,249.44	$9,437.45
7.	$116,080.67	$9,673.39

Payment of Base Rent shall commence on the date on which the Tenant receives the CON.

Notwithstanding the foregoing provisions, upon the commencement of the Term Tenant shall receive one (1) month of free Base Rent which shall be the first month of the Term.

3.3 **Renewal Term.**

(a) In the event Tenant renews the term of this Lease, as set forth herein, the annual Base Rent for each Renewal Term, payable to Landlord, effective as of commencement of each respective Renewal Term shall be equal to an amount agreed upon by Landlord and Tenant in good faith. If the Landlord and the Tenant are not able to agree on the rent for either Renewal Term within thirty (30) days after Landlord's receipt of Tenant's notice to renew, then the Base Rent shall be ninety five percent (95%) of the fair market rent for the Leased Premises, but in any event not less than the previous year's Base Rent. The fair market rent shall be determined by a MAI designated appraiser with not less than five (5) years' experience who shall be selected by Landlord but shall be reasonably acceptable to Tenant. During each year of each Renewal Term after the first year the rent shall increase by two and one-half percent (2.5%) each year.

(b) If Tenant is unwilling to accept the appraiser's determination, then Tenant shall notify Landlord within ten (10) business days after receipt of Landlord's determination. The parties shall negotiate in good faith to reach agreement thereon within thirty (30) days after the delivery of such notice by Tenant. If the parties are unable to reach agreement thereon within thirty (30) days after the delivery of such notice by Tenant, then either party may submit the determination of the fair market rent of the Leased Premises to arbitration by giving notice to the other party naming the initiating party's arbitrator within ten (10) days after the expiration of such thirty (30)-day period. Within fifteen (15) days after receiving a notice of initiation of arbitration, the responding party shall appoint its own arbitrator by notifying the initiating party of the responding party's arbitrator. If the second arbitrator shall not have been so appointed within such fifteen (15) day period, the fair market rent of the Leased Premises shall be determined by the initiating party's arbitrator. If the second arbitrator shall have been so appointed, the two arbitrators thus appointed shall, within fifteen (15) days after the responding party's notice of appointment of the second arbitrator, appoint a third arbitrator. If the two initial arbitrators are unable timely to agree on the third arbitrator, then either may, on behalf of both,

request such appointment by the then president of the New Haven Real Estate Board, or its successor, or, on the failure, refusal or inability of such individual to act, by the New Haven office of the American Arbitration Association. The fair market rent of the Leased Premises for the Renewal Term shall be determined by the method commonly known as Baseball Arbitration, whereby Landlord's selected arbitrator and Tenant's selected arbitrator shall each set forth its respective determination of the fair market rent the Leased Premises, and the third arbitrator must select one or the other (it being understood that the third arbitrator shall be expressly prohibited from selecting a compromise figure, except that if the two determinations are within ten percent (10% then they shall be averaged). Landlord's selected arbitrator and Tenant's selected arbitrator shall deliver their determinations of the fair market rent of the Leased Premises to the third arbitrator within ten (10) Business Days after the appointment of the third arbitrator and the third arbitrator shall render his or her decision within ten (10) business days after receipt of both of the other two determinations of the fair market rent of the Leased Premises. The third arbitrator's decision shall be binding on both Landlord and Tenant. All arbitrators shall be commercial real estate brokers who are independent from the parties and who have had at least ten (10) years' experience leasing comparable buildings in the Guilford area. Each party shall pay the fees of its own arbitrator, and the fees of the third arbitrator shall be shared equally by the parties. If as of the commencement of the Renewal Term the amount of the Base Rent for the Renewal Term has not been determined, Tenant shall pay the amount determined by Landlord's appraiser for the Leased Premises and when the determination has actually been made, an appropriate retroactive adjustment shall be made as of the commencement of the Renewal Term if necessary. In the event that such determination shall result in an overpayment by Tenant of any Base Rent, such overpayment shall be credited by Landlord Base Rent next becoming due, and if such determination shall result in an underpayment by Tenant of any Base Rent, Tenant shall pay any such amounts to Landlord within fifteen (15) days following such determination.

3.4 **Payment of Base Rent**. Monthly installments of Base Rent shall be due and payable in advance without demand or setoff, except as otherwise set forth in this Lease, on the first (1st) day of each calendar month, except that a pro-rated portion of the rent shall be due upon the first day of the Initial Term if the Initial Term does not commence on the first day of a particular month.

3.5 **Late Charge**. In order to cover the extra expense involved in handling delinquent payment, Tenant agrees to pay a "late charge" of five percent (5%) of any installment of Base Rent or Additional Rent which is paid more than ten (10) days after the same is due. Such late charge shall be due and payable on demand.

4 ADDITIONAL RENT.

4.1 **Common Area Maintenance Costs**. As additional rent during the term of this Lease, Tenant agrees to pay, on the first day of each calendar month, in advance, an amount equal to one-twelfth (1/12th) of its Proportionate Share (as hereinafter defined) of the estimated "Common Area Maintenance Costs" (as determined by Landlord) during the calendar year in

which said month occurs. Such payments of Common Area Maintenance Costs shall commence on April 1, 2015.

Following the close of each calendar year, the Tenant shall pay within thirty (30) days after receipt of written demand therefor by Landlord (together with reasonable underlying supporting documentation), any deficiencies in Tenant's share of the Common Area Maintenance Costs as established by Landlord's actual costs of same. In the event that Tenant's payments were greater than its actual share of such costs, such excess shall be credited towards future payments to be made by Tenant or if Tenant's lease term has expired and Tenant is not in default, such excess shall be repaid to Tenant.

4.2 The term "Common Area Maintenance Costs" shall mean all Common Area Maintenance Costs plus such expenses for administrative and overhead cost and expenses paid or incurred by Landlord for the maintenance and operation of the Office Park, which are herein defined to include, without limitation, the following:

(i) All supplies, materials and other costs incurred in connection with the operation and maintenance of the common areas of the Office Park;

(ii) The cost of supplying utilities to the common areas of the Office Park;

(iii) The cost of all maintenance and service agreements on equipment for the common areas of the Office Park;

(iv) The cost of all trash or rubbish removal, snow plowing and removal and lawn care;

(v) Insurance premiums, which shall include fire, casualty and liability and any other insurance considered customary or prudent on retail buildings similar to the Office Park or as may be required by a mortgagee of the Premises;

(vi) Actual wages, salaries and benefits (including, but not limited to, vacation pay and union payments or benefits, if any) of all necessary building employees engaged in the physical operation, repair and maintenance of the building, all mechanical equipment and parking areas, including employer Social Security taxes and any other taxes which may be levied on such wages and salaries and including a managing agent's fee in accordance with the then current rates in Connecticut, including any reasonable fee payable to Landlord if Landlord acts as managing agent (which shall not exceed 10% of the Common Area Maintenance Costs (exclusive of insurance premiums, utilities, Taxes and single expenditures in excess of $10,000), but excluding, however, any brokerage fees paid in relation to the operation of the premises of which the Leased Premises are a part; and

(vii) The cost of all other items of general operation, repair and maintenance of the Office Park.

Common Area Maintenance Costs shall not include or have excluded therefrom the following: (i) the cost of any repairs, alterations, additions, changes, replacements and other items which are (a) capital expenditures or capital improvements (except those in connection with the reduction in Common Area Maintenance Costs or changes in accordance with laws or regulations enacted after the Effective Date of this Lease), or (b) pursuant to or as a result of condemnation; (ii) the cost of complying with laws or changes in laws, including, hazardous waste and environmental laws, and laws requiring changes to the Building or Premises; (iii) any profits received by Landlord on account of computations where the aggregate of the Proportionate Shares for all tenants in the Building equals a number greater than 100; (iv) additional rent or other charge under any lease (including any superior or ground lease) or sublease to, or assumed directly or indirectly by, Landlord; (v) transfer, franchise, capital gains, income, inheritance taxes and similar costs incurred by Landlord; (vi) costs which are paid by other tenants of the Office Park; (vii) costs that would duplicate costs theretofore included in Common Area Maintenance Costs; (viii) arbitration expenses unrelated to the maintenance, operation and security of the Building and any other arbitration expenses incurred in connection with leases of space in the Building or with default or eviction proceedings against tenants or relating in any other way to tenant disputes; (ix) unless caused solely by Tenant after the Commencement Date, costs relating to, or in connection with, the removal, containment, encapsulation, disposal, repair, monitoring, testing, venting, clean-up, remediation, or compliance with laws pertaining to (a) asbestos; or (b) any hazardous, toxic or regulated substance or gas; (x) depreciation, interest or amortizations on mortgages or ground lease payments; (xi) legal fees incurred in negotiating and enforcing tenant leases; (xii) real estate brokers' leasing commissions; (xiii) improvements or alterations to tenant spaces; (xiv) the cost of providing any service directly and paid directly by any tenant; (xv) costs of any items for which Landlord receives reimbursement from insurance proceeds or a third party; (xvi) cost to correct any penalty or fine incurred by Landlord due to Landlord's violation of any federal, state, or local law or regulation and any interest or penalties due for late payment by Landlord of any of amounts included as part of the Common Area Maintenance Costs; (xvii) cost of repairs necessitated by Landlord's negligence or willful misconduct; (xviii) fees paid to affiliates of Landlord to the extent that such fees exceed the customary amount charged for the services provided.

4.3 **Real Property Taxes/Assessments for Municipal Improvements**. As additional rent during the term of this Lease, Tenant agrees to pay on the first day of each calendar month, in advance, without setoff or deduction, an amount equal to one-twelfth (1/12th) of its Proportionate Share of the real estate taxes assessed against the Office Park. "Real estate taxes" shall mean all taxes or assessments and governmental charges whether federal, state, county or municipal which are levied or charged against real estate, personal property or rents (excluding, however, any capital gains, franchise, inheritance or income taxes and any fine, interest, late charge or penalty levied or assessed for late payment of real estate taxes), or on the right or privilege of leasing real estate or collecting rents thereon and any other taxes and assessments attributable to the premises of the Office Park. Tenant shall have the right to examine the appropriate bills to determine the accuracy of its Proportionate Share.

4.4 **Tenant's Proportionate Share**. Whenever the term "Proportionate Share" is used in this Lease or reference is made to Tenant's "Proportionate Share", said term shall be determined by the expression as a percentage of the fraction where the numerator is the total rentable square feet of the Leased Premises (as set forth in Section 1.1.) and the denominator is the total rentable square feet of the Office Park. Tenant's Proportionate Share shall be forty eight percent (48%).

4.5 **Other**. The foregoing payments together with all other costs and expenses which Tenant assumes or agrees to pay pursuant to this Lease shall at Landlord's election be treated as additional rent ("Additional Rent"), and in the event of non-payment, Landlord shall have all the rights and remedies herein provided for in the case of non-payment of Base Rent or of a breach of condition. If Tenant shall default in making any payment required to be made by Tenant (including the payment of Base Rent required by Paragraph 3 hereof), or shall default in performing any term, covenant or condition of this Lease on the part of Tenant to be performed which shall involve the expenditure of money by Tenant, after five (5) business days' notice to Tenant and Tenant's failure to pay the same (except in the case of an emergency when no such notice shall be required), Landlord, at Landlord's option, may, but shall not be obligated to, make such payment or, on behalf of Tenant, expend such sum as may be necessary to perform and fulfill such term, covenant or condition, and any and all sums so expended by Landlord with interest thereon at twelve (12%) percent per annum from the date of such expenditure, shall be and be deemed to be additional rent, in addition to the Base Rent, and shall be repaid by Tenant to Landlord, on demand, but no such payment or expenditure by Landlord shall be deemed a waiver of Tenant's default nor shall it affect any other remedy of Landlord by reason of such default. Base Rent and Additional Rent are sometimes collectively referred to herein as "Rent."

4.6 **Accounting of Common Area Maintenance Costs**. After the end of each calendar year, Landlord shall submit to Tenant a reasonably detailed accounting of Common Area Maintenance Costs for such calendar year, and Landlord shall certify to the accuracy thereof. If estimated payments theretofore made for such year by Tenant exceed Tenant's required payment on account thereof for such calendar year according to such statement, Landlord shall credit the amount of overpayment against subsequent obligations of Tenant with respect to Common Area Maintenance Costs (or promptly refund such overpayment if the Term of this Lease has ended and Tenant has no further obligation to Landlord); but if the required payments on account thereof for such calendar year are greater than the estimated payments (if any) theretofore made on account thereof for such calendar year, Tenant shall make payment to Landlord within thirty (30) days after being so advised by Landlord, and the obligation to make such payment for any period within the Term shall survive expiration of the Term.

Any such accounting by Landlord shall be binding and conclusive upon Tenant unless within sixty (60) days after the giving by Landlord of such accounting Tenant shall notify Landlord that Tenant disputes the correctness of such accounting, specifying the particular respects in which the accounting is claimed to be incorrect. Tenant may, at Tenant's sole cost and expense, undertake an audit of such of Landlord's books as are directly relevant to the accounting for Common Area Maintenance Costs for the calendar year in question, if Tenant timely sends a notice to Landlord disputing the accounting received from Landlord, Tenant has made all payments billed or invoiced by Landlord as of the date of the audit, the audit is performed only by Tenant's employees, internal accounting department or an independent certified public accounting firm reasonably approved by Landlord and whose fee or other compensation is fixed by contract and is

in no manner computed or determined based upon the results of the audit, both Tenant and its examiners execute and deliver to Landlord a confidentiality agreement in form and substance reasonably acceptable to Landlord whereby such parties expressly agree to maintain the results of such audit in strict confidence, and such audit is commenced and completed and the results thereof delivered to Landlord within sixty (60) days following the date Landlord makes its books available to Tenant. If Tenant fails to timely deliver a dispute notice to Landlord, or fails to complete its audit and deliver the results thereof to Landlord within the applicable sixty (60) day period, then, in either of such events, Landlord's accounting shall be binding and conclusive upon Tenant for all purposes of this Lease. If it is finally determined or mutually agreed that Landlord has overstated Tenant's Proportionate Share of Common Area Maintenance Costs, Landlord shall credit the amount of such overstatement against the monthly installments of Common Area Maintenance Costs next due under this Lease (or refund such amount to Tenant if the Term has ended and Tenant has no further obligations to Landlord under this Lease). If the audit demonstrates that Landlord has not overstated Tenant's Proportionate Share of Common Area Maintenance Costs, then Landlord may invoice Tenant for any amount by which Tenant's Proportionate Share of Common Area Maintenance Costs was understated, which invoice shall be payable by Tenant within thirty (30) days after receipt.

5. OPTIONS TO EXPAND AND PURCHASE.

5.1 Option to Expand.

Landlord shall provide Tenant with the right of first offer to lease any additional office space which becomes available within the Office Complex. In the event any additional office space becomes available, Landlord shall advise Tenant of all pertinent information regarding the Office Space, including the rental terms. Tenant shall be provided with a period of thirty (30) days from the date when Tenant receives the lease information during which Tenant shall have the exclusive right to negotiate a lease for the additional office space. If the Landlord and the Tenant are not able to agree on terms of a proposed lease within such thirty (30) day period, then Landlord shall have the right to market the additional office space to other prospective tenants.

5.2 Option to Purchase.

A. Tenant is hereby granted an option to purchase the Office Park at any time during the first three (3) Lease Years of the Term, upon the terms and conditions set forth herein (the "Option"). In order to exercise the Option, Tenant must provide notice to Landlord of its exercise of the Option not less than ninety (90) days prior to the proposed closing date (the "Closing Date"), time being of the essence. If Tenant does not complete the acquisition of the Office Park by the end of the third Lease Year, then the Option shall automatically terminate and the Tenant shall have no further rights to purchase the Office Park. The failure of Tenant to exercise the Option or to acquire the Office Park or the termination or expiration of the Option for any reason whatsoever shall not affect this Lease or Landlord's and Tenant's obligations under this Lease. If Tenant exercises the Option, and subject to the terms and conditions herein set forth, Landlord hereby agrees to sell, and Tenant hereby agrees to purchase, the Office Park including buildings,

structures, and improvements now or hereafter thereon and the fixtures used in connection therewith on the following terms and conditions.

(1) The Landlord shall convey marketable title, free and clear of all encumbrances, liens and exceptions to title subject to the following matters (the "Permitted Title Exceptions"):

(a) Any restrictions, limitations, regulations, ordinances, rules and statutes, if any, of the Town of Guilford with respect to the Office Park (including, but not limited to, the wetlands, zoning and planning rules and regulations of the Town of Guilford) and of such other governmental authorities as may have, or claim to have, jurisdiction with respect to the Office Park, provided that they are not violated by any existing buildings and improvements erected on the property or by their use;

(b) Real estate taxes of the Town of Guilford which are not yet due and payable;

(c) Those defects and encumbrances which an accurate survey and personal inspection would show, provided that such does not render title unmarketable in accordance with the standards of title of the Connecticut Bar Association;

(d) Any other easement, restriction, covenant, and/or encumbrance of record, provided they are not violated and that they do not impair the marketability of title or the continued use of the Office Park for commercial purposes as now or hereafter allowed by law; and

(e) Other easements, agreements and restrictions of record, provided that such does not render title unmarketable in accordance with the standards of title of the Connecticut Bar Association.

B. Subject to adjustments as set forth herein, the purchase price for the Office Park shall be Three Million Two Hundred Fifty Thousand Dollars ($3,250,000.00) (the "Purchase Price"), which shall be due and payable in full at Closing by bank or certified check or wire transfer of immediately available funds. To enable Landlord to make conveyance as herein provided, Landlord may, at the time of delivery of the deed, use the purchase money, or any portion thereof, to clear the title of any or all encumbrances or interests, provided the instruments so procured are recorded simultaneously with the delivery of the deed.

C. At the Closing, Landlord shall deliver, at Landlord's expense, and Tenant shall accept, a Warranty Deed, in proper form according to Connecticut law, duly executed and acknowledged by Landlord, conveying to Tenant fee simple, marketable title to the Office Park, subject only to the Permitted Title Exceptions, and checks to pay all conveyance taxes required to be paid by Landlord in connection with the transaction contemplated in this Lease. If said deed refers to any plan necessary to be recorded herewith, Landlord shall deliver such plan with the deed in form adequate for recording or registration, provided such plan is reasonably available and is necessary to establish marketable and insurable title.

D. The Closing of the purchase and sale of the Office Park (the "Closing") shall take place at The Law Offices of Thomas J. Dufour, LLC, 65 Trumbull Street, New Haven,

Connecticut, at 10:00 a.m. unless otherwise herein provided or as otherwise agreed or required by Tenant's mortgage lender, on the Closing Date to be selected by Tenant not later than the final business day of the Term.

E. Subject to Tenant's rights of inspection as hereinafter provided, the Office Park shall be sold and conveyed strictly on an "as is", "where is" and "with all defects" basis, without representation, warranty or covenant, express, implied or statutory, of any kind whatsoever, including, without limitation, representation, warranty or covenant as to condition (structural, mechanical or otherwise), past or present use, construction, development, lease performance, investment potential, tax ramifications or consequences, income, service agreements, compliance with law, habitability, tenancies, merchantability or fitness or suitability for any purpose, all of which are hereby expressly disclaimed. Nothwithstanding the foregoing, at the time of closing the Office Park shall be conveyed substantially in the condition in which it existed at the time of exercise of the Option, excluding, however, normal wear and tear and any repairs which are required to be completed by the Tenant under this Lease.

F. After the Closing the Landlord shall be allowed to remain in possession of its office in the Barn Suite for up to eight (8) months without payment of any rent. Landlord shall pay all utilities separately metered to the Barn Suite.

G. Notwithstanding anything to the contrary elsewhere herein contained, it is understood and agreed by the parties that the Office Park shall not conform to the title provisions of this Option unless (a) all buildings, improvements and structures, including but not limited to, any driveways, garages, septic system and cesspools and all means of access to the Office Park shall be located completely within the boundary lines of the Office Park and shall not encroach upon or under the property of any other persons or entity, (b) no building, improvement or structure of any kind belonging to any other person or entity shall encroach upon or under said Office Park, provided, however, that encroaching utility easements shall not be considered as a violation of the title provisions of this agreement and further provided that any such utility easement shall not affect the use of the Office Park for its purposes, (c) the Office Park shall abut a public way duly laid out or accepted as such by the city or town in which it is located, (d) title to the Office Park is insurable, for the benefit of Tenant, by a title insurance company qualified to do business in the State of Connecticut, and a fee owner's policy of title insurance at normal premium rates, in the American Land Title Association (ALTA) form currently in use, subject only to those printed exceptions to title normally included in the "jacket" to such form or policy, or those exceptions set forth in this Option and (c) all disputes as to the condition of title shall be resolved in accordance with the standards promulgated by the Connecticut Bar Association in effect as of the date hereof and any other applicable provisions of Connecticut law.

H. Landlord shall execute and deliver at time of the Closing, executed certificates, affidavits and indemnities regarding parties in possession of the premises, mechanics' and materialmen's liens and other certificates, affidavits and/or indemnities customarily required by title insurance companies sufficient to eliminate any title insurance exceptions for these matters and to execute and deliver, at such time, any such certificates, affidavits and/or indemnities customarily required by Tenant's mortgage lender and/or Internal Revenue Service in connection with transactions of this type. If Landlord is not a natural person, Landlord shall also provide evidence

of its legal existence and authority to enter into this transaction and to convey title to Tenant and of the authority and incumbency of the person(s) executing documents on behalf of Landlord.

F. Collected rents, water and sewer use charges, operating expenses, common charges, and taxes and assessments for the then current fiscal year shall be apportioned and fuel value shall be adjusted, as of the day of performance of the Closing and the net amount thereof shall be added to or deducted from, as the case may be, the purchase price payable by Tenant at the time of delivery of the deed. Uncollected rents for the current rental period shall be apportioned if and when collected by either party.

I. At time of Closing:

(a) There shall be no written notices of deficiency or violation with respect to the storm water or sewage system, water supply or utilities services used in connection with the Office Park;

(b) There shall be no underground oil or gas storage tanks exists at the Office Park;

(c) The Office Park shall not be the subject of any written orders, notices or allegations of violations from any governmental agency;

(d) There will be no written notice of any claim, action, dispute, contingency or proceeding nor will there be pending any suit, claim or contingency affecting the Office Park, including but not limited to actions for health code violations, violation or infringement of zoning or other laws, rules and regulations applicable to the Office Park or actions in tort or equity.

(e) All buildings have final certificates of occupancy issued and not revoked or suspended; provided that Tenant shall be responsible for an certificate of occupancy for its own improvements.

J . At any time prior to the exercise of the Option, the Tenant:

(i) may, at its own expense, have the septic system(s) serving the Office Park and buildings inspected by a person licensed or certified to conduct septic system inspections. If such system fails the inspection such that a certificate of compliance cannot or will not issue, the Tenant shall shall have the right to terminate this Option and its exercise by written notice to the Landlord. If the Tenant so elects to terminate this Option and its exercise the Option and its exercise shall be null and void without further recourse to either party;

(ii) may, at its own expense have each of the buildings of the Office Park inspected for structural soundness and have all roofing, electrical, mechanical, plumbing, fire alarm, fire suppression and other systems serving each building inspected to determine if such systems are in good repair and in good working order and condition. If any inspection reveals that there is a structural defect or that any system is not in good repair and in good working order and condition

Tenant shall have the right to terminate this Option and its exercise by written notice to the Landlord. If the Tenant so elects to terminate this Option and this Option and its exercise shall be null and void without further recourse to either party;

(iii) may, at its own expense have done a Phase I environmental inspection of the Office Park and, if deemed prudent or desirable, a Phase II environmental inspection for the purpose of determining if the Office Park and all portions thereof are in compliance with Environmental Laws, as hereinafter defined.. Landlord shall permit engineers and other professionals conducting any such inspection full access to the Office Park and any portion thereof for such purposes; provided that Tenant shall not conduct any invasive testing without Landlord's prior consent. Landlord shall give written notice to Tenant as soon as reasonably practicable any communication received by Landlord from any governmental authority concerning Hazardous Materials which relates to the Office Park or any portion thereof, and any environmental condition, i.e. any disposal, release or threat of release of hazardous materials on, under, from or about any building or the Office Park or storage of hazardous materials on, from or about any building or the Office Park of which Landlord is aware. "Environmental Laws" are any federal, state and/or local statute, ordinance, bylaw, code, rule and/or regulation now or hereafter enacted, pertaining to any aspect of the environment or human health, including, without limitation, the General Statutes of Connecticut and the regulations promulgated by the Connecticut Department of Energy and Environmental Protection, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. § 9601 *et seq.,* the Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6901 *et seq.,* the Toxic Substances Control Act, 15 U.S.C. §2061 *et seq.,* the Federal Clean Water Act, 33 U.S.C. §1251, and the Federal Clean Air Act, 42 U.S.C. §7401 *et seq.* "Hazardous Materials" shall mean chemicals, contaminants, pollutants, flammables, explosives, materials, wastes or other substances defined, determined or identified as hazardous or toxic under or otherwise controlled pursuant to any Environmental Laws, including, without limitation, any "oil," "hazardous material," "hazardous waste," "hazardous substance" or "chemical substance or mixture", as the foregoing terms (in quotations) are defined in any Environmental Laws.

In the event that a Phase I environmental inspection reveals that a Phase II inspection would be advisable or necessary or if Landlord receives a communication from a government agency, bureau or department regarding an environmental condition, Tenant shall have the right to terminate this Option and its exercise by written notice to the Landlord. If the Tenant so elects to terminate this Option and its exercise and this Option and its exercise shall be null and void without further recourse to either party.

(iii) The Tenant at its own expense may have the buildings in the Office Park tested for the presence of asbestos, asbestos containing material and radon gas. If such testing reveals the presence of asbestos or asbestos containing material or indicates the presence of radon gas above normal limits as defined by the United States Environmental Protection Agency {"EPA."), Tenant shall have the option of terminating this Option and its exercise by written notice to the Landlord. If Tenant so elects to so terminate this Option and its exercise shall become null and void without further recourse to either party.

K. All inspections shall be conducted at Tenant's sole cost and expense. Except as otherwise set forth in this Lease, Landlord shall have no obligation to make any repairs to the

Office Park. The failure of Tenant to exercise the Option or the termination of the Option as provided herein shall not affect this Lease in any way, which shall remain in full force and effect.

L. Upon reasonable prior notice Tenant and its servants or agents shall have the right of access to all parts of the Office Park prior to the Closing for the purpose of showing the Office Park to prospective mortgage lenders and/or their real estate appraisers and/or to conduct inspections.

M. At the Closing, Landlord shall provide final certificates of occupancy for all buildings in the Office Park, if such previously have not been given to Tenant; provided that Tenant shall be responsible for any certificate of occupancy for its own improvements.

N. Upon Tenant's written request for any of the following, Landlord shall provide the same to Tenant within ten (10) days of receipt to the extent in the possession of the Landlord:

(i) a list of all tenants in the Office Park, a copy of each of their leases, including any amendments or modifications, thereto, the amount of base rent and any additional rent payable by each and the amount(s), if any, which have not been paid and are due and owing. Furthermore, Landlord at Tenant's written request, shall obtain from each tenant an estoppel certificate prepared by Landlord which certificate shall describe the lease and any amendments thereto and shall set forth the lease term, a description of the premises leased by such tenant, whether the lease is in full force and effect, whether the tenant has any defenses or rights of offset against the Landlord, the date to which rent payments have been paid in advance, whether there is any default on the part of the other party, and acknowledging that the Tenant as purchaser of the Office Park is relying on the certificate and the information contained therein. All such estoppel certificates shall be given to tenant within ten (10) business days of the exercise of the Option. At Closing Landlord shall assign all extant Leases to Tenant and Tenant shall assume all of Landlord's obligations under the Leases arising after the Closing.

If Tenant exercises the Option, then from and after the exercise Landlord will send to Tenant a copy of any notice of default issued to a tenant but shall not terminate any lease for the default without first obtaining Tenant's consent and Landlord will not enter into any new lease with any party without first obtaining Tenant's consent unless the new lease is entered into as a result of the exercise of a right by an existing tenant under its lease nor will Landlord enter into any amendment or modification of an existing lease without first obtaining Tenant's consent;

(ii) a list of all parties providing services to the Office Park, copies of all contracts/agreements with such parties and the current status of Landlord's payments to each of them. Landlord shall not renew, modify, amend or extend any such contract/agreement or enter into any new contract/agreement with an existing or new party without first obtaining Tenant's written consent thereto. Landlord hereby represents that it is not in default in its required performance under any such agreement and that as of the date hereof and as of the date of Closing there is not event which by the passage of time would ripen into a default by Landlord. At Closing, Landlord shall assign all such contracts/agreements to Tenant as Tenant wishes to assume;

(iii) a copy of all service, maintenance and repair records for machinery and equipment used in connection with the buildings and Office Park;

(iv) an inventory of all furniture, fixtures, equipment, cleaning supplies, tools, maintenance items, landscaping and Office Park maintenance machinery and equipment owned by Landlord and used in connection with the buildings and the Office Park. The purchase price for the Office Park shall include all these items and any replacements or additions thereto and Landlord shall execute a bill of sale to Tenant transferring clear and unencumbered title thereto at Closing;

(v) a list of all employees of the Office Park together with their current salaries and benefits and any scheduled changes in salary or benefits, a copy of each employee's work record and evaluation and a statement whether such employee is at will or under contract. Landlord shall not renew, modify, amend or extend any such employment contract/agreement or enter into any new employment contract/agreement with an existing or new employee without first obtaining Tenant's written consent thereto. Landlord shall also provide Tenant within than time any collective bargaining agreements or union contracts, their current status and expiration dates. Landlord shall consult with Tenant before entering into any new contract/agreement. At Closing, Landlord shall assign all such contracts/agreements to Tenant;

(vi) books and records relating to the expenses and income from operation of the Office Park.

