Strengthening Systems to Address Eating Disorders

Part of the ***Refocus and Renew: Moving Towards Health***
FY2025 Technical Assistance Coalition Policy Paper Series

SAMHSA
Substance Abuse and Mental Health Services Administration

2026

Strengthening Systems to Address Eating Disorders

Strengthening Systems to Address Eating Disorders was prepared for the Substance Abuse and Mental Health Services Administration (SAMHSA) under Task 2.2 of NASMHPD's Technical Assistance Coalition contract/task order, HHSS283201700024I/75S20321F42001. Asha Stanly served as contracting officer representative.

ELECTRONIC ACCESS

This publication may be downloaded from https://library.samhsa.gov

ORIGINATING OFFICE

Substance Abuse and Mental Health Services Administration, 5600 Fishers Lane, Rockville, MD 20857, SAMHSA.

Publication No. PEP26-01-006

Released 2026

Table of Contents

Abstract

Eating disorders are mental disorders that involve extreme mental preoccupation, disturbing emotions, attitudes, and behaviors involving weight and food. They include alterations to eating behaviors and food consumption that significantly impair health and psychosocial functioning. With treatment, many people recover and live full lives. Without treatment, the illness course can be long, with the need for extensive medical and psychiatric treatment, and can result in death. People of both sexes and all ages, races, and socioeconomic statuses can experience eating disorders, and they commonly co-occur with other psychiatric conditions, including anxiety and mood disorders and substance use disorders. There are also significant general medical comorbid conditions with eating disorders, including chronic conditions such as osteoporosis, autoimmune disorders, and type 2 diabetes. For state mental health program directors, providers, family members, and people with lived experience, an understanding of these conditions from a clinical and scientific perspective can help shape better services and related policies. This paper provides an overview of eating disorders and offers recommendations on strengthening public service systems to better serve individuals with eating disorders who need specialized supports.

Highlights

- Eating disorders can have significant health consequences and have the second-highest mortality rate of any psychiatric illness.
- Suicide attempts and suicidal ideation are common in people with eating disorders.
- Eating disorders frequently co-occur with other psychiatric illnesses, including mood, anxiety, and substance use disorders.
- Effective treatments exist but are difficult to access for many people across the United States.

Recommendations

1. Offer training opportunities related to eating disorders for people providing clinical care across disciplines.
2. Conduct research on the epidemiology and treatment of eating disorders.
3. Integrate basic screening practices and clinical recognition of eating disorders and disordered eating behaviors in state mental health and social service programs.
4. Provide clinical support and guidance to individuals and families who use food assistance programs (and clinicians who work with these populations) to ensure they can meet nutritional treatment goals.
5. Build capacity across the state hospital and public mental health system to recognize and treat eating disorders.

Introduction

The severity of eating disorders is highly underestimated, despite their having significant effects on mental and physical health. Relapse is estimated to occur in 25 percent to more than 50 percent of people,[1-4] and there is a significant risk of death, with anorexia nervosa having the second-highest mortality rate of any psychiatric illness after opioid use disorder.[5] People with eating disorders experience functional challenges similar to those of people with schizophrenia, bipolar disorder, and major depression but are routinely excluded from conversations about serious mental illnesses.[4] Outdated and erroneous stereotypes about who is at risk for developing an eating disorder (young women) and what causes such a disorder (social pressures toward thinness) have been proven to be incorrect, but they have lingering effects on stigma, treatment seeking, detection, and even the likelihood of a correct diagnosis. Moreover, not all people with eating disorders are underweight—in fact, most are in the typical or overweight range.[6] Therefore, weight alone cannot inform diagnosis.

Access to specialist eating disorder treatment is a challenge for people of all ages across the United States. Finding treatment covered by health insurance is difficult for children and adults with private or public insurance plans for both specialized outpatient clinicians and specialized treatment programs.[7-8] For people who are medically compromised, general medical floors in hospitals are typically not well versed or sufficiently staffed to provide the kind of psychiatric support needed. Further, general psychiatric units are also often poorly equipped to manage the needs of eating disorder patients, particularly when managing other high-acuity psychiatric conditions.

Prior to passage of the Mental Health Parity and Addiction Equity Act[9] in 2008, eating disorder treatment was often excluded from coverage in commercial health insurance plans. Now, despite stated benefits in commercial insurance plans, people continue to struggle to access care due to insurer processes such as medical necessity criteria and utilization reviews.[10-12] For adults with Medicaid, coverage varies dramatically across states in terms of what types of treatment are covered. Just one-quarter of intensive eating disorder treatment facilities—such as inpatient hospitals or residential programs—accept Medicaid. More than 90 percent of these facilities accept private insurance.[13] Finding a treatment program that accepts Medicaid or Medicare is challenging. Care for this population is typically provided in specialty units of academic and public healthcare settings.[10-12]

Recent legislation to support advances in access to treatment and promotion of research and education have catalyzed further conversation and policy development to assist individuals with eating disorders who need care. For example, the 21st Century Cures Act (2016) incorporated elements establishing grant funding for the education of healthcare professionals as well as school staff regarding eating disorders and included language to clarify health insurance coverage.[14-16] Provisions in the National Defense Authorization Act for Fiscal Year 2022 promote improved access to all levels of care for eating disorders for service members and their families.[16-17]

Given the national attention through legislation and subsequent development of expectations to broaden knowledge about eating disorders and enhance access to care, state mental health leaders are in a position to advance services for individuals with eating disorders that qualify for

public behavioral health services as well as provide access to specialized services for any individual with a serious mental illness and co-occurring eating disorder. As part of a series of papers related to helping Americans achieve better health,[18] this paper will provide an overview of eating disorders. The paper will also reflect on strengthening public service systems to better serve individuals with eating disorders that need specialized supports.

