Introduction to Magellan’s Adopted Clinical Practice Guideline for the Assessment and Treatment of Patients With Eating Disorders
### Table of Contents

Magellan Practice Guideline Task Force ................................................................. 1

Purpose of This Document .......................................................................................... 1

Additional Recommendations Based on Recent Literature Review ......................... 1

Epidemiology ................................................................................................................. 2

Feeding and Eating Disorders – Changes in the DSM-5 (Release Date May 2013) .......... 3

Anorexia Nervosa .......................................................................................................... 3

Bulimia Nervosa .......................................................................................................... 7

Binge Eating Disorder .................................................................................................. 11

Pica and Rumination Disorder ...................................................................................... 16

Avoidance/Restrictive Food Intake Disorder ................................................................. 16

Obtaining Copies of the APA Guidelines .................................................................... 17

Provider Feedback ....................................................................................................... 17

References ..................................................................................................................... 18
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Purpose of This Document

Magellan Behavioral Health has adopted the American Psychiatric Association's (APA) Practice Guideline for the Treatment of Patients With Eating Disorders, Third Edition (2006) and Guideline Watch (August 2012): Practice Guideline for the Treatment of Patients with Eating Disorders, 3rd Edition to serve as an evidence-based framework for practitioners' clinical decision-making with adult patients who have an eating disorder. The adopted guideline indicates that while APA practice guidelines are intended for the care of adults, this particular guideline for eating disorders includes recommendations that apply to adolescents, since anorexia nervosa and bulimia nervosa often begin during this period. This guideline makes special notations when recommendations apply exclusively to a certain age group.

An extensive literature review suggests that the APA guideline is among the most comprehensive, evidence-based clinical practice guidelines (CPGs) for this disorder, and in general, APA guidelines are widely used. The guideline covers most areas of psychiatric management of patients with eating disorders, from clinical features and epidemiology to numerous aspects of treatment approach and planning. Since this guideline is broadly accepted by managed behavioral healthcare organizations (MBHOs), this adoption will minimize the burden on practitioners serving multiple MBHOs.

As with all guidelines, these adopted guidelines and Magellan's introduction are intended to augment, not replace, sound clinical judgment. As a matter of good practice, clinically sound exceptions to the treatment guidelines should be noted in the member's record. Additionally, this guideline does not supersede Food and Drug Administration (FDA) determinations or other actions regarding withdrawal or approval of specific medications or devices, and their uses. It is the responsibility of the treating clinician to remain current on medication/device alerts and warnings issued by the FDA and other regulatory and professional bodies, and to incorporate such information in his or her treatment decisions.

Additional Recommendations Based on Recent Literature Review

The APA guideline is based on a literature review through 2004. Magellan conducted a further review of the clinical literature on assessment and treatment of eating disorders published through December 2012. We summarize key relevant recommendations from
this more recent literature review here. Magellan encourages providers to be familiar with this information, as well as the information discussed in the guideline.

**Epidemiology**

More recent epidemiological data and trending on eating disorders in the United States have been published since the release of the APA guideline. According to the American Academy of Pediatrics (AAP) Clinical Report – Identification and Management of Eating Disorders in Children and Adolescents, “The epidemiology of eating disorders has gradually changed; there is an increasing prevalence of eating disorders in males and minority populations in the United States as well as in countries in which eating disorders had not been commonly seen.” Of particular concern is the increasing prevalence of eating disorders at progressively younger ages. An analysis by the Agency for Healthcare Research and Quality revealed that from 1999 to 2006, hospitalizations for eating disorders increased most sharply – 119 percent for children younger than aged 12 (AAP, 2010, p. 1240).

Other new important information on the determinants of eating disorder symptomatology in adolescents was garnered through a very large epidemiology health survey (n=2,036) conducted in the Portugal school system (Costa et al. 2008). This study concluded that higher body mass index and higher depressive symptomatology were associated with more severe eating disorder symptomatology in both sexes. Additionally, a sex effect on the association between socioeconomic status and eating disorder symptomatology was found. Girls with higher socioeconomic status and boys with lower socioeconomic status presented with more eating disorder symptomatology. These investigators also shared in their report that, “in the previous decade, the prevalence of eating disorders has progressively increased, whereas the severity of observed cases has decreased,” signaling a substantial number of subclinical and intermediate forms of dieting and eating concerns (Costa et al. 2008, p. 1126).

A later population-based study examined the prevalence and correlates of eating disorders using data from the National Comorbidity Survey Replication Adolescent Supplement (NCS-A), a large, cross-sectional sample of US adolescents (n=10,123) aged 13 to 18 years (Swanson et al. 2011). The NCS-A sample was based on both a household sample (n=879) and a school sample (n=9,244). Researchers found lifetime prevalence rates of anorexia nervosa (AN), bulimia nervosa (BN) and binge eating disorder (BED) of 0.3 percent, 0.9 percent and 1.6 percent respectively. The twelve-month prevalence rates of AN, BN and BED were 0.2 percent, 0.6 percent and 0.9 percent respectively. BN and BED were each more prevalent in girls, but there were no sex differences in the prevalence of AN. However, this study found that subthreshold anorexia nervosa was much more prevalent in girls than boys (15:1 ratio). Investigators explained how these results are different from those previously reported, stating, “The sex ratio for most eating spectrum disorders in this study was generally smaller than that in prior treatment-seeking samples and considerably smaller than the 9:1 ratio stated in the DSM-IV. The lack of a female preponderance of eating disorders could be attributable to either the methods of the present study or a true
lack of a sex difference in eating disorders in adolescence. The large female to male ratio for SAN (subthreshold anorexia nervosa) provides one indication that the difference may be genuine. Future analyses will explore possible explanations for sex differences in eating symptoms and disorders.” (Swanson SA et al. 2011, page 718). The highest prevalence for BN was shown in Hispanic adolescents, while non-Hispanic white adolescents tended to have highest prevalence of AN. There was also a trend toward ethnic minorities reporting more BED. The majority of adolescents with an eating disorder also met criteria for at least one other lifetime DSM-IV disorder assessed in this study. Social impairment was reported in 88.9 percent of respondents with AN, and almost 20 percent reported severe social impairment associated with their eating or weight problems. A majority of adolescents with eating disorders sought treatment for emotional or behavioral problems, but only a small minority received treatment specifically for eating or weight problems.