O. In addition to the items apportioned between Landlord and Tenant at Closing as herein provided, any payments (i) not yet due and payable as of the Closing date or (ii) for any period after the Closing date under any service contracts/agreements or employment contracts shall be apportioned as of such date between Landlord and Tenant.

P. If Landlord shall be unable to give title or to make conveyance, or to deliver possession of the Office Park, all as herein stipulated, or if at the time of the Closing the Office Park does not conform with the provisions hereof or if any representation made in Paragraphs 5 K, O through and including R is not true at time of Closing, Tenant shall have the right to terminate this Option and its exercise by written notice to the Landlord and all other obligations of the parties hereto shall cease and the obligations of the parties under this Option shall be void without recourse to the parties hereto. Such right of termination shall be Tenant's sole remedy.

Q. Tenant warrants and represents that Tenant has dealt with no broker in connection with the Option other than Colliers International, Hartford Office and O, R & L (the "Brokers"), and, in the event of any brokerage claims against Landlord predicated upon prior dealings with Tenant, Tenant agrees to defend the same and indemnify Landlord against any such claim (except any claim by the Brokers). Landlord warrants and represents that Landlord has dealt with no broker in connection with the consummation of this Lease other than the Brokers, and, in the event of any brokerage claims against Tenant predicated upon prior dealings with Landlord, Landlord agrees to defend the same and indemnify Tenant against any such claim. Landlord shall be responsible to pay the commission or fee due to the Brokers as and to the extent provided in a separate written agreement

R. Notices from one party to the other regarding the Option shall be given in the manner and to the person or entity from time to time as specified in Section 20 of this Lease.

6. SECURITY DEPOSIT.

Tenant has this day deposited the sum of $16,862.66 upon execution of this Lease to secure the faithful performance of all of the terms and conditions of this Lease. If the Tenant shall comply with all the terms, conditions and obligations of this Lease, such deposit will be returned to the Tenant at the termination of this Lease, without interest. In the event of the Tenant's default hereunder such deposit may be applied by the Landlord toward reduction of any damages without barring the Landlord, in any manner whatsoever, from other or additional legal or equitable course. Such deposit shall not be construed as constituting liquidated damages. It is understood and agreed that the Landlord shall always have the right, at its option, to apply said deposit, or from time to time such one or more pats or portions thereof or part or portion thereof not previously applied, to late charges and to the curing of any default that may then exist, without prejudice to any other remedy or remedies which the Landlord may have on account thereof. If Landlord shall apply any portion of the security deposit to cure a default by Tenant, Tenant shall immediately upon notice replenish the security deposit to the full amount set forth above. Tenant hereby agrees not to look to the Landlord's mortgagee, as mortgagee, mortgagee in possession, or successor in title to the Office Park, for accountability for any security deposit required by Landlord hereunder unless said sums have actually been received by said mortgagee as security for Tenant's performance of this Lease.

7. PUBLIC UTILITIES/TRASH REMOVAL.

7.1 Tenant shall apply for and obtain in Tenant's own name and at Tenant's sole cost and expense, all utilities that Tenant desires or requires, including but not limited to gas, phone, electricity, and water and sewer charges. Landlord represents that all utilities (except sewer) will be separately metered. Tenant shall pay for such utilities directly to the supplier thereof.

7.2 Except as otherwise herein provided, Landlord shall not be liable to Tenant or any other person for any failure or interruption of water supply, sewer, gas, telephone or electric current unless such failure or interruption is due to the negligence or misconduct of Landlord or its agents, servants, employees or contractors.

7.3 Tenant shall be solely responsible for removal and transfer of all rubbish and trash from the Leased Premises to the dumpster or other common rubbish removal facility located on the Premises, as well as for the proper removal of medical waste in accordance with all government laws and regulations. Landlord shall ensure the availability and maintenance of said central trash removal on site, and ensure routine removal of rubbish from that site. Tenant shall be solely responsible at its own expense for the proper removal and disposal of all medical waste as required by applicable law. Tenant shall not place any medical waste in any dumpsters or other trash receptacles.

7.4 Notwithstanding anything to the contrary in the Lease, if as a result of the negligence or willful misconduct of Landlord, its agents, servants, employees, contractors or any party for which Landlord is legally responsible there shall be an interruption, curtailment or suspension (collectively, "Interruption") of any service required to be provided to the Leased

Premises that shall materially interfere with Tenant's use and enjoyment of a material portion of the Leased Premises, and Tenant actually ceases to use the affected portion of the Leased Premises and if (a) such Interruption shall continue for five (5) consecutive business days following receipt by Landlord of written notice from Tenant describing such Interruption (the "Interruption Notice") and (b) such Interruption shall not have been caused, in whole or in part, by reasons beyond Landlord's reasonable control or by an act or omission of Tenant or Tenant's agents, employees, contractors or invitees (an Interruption that satisfies the foregoing conditions being referred to hereinafter as a "Material Service Interruption") then, Tenant shall be entitled to an equitable abatement of Base Rent, based on the nature and duration of the Material Service Interruption, the area of the Premises affected, and the then current Base Rent amounts, for the period that shall begin on the first day of the Material Service Interruption and that shall end on the day such Material Service Interruption ceases. In all events, Landlord will use commercially reasonable efforts to restore the service interruption as soon as is reasonably practicable. If such Material Service Interruption continues for twenty (20) consecutive business days Tenant may cure the Interruption and deduct the reasonable expenses incurred by Tenant against Base Rent next becoming due.

8. USE OF LEASED PREMISES.

8.1 Use. The Tenant shall use and occupy Premises solely for the purpose of medical services and general office use (the "Permitted Use"). Tenant shall not use the Leased Premises for any other purpose without the express written consent of the Landlord.

8.2 Licenses and Permits. It shall be Tenant's sole obligation to obtain all licenses, permits and franchises required by it for its use of the Leased Premises. No failure to obtain the same, nor any revocation thereof by any governmental authority of any such licenses, permits or franchises heretofore or hereafter granted by any such governmental authority, shall in any manner affect this Lease or diminish the amount of rent or any other payments or charges payable by Tenant hereunder.

8.3 Compliance with Laws. Tenant shall comply with and conform to all federal law, the laws of the State of Connecticut, and the by-laws, rules and regulations of the town in which the Leased Premises is located and the Board of Fire Underwriters, now in force, or which may hereafter be in force, so far as the Leased Premises are or may be concerned only as they relate specifically to Tenant's use and if not, then Landlord shall comply Tenant agrees to hold Landlord harmless from all fines, penalties or costs for violation of or non-compliance with the same caused by the Tenant, its employees, agents, assignees, subleases, successors and assigns. The commencement or pendency of any State or Federal court abatement proceeding affecting the use of the Leased Premises shall, at the option of the Landlord, be deemed a breach hereof.

Landlord shall comply with and conform to all federal law, the laws of the State of Connecticut, and the by-laws, rules and regulations of the town in which the Leased Premises is located and the Board of Fire Underwriters, now in force, or which may hereafter be in force, so far as the Building and Office Park. Landlord agrees to hold Tenant harmless from all fines, penalties or costs for violation of or non-compliance with the same caused by Landlord its employees, agents, assignees, or contractors.

8.4 Nuisance. The Tenant agrees to use the Leased Premises in a manner that does not interfere with or infringe upon the rights of other tenants, if any, in the Building or the Property. Tenant shall not cause, maintain or permit any nuisance in, on or about the Leased Premises, the Building or the Office Park; nor shall Tenant commit or suffer to be committed any waste in, on or about the Leased Premises, the Building or the Office Park.

8.5 Rules and Regulations. Landlord reserves the right to impose upon the Tenant such reasonable rules and regulations regarding the use of the Leased Premises and the Office Park, as may reasonably be necessary, in the sole discretion of Landlord, to preserve and protect the Leased Premises, the Building, the Office Park and the rights of any other tenants of the Office Park. All such rules and regulations shall be observed by the Tenant and by Tenant's employees, agents and customers. All such rules and regulations shall not, however, be inconsistent with the proper and rightful enjoyment by the Tenant of the Leased Premises. No such rule or regulation shall be effective as to Tenant unless and until Tenant has received a copy of same in writing. Landlord shall enforce all rules and regulations uniformly against all occupants of the Office Park.

8.6 Tenant's Expenses. Tenant shall pay directly and shall have full responsibility for (i) all utilities to the Leased Premises, including, without limitation, gas, electricity, telephone, heating, ventilating, air conditioning and any service costs associated therewith; (ii) all installation costs for telephone and wiring for specialty equipment within the Leased Premises; (iii) the maintenance and repair of Tenant's HVAC units, plate glass, electrical wiring, plumbing and any other systems or equipment upon the Leased Premises; (iv) glass cleaning, repair or replacement; (v) rubbish removal; (vi) pest control; (vii) Tenant's liability insurance; (viii) Tenant's personal property taxes levied or assessed against trade fixtures, equipment, furnishings, merchandise and other personal property located within or installed in or upon the Leased Premises; and (ix) any interior cleaning or maintenance.

8.7 No Offset or Deductions. Except as expressly set forth in this Lease, the Tenant will not be permitted to offset or deduct any expenses it incurs or security deposit it paid against the Landlord's Base Rent or Additional Rent.

9. LANDLORD'S REPAIRS AND MAINTENANCE.

9.1 Landlord shall be responsible for the maintenance, repair and replacement of the common areas of the Office Park except those areas which are to be maintained by other tenants of the Office Park.

9.2 Throughout the Term, Landlord shall repair, maintain, and replace, and keep in good working order and condition, all at its sole cost and expense, the exterior and structural components of the Building and Leased Premises, including but not limited to the roof, and all parts and portions thereof, the roofing system and its component parts, the roof membrane, exterior walls, interior load bearing walls, foundation, floor slab, sprinkler and fire alarm systems, exterior canopies, gutters and water spouts, and utility services extending to the service connections within the Leased Premises.

9.3 Except as provided in this Lease, Landlord shall not be required to furnish any services or facilities or to make any improvements, repairs or alterations in or to the Leased Premises during the term of this Lease or any renewal thereof. Any repairs and maintenance, which are the responsibility of the Landlord shall, if caused by the negligence or intentional act of the Tenant, its agents, employees and/or invitees, be paid for by the Tenant.

10. TENANT'S REPAIRS AND MAINTENANCE. Tenant shall, at all times during the term of this Lease and any renewals thereof, at its own cost and expense, keep and maintain in repair and good condition (ordinary wear and tear excepted), the interior, non-structural portions of the Leased Premises and any other areas the Landlord is not required to maintain, including plate glass, electrical wiring, lighting (including bulbs and starters) plumbing, heating, ventilation, and air conditioning installations (regardless of whether such system is located inside or outside the Building) and any other system or equipment upon the Leased Premises and shall surrender the same upon termination hereof, in as good condition as received (ordinary wear and tear and damage by casualty excepted). Provided, however, that in the event that any components of the heating, ventilating and air conditioning system cannot be repaired and must be replaced, Landlord shall be responsible for the cost of such replacement. If Landlord is obligated to replace any component of the heating, ventilating and air conditioning system, and fails to do so within a reasonable time after notice from the Tenant, Tenant may undertake the replacement and deduct the reasonable cost thereof from the Base Rent next coming due. Tenant will also perform and make all maintenance and repairs necessary to keep the Leased Premises which are not Landlord's responsibility as elsewhere provided in good order and condition, ordinary wear and tear and damage by casualty excepted. Tenant shall be liable for any damage to the Building resulting from the acts or omissions of Tenant or its customers, guests, employees, agents, and authorized representatives. Tenant shall further be responsible for all repairs, the need for which arises out of (a) the performance of or existence of improvements made after the date hereof by or at the request of Tenant, (b) the installation, use or operation of Tenant's Property, (c) the moving of Tenant's property in or out of the Building, or (d) the acts, omissions, or negligence by Tenant or any of its subtenants or any of its or their employees, agents, contractors, or invitees or their use or occupancy of the Premises. All repairs, maintenance and replacements as aforesaid shall be in compliance with all applicable building codes and ordinances.

11. INSURANCE.

11.1 Liability Insurance. Tenant shall, at its own expense, during the entire term of this Lease, or any extension thereof, carry owner's and tenant's general liability and property damage insurance covering the Leased Premises with limits of Three Million Dollars ($3,000,000.00) combined single limit in respect to injuries or death of more than one person in any one occurrence and One Million Dollars ($1,000,000.00) for property damage. Such policies shall be written in standard Connecticut form, shall name the Landlord as an additional insured therein, shall provide for not less than ten (10) days written notice to Landlord in the event of cancellation or material change in coverage, and shall be primary and noncontributing with respect to any insurance carried by the Landlord. Prior to the commencement date of this Lease, Tenant shall deliver to the Landlord certificates evidencing such insurance and, at Landlord's option, deliver said original policies to the Landlord. Landlord shall deliver to Tenant a certificate evidencing all insurances maintained by Landlord on the Building. Throughout the Term, Landlord shall insure the Building

in an amount equal to its full replacement value, exclusive of foundation. All insurance herein required of the parties shall be carried by companies authorized to to business in the State of Connecticut and having a Best's rating of at least A-X.

11.2 Tenant's Use of the Leased Premises. Tenant shall not use the Leased Premises in a manner that will increase the rate of fire insurance in the Building over the rate in effect after one (1) years from the commencement of the Initial Term. If by reason of the failure of the Tenant to comply with the provision of this paragraph the fire insurance rate is increased higher than it would be otherwise, the Tenant shall reimburse the Landlord for the part of all fire insurance premiums thereafter paid by the Landlord that have been charged because of such failure of the Tenant, such reimbursement to be in addition to Tenant's hazard insurance premiums required by this Section.

11.3 Contents Insurance. Tenant shall, it its own cost and expense, keep its own personal property, furniture, fixtures and equipment belonging to Tenant and located in the Leased Premises insured for not less than one hundred percent (100%) of its actual replacement value against loss or damage by fire, with the usual extended coverage endorsements. Tenant shall, at any time upon request of the Landlord, provide Landlord with copies of such policies and/or evidence of payment of premiums for such policies. All such policies shall be in place at the commencement of this Lease.

11.4 Waiver of Subrogation. Landlord and Tenant each hereby waive any and all rights of recovery against the other, or against the officers, employees, agents and representatives of the other, for loss of or damage to such waiving party or its property or the property of others under its control, where such loss or damage is insured against under any insurance policy in force at the time of such loss or damage. Landlord and Tenant shall, upon obtaining the policies of insurance required hereunder, give notice to the insurance carrier that the foregoing mutual waiver of subrogation is contained in this Lease.

12. **INDEMNIFICATION.**

12.1 Indemnification. Tenant and Landlord hereby indemnify and hold the other harmless from and against any and all claims, demands, actions, causes of action, penalties, judgments, court costs, reasonable attorneys' fees, and liabilities of every kind and description arising from the use of the Leased Premises, the Building and the Office Park; from the conduct of Tenant's or Landlord's business, as the case may be; from any activity, work or things done, permitted or suffered by Tenant or Landlord in or about the Leased Premises, the Office Park or elsewhere, including, without limitation from any accidents, injuries, or claims relating to any breach or default in the performance of any other obligation on Tenant's or Landlord's part to be performed under the terms of this Lease; or from any negligence or willful act of either party, or their agents, contractors or employees, and from and against all costs, attorney's fees, expenses and liabilities incurred in the defense of any such claim (whether or not suit is brought) or any action or proceeding brought thereon. In the event that any action or proceeding is brought against Landlord or Tenant, as the case may be, by reason of any such claim, the indemnified party, upon notice from the indemnified party, shall defend the same at the indemnifying party's sole expense by counsel satisfactory to Landlord.

12.2 Exemption of Landlord from Liability. Tenant hereby agrees that Landlord shall not be liable for injury to Tenant's business or any loss of income therefrom or for damage to the goods, wares, merchandise or other property of Tenant, Tenant's employees, invitees, customers, or any other persons in or about the Leased Premises, the Building or the Office Park, whether such damage or injury is caused by or results from fire, steam, electricity, gas, water or rain, or from breakage, leakage, obstruction or other defects of pipes, sprinklers, wires, appliances, plumbing, air conditioning or lighting fixtures, or from any other cause, whether the said damage or injury results from conditions arising upon the Leased Premises, the Building or the Office Park, or from other sources or places, and regardless of whether the cause of such damage or injury or the means of repairing the same is inaccessible to Tenant. Notwithstanding anything in the foregoing to the contrary, Landlord shall be liable for any third party claims resulting wholly or partially from the negligence or willful act of the Landlord or its agents, servants, employees or contractors.

13. DAMAGE BY FIRE OR OTHER CASUALTY.

13.1 Total Destruction. In the event the Leased Premises shall be destroyed or so damaged by fire or other casualty so as to render the Leased Premises wholly untenantable, Landlord shall restore and repair such damage to the Leased Premises with reasonable dispatch, in which case the Base Rent and Additional Rent due hereunder shall abate on a per diem thirty (30) day month basis during the period of restoration until the first to occur of (a) substantial completion by Tenant of Tenant's improvements, or (b) sixty (60) days after Landlord completes its restoration of the Building.

In the event the Landlord is unable to restore and repair such damage within one hundred eighty (180) days after such destruction, Tenant may elect to terminate this Lease by giving the Landlord written notice of its intention to do so within two (2) weeks after the earlier of the expiration of such one hundred eighty (180) day period or notification from Landlord with an estimate of the time required to repair such damages and restore the Leased Premises, which estimate is in excess of one hundred eighty (180) days from the date of destruction.

13.2 Partial Destruction. In the event the Leased Premises shall be damaged but are not thereby rendered wholly untenantable, Landlord shall restore the Leased Premises with reasonable dispatch. While such damage is being repaired, the Base Rent shall be reduced by an amount which bears the same ratio to the monthly rent that the floor area rendered untenantable bears to the total floor area of the Leased Premises. Such reduction shall continue until the first to occur of (a) substantial completion by Tenant of Tenant's improvements, or (b) sixty (60) days after Landlord completes its restoration of the Building If such restoration is not completed within one hundred eighty (180) days of the date of destruction, Tenant may, at its option, terminate this Lease upon thirty (30) days prior written notice to Landlord.

13.3 Landlord's Obligations. Nothing herein shall obligate Landlord to replace or repair the personal property or fixtures of the Tenant nor any alteration or improvement constructed by the Tenant. Nor shall the Landlord be obligated for any repairs made necessary by a casualty not covered by any standard form fire and extended coverage required to be maintained hereunder.

13.4 Repair/Restoration by Tenant. Notwithstanding anything to the contrary in the foregoing, Tenant shall be responsible for repairing, restoring and replacing its trade fixtures and for replicating to the extent possible, Tenant's Work in the Leased Premises. Any and all insurance proceeds payable to or received by Tenant on account of Tenant's Work items shall belong to Tenant exclusively. Landlord and Tenant shall cooperate such that each party's work of repair and restoration can be completed as expeditiously as possible. As with Tenant' initial Tenant's Work, Landlord will cooperate with Tenant such that repair and restoration shall proceed with as little delay and interruption as possible. Landlord shall sign promptly such applications and take such other actions as may be necessary for obtainment of necessary permits, approvals and authorizations so that repair and restoration may proceed.

14. ALTERATIONS AND IMPROVEMENTS.

14.1 Tenant's Additional Improvements. No improvements or alterations of the Leased Premises which would require a building permit shall be made by Tenant without the prior written consent of Landlord, which consent shall not be unreasonably withheld, conditioned or delayed. Upon obtaining Landlord's prior consent, Tenant may, at its option and at its own cost and expense, at any time and from time to time, make additional alterations, changes, replacements, improvements and additions in and to the Leased Premises, as it may deem desirable. Prior to the commencement of any substantial repair, improvement, or alteration, Tenant shall give Landlord at least ten (10) days prior written notice in order that Landlord may post appropriate notices to avoid any liability for liens. Tenant shall submit the plans and specifications of said proposed alterations and a list of its proposed contractors and subcontractors to be used in connection with said alterations to the Landlord and must obtain Landlord s written approval for the same, which approval shall not be unreasonably withheld, conditioned or delayed. All work shall be done in conformance with said prior approvals and (with the exception of trade fixtures) shall be the property of the Landlord upon termination of this Lease. Landlord's approval of such alterations shall not be deemed a representation or warranty by Landlord of the fitness or quality of the plans as proposed or the work as completed.

14.2 Signs. Subject to Landlord's signage criteria for the Office Park and Landlord's reasonable approval, Tenant shall be permitted to install the maximum amount of signage permitted by applicable law. All signage installed by Tenant shall be subject to Landlord's approval, shall be consistent with the style and design of other signage in the Office Park, and shall comply with the signage regulations of the Town of Guilford. Tenant shall be responsible for all permits required for the installation of any signage.

14.3 Mechanic's Liens. If as a result of Tenant's alterations hereunder, including any initial fit up, any mechanic's lien or other lien is place on the Leased Premises, Tenant shall cause the same to be canceled and discharged of record, by bond or otherwise, at Tenant's sole cost and expense, within thirty (30) days after the filing of such lien. In addition, Tenant shall defend, on behalf of the Landlord, at Tenant's sole cost and expense, any action, suit or proceeding that may be brought thereon or for the enforcement of such lien, and Tenant shall pay any damages and discharge any judgment entered therein and hold harmless Landlord from and indemnify it against any claim, damage or costs, including reasonable attorney's fees, resulting therefrom.

14.4 Compliance with Building Codes. All work done by Tenant in connection with any repairs or in connection with alterations, installations, and changes in the Leased Premises, including any initial fit up, shall be in compliance with building and zoning rules and regulations and with all applicable laws, orders, ordinances, rules, regulations, and requirements of all federal, state and municipal governments or departments, commissions, boards, and officers thereof and in accordance with the rules, orders and regulations of any applicable insurance underwriters. Landlord shall not be liable for the failure of any building facilities or services installed by the Landlord caused by the Tenant's improvements and Tenant shall promptly correct the same. Landlord may make such correction and charge the Tenant for the costs related to the repairs of any improvements made by the Tenant, such charge to be Additional Rent.

15. **QUIET ENJOYMENT**. The Landlord covenants with the Tenant that it has good right to lease said Leased Premises in manner aforesaid, that the Leased Premises are free and clear of all encumbrances except as specified in Schedule "A" and that it will suffer and permit the Tenant (it keeping all the covenants on its part, as herein contained) to occupy, possess and enjoy the Leased Premises during the term aforesaid, without hindrance or molestation from it or any person claiming by, from or under it.

16. **TENANT'S DEFAULT.**

16.1 Events of Default. Tenant shall be in default under this Lease if

(A) Tenant fails to pay any installment of Base Rent or Additional Rent within ten (10) days of the date when due and if not cured within ten (10) days from written notice thereof (provided that Landlord shall not be required to deliver written notice of nonpayment of Base Rent more than two (2) times in any calendar year); or

(B) If Tenant defaults in the performance of any of the other terms, covenants or conditions of this Lease and such default has not been cured within thirty (30) days after notice by Landlord to Tenant specifying such default and requiring it to be remedied, or where such default cannot reasonably be remedied within such period of thirty (30) days, if Tenant shall not have, in good faith, commenced the remedying thereof within such period of time and shall not be proceeding with due diligence to remedy it; or

(C) Upon Tenant's filing of a petition under the Federal Bankruptcy Code or if any involuntary petition under the provisions of said Code is filed against Tenant and such involuntary petition is not dismissed within sixty (60) days thereafter, or if Tenant makes an assignment of all its assets for the benefit of creditors or is placed in receivership and said receiver has not been discharged thirty (30) days after his appointment.

16.2 Termination by Landlord. If Tenant shall be in default under this Lease, Landlord, at its option, may terminate this Lease without further notice to Tenant, and upon such termination, Tenant shall quit and surrender the Leased Premises and all improvements located thereon to Landlord, but such termination shall not affect the Landlord's rights to recover damages or exercise any other rights as hereinafter stated.

16.3 Re-entry by Landlord. Upon termination of this Lease as aforesaid, Landlord may: a) re-enter and resume possession of the Leased Premises and enter and possess all improvements

thereon and remove all persons and property therefrom either by summary process proceedings or by a suitable action or proceeding, at law or in equity, without being liable for any damages therefore; and to re-let the whole or any part of the Leased Premises on behalf of Tenant for a period equal to, greater or less than the remainder of the term of this Lease, at such rental and upon such terms and conditions as Landlord shall deem reasonable, to any tenant it may deem suitable and for any use and purpose it may deem appropriate. Landlord shall not be liable in any respect for the failure to relet the Leased Premises and the improvements located thereon, or, in the event of such re-letting, for failure to collect the rent thereunder and any sums received by Landlord on a re-letting in excess of the rent reserved in this Lease, shall belong to Landlord.

16.4 Damages. Upon the termination of this Lease as aforesaid, Landlord shall forthwith be entitled to recover from Tenant all damages sustained by the Landlord as a result of Tenant's default, including, but not limited to, the following items:

A) If the Base Rent and the Additional Rent provided for herein exceed the net sum received by Landlord on any re-letting, the amount of such excess; and

B) All expenses of operating the Leased Premises while they are vacant; all expenses, including reasonable attorney's fees, incurred by Landlord in recovering possession of the Leased Premises and re-letting the same, , including, without limitation a broker's commission at the rate typically charged for commercial lease transactions in the market area in which the Office Park is located, but limited to the unexpired term only; provided however Landlord shall not be entitled to recover consequential damages.

16.5 Landlord's Costs and Expenses. Tenant shall pay as Additional Rent hereunder all other expenses reasonably incurred by Landlord, including reasonable attorney's fees, in seeking to enforce the obligations of Tenant hereunder occasioned by the Tenant's default. Tenant agrees that Landlord shall be entitled to recover the sum set forth in this paragraph in one action or, at Landlord's option and provided there shall be good reason to do so, in several separate actions. In such latter event, Tenant hereby waives the right to assert the rule against splitting the cost of action as a defense thereto. Both Landlord and Tenant hereby expressly waive their right to a trial by jury in any action brought by either party.

16.6 Mitigation of Damages. Landlord shall use commercially reasonable efforts to mitigate damages resulting from Tenant's default under this Lease.

16.7 Waiver. A waiver by Landlord of any breach by the Tenant of any of the terms, covenants, conditions and agreements of this Lease shall be limited to the particular instance and shall not operate or be deemed as a waiver of any future breaches of said terms, covenants, conditions and agreements. The failure of Landlord to enforce any agreement, condition, covenant or term of this Lease against the Tenant shall not be deemed to void or affect the right of Landlord to enforce the same agreement, condition, covenant or term on the occasion of such subsequent breach or default.

16.8 Landlord's Right to Cure Tenant's Default. If Tenant defaults in the performance of any covenant or condition of this Lease required to be performed by Tenant, Landlord, at its option, may after thirty (30) days notice to Tenant, or without notice if, in Landlord's sole opinion, an emergency exists, perform such covenant or condition for the account and at the expense of Tenant

and Tenant shall reimburse Landlord for such expense. The amount of such expense shall be deemed to be Additional Rent and shall be paid by Tenant with the next monthly installment of rent due hereunder. The provisions of this Section shall survive the termination of this Lease.

17. **EMINENT DOMAIN.**

17.1 Total Condemnation. In the event the whole of the Leased Premises shall be taken under the power of eminent domain for any public or quasi-public use or purpose permanently or only for a period of time, or a portion of the Leased Premises are so taken and the remaining portion does not allow Tenant to use the remainder of the Leased Premises for the purposes permitted by this Lease, this Lease shall thereupon terminate as of the date possession shall be taken by or under the condemning authority. Tenant shall have no claim against Landlord for the value of any unexpired term of this Lease.

17.2 Partial Condemnation. In the event that proceedings in eminent domain shall have been instituted with respect to the Office Park, Tenant's Proportionate Share for the remaining term shall be a percentage based upon a fraction where the numerator is the total rentable square footage of the Leased Premises (as set forth in Section 1.1) and the denominator is the total rentable square footage of the uncondemned Office Park; provided, however, that Landlord or Tenant may, at its option, terminate this lease as of the date condemning authority acquires possession.

17.3 Termination of Lease. In the event this Lease shall be terminated, as provided in this Section, the Leased Premises and the improvements shall belong absolutely to the Landlord and Tenant shall promptly remove all of Tenant's personal property and each party hereto shall thereupon be released from every obligation hereunder to the other, except:
a) With respect to any covenants the breach of which occurred prior to the termination date; and
b) The obligation of Landlord to refund to Tenant any rent paid by Tenant for the period subsequent to the termination date and Tenant's security deposit hereunder to the extent it is refundable under Section 5.