TYPES OF EATING DISORDERS

Anorexia nervosa is characterized by restrictive eating behaviors. This can include taking in less energy than a person uses, intense fear of gaining weight, distorted body image, and difficulty recognizing the severity of one's illness.[19] There are two types of anorexia nervosa included in the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision* (DSM-5-TR)—restricting and binge eating/purging. The restricting type is defined by weight loss that occurs only through behaviors such as dieting, fasting, and/or exercise. The binge-eating/purging type is defined as including repeated episodes of binge-eating or purging behavior (including vomiting or misuse of laxatives, diuretics, or enemas). Some of the signs of anorexia nervosa can include obsessive interest in food, dieting, or nutrition; frequent weighing; avoiding eating in social situations; and/or cutting food into small pieces or eating very slowly. This disorder can affect all body systems with complications such as constipation; dry mouth; heart rhythm abnormalities; organ failure; loss of bone density; loss of menstruation or menstrual irregularities and fertility complications; and low blood sugar.[20]

Bulimia nervosa is characterized by episodes of binge eating followed by behaviors to "undo" the binge in an effort to prevent weight gain. Binge eating is defined as eating significantly more than what most people would eat in a similar time (under the same conditions) paired with a sense of loss of control while eating. Loss of control distinguishes binge eating from typical episodes of overeating. Behaviors to compensate for the food eaten during a binge include vomiting; misuse of laxatives, diuretics, or enemas; exercise; or fasting.[19] Additionally, people with bulimia nervosa often consider their weight and/or shape as highly important to their self-image. People with bulimia nervosa are generally normal or higher weight, whereas individuals with low weight and binge/purge behaviors typically receive a diagnosis of anorexia nervosa binge-eating/purging type. Some signs of bulimia nervosa can include trips to the bathroom during or directly after eating or spending long periods in the bathroom, eating alone or in secret, Russell's sign (scrapes on knuckles from inducing vomiting), and avoiding foods believed to trigger a binge. Medical complications of bulimia nervosa include constipation; electrolyte imbalances; dental erosion; sore throat, hoarseness, cough, and difficulty swallowing; swollen glands in the face; esophageal tears; and abnormal heart rhythms.[21]

Binge-eating disorder is also characterized by episodes of binge eating, but in the absence of behaviors to compensate. The binge-eating definition is the same as in bulimia nervosa; however, binge-eating disorder diagnostic criteria require that a binge be accompanied by at least three of the following: eating at a faster pace than normal; eating to the point of discomfort; eating large quantities of food when not hungry; eating alone due to embarrassment over the quantity of food consumed; and/or feeling a sense of disgust, depression, or guilt after a binge. These behaviors occur in conjunction with feelings of a lack of control and distress over the binge eating. Similar to bulimia nervosa, people with binge-eating disorder are often normal or higher weight. Signs of binge-eating disorder can include skipping meals throughout the day,

hiding or hoarding food, frequent weight changes, and significant concern with weight and body image (although not required for a diagnosis).[19] Medical complications from binge-eating disorder include digestive distress such as stomach pain, nausea, bloating, gastric reflux, and constipation. Additional medical concerns include cardiovascular diseases such as high blood pressure or high cholesterol, increased risk of gallstones and gallbladder disease, and increased risk of type 2 diabetes.[22]

Avoidant/restrictive food intake disorder, commonly referred to as ARFID, is an eating disturbance that results in inadequate nutritional and/or energy intake associated with significant weight loss or failure to meet expected weight gains, significant nutritional deficiency, reliance on tube feeding or oral supplemental nutrition, and significant effects on psychosocial functioning. The three overlapping presentations are characterized by a lack of interest in eating, avoiding food based on sensory aspects (e.g., heat, texture), and fear of adverse effects of eating such as choking or vomiting. While the restrictive eating may resemble anorexia nervosa, the restriction is not primarily motivated by weight and shape concerns. Avoidant/restrictive food intake disorder symptoms are not better explained by another eating disorder or psychiatric or medical condition. Signs of avoidant/restrictive food intake disorder can include extreme pickiness when choosing food; avoiding entire food groups; high sensitivity to smell, texture, or temperature of food; anxiety around new foods; fears of allergic reactions, vomiting, or choking; feeling full before meals; or lacking an appetite.[19] Physical complications of avoidant/restrictive food intake disorder are similar to those of anorexia nervosa that are associated with malnutrition. Avoidant/restrictive food intake disorder typically onsets in childhood and can persist into adulthood, although later onset can also occur. Avoidant/restrictive food intake disorder can be diagnosed in individuals of all body weights.[23-25]

Other specified feeding or eating disorder, sometimes referred to as OSFED, is an eating disorder diagnosis for people with eating disturbances that cause significant distress or impairment but do not fulfill the specific criteria for another eating disorder diagnosis. Five examples of symptom profiles are classified as other specified feeding or eating disorder in the DSM-5-TR: atypical anorexia nervosa, bulimia nervosa of low frequency or limited duration, binge-eating disorder of low frequency or limited duration, purging disorder, and night eating syndrome.[19] For a diagnosis of atypical anorexia nervosa, all criteria for anorexia nervosa are met, with the exception that the individual's weight remains within or above a normal range despite significant weight loss. The criteria are meant to capture individuals of lower weight with all the anorexia nervosa criteria but whose weight has not reached the low-weight threshold for an anorexia nervosa diagnosis and individuals of high body weight who have lost large amounts of weight (but are still at high or normal weight) and who have all the psychological symptoms of anorexia nervosa.[26] For the low-frequency or limited-duration bulimia nervosa and binge-eating disorders, all diagnostic criteria are met except that the primary behavior (binge eating and/or purging) occurs on average less than once per week or for fewer than three months. Purging disorder is characterized by purging behaviors to influence weight or shape without binge eating. Finally, night eating syndrome is defined by repeated episodes of eating after waking from sleep or excessive eating after the evening meal. The night eating is not better explained by another eating or psychiatric disorder, medical condition, or medication. Depending on the presentation for any of the other specified eating disorders, signs and medical complications look similar to those of the more well-known anorexia nervosa, bulimia nervosa, and binge-eating disorder and can be just as severe.