Feeding and Eating Disorders – Changes in the DSM-5 (Release Date: May 2013)

Several changes representing the symptoms and behaviors of patients with eating disorders will be included in the Fifth Edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) scheduled for release in May 2013 (American Psychiatric Association, 2013). The most substantial of these changes is the recognition of binge eating disorder as its own category of eating disorder. In the DSM-IV, it was included in the category, “Eating Disorders Not Otherwise Specified” (EDNOS). The minimum average frequency of binge eating required for diagnosis of binge eating disorder has been changed in DSM-5 to at least once weekly over three months.

The most significant change for anorexia nervosa is the deletion of the DSM-IV criterion requiring amenorrhea, or the absence of at least three menstrual cycles. DSM-5 criteria for bulimia nervosa reduce the frequency of binge eating and compensatory behaviors from twice a week to once a week for at least three months. Other changes in the feeding and eating disorders chapter of the DSM-5 include the addition of pica, rumination and avoidant/restrictive food intake disorder (ARFID), listed in the DSM-IV among Disorders Usually First Diagnosed in Infancy, Childhood or Adolescence, a chapter that will be excluded in DSM-5.

Anorexia Nervosa

The APA guideline describes limited evidence for the use of medications in restoring weight, preventing relapse or treating chronic anorexia nervosa. It emphasizes that a clinician’s decision to use psychotropic medications for weight restoration in a patient with anorexia nervosa (AN) must be based on the patient’s individual presentation. The guideline notes that selective serotonin reuptake inhibitors (SSRIs) combined with psychotherapy are widely used in treating anorexia. The guideline also indicates that more research is needed to evaluate the efficacy of the second-generation antipsychotics (SGAs) where initial clinical impressions have suggested that they may be useful in patients with severe, unremitting resistance to gaining weight, severe obsessional thinking and denial of delusional proportions. Regarding this clinical issue, a randomized clinical trial of 34-day
hospital patients with anorexia nervosa demonstrated that compared with placebo, a flexible dose regimen of the SGA, olanzapine (2.5 mg/day to 10 mg/day), resulted in a greater rate of increase in weight, earlier achievement of target body mass index and a greater rate of decrease in obsessive symptoms. Researchers reported that they found no serious adverse side effects, e.g., extrapyramidal symptoms, excessive sleepiness, dizziness or galactorrhea, during weekly medical examinations. Additionally, blood glucose levels randomly tested each week in all patients showed no evidence of impaired glucose tolerance or de novo development of diabetes mellitus in any participant (Bissada et al. 2008).

Due to the limitations of the small sample sizes of individual studies showing mixed results, a later meta-analysis of antipsychotic effects in patients with anorexia nervosa was performed (Kishi et al. 2012). Included in this meta-analysis were eight randomized controlled trials including anorexia nervosa patients (n=221) who were randomized to one of five different antipsychotics, i.e., olanzapine, quetiapine, risperidone, pimozide, sulpiride, placebo or usual care. Analysis of the pooled data showed no significant differences between antipsychotics and the comparison groups regarding efficacy outcomes, e.g., body weight, body mass index and psychopathology related to anorexia. Of all the antipsychotics included in the trials, olanzapine was the most weight-gain producing medication, but this result was nonsignificant. The eight trials were all of short duration (≤ 12 weeks); longer-term efficacy and safety data are needed in future studies. The APA Guideline Watch reports that the World Federation of Societies of Biological Psychiatry concluded that Grade B evidence, i.e., limited positive evidence from controlled studies, supports the use of olanzapine for weight gain.

The APA guideline indicates that for children and adolescents, evidence supports that family treatment is the most-effective intervention. The guideline also emphasizes that for some outpatients, a short-term course of family therapy may be as effective as a long-term course if patients do not have severe obsessive-compulsive features or non-intact families.

The efficacy of family therapy for adolescent anorexia was analyzed in a five-year follow-up of 40 patients in the United Kingdom who received either conjoint family therapy (CFT) or separated family therapy (SFT) – i.e., where the adolescent was seen individually and the parents attending separate sessions with the same therapist. Their analysis showed that overall there was little to distinguish the two treatments at five years, with more than 75 percent of subjects having no eating disorders symptoms. Other findings showed no deaths in the cohort and only 8 percent of those who had achieved a healthy weight by the end of treatment reported any relapse. Researchers suggested that those patients who respond well to outpatient family therapy generally stay well (Eisler et al. 2007).

The APA guideline also indicates that cognitive-behavioral, interpersonal and psychodynamic approaches, or a combination of these approaches, have the most evidence and consensus for use in the treatment of adults with anorexia. In addition, the APA guideline suggests that individual psychotherapy may be required for at least one year or many more, due to the enduring nature of the illness and the need for support during recovery. A more recent clinical trial was conducted to evaluate the relative efficacy of
family-based treatment (FBT) versus adolescent-focused individual therapy (AFT) for adolescents with anorexia nervosa. Therapy sessions were conducted in 24 outpatient hours over 12 months (Lock et al. 2010). The FBT modality was designed to focus on several goals: 1) helping parents not feel responsible for causing the disorder, 2) reinforcing positive aspects of parenting, 3) developing family strategies for weight restoration in the child with anorexia, 4) transitioning weight and eating control back to the child and 5) establishing a new and healthy adolescent relationship with the parents. The AFT modality was based on the theory that individuals with anorexia manifest ego deficits and confuse self-control with biological needs. This intervention was designed to help patients learn to identify/define their emotions and to tolerate them, rather than using starvation as a mechanism to numb the affective states. Both treatments led to considerable improvement and were similarly effective in producing full remission at the end of treatment. However, at both the six- and 12-month follow-up, FBT was significantly superior to AFT in facilitating full remission (Lock et al. 2010).