17.4 Damages. All damages awarded for any such taking under the power of eminent domain, whether for the whole or a part of the Leased Premises, shall belong to and be the property of Landlord, whether such damages shall be awarded as compensation for diminution in value of the leasehold , loss of rental income, Tenant's improvements which are attached to the Building or for the fee of the Leased Premises, provided, however, that Landlord shall not be entitled to any award made to Tenant for loss of or damages to Tenant's personal property or for damages for cessation or interruption of Tenant's business or for the Tenant's cost of moving.

17.5 Adjustment of Rents. If this Lease is terminated as provided in this Section 17, all rent shall be paid up to the date that possession is taken by the condemning authority, and Landlord shall make an equitable refund of any rent paid by Tenant in advance and not yet earned by Landlord.

17.6 Voluntary Sale. A voluntary sale by Landlord to any public or quasi-public body, agency or person, corporate or otherwise, having the power of eminent domain, either under threat

of condemnation, or while condemnation proceedings are pending, shall be deemed to be a taking by eminent domain for the purposes of this Section 17.

18. HAZARDOUS SUBSTANCE; INDEMNIFICATION.

18.1 Tenant's Affirmative Covenants.

Except for cleaning supplies, office supplies and items which Tenant may use in the normal course of business from time to time, the Tenant shall not cause or permit any hazardous substances or hazardous wastes to be brought upon, kept, or used in or about the Building by the Tenant, its agents, employees, guests or invitees without the prior written consent of the Landlord. Landlord shall not unreasonably withhold such consent so long as Tenant demonstrates to Landlord's reasonable satisfaction that such hazardous substances or hazardous wastes are necessary or useful to Tenant's business and will be used, kept and stored in a manner that complies with all environmental laws, will not increase the likelihood of the occurrence of any environmental condition, and that Tenant has obtained all permits required for such hazardous substances or hazardous wastes to be brought upon, kept or used in or about the Office Park.

B) The Tenant agrees that it shall not at any time generate any hazardous waste so as to cause the Leased Premises or the Office Park to be designated an "establishment" under the Connecticut Transfer Act.

C) If any environmental condition or release on the Office Park is caused by Tenant or Tenant's agents, employees, guests or invitees, Tenant shall promptly take all actions at its sole expense as are necessary to return the Office Park to the condition existing prior to the introduction of such hazardous substances or hazardous wastes to the Office Park, provided that Landlord's approval of such actions shall first be obtained, which approval shall not be unreasonably withheld so long as such actions would not potentially have any material adverse effect on the Office Park.

18.2 Representation by Landlord. Landlord represents that there are currently no hazardous substances or hazardous wastes at the Building.

19. **ASSIGNMENT AND SUBLETTING**. Tenant, its successors and assigns, shall not assign or sublet all or any part of the Leased Premises for any portion of the term of this Lease or any extension thereof without the prior written consent of Landlord, which shall not be unreasonably withheld, conditioned or delayed. Tenant shall provide such financial information regarding the prospective subtenant or assignee as Landlord shall reasonably request. Any such assignment or transfer, if approved, shall not relieve Tenant of any liability hereunder. Any such assignment or subletting without consent shall be void and, at the option of the Landlord, may terminate this Lease. It is further agreed that in the event the Landlord consents to a sublease or assignment of the Leased Premises, Tenant agrees to pay Landlord fifty percent (50%) of any net profit realized by virtue of the sublease or assignment. "Net profit" shall be the total amount of consideration received by the Tenant from the sublease or assignment in excess of the Tenant's rent obligations under the Lease, but specifically does not include any amount Tenant receives from a sale of its business. Any such assignment or subletting without consent shall be void and, at the option of the Landlord, may terminate this Lease. Notwithstanding the foregoing, Landlord's consent shall not be required to transactions with an entity into or with which Tenant is merged or consolidated, or to

which all or substantially all of Tenant's assets are transferred, or to transactions with any entity which controls or is controlled by Tenant or is under common control with Tenant

20. **NOTICES.** Any notice required or permitted to be given under this Lease shall be in writing and shall be sent by hand delivery, facsimile transmission, overnight courier service or registered or certified mail, return receipt requested and postage prepaid to:

Landlord:

Pite Family Limited Partnership
c/o Sachem Financial
157 Goose Lane
Barn Suite
Guilford, CT 06437

Tenant:

Walden Behavioral Care LLC
51 Sawyer Road
Waltham, MA 02453

such notice shall be deemed to have been given on the date received or rejected.

21. **ACCESS TO PREMISES.**

21.1 Access for Repairs and Improvements. Tenant shall permit Landlord or Landlord's agents to enter the Leased Premises and improvements thereon at all reasonable hours upon at least twenty four (24) hours notice except in the case of emergency, for the purpose of inspecting the same, or of making repairs or performing any other work on the Leased Premises and improvements thereon that Tenant may have failed to commence in accordance with the agreements, conditions, covenants and terms hereof, or that Landlord shall deem necessary for the safety, preservation or restoration of the improvements, or for the safety or convenience of the occupants or users thereof (there being no obligation, however, on the part of the Landlord to make any such repairs, additions or alterations).

21.2 Access for Sale or Lease. Tenant shall also permit Landlord or Landlord's agents to enter the Leased Premises at all reasonable hours for the purpose of showing the Leased Premises to prospective mortgagees or to persons wishing to purchase the same and, within three (3) months prior to the expiration of the term of this Lease (or any extension thereof), to persons wishing to lease the Leased Premises or any part thereof.

22. **SUBORDINATION, NON-DISTURBANCE AND ATTORNMENT.**

22.1 This Lease and any extension thereof, the lien thereof upon the Leased Premises, and all rights of the Tenant hereunder, are, subject to the provisions of this Paragraph 22, hereby subordinated and made subject to liens of all bona fide mortgages to any bank, institutional lender, private lender or insurance company hereinafter placed on the Leased Premises (Mortgagee) . No other instrument shall be necessary to subordinate this Lease and all rights hereunder to the lien or liens of any such Mortgagees or mortgages. Nonetheless, Tenant hereby agrees that it will, upon demand, at any time or times execute, acknowledge and deliver to the Landlord, without expense to the Landlord, any and all instruments that may be necessary or proper to subordinate this Lease and all rights hereunder to the lien of any such mortgage or mortgages; provided such subordination includes the latter provisions of this Paragraph 22.

22.2 All Mortgagees hereby agree to by bound by all of the terms and conditions of this Lease in the event Mortgagee becomes the owner of the Office Park, Building or Leased Premises by reason of foreclosure, deed in lieu of foreclosure, or otherwise. Notwithstanding the subordination provisions set forth above, so long as an Event of Default on Tenant's part (beyond any applicable note, grace or cure period) does not exist under this Lease, Tenant's possession of the Leased Premises and Tenant's rights and privileges under this Lease, or any extensions or renewals thereof, shall not be diminished or interfered with by any Mortgagee, and Tenant's occupancy of the Leased Premises shall not be disturbed by any Mortgagee for any reason whatsoever during the term of this Lease or any such extension or renewal thereof, except as would be permitted for Landlord to do so. In addition, notwithstanding such subordination, so long as Event of Default on Tenant's part (beyond any applicable notice, grace or cure period) does not exist under this Lease, no Mortgagee will join Tenant as a party defendant in any foreclosure action or other proceeding for the purpose of terminating Tenant's interest and estate under this Lease or for any other purpose.

23 **ESTOPPEL CERTIFICATE.** The Tenant, upon Landlord s written request, shall execute an estoppel certificate prepared by Landlord which certificate shall describe the lease and any amendments thereto and shall set forth the lease term, a description of the Leased Premises, whether the lease is in full force and effect, whether the Tenant has any defenses or rights of offset against the Landlord, the date to which rent payments have been paid in advance, whether there is any default on the part of the other party, and acknowledging that the prospective lender or purchaser is relying on the certificate and the information contained therein. Furthermore, Tenant agrees to deliver to any lender or purchaser designated by Landlord such financial statements of Tenant as may be reasonably required by such lender or purchaser, provided any such statements shall be delivered in confidence and used only for the purposes herein set forth.

24. **NOTICE OF LEASE.** The Landlord, upon Tenant s written request, shall execute a notice of lease prepared by Tenant and containing such information required by Section 47-19 of the Connecticut General Statutes to be recorded in the land records of the town in which the Leased Premises are located.

25. **CONVEYANCE BY LANDLORD AND LIMIT OF LIABILITY.** Subject to Tenant's Option to purchase contained in Section 5 of this Lease, Landlord shall be entitled to

convey and otherwise dispose of the Leased Premises and shall be entirely free and released of all covenants and obligations of the Landlord after the Leased Premises are so conveyed, and Landlord shall not be subject to any liability resulting from any act or omission or event occurring after such conveyance. The purchaser, or any person who takes title to the Leased Premises from the Landlord or any person who subsequently holds title to the Leased Premises, shall be deemed to have assumed and agreed to carry out any and all covenants on Landlord's part to be performed under this Lease. No further agreement will be required between the Landlord and the Tenant and any person holding title subsequent to Landlord in connection with the assumption of the obligations of Landlord hereunder.

26. **FORCE MAJEURE**. In the event the Landlord or Tenant shall be delayed, hindered in or prevented from the performance of any act required hereunder by reason of strikes, lock-outs, labor troubles, inability to produce materials, failure of power, restrictive governmental laws or regulations, riots, insurrection, the act, failure to act or default of the other party, war or other reason beyond their control, then performance of such act shall be excused for the period of the delay and the period for the performance of any such act shall be extended for a period equivalent to the period of such delay.

27. **HOLDING OVER**. If Tenant remains in possession of the Leased Premises or any other part thereof after the expiration of the term hereof without the express written consent of Landlord, Landlord may elect to (a) deem such occupancy to be a tenancy from month to month at a rental in the amount of one hundred fifty percent (150%) of the last monthly rental payment plus any other charges payable by Tenant hereunder and upon such terms and conditions hereof applicable to a month to month tenancy or (b) deem such occupancy to be unauthorized and immediately commence proceedings under the Connecticut summary process statute and acceptance by Landlord of any sums from Tenant shall not be construed as its consent to Tenant's continued occupancy or as a renewal of this Lease or as an agreement to month-to-month occupancy, but shall be applied to use and occupancy only.

28. **NOTICE TO QUIT**. whenever this Lease shall terminate either by lapse of time, abandonment, or by virtue of any of the express stipulations herein, the Tenant hereby waives all rights to any notice to quit possession as prescribed by the statute relating to summary process, as well as any right to a jury trial and to any court appeals.

29. **GENERAL PROVISIONS.**

29.1 Entire Agreement. This instrument contains the entire and only agreement between the parties and no oral statements or representations or prior written matter not contained in this instrument shall have any force or effect. This Lease may only be changed, modified or discharged by an agreement in writing executed by the parties hereto.

29.2 Partial Invalidity. If any term, covenant, condition or provision of this Lease or the application thereof to any person or circumstances shall, to any extent, be invalid or unenforceable, the remainder of this Lease, or the application of such term or provision to persons or circumstances other than those as to which is held invalid or unenforceable, shall not be affected

thereby, and each remaining term, covenant, condition and provision of this Lease shall be valid and be enforced to the fullest extent permitted by Law.

29.3 Marginal Notes. The marginal notes used as headings for the various subject matters covered in this Lease are used only as a matter of convenience as an aid to finding the subject matters and are not to be construed as part of this Lease and shall not in any way limit or amplify the terms or provisions thereof.

29.4 Construction. This Lease is made and executed in and is to be construed under the substantive laws of the State of Connecticut. Landlord and Tenant hereby agree to be subject to the jurisdiction of Connecticut courts for the resolution of any dispute arising hereunder.

29.5 Successors and Assigns. Except as otherwise provided herein, the agreements, conditions, covenants and terms herein contained shall, in every case, apply to, to be binding upon, and inure to the benefit of the respective parties hereto and their respective heirs, administrators, executors, successors and assigns, with the same force and effect as if specifically mentioned in each instance where a party hereto is named.

29.6 Jury Trial. Tenant and Landlord each hereby waive trial by jury in any action or proceeding brought by either of the parties against the other.

29.7 Lease Signing. No rights are to be conferred upon the Tenant until this Lease has been signed by Landlord, and an executed copy of the Lease has been delivered to Tenant.

29.8 Counterparts. This Lease may be executed in multiple counterparts and all such counterparts shall be deemed one original document. This Lease may be signed by electronic or facsimile signature and shall signatures shall be effective as originals.

29.9 Brokerage. Tenant warrants and represents that Tenant has dealt with no broker in connection with the consummation of this Lease other than Colliers International, Hartford Office and O, R & L ("Broker", and, in the event of any brokerage claims against Landlord predicated upon prior dealings with Tenant, Tenant agrees to defend the same and indemnify Landlord against any such claim (except any claim by Broker). Landlord warrants and represents that Landlord has dealt with no broker in connection with the consummation of this Lease other than Broker, and, in the event of any brokerage claims against Tenant predicated upon prior dealings with Landlord, Landlord agrees to defend the same and indemnify Tenant against any such claim. Landlord shall be responsible to pay the commission or fee due to Broker as and to the extent provided in a separate written agreement

(The rest of this page is intentionally blank. Signatures are on the next page.)

IN WITNESS WHEREOF, the parties hereto have hereunder set their names, and seals on the day first above written.

Signed, sealed, and delivered
in the presence of:

LANDLORD:

_____
Witness

PITE FAMILY LIMITED PARTNERSHIP

_____
Witness

By: _____
Dr. William J. Pite
General Partner

TENANT:

_____
Witness

WALDEN BEHAVIORAL CARE LLC

By: _____
Lawrence R. Behan
Chief Financial Officer

_____
Witness

SCHEDULE A

(Legal Description of 157 Goose Lane, Guilford, Connecticut)

All that certain piece or parcel of land, with all the buildings and other improvements thereon, situated in the Town of Guilford, County of New Haven, State of Connecticut shown as Parcel "B" on a survey map entitled "Map Showing Two Parcels of Property of Arne E. and Phyllis Ahlberg, Guilford, Connecticut, Scale 1" = 40', 7-14-77, Russell Waldo, Professional Engineer and Land Surveyor and Associates, P.C., 89 State Street, Guilford, Connecticut 06437", bounded and described as follows:

WESTERLY:	by Goose Lane, 176.72 feet;
NORTHERLY:	by land now or formerly of Buonanna, 300.05 feet in all; by land now or formerly of Silvestro, 687.58 feet in all;
EASTERLY	by land now or formerly of Scott, 127.15 feet;:
SOUTHERLY and SOUTHEASTERLY	by land now or formerly of Joyce along the centerline of a stone wall, 514.77 feet;
WESTERLY AGAIN:	by Parcel "A", as shown on said map, 82.78 feet;
SOUTHERLY AGAIN:	by a bent line by Parcel "A" as shown on said map, 222.54 feet.

Exhibit 27

Walden Behavioral Care, LLC
>> CT - Guilford Clinic <<

13. B i. Please provide one year of actual results and three years of projections of ***Total Facility*** revenue, expense and volume statistics without, incremental to and with the CON proposal in the following reporting format:

Total Facility:	FY2014	FY 2015	FY 2016			FY 2017			FY 2018		
Description	Actual Results	Projected Results	Projected W/out CON	Projected Incremental	Projected With CON	Projected W/out CON	Projected Incremental	Projected With CON	Projected W/out CON	Projected Incremental	Projected With CON
NET PATIENT REVENUE											
Non-Government	-	-	-	613,671	613,671	-	1,100,896	1,100,896	-	1,483,819	1,483,819
Medicare	-	-	-	-	-	-	-	-	-	-	-
Medicaid and Other Medical Assistance	-	-	-	108,464	108,464	-	193,035	193,035	-	259,327	259,327
Other Government	-	-	-	-	-	-	-	-	-	-	-
Total Net Patient Patient Revenue	$0	$0	$0	722,135	$722,135	$0	1,293,931	$1,293,931	$0	1,743,146	$1,743,146
Other Operating Revenue	-	-	-	-	-	-	-	-	-	-	-
Revenue from Operations	$0	$0	$0	$722,135	$722,135	$0	$1,293,931	$1,293,931	$0	$1,743,146	$1,743,146
OPERATING EXPENSES											
Salaries and Fringe Benefits	-	-	-	448,652	448,652	-	655,310	655,310	-	742,649.67	742,650
Professional / Contracted Services	-	-	-	63,191	63,191	-	71,093	71,093	-	77,668.56	77,669
Supplies and Drugs	-	-	-	8,877	8,877	-	13,477	13,477	-	17,134.98	17,135
Bad Debts	-	-	-	17,646	17,646	-	31,836	31,836	-	42,497.51	42,498
Other Operating Expense	-	-	-	243,376	243,376	-	249,626	249,626	-	256,040.53	256,041
Subtotal	$0	$0	$0	$781,742	$781,742	$0	$1,021,342	$1,021,342	$0	1,135,991	$1,135,991
Depreciation/Amortization	-	-	-	82,000	82,000	-	82,000	82,000	-	82,000	82,000
Interest Expense	-	-	-	-	-	-	-	-	-	-	-
Lease Expense	-	-	-	3,160	3,160	-	3,239	3,239	-	3,320	3,320
Total Operating Expenses	**$0**	**$0**	**$0**	**$866,902**	**$866,902**	**$0**	**$1,106,581**	**$1,106,581**	**$0**	**$1,221,311**	**$1,221,311**
Income (Loss) from Operations	$0	$0	$0	($144,767)	($144,767)	$0	$187,350	$187,350	$0	$521,835	$521,835
Non-Operating Income	-	-	-	-	-	-	-	-	-	-	-
Income before provision for income taxes	$0	$0	$0	($144,767)	($144,767)	$0	$187,350	$187,350	$0	$521,835	$521,835
Provision for income taxes	-	-	-	(12,884)	(12,884)	-	16,674	16,674	-	46,443	46,443
Net Income	**$0**	**$0**	**$0**	**($131,882)**	**($131,882)**	**$0**	**$170,676**	**$170,676**	**$0**	**$475,392**	**$475,392**
Retained earnings, beginning of year	-	-	-	-	-	-	(131,882)	(131,882)	-	38,794	38,794
Retained earnings, end of year	$0	$0	$0	($131,882)	($131,882)	$0	$38,794	$38,794	$0	$514,186	$514,186
FTEs	**0**	**0**	**0**	**8.0**	**8.0**	**0**	**9.9**	**9.9**	**0**	**10.4**	**10.4**
***Volume Statistics: Patient Days**	**0**	**0**	**0**	**2,540**	**2,540**	**0**	**4,550**	**4,550**	**0**	**6,136**	**6,136**

Provide projected inpatient and/or outpatient statistics for any new services and provide actual and projected inpatient and/or outpatient statistics for any existing services which will change due to the proposal.

000512

Walden Behavioral Care, LLC

>> CT - Guilford Clinic <<

13. B (i). Please provide one year of actual results and three years of ***Total Hospital Health System*** projections of revenue, expense and volume statistics without, incremental to and with the CON proposal in the following reporting format:

Total Hospital Health System:	FY 2014	FY 2015	FY 2016			FY 2017			FY 2018		
Description	Actual Results	Projected Results	Projected W/out CON	Projected Incremental	Projected With CON	Projected W/out CON	Projected Incremental	Projected With CON	Projected W/out CON	Projected Incremental	Projected With CON
NET PATIENT REVENUE											
Non-Government	18,078,782	20,483,141	22,531,455	613,671	23,145,126	24,784,601	1,100,896	25,885,497	27,263,061	1,483,819	28,746,880
Medicare	-	-	-	-	-	-	-	-	-	-	-
Medicaid and Other Medical Assistance	7,359,183	8,337,906	9,171,697	108,464	9,280,162	10,088,867	193,035	10,281,902	11,097,753	259,327	11,357,081
Other Government	-	-	-	-	-	-	-	-	-	-	-
Total Net Patient Patient Revenue	**$25,437,966**	**$28,821,048**	**$31,703,152**	**$722,135**	**$32,425,288**	**$34,873,468**	**$1,293,931**	**$36,167,399**	**$38,360,814**	**$1,743,146**	**$40,103,961**
Other Operating Revenue	10,599	15,000	15,300	-	15,300	15,606	-	15,606	15,918	-	15,918
Revenue from Operations	**$25,448,565**	**$28,836,048**	**$31,718,452**	**$722,135**	**$32,440,588**	**$34,889,074**	**$1,293,931**	**$36,183,005**	**$38,376,732**	**$1,743,146**	**$40,119,879**
OPERATING EXPENSES											
Salaries and Fringe Benefits	14,512,438	16,325,842	17,631,909	448,652	18,080,561	19,042,462	655,310	19,697,771	20,565,859	742,650	21,308,508
Professional / Contracted Services	3,146,490	3,288,980	3,387,649	63,191	3,450,840	3,658,661	71,093	3,729,754	3,951,354	77,669	4,029,022
Supplies and Drugs	454,441	471,211	485,347	8,877	494,225	524,175	13,477	537,652	566,109	17,135	583,244
Bad Debts	133,216	112,363	115,734	17,646	133,380	124,993	31,836	156,829	134,992	42,498	177,490
Other Operating Expense	3,438,346	4,038,857	4,160,022	243,376	4,403,398	4,492,824	249,626	4,742,450	4,852,250	256,041	5,108,291
Subtotal	**$21,684,931**	**$24,237,252**	**$25,780,662**	**$781,742**	**$26,562,404**	**$27,843,115**	**$1,021,342**	**$28,864,456**	**$30,070,564**	**$1,135,991**	**$31,206,555**
Depreciation/Amortization	329,619	248,772	256,235	82,000	338,235	276,734	82,000	358,734	298,873	82,000	380,873
Interest Expense	372,639	580,000	597,400	-	597,400	645,192	-	645,192	696,807	-	696,807
Lease Expense	28,353	28,690	29,551	3,160	32,711	31,915	3,239	35,154	34,468	3,320	37,788
Total Operating Expenses	**$22,415,542**	**$25,094,715**	**$26,663,848**	**$866,902**	**$27,530,750**	**$28,796,956**	**$1,106,581**	**$29,903,537**	**$31,100,713**	**$1,221,311**	**$32,322,024**
Income (Loss) from Operations	$3,033,023	$3,741,333	$5,054,604	($144,767)	$4,909,837	$6,092,118	$187,350	$6,279,468	$7,276,020	$521,835	$7,797,855
Non-Operating Income	218,150	345,706	397,562	-	397,562	457,196	-	457,196	525,776	-	525,776
Income before provision for income taxes	$3,251,174	$4,087,039	$5,452,166	($144,767)	$5,307,400	$6,549,314	$187,350	$6,736,664	$7,801,796	$521,835	$8,323,631
Provision for income taxes	1,569,886	1,930,915	2,124,007	(12,884)	2,111,123	2,336,408	16,674	2,353,082	2,570,048	46,443	2,616,492
Net Income	**$1,681,288**	**$2,156,124**	**$3,328,159**	**($131,882)**	**$3,196,277**	**$4,212,906**	**$170,676**	**$4,383,582**	**$5,231,747**	**$475,392**	**$5,707,139**
Retained earnings, beginning of year	(2,542,203)	(860,915)	1,295,209	-	1,295,209	4,491,485	(131,882)	4,359,603	8,743,185	38,794	8,781,979
Retained earnings, end of year	($860,915)	$1,295,209	$4,623,368	($131,882)	$4,491,485	$8,704,392	$38,794	$8,743,185	$13,974,933	$514,186	$14,489,118
FTEs	**139.0**	**147.3**	**156.2**	**8.0**	**164.2**	**174.0**	**9.9**	**183.9**	**194.9**	**10.4**	**205.3**
***Volume Statistics: Patient Days**	**36,051**	**59,655**	**65,621**	**2,540**	**68,161**	**73,307**	**4,550**	**77,857**	**82,578**	**6,136**	**88,714**

000513

Exhibit 28

Exhibit 28: Financial Assumptions for Financial Attachment I

Walden Behavioral Care, LLC Facility in Guilford:

Walden's fiscal year is January 1 to December 31.

FY 2016 is the first full year of operation of the new facility. It is anticipated that the facility will commence operations in January 2016.

The unit of service is days.

The projected staffing, volume, revenue and expense information is based on the assumptions used for Walden's existing program in South Windsor, Connecticut. Those assumptions were conservative for a new outpatient clinic in CT.

The program growth assumptions for the Guilford facility are based on the experience at Walden's existing program in South Windsor, CT over the last three years.

The current payer agreements and rates that are in effect at the South Windsor facility will be extended to the proposed Guilford facility.

Walden Behavioral Care, LLC – Total System:
Walden's fiscal year is January 1 to December 31.

Annual change in patient revenue is 10%

No change in the net patient revenue mix.

Annual change in other operating revenue is 2%.

Annual change in salaries and fringe benefits is 8%.

Annual change in operating revenue (non-salary and fringe benefits) is 3%.

Annual change in non-operating revenue is 2%.

Annual change in FTEs is 6%.

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

Office of Health Care Access

April 23, 2015

VIA FAX & EMAIL

Charles Rossignol
Assistant Vice President, Business Development
Walden Behavioral Care
51 Sawyer Road
Waltham, MA 02453

RE: Certificate of Need Application, Docket Number 15-31988-CON
Establishment of a Partial Hospital and Intensive Outpatient Eating Disorder Clinic

Dear Mr. Rossignol:

On April 2, 2015, the Office of Health Care Access ("OHCA") received a Certificate of Need ("CON") application on behalf of Walden Behavioral Care ("Applicant"). The proposal requests authorization to establish a partial hospital and intensive outpatient eating disorder treatment for adults and adolescents and potentially, aftercare support for adolescents and their families in Guilford. The associated capital expenditure is estimated to be $495,000.

OHCA has reviewed the CON application and requests the following additional information pursuant to Connecticut General Statutes §19a-639a(c):

1. Explain why the Applicant chose the town of Guilford for the proposed facility.

2. Describe how the proposal will improve the cost effectiveness of health care delivery in the region.

3. Page 2 of the application indicates that the South Windsor facility has undergone two physical space expansions since opening. Discuss any alternative proposals that were considered, including why the South Windsor facility could not have been expanded a third time.

4. Page 4 of the application describes the various levels of care at the proposed facility. How will the Applicant handle adult patients requiring admission to a more restrictive environment such as residential or inpatient settings?

5. Page 8 of the application indicates that approximately 20% of the patients treated at the South Windsor facility are from southeastern or south central Connecticut. Using the following table below, please provide the number of patients by patient town treated at that facility in FY 2014.

UTILIZATION BY TOWN

Town	Utilization FY 2014

6. Using the table below, provide volume projections for 2015, 2016 and 2017 for the South Windsor facility and explain all assumptions.

SOUTH WINDOR FACILITY PROJECTED UTILIZATION BY SERVICE

	Projected Volume		
Service*	**FY 2015**	**FY 2016**	**FY 2017**
Total			

* For periods greater than 6 months, report annualized volume, identifying the number of actual months covered and the method of annualizing. For periods less than 6 months, report actual volume and identify the period covered.
** Identify each service type and level adding lines as necessary. Provide the number of visits or discharges as appropriate for each service type and level listed.
*** Fill in years. If the time period reported is not *identical* to the fiscal year reported in the application, provide the date range using the mm/dd format as a footnote to the table.

7. Provide the sources/citations for the tables on pages 12, 202 and 203.

8. Revise and resubmit Table 4 on page 11, Table 5 on page 12 and Exhibit 12 on pages 202-203 to correctly reflect a prevalence rate of anorexia nervosa in males of 0.3% as shown in page 208, instead of the 0.05% reported in Table 4.

9. Page 12 of the application states eating disorder programs are provided at Hartford, Yale-New Haven Hospital and Silver Hills Hospitals, however, treatments are not necessarily provided within a dedicated unit. Elaborate on the benefits of providing eating disorder treatments within a dedicated unit.

10. Resubmit the tables on page 16 of the application with the corrected labels (e.g. from POP to PHP) and column totals.

11. Page 22 of the application specifies that in FY 2014, 28% of the patients treated at the South Windsor facility were Medicaid patients. Using the table below, provide the FY 2014 and

projected patient population payer mix for that facility. Provide all assumptions and explain any increases or decreases. **Note: Calculate payer mix from patient volumes, not patient revenues.**

SOUTH WINDOR FACILITY CURRENT & PROJECTED PAYER MIX

Payer	Current FY 2014		Projected FY 2015		FY 2016		FY 2017	
	Patients	%	Patients	%	Patients	%	Patients	%
Medicare*								
Medicaid*								
CHAMPUS & TriCare								
Total Government								
Commercial Insurers								
Uninsured								
Workers Compensation								
Total Non-Government								
Total Payer Mix								

* Includes managed care activity.

12. Will the pricing structure at the proposed facility be the same as what is currently in place at the South Windsor facility? Quantify and provide the rationale for any changes in price structure resulting from this proposal.