The disorders detailed here represent the primary spectrum of food and body-related pathology. Although pica and rumination syndrome are also classified as eating disorders, they are distinct enough in their origin and treatment that they fall outside the scope of this specific discussion.

Epidemiology: Prevalence, demographics, morbidity and mortality

Capturing the true incidence (new cases) and prevalence (both new and existing cases) of eating disorders is an ongoing challenge. Estimates vary depending on the sample (e.g., age or sex specific, representativeness, community samples, individuals receiving treatment, etc.), method of data collection (e.g., self-report, full clinical interviews, healthcare records), instrument used (e.g., an eating disorder–specific instrument or a broad psychiatric diagnostic instrument), and version of DSM or International Classification of Diseases criteria. In the United States, eating disorders were not routinely captured in population-based epidemiological studies until the National Comorbidity Survey Replication (NCS-R) (and the adolescent supplement), which was fielded from 2001 to 2003.[27] In 2012–2013, the third wave of the National Epidemiological Survey on Alcohol and Related Conditions (NESARC-III) included DSM-5 eating disorder diagnoses.[28] Presently, no regularly administered federally supported national surveys evaluate past or present eating disorder diagnoses in the United States.

PREVALENCE AND SEX

Across global population–level studies, females are consistently more likely to be diagnosed with an eating disorder and to report engaging in disordered eating behaviors than males—with greater similarity across sexes in binge-eating disorder and some studies showing a greater percentage of males in youth with avoidant/restrictive food intake disorder.[29] Research suggests that the presentation of some eating disorders may differ for males in terms of symptoms, such as a “drive for muscularity” versus a “drive for thinness.”[30-31] As a result, prevalence estimates may underestimate the occurrence in males. Another important consideration is that lifetime prevalence is significantly affected by the age of participants in the sample: In a sample of youth, the prevalence estimate will be lower than that in a study that includes adults who have had more years to develop symptoms.

In the NESARC-III the prevalence estimates among all adults ages 18 and older were 0.08 percent for anorexia nervosa, 0.28 percent for bulimia nervosa, and 0.85 percent for binge-eating disorder. The 12-month prevalence estimates (or the percentage of people who experienced the disorder in the past 12 months) in the same population were 0.05 percent for anorexia nervosa, 0.14 percent for bulimia nervosa, and 0.44 percent for binge-eating disorder.[32] **Table 1** shows the weighted range of lifetime and 12-month prevalence estimates by eating disorder diagnosis and sex generated from the NESARC-III data set of a nationally representative sample of U.S. adults.

Table 1: Lifetime and 12-Month Prevalence Estimates in U.S. Adults by Eating Disorder Diagnosis and Sex from the NESARC-III[31]

Lifetime Prevalence	Anorexia Nervosa	Bulimia Nervosa	Binge-Eating Disorder
Female	1.42%	0.46%	1.25%
Male	0.12%	0.08%	0.42%
12-Month Prevalence	**Anorexia Nervosa**	**Bulimia Nervosa**	**Binge-Eating Disorder**
Female	0.08%	0.22%	0.60%
Male	0.01%	0.05%	0.26%

It is important to note that studies examining the prevalence of other specified feeding or eating disorder and avoidant/restrictive food intake disorder are less definitive. Most studies that reported prevalence of other specified feeding or eating disorder looked at specific populations including adolescent twins or samples of adolescents (up to age 21).[33] As a result of its introduction as a diagnosis in 2013 into the DSM-5, there are not many epidemiological studies on avoidant/restrictive food intake disorder. A review study on the epidemiology found significant variability in study settings (adolescent medicine clinics, pediatric feeding clinics, general population, etc.), sample size, and assessments used to identify avoidant/restrictive food intake disorder. As a result, estimates in the general population ranged from 0.3 percent to 15.5 percent.[34]

AGE

The age of onset for eating disorders is generally late adolescence/early adulthood. The mean age of onset in the NESARC-III and NCS-R was similar across diagnoses (**Table 2)**. Additionally, a meta-analysis of age of onset of mental disorders found that more than 70 percent of anorexia nervosa, bulimia nervosa, and binge-eating disorder had developed by 25 years old.