In a later two-site study, investigators examined moderators, mediators and predictors of remission for adolescents with anorexia nervosa (n=121) who participated in the above trial of FBT vs. AFT (Le Granage et al. 2012). Eating related obsessionality and eating disorder specific psychopathology were identified as moderators at end of treatment. Adolescents with higher levels of eating psychopathology and eating related obsessionality benefitted more from FBT than from AFT, and no mediators of treatment outcome were identified. Prior hospitalization, older age and duration of illness were identified as non-specific predictors of outcome. Investigators concluded that these exploratory findings may provide a rationale for examining treatment effects on outcome for patients with different levels of eating related psychopathology in future studies.

The APA Guideline suggests that hospital-based programs for nutritional rehabilitation should be considered for children and adolescents who are markedly underweight and whose weight has deviated below their growth curve. It emphasizes that refeeding programs be implemented in nurturing emotional contexts. The guideline cautions that when severely malnourished patients undergo aggressive oral, nasogastric or parenteral refeeding, complications of nutritional rehabilitation, particularly the refeeding syndrome, can occur. This condition includes the occurrence of electrolyte abnormalities, e.g., hypophosphatemia, hypokalemia and hypomagnesemia (Kohn et al. 2011). More severe forms of refeeding syndrome can result in fluid retention and cardiovascular, pulmonary, neurologic and hematologic manifestations (Magellan Health Services: Technology Assessment Report 2012). Professional associations, i.e., American Dietetic Association (ADA), American Psychiatric Association, American Academy of Pediatrics (AAP), Society for Adolescent Medicine, United Kingdom National Institute for Clinical Excellence (NICE), and the Royal Australian and New Zealand College of Psychiatrists (RANZCP), have published clinical refeeding recommendations. These include conservative initial rates of refeeding with close monitoring of weight, vital signs, fluid shifts and serum electrolytes to avoid refeeding syndrome. Gradual increases in caloric prescription and oral multivitamin/mineral supplements are also recommendations. Short-term use of nasogastric feeding is recommended in severe malnutrition cases.
The APA recommends a conservative feeding approach with caloric intake levels starting at 30-40 kcal/kg per day (approximately 1000 to 1600 kcal/day), increasing gradually during the weight gain phase. Other professional associations named above also recommend conservative refeeding approaches at the inpatient level of care where the patient’s weight is more than 30 percent below the ideal body weight. The “start low, advance slow” dictum includes the following principles: 1) total energy expenditure (TEE) should never exceed twice the basal energy expenditure (BEE), 2) caloric intake should rarely exceed 70-80 kcal per kilogram of body weight, 3) a diet of 20-25 kcal per kilogram should be initiated for severely anorexic patients, 4) protein intake should not exceed 1.5-1.7 grams per kilogram of body weight, 5) carbohydrate intake should not exceed 7 mg/kg/minute when parental nutrition (TPN) or enteral feedings are used and 6) weight gain should be in the range of 2-3 pounds per week (Mehler et al. 2010).

Some researchers are now challenging the “start low, advance slow” approach, and aggressive refeeding clinical protocols are being developed and investigated. One study reported initial refeeding in 300 adolescents with anorexia nervosa using continuous nasogastric tube feedings with caloric intake levels starting at a minimum of 2000 kcal/day, graduating to intermittent daily oral feeds with phosphate supplementation (Kohn et al. 2011). No difficulties in reestablishing an oral diet were reported and weight gain in the first week was >2.1 kg.

In another study, 30 out of 33 hospitalized patients with severe anorexia nervosa and an initial body mass index (BMI) ≤ 12 kg/m² received nutritional support with temporary nasogastric feeding while the other three patients received oral supplementation (Gentile et al. 2010). During refeeding, vitamins, potassium and phosphate supplements were administered. The amount of calories from enteral feeding plus glucose infusion was 28.5 ± 9.5 kcal/BW/day at 0 day, 38 ± 14 kcal/BW/day at 30 days, and 32 ± 11 kcal/BW/day after 60 days of refeeding treatment. Estimated amount of calories from oral diet was 14 ± 11 kcal/BW/day at 0 day, 32 ± 12 kcal/BW/day at 30 days, and 40 ± 8 kcal/BW/day at 60 days. None of the patients developed refeeding syndrome and the mean BMI and mean body weight increased from 11.3 ± 0.7 kg/m² to 13.5 ± 1 kg/m² and from 29.1 ± 3.2 kg to 34.5 ± 3.3 kg respectively after 60 days of intensive inpatient treatments.

A one-year retrospective chart review of 46 hospitalized patients (29 adolescents) with anorexia nervosa was undertaken to determine the incidence of hypophosphatemia (HP) in 12 to 18 year-old inpatients receiving aggressive refeeding treatment (Whitelaw et al. 2010). Results showed that 61 percent of admissions commenced on 1,900 kcal (8,000 kJ) and 28 percent on 2,200 kcal (9,300 kJ). Three patients commenced on rehydration therapy and one on 1,400 kcal (6,000kJ) as they were deemed at high risk of refeeding syndrome. None of the patients developed moderate or severe HP, although 37 percent developed mild HP.