13. Provide a copy of the Applicant's charity care policy and sliding fee scale applicable to the proposal.

In responding to the questions contained in this letter, please repeat each question before providing your response. Paginate and date your response. Information filed after the initial CON application submission (e.g., completeness response letter, prefile testimony, late file submissions and the like) must be numbered sequentially from the Applicant's document preceding it. Please begin your submission using **Page 516** and reference "Docket Number: 15-31988-CON." Submit one (1) original and three (3) hard copies of your response. In addition, please submit a scanned copy of your response, in an Adobe format (.pdf) including all attachments on CD. If available, a copy of the response in MS Word should also be copied to the CD.

Pursuant to Section 19a-639a(c) of the Connecticut General Statutes, you must submit your response to this request for additional information no later than sixty days after the date that this request was transmitted. Therefore, please provide your written responses to OHCA no later than **June 22, 2015**, otherwise your application will be automatically considered withdrawn.

If you have any questions concerning this letter, please feel free to contact me at olga.armah@ct.gov or (860) 418 7070 or Brian Carney at brian.carney@ct.gov or (860) 418-7014.

Sincerely,

Olga Armah
Associate Research Analyst

* * * COMMUNICATION RESULT REPORT (APR. 23. 2015 10:53AM) * * *

FAX HEADER:

TRANSMITTED/STORED : APR. 23. 2015 10:52AM FILE MODE	OPTION	ADDRESS	RESULT	PAGE
026 MEMORY TX		917816476755	OK	5/5

REASON FOR ERROR
E-1) HANG UP OR LINE FAIL
E-2) BUSY
E-3) NO ANSWER
E-4) NO FACSIMILE CONNECTION

STATE OF CONNECTICUT
OFFICE OF HEALTH CARE ACCESS

FAX SHEET

TO: MR. CHARLES ROSSIGNOL

FAX: (781) 647-6755

AGENCY: WALDEN BEHAVIORAL CARE

FROM: OHCA

DATE: 04/23/15 **Time:**

NUMBER OF PAGES: 5
(including transmittal sheet

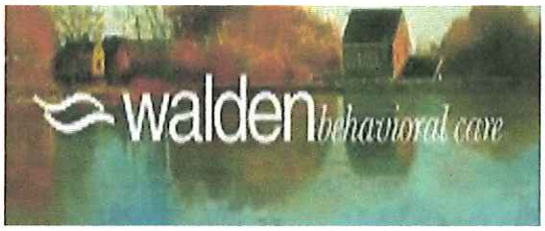
Comments:

Completeness Letter for Docket Number: 15-31988 Establishment of a Partial Hospital and Intensive Outpatient Eating Discorder Clinic in Guilford, CT

PLEASE PHONE IF THERE ARE ANY TRANSMISSION PROBLEMS

Phone: (860) 418-7001 ***Fax: (860) 418-7053***

410 Capitol Ave., MS#13HCA
P.O.Box 340308
Hartford, CT 06134



May 28, 2015

Ms. Kimberly Martone
Director
Office of Health Care Access
Department of Public Health
410 Capitol Avenue, MS#13HCA
P.O. Box 340308
Hartford, CT 06134-0308

RECEIVED
JUN - 1 2015
Office of
HEALTHCARE ACCESS

Re: OHCA Docket No.: 15-31988-CON
Establishment of a Partial Hospital and Intensive Outpatient Eating Disorder Clinic in Guilford

Dear Ms. Martone,

Enclosed please find the Completeness Answers from Walden Behavioral Care, LLC in the above-captioned docket.

In addition, I am including as Exhibit # 30 a signed copy of the Lease Agreement between Pite Family Limited Partnership and Walden Behavioral Care, LLC.

Please do not hesitate to contact me at (781) 647-2922 if you have any questions. Thank you, and your staff, for the time you will spend considering our application.

Respectfully submitted,

Charles R. Rossignol

Charles Rossignol
Assistant Vice President, Business Development

CC: Olga Armah
Brian Carney

51 Sawyer Road, 5th Floor / Waltham, MA 02453 Tel: 781-647-6767 / Fax: 781-647-6755
www.waldenbehavioralcare.com

WALDEN BEHAVIORAL CARE, LLC	:	**Docket No. 15-31988-CON**
Establishment of a Partial Hospital and	:	
Intensive Outpatient Eating Disorder Clinic	:	
In Guilford, CT	:	**May 28, 2015**

ANSWERS TO COMPLETENESS QUESTIONS

1. **Explain why the Applicant chose the town of Guilford for the proposed facility.**

   Response: In FY 2013 approximately 20% of the patients receiving treatment in South Windsor were from southeastern or south central Connecticut. In FY 2014 this percentage had increased to 22%. (Please see the response to Completeness Question # 5 for patient origin data updated to FY 2014). Due to this large percentage of patients currently coming from southeastern and south central Connecticut, Walden determined that a second facility centrally located in the Guilford area would better serve these residents. Especially for adolescents who are still attending school, (and receive treatment in the afternoons after school), the drive from Guilford to South Windsor is difficult, and undoubtedly leaves many individuals who can't make the drive with no access to an eating disorder clinic within their geographic reach. The Applicant surveyed the region surrounding Guilford, and determined that there was sufficient need for Walden's services in the area to make this a valuable contribution to this part of the State.

   While there are providers in the area who treat mental health issues, none of these providers offer expert treatment for men and women specifically for Anorexia Nervosa, Bulimia Nervosa and Binge Eating Disorder. Additionally, the Guilford location at 157 Goose Lane is in close proximity to Yale's Shoreline Medical Clinic, located at 111 Goose Lane, which will provide the necessary back-up medical emergency services.

2. **Describe how the proposal will improve the cost effectiveness of health care delivery in the region.**

   Response: Without access to an outpatient eating disorder program within a reasonable distance from their homes, individuals who suffer from an eating disorder may let it go untreated until it becomes a major health issue; either physically or mentally, or both, that requires more expensive inpatient treatment. When care at a later stage of the illness is sought at a hospital (psychiatric or acute care), the issues are harder to treat, and cost a great deal more in time and money to resolve.

   Additionally, as noted in the CON application on page 23, the proposed facility is part of a treatment network and is able to achieve economies of operation with respect to purchasing and administration.

3. **Page 2 of the application indicates that the South Windsor facility has undergone two physical space expansions since opening. Discuss any alternative proposals that were considered, including why the South Windsor facility could not have been expanded a third time.**

   Response: There are several reasons why service expansion through a new clinic is the optimal solution. At this time, further physical expansion of the South Windsor clinic is not possible because there is no other available space contiguous with, or in the vicinity of, the present clinic. While expansion is always a financially attractive option in most cases, it would also not address the accessibility issues that face patients who live in southeastern and south central Connecticut who seek IOP or PHP services for eating disorders. When Walden realized the number of patients now driving to South Windsor from this area, it began to investigate the need in the Guilford area. Walden also discovered that while Fairfield County has a new provider offering some of the same services that Walden offers, New Haven County, Middlesex County and New London County have no such facility. Given the increasing incidence of eating disorders, there is additional need in the proposed service area for the services Walden offers, which includes not only outpatient treatment for men and women for Anorexia Nervosa, Bulimia Nervosa and Binge Eating Disorder, but the option of a seamless transition to an inpatient setting in Waltham, Massachusetts if such treatment becomes necessary.

   It is anticipated that those individuals who are now being treated in South Windsor but who live in the proposed service area, will begin receiving treatment in Guilford if this CON application is approved. That will leave available space in South Windsor for new patients.

4. **Page 4 of the application describes the various levels of care at the proposed facility. How will the Applicant handle adult patients requiring admission to a more restrictive environment such as residential or inpatient settings?**

   Response: Walden always seeks the most appropriate clinical setting for the clients it serves. When clients who present at Walden's South Windsor clinic site, or this proposed clinic site in Guilford, require more acute levels of care (inpatient or residential), these clients are often referred to Walden's licensed inpatient and/or residential programs located in Massachusetts, pending payer approval and client consent. Clients who do not wish to receive inpatient or residential care at the Walden Massachusetts program can make arrangements to receive treatment at other programs.

5. Page 8 of the application indicates that approximately 20% of the patients treated at the South Windsor facility are from southeastern or south central Connecticut. Using the following table below, please provide the number of patients by patient town treated at that facility in FY 2014.

UTILIZATION BY TOWN*

Town	Utilization FY 2014

***Completed table is Exhibit #29, see response below**

Response: Exhibit #29, pages 526 – 529, provides the number of patients by patient town treated at the South Windsor facility in FY 2014. In FY 2014, 76 patients (22%) were from the service area of the proposed Guilford clinic.

6. Using the table below, provide volume projections for 2015, 2016 and 2017 for the South Windsor facility and explain all assumptions.

Response:

SOUTH WINDOR FACILITY PROJECTED UTILIZATION BY SERVICE

	Projected Volume (patient days)		
Service*	FY 2015	FY 2016	FY 2017
Adult Binge IOP	1,092	1,092	1,092
Adult IOP	1,716	1,716	1,716
Adult PHP	2,080	2,080	2,080
Adolescent IOP	858	858	858
Adolescent PHP	1,040	1,040	1,040
Total	**6,786**	**6,786**	**6,786**

* For periods greater than 6 months, report annualized volume, identifying the number of actual months covered and the method of annualizing. For periods less than 6 months, report actual volume and identify the period covered.
** Identify each service type and level adding lines as necessary. Provide the number of visits or discharges as appropriate for each service type and level listed.
*** Fill in years. If the time period reported is not *identical* to the fiscal year reported in the application, provide the date range using the mm/dd format as a footnote to the table.

Service*	Projected Volume (number of patients)		
	FY 2015	FY 2016	FY 2017
Adult Binge IOP	54	54	54
Adult IOP	94	94	94
Adult PHP	115	115	115
Adolescent IOP	47	47	47
Adolescent PHP	77	77	77
Total	**387**	**387**	**387**

* For periods greater than 6 months, report annualized volume, identifying the number of actual months covered and the method of annualizing. For periods less than 6 months, report actual volume and identify the period covered.
** Identify each service type and level adding lines as necessary. Provide the number of visits or discharges as appropriate for each service type and level listed.
*** Fill in years. If the time period reported is not *identical* to the fiscal year reported in the application, provide the date range using the mm/dd format as a footnote to the table.

The projections are based on the assumption that by FY 2015 the South Windsor is a mature clinic that has been in operation since 2012. Increases in utilization are not anticipated due to physical plant constraints.

7. Provide the sources/citations for the tables on pages 12, 202 and 203.

Response: Please see response to Completeness Question 8, pages 522, 531, and 532.

8. Revise and resubmit Table 4 on page 11, Table 5 on page 12 and Exhibit 12 on pages 202-203 to correctly reflect a prevalence rate of anorexia nervosa in males of 0.3% as shown in page 208, instead of the 0.05% reported in Table 4.

Response:

Table 4 Incidence of Eating Disorders in the United States

Eating disorder	Gender	Population	Prevalence	Incidence
Anorexia Nervosa	Male	152,753,000	0.30%	458,259
	Female	157,479,000	0.90%	1,417,311
	Total	**310,232,000**	**0.60% (weighted average)**	**1,493,688**
Bulimia Nervosa	Male	152,753,000	0.50%	763,765
	Female	157,479,000	1.50%	2,362,185
	Total	**310,232,000**	**1.01% (weighted average)**	**3,125,950**
Binge Eating Disorder	Male	152,753,000	2.00%	3,055,060
	Female	157,479,000	3.50%	5,511,765
	Total	**310,232,000**	**2.76% (weighted average)**	**8,566,825**
Total Eating Disorder	Male	152,753,000	2.80%	4,277,084
	Female	157,479,000	5.9%	9,291,261
	Total	**310,232,000**	**4.37% (weighted average)**	**13,568,345**

Sources:
http://www.census.gov/prod/2011pubs/12statab/pop.pdf
American Psychiatric Association. (2000). Diagnostic and Statistical Manual of Mental Disorders (4th ed., text rev.).
Hudson JI, Hiripi E, Pope HG, Jr, & Kessler RC. (2007), Biological Psychiatry, 61: 348-358.
SAMSHA Advisory (2011)

Table 5 Incidence of Eating Disorders in Connecticut and the Service Area

Area	Anorexia Nervosa	Bulimia Nervosa	Binge Eating Disorder	Total
Connecticut	21,269	35,448	97,147	153,864
Service Area	5,695	11,983	32,745	50,423

Sources:
http://www.census.gov/prod/2011pubs/12statab/pop.pdf
American Psychiatric Association. (2000). Diagnostic and Statistical Manual of Mental Disorders (4th ed., text rev.).
Hudson JI, Hiripi E, Pope HG, Jr, & Kessler RC. (2007), Biological Psychiatry, 61: 348-358.
SAMSHA Advisory (2011)

Notes:
Prevalence for AN is 0.60%
Prevalence for BN is 1.01%
Prevalence for Binge Eating Disorder is 2.76%
Total Prevalence is 4.37%

Please see revised Exhibit 12 on pages530-532..

9. **Page 12 of the application states eating disorder programs are provided at Hartford, Yale-New Haven Hospital and Silver Hills Hospitals, however, treatments are not necessarily provided within a dedicated unit. Elaborate on the benefits of providing eating disorder treatments within a dedicated unit.**

Response: Treatment is always better on a dedicated unit, for reasons similar to those of a dedicated medical unit within an acute care hospital. These benefits include:

a) Dedicated staff skilled specifically in eating disorder treatment, working as a cohesive multidisciplinary (medical, nursing, social work, nutrition, pharmacy) team in managing individual patient treatment concerns as well as the milieu in total.
b) Comprehensive, specialized group treatment program utilizing a robust cadre of evidenced-based practices (CBT, DBT, IT and FBT) as outlined on page 3 (and following) of the CON application. The schedule of group activities includes therapeutic meals and groups addressing goals, DBT skills, anger management, mindful-based yoga, journaling, recovery skills, spirituality, nutrition, and coping with addictions.
c) 1:1 individual treatment, enhanced by a team of dedicated staff providing consistent individual therapy and interventions as needed throughout the course of the episode of care.
d) Family work with adolescent clients.
e) Generous space use dedicated for purposes of eating disorders treatment.

Eating disorder patients are very difficult to treat in a general inpatient unit, primarily because of monitoring and nutrition requirements. While other treatment providers may be

able to provide a small number of these treatment resources in their settings, the depth and breadth of service offerings and features in a dedicated unit is significantly higher and more conducive to an effective treatment environment than one which must serve multiple unrelated treatment needs.

10. Resubmit the tables on page 16 of the application with the corrected labels (e.g. from POP to PHP) and column totals.

Response:

TABLE 7: PROJECTED VOLUME FOR GUILFORD FACILITY

Service/Program	Projected Volume in Days (First 3 Full Operational Years)		
	FY 2016	FY 2017	FY 2018
Binge IOP	351	624	780
Adult IOP	624	858	1,248
Adult PHP	824	1,430	1,820
Adolescent IOP	351	858	1,248
Adolescent PHP	390	780	1,040
Total	**2,540**	**4,550**	**6,136**

Fiscal year is January 1 – December 31.
It is anticipated that the Guilford facility will commence operation in January 2016.

Service/Program	Projected Number of Patients (First 3 Full Operational Years)		
	FY 2016	FY 2017	FY 2018
Binge IOP	41	73	91
Adult IOP	73	100	145
Adult PHP	83	144	183
Adolescent IOP	28	69	100
Adolescent PHP	25	50	66
Total	**250**	**436**	**585**

Fiscal Year is January 1 – December 31
It is anticipated that the Guilford facility will commence operation in January 2016.

Note to Tables: The projection for patient volume statistics were developed using the model that was used for projecting utilization at the South Windsor clinic (Docket Number: 11-31731-CON). The model is based on the experience in Massachusetts. South Windsor began with an average length of stay of approximately 11.5 patient days, but increased to approximately 16.5 patient days by the third year. Walden's business strategy is to be conservative in its projections of patient volumes (e.g., days, admissions and average length of stay (ALOS)). We want to be certain that the proposed facility can remain financially viable with a conservatively short ALOS, which it does. If the ALOS increases, then then facility is even more financially solid, which improves our confidence of being a presence in the Guilford area for a long time to come.

11. Page 22 of the application specifies that in FY 2014, 28% of the patients treated at the South Windsor facility were Medicaid patients. Using the table below, provide the FY 2014 and projected patient population payer mix for that facility. Provide all assumptions and explain any increases or decreases. Note: Calculate payer mix from patient volumes, not patient revenues.

Response:

SOUTH WINDOR FACILITY CURRENT & PROJECTED PAYER MIX

Payer	Current FY 2014		Projected					
			FY 2015		FY 2016		FY 2017	
	Patients	%	Patients	%	Patients	%	Patients	%
Medicare*	0	0	0		0		0	0
Medicaid*	99	28.9	112	28.9	112	28.9	112	28.9
CHAMPUS & TriCare	1	0.3	1	0.3	1	0.3	1	0.3
Total Government	**100**	**29.2%**	**113**	**29.2%**	**113**	**29.2%**	**113**	**29.2%**
Commercial Insurers	238	69.9	270	69.8	270	69.8	270	69,8
Uninsured	3	0.9	4	1	4	1	4	1
Workers Compensation	0	0	0	0	0	0	0	0
Total Non-Government	**241**	**70.8%**	**274**	**70.8%**	**274**	**70.8%**	**274**	**70.8%**
Total Payer Mix	**341**	**100%**	**387**	**100%**	**387**	**100%**	**387**	**100%**

* *Includes managed care activity.*

The projections are based on the assumption that by FY 2015 the South Windsor is a mature clinic that has been in operation since 2012. Therefore no changes to the payer mix are anticipated.

12. Will the pricing structure at the proposed facility be the same as what is currently in place at the South Windsor facility? Quantify and provide the rationale for any changes in price structure resulting from this proposal.

Response: Fee schedules will be consistent between the two facilities, because the reimbursement rates are contracted rates with insurance payers for the type of service provided within any existing or planned licensed Connecticut clinic location.

13. Provide a copy of the Applicant's charity care policy and sliding fee scale applicable to the proposal.

Response: Walden is committed to providing care to patients with limited financial means, and the uninsured through its flexible payment policies, charity care plan and affiliation with the Walden Center for Education and Research, a non-profit sister corporation that makes scholarships to patients depending on funding availability. Walden will always work with the patient and related family members to establish an appropriate mechanism to pay for serves provided. Walden will utilize tools such as payment plans, and sliding scale fee structures, to achieve a plan mutually acceptable to the patient/family and Walden. Walden has a charity care cap amount within each fiscal year, the limit for the first year is $25,000.

The Table below presents the non-insured self pay discount rates used by Walden for all of its programs in Massachusetts and Connecticut. As noted above, Walden will work with patients and family members to establish a suitable payment plan.

Walden Behavioral Care, LLC
Non Insured Self Pay Discount Rates by Program

Treatment	Program	Rate	Deposit Requirement	
PSYCH	Inpatient	$1,000 per day	$7,000	7 Days
EDS	Inpatient	$1,200 per day	$8,400	7 Days
EDS	Residential	$800 per day	$11,200	14 Days
EDS	Partial Hospital	$550 per day	$5,500	10 Days
EDS	Intensive Outpatient - adult	$300 per day	$2,700	9 Days
EDS	Intensive Outpatient - adolescent	$350 per day	$3,150	10 Days
	Evaluation	$250 per visit	$250.00	

Exhibit 29

Exhibit 29: FY 2014 Patient Origin for South Windsor Clinic

UTILIZATION BY TOWN

TOWN	STATE	UTILIZATION FY 2014
ASHFORD	CT	1
AVON	CT	11
BEACON FALLS	CT	3
BERLIN	CT	5
BLOOMFIELD	CT	5
BOLTON	CT	10
BRANFORD	CT	5
BRISTOL	CT	8
BURLINGTON	CT	6
CANTON	CT	2
CHESHIRE	CT	6
COLCHESTER	CT	8
COLUMBIA	CT	2
COVENTRY	CT	3
E HARTFORD	CT	14
EAST GRANBY	CT	1
EAST HAMPTON	CT	3
EAST HARTLAND	CT	2
EAST HAVEN	CT	2
EAST LYME	CT	1
EAST WINDSOR	CT	3
ELLINGTON	CT	4
ENFIELD	CT	6
FARMINGTON	CT	6
GILL	MA	1
GLASTONBURY	CT	10
GOSHEN	CT	1
GRANBY	CT	2
GREENFIELD	IN	3
GRISWOLD	CT	1
GUILFORD	CT	6
HAMDEN	CT	5
HAMPTON	CT	2
HARTFORD	CT	5

TOWN	STATE	UTILIZATION FY 2014
HEBRON	CT	2
LEBANON	CT	1
LEDYARD	CT	2
LIBSON	CT	2
LITCHFIELD	CT	3
LONGMEADOW	MA	1
MANCHESTER	CT	25
MANSFIELD	CT	7
MARLBOROUGH	CT	2
MERIDEN	CT	3
MIDDLETOWN	CT	2
NEW BRITAIN	CT	3
NEW HARTFORD	CT	1
NEW LONDON	CT	2
NEWINGTON	CT	1
NORTH BRANFORD	CT	1
NORTH HAVEN	CT	1
NORWICH	CT	2
OLD LYME	CT	1
OLD SAYBROOK	CT	4
ORANGE	CT	3
PALMER	MA	1
PLAINFIELD	CT	3
PLYMOUTH	CT	2
PROSPECT	CT	2
PUTNAM	CT	2
SHELTON	CT	3
SIMSBURY	CT	2
SOUTH WINDSOR	CT	3
SOUTHINGTON	CT	20
STAFFORD	CT	7
STONINGTON	CT	2
STAMFORD	CT	2
SUFFIELD	CT	2
SOMERS	CT	2
THOMPSON	CT	1
TOLLAND	CT	11
TORRINGTON	CT	2

TOWN	STATE	UTILIZATION FY 2014
TRUMBULL	CT	2
VERNON	CT	12
W SPRINGFIELD	MA	1
WALLINGFORD	CT	10
WATERBURY	CT	1
WATERTOWN	CT	1
WEST HARTFORD	CT	10
WETHERSFIELD	CT	3
WILLIMANTIC	CT	1
WILLINGTON	CT	4
WINDSOR LOCKS	CT	1
WINSTED	CT	2
WOLCOTT	CT	1
WOODSTOCK	CT	2
YORKTOWN	NY	1
TOTAL		**341**

Revised Exhibit 12

Exhibit 12: Estimate of Persons with Eating Disorders in the Service Area

Town	Anorexia Nervosa	Bulimia Nervosa	Binge Eating Disorder	Total
Ansonia	115	193	529	837
Beacon Falls	36	61	167	264
Bethany	33	56	153	242
Bozrah	16	27	73	116
Branford	168	283	773	1,224
Cheshire	176	296	809	1,281
Chester	25	43	117	185
Clinton	79	133	364	576
Colchester	97	163	447	707
Cromwell	85	144	392	621
Deep River	28	46	127	201
Durham	44	74	203	321
East Haddam	55	92	253	400
East Hampton	78	131	357	566
East Haven	175	295	806	1,276
East Lyme	113	191	521	825
Essex	40	67	183	290
Franklin	12	20	55	87
Griswold	72	121	331	524
Groton	239	403	1,101	1,743
Guilford	134	226	618	978
Haddam	50	84	231	365
Hamden	365	615	1,680	2,660
Killingworth	39	66	180	285
Lebanon	44	74	202	320
Ledyard	90	152	416	658
Lisbon	26	44	120	190
Lyme	14	24	66	104
Madison	110	185	505	800
Meriden	364	612	1,674	2,650
Middlebury	45	76	209	330
Middlefield	26	45	122	193
Middletown	284	478	1,306	2,068
Montville	118	199	543	860
Naugatuck	191	321	877	1,389
New Haven	784	1,320	3,608	5,712
New London	166	280	765	1,211
North Branford	86	145	397	628
North Haven	144	243	663	1,050
North Stonington	32	54	146	232

Town	Anorexia Nervosa	Bulimia Nervosa	Binge Eating Disorder	Total
Norwich	243	409	1,118	1,770
Old Lyme	46	77	210	333
Old Saybrook	61	103	283	447
Oxford	77	129	354	560
Portland	57	96	261	414
Preston	29	48	131	208
Prospect	58	97	266	421
Salem	25	42	116	183
Sprague	18	30	82	130
Stonington	111	187	512	810
Voluntown	16	26	72	114
Wallingford	271	456	1,247	1,974
Waterbury	659	1,110	3,034	4,803
Waterford	117	197	539	853
Westbrook	41	70	191	302
West Haven	332	560	1,529	2,421
Wolcott	100	169	462	731
Woodbridge	54	91	247	392
TOTAL	**7,113**	**11,979**	**32,743**	**51,835**

Sources:
http://www.ct.gov/dph/cwp/view.asp?a=3132&q=388156
American Psychiatric Association. (2000). Diagnostic and Statistical Manual of Mental Disorders (4th ed., text rev.).
Hudson JI, Hiripi E, Pope HG, Jr, & Kessler RC. (2007), Biological Psychiatry, 61: 348-358.
SAMSHA Advisory (2011)

Exhibit 30

COMMERCIAL LEASE AGREEMENT

THIS LEASE AGREEMENT (this "Lease"), made and entered into this 31st day of March, 2015 (the "Effective Date"), by and between **PITE FAMILY LIMITED PARTNERSHIP**, a Connecticut limited partnership having its principal office at 157 Goose Lane, Guilford, Connecticut 06437 (hereinafter referred to as "Landlord") and **WALDEN BEHAVIORAL CARE LLC**, a Massachusetts limited liability company having an office at 51 Sawyer Road, Waltham, MA 02453 (hereinafter referred to as "Tenant").

WITNESSETH

1. **LEASED PREMISES.**

1.1 **Lease.** In consideration of the rent and covenants herein reserved and contained on the part of the Tenant to be paid, performed and observed, the Landlord does hereby lease, demise, and let unto the Tenant and the Tenant does hereby hire from the Landlord upon the terms, provisions, covenants and conditions hereinafter set forth, an office building known as and numbered 157 Goose Lane, Guilford, Connecticut (the "Building"). The Building is located on a parcel of land described on Schedule A attached hereto (the "Land"). The premises leased hereunder shall be a standalone building containing approximately six thousand two hundred fifty six (6,256) square feet of rentable area (hereinafter referred to as the "Leased Premises"). The Leased Premises are part of an office park located at 157 Goose Lane, Guilford, Connecticut known as the Sachem Hill Professional Center(the "Office Park"). The Leased Premises are leased together with (i) the right, in common with others, to use the parking spaces, access to and from Goose Lane, and walkways in the Office Park, and (ii) the right to use the utilities that service the Building.

1.2 **Tenant Improvement Allowance**. Landlord shall provide Tenant with a build-out allowance equal to $10 per square foot of the Leased Premises ($62,560) to be paid within thirty (30) days following the Commencement Date or, at Landlord's option, as a credit against Base Rent.

1.3 **Tenant's Preparatory Work**. Tenant shall have prepared plans (the "Plans") for the interior finish and other tenant improvements to the Leased Premises. The Plans shall be submitted to Landlord for its approval, which shall not be unreasonably withheld or delayed. Failure by Landlord to disapprove any submission or resubmission of the Plans within five (5) business days after submission or any resubmission shall constitute a Landlord delay. Any disapproval shall be accompanied by a specific statement of the reasons therefor.

Promptly after approval of the Plans Tenant shall commence Tenant's Work. Tenant shall perform Tenant's Work in a good and workmanlike manner using new materials and in compliance with all applicable laws. Promptly upon the commencement of Tenant's Work, Tenant shall furnish Landlord with a construction schedule letter setting forth the projected completion dates therefor and showing the deadlines for any actions required to be taken by Landlord during such construction. Tenant may from time to time during construction of Tenant's Work modify

such schedule. Landlord will cooperate with Tenant such that Tenant's Work shall proceed with as little delay and interruption as possible. Landlord shall sign promptly such applications and take such other actions as may be necessary for obtainment of necessary permits, approvals and authorizations so that Tenant's Work may proceed.

Tenant shall own and have title to all items of Tenant's Work until the expiration or sooner termination of the Lease. To the extent possible, Tenant shall insure such items of Tenant's Work for their full replacement value.

Tenant's Work shall be deemed substantially complete on the first day as of which Tenant's Work has been substantially completed in accordance with the Plans, as evidenced by a certificate from Tenant's architect, except for items of work (and, if applicable, adjustment of equipment and fixtures) which can be completed after occupancy has been taken without causing undue interference with Tenant's use of the Leased Premises (i.e. so-called "punch list" items), receipt of the CON (as defined below), and, if applicable, receipt of a temporary or permanent certificate of occupancy for the Leased Premises; provided, however, that if substantial completion of Tenant's Work is delayed solely as a result of any Tenant delays, then Substantial Completion shall be the date that Tenant's Work would have been completed but for such Tenant delays (the "Substantial Completion Date").

Notwithstanding the foregoing provisions, the Commencement Date of this Lease shall be determined in accordance with Section 2.1 and not by the Substantial Completion Date.

Notwithstanding the foregoing provisions, Tenant shall not commence any construction or renovations in the Leased Premises prior to the date that Tenant has received a final nonappealable CON.