Table 2: Age of Onset in Anorexia Nervosa, Bulimia Nervosa, and Binge-Eating Disorder

Source (metric)	Anorexia Nervosa	Bulimia Nervosa	Binge-Eating Disorder
NESARC-III (mean age in years)[32]	19.3	20.0	24.5
NCS-R (mean age in years)[35]	18.9	19.7	25.4
Solmi et al. (percent of cases developed by age 25 years)[36]	78.7%	82.9%	73.5%

The age of onset is typically adolescence and young adulthood, but eating disorders do occur in children and older adults. A study of 5-to-12-year-olds suggested that the incidence of restrictive eating disorders is 2 times greater than the incidence of type 2 diabetes in youth ages 18 or younger.[37] Another study also found a younger age of onset in males than females (13 years vs. 14 years) in a sample of youth ages 6–18.[38] In older adults, eating disorders may present as new onset or relapse after a period of remission, or may be present continuously from a younger age.[39] For midlife and older age, a review found a prevalence of 3 to 4 percent in females and 1 to 2 percent in males.[40] Additionally, in a single year of Medicare data, approximately 0.15 percent of the sample had any eating disorder diagnosis. Of those with a diagnosis, 10 percent were under age 40, 32 percent were between the ages of 40 and 64, and 58 percent were 65 or older.[41]

Given that eating disorders can present in any age, all healthcare providers should be prepared to identify when someone's symptoms may warrant screening for an eating disorder, not just clinicians who treat adolescents. For state mental health programs, an important consideration is how to design services. In the United States, generally, children and adolescents receive specialty eating disorder treatment in different programs than adults. Further, eating disorder treatment is not often combined with treatment for other psychiatric conditions. Whether and how to combine populations will require careful consideration of the appropriateness of the combination (for example, it may be inappropriate to embed eating disorder services in a healthy eating program for people with schizophrenia experiencing weight gain associated with medications), co-occurrence between conditions, and the resources available for new programs versus training clinicians in existing programs.

MORTALITY RISKS

Eating disorders have high mortality rates, with anorexia nervosa having the second-highest mortality rate of any psychiatric illness, following opioid use disorder.[42] In a 2011 analysis of mortality in eating disorders, study authors found that, compared with people of the same age and sex in the general population, people with anorexia nervosa were approximately 6 times more likely to die and people with bulimia nervosa and eating disorder not otherwise specified were approximately twice as likely to die.[43] A recent update of this analysis found that people with anorexia nervosa were 5 times more likely to die, people with bulimia were twice as likely to die, people with binge-eating disorder were 1.5 times as likely to die, and people with eating disorder not otherwise specified were 2.5 times more likely to die than same age and sex individuals in the general population.[5] For comparison, a meta-analysis of mortality in combined schizophrenia and psychotic disorders reported that that population was 3 times more likely to die than the same age and sex people in the general population.[42]

Symptoms of eating disorders can affect all organ systems leading to significant physical complications and, if untreated, death. Cardiac, electrolyte, and gastrointestinal emergencies and organ failure are the medical conditions most commonly associated with death in individuals with eating disorders. Starvation and electrolyte abnormalities such as hypokalemia can cause cardiac arrhythmias, myocardial atrophy, and bradycardia.[44-46] Gastrointestinal emergencies include gastric rupture (a physical tear in the stomach wall) and esophageal tears. Chronic dehydration and electrolyte imbalances can lead to poor kidney function, permanent

kidney damage, and renal failure. Starvation can also lead to liver failure.[46-47] In people with type 1 diabetes, restricting insulin as a way to lose weight can lead to diabetic ketoacidosis.[47]

One significant driver of the increased mortality rates in eating disorders is suicide. Obtaining accurate estimates for suicide deaths in this population is complicated by the varied nature of samples included in research, the significant number of people who never receive treatment, and variability in the recording of suicide deaths. In a nationwide population–based study in Denmark, approximately 14 percent of all deaths in individuals with an anorexia nervosa diagnosis from 1977 to 2018 were due to suicide.[48] Another Danish population–based study found that people with all eating disorder diagnoses had about a 9 times greater rate of death by suicide than the general population.[49] Additionally, when comparing people with anorexia nervosa and bulimia nervosa with age-and-gender-matched comparators, people with anorexia nervosa were 18 times more likely to die by suicide and people with bulimia nervosa were 7 times more likely.[50]

Suicidality and suicide attempts are common among eating disorder diagnoses. A 2023 systematic review and meta-analysis estimated pooled prevalence across diagnoses of 51 percent for suicidal ideation and 22 percent for suicide attempts. The pooled prevalence of suicidal ideation in bulimia nervosa was estimated to be 50 percent, while the estimate for suicide attempts was 25 percent. For anorexia nervosa, estimated prevalence for suicidal ideation was 50 percent and 17 percent for suicide attempts.[51] In a study of suicidal ideation and suicide attempts in adults with binge-eating disorder, incidence of suicidal ideation in the binge-eating disorder cohort was approximately 5 times greater than in the matched comparison group, and the incidence of suicide attempts was approximately 9 times greater in the binge-eating disorder cohort.[52] In a sample of 3,299 adults who screened positive for avoidant/restrictive food intake disorder, the prevalence of suicidal ideation was 22.9 percent.[53]

Awareness of the risk of death from medical complications and suicide is crucial for clinicians treating individuals with eating disorders. Programs that serve people with eating disorders or that are designed specifically for this population need to ensure that individuals are appropriately monitored for medical stability and connected with medical services when necessary. Further, with state plans to address and reduce suicide rates, it is important for state behavioral health leaders to identify methods to help reduce the rates of suicide among people with eating disorders. Ensuring that care providers are familiar with the 988 Suicide & Crisis Lifeline, are educated in suicide risk assessment and suicide prevention, and are aware of community-based crisis resources is crucial to improving outcomes for individuals with eating disorders.

Risk factors

Several genetic and psychosocial risk factors have been identified for the development of eating disorders. Ongoing research aims to better understand the relative contributions of and interactions between these risk factors to design primary prevention strategies and tailored treatment interventions.