An observational study by Garber et al. (2010) evaluated the daily weight trajectory of 35 hospitalized adolescents with anorexia nervosa, based on a recommended (conservative) refeeding protocol. A wide range of diets was prescribed at baseline from 800-2,200
calories, where 94 percent of patients were started on ≤ 1,400 calories. Mean prescribed calories were 1,205 on day one, and increased to 2,688 calories. Mean weight gain during the 17-day hospital stay was 2.42 kg or .15 kg/d and more than 80 percent of patients initially lost weight. Mean BMI did not increase significantly until day eight of hospitalization. Twenty percent of patients received phosphorus supplementation but there were no other clinical or electrolyte abnormalities noted. Investigators reported that higher calories prescribed at baseline were significantly associated with faster weight gain and shorter hospital stay. Based on this observational study of a very small number of adolescents with anorexia nervosa, investigators concluded that hospitalized adolescents demonstrated weight loss and slow weight gain on recommended (conservative) refeeding protocols in contrast to those prescribed higher caloric diets upon admission. Magellan Health Services has determined that large randomized controlled, multi-site trials are necessary to address questions of safety and efficacy for refeeding protocols that are more aggressive than currently recommended by professional association consensus guidelines. Magellan Health Services considers increased caloric inpatient refeeding protocols to be investigational for the treatment of anorexia nervosa.

The issue of relapse in anorexia nervosa is discussed only briefly in the APA guideline. An observation put forth in the guideline is that many clinicians who report seeing patients with chronic anorexia do see these patients experience substantial remission after many years of struggling with their disorder. In light of this, relapse in anorexia was an area of clinical study focusing on body composition as a predictor of relapse. A follow-up analysis of 32 weight-recovered subjects with anorexia nervosa from the New York site of the Fluoxetine to Prevent Relapse in Women With Anorexia Nervosa clinical trial and the Energy Homeostasis in Anorexia Nervosa longitudinal study, examined the effect of percent body fat, body mass index (BMI), anorexia nervosa subtype, waist-to-hip ratio, and serum cortisol and leptin levels on treatment outcome. Findings revealed that percent body fat at the time of hospital discharge was the only clinical variable significantly associated with treatment outcome – i.e., lower percent body fat was associated with poorer long-term outcome. Investigators indicated that, while additional data linking percent body fat as a risk factor for relapse is necessary, their findings suggested that increased body fat may be protective against relapse (Mayer et al. 2007).

**Bulimia Nervosa**

A large systematic review of 47 studies on the efficacy of treatments for bulimia nervosa (BN) was conducted to include studies of medication only, behavioral interventions only, and medication plus behavioral interventions for adults and adolescents. Findings of the review revealed that evidence for medication is strong in the use of fluoxetine (60 mg/day) for reducing core bulimic symptoms. While researchers noted that further studies are needed, preliminary evidence of efficacy exists for other second-generation antidepressants (trazodone and fluvoxamine), an anticonvulsant (topiramate), a tricyclic antidepressant (desipramine) and for a monoamine oxidase inhibitor (MAOI), brofaromine (prescribed with close dietary monitoring) in reducing vomiting in the treatment of bulimia. Similarly, the evidence was strong for the effectiveness of cognitive behavioral
therapy (CBT) and interpersonal therapy (IPT) while the data showed promising results for dialectic behavioral therapy (DBT) and guided imagery. However, the supportive evidence for effectiveness of self-help groups was weak. In addition, the authors confirmed that the evidence for combined treatments is weak and that outcome differentiation by socio-demographic factors is nonexistent (Shapiro et al. 2007).

The current APA guideline recommends the use of SSRIs for treatment of bulimia and indicates they may be helpful for depression, anxiety, obsessions, certain impulse disorder symptoms, and for those patients with a suboptimal response to appropriate psychosocial therapy. The APA Guideline Watch cites findings from a later systematic review including 36 randomized, controlled trials of medications for the treatment of bulimia nervosa. Aigner et al. recommended antidepressants, SSRIs in particular, as an effective part of the initial treatment program for most patients (Aigner et al. 2011). The guideline also specifically cautions prescribers that tricyclic antidepressants (TCAs) should generally be avoided, and their potential lethality and toxicity in overdose should be taken into consideration. Similarly, the guideline cautions that MAOIs should be avoided with chaotic binge eating and purging, and that bupropion should be avoided in patients with bulimia because of seizure risk.

The APA guideline does not address the use of neurostimulation in the treatment of eating disorders. Repetitive Transcranial Magnetic Stimulation (rTMS) has been studied primarily in the treatment of refractory depression. Researchers have just begun to research rTMS in the treatment of bulimia since it is believed to be often associated with depressive symptoms. It is postulated that there is a shared deficient serotonergic transmission in both syndromes and involvement of the left dorsolateral prefrontal cortex in the regulation of eating behavior (Walpoth et al. 2008). A small, randomized sample of 14 women with bulimia were submitted to sham treatment, followed by either three weeks of active or sham rTMS. Stimulation was delivered for three weeks with an intensity of 120 percent motor threshold using 20 Hz in one session per day. Ten trains of 10 s, with a train interval of 60 s, were performed per session. Patients got an amount of 2,000 stimuli per session up to a total of 30,000 stimuli in the actively treated group. Results of this study showed that the average number of binges per day declined significantly between baseline and the end of treatment in both groups. There was also no significant difference between sham and active stimulation, in terms of improvements in purging behavior, and depressive or obsessive-compulsive symptoms – indicative of a placebo effect (Walpoth et al. 2008).