1.4 **Condition of Building and Leased Premises.** Landlord represents that at Term commencement the Building and the Leased Premises, exclusive of Tenant's Work, and Tenant's permitted use thereof shall comply with all applicable Federal, State and local laws, ordinances, rules and regulations applicable thereto including but not limited to the Americans with Disabilities Act.

2. TERM OF LEASE.

2.1 **Initial Term.** The term of this Lease ("Initial Term") is seven (7) years commencing on the date Tenant receives a Certificate of Need for Tenant's proposed use of the Leased Premises ("CON") from the Connecticut Office of Health Care Access (the "Commencement Date"). In the event the Initial Term commences on a day that is not the first of the month, the Initial Term shall be seven (7) years plus that partial month preceding the next full calendar month. The Lease shall terminate on the last day of the eighty-fourth (84th) full calendar month after the Commencement Date (the "Termination Date").

2.2 **Renewal Terms.** Tenant may renew and extend the term of this Lease for two (2) additional terms of three (3) years each, the first renewal term commencing on the day immediately following the Termination Date and ending three (3) years thereafter ("First Renewal Term); and the second renewal term shall commence on the third (3rd) anniversary of the commencement of

the first Renewal Term and shall terminate on the third (3rd) anniversary of the second renewal term ("Second Renewal Term") (any one of the renewal terms being sometimes referred to as "Renewal Term" and all of them sometimes being collectively referred to as "Renewal Terms"). In order to exercise the Renewal Terms Tenant shall notify Landlord in writing of its intent to renew the lease for either of the Renewal Terms not later than nine (9) months before the end of the Initial Term and nine (9) months before the end of the First Renewal Term as applicable. All obligations, covenants and conditions contained herein shall continue for any and all Renewal Terms. Tenant shall not have the right to exercise its right to extend this Lease for the Second Renewal Term unless it has previously exercised its to extend the term of the Lease for the First Renewal Term.

2.3 **Lease Term.** Except as otherwise provided herein, any reference in this Lease to the "term of this Lease" or "Lease Term" shall mean the Initial Term and all Renewal Terms, if any, as applicable.

3. **BASE RENT.**

3.1 Preliminary Period. (a) Tenant shall be permitted to take occupancy of the Leased Premises on April 1, 2015 (as the same may be extended as hereinafter provided, the "Preliminary Period."). From April 1, 2015 to June 30, 2015, Tenant shall pay rent in the amount of Three Thousand Dollars ($3,000.00) per month due and payable on the first day of the month. During the Preliminary Period all the terms and conditions of this Lease shall apply, and Tenant shall not make any alterations or improvements to the Leased Premises without the Landlord's approval, which may be withheld in the Landlord's sole discretion.

(b) If the Tenant has not received the CON by July 1, 2015, then the Preliminary Period shall automatically be extended on the following terms. Commencing on July 1, 2015 Tenant shall pay rent in the amount of Six Thousand Dollars ($6,000.00) per month until the first to occur of the following: (i) February 28, 2016; (ii) Tenant receives approval of the CON; or (iii) the CON is denied. Additional extension of the Preliminary Period shall be subject to the approval of Landlord and Tenant in their sole discretion.

(c) If the CON is not received by Tenant prior to the end of the extended Preliminary Period, or if the CON is denied at any time either Landlord or Tenant shall have the right to terminate this Lease upon written notice to the other party. Upon such termination this Lease shall be null and void and neither Landlord nor Tenant shall have any obligations or rights hereunder. Tenant shall use diligent efforts to obtain the CON.

3.2 Initial Term. The total Base Rent ("Base Rent") payable during the Initial Term hereof shall be as set forth in the following schedule:

Lease Year	Annual Base Rent	Monthly Payment
1	$100,096.00	$8,341.33

2	$102,598.40	$8,549.87
3	$105,163.36	$8,763.63
4	$107,792.44	$8,982.70
5.	$110,487.26	$9,207.27
6.	$113,249.44	$9,437.45
7.	$116,080.67	$9,673.39

Payment of Base Rent shall commence on the date on which the Tenant receives the CON.

Notwithstanding the foregoing provisions, upon the commencement of the Term Tenant shall receive one (1) month of free Base Rent which shall be the first month of the Term.

3.3 **Renewal Term.**

(a) In the event Tenant renews the term of this Lease, as set forth herein, the annual Base Rent for each Renewal Term, payable to Landlord, effective as of commencement of each respective Renewal Term shall be equal to an amount agreed upon by Landlord and Tenant in good faith. If the Landlord and the Tenant are not able to agree on the rent for either Renewal Term within thirty (30) days after Landlord's receipt of Tenant's notice to renew, then the Base Rent shall be ninety five percent (95%) of the fair market rent for the Leased Premises, but in any event not less than the previous year's Base Rent. The fair market rent shall be determined by a MAI designated appraiser with not less than five (5) years' experience who shall be selected by Landlord but shall be reasonably acceptable to Tenant. During each year of each Renewal Term after the first year the rent shall increase by two and one-half percent (2.5%) each year.

(b) If Tenant is unwilling to accept the appraiser's determination, then Tenant shall notify Landlord within ten (10) business days after receipt of Landlord's determination. The parties shall negotiate in good faith to reach agreement thereon within thirty (30) days after the delivery of such notice by Tenant. If the parties are unable to reach agreement thereon within thirty (30) days after the delivery of such notice by Tenant, then either party may submit the determination of the fair market rent of the Leased Premises to arbitration by giving notice to the other party naming the initiating party's arbitrator within ten (10) days after the expiration of such thirty (30)-day period. Within fifteen (15) days after receiving a notice of initiation of arbitration, the responding party shall appoint its own arbitrator by notifying the initiating party of the responding party's arbitrator. If the second arbitrator shall not have been so appointed within such fifteen (15) day period, the fair market rent of the Leased Premises shall be determined by the initiating party's arbitrator. If the second arbitrator shall have been so appointed, the two arbitrators thus appointed shall, within fifteen (15) days after the responding party's notice of appointment of the second arbitrator, appoint a third arbitrator. If the two initial arbitrators are unable timely to agree on the third arbitrator, then either may, on behalf of both,

request such appointment by the then president of the New Haven Real Estate Board, or its successor, or, on the failure, refusal or inability of such individual to act, by the New Haven office of the American Arbitration Association. The fair market rent of the Leased Premises for the Renewal Term shall be determined by the method commonly known as Baseball Arbitration, whereby Landlord's selected arbitrator and Tenant's selected arbitrator shall each set forth its respective determination of the fair market rent the Leased Premises, and the third arbitrator must select one or the other (it being understood that the third arbitrator shall be expressly prohibited from selecting a compromise figure, except that if the two determinations are within ten percent (10% then they shall be averaged). Landlord's selected arbitrator and Tenant's selected arbitrator shall deliver their determinations of the fair market rent of the Leased Premises to the third arbitrator within ten (10) Business Days after the appointment of the third arbitrator and the third arbitrator shall render his or her decision within ten (10) business days after receipt of both of the other two determinations of the fair market rent of the Leased Premises. The third arbitrator's decision shall be binding on both Landlord and Tenant. All arbitrators shall be commercial real estate brokers who are independent from the parties and who have had at least ten (10) years' experience leasing comparable buildings in the Guilford area. Each party shall pay the fees of its own arbitrator, and the fees of the third arbitrator shall be shared equally by the parties. If as of the commencement of the Renewal Term the amount of the Base Rent for the Renewal Term has not been determined, Tenant shall pay the amount determined by Landlord's appraiser for the Leased Premises and when the determination has actually been made, an appropriate retroactive adjustment shall be made as of the commencement of the Renewal Term if necessary. In the event that such determination shall result in an overpayment by Tenant of any Base Rent, such overpayment shall be credited by Landlord Base Rent next becoming due, and if such determination shall result in an underpayment by Tenant of any Base Rent, Tenant shall pay any such amounts to Landlord within fifteen (15) days following such determination.

3.4 **Payment of Base Rent**. Monthly installments of Base Rent shall be due and payable in advance without demand or setoff, except as otherwise set forth in this Lease, on the first (1st) day of each calendar month, except that a pro-rated portion of the rent shall be due upon the first day of the Initial Term if the Initial Term does not commence on the first day of a particular month.

3.5 **Late Charge**. In order to cover the extra expense involved in handling delinquent payment, Tenant agrees to pay a "late charge" of five percent (5%) of any installment of Base Rent or Additional Rent which is paid more than ten (10) days after the same is due. Such late charge shall be due and payable on demand.

4 ADDITIONAL RENT.

4.1 **Common Area Maintenance Costs**. As additional rent during the term of this Lease, Tenant agrees to pay, on the first day of each calendar month, in advance, an amount equal to one-twelfth (1/12th) of its Proportionate Share (as hereinafter defined) of the estimated "Common Area Maintenance Costs" (as determined by Landlord) during the calendar year in

which said month occurs. Such payments of Common Area Maintenance Costs shall commence on April 1, 2015.

Following the close of each calendar year, the Tenant shall pay within thirty (30) days after receipt of written demand therefor by Landlord (together with reasonable underlying supporting documentation), any deficiencies in Tenant's share of the Common Area Maintenance Costs as established by Landlord's actual costs of same. In the event that Tenant's payments were greater than its actual share of such costs, such excess shall be credited towards future payments to be made by Tenant or if Tenant's lease term has expired and Tenant is not in default, such excess shall be repaid to Tenant.

4.2 The term "Common Area Maintenance Costs" shall mean all Common Area Maintenance Costs plus such expenses for administrative and overhead cost and expenses paid or incurred by Landlord for the maintenance and operation of the Office Park, which are herein defined to include, without limitation, the following:

(i) All supplies, materials and other costs incurred in connection with the operation and maintenance of the common areas of the Office Park;

(ii) The cost of supplying utilities to the common areas of the Office Park;

(iii) The cost of all maintenance and service agreements on equipment for the common areas of the Office Park;

(iv) The cost of all trash or rubbish removal, snow plowing and removal and lawn care;

(v) Insurance premiums, which shall include fire, casualty and liability and any other insurance considered customary or prudent on retail buildings similar to the Office Park or as may be required by a mortgagee of the Premises;

(vi) Actual wages, salaries and benefits (including, but not limited to, vacation pay and union payments or benefits, if any) of all necessary building employees engaged in the physical operation, repair and maintenance of the building, all mechanical equipment and parking areas, including employer Social Security taxes and any other taxes which may be levied on such wages and salaries and including a managing agent's fee in accordance with the then current rates in Connecticut, including any reasonable fee payable to Landlord if Landlord acts as managing agent (which shall not exceed 10% of the Common Area Maintenance Costs (exclusive of insurance premiums, utilities, Taxes and single expenditures in excess of $10,000), but excluding, however, any brokerage fees paid in relation to the operation of the premises of which the Leased Premises are a part; and

(vii) The cost of all other items of general operation, repair and maintenance of the Office Park.

Common Area Maintenance Costs shall not include or have excluded therefrom the following: (i) the cost of any repairs, alterations, additions, changes, replacements and other items which are (a) capital expenditures or capital improvements (except those in connection with the reduction in Common Area Maintenance Costs or changes in accordance with laws or regulations enacted after the Effective Date of this Lease), or (b) pursuant to or as a result of condemnation; (ii) the cost of complying with laws or changes in laws, including, hazardous waste and environmental laws, and laws requiring changes to the Building or Premises; (iii) any profits received by Landlord on account of computations where the aggregate of the Proportionate Shares for all tenants in the Building equals a number greater than 100; (iv) additional rent or other charge under any lease (including any superior or ground lease) or sublease to, or assumed directly or indirectly by, Landlord; (v) transfer, franchise, capital gains, income, inheritance taxes and similar costs incurred by Landlord; (vi) costs which are paid by other tenants of the Office Park; (vii) costs that would duplicate costs theretofore included in Common Area Maintenance Costs; (viii) arbitration expenses unrelated to the maintenance, operation and security of the Building and any other arbitration expenses incurred in connection with leases of space in the Building or with default or eviction proceedings against tenants or relating in any other way to tenant disputes; (ix) unless caused solely by Tenant after the Commencement Date, costs relating to, or in connection with, the removal, containment, encapsulation, disposal, repair, monitoring, testing, venting, clean-up, remediation, or compliance with laws pertaining to (a) asbestos; or (b) any hazardous, toxic or regulated substance or gas; (x) depreciation, interest or amortizations on mortgages or ground lease payments; (xi) legal fees incurred in negotiating and enforcing tenant leases; (xii) real estate brokers' leasing commissions; (xiii) improvements or alterations to tenant spaces; (xiv) the cost of providing any service directly and paid directly by any tenant; (xv) costs of any items for which Landlord receives reimbursement from insurance proceeds or a third party; (xvi) cost to correct any penalty or fine incurred by Landlord due to Landlord's violation of any federal, state, or local law or regulation and any interest or penalties due for late payment by Landlord of any of amounts included as part of the Common Area Maintenance Costs; (xvii) cost of repairs necessitated by Landlord's negligence or willful misconduct; (xviii) fees paid to affiliates of Landlord to the extent that such fees exceed the customary amount charged for the services provided.

4.3 **Real Property Taxes/Assessments for Municipal Improvements**. As additional rent during the term of this Lease, Tenant agrees to pay on the first day of each calendar month, in advance, without setoff or deduction, an amount equal to one-twelfth (1/12th) of its Proportionate Share of the real estate taxes assessed against the Office Park. "Real estate taxes" shall mean all taxes or assessments and governmental charges whether federal, state, county or municipal which are levied or charged against real estate, personal property or rents (excluding, however, any capital gains, franchise, inheritance or income taxes and any fine, interest, late charge or penalty levied or assessed for late payment of real estate taxes), or on the right or privilege of leasing real estate or collecting rents thereon and any other taxes and assessments attributable to the premises of the Office Park. Tenant shall have the right to examine the appropriate bills to determine the accuracy of its Proportionate Share.

4.4 **Tenant's Proportionate Share.** Whenever the term "Proportionate Share" is used in this Lease or reference is made to Tenant's "Proportionate Share", said term shall be determined by the expression as a percentage of the fraction where the numerator is the total rentable square feet of the Leased Premises (as set forth in Section 1.1.) and the denominator is the total rentable square feet of the Office Park. Tenant's Proportionate Share shall be forty eight percent (48%).

4.5 **Other.** The foregoing payments together with all other costs and expenses which Tenant assumes or agrees to pay pursuant to this Lease shall at Landlord's election be treated as additional rent ("Additional Rent"), and in the event of non-payment, Landlord shall have all the rights and remedies herein provided for in the case of non-payment of Base Rent or of a breach of condition. If Tenant shall default in making any payment required to be made by Tenant (including the payment of Base Rent required by Paragraph 3 hereof), or shall default in performing any term, covenant or condition of this Lease on the part of Tenant to be performed which shall involve the expenditure of money by Tenant, after five (5) business days' notice to Tenant and Tenant's failure to pay the same (except in the case of an emergency when no such notice shall be required), Landlord, at Landlord's option, may, but shall not be obligated to, make such payment or, on behalf of Tenant, expend such sum as may be necessary to perform and fulfill such term, covenant or condition, and any and all sums so expended by Landlord with interest thereon at twelve (12%) percent per annum from the date of such expenditure, shall be and be deemed to be additional rent, in addition to the Base Rent, and shall be repaid by Tenant to Landlord, on demand, but no such payment or expenditure by Landlord shall be deemed a waiver of Tenant's default nor shall it affect any other remedy of Landlord by reason of such default. Base Rent and Additional Rent are sometimes collectively referred to herein as "Rent."

4.6 **Accounting of Common Area Maintenance Costs.** After the end of each calendar year, Landlord shall submit to Tenant a reasonably detailed accounting of Common Area Maintenance Costs for such calendar year, and Landlord shall certify to the accuracy thereof. If estimated payments theretofore made for such year by Tenant exceed Tenant's required payment on account thereof for such calendar year according to such statement, Landlord shall credit the amount of overpayment against subsequent obligations of Tenant with respect to Common Area Maintenance Costs (or promptly refund such overpayment if the Term of this Lease has ended and Tenant has no further obligation to Landlord); but if the required payments on account thereof for such calendar year are greater than the estimated payments (if any) theretofore made on account thereof for such calendar year, Tenant shall make payment to Landlord within thirty (30) days after being so advised by Landlord, and the obligation to make such payment for any period within the Term shall survive expiration of the Term.

Any such accounting by Landlord shall be binding and conclusive upon Tenant unless within sixty (60) days after the giving by Landlord of such accounting Tenant shall notify Landlord that Tenant disputes the correctness of such accounting, specifying the particular respects in which the accounting is claimed to be incorrect. Tenant may, at Tenant's sole cost and expense, undertake an audit of such of Landlord's books as are directly relevant to the accounting for Common Area Maintenance Costs for the calendar year in question, if Tenant timely sends a notice to Landlord disputing the accounting received from Landlord, Tenant has made all payments billed or invoiced by Landlord as of the date of the audit, the audit is performed only by Tenant's employees, internal accounting department or an independent certified public accounting firm reasonably approved by Landlord and whose fee or other compensation is fixed by contract and is

in no manner computed or determined based upon the results of the audit, both Tenant and its examiners execute and deliver to Landlord a confidentiality agreement in form and substance reasonably acceptable to Landlord whereby such parties expressly agree to maintain the results of such audit in strict confidence, and such audit is commenced and completed and the results thereof delivered to Landlord within sixty (60) days following the date Landlord makes its books available to Tenant. If Tenant fails to timely deliver a dispute notice to Landlord, or fails to complete its audit and deliver the results thereof to Landlord within the applicable sixty (60) day period, then, in either of such events, Landlord's accounting shall be binding and conclusive upon Tenant for all purposes of this Lease. If it is finally determined or mutually agreed that Landlord has overstated Tenant's Proportionate Share of Common Area Maintenance Costs, Landlord shall credit the amount of such overstatement against the monthly installments of Common Area Maintenance Costs next due under this Lease (or refund such amount to Tenant if the Term has ended and Tenant has no further obligations to Landlord under this Lease). If the audit demonstrates that Landlord has not overstated Tenant's Proportionate Share of Common Area Maintenance Costs, then Landlord may invoice Tenant for any amount by which Tenant's Proportionate Share of Common Area Maintenance Costs was understated, which invoice shall be payable by Tenant within thirty (30) days after receipt.

5. OPTIONS TO EXPAND AND PURCHASE.

5.1 Option to Expand.

Landlord shall provide Tenant with the right of first offer to lease any additional office space which becomes available within the Office Complex. In the event any additional office space becomes available, Landlord shall advise Tenant of all pertinent information regarding the Office Space, including the rental terms. Tenant shall be provided with a period of thirty (30) days from the date when Tenant receives the lease information during which Tenant shall have the exclusive right to negotiate a lease for the additional office space. If the Landlord and the Tenant are not able to agree on terms of a proposed lease within such thirty (30) day period, then Landlord shall have the right to market the additional office space to other prospective tenants.

5.2 Option to Purchase.

A. Tenant is hereby granted an option to purchase the Office Park at any time during the first three (3) Lease Years of the Term, upon the terms and conditions set forth herein (the "Option"). In order to exercise the Option, Tenant must provide notice to Landlord of its exercise of the Option not less than ninety (90) days prior to the proposed closing date (the "Closing Date"), time being of the essence. If Tenant does not complete the acquisition of the Office Park by the end of the third Lease Year, then the Option shall automatically terminate and the Tenant shall have no further rights to purchase the Office Park. The failure of Tenant to exercise the Option or to acquire the Office Park or the termination or expiration of the Option for any reason whatsoever shall not affect this Lease or Landlord's and Tenant's obligations under this Lease. If Tenant exercises the Option, and subject to the terms and conditions herein set forth, Landlord hereby agrees to sell, and Tenant hereby agrees to purchase, the Office Park including buildings,

structures, and improvements now or hereafter thereon and the fixtures used in connection therewith on the following terms and conditions.

(1) The Landlord shall convey marketable title, free and clear of all encumbrances, liens and exceptions to title subject to the following matters (the "Permitted Title Exceptions"):

(a) Any restrictions, limitations, regulations, ordinances, rules and statutes, if any, of the Town of Guilford with respect to the Office Park (including, but not limited to, the wetlands, zoning and planning rules and regulations of the Town of Guilford) and of such other governmental authorities as may have, or claim to have, jurisdiction with respect to the Office Park, provided that they are not violated by any existing buildings and improvements erected on the property or by their use;

(b) Real estate taxes of the Town of Guilford which are not yet due and payable;

(c) Those defects and encumbrances which an accurate survey and personal inspection would show, provided that such does not render title unmarketable in accordance with the standards of title of the Connecticut Bar Association;

(d) Any other easement, restriction, covenant, and/or encumbrance of record, provided they are not violated and that they do not impair the marketability of title or the continued use of the Office Park for commercial purposes as now or hereafter allowed by law; and

(e) Other easements, agreements and restrictions of record, provided that such does not render title unmarketable in accordance with the standards of title of the Connecticut Bar Association.

B. Subject to adjustments as set forth herein, the purchase price for the Office Park shall be Three Million Two Hundred Fifty Thousand Dollars ($3,250,000.00) (the "Purchase Price"), which shall be due and payable in full at Closing by bank or certified check or wire transfer of immediately available funds. To enable Landlord to make conveyance as herein provided, Landlord may, at the time of delivery of the deed, use the purchase money, or any portion thereof, to clear the title of any or all encumbrances or interests, provided the instruments so procured are recorded simultaneously with the delivery of the deed.

C. At the Closing, Landlord shall deliver, at Landlord's expense, and Tenant shall accept, a Warranty Deed, in proper form according to Connecticut law, duly executed and acknowledged by Landlord, conveying to Tenant fee simple, marketable title to the Office Park, subject only to the Permitted Title Exceptions, and checks to pay all conveyance taxes required to be paid by Landlord in connection with the transaction contemplated in this Lease. If said deed refers to any plan necessary to be recorded herewith, Landlord shall deliver such plan with the deed in form adequate for recording or registration, provided such plan is reasonably available and is necessary to establish marketable and insurable title.

D. The Closing of the purchase and sale of the Office Park (the "Closing") shall take place at The Law Offices of Thomas J. Dufour, LLC, 65 Trumbull Street, New Haven,

Connecticut, at 10:00 a.m. unless otherwise herein provided or as otherwise agreed or required by Tenant's mortgage lender, on the Closing Date to be selected by Tenant not later than the final business day of the Term.

E. Subject to Tenant's rights of inspection as hereinafter provided, the Office Park shall be sold and conveyed strictly on an "as is", "where is" and "with all defects" basis, without representation, warranty or covenant, express, implied or statutory, of any kind whatsoever, including, without limitation, representation, warranty or covenant as to condition (structural, mechanical or otherwise), past or present use, construction, development, lease performance, investment potential, tax ramifications or consequences, income, service agreements, compliance with law, habitability, tenancies, merchantability or fitness or suitability for any purpose, all of which are hereby expressly disclaimed. Nothwithstanding the foregoing, at the time of closing the Office Park shall be conveyed substantially in the condition in which it existed at the time of exercise of the Option, excluding, however, normal wear and tear and any repairs which are required to be completed by the Tenant under this Lease.

F. After the Closing the Landlord shall be allowed to remain in possession of its office in the Barn Suite for up to eight (8) months without payment of any rent. Landlord shall pay all utilities separately metered to the Barn Suite.

G. Notwithstanding anything to the contrary elsewhere herein contained, it is understood and agreed by the parties that the Office Park shall not conform to the title provisions of this Option unless (a) all buildings, improvements and structures, including but not limited to, any driveways, garages, septic system and cesspools and all means of access to the Office Park shall be located completely within the boundary lines of the Office Park and shall not encroach upon or under the property of any other persons or entity, (b) no building, improvement or structure of any kind belonging to any other person or entity shall encroach upon or under said Office Park, provided, however, that encroaching utility easements shall not be considered as a violation of the title provisions of this agreement and further provided that any such utility easement shall not affect the use of the Office Park for its purposes, (c) the Office Park shall abut a public way duly laid out or accepted as such by the city or town in which it is located, (d) title to the Office Park is insurable, for the benefit of Tenant, by a title insurance company qualified to do business in the State of Connecticut, and a fee owner's policy of title insurance at normal premium rates, in the American Land Title Association (ALTA) form currently in use, subject only to those printed exceptions to title normally included in the "jacket" to such form or policy, or those exceptions set forth in this Option and (c) all disputes as to the condition of title shall be resolved in accordance with the standards promulgated by the Connecticut Bar Association in effect as of the date hereof and any other applicable provisions of Connecticut law.

H. Landlord shall execute and deliver at time of the Closing, executed certificates, affidavits and indemnities regarding parties in possession of the premises, mechanics' and materialmen's liens and other certificates, affidavits and/or indemnities customarily required by title insurance companies sufficient to eliminate any title insurance exceptions for these matters and to execute and deliver, at such time, any such certificates, affidavits and/or indemnities customarily required by Tenant's mortgage lender and/or Internal Revenue Service in connection with transactions of this type. If Landlord is not a natural person, Landlord shall also provide evidence

of its legal existence and authority to enter into this transaction and to convey title to Tenant and of the authority and incumbency of the person(s) executing documents on behalf of Landlord.

F. Collected rents, water and sewer use charges, operating expenses, common charges, and taxes and assessments for the then current fiscal year shall be apportioned and fuel value shall be adjusted, as of the day of performance of the Closing and the net amount thereof shall be added to or deducted from, as the case may be, the purchase price payable by Tenant at the time of delivery of the deed. Uncollected rents for the current rental period shall be apportioned if and when collected by either party.

I. At time of Closing:

(a) There shall be no written notices of deficiency or violation with respect to the storm water or sewage system, water supply or utilities services used in connection with the Office Park;

(b) There shall be no underground oil or gas storage tanks exists at the Office Park;

(c) The Office Park shall not be the subject of any written orders, notices or allegations of violations from any governmental agency;

(d) There will be no written notice of any claim, action, dispute, contingency or proceeding nor will there be pending any suit, claim or contingency affecting the Office Park, including but not limited to actions for health code violations, violation or infringement of zoning or other laws, rules and regulations applicable to the Office Park or actions in tort or equity.

(e) All buildings have final certificates of occupancy issued and not revoked or suspended; provided that Tenant shall be responsible for an certificate of occupancy for its own improvements.

J . At any time prior to the exercise of the Option, the Tenant:

(i) may, at its own expense, have the septic system(s) serving the Office Park and buildings inspected by a person licensed or certified to conduct septic system inspections. If such system fails the inspection such that a certificate of compliance cannot or will not issue, the Tenant shall shall have the right to terminate this Option and its exercise by written notice to the Landlord. If the Tenant so elects to terminate this Option and its exercise the Option and its exercise shall be null and void without further recourse to either party;

(ii) may, at its own expense have each of the buildings of the Office Park inspected for structural soundness and have all roofing, electrical, mechanical, plumbing, fire alarm, fire suppression and other systems serving each building inspected to determine if such systems are in good repair and in good working order and condition. If any inspection reveals that there is a structural defect or that any system is not in good repair and in good working order and condition

Tenant shall have the right to terminate this Option and its exercise by written notice to the Landlord. If the Tenant so elects to terminate this Option and this Option and its exercise shall be null and void without further recourse to either party;

(iii) may, at its own expense have done a Phase I environmental inspection of the Office Park and, if deemed prudent or desirable, a Phase II environmental inspection for the purpose of determining if the Office Park and all portions thereof are in compliance with Environmental Laws, as hereinafter defined.. Landlord shall permit engineers and other professionals conducting any such inspection full access to the Office Park and any portion thereof for such purposes; provided that Tenant shall not conduct any invasive testing without Landlord's prior consent. Landlord shall give written notice to Tenant as soon as reasonably practicable any communication received by Landlord from any governmental authority concerning Hazardous Materials which relates to the Office Park or any portion thereof, and any environmental condition, i.e. any disposal, release or threat of release of hazardous materials on, under, from or about any building or the Office Park or storage of hazardous materials on, from or about any building or the Office Park of which Landlord is aware. "Environmental Laws" are any federal, state and/or local statute, ordinance, bylaw, code, rule and/or regulation now or hereafter enacted, pertaining to any aspect of the environment or human health, including, without limitation, the General Statutes of Connecticut and the regulations promulgated by the Connecticut Department of Energy and Environmental Protection, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. § 9601 *et seq.*, the Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6901 *et seq.*, the Toxic Substances Control Act, 15 U.S.C. §2061 *et seq.*, the Federal Clean Water Act, 33 U.S.C. §1251, and the Federal Clean Air Act, 42 U.S.C. §7401 *et seq.* "Hazardous Materials" shall mean chemicals, contaminants, pollutants, flammables, explosives, materials, wastes or other substances defined, determined or identified as hazardous or toxic under or otherwise controlled pursuant to any Environmental Laws, including, without limitation, any "oil," "hazardous material," "hazardous waste," "hazardous substance" or "chemical substance or mixture", as the foregoing terms (in quotations) are defined in any Environmental Laws.