GENETIC

Familial studies of anorexia nervosa and bulimia nervosa have found higher numbers of lifetime diagnosis of eating disorders in relatives of people with eating disorders than in relatives of

healthy controls.[54] Twin studies have found significant heritability of anorexia nervosa, bulimia nervosa, and binge-eating disorder.[55] Recently, genome-wide association studies of anorexia nervosa have reported significant positive genetic correlations between anorexia nervosa and other psychiatric disorders and traits. This means that some of the same genetic factors that increase risk for anorexia nervosa also increase the risk for psychiatric disorders. Moreover, genetic factors that increase risk for anorexia nervosa were also found to decrease risk for metabolic factors like type 2 diabetes and physical traits like high body mass index (BMI).[56] This work has opened a line of scientific inquiry focusing on both psychiatric and metabolic factors underlying anorexia nervosa. Ongoing work with binge-eating behavior suggests similar genetic correlations as anorexia nervosa with psychiatric traits but divergent results with metabolic and physical traits, demonstrating differences in genetic contributions across eating disorder presentations.[57]

PSYCHOSOCIAL

Some documented psychosocial risk factors for eating disorders are nonspecific, meaning they are shared with other psychiatric disorders such as childhood maltreatment, exposure to physical or sexual violence, and negative affect.[58-59] For example, in a meta-analysis of types of childhood maltreatment (sexual, physical, emotional, or a combination of these), prevalence was examined in people with eating disorders compared with healthy controls and people with other psychiatric diagnoses (primarily depression and substance use disorders). The analysis yielded significantly higher odds of all types of maltreatment in anorexia nervosa, bulimia nervosa, and binge-eating disorder compared with healthy controls. However, compared with other psychiatric illnesses, the differences were nonsignificant.[60] Risk factors that are specific to eating disorders include dieting behaviors, body dissatisfaction, and weight and shape concerns.[61]

Psychiatric conditions that co-occur with eating disorders

Eating disorders co-occur with many other psychiatric disorders. In a large-scale study in Sweden, more than 71 percent of people with an eating disorder had at least one comorbid DSM-IV psychiatric condition.[62] The most common co-occurring conditions are anxiety disorders, mood disorders, substance use disorders, and post-traumatic stress disorder. There has recently been increasing interest in the co-occurrence of eating disorders, especially anorexia nervosa, and autism spectrum disorders. Comorbid psychiatric conditions complicate the clinical picture and can be associated with greater eating disorder pathology and worse prognosis.

ANXIETY DISORDERS

Anxiety disorders commonly are seen in individuals with all types of eating disorder diagnoses (**Box 1**). Lifetime prevalence of co-occurring anxiety disorders in people with anorexia nervosa ranges from 23 to 75 percent,[63-64] and from 25 to 75 percent in individuals with bulimia nervosa.[65-66] A Swedish study found rates of any anxiety disorder to be approximately 17 percent.[67] Another study found lifetime prevalence of any anxiety disorder in a sample with binge-eating disorder to be 37 percent.[68] A review of the epidemiology of avoidant/restrictive food intake disorder found comorbidity estimates of 9 to 72 percent across studies.[34]

Social anxiety disorder and elevated levels of social anxiety are significantly higher in people with anorexia nervosa and people with bulimia nervosa compared with healthy controls, and

higher levels of social anxiety are associated with longer duration of illness, greater eating disorder psychopathology, and older age.[69] Social anxiety is also associated with greater eating disorder psychopathology in individuals with binge-eating disorder.[70]

Generalized anxiety disorder (GAD) was found in about 48 percent of people with anorexia nervosa in a treatment-seeking sample, and in about 31 percent of people with bulimia nervosa.[71] In one study, comorbid GAD and anorexia nervosa was associated with lower lifetime BMI versus anorexia nervosa only, GAD only, and healthy controls.[72] Obsessive compulsive disorder also commonly co-occurs, with a meta-analysis of the comorbid lifetime prevalence finding approximately 19 percent in anorexia nervosa and 14 percent in bulimia nervosa. Longitudinal studies in the meta-analysis yielded lifetime comorbidity estimates of up to 44 percent in anorexia nervosa and 19 percent in bulimia nervosa. For binge-eating disorder, the lifetime prevalence estimates across two studies were approximately 3 percent and approximately 10 percent.[73]

Box 1: Anxiety Disorders and Eating Disorders Frequently Co-Occur

Prevalence of **any anxiety disorder** is elevated across eating disorder diagnoses, with estimated ranges as follows:

- **Anorexia nervosa:** 23 to 75 percent
- **Bulimia nervosa:** 25 to 75 percent
- **Binge-eating disorder:** 17 to 37 percent
- **Avoidant/restrictive food intake disorder:** 9 to 72 percent

Rates of **generalized anxiety disorder** are estimated to be as high as 48 percent in people with anorexia nervosa and 31 percent among those with bulimia nervosa.

Co-occurring **social anxiety** is linked to more severe eating disorder symptoms across diagnoses.