A later randomized, double-blind controlled trial investigated whether rTMS of the left dorsolateral prefrontal cortex reduces food craving in patients with bulimia (n=38). Patients were randomly allocated to receive a single session of real rTMS or sham treatment. Patients in the real rTMS group reported lowered cue-induced food craving than those patients in the sham treatment group after neurostimulation. Compared with sham control, real rTMS was also associated with fewer binge-eating episodes during the 24 hours following stimulation. Investigators suggested the results provide a rationale for further research of rTMS as a treatment for bulimic eating disorders (Van den Eynde et al. 2010).
CBT is recognized in the APA guideline as the most efficacious short-term intervention in the treatment of bulimia when specifically directed at eating disorder symptoms and underlying maladaptive cognitions. The adopted guideline also suggests that psychodynamic and psychoanalytic approaches in individual or group format are useful once binging and purging symptoms have improved. The guideline indicates that family therapy should be considered whenever possible, especially for adolescents still living with parents or for older patients with ongoing conflicted interactions with parents. Additionally, the guideline indicates that support groups and 12-step groups may be helpful adjuncts to the initial treatment of bulimia and for subsequent relapse prevention, but are not recommended as the sole initial treatment approach.

Two studies on the effectiveness of family therapy in treating adolescents with bulimia were conducted with mixed results. One clinical trial with 85 study participants conducted in the United Kingdom compared the efficacy and cost-effectiveness of family therapy versus CBT guided self-care. While the study results showed that at six months, binging had undergone a significantly greater reduction in the CBT guided self-care group than in the family therapy group – this difference disappeared at 12 months. There were no other differences between groups in behavioral or attitudinal eating disorder symptoms, but the direct cost of treatment was lower for CBT guided self-care than for family therapy (Schmidt et al. 2007).

Another study of 80 adolescents with bulimia evaluated the relative efficacy of family-based treatment (FBT) and supportive psychotherapy (SPT). In this trial, family therapy showed superior efficacy in that significantly more of these patients were binge-and-purge abstinent at the end of the study and at six months, and showed treatment effects in favor of FBT on all measures of eating pathological features (le Grange et al. 2007). Researchers in this trial conducted a follow-up analysis of these results, which showed that lower eating concerns, as measured by the Eating Disorder Examination (EDE), are the best predictor of remission for adolescents with bulimia. Additionally, FBT may be most effective in those cases with low levels of eating disorder psychopathology (le Grange et al. 2008).

Two transdiagnostic CBT modalities designed for patients with eating disorders, i.e., bulimia nervosa and eating disorder not otherwise specified, were studied in order to compare a treatment (CBT–Ef) focusing solely on eating disorder psychopathology against a more complex treatment (CBT–Eb) that also addressed additional problems – mood, clinical perfectionism, low self-esteem and interpersonal difficulties (Fairburn et al. 2009). Patients in the two treatment conditions exhibited substantial and equivalent change, which was maintained during follow-up. Investigators reported that at the 60-week follow-up assessment, 51.3 percent of the sample had a level of eating disorder features less than one standard deviation above the community mean. In addition, the treatment outcome was not dependant upon the specific eating disorder diagnosis and both types appeared to be suitable for the majority of outpatients with eating disorders. Further exploratory analysis conducted by the research team indicated that patients with substantial additional psychopathology, of the type targeted in CBT–Eb, did better with this treatment than the focused form, while the opposite was true for the remaining patients (Fairburn et al. 2009).
CBT focuses on targeting the overt symptoms of bulimia nervosa, e.g., bingeing and compensatory behaviors. A new group-based treatment for bulimia nervosa, Emotional and Social Mind Training Program (ESM), improves treatment by focusing on broader emotional and social/interpersonal issues underlying bulimia nervosa (Lavender et al. 2012). ESM, a non-symptom based treatment, is based on evidence from several small studies suggesting that emotional and social deficits, e.g., negative self-evaluation, difficulties in understanding the minds of others, poor interpersonal skills, a tendency to focus on negative or threatening socio-emotional information and shame, are factors triggering the onset of bulimia nervosa or as maintaining factors for the disorder. Lavender et al. conducted a randomized controlled trial to evaluate the efficacy of ESM compared to Group CBT. Adults (n=74) with bulimia nervosa were randomized to either CBT or ESM treatment programs, each of which included 13 group and four individual sessions. ESM was divided into three stages: 1) learning about inter- and intra-personal emotions including the social context of emotion, understanding self-esteem difficulties; 2) developing other ways of coping – self-compassion to manage shame, learning alternative coping strategies and 3) relapse prevention and maintenance. It is noteworthy that in this study, ESM performed as well as CBT in terms of treatment outcomes and patients improved as significantly in ESM as in CBT. ESM and CBT were equally effective at the end of treatment as well as follow-up. The APA Guideline recommends CBT as the most effective treatment for patients with bulimia. Researchers suggest that ESM may be a viable alternative to CBT for the treatment of some individuals with bulimia nervosa and conclude that further research is required to identify and preferentially allocate suitable individuals accordingly.

Another study investigated whether an appetite-focused dialectical behavior therapy (DBT-AF) is an effective alternative treatment for bulimia nervosa (Hill et al. 2011). DBT-AF combines appetite awareness training, i.e., redirecting patient’s focus from monitoring the mount/type of foods consumed to internal appetite signals, with dialectical behavior therapy, i.e., acceptance-based strategies and emotion regulation skills. Participants with binge/purge episodes at least once per week (n=32) were randomly assigned to 12 weekly sessions of DBT-AF or to a six-week delayed treatment control. Therapy sessions focused on mindfulness practice, diary card/homework review and chain analyses and teaching, and practicing new skills. Results of this study showed that DBT-AF was acceptable to participants who preferred appetite monitoring to food monitoring, and DBT-AF participants showed greater improvement in focal and secondary symptoms of bulimia nervosa at six weeks than control group participants. Researchers suggested that DBT-AF may be useful for individuals who are not willing to comply with food monitoring or those needing to focus more on emotion regulation skills. Researchers suggested future studies directly comparing DBT-AF with CBT to determine if some individuals would benefit more from this alternative treatment.