In the event that a Phase I environmental inspection reveals that a Phase II inspection would be advisable or necessary or if Landlord receives a communication from a government agency, bureau or department regarding an environmental condition, Tenant shall have the right to terminate this Option and its exercise by written notice to the Landlord. If the Tenant so elects to terminate this Option and its exercise and this Option and its exercise shall be null and void without further recourse to either party.

(iii) The Tenant at its own expense may have the buildings in the Office Park tested for the presence of asbestos, asbestos containing material and radon gas. If such testing reveals the presence of asbestos or asbestos containing material or indicates the presence of radon gas above normal limits as defined by the United States Environmental Protection Agency {"EPA."), Tenant shall have the option of terminating this Option and its exercise by written notice to the Landlord. If Tenant so elects to so terminate this Option and its exercise shall become null and void without further recourse to either party.

K. All inspections shall be conducted at Tenant's sole cost and expense. Except as otherwise set forth in this Lease, Landlord shall have no obligation to make any repairs to the

Office Park. The failure of Tenant to exercise the Option or the termination of the Option as provided herein shall not affect this Lease in any way, which shall remain in full force and effect.

L. Upon reasonable prior notice Tenant and its servants or agents shall have the right of access to all parts of the Office Park prior to the Closing for the purpose of showing the Office Park to prospective mortgage lenders and/or their real estate appraisers and/or to conduct inspections.

M. At the Closing, Landlord shall provide final certificates of occupancy for all buildings in the Office Park, if such previously have not been given to Tenant; provided that Tenant shall be responsible for any certificate of occupancy for its own improvements.

N. Upon Tenant's written request for any of the following, Landlord shall provide the same to Tenant within ten (10) days of receipt to the extent in the possession of the Landlord:

(i) a list of all tenants in the Office Park, a copy of each of their leases, including any amendments or modifications, thereto, the amount of base rent and any additional rent payable by each and the amount(s), if any, which have not been paid and are due and owing. Furthermore, Landlord at Tenant's written request, shall obtain from each tenant an estoppel certificate prepared by Landlord which certificate shall describe the lease and any amendments thereto and shall set forth the lease term, a description of the premises leased by such tenant, whether the lease is in full force and effect, whether the tenant has any defenses or rights of offset against the Landlord, the date to which rent payments have been paid in advance, whether there is any default on the part of the other party, and acknowledging that the Tenant as purchaser of the Office Park is relying on the certificate and the information contained therein. All such estoppel certificates shall be given to tenant within ten (10) business days of the exercise of the Option. At Closing Landlord shall assign all extant Leases to Tenant and Tenant shall assume all of Landlord's obligations under the Leases arising after the Closing.

If Tenant exercises the Option, then from and after the exercise Landlord will send to Tenant a copy of any notice of default issued to a tenant but shall not terminate any lease for the default without first obtaining Tenant's consent and Landlord will not enter into any new lease with any party without first obtaining Tenant's consent unless the new lease is entered into as a result of the exercise of a right by an existing tenant under its lease nor will Landlord enter into any amendment or modification of an existing lease without first obtaining Tenant's consent;

(ii) a list of all parties providing services to the Office Park, copies of all contracts/agreements with such parties and the current status of Landlord's payments to each of them. Landlord shall not renew, modify, amend or extend any such contract/agreement or enter into any new contract/agreement with an existing or new party without first obtaining Tenant's written consent thereto. Landlord hereby represents that it is not in default in its required performance under any such agreement and that as of the date hereof and as of the date of Closing there is not event which by the passage of time would ripen into a default by Landlord. At Closing, Landlord shall assign all such contracts/agreements to Tenant as Tenant wishes to assume;

(iii) a copy of all service, maintenance and repair records for machinery and equipment used in connection with the buildings and Office Park;

(iv) an inventory of all furniture, fixtures, equipment, cleaning supplies, tools, maintenance items, landscaping and Office Park maintenance machinery and equipment owned by Landlord and used in connection with the buildings and the Office Park. The purchase price for the Office Park shall include all these items and any replacements or additions thereto and Landlord shall execute a bill of sale to Tenant transferring clear and unencumbered title thereto at Closing;

(v) a list of all employees of the Office Park together with their current salaries and benefits and any scheduled changes in salary or benefits, a copy of each employee's work record and evaluation and a statement whether such employee is at will or under contract. Landlord shall not renew, modify, amend or extend any such employment contract/agreement or enter into any new employment contract/agreement with an existing or new employee without first obtaining Tenant's written consent thereto. Landlord shall also provide Tenant within than time any collective bargaining agreements or union contracts, their current status and expiration dates. Landlord shall consult with Tenant before entering into any new contract/agreement. At Closing, Landlord shall assign all such contracts/agreements to Tenant;

(vi) books and records relating to the expenses and income from operation of the Office Park.

O. In addition to the items apportioned between Landlord and Tenant at Closing as herein provided, any payments (i) not yet due and payable as of the Closing date or (ii) for any period after the Closing date under any service contracts/agreements or employment contracts shall be apportioned as of such date between Landlord and Tenant.

P. If Landlord shall be unable to give title or to make conveyance, or to deliver possession of the Office Park, all as herein stipulated, or if at the time of the Closing the Office Park does not conform with the provisions hereof or if any representation made in Paragraphs 5 K, O through and including R is not true at time of Closing, Tenant shall have the right to terminate this Option and its exercise by written notice to the Landlord and all other obligations of the parties hereto shall cease and the obligations of the parties under this Option shall be void without recourse to the parties hereto. Such right of termination shall be Tenant's sole remedy.

Q. Tenant warrants and represents that Tenant has dealt with no broker in connection with the Option other than Colliers International, Hartford Office and O, R & L (the "Brokers"), and, in the event of any brokerage claims against Landlord predicated upon prior dealings with Tenant, Tenant agrees to defend the same and indemnify Landlord against any such claim (except any claim by the Brokers). Landlord warrants and represents that Landlord has dealt with no broker in connection with the consummation of this Lease other than the Brokers, and, in the event of any brokerage claims against Tenant predicated upon prior dealings with Landlord, Landlord agrees to defend the same and indemnify Tenant against any such claim. Landlord shall be responsible to pay the commission or fee due to the Brokers as and to the extent provided in a separate written agreement

R. Notices from one party to the other regarding the Option shall be given in the manner and to the person or entity from time to time as specified in Section 20 of this Lease.

6. SECURITY DEPOSIT.

Tenant has this day deposited the sum of $16,862.66 upon execution of this Lease to secure the faithful performance of all of the terms and conditions of this Lease. If the Tenant shall comply with all the terms, conditions and obligations of this Lease, such deposit will be returned to the Tenant at the termination of this Lease, without interest. In the event of the Tenant's default hereunder such deposit may be applied by the Landlord toward reduction of any damages without barring the Landlord, in any manner whatsoever, from other or additional legal or equitable course. Such deposit shall not be construed as constituting liquidated damages. It is understood and agreed that the Landlord shall always have the right, at its option, to apply said deposit, or from time to time such one or more pats or portions thereof or part or portion thereof not previously applied, to late charges and to the curing of any default that may then exist, without prejudice to any other remedy or remedies which the Landlord may have on account thereof. If Landlord shall apply any portion of the security deposit to cure a default by Tenant, Tenant shall immediately upon notice replenish the security deposit to the full amount set forth above. Tenant hereby agrees not to look to the Landlord's mortgagee, as mortgagee, mortgagee in possession, or successor in title to the Office Park, for accountability for any security deposit required by Landlord hereunder unless said sums have actually been received by said mortgagee as security for Tenant's performance of this Lease.

7. PUBLIC UTILITIES/TRASH REMOVAL.

7.1 Tenant shall apply for and obtain in Tenant's own name and at Tenant's sole cost and expense, all utilities that Tenant desires or requires, including but not limited to gas, phone, electricity, and water and sewer charges. Landlord represents that all utilities (except sewer) will be separately metered. Tenant shall pay for such utilities directly to the supplier thereof.

7.2 Except as otherwise herein provided, Landlord shall not be liable to Tenant or any other person for any failure or interruption of water supply, sewer, gas, telephone or electric current unless such failure or interruption is due to the negligence or misconduct of Landlord or its agents, servants, employees or contractors.

7.3 Tenant shall be solely responsible for removal and transfer of all rubbish and trash from the Leased Premises to the dumpster or other common rubbish removal facility located on the Premises, as well as for the proper removal of medical waste in accordance with all government laws and regulations. Landlord shall ensure the availability and maintenance of said central trash removal on site, and ensure routine removal of rubbish from that site. Tenant shall be solely responsible at its own expense for the proper removal and disposal of all medical waste as required by applicable law. Tenant shall not place any medical waste in any dumpsters or other trash receptacles.

7.4 Notwithstanding anything to the contrary in the Lease, if as a result of the negligence or willful misconduct of Landlord, its agents, servants, employees, contractors or any party for which Landlord is legally responsible there shall be an interruption, curtailment or suspension (collectively, "Interruption") of any service required to be provided to the Leased

Premises that shall materially interfere with Tenant's use and enjoyment of a material portion of the Leased Premises, and Tenant actually ceases to use the affected portion of the Leased Premises and if (a) such Interruption shall continue for five (5) consecutive business days following receipt by Landlord of written notice from Tenant describing such Interruption (the "Interruption Notice") and (b) such Interruption shall not have been caused, in whole or in part, by reasons beyond Landlord's reasonable control or by an act or omission of Tenant or Tenant's agents, employees, contractors or invitees (an Interruption that satisfies the foregoing conditions being referred to hereinafter as a "Material Service Interruption") then, Tenant shall be entitled to an equitable abatement of Base Rent, based on the nature and duration of the Material Service Interruption, the area of the Premises affected, and the then current Base Rent amounts, for the period that shall begin on the first day of the Material Service Interruption and that shall end on the day such Material Service Interruption ceases. In all events, Landlord will use commercially reasonable efforts to restore the service interruption as soon as is reasonably practicable. If such Material Service Interruption continues for twenty (20) consecutive business days Tenant may cure the Interruption and deduct the reasonable expenses incurred by Tenant against Base Rent next becoming due.

8. USE OF LEASED PREMISES.

8.1 Use. The Tenant shall use and occupy Premises solely for the purpose of medical services and general office use (the "Permitted Use"). Tenant shall not use the Leased Premises for any other purpose without the express written consent of the Landlord.

8.2 Licenses and Permits. It shall be Tenant's sole obligation to obtain all licenses, permits and franchises required by it for its use of the Leased Premises. No failure to obtain the same, nor any revocation thereof by any governmental authority of any such licenses, permits or franchises heretofore or hereafter granted by any such governmental authority, shall in any manner affect this Lease or diminish the amount of rent or any other payments or charges payable by Tenant hereunder.

8.3 Compliance with Laws. Tenant shall comply with and conform to all federal law, the laws of the State of Connecticut, and the by-laws, rules and regulations of the town in which the Leased Premises is located and the Board of Fire Underwriters, now in force, or which may hereafter be in force, so far as the Leased Premises are or may be concerned only as they relate specifically to Tenant's use and if not, then Landlord shall comply Tenant agrees to hold Landlord harmless from all fines, penalties or costs for violation of or non-compliance with the same caused by the Tenant, its employees, agents, assignees, subleases, successors and assigns. The commencement or pendency of any State or Federal court abatement proceeding affecting the use of the Leased Premises shall, at the option of the Landlord, be deemed a breach hereof.

Landlord shall comply with and conform to all federal law, the laws of the State of Connecticut, and the by-laws, rules and regulations of the town in which the Leased Premises is located and the Board of Fire Underwriters, now in force, or which may hereafter be in force, so far as the Building and Office Park. Landlord agrees to hold Tenant harmless from all fines, penalties or costs for violation of or non-compliance with the same caused by Landlord its employees, agents, assignees, or contractors.

8.4 Nuisance. The Tenant agrees to use the Leased Premises in a manner that does not interfere with or infringe upon the rights of other tenants, if any, in the Building or the Property. Tenant shall not cause, maintain or permit any nuisance in, on or about the Leased Premises, the Building or the Office Park; nor shall Tenant commit or suffer to be committed any waste in, on or about the Leased Premises, the Building or the Office Park.

8.5 Rules and Regulations. Landlord reserves the right to impose upon the Tenant such reasonable rules and regulations regarding the use of the Leased Premises and the Office Park, as may reasonably be necessary, in the sole discretion of Landlord, to preserve and protect the Leased Premises, the Building, the Office Park and the rights of any other tenants of the Office Park. All such rules and regulations shall be observed by the Tenant and by Tenant's employees, agents and customers. All such rules and regulations shall not, however, be inconsistent with the proper and rightful enjoyment by the Tenant of the Leased Premises. No such rule or regulation shall be effective as to Tenant unless and until Tenant has received a copy of same in writing. Landlord shall enforce all rules and regulations uniformly against all occupants of the Office Park.

8.6 Tenant's Expenses. Tenant shall pay directly and shall have full responsibility for (i) all utilities to the Leased Premises, including, without limitation, gas, electricity, telephone, heating, ventilating, air conditioning and any service costs associated therewith; (ii) all installation costs for telephone and wiring for specialty equipment within the Leased Premises; (iii) the maintenance and repair of Tenant's HVAC units, plate glass, electrical wiring, plumbing and any other systems or equipment upon the Leased Premises; (iv) glass cleaning, repair or replacement; (v) rubbish removal; (vi) pest control; (vii) Tenant's liability insurance; (viii) Tenant's personal property taxes levied or assessed against trade fixtures, equipment, furnishings, merchandise and other personal property located within or installed in or upon the Leased Premises; and (ix) any interior cleaning or maintenance.

8.7 No Offset or Deductions. Except as expressly set forth in this Lease, the Tenant will not be permitted to offset or deduct any expenses it incurs or security deposit it paid against the Landlord's Base Rent or Additional Rent.

9. LANDLORD'S REPAIRS AND MAINTENANCE.

9.1 Landlord shall be responsible for the maintenance, repair and replacement of the common areas of the Office Park except those areas which are to be maintained by other tenants of the Office Park.

9.2 Throughout the Term, Landlord shall repair, maintain, and replace, and keep in good working order and condition, all at its sole cost and expense, the exterior and structural components of the Building and Leased Premises, including but not limited to the roof, and all parts and portions thereof, the roofing system and its component parts, the roof membrane, exterior walls, interior load bearing walls, foundation, floor slab, sprinkler and fire alarm systems, exterior canopies, gutters and water spouts, and utility services extending to the service connections within the Leased Premises.

9.3 Except as provided in this Lease, Landlord shall not be required to furnish any services or facilities or to make any improvements, repairs or alterations in or to the Leased Premises during the term of this Lease or any renewal thereof. Any repairs and maintenance, which are the responsibility of the Landlord shall, if caused by the negligence or intentional act of the Tenant, its agents, employees and/or invitees, be paid for by the Tenant.

10. TENANT'S REPAIRS AND MAINTENANCE. Tenant shall, at all times during the term of this Lease and any renewals thereof, at its own cost and expense, keep and maintain in repair and good condition (ordinary wear and tear excepted), the interior, non-structural portions of the Leased Premises and any other areas the Landlord is not required to maintain, including plate glass, electrical wiring, lighting (including bulbs and starters) plumbing, heating, ventilation, and air conditioning installations (regardless of whether such system is located inside or outside the Building) and any other system or equipment upon the Leased Premises and shall surrender the same upon termination hereof, in as good condition as received (ordinary wear and tear and damage by casualty excepted). Provided, however, that in the event that any components of the heating, ventilating and air conditioning system cannot be repaired and must be replaced, Landlord shall be responsible for the cost of such replacement. If Landlord is obligated to replace any component of the heating, ventilating and air conditioning system, and fails to do so within a reasonable time after notice from the Tenant, Tenant may undertake the replacement and deduct the reasonable cost thereof from the Base Rent next coming due. Tenant will also perform and make all maintenance and repairs necessary to keep the Leased Premises which are not Landlord's responsibility as elsewhere provided in good order and condition, ordinary wear and tear and damage by casualty excepted. Tenant shall be liable for any damage to the Building resulting from the acts or omissions of Tenant or its customers, guests, employees, agents, and authorized representatives. Tenant shall further be responsible for all repairs, the need for which arises out of (a) the performance of or existence of improvements made after the date hereof by or at the request of Tenant, (b) the installation, use or operation of Tenant's Property, (c) the moving of Tenant's property in or out of the Building, or (d) the acts, omissions, or negligence by Tenant or any of its subtenants or any of its or their employees, agents, contractors, or invitees or their use or occupancy of the Premises. All repairs, maintenance and replacements as aforesaid shall be in compliance with all applicable building codes and ordinances.

11. INSURANCE.

11.1 Liability Insurance. Tenant shall, at its own expense, during the entire term of this Lease, or any extension thereof, carry owner's and tenant's general liability and property damage insurance covering the Leased Premises with limits of Three Million Dollars ($3,000,000.00) combined single limit in respect to injuries or death of more than one person in any one occurrence and One Million Dollars ($1,000,000.00) for property damage. Such policies shall be written in standard Connecticut form, shall name the Landlord as an additional insured therein, shall provide for not less than ten (10) days written notice to Landlord in the event of cancellation or material change in coverage, and shall be primary and noncontributing with respect to any insurance carried by the Landlord. Prior to the commencement date of this Lease, Tenant shall deliver to the Landlord certificates evidencing such insurance and, at Landlord's option, deliver said original policies to the Landlord. Landlord shall deliver to Tenant a certificate evidencing all insurances maintained by Landlord on the Building. Throughout the Term, Landlord shall insure the Building

in an amount equal to its full replacement value, exclusive of foundation. All insurance herein required of the parties shall be carried by companies authorized to to business in the State of Connecticut and having a Best's rating of at least A-X.

11.2 Tenant's Use of the Leased Premises. Tenant shall not use the Leased Premises in a manner that will increase the rate of fire insurance in the Building over the rate in effect after one (1) years from the commencement of the Initial Term. If by reason of the failure of the Tenant to comply with the provision of this paragraph the fire insurance rate is increased higher than it would be otherwise, the Tenant shall reimburse the Landlord for the part of all fire insurance premiums thereafter paid by the Landlord that have been charged because of such failure of the Tenant, such reimbursement to be in addition to Tenant's hazard insurance premiums required by this Section.

11.3 Contents Insurance. Tenant shall, it its own cost and expense, keep its own personal property, furniture, fixtures and equipment belonging to Tenant and located in the Leased Premises insured for not less than one hundred percent (100%) of its actual replacement value against loss or damage by fire, with the usual extended coverage endorsements. Tenant shall, at any time upon request of the Landlord, provide Landlord with copies of such policies and/or evidence of payment of premiums for such policies. All such policies shall be in place at the commencement of this Lease.

11.4 Waiver of Subrogation. Landlord and Tenant each hereby waive any and all rights of recovery against the other, or against the officers, employees, agents and representatives of the other, for loss of or damage to such waiving party or its property or the property of others under its control, where such loss or damage is insured against under any insurance policy in force at the time of such loss or damage. Landlord and Tenant shall, upon obtaining the policies of insurance required hereunder, give notice to the insurance carrier that the foregoing mutual waiver of subrogation is contained in this Lease.

12. **INDEMNIFICATION.**

12.1 Indemnification. Tenant and Landlord hereby indemnify and hold the other harmless from and against any and all claims, demands, actions, causes of action, penalties, judgments, court costs, reasonable attorneys' fees, and liabilities of every kind and description arising from the use of the Leased Premises, the Building and the Office Park; from the conduct of Tenant's or Landlord's business, as the case may be; from any activity, work or things done, permitted or suffered by Tenant or Landlord in or about the Leased Premises, the Office Park or elsewhere, including, without limitation from any accidents, injuries, or claims relating to any breach or default in the performance of any other obligation on Tenant's or Landlord's part to be performed under the terms of this Lease; or from any negligence or willful act of either party, or their agents, contractors or employees, and from and against all costs, attorney's fees, expenses and liabilities incurred in the defense of any such claim (whether or not suit is brought) or any action or proceeding brought thereon. In the event that any action or proceeding is brought against Landlord or Tenant, as the case may be, by reason of any such claim, the indemnified party, upon notice from the indemnified party, shall defend the same at the indemnifying party's sole expense by counsel satisfactory to Landlord.

12.2 Exemption of Landlord from Liability. Tenant hereby agrees that Landlord shall not be liable for injury to Tenant's business or any loss of income therefrom or for damage to the goods, wares, merchandise or other property of Tenant, Tenant's employees, invitees, customers, or any other persons in or about the Leased Premises, the Building or the Office Park, whether such damage or injury is caused by or results from fire, steam, electricity, gas, water or rain, or from breakage, leakage, obstruction or other defects of pipes, sprinklers, wires, appliances, plumbing, air conditioning or lighting fixtures, or from any other cause, whether the said damage or injury results from conditions arising upon the Leased Premises, the Building or the Office Park, or from other sources or places, and regardless of whether the cause of such damage or injury or the means of repairing the same is inaccessible to Tenant. Notwithstanding anything in the foregoing to the contrary, Landlord shall be liable for any third party claims resulting wholly or partially from the negligence or willful act of the Landlord or its agents, servants, employees or contractors.

13. **DAMAGE BY FIRE OR OTHER CASUALTY.**

13.1 Total Destruction. In the event the Leased Premises shall be destroyed or so damaged by fire or other casualty so as to render the Leased Premises wholly untenantable, Landlord shall restore and repair such damage to the Leased Premises with reasonable dispatch, in which case the Base Rent and Additional Rent due hereunder shall abate on a per diem thirty (30) day month basis during the period of restoration until the first to occur of (a) substantial completion by Tenant of Tenant's improvements, or (b) sixty (60) days after Landlord completes its restoration of the Building.

In the event the Landlord is unable to restore and repair such damage within one hundred eighty (180) days after such destruction, Tenant may elect to terminate this Lease by giving the Landlord written notice of its intention to do so within two (2) weeks after the earlier of the expiration of such one hundred eighty (180) day period or notification from Landlord with an estimate of the time required to repair such damages and restore the Leased Premises, which estimate is in excess of one hundred eighty (180) days from the date of destruction.

13.2 Partial Destruction. In the event the Leased Premises shall be damaged but are not thereby rendered wholly untenantable, Landlord shall restore the Leased Premises with reasonable dispatch. While such damage is being repaired, the Base Rent shall be reduced by an amount which bears the same ratio to the monthly rent that the floor area rendered untenantable bears to the total floor area of the Leased Premises. Such reduction shall continue until the first to occur of (a) substantial completion by Tenant of Tenant's improvements, or (b) sixty (60) days after Landlord completes its restoration of the Building If such restoration is not completed within one hundred eighty (180) days of the date of destruction, Tenant may, at its option, terminate this Lease upon thirty (30) days prior written notice to Landlord.

13.3 Landlord's Obligations. Nothing herein shall obligate Landlord to replace or repair the personal property or fixtures of the Tenant nor any alteration or improvement constructed by the Tenant. Nor shall the Landlord be obligated for any repairs made necessary by a casualty not covered by any standard form fire and extended coverage required to be maintained hereunder.

13.4 Repair/Restoration by Tenant. Notwithstanding anything to the contrary in the foregoing, Tenant shall be responsible for repairing, restoring and replacing its trade fixtures and for replicating to the extent possible, Tenant's Work in the Leased Premises. Any and all insurance proceeds payable to or received by Tenant on account of Tenant's Work items shall belong to Tenant exclusively. Landlord and Tenant shall cooperate such that each party's work of repair and restoration can be completed as expeditiously as possible. As with Tenant' initial Tenant's Work, Landlord will cooperate with Tenant such that repair and restoration shall proceed with as little delay and interruption as possible. Landlord shall sign promptly such applications and take such other actions as may be necessary for obtainment of necessary permits, approvals and authorizations so that repair and restoration may proceed.

14. ALTERATIONS AND IMPROVEMENTS.

14.1 Tenant's Additional Improvements. No improvements or alterations of the Leased Premises which would require a building permit shall be made by Tenant without the prior written consent of Landlord, which consent shall not be unreasonably withheld, conditioned or delayed. Upon obtaining Landlord's prior consent, Tenant may, at its option and at its own cost and expense, at any time and from time to time, make additional alterations, changes, replacements, improvements and additions in and to the Leased Premises, as it may deem desirable. Prior to the commencement of any substantial repair, improvement, or alteration, Tenant shall give Landlord at least ten (10) days prior written notice in order that Landlord may post appropriate notices to avoid any liability for liens. Tenant shall submit the plans and specifications of said proposed alterations and a list of its proposed contractors and subcontractors to be used in connection with said alterations to the Landlord and must obtain Landlord s written approval for the same, which approval shall not be unreasonably withheld, conditioned or delayed. All work shall be done in conformance with said prior approvals and (with the exception of trade fixtures) shall be the property of the Landlord upon termination of this Lease. Landlord's approval of such alterations shall not be deemed a representation or warranty by Landlord of the fitness or quality of the plans as proposed or the work as completed.

14.2 Signs. Subject to Landlord's signage criteria for the Office Park and Landlord's reasonable approval, Tenant shall be permitted to install the maximum amount of signage permitted by applicable law. All signage installed by Tenant shall be subject to Landlord's approval, shall be consistent with the style and design of other signage in the Office Park, and shall comply with the signage regulations of the Town of Guilford. Tenant shall be responsible for all permits required for the installation of any signage.

14.3 Mechanic's Liens. If as a result of Tenant's alterations hereunder, including any initial fit up, any mechanic's lien or other lien is place on the Leased Premises, Tenant shall cause the same to be canceled and discharged of record, by bond or otherwise, at Tenant's sole cost and expense, within thirty (30) days after the filing of such lien. In addition, Tenant shall defend, on behalf of the Landlord, at Tenant's sole cost and expense, any action, suit or proceeding that may be brought thereon or for the enforcement of such lien, and Tenant shall pay any damages and discharge any judgment entered therein and hold harmless Landlord from and indemnify it against any claim, damage or costs, including reasonable attorney's fees, resulting therefrom.

14.4 Compliance with Building Codes. All work done by Tenant in connection with any repairs or in connection with alterations, installations, and changes in the Leased Premises, including any initial fit up, shall be in compliance with building and zoning rules and regulations and with all applicable laws, orders, ordinances, rules, regulations, and requirements of all federal, state and municipal governments or departments, commissions, boards, and officers thereof and in accordance with the rules, orders and regulations of any applicable insurance underwriters. Landlord shall not be liable for the failure of any building facilities or services installed by the Landlord caused by the Tenant's improvements and Tenant shall promptly correct the same. Landlord may make such correction and charge the Tenant for the costs related to the repairs of any improvements made by the Tenant, such charge to be Additional Rent.

15. **QUIET ENJOYMENT**. The Landlord covenants with the Tenant that it has good right to lease said Leased Premises in manner aforesaid, that the Leased Premises are free and clear of all encumbrances except as specified in Schedule "A" and that it will suffer and permit the Tenant (it keeping all the covenants on its part, as herein contained) to occupy, possess and enjoy the Leased Premises during the term aforesaid, without hindrance or molestation from it or any person claiming by, from or under it.

16. **TENANT'S DEFAULT.**

16.1 Events of Default. Tenant shall be in default under this Lease if

(A) Tenant fails to pay any installment of Base Rent or Additional Rent within ten (10) days of the date when due and if not cured within ten (10) days from written notice thereof (provided that Landlord shall not be required to deliver written notice of nonpayment of Base Rent more than two (2) times in any calendar year); or

(B) If Tenant defaults in the performance of any of the other terms, covenants or conditions of this Lease and such default has not been cured within thirty (30) days after notice by Landlord to Tenant specifying such default and requiring it to be remedied, or where such default cannot reasonably be remedied within such period of thirty (30) days, if Tenant shall not have, in good faith, commenced the remedying thereof within such period of time and shall not be proceeding with due diligence to remedy it; or

(C) Upon Tenant's filing of a petition under the Federal Bankruptcy Code or if any involuntary petition under the provisions of said Code is filed against Tenant and such involuntary petition is not dismissed within sixty (60) days thereafter, or if Tenant makes an assignment of all its assets for the benefit of creditors or is placed in receivership and said receiver has not been discharged thirty (30) days after his appointment.

16.2 Termination by Landlord. If Tenant shall be in default under this Lease, Landlord, at its option, may terminate this Lease without further notice to Tenant, and upon such termination, Tenant shall quit and surrender the Leased Premises and all improvements located thereon to Landlord, but such termination shall not affect the Landlord's rights to recover damages or exercise any other rights as hereinafter stated.

16.3 Re-entry by Landlord. Upon termination of this Lease as aforesaid, Landlord may: a) re-enter and resume possession of the Leased Premises and enter and possess all improvements

thereon and remove all persons and property therefrom either by summary process proceedings or by a suitable action or proceeding, at law or in equity, without being liable for any damages therefore; and to re-let the whole or any part of the Leased Premises on behalf of Tenant for a period equal to, greater or less than the remainder of the term of this Lease, at such rental and upon such terms and conditions as Landlord shall deem reasonable, to any tenant it may deem suitable and for any use and purpose it may deem appropriate. Landlord shall not be liable in any respect for the failure to relet the Leased Premises and the improvements located thereon, or, in the event of such re-letting, for failure to collect the rent thereunder and any sums received by Landlord on a re-letting in excess of the rent reserved in this Lease, shall belong to Landlord.