MOOD DISORDERS

Estimates of the lifetime prevalence of major depressive disorder in people with eating disorders vary depending on the study. A 2007 literature review found lifetime prevalence estimates for anorexia nervosa ranging from 9.5 to 71 percent in clinical samples and approximately 3 to 4 times higher than controls in community samples. In bulimia nervosa, the lifetime prevalence estimates ranged from 20 to 70 percent in clinical samples and from 30 to 51 percent in community samples.[74] For binge-eating disorder, a Swedish study found individuals with binge-eating disorder to be 7 times more likely to have major depressive disorder than controls (24 percent vs. 4 percent controls).[67] Depression (specifically severe depression), and depressive symptoms have been found to have a negative effect on weight gain in anorexia nervosa,[75] as well as more hospitalizations when comparing inpatients with anorexia nervosa and major depressive disorder with inpatients with anorexia nervosa only.[76] In a retrospective study of inpatient hospitalizations for bulimia nervosa, comorbid major depressive disorder was associated with increased odds of a longer admission.[77]

Comorbidity between bipolar disorders and eating disorders has been examined in populations with a primary bipolar diagnosis and with a primary eating disorder diagnosis. In a systematic review and meta-analysis of studies in both populations, bipolar disorders (including type-I bipolar disorder, type-II bipolar disorder, and cyclothymia) occurred in 9 percent of people with binge-eating disorder, while 12.5 percent of people with bipolar disorders endorsed binge-eating disorder. Of people with bulimia nervosa, 6.7 percent endorsed bipolar disorders, while bulimia nervosa occurred in 7.4 percent of people with bipolar disorders. Anorexia nervosa had the lowest occurrence of bipolar disorders at 2 percent, while 3.8 percent of people with bipolar disorders endorsed anorexia nervosa.[78] Research in people with bipolar disorders has found that comorbidity with an eating disorder increased the number of mood episodes (typically depressive); research also indicates higher rates of comorbidity with substance use disorders, anxiety disorders, and more frequent suicide attempts.[79-80] In a study of individuals with eating disorders, comorbid bipolar disorders were also associated with higher comorbidity of substance use and anxiety disorders, and lifetime suicide attempts. Another finding of the study was significantly higher scores on assessments of disordered eating symptoms, suggesting increased severity for people with comorbid bipolar disorders versus those without.[81]

An important factor in the treatment of anxiety and mood symptoms in people with eating disorders is the effect of malnutrition. Across disorders and at any weight, malnutrition can cause low mood, apathy, increased anxiety, difficulty concentrating, and sleep disruptions—all of which are also symptoms of anxiety and mood disorders. Careful psychiatric and physical assessment, addressing nutritional deficiencies, and subsequent reassessment of psychiatric symptoms are necessary to ensure adequate treatment of the eating disorder and any co-occurring disorders.

SUBSTANCE USE DISORDERS

Substance use, including the use of nicotine, caffeine, alcohol, prescription medications, over-the-counter medications (e.g., laxatives, diuretics, and diet pills), and illicit substances, is not uncommon with individuals who have an eating disorder. In a systematic review and meta-analysis of DSM-IV eating disorders and substance use disorders, the pooled prevalence of lifetime comorbid substance use disorder was 21.9 percent and the current prevalence was 7.7 percent. Additionally, lifetime prevalence of tobacco use was approximately 36 percent, 24 percent for caffeine use disorder, 21 percent for alcohol use disorder, 15 percent for cannabis use disorder, 14 percent for cocaine use, and 9 percent for polysubstance use.[82] Additionally, in a Danish study, substance use disorders contributed to the excess deaths associated with eating disorders.[83] Research also suggests a stronger association between substance use disorders and bulimia nervosa and binge–purge behaviors than other eating disorders. One potential reason for the stronger association between substance use disorders and bulimia nervosa is that impulsivity, novelty seeking, and difficulty delaying gratification are associated with both conditions.[84]

A particular consideration for comorbid eating disorders and substance use disorders is the challenge of treating them simultaneously. Both eating disorders and substance use disorders are associated with high relapse rates.[85] A key clinical consideration is that presently there are few treatment settings that can comprehensively treat both conditions together. Further, there are no well-established evidence-based interventions for simultaneous treatment. As a result

individuals are left to seek treatment for a primary substance use disorder or eating disorder in separate settings, and while receiving treatment for the symptoms of one disorder, people experience a worsening of the symptoms of the other.[86]

POST-TRAUMATIC STRESS DISORDER

Co-occurrence of post-traumatic stress disorder (PTSD) with an eating disorder increases the rate of treatment dropout and the recurrence of eating disorder symptoms compared with people with eating disorders who do not have PTSD.[87] A review of the literature on the impact of PTSD on eating disorder treatment and eating disorders on PTSD treatment found that comorbid PTSD has negative effects on outcomes of eating disorder treatment and that comorbid eating disorders also have a negative impact on outcomes of PTSD treatment. Research is ongoing about the best approaches to treat co-occurring PTSD and eating disorders, including integrated care options.[88] When treating people with both conditions, clinicians should consider how to ensure that symptoms of both are sufficiently addressed and that clinical staff treating people in a setting specialized for one condition are well versed in the treatment of the other.[89]

ATTENTION-DEFICIT/HYPERACTIVITY DISORDER

Research into the prevalence of attention-deficit/hyperactivity disorder (ADHD) in eating disorder populations and eating disorders in ADHD populations found elevated prevalence in both groups. A comprehensive review found that people with ADHD had higher odds of having an eating disorder compared with people without ADHD. Specifically, their odds were 4.3 times greater for anorexia nervosa, 5.7 times greater for bulimia nervosa, and 4.1 times greater for binge-eating disorder. The eating disorder population (inclusive of all diagnoses) had 2.6 times greater odds of having ADHD versus those without an eating disorder, and in people with binge eating (binge-eating disorder or loss of control eating), the odds were 5.77 times greater than those without binge eating.[90]