Innovative modalities in the area of school-based, peer-led programs to prevent obesity and eating disorders have begun to emerge and gain credence. Two studies in this area were published with positive findings. One study evaluated peer teaching on healthy living,
i.e., nutrition, physical activity and healthy body image, from older to younger children ("buddies"). Findings showed that all students improved their knowledge and that weight velocity was decreased in older students (Stock et al. 2007). Another study demonstrated the effectiveness of an interdisciplinary, school-based obesity prevention intervention where disordered weight control behaviors were reduced by two-thirds for the girls in early adolescence who participated (Austin et al. 2007). Similarly, an eating disorders prevention program using dissonance-inducing activities that reduce thin-ideal internalization showed superiority over another prevention program that promoted healthy weight management. Reductions in eating disorder risk factors, bulimic symptoms and obesity onset were seen through the 12-month and three-year follow-ups, suggesting public health potential (Stice et al. 2006, Stice et al. 2008).

**Binge Eating Disorder**

A published clinical review on binge eating disorder (BED) treatments reported that new epidemiological studies have shown BED to be the most common of the eating disorders, with lifetime prevalence estimates in the community of 3.5 percent among women and 2 percent among men (Yager 2008). The author noted that obesity occurs in approximately 65 percent of patients with BED where it increases progressively over time. BED was consigned to the “eating disorders not otherwise specified” (EDNOS) diagnosis in the Diagnostic and Statistical Manual (DSM)-IV, but will achieve full status as a real, recognized mental disorder with an official diagnosis in the DSM-5 scheduled for release in May 2013 (Grohol 2012). According to the new criteria, binge eating disorder includes overeating at least once a week for three months, along with lack of control and marked feelings of distress. Criteria differentiating binge eating disorder from normal periodic overeating include the following: episodes of eating much more rapidly than normal, recurring episodes of 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/or feeling disgusted with oneself, depressed or very guilty afterward (Moran 2012). The APA notes that recurrent binge eating is much less common, much more severe and associated with more significant problems, physical and psychological, than the common phenomenon of overeating (American Psychiatric Association 2013).

Since binge eating is prevalent in overweight and obese individuals with type 2 diabetes mellitus, the impact of behavioral weight loss treatments on eating disorders symptomatology has been analyzed by investigators in the Look AHEAD (Action for Health in Diabetes) clinical trial (Gorin et al. 2010). Overweight and obese individuals aged 45 to 76 years (n=5,145), with and without BED symptoms, were treated with either intensive lifestyle intervention or to enhanced usual care (a diabetes support/education control condition). Investigators reported that participants who stopped binge eating (BE) appeared to be just as successful at weight loss as non-binge eaters after one year of treatment. Gorin et al. also noted that individuals reporting more BE also reported a more depressed mood and worse physical health than their non-BE peers. Nevertheless, investigators stressed that most individuals who reported BE at baseline stopped BE by one year, and these individuals were just as successful at weight loss as those who reported
no BE. Additionally, they indicated that few individuals started BE during the one-year study period. The study team concluded that BE is not exacerbated by behavioral weight loss treatment and may be improved by participating in a structured weight loss program targeting lifestyle changes (Gorin et al. 2010).

The APA guideline specifies that both group and individual formats of CBT, behavior therapy, dialectical behavior therapy and interpersonal therapy all have been associated with binge frequency reduction and abstinence rates along with evidence of maintenance of this change over a year follow-up. Since publication of the guideline, a more recent study (n=101) of Dialectical Behavior Therapy for Binge Eating Disorder (DBT-BED) by Safer et al. was compared to an active comparison group therapy (ACGT) in order to evaluate it against a credible control group (“active placebo”) (Safer et al. 2010). Both interventions used specific manual-based treatment protocols and used the same therapists in both conditions in order to minimize variability. The DBT-BED approach, which was based on Linehan’s DBT for borderline personality disorder and modified by Telch et al. for binge eating, consisted of three modules: mindfulness, emotional regulation and distress tolerance, concluding with relapse prevention. The ACGT approach, which was modeled after Markowitz and Sacks’ supportive therapy for chronic depression, was modified to address binge eating for the current study while focusing primarily on bolstering self-esteem (Safer et al. 2010). Study results showed that both DBT-BED and ACGT reduced binge eating, but DBT-BED showed significantly fewer dropouts and greater initial efficacy at posttreatment, e.g., 64 percent abstinence rate for DBT-BED vs. 36 percent for ACGT. Investigators reported that these differences, however, did not persist over the three-, six-, and 12-month follow-up assessments, e.g., 12-month follow-up abstinence rate equal to 64 percent for DBT versus 56 percent for ACGT (Safer et al. 2010).

Using the sample from the 2010 Safer et al. study, a later study by Safer et al. (2011) investigated the role of rapid response as a predictor of outcome in the treatment of BED. Investigators analyzed and compared rapid response and non-rapid response participants across treatment conditions (DBT-BED and ACGT) as well as within the two treatment conditions to investigate differences between rapid response and non-rapid response on continuous treatment outcomes. They found that rapid response predicts improvement in abstinence from binge eating at a 12-month follow-up and shows that rapid response is a significant predictor of outcome in group therapy. Investigators concluded that rapid response to treatment is a significant predictor of outcome in DBT-BED, a less established therapeutic treatment for BED.