16.4 Damages. Upon the termination of this Lease as aforesaid, Landlord shall forthwith be entitled to recover from Tenant all damages sustained by the Landlord as a result of Tenant's default, including, but not limited to, the following items:

A) If the Base Rent and the Additional Rent provided for herein exceed the net sum received by Landlord on any re-letting, the amount of such excess; and

B) All expenses of operating the Leased Premises while they are vacant; all expenses, including reasonable attorney's fees, incurred by Landlord in recovering possession of the Leased Premises and re-letting the same, , including, without limitation a broker's commission at the rate typically charged for commercial lease transactions in the market area in which the Office Park is located, but limited to the unexpired term only; provided however Landlord shall not be entitled to recover consequential damages.

16.5 Landlord's Costs and Expenses. Tenant shall pay as Additional Rent hereunder all other expenses reasonably incurred by Landlord, including reasonable attorney's fees, in seeking to enforce the obligations of Tenant hereunder occasioned by the Tenant's default. Tenant agrees that Landlord shall be entitled to recover the sum set forth in this paragraph in one action or, at Landlord's option and provided there shall be good reason to do so, in several separate actions. In such latter event, Tenant hereby waives the right to assert the rule against splitting the cost of action as a defense thereto. Both Landlord and Tenant hereby expressly waive their right to a trial by jury in any action brought by either party.

16.6 Mitigation of Damages. Landlord shall use commercially reasonable efforts to mitigate damages resulting from Tenant's default under this Lease.

16.7 Waiver. A waiver by Landlord of any breach by the Tenant of any of the terms, covenants, conditions and agreements of this Lease shall be limited to the particular instance and shall not operate or be deemed as a waiver of any future breaches of said terms, covenants, conditions and agreements. The failure of Landlord to enforce any agreement, condition, covenant or term of this Lease against the Tenant shall not be deemed to void or affect the right of Landlord to enforce the same agreement, condition, covenant or term on the occasion of such subsequent breach or default.

16.8 Landlord's Right to Cure Tenant's Default. If Tenant defaults in the performance of any covenant or condition of this Lease required to be performed by Tenant, Landlord, at its option, may after thirty (30) days notice to Tenant, or without notice if, in Landlord's sole opinion, an emergency exists, perform such covenant or condition for the account and at the expense of Tenant

and Tenant shall reimburse Landlord for such expense. The amount of such expense shall be deemed to be Additional Rent and shall be paid by Tenant with the next monthly installment of rent due hereunder. The provisions of this Section shall survive the termination of this Lease.

17. **EMINENT DOMAIN.**

17.1 Total Condemnation. In the event the whole of the Leased Premises shall be taken under the power of eminent domain for any public or quasi-public use or purpose permanently or only for a period of time, or a portion of the Leased Premises are so taken and the remaining portion does not allow Tenant to use the remainder of the Leased Premises for the purposes permitted by this Lease, this Lease shall thereupon terminate as of the date possession shall be taken by or under the condemning authority. Tenant shall have no claim against Landlord for the value of any unexpired term of this Lease.

17.2 Partial Condemnation. In the event that proceedings in eminent domain shall have been instituted with respect to the Office Park, Tenant's Proportionate Share for the remaining term shall be a percentage based upon a fraction where the numerator is the total rentable square footage of the Leased Premises (as set forth in Section 1.1) and the denominator is the total rentable square footage of the uncondemned Office Park; provided, however, that Landlord or Tenant may, at its option, terminate this lease as of the date condemning authority acquires possession.

17.3 Termination of Lease. In the event this Lease shall be terminated, as provided in this Section, the Leased Premises and the improvements shall belong absolutely to the Landlord and Tenant shall promptly remove all of Tenant's personal property and each party hereto shall thereupon be released from every obligation hereunder to the other, except:
a) With respect to any covenants the breach of which occurred prior to the termination date; and
b) The obligation of Landlord to refund to Tenant any rent paid by Tenant for the period subsequent to the termination date and Tenant's security deposit hereunder to the extent it is refundable under Section 5.

17.4 Damages. All damages awarded for any such taking under the power of eminent domain, whether for the whole or a part of the Leased Premises, shall belong to and be the property of Landlord, whether such damages shall be awarded as compensation for diminution in value of the leasehold , loss of rental income, Tenant's improvements which are attached to the Building or for the fee of the Leased Premises, provided, however, that Landlord shall not be entitled to any award made to Tenant for loss of or damages to Tenant's personal property or for damages for cessation or interruption of Tenant's business or for the Tenant's cost of moving.

17.5 Adjustment of Rents. If this Lease is terminated as provided in this Section 17, all rent shall be paid up to the date that possession is taken by the condemning authority, and Landlord shall make an equitable refund of any rent paid by Tenant in advance and not yet earned by Landlord.

17.6 Voluntary Sale. A voluntary sale by Landlord to any public or quasi-public body, agency or person, corporate or otherwise, having the power of eminent domain, either under threat

which all or substantially all of Tenant's assets are transferred, or to transactions with any entity which controls or is controlled by Tenant or is under common control with Tenant

20. **NOTICES.** Any notice required or permitted to be given under this Lease shall be in writing and shall be sent by hand delivery, facsimile transmission, overnight courier service or registered or certified mail, return receipt requested and postage prepaid to:

Landlord:

Pite Family Limited Partnership
c/o Sachem Financial
157 Goose Lane
Barn Suite
Guilford, CT 06437

Tenant:

Walden Behavioral Care LLC
51 Sawyer Road
Waltham, MA 02453

such notice shall be deemed to have been given on the date received or rejected.

21. **ACCESS TO PREMISES.**

21.1 Access for Repairs and Improvements. Tenant shall permit Landlord or Landlord's agents to enter the Leased Premises and improvements thereon at all reasonable hours upon at least twenty four (24) hours notice except in the case of emergency, for the purpose of inspecting the same, or of making repairs or performing any other work on the Leased Premises and improvements thereon that Tenant may have failed to commence in accordance with the agreements, conditions, covenants and terms hereof, or that Landlord shall deem necessary for the safety, preservation or restoration of the improvements, or for the safety or convenience of the occupants or users thereof (there being no obligation, however, on the part of the Landlord to make any such repairs, additions or alterations).

21.2 Access for Sale or Lease. Tenant shall also permit Landlord or Landlord's agents to enter the Leased Premises at all reasonable hours for the purpose of showing the Leased Premises to prospective mortgagees or to persons wishing to purchase the same and, within three (3) months prior to the expiration of the term of this Lease (or any extension thereof), to persons wishing to lease the Leased Premises or any part thereof.

22. **SUBORDINATION, NON-DISTURBANCE AND ATTORNMENT.**

convey and otherwise dispose of the Leased Premises and shall be entirely free and released of all covenants and obligations of the Landlord after the Leased Premises are so conveyed, and Landlord shall not be subject to any liability resulting from any act or omission or event occurring after such conveyance. The purchaser, or any person who takes title to the Leased Premises from the Landlord or any person who subsequently holds title to the Leased Premises, shall be deemed to have assumed and agreed to carry out any and all covenants on Landlord's part to be performed under this Lease. No further agreement will be required between the Landlord and the Tenant and any person holding title subsequent to Landlord in connection with the assumption of the obligations of Landlord hereunder.

26. **FORCE MAJEURE.** In the event the Landlord or Tenant shall be delayed, hindered in or prevented from the performance of any act required hereunder by reason of strikes, lock-outs, labor troubles, inability to produce materials, failure of power, restrictive governmental laws or regulations, riots, insurrection, the act, failure to act or default of the other party, war or other reason beyond their control, then performance of such act shall be excused for the period of the delay and the period for the performance of any such act shall be extended for a period equivalent to the period of such delay.

27. **HOLDING OVER.** If Tenant remains in possession of the Leased Premises or any other part thereof after the expiration of the term hereof without the express written consent of Landlord, Landlord may elect to (a) deem such occupancy to be a tenancy from month to month at a rental in the amount of one hundred fifty percent (150%) of the last monthly rental payment plus any other charges payable by Tenant hereunder and upon such terms and conditions hereof applicable to a month to month tenancy or (b) deem such occupancy to be unauthorized and immediately commence proceedings under the Connecticut summary process statute and acceptance by Landlord of any sums from Tenant shall not be construed as its consent to Tenant's continued occupancy or as a renewal of this Lease or as an agreement to month-to-month occupancy, but shall be applied to use and occupancy only.

28. **NOTICE TO QUIT.** whenever this Lease shall terminate either by lapse of time, abandonment, or by virtue of any of the express stipulations herein, the Tenant hereby waives all rights to any notice to quit possession as prescribed by the statute relating to summary process, as well as any right to a jury trial and to any court appeals.

29. **GENERAL PROVISIONS.**

29.1 Entire Agreement. This instrument contains the entire and only agreement between the parties and no oral statements or representations or prior written matter not contained in this instrument shall have any force or effect. This Lease may only be changed, modified or discharged by an agreement in writing executed by the parties hereto.

29.2 Partial Invalidity. If any term, covenant, condition or provision of this Lease or the application thereof to any person or circumstances shall, to any extent, be invalid or unenforceable, the remainder of this Lease, or the application of such term or provision to persons or circumstances other than those as to which is held invalid or unenforceable, shall not be affected

thereby, and each remaining term, covenant, condition and provision of this Lease shall be valid and be enforced to the fullest extent permitted by Law.

29.3 Marginal Notes. The marginal notes used as headings for the various subject matters covered in this Lease are used only as a matter of convenience as an aid to finding the subject matters and are not to be construed as part of this Lease and shall not in any way limit or amplify the terms or provisions thereof.

29.4 Construction. This Lease is made and executed in and is to be construed under the substantive laws of the State of Connecticut. Landlord and Tenant hereby agree to be subject to the jurisdiction of Connecticut courts for the resolution of any dispute arising hereunder.

29.5 Successors and Assigns. Except as otherwise provided herein, the agreements, conditions, covenants and terms herein contained shall, in every case, apply to, to be binding upon, and inure to the benefit of the respective parties hereto and their respective heirs, administrators, executors, successors and assigns, with the same force and effect as if specifically mentioned in each instance where a party hereto is named.

29.6 Jury Trial. Tenant and Landlord each hereby waive trial by jury in any action or proceeding brought by either of the parties against the other.

29.7 Lease Signing. No rights are to be conferred upon the Tenant until this Lease has been signed by Landlord, and an executed copy of the Lease has been delivered to Tenant.

29.8 Counterparts. This Lease may be executed in multiple counterparts and all such counterparts shall be deemed one original document. This Lease may be signed by electronic or facsimile signature and shall signatures shall be effective as originals.

29.9 Brokerage. Tenant warrants and represents that Tenant has dealt with no broker in connection with the consummation of this Lease other than Colliers International, Hartford Office and O, R & L ("Broker", and, in the event of any brokerage claims against Landlord predicated upon prior dealings with Tenant, Tenant agrees to defend the same and indemnify Landlord against any such claim (except any claim by Broker). Landlord warrants and represents that Landlord has dealt with no broker in connection with the consummation of this Lease other than Broker, and, in the event of any brokerage claims against Tenant predicated upon prior dealings with Landlord, Landlord agrees to defend the same and indemnify Tenant against any such claim. Landlord shall be responsible to pay the commission or fee due to Broker as and to the extent provided in a separate written agreement

(The rest of this page is intentionally blank. Signatures are on the next page.)

IN WITNESS WHEREOF, the parties hereto have hereunder set their names, and seals on the day first above written.

Signed, sealed, and delivered
in the presence of:

Witness

Witness

LANDLORD:

PITE FAMILY LIMITED PARTNERSHIP

By:
Dr. William J. Pite
General Partner

PATRICIA A. PETRO
NOTARY PUBLIC
My Commission Expires 4/30/2016

TENANT:

Witness

WALDEN BEHAVIORAL CARE LLC

Witness

By:
Lawrence R. Behan
Chief Financial Officer

CURTIS GARRY
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
August 13, 2021

SCHEDULE A

(Legal Description of 157 Goose Lane, Guilford, Connecticut)

All that certain piece or parcel of land, with all the buildings and other improvements thereon, situated in the Town of Guilford, County of New Haven, State of Connecticut shown as Parcel "B" on a survey map entitled "Map Showing Two Parcels of Property of Arne E. and Phyllis Ahlberg, Guilford, Connecticut, Scale 1" = 40', 7-14-77, Russell Waldo, Professional Engineer and Land Surveyor and Associates, P.C., 89 State Street, Guilford, Connecticut 06437", bounded and described as follows:

WESTERLY:	by Goose Lane, 176.72 feet;
NORTHERLY:	by land now or formerly of Buonanna, 300.05 feet in all;
	by land now or formerly of Silvestro, 687.58 feet in all;
EASTERLY	by land now or formerly of Scott, 127.15 feet;:
SOUTHERLY and	
SOUTHEASTERLY	by land now or formerly of Joyce along the centerline of a stone wall, 514.77 feet;
WESTERLY AGAIN:	by Parcel "A", as shown on said map, 82.78 feet;
SOUTHERLY AGAIN:	by a bent line by Parcel "A" as shown on said map, 222.54 feet.

Greer, Leslie

From: Armah, Olga
Sent: Thursday, June 18, 2015 1:55 PM
To: 'crossignol@waldenbehavioralcare.com'
Cc: Carney, Brian; Greer, Leslie
Subject: 15-31988-CON: Establishment of a Partial Hospital and Intensive Outpatient Eating Disorder Clinic in Guilford

Dear Mr. Rossignol,

As I indicated in my call to you this afternoon, in reviewing your June 1, 2015 completeness responses for the above docket, we found that you have to update pages 521 and 522 of the application as follows:

- Page 521 – Change the Total Incidence for Anorexia Nervosa in Table 4, from 1,493,688 to 1,875,570, to reflect the correct total; and

- Page 522 – In Table 5 -

    - For Connecticut - apply the weighted average prevalence from Table 4 to the population estimate for Connecticut to arrive at the incidence for each disorder. For e.g. the 2013 CT population estimate is 3,599,341 (source: http://www.census.gov/popest/data/state/totals/2014/index.html), so incidence for AN = 21,596; BN =36,353; BED =99,342; TED =157,291. As part of the table footnote, indicate the actual population estimate used (3,599.341), year of estimate (2013), and data source (http://www.census.gov/popest/data/state/totals/2014/index.html).

    - For Service Area - replace the numbers currently listed for each disorder for the service area with those from the total row of the table on page 532.

Update both pages and resend the corrected pages with the current pagination to me via email by Tuesday June 23, 2015. Please feel free to contact me or Brian Carney at Brian.Carney@ct.gov or 860 418 7014 if you have questions.

Thank you.

Olga

Olga Armah, M. Phil
Associate Research Analyst
CT Department of Public Health
Office of Health Care Access
410 Capitol Avenue, MS #13HCA
P.O. Box 340308
Hartford, CT 06134

Phone: 860 418 7070
Fax: 860 418 7053
mailto: olga.armah@ct.gov
Web: www.ct.gov/ohca
Please consider the environment before printing this message

Greer, Leslie

From: Armah, Olga
Sent: Monday, June 22, 2015 3:33 PM
To: Rossignol, Charles
Cc: Carney, Brian; Greer, Leslie; Pat Gerner (KLG1@aol.com); Susan Cole (wjske@aol.com); Koman, Stuart
Subject: RE: 15-31988-CON: Establishment of a Partial Hospital and Intensive Outpatient Eating Disorder Clinic in Guilford

This is to acknowledge receipt of your response. Thanks,

Olga Armah
CT Department of Public Health
Office of Health Care Access (OHCA)
Phone: 860 418 7070
Fax: 860 418 7053
Mailto: olga.armah@ct.gov
Web: www.ct.gov/ohca
Please consider the environment before printing this message

From: Rossignol, Charles [mailto:CRossignol@waldenbehavioralcare.com]
Sent: Monday, June 22, 2015 11:23 AM
To: Armah, Olga
Cc: Carney, Brian; Greer, Leslie; Pat Gerner (KLG1@aol.com); Susan Cole (wjske@aol.com); Koman, Stuart
Subject: RE: 15-31988-CON: Establishment of a Partial Hospital and Intensive Outpatient Eating Disorder Clinic in Guilford

Greetings, Ms. Armah. Per your request from June 18, please find attached a cover letter and amended CoN Application pages 521-522 in a pdf file, and the amended pages also attached as a Word document for inclusion with the application materials.
Please confirm your timely receipt of these materials. We look forward to working with your office as the review continues.
Many thanks –
Chuck Rossignol

****

Charles R Rossignol, MBA
AVP - Business Development
Office: 781-647-2922

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Sent: Thursday, June 18, 2015 1:55 PM
To: Rossignol, Charles
Cc: Carney, Brian; Greer, Leslie
Subject: 15-31988-CON: Establishment of a Partial Hospital and Intensive Outpatient Eating Disorder Clinic in Guilford

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- Page 521 – Change the Total Incidence for Anorexia Nervosa in Table 4, from 1,493,688 to 1,875,570, to reflect the correct total; and

- Page 522 – In Table 5 -

    - For Connecticut - apply the weighted average prevalence from Table 4 to the population estimate for Connecticut to arrive at the incidence for each disorder. For e.g. the 2013 CT population estimate is 3,599,341 (source: http://www.census.gov/popest/data/state/totals/2014/index.html), so incidence for AN = 21,596; BN =36,353; BED =99,342; TED =157,291. As part of the table footnote, indicate the actual population estimate used (3,599.341), year of estimate (2013), and data source (http://www.census.gov/popest/data/state/totals/2014/index.html).

    - For Service Area - replace the numbers currently listed for each disorder for the service area with those from the total row of the table on page 532.

Update both pages and resend the corrected pages with the current pagination to me via email by Tuesday June 23, 2015. Please feel free to contact me or Brian Carney at Brian.Carney@ct.gov or 860 418 7014 if you have questions.

Thank you.

Olga

Olga Armah, M. Phil
Associate Research Analyst
CT Department of Public Health
Office of Health Care Access
410 Capitol Avenue, MS #13HCA
P.O. Box 340308
Hartford, CT 06134

Phone: 860 418 7070
Fax: 860 418 7053
mailto: olga.armah@ct.gov
Web: www.ct.gov/ohca
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Greer, Leslie

From: Armah, Olga
Sent: Monday, June 29, 2015 10:19 AM
To: Rossignol, Charles
Cc: Carney, Brian; Greer, Leslie
Subject: Docket No. 15-31988 Deemed Complete
Attachments: 15-31988 Deemed Complete_06292015.pdf

Dear Mr. Rossignol:

OHCA has deemed complete the above noted application. The signed notification is attached.

Thanks.

Olga

Olga Armah, M. Phil
Associate Research Analyst
CT Department of Public Health
Office of Health Care Access
410 Capitol Avenue, MS #13HCA
P.O. Box 340308
Hartford, CT 06134

Phone: 860 418 7070
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STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

Office of Health Care Access

VIA EMAIL ONLY

June 29, 2015

Charles Rossignol
Assistant Vice President, Business Development
Walden Behavioral Care
51 Sawyer Road
Waltham, MA 02453

RE: Certificate of Need Application, Docket Number 15-31988-CON
Walden Behavioral Health Care, LLC
Establishment of a Partial Hospital and Intensive Eating Discorder Clinic in Guilford

Dear Mr. Rossignol:

This letter is to inform you that, pursuant to Section 19a-639a (d) of the Connecticut General Statutes, the Office of Health Care Access has deemed the above-referenced application complete as of June 29, 2015.

If you have any questions regarding this matter, please feel free to contact me at (860) 418 7070 or Brian Carney at (860) 418 7014.

Sincerely,

Olga Armah
Associate Research Analyst

Greer, Leslie

From: Rossignol, Charles <CRossignol@waldenbehavioralcare.com>
Sent: Monday, June 29, 2015 10:32 AM
To: Armah, Olga
Cc: Carney, Brian; Greer, Leslie
Subject: RE: Docket No. 15-31988 Deemed Complete

Many thanks for your assistance with getting the completeness questions addressed, and this notification, Olga. We look forward to hearing from your office again regarding next steps.
Sincerely –
Chuck Rossignol

****

Charles R Rossignol, MBA
AVP - Business Development
Office: 781-647-2922

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Sent: Monday, June 29, 2015 10:19 AM
To: Rossignol, Charles
Cc: Carney, Brian; Greer, Leslie
Subject: Docket No. 15-31988 Deemed Complete

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Thanks.

Olga

Olga Armah, M. Phil
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Please consider the environment before printing this message

Greer, Leslie

From: Lazarus, Steven
Sent: Tuesday, August 25, 2015 10:11 AM
To: Stephen Cowherd
Cc: Veyberman, Alla; Greer, Leslie; Riggott, Kaila
Subject: Close of Hearing- Docket Number: 15-31998
Attachments: 15-31998-CON_Close of Hearing.pdf

Good Morning Attorney Cowherd,

Please see the enclosed letter closing the hearing on August 6, 2015, for Milford Hospital's termination of OB services which was held on July 29, 2015. If you have any questions, please feel free to contact me directly.

Thank you,
Steve

Steven W. Lazarus
Associate Health Care Analyst
Division of Office of Health Care Access
Connecticut Department of Public Health
410 Capitol Avenue
Hartford, CT 06134
Phone: 860-418-7012
Fax: 860-418-7053

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

Office of Health Care Access

August 25, 2015

VIA EMAIL ONLY

Stephen Cowherd, Esq.
Jeffers Cowherd P.C.
55 Walls Drive
Fairfield, CT 06824

RE: Certificate of Need Application; Docket Number: 15-31998-CON
Milford Hospital
Termination of Inpatient Obstetrical Labor and Delivery Services

Dear Attorney Cowherd:

Please be advised, by way of this letter, the public hearing held on July 29, 2015, in the above referenced matter is hereby closed as of August 6, 2015. OHCA will receive no additional public comments or filings.

If you have any questions regarding this matter, please feel free to contact Steven W. Lazarus at (860) 418-7012.

Sincerely,

Kevin T. Hansted
Hearing Officer

KTH:swl

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

Office of Health Care Access

August 25, 2015

IN THE MATTER OF:

An Application for a Certificate of Need filed Pursuant to Section 19a-638, C.G.S. by:	Notice of Decision Office of Health Care Access Docket Number: 15-31988-CON
Walden Behavioral Care, LLC	Establishment of a Partial Hospital and Intensive Outpatient Program for Adults and Adolescents with Eating Disorders

To: Charles Rossignol
Assistant Vice President, Business Development
Walden Behavioral Care, LLC
51 Sawyer Road
Waltham, MA 02453

Dear Mr. Rossignol:

Enclosed please find a copy of the decision issued in the above-referenced matter pursuant to Connecticut General Statutes § 19a-639a on August 25, 2015.

Kimberly R. Martone
Director of Operations

Enclosure
KRM:oa

Department of Public Health
Office of Health Care Access
Certificate of Need Application

Final Decision

Applicant: **Walden Behavioral Care, LLC**
51 Sawyer Road
Waltham, MA 02453

Docket Number: **15-31988-CON**

Project Title: **Proposal to Establish a Partial Hospital and Intensive Outpatient Program for Adults and Adolescents with Eating Disorders in Guilford, Connecticut**

Project Description: Walden Behavioral Care, LLC, ("Walden" or "Applicant") is proposing to establish a partial hospital and an intensive outpatient program for adults and adolescents with eating disorders; a distinct intensive outpatient program for adults with binge eating disorder; and aftercare support services for adolescents and their families, in Guilford, Connecticut, at an associated capital cost of $495,000.

Procedural History: The Applicant published notice of its intent to file a Certificate of Need ("CON") application in *The New Haven Register* (New Haven) on February 25, 26 and 27, 2015. On April 2, 2015, the Office of Health Care Access ("OHCA") received the CON application from the Applicant for the above-referenced project. On June 29, 2015, OHCA deemed the application complete.

OHCA received no responses from the public concerning the proposal and no hearing requests from the public per Connecticut General Statutes ("Conn. Gen. Stat.") § 19a-639a(e). Deputy Commissioner Brancifort considered the entire record in this matter.

Findings of Fact and Conclusions of Law

To the extent the findings of fact actually represent conclusions of law, they should be so considered, and vice versa. *SAS Inst., Inc., v. S & H Computer Systems, Inc.*, 605 F.Supp. 816 (Md. Tenn. 1985).

1. Walden Behavioral Care, LLC ("Walden" or "Applicant") is a Massachusetts-based provider of behavioral health services that include inpatient, residential, partial hospital ("PHP") and intensive outpatient ("IOP") services in licensed clinics and outpatient office treatment. Ex. A, p. 2.

2. Walden proposes to establish an outpatient psychiatric clinic at 157 Goose Lane, Guilford, Connecticut to treat adults and adolescents (ages 12-18) with eating disorders. Ex. A, p. 2

3. The clinic will treat patients with anorexia nervosa (AN) and bulimia nervosa (BN) eating disorders in two levels of care, PHP and IOP. There will also be a distinct IOP program for adults with binge-eating disorder (BED) and aftercare support for adolescents and their families. Ex. A, p. 3.

4. Walden's subsidiary, WBC Connecticut East, LLC, currently operates a similar outpatient clinic and programs for the treatment of eating disorders in South Windsor, Connecticut. (approved by OHCA on 7/12/12, Docket: 11-317131-CON). Ex. A, p. 2.

5. Walden's eating disorder programs utilize evidence-based practice approaches like Cognitive Behavioral Therapy, Dialectical Behavioral Therapy, Interpersonal Therapy and Maudsley Method Family Based Therapy; and provide nutritional education. Ex. A, pp. 3, 6.

6. The proposed PHP programs will meet five days per week, with an option for Saturday programming. Both the adult and adolescent programs will initially serve ten patients. Ex. A, p. 4.

7. The proposed IOP programs will meet three days per week and initially serve twelve adults and twelve adolescents in distinct programs. Upon completing the IOP program, adolescents and their families may continue specialized eating disorder recovery treatment by participating in individual, group and family treatment. Ex. A, pp. 4-5.

8. The distinct binge-eating disorder IOP program will serve twelve adults. Ex. A, p. 5.

9. The service area towns for the proposed clinic will include all of Middlesex County and those portions of New Haven and New London counties that are within one hour's drive of Guilford. Ex. A, p. 8.

10. The Applicant chose a location in Guilford due to the following factors:
    a. Guilford adult and adolescent populations were at high risk for being over-weight or obese accordingly, the town's "growing elderly population and higher obesity rate among adults will likely increase the number of residents who are most vulnerable to be affected by chronic health disease;"[1]
    b. A survey of the region surrounding Guilford determined there was sufficient need for the services;
    c. It is centrally located to serve the South Windsor clinic patients that come from southeastern and south central Connecticut;
    d. To serve adolescent patients, from the same area, still attending school, and who drive to South Windsor to receive treatments in the afternoons after school;
    e. There are no dedicated eating disorder providers offering a continuum of care for men, women or adolescents, within the proposed service area, so residents seeking treatment must travel long distances or out of state to receive comprehensive care;
    f. To serve as a regional resource;

    Ex. A, pp. ix, 12, 517.

11. Estimates, based on national prevalence rates and population statistics, indicate the service area has about fifty-two thousand or one-third of the state's residents with eating disorders.

TABLE 2
ESTIMATE OF EATING DISORDER INCIDENCE IN CONNECTICUT

EATING DISORDER	PREVALENCE[1]	INCIDENCE		SERVICE AREA AS PERCENT OF CONNECTICUT
		CONNECTICUT[2]	SERVICE AREA[2]	
Anorexia Nervosa	0.60%	21,596	7,113	33%
Bulimia Nervosa	1.01%	36,353	11,979	33%
Binge Eating	2.76%	99,342	32,743	33%
Total	**4.37%**	**157,291**	**51,835**	**33%**

Sources:
[1]*American Psychiatric Association. (2000). Diagnostic and Statistical Manual of Mental Disorders (4th ed., text rev.).*
Hudson JI, Hiripi E, Pope HG, Jr, & Kessler RC. (2007), Biological Psychiatry, 61: 348-358.
SAMSHA Advisory (2011)
[2]*http://www.census.gov/popest/data/state/totals/2014/index.html 2013 Connecticut population estimate is 3,599,341.*

Ex. A, pp. 10-11, 521 - 522.

[1] Andersen, Elizabeth (2011). *Community Health Assessment of Guilford, Connecticut.* Nursing 6180 Dimensions of Professional Nursing. George Washington University.

12. In FY 2013, the South Windsor clinic served approximately 20% of patients residing in southeastern and south central Connecticut. The percentage increased to 23% in FY 2014.