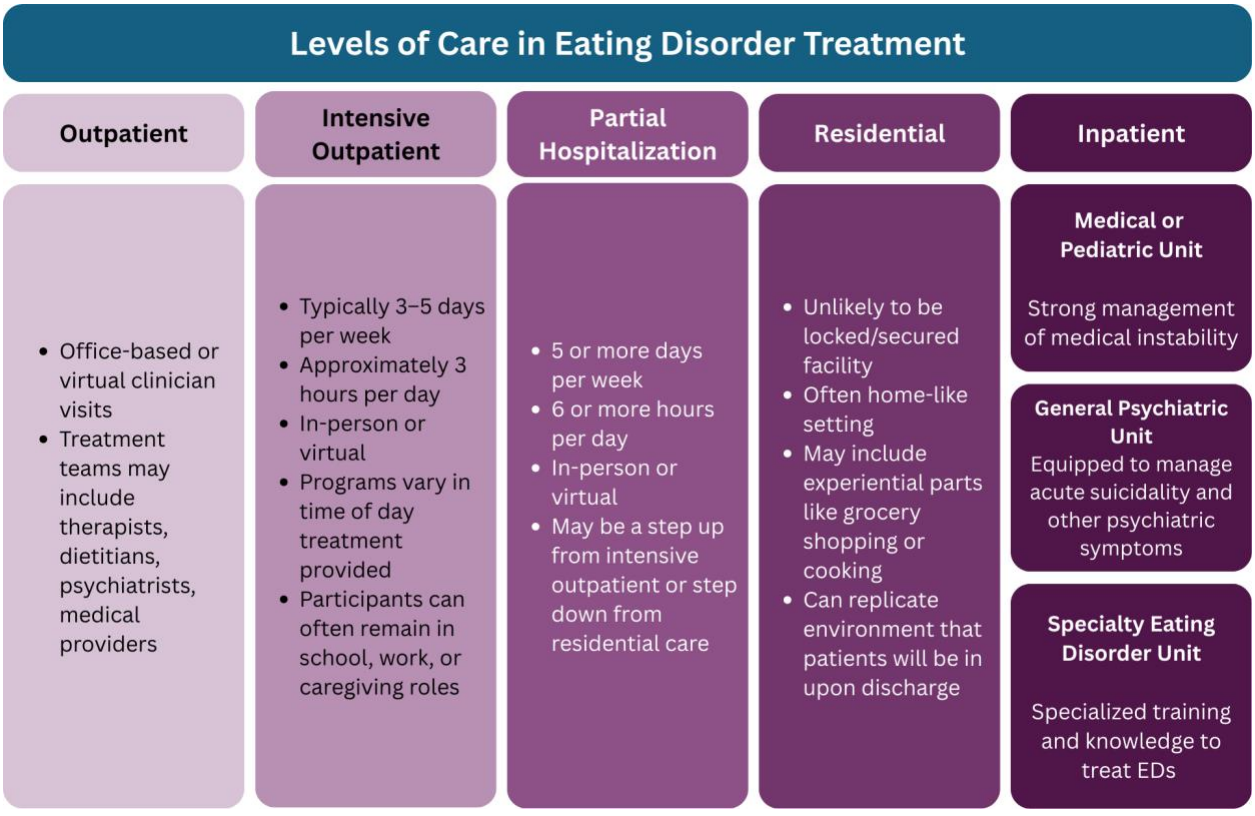
AUTISM SPECTRUM DISORDERS

There is a small but growing body of research on the occurrence of autism spectrum disorders (ASD) and autistic traits in eating disorders. A 2013 systematic review of ASD in eating disorders found a mean prevalence of approximately 23 percent with a range from 8 to 37 percent, far exceeding the general population rate.[91] Although there are definitely elevated levels of characteristic traits of ASD in people with eating disorders, it is difficult to discern whether those symptoms represent ASD, whether the symptoms are due to the illness state, or whether there are overlapping symptom presentations.[92] It is also difficult to get an accurate picture of comorbidity between the conditions given the higher prevalence of eating disorders in females, and challenges with the identification of ASD in females (potentially related to issues such as different symptom presentations or a better ability to mask symptoms in females).[93] Of note, people with ASD and higher autistic traits report difficult experiences of eating disorder treatment and may be at greater risk for hospitalization and longer inpatient stays. Clinically, there are questions as to whether group and cognitive-based interventions are well suited to those with ASD.[94] When determining how best to serve people with co-occurring eating disorders and ASD, clinicians with expertise in both conditions should collaborate to determine the best interventions and settings.

Treatment

Treatments for eating disorders vary depending on the diagnosis and the age of the person with the disorder. Due to the varied severity of physical and psychiatric consequences, there are multiple settings and levels of care in which people can receive treatment. These settings include outpatient care; intensive outpatient and partial hospitalization programs; residential settings; and inpatient specialty eating disorder, medical, and psychiatric settings (**Figure 1**). At the outpatient level, the American Psychiatric Association (APA) recommends a multidisciplinary team, including a combination of a psychiatrist, therapist, primary medical provider, and registered dietitian who have experience and expertise treating eating disorders.[95] Optimally, people receive treatment in specialty eating disorder settings. However, many receive care in general medical and psychiatric settings, which may or may not have a specific protocol for treating people with eating disorders.

Figure 1: Levels of Care in Eating Disorder Treatment



CONSIDERATIONS FOR LEVEL OF TREATMENT

Whether an individual is appropriate for outpatient treatment or needs a higher-intensity intervention depends on a number of clinical indicators (e.g., medical stability, thoughts, behaviors, and affect) and personal circumstances (e.g., geographic access to treatment, cost of care, work, school, or childcare). The APA provides a number of considerations for level-of-care determinations, including the following:

- any symptoms that indicate current (or risk of) medical instability requiring management in a hospital;
- symptoms indicative of a need for inpatient psychiatric hospitalization;
- co-occurring medical or psychiatric conditions that warrant higher-intensity treatment;
- worsening or lack of improvement in the person's symptoms during outpatient or lower-intensity treatment;
- the need for high-intensity monitoring support to manage disordered eating behaviors;
- the individual's relative motivation, insight, and engagement with treatment;
- ongoing stressors and engagement with a support system; and
- any practical considerations such as location; work, school, or familial responsibilities; or financial constraints.[95]

Although clinical considerations should determine the level of care a person receives, often circumstances such as geographic access to treatment, the need to continue working to pay bills, or caregiving responsibilities may preclude someone from accessing treatment that requires being away from home. Additionally, health insurance coverage can often dictate what care is accessible. For example, Medicaid routinely does not cover residential treatment for adults, and coverage for nutrition services varies significantly between states. When people are in treatment, commercial insurers require utilization reviews at varying intervals and have used a range of criteria to determine approvals or denials of additional treatment.[7,12]

NON-PHARMACEUTICAL INTERVENTIONS

There are a variety of non-pharmaceutical interventions available for treatment for eating disorders (**Table 3**). For anorexia nervosa, there are a number of psychotherapeutic interventions for adults including cognitive behavioral therapy (CBT) (both CBT for anorexia nervosa [CBT-AN] and enhanced CBT [CBT-E] for eating disorders), focal psychodynamic therapy (FPT), interpersonal psychotherapy (IPT), the Maudsley Model of Anorexia Nervosa Treatment for Adults (MANTRA), and specialist supportive clinical management (SSCM). Each of these psychotherapies has shown modest efficacy, particularly at increasing weight, but there is no clear superior intervention.[96]

For adolescents and emerging adults (ages 18–26), family-based treatment (FBT) for anorexia nervosa, adolescent focused therapy (AFT), and CBT-E have been found to have similar outcomes, although research found that FBT had better full remission outcomes at long-term follow-up than AFT.[97-99] The central approach of FBT is that parents or other caregivers initially take responsibility for renourishing the person with the eating disorder (including choosing and plating food and post-meal monitoring). Accordingly, this intervention is best suited to people who have a strong support system in place.

The first-line psychotherapeutic intervention for bulimia nervosa and binge-eating disorder is CBT-E. It has been shown to be effective for both eating disorders when delivered in individual or group settings.[100-101] For bulimia nervosa, CBT-E is the most well studied intervention, although APA practice guidelines note that elements of other interventions such as IPT and psychodynamic therapies are often incorporated into treatment. The guidelines note that dialectical behavior therapy (DBT) may also be useful for bulimia nervosa, especially when the individual has another condition, such as suicidality or a personality disorder, for which DBT is effective. In addition, for binge-eating disorder, IPT has been shown to be effective.[95] In

adolescents and emerging adults with bulimia nervosa, FBT is similar to FBT for anorexia nervosa but has a slightly different focus. Where the focus is weight restoration in anorexia nervosa, it is more about normalizing disordered eating behaviors and addressing underlying emotions such as secrecy and shame around the behaviors for bulimia nervosa.[102]

Treatments for avoidant/restrictive food intake disorder are an area of ongoing research. To date, CBT for avoidant/restrictive food intake disorder (CBT-AR), FBT for avoidant/restrictive food intake disorder (FBT-ARFID), and intensive multidisciplinary treatment (physician, nurse practitioner, psychologist, registered dietitian, speech-language pathologist, occupational therapist, social worker) have been tested. CBT-AR has been tested in children, adolescents, and adults and showed improvements for all groups. FBT-ARFID has shown early signs of efficacy and feasibility in the treatment of children and adolescents.[103-104] Much less is known about how best to treat adults with avoidant/restrictive food intake disorder.

Table 3: Non-pharmaceutical Interventions for Eating Disorder Treatment

Treatment	Brief Description
Cognitive behavioral therapy (CBT)[105-106] CBT-BN (bulimia nervosa) CBT-AN (anorexia nervosa) CBT-E (enhanced for eating disorders [transdiagnostic]) CBT-AR (avoidant/restrictive food intake disorder)	• Structured, typically lasting 20–40 sessions with homework to be completed outside of session • Focuses on current presentation and symptoms (not causes of the eating disorder) • Addresses relationship between thoughts (e.g., preoccupation with food, weight, shape), feelings, and behaviors (e.g., restrictive eating, purging) that maintain eating disorders • CBT-E designed as transdiagnostic and flexible for different presentations
Focal psychodynamic therapy (FPT)[107]	• Structured treatment of up to 50 sessions • Develop a person-centered hypothesis for what symptoms mean to the individual, how they affect the individual's life and relationships
Interpersonal psychotherapy (IPT)[108]	• Structured treatment, 16–20 sessions over 4–5 months • Focuses on present interpersonal difficulties that drive or maintain eating disorder symptoms • Shares core design with IPT for depression • Four interpersonal domains: grief, interpersonal role disputes, role transitions, and interpersonal deficits
Maudsley Model of Anorexia Nervosa Treatment for Adults (MANTRA)[109]	• Includes seven modules typically over 20–40 sessions but pace is directed by the person receiving services • Intervention targets mapped to predisposing and maintaining domains of "emotional and social mind, identity, thinking styles, and relationships"

Treatment	Brief Description
	• Highly collaborative with the individual in care and the therapist and can involve other support people including family and friends
Specialist supportive clinical management (SSCM)[110]	• Let by the person receiving services • Clinical management including supporting goals around weight gain and addressing any medical complications • Supportive therapy to address life issues affecting the eating disorder as identified by the individual in care • Highly flexible
Family-based treatment (