Similarly, the adopted guideline acknowledges that CBT with the addition of exercise appears to augment both binge and weight reduction and that some guided self-help CBT programs show promise for binge remission. A more recent clinical study of obese patients with BED (n=205) compared interpersonal therapy (IPT) with behavioral weight loss treatment (BWL) and guided self-help based on cognitive behavior therapy (CBTgsh) where 20 sessions of each modality was conducted over six months. Results showed that there was no difference among the three interventions at posttreatment on binge eating, specific eating disorder psychopathology, i.e., body weight, shape and eating concern, or
general psychopathology. At the two-year follow-up, both IPT and CBTgsh were significantly more effective than BWL in eliminating binge eating. Investigators suggested that guided self-help CBT should be considered a first-line treatment for most patients with BED and that IPT be use as the treatment of choice for the subset of individuals with BED with low self-esteem and high level of specific eating disorder psychopathology (Wilson et al. 2010).

Another clinical trial demonstrated that self-help approaches were a viable alternative to therapist-delivered treatment. Findings from a study of 259 adults with BED where therapist-led, therapist-assisted or self-help group treatments were compared to a wait-list condition showed that patients in the therapist-led group had the highest rate of abstinence and fewest dropouts at the end of treatment. However, there were no significant differences between treatment groups at follow-up on any of the primary or secondary outcome measures. Investigators concluded that while the presence of a therapist may enhance short-term abstinence and reduce the likelihood of dropout, they suggested groups for individuals with BED with reduced or no therapist involvement may be used as alternative treatments (Peterson et al. 2009).

The APA Guideline Watch cites studies supporting the APA Guideline’s recommendation for individual and group CBT and self-help programs for binge-eating disorders. In a later study, DeBar et al. (2011) replicated and extended results of one of the studies (Striegel-Moore et al. 2010) that examined the effectiveness and cost-effectiveness of a brief guided self-help treatment for binge eating disorders in a HMO setting. Participants, female health plan members (n=160) who expressed a desire to receive treatment for binge eating concerns, were randomly assigned into usual care or CBT-GSH. CBT-GSH was based on a six-step self-help program using self-monitoring, self-control strategies and problem solving to develop a pattern of moderate eating. Results of the study showed that participants in the CBT-GSH group showed greater remission from binge eating than usual care and had greater improvements in dietary restraint, eating, shape and weight concerns.

Maseb et al. (2011) performed a randomized, controlled trial to investigate the effects of a low-energy-density dietary approach, i.e., the consumption of more water- and fiber-rich foods such as fruits and vegetables with decreased consumption of fat, in obese individuals with BED who also received CBT to address binge eating and BED related outcomes. Participants (n=50) were randomized to one of two groups: six-month individual treatment of CBT plus a low-energy-density diet or CBT plus general nutrition counseling not related to weight loss. In this study, both treatments resulted in similar and significant outcomes: reductions in waist circumference and blood pressure; and improvements in total cholesterol. More than 30 percent of the sample achieved statistically and clinically significant weight losses and rates for remission from binge eating ranged from 52 percent to 72 percent for CBT plus low-energy-density diet and from 44 percent to 75 percent for CBT plus general nutrition counseling. Researchers concluded that dietary counseling can successfully be combined with CBT for obese patients with BED and that low-energy-density dietary counseling has promise for enhancing CBT for obese individuals with BED.
The APA guideline discusses the serotonin and norepinephrine reuptake inhibitor (SNRI) and appetite-suppressant drug, sibutramine, as a promising treatment based on findings of preliminary trials. Since release of the guideline, a large clinical trial of 304 patients with BED was conducted comparing sibutramine against placebo. The participants who received sibutramine had significantly greater reductions in weekly binge frequency, binge days, BMI and associated psychopathology (Wilfley et al. 2008). On October 8, 2010, the U.S. Food and Drug Administration (FDA) asked the drug manufacturer to withdraw voluntarily sibutramine from the U.S. market because of clinical trial data indicating an increased risk of cardiovascular adverse events, including heart attack and stroke, in the studied population. The manufacturer complied with the request and sibutramine no longer is available in the United States (FDA MedWatch, 2010).

Duloxetine is another SNRI evaluated for the treatment of binge eating disorder with comorbid current depressive disorders. It has not been associated with the adverse cardiovascular events triggering sibutramine’s withdrawal from the market. In a randomized, parallel-group, placebo controlled study by Guerdjikova et al. (2012), 40 patients with BED and a comorbid depressive disorder received duloxetine or placebo to assess the efficacy and safety of duloxetine during a 12-week course of treatment. Duloxetine was superior to placebo in reducing the frequency of binge eating episodes, weight and overall severity of illness related to BED and depressive disorder. In the duloxetine group, the mean weight loss was 3.4 kg, compared with 0.3 kg in the placebo group. Researchers suggested that larger controlled trials of duloxetine and other SNRIs, in participants with BED and depressive disorders, are warranted.

The APA guideline also presented early positive findings of studies evaluating the efficacy of the anticonvulsant drug topiramate. More recently, findings of a large multi-center clinical trial with 407 patients with BED have been published. Patients receiving topiramate experienced highly significant rates of reduction in binge eating days and binge eating episode frequency, weight, BMI, overall severity and compulsive features of BED, compared with placebo. In addition, topiramate was associated with greater improvement in measures of hunger, impulsive features and disability (McElroy, Hudson et al. 2007). The novel antiepileptic drug agent zonisamide was also studied in a small single-center trial where it was associated with a significantly greater rate of reduction in binge eating episode frequency, body weight and severity of illness than placebo. However, researchers reported that zonisamide was associated with only fair tolerability and a relatively high treatment discontinuation rate (McElroy, Kotwal et al. 2006).

Treatment of BED with antidepressant medications, particularly the SSRIs, was recommended as a treatment option in the APA guideline with the cautionary note that while patients experience a short-term reduction in binge eating, there is usually no accompanying substantial weight loss. The guideline also indicates that use of SSRIs for this disorder is typically at the high end of the recommended dosage range. More recent clinical trials and meta-analyses have produced mixed results in their usage for this indication. A study comparing sertraline and fluoxetine in the treatment of obese patients with BED showed no differences between the two treatments and both demonstrated significant
weight loss and improvement in binge eating core symptoms and psychopathology (Leombruni et al. 2008). Similarly, a trial of high-dose escitalopram was shown to be efficacious in reducing weight and global severity illness in obese patients with BED, but not in reducing obsessive-compulsive symptoms of BED (Guerdjikova et al. 2007). Conversely, a meta-analysis of seven antidepressant studies, i.e., fluoxetine, sertraline, citalopram, fluvoxamine and imipramine, concluded that their findings were not supportive in recommending the use of antidepressants as the only and first-choice therapy for remission of binge eating episodes and weight reduction of patients being treated for BED (Stefano et al. 2007). In another systematic review of studies, findings for SSRI antidepressant efficacy, i.e., sertraline, citalopram, were based primarily on a series of short-term, placebo-controlled medication trials. These agents demonstrated greater rates of reduction in target eating, and psychiatric and weight symptoms in individuals with BED than placebo. Researchers noted that these conclusions should be viewed tentatively due to high dropout rates and placebo response rates (Brownley et al. 2007).

Researchers have indicated that novel drug treatments that reduce binge eating, the associated psychopathology and body weight, and are well tolerated, are needed for the treatment of BED. In addition, several drugs used to treat BED, i.e., orlistat, sibutramine, topiramate and zonisamide, have problematic side effects and relatively high discontinuation rates (McElroy, Guerdjikova et al. 2007). The highly specific norepinephrine reuptake inhibitor, atomoxetine, used in the treatment of attention-deficit hyperactivity disorder (ADHD), is associated with anorexia and weight loss. Since this drug is generally well tolerated and may have antidepressant properties, it was chosen for study in a placebo-controlled clinical trial in order to determine its possible efficacy in the treatment of BED. Study results found atomoxetine to be superior to placebo in reducing binge frequency, weight and severity of illness. Researchers suggest that further studies of atomoxetine are clearly warranted (McElroy, Guerdjikova et al. 2007).

The APA guideline indicates that although evidence is limited, combined pharmacotherapy and psychotherapy treatment for BED is frequently helpful in clinical practice. The systematic review of studies previously cited by Brownley et al. (2007) revealed that use of cognitive behavioral therapy (CBT) combined with medications, i.e. fluoxetine, orlistat, or medication (desipramine) along with weight loss therapy, was superior to medication or weight loss therapy alone or when combined with placebo in the treatment of patients with BED (Brownley et al. 2007). Similarly, a marked reduction in binge eating, short-term weight loss and a significant decrease in psychopathology were shown in a clinical trial of topiramate (target dose 200 mg) plus CBT in obese patients with BED (Claudino et al. 2007). Another study demonstrated that the combination of cognitive-behavioral weight loss therapy (BWL) and sibutramine, leads to comparable weight loss in individuals suffering from obesity and subclinical binge eating disorder (sBED) as in obese non-bingers. However, BWL alone was an effective treatment in significantly reducing binge-eating frequency in sBED without the augmenting effect of sibutramine (Bauer et al. 2006).

Modalities employing new technologies and psychosocial approaches continue to be developed and studied in the area of eating disorders treatment. One clinical trial of 105 male and female high school students examined the effects of an Internet-facilitated, weight
management program on reducing binge eating and overeating, and preventing weight gain in a population of students at risk of being overweight. In comparing a 16-week online intervention compared to a wait-list control group, the study group found a strong effect for stabilization of weight gain and reduction in binge eating and overeating at the nine-month follow-up assessment. Researchers were encouraged with these findings using an easily disseminated, Internet-facilitated program (Jones et al. 2008). Adapted motivational interviewing (AMI) that was originally developed for addictive behaviors was studied in 108 women with BED. Both groups, where one was assigned to one session of AMI and use of a self-help handbook, or use of a self-help handbook only, showed improvement in binge eating and associated symptoms. After 16 weeks of intervention, the AMI group had a greater proportion of women who abstained from binge eating and no longer met the binge frequency criterion for BED DSM-IV diagnosis (Cassin et al. 2008).

**Pica and Rumination Disorder**

The DSM-IV lists pica and rumination disorders as disorders of infancy and childhood, but they will be distinct categories in the DSM-5 chapter on feeding and eating disorders. Inclusion in this chapter indicates that the diagnosis can be made of individuals of any age.

**Avoidant/Restrictive Food Intake Disorder**

Avoidant/restrictive food intake disorder (ARFID) is a category including both children as well as adults who have idiosyncratic preferences and requirements for food leading to psychological and/or nutritional problems. The DSM-IV listed this rarely used diagnosis as eating disorder of infancy or childhood, but it will be included in the feeding and eating disorders chapter of the DSM-5. This disorder is manifest by persistent failure to meet appropriate nutritional and/or energy needs associated with one or more of the following: significant weight loss or lack of growth in children, significant nutritional deficiency, dependence on nutritional supplements or enteral feeding, and marked interference with psychosocial functioning.
Obtaining Copies of the APA Guidelines

Copies of the APA Practice Guideline for the Treatment of Patients With Eating Disorders, Third Edition can be obtained through the APA at http://psych.org/, by calling (800) 368-5777, or by U.S. mail at:

1000 Wilson Blvd., Suite 1825
Arlington, VA 22209-3901

Provider Feedback

Magellan welcomes feedback on adopted clinical practice guidelines. We take all suggestions and recommendations into consideration in our ongoing review of the guidelines. Submit your comments to:

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