TABLE 1
FY 2014 PATIENT ORIGIN FOR SOUTH WINDSOR CLINIC

SERVICE AREA TOWNS	NO. OF PATIENTS	PERCENT OF TOTAL
Beacon Falls	3	1%
Branford	5	1%
Cheshire	6	2%
Colchester	8	2%
East Hampton	3	1%
East Haven	2	1%
East Lyme	1	<1%
Griswold	1	<1%
Guilford	6	2%
Hamden	5	1%
Lebanon	1	<1%
Ledyard	2	1%
Lisbon	2	1%
Meriden	3	1%
Middletown	2	1%
New London	2	1%
North Branford	1	<1%
North Haven	1	<1%
Norwich	2	1%
Old Lyme	1	<1%
Old Saybrook	4	1%
Prospect	2	1%
Stonington	2	1%
Wallingford	10	3%
Waterbury	1	<1%
Wolcott	1	<1%
Sub-total	**77**	**23%**
All other	264	77%
Total	**341**	**100%**

Fiscal year is from January 1 – December 31

Ex. A, pp. 8, 9, 517, 527.

13. Yale-New Haven Hospital provides a clinic for assessment and offers inpatient treatment to adolescents with eating disorders, but does not offer a specialized dedicated eating disorders treatment program. Ex. A, p. 12-13.

14. The Guilford location is in close proximity to Yale's Shoreline Medical Clinic, located at 111 Goose Lane, for back-up medical emergency services if required. Ex. A, p. 517.

15. As with the South Windsor clinic, Walden will refer adult clients that require more acute levels of care (inpatient or residential) to a Walden Massachusetts program for treatment pending payer approval and client consent or to another program of the patient's choice. Ex. A, p. 518.

16. In its first full year of operation, the South Windsor clinic received about 200 admissions which increased by 70% to 341 in FY 2014.

TABLE 3
HISTORICAL UTILIZATION BY SERVICE – SOUTH WINDSOR

	Historical Volume - Patients			Historical Volume - Days		
Service/Program	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2012**	**FY 2013**	**FY 2014**
Adult Binge IOP (start 11/2013)		6	38		54	731
Adult IOP	13	72	97	130	826	1,532
Adult PHP	38	88	114	493	1,115	1,945
Adolescent IOP	12	35	47	102	766	772
Adolescent PHP (start 4/2014)			45			621
Total	**63**	**201**	**341**	**725**	**2,761**	**5,601**

Fiscal Year is January 1 – December 21
The South Windsor clinic opened in August 2012
Ex. A, p. 17.

17. The Applicant projects the admission volume at the South Windsor clinic to increase from 341in 2014 to 387 in 2015. No additional increases in utilization are anticipated in subsequent years due to physical plant constraints.

TABLE 4
PROJECTED UTILIZATION BY SERVICE- SOUTH WINDSOR

	Projected Volume - Patients			Projected Volume - Days		
Service/Program	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2015**	**FY 2016**	**FY 2017**
Adult Binge IOP	54	54	54	1,092	1,092	1,092
Adult IOP	94	94	94	1,716	1,716	1,716
Adult PHP	115	115	115	2,080	2,080	2,080
Adolescent IOP	47	47	47	858	858	858
Adolescent PHP	77	77	77	1,040	1,040	1,040
Total	**387**	**387**	**387**	**6,786**	**6,786**	**6,786**

Fiscal Year is January 1 – December 21
The South Windsor clinic opened in August 2012.
Ex. A, pp.17, 519-520

18. The South Windsor clinic has undergone two physical space expansions since opening to adequately treat the increased patient demand. Ex. A, p. 2.

19. Further expansion of the South Windsor clinic is impossible because there is no space available either contiguous to the clinic or in its vicinity. Ex. A, p. 518.

20. The Applicant based projected volumes for the proposed Guilford clinic on experiences with the Massachusetts and South Windsor clinics.

TABLE 5
PROJECTED UTILIZATION BY SERVICE – GUILFORD

	Projected Volume - Patients			Projected Volume - Days		
Service/Program	FY 2016	FY 2017	FY 2018	FY 2016	FY 2017	FY 2018
Adult Binge IOP	41	73	91	351	624	780
Adult IOP	73	100	145	624	858	1,248
Adult PHP	83	144	183	824	1,430	1,820
Adolescent IOP	28	69	100	351	858	1,248
Adolescent PHP	25	50	66	390	780	1,040
Total	**250**	**436**	**585**	**2,540**	**4,550**	**6,136**

Fiscal year is January 1 – December 21
It is anticipated that the Guilford facility will commence operation in January 2016.
Ex. A, p. 523.

21. Walden is actively exploring a cooperative relationship with Yale New Haven Hospital to receive referrals from Yale for eating disorder patients and to provide training opportunities with the clinic for selected medical, social work and nutrition staff. Ex. A, p. 13.

22. As with the South Windsor clinic, referrals to the proposed programs will be from primary care physicians, acute and psychiatric hospitals, community health, behavioral health and human services providers, educational systems and districts, insurance companies and families of those who need treatment. Ex. A, p. 13.

23. The Applicant utilized the patient population mix at the South Windsor clinic as the basis for the payer mix projection for the proposed clinic.

TABLE 6
WALDEN (SOUTH WINDSOR) CURRENT & PROJECTED PAYER MIX

Payer	Current FY 2014		Projected					
			FY 2015		FY 2016		FY 2017	
	Volume	%	Volume	%	Volume	%	Volume	%
Medicare*	0		0		0		0	
Medicaid*	99	28.9	112	28.9	112	28.9	112	28.9
CHAMPUS & TriCare	1	0.3	1	0.3	1	0.3	1	0.3
Total Government	**100**	**29.3**	**113**	**29.2**	**113**	**29.2**	**113**	**29.2**
Commercial Insurers	238	69.9	270	69.8	270	69.8	270	69.8
Uninsured	3	0.9	4	1.0	4	1.0	4	1.0
Workers Compensation	0		0		0		0	
Total Non-Government	**241**	**70.8**	**274**	**70.8**	**274**	**70.8**	**274**	**70.8**
Total Payer Mix	**341**	**100.0**	**387**	**100.0**	**387**	**100.0**	**387**	**100.0**

* Includes managed care activity.

TABLE 7
WALDEN (GUILFORD) PROJECTED PAYER MIX

Payer	Projected					
	FY 2016		FY 2017		FY 2018	
	Volume	%	Volume	%	Volume	%
Medicare*	0		0		0	
Medicaid*	72	28.9	126	28.9	169	28.9
CHAMPUS & TriCare	0		0		0	
Total Government	**72**	**28.9**	**126**	**28.9**	**169**	**28.9**
Commercial Insurers	175	70.4	306	70.4	412	70.4
Uninsured	2	0.7	3	0.7	4	0.7
Workers Compensation	0		0		0	
Total Non-Government	**177**	**71.1**	**309**	**71.1**	**416**	**71.1**
Total Payer Mix	**249**	**100.0**	**435**	**100.0**	**585**	**100.0**

*Includes managed care activity.
Ex. A, p. 21.

24. Similar to the South Windsor clinic, Medicaid recipients and indigent persons will have access to proposed services. Ex. A, p. 21.

25. Fee schedules will be consistent between the Guilford and South Windsor clinics, as reimbursement rates are contracted with insurance payers for the type service provided at licensed Connecticut clinic locations. Ex. A, p. 524

26. Walden will utilize tools such as payment plans and sliding scale fee structures to achieve a payment plan mutually acceptable to patients with limited financial means or uninsured patients/families and to Walden. The Applicant has a charity care cap amount within each fiscal year and a $25,000 limit for the first year. Ex. A, p. 525

27. The Applicant estimates the total project cost to be $495,000 and will be funded from Walden's existing revenue sources.

TABLE 8
TOTAL PROPOSAL CAPITAL EXPENDITURE

Purchase/Lease	Cost
Equipment (Medical, Non-medical Imaging)	$85,000
Land/Building Purchase	
Construction/Renovation**	$410,000
Other (specify)	
Total Capital Expenditure (TCE)	**$495,000**
Lease (Medical, Non-medical, Imaging)***	
Total Capital Cost (TCO)	
Total Project Cost (TCE+TCO)	**$495,000**

* $2,500 for medical and $82,500 for non-medical.

Ex. A, p. 20.

28. As a result of startup costs related to staffing, Walden projects an incremental loss in FY 2016 and incremental gains for FY 2017 and FY 2018 due to the anticipated increase in patient volume without substantial increases in staff capacity.

TABLE 10
APPLICANTS PROJECTED INCREMENTAL INCOME/LOSS FROM OPERATIONS

	FY 2016	FY 2017	FY 2018
Revenue from Operations	$722,135	$1,293,931	$1,743,146
Total Operating Expenses	$866,602	$1,106,581	$1,221,311
Income (Loss) from Operations	**$(144,767)**	**$187,350**	**$475,392**

Assumes 10% annual increase in patient revenue; 2% annual increase in operating revenue; 8% annual increase in salaries and fringe benefits; 3% increase in operating revenue (non-salary and fringe benefits); 2% increase in non-operating revenue; and 6% annual increase in FTEs.
Ex. A, pp. 23, 512, 515.

29. OHCA is currently in the process of establishing its policies and standards as regulations. Therefore, OHCA has not made any findings as to this proposal's relationship to any regulations not yet adopted by OHCA. (Conn. Gen. Stat. § 19a-639(a)(1))

30. This CON application is consistent with the overall goals of the Statewide Health Care Facilities and Service Plan. (Conn. Gen. Stat. § 19a-639(a)(2))

31. The Applicant has established that there is a clear public need for the proposal. (Conn. Gen. Stat. § 19a-639(a)(3))

32. The Applicant has demonstrated that the proposal is financially feasible. (Conn. Gen. Stat. § 19a-639(a)(4))

33. The Applicant has satisfactorily demonstrated that the proposal will maintain quality, and improve the accessibility and cost effectiveness of health care delivery in the region. (Conn. Gen. Stat.§ 19a-639(a)(5))

34. The Applicant has shown that there would be no adverse change in the provision of health care services to the relevant populations and payer mix, including access to services by Medicaid recipients and indigent persons. (Conn. Gen. Stat. § 19a-639(a)(6))

35. The Applicant has satisfactorily identified the population to be affected by this proposal. (Conn. Gen. Stat. § 19a-639(a)(7))

36. The Applicant's historical provision of the services in Connecticut supports this proposal. (Conn. Gen. Stat. § 19a-639(a)(8))

37. The Applicant has satisfactorily demonstrated that this proposal would not result in an unnecessary duplication of existing services in the area. (Conn. Gen. Stat. § 19a-639(a)(9))

38. The Applicant has demonstrated that there will be no reduction in access to services by Medicaid recipients or indigent persons. (Conn. Gen. Stat. § 19a-639(a)(10))

39. The Applicant has demonstrated that the proposal will not negatively impact the diversity of health care providers and patient choice in the region. (Conn. Gen. Stat. § 19a-639(a)(11))

40. The Applicant has satisfactorily demonstrated that the proposal will not result in any consolidation that would affect health care costs or accessibility to care. (Conn. Gen. Stat. § 19a-639(a)(12))

DISCUSSION

CON applications are decided on a case by case basis and do not lend themselves to general applicability due to the uniqueness of the facts in each case. In rendering its decision, OHCA considers the factors set forth in § 19a-639(a) of the Statutes. The Applicants bear the burden of proof in this matter by a preponderance of the evidence. *Jones v. Connecticut Medical Examining Board, 309 Conn. 727 (2013).*

Walden Behavioral Care, LLC ("Walden" or "Applicant") is a Massachusetts-based behavioral health services provider." *FF1* Walden proposes to establish in Guilford, Connecticut an outpatient clinic that provides partial hospital ("PHP") and intensive outpatient ("IOP") programs for adults and adolescents with eating disorders; a distinct intensive outpatient for adults with binge eating disorders; and aftercare support for adolescents and their families may also be provided. *FF2, FF3* Since 2012, Walden's subsidiary, WBC Connecticut East, LLC, has been operating a similar outpatient clinic and programs for eating disorders treatment in South Windsor, Connecticut. *FF4*

The Applicant's proposed eating disorder programs utilize evidence-based practice approaches like cognitive behavioral therapy, dialectical behavioral therapy and Interpersonal therapy. *FF5.* The PHP will initially serve ten adults and ten adolescents meeting five times a week with an option for Saturday programming. *FF6* The IOP will initially serve twelve adults and adolescents, each, meeting three times a week with an option for specialized individual, group and family recovery treatment for adolescents that go through an IOP program. *FF7, FF8* The binge-eating disorder IOP program will serve twelve adults, initially. *FF9*

The service area for the proposed clinic includes Middlesex County and portions of New Haven and New London counties that are within an hour's drive of the clinic location in Guilford. *FF9* Walden chose the town of Guilford based on the following factors: 1) adolescents and adults of the town are at a high risk for being overweight or obese; 2) there is sufficient demand in the area as it accounts for over fifty-two thousand or one-third of the state's residents with eating disorders; 3) the town is centrally located and improves access for patients from the proposed service area who travel to the South Windsor clinic to receive treatment, including adolescent student patients; and 4) the clinic will serve as a regional resource for men, women and adolescents who have to travel far or out of state to seek outpatient treatment. *FF10, FF11, FF12* There are no outpatient eating disorders treatment providers in the service area except Yale New Haven Hospital which only provides assessments and inpatient treatments for adolescents. *FF10, FF13*

In 2013 and 2014, over 20% of the South Windsor facility patients, including adolescent patients still attending school, traveled from the proposed service area for outpatient treatment. *FF12* Further physical space expansion of the South Windsor clinic to meet increasing demand for the proposed services is not an option, since that facility has already undergone two expansions and run out of space either contiguous to it or in its vicinity. *FF16, FF18, FF19* The Applicant expects the clinic to reach its maximum patient volume of 387, at the end of FY 2015, at which point no additional patients can be accepted due to physical plant constraints. *FF17*

Patients from the service area, currently required to travel to South Windsor to receive outpatient services would be able to access care in Guilford, a closer location. *FF12* Walden is also actively exploring a cooperative relationship with Yale New Haven Hospital to receive referrals from the hospital for eating disorders patients and to provide training opportunities with the clinic for selected medical, social work and nutrition staff. *FF21* Additionally, as with its South Windsor clinic experience, Walden anticipates referrals to the proposed facility will be from local providers such as primary care physicians, hospitals, schools, insurance companies and families of potential patients. *FF22* The location of the proposed clinic is in close proximity to Yale Shoreline Medical Clinic for necessary back-up medical emergency services. *FF14* Also, adult clients requiring more acute levels of care will be referred to a Walden Massachusetts program pending payer approval or patient consent or to a program of the patient's choice. *FF15* On this basis, the Applicant has satisfactorily demonstrated that the quality of care will improve through increased access to a continuum of outpatient eating disorders treatment services.

The fee schedules for the Guilford clinic will be similar to that of South Windsor. *FF25* The Applicant expects as much as 30% of the proposed clinic's patients to be to be Medicaid beneficiaries or uninsured. *FF3, FF24* In anticipation of the payer mix, the Applicant will utilize payment plans, sliding fee scale fee structures and charity care cap amounts to assist patient/families with limited financial means or are uninsured. *FF26* The Applicant has satisfactorily demonstrated that there would be no adverse change in the provision of health care services to the relevant populations and payer mix, including access to services by Medicaid recipients and indigent persons.

Walden will fund the total project cost of $495,000 from its existing revenue sources. *FF27* Due to startup costs related to staffing, the Applicant projects a first year incremental loss of $144,767 followed by subsequent years of incremental gain in the amounts of $187,350 and $475,392 from increases in patient volumes. *FF29* Based on these two factors, the Applicant has satisfactorily demonstrated that the proposal is financially feasible.

As a result of these combined factors, the Applicant has satisfactorily demonstrated that there is clear public need for the eating disorder clinic in Guilford. Additionally, there will be no unnecessary duplication of services in the service area. The Applicant has satisfactorily demonstrated the proposal will ensure that access to quality care is improved for the population currently being served, including that of the Medicaid population. Consequently, the Applicant has demonstrated that the proposal is consistent with the overall goals included in the Statewide Health Care Facilities and Services Plan.

Order

Based upon the foregoing Findings and Discussion, the Certificate of Need application of Walden Behavioral Care, LLC to establish a partial hospital and an intensive outpatient program for adults and adolescents with eating disorders; a distinct intensive outpatient program for adults with binge eating disorder; and aftercare support services for adolescents and their families, in Guilford, Connecticut is hereby **APPROVED**.

All of the foregoing constitutes the final order of the Office of Health Care Access in this matter.

By Order of the
Department of Public Health
Office of Health Care Access

August 25, 2015
Date

Janet M. Brancifort
Janet M. Brancifort, MPH, RRT
Deputy Commissioner

* * * COMMUNICATION RESULT REPORT (AUG. 26. 2015 2:57PM) * * *

FAX HEADER:

TRANSMITTED/STORED : AUG. 26. 2015 2:55PM

FILE	MODE	OPTION	ADDRESS	RESULT	PAGE
253	MEMORY TX		917816476755	OK	14/14

REASON FOR ERROR
E-1) HANG UP OR LINE FAIL
E-2) BUSY
E-3) NO ANSWER
E-4) NO FACSIMILE CONNECTION

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH
OFFICE OF HEALTH CARE ACCESS

FAX SHEET

TO: CHARLES ROSSIGNOL
ASSISTANT VICE PRESIDENT, BUSINESS DEVELOPMENT

FAX: 781 647 6755

AGENCY: WALDEN BEHAVIORAL CARE, LLC

FROM: OLGA ARMAH/BRIAN CARNEY

DATE: AUGUST 26, 2015

NUMBER OF PAGES: 13
(including transmittal sheet

Comments: DN 15-31988-CON Proposal to Establish a Partial Hospital and Intensive Outpatient Program for Adults and Adolescents

PLEASE PHONE IF THERE ARE ANY TRANSMISSION PROBLEMS.

Phone: (860) 418-7001 ***Fax: (860) 418-7053***

410 Capitol Ave., MS#13HCA
P.O.Box 340308
Hartford, CT 06134

Huber, Jack

From: Huber, Jack
Sent: Thursday, August 27, 2015 1:01 PM
To: 'CRossignol@waldenbehavioralcare.com'
Cc: Roberts, Karen
Subject: Notice of CON Expiration Date for the Final Decision Rendered under Docket Number: 15-31988-CON

Dear Mr. Rossignol:

On August 25, 2015, in a final decision under Docket Number: 15-31988-CON, the Office of Health Care Access authorized a Certificate of Need ("CON") to Walden Behavioral Care, LLC for the establishment of a partial hospital and an intensive outpatient program for adults and adolescents with eating disorders; a distinct intensive outpatient program for adults with binge eating disorder; and aftercare support services for adolescents and their families, in Guilford, Connecticut. Pursuant to Section 19a-639b of the Connecticut General Statutes ("C.G.S."), *"a certificate of need shall be valid for two years from the date of issuance by this office."*

With this letter, please be advised that pursuant to Section 19a-639b, C.G.S., the current CON authorization issued under Docket Number: 15-31988-CON will expire on August 25, 2017. Please contact me at (860) 418-7069 or Karen Roberts, Principal Health Analyst at (860) 418-7041, if you have any questions regarding this notification.

Sincerely,

Jack A. Huber

Jack A. Huber
Health Care Analyst
Department of Public Health | Office of Health Care Access |410 Capitol Avenue
P.O. Box 340308 MS #13HCA | Hartford, CT 06134 |Ph: 860-418-7069| Fax: 860-418-7053| email: Jack.Huber@ct.gov

User, OHCA

From: Clarke, Ormand
Sent: Friday, September 15, 2017 9:24 AM
To: User, OHCA
Cc: Roberts, Karen
Subject: Re: DN-15: 31988 _Walden Behavioral Health_ Evidence of Licensure
Attachments: CT DCF license - 2016-2018 - S Windsor.pdf; CT DPH License - MH Day Tx - S Windsor.pdf; CT DPH License - Psych OP - S Windsor.pdf; CT DCF License - Guilford.pdf; CT DPH License - MH Day Tx - Guilford.pdf; CT DPH License - Psych OP - Guilford.pdf

The attached files bear evidence of licensure for Walden Behavioral Health in South Windsor and Guilford, respectively.

From: Rossignol, Charles [mailto:CRossignol@waldenbehavioralcare.com]
Sent: Thursday, September 14, 2017 2:25 PM
To: Clarke, Ormand <Ormand.Clarke@ct.gov>
Subject: RE: Walden Behavioral Health Evidence (DN-15: 31988)

Greetings, Ormand. I enjoyed speaking with you as well. As requested, please find attached:

a) One DCF and two DPH licenses for our clinic in South Windsor, which opened in 2012, I believe.
b) One DCF and two DPH licenses for our clinic in Guilford, which opened last October.

All licenses are current.
Thanks for reach reaching out to me after my phone call. I appreciated talking with you.
Chuck

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Charles R Rossignol, MBA
Vice President - Business Development & Contracting
Walden Behavioral Care

Office: 781-647-2922

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From: Clarke, Ormand [mailto:Ormand.Clarke@ct.gov]
Sent: Thursday, September 14, 2017 1:01 PM
To: Rossignol, Charles <CRossignol@waldenbehavioralcare.com>
Cc: Clarke, Ormand <Ormand.Clarke@ct.gov>
Subject: RE: Walden Behavioral Health Evidence (DN-15: 31988)

Dear Mr. Rossignol:

It afforded me great pleasure speaking with you, today. Thanks for the information that Walden Behavioral Health is licensed and operational. Per your offer, I anticipate your emailed response to this email bearing a copy of the license.

Respectfully,

Ormand Clarke

Health Care Analyst
Office of Health Care Access
Connecticut Department of Public Health
410 Capitol Avenue, MS #13HCA, P.O. Box 340308, Hartford, CT 06134-0308
P: (860) 418-7047 / F: (860) 418-7053 / E: ormand.clarke@ct.gov

DEPARTMENT of CHILDREN and FAMILIES
Making a Difference for Children, Families and Communities

Joette Katz
Commissioner

Dannel P. Malloy
Governor

July 7, 2016

Dr. Stuart Koman, PhD.
Chief Executive Officer
Walden Behavioral Care East, LLC
2400 Tamarak Ave.
South Windsor, CT 06074

Re: License Number OPCC - 69

Dear Mr. Koman,

The Department is in receipt of a service development plan (SDP) on this date from Walden Behavioral Care to address areas of regulatory issues cited in the licensing inspection report dated 6-8-16.

Please be advised that the SDP has been accepted and as a result, the enclosed license is issued effective 8-15-16, and is valid for a period of twenty-four months for the South Windsor outpatient clinic for children.

We thank you and your staff for the cooperation extended to us during the relicensing process. Should you have any questions, please do not hesitate to contact me at (860)-550-6316.

Sincerely,

Kathleen Forsythe, LCSW
DCF Regulatory Consultant
Dept. of Children and Families
Licensing Unit
505 Hudson Street
Hartford, CT 06106

Cc: File
R. Doweyko

STATE OF CONNECTICUT
DEPARTMENT OF CHILDREN AND FAMILIES

This is to certify, that, in accordance with the provisions of Sections 17a-20 of the Connecticut General Statutes, as amended, WALDEN BEHAVIORAL CARE CT EAST, LLC, located at 2400 Tamarack Avenue, Suite 203, in the TOWN OF SOUTH WINDSOR, CT, is hereby licensed as an OUTPATIENT PSYCHIATRIC CLINIC FOR CHILDREN to provide OUTPATIENT PSYCHIATRIC CLINIC services to children at the location(s) listed below *.

This license is issued effective AUGUST 15, 2016, for a period of 24 months and is conditional upon compliance with all regulations of the Department of Children and Families and may be revoked for cause at any time.

License No. OPCC-69
Signed in Hartford Connecticut the 7th day of July 2016.

James McPherson, Program Manager
Office of Legal Affairs

*2400 Tamarack Ave., Suite 203, South Windsor, CT 06074

STATE OF CONNECTICUT

Department of Public Health

LICENSE

License No. 0063

Mental Health Day Treatment Facility

In accordance with the provisions of the General Statutes of Connecticut Section 19a-493:

Walden Behavioral Care LLC of Waltham, MA, d/b/a Walden Behavioral Care-Guilford is hereby licensed to maintain and operate a Mental Health Day Treatment Facility.

Walden Behavioral Care-Guilford is located at 157 Goose Lane, Guilford, CT 06437 with:

Stuart L. Koman, Ph.D. as Executive Director,
Rebekah Doweyko, LPC as Director.

This license expires **March 31, 2020** and may be revoked for cause at any time.

Dated at Hartford, Connecticut, May 18, 2016. **INITIAL**



Raul Pino, MD, MPH
Commissioner

STATE OF CONNECTICUT

Department of Public Health

LICENSE

License No. 0057

Mental Health Day Treatment Facility

In accordance with the provisions of the General Statutes of Connecticut Section 19a-493:

WBC Connecticut East LLC of Waltham, MA, d/b/a Walden Behavioral Care is hereby licensed to maintain and operate a Mental Health Day Treatment Facility.

Walden Behavioral Care is located at 2400 Tamarack Ave, South Windsor, CT 06074 with:

Stuart L. Koman, Ph.D. as Executive Director,
Rebekah Doweyko, M. Ed. as Director.

This license expires **June 30, 2020** and may be revoked for cause at any time.

Dated at Hartford, Connecticut, July 1, 2016. RENEWAL

Raul Pino, MD, MPH
Commissioner

STATE OF CONNECTICUT

Department of Public Health

LICENSE

License No. 0611

Psychiatric Outpatient Clinic for Adults

In accordance with the provisions of the General Statutes of Connecticut Section 19a-493:

Walden Behavioral Care LLC of Waltham, MA, d/b/a Walden Behavioral Care-Guilford is hereby licensed to maintain and operate a Psychiatric Outpatient Clinic for Adults.

Walden Behavioral Care-Guilford is located at 157 Goose Lane, Guilford, CT 06437 with:

Stuart L. Koman, PhD as Executive Director,
Rebekah Doweyko, LPC as Director.

This license expires **March 31, 2020** and may be revoked for cause at any time.

Dated at Hartford, Connecticut, May 11, 2016. **INITIAL**



Raul Pino, MD, MPH
Commissioner

STATE OF CONNECTICUT

Department of Public Health

LICENSE

License No. 0529

Psychiatric Outpatient Clinic for Adults

In accordance with the provisions of the General Statutes of Connecticut Section 19a-493:

WBC Connecticut East LLC of Waltham, MA. d/b/a Walden Behavioral Care is hereby licensed to maintain and operate a Psychiatric Outpatient Clinic for Adults.

Walden Behavioral Care is located at 2400 Tamarack Ave, South Windsor, CT 06074 with:

Stuart L. Koman, Ph.D. as Executive Director.
Rebekah Doweyko, M. Ed. as Director.

This license expires **June 30, 2020** and may be revoked for cause at any time.

Dated at Hartford, Connecticut, July 1, 2016. **RENEWAL**

DEPARTMENT OF PUBLIC HEALTH STATE OF CONNECTICUT

Raul Pino, MD, MPH
Commissioner

DEPARTMENT of CHILDREN and FAMILIES
Making a Difference for Children, Families and Communities

Joette Katz
Commissioner

Dannel P. Malloy
Governor

April 29, 2016

Dr. Stuart Koman, PhD.
Chief Executive Officer
Walden Behavioral Care, LLC
157 Goose Lane, Suite 100
Guilford, CT 06437

Re: License Number OPCC - 78

Dear Mr. Koman,

A Regulatory Consultant from the Dept. of Children and Families visited your agency's proposed Outpatient Psychiatric Clinic for Children located at 157 Goose Lane in Guilford, CT on 3-24-16 and 4-28-16 as part of an assessment for an initial license.

The inspection and subsequent review of the agency's policies, personnel files components, and case record format was conducted to determine the level of compliance of this new program with the Regulations for the Licensure of Outpatient Psychiatric Clinics for Children Sections 17a-20-11 through 17a-20-61.

As a result of the review, DCF has determined that the program is in compliance with all applicable regulatory provisions. Please find enclosed a license to operate as an Outpatient Psychiatric Clinic for Children which is effective 4-29-16.

We thank your staff for the cooperative participation in the review process. Any comments, concerns or questions you may have regarding these findings should be addressed to this Department and your response will become part of the permanent record of your organization.

Sincerely,

Kathleen Forsythe

Kathleen Forsythe, LCSW
DCF Regulatory Consultant
Dept. of Children and Families
Licensing Unit
505 Hudson Street
Hartford, CT 06106

Cc: file
C. Rossignol

STATE OF CONNECTICUT
DEPARTMENT OF CHILDREN AND FAMILIES

This is to certify, that, in accordance with the provisions of Sections 17a-20 of the Connecticut General Statutes, as amended, WALDEN BEHAVIORAL CARE, LLC, located at 157 Goose Lane in the TOWN OF GUILFORD, CT, is hereby licensed as an OUTPATIENT PSYCHIATRIC CLINIC FOR CHILDREN to provide OUTPATIENT PSYCHIATRIC CLINIC services to children at the location(s) listed below.*

This license is issued effective APRIL 29, 2016, for a period of 24 months and is conditional upon compliance with all regulations of the Department of Children and Families and may be revoked for cause at any time.

License No. OPCC- 78
Signed in Hartford Connecticut the 29th day of April 2016.

James McPherson, Program Manager
Office of Legal Affairs

*157 Goose Lane, Suite 100-200, Guilford, CT 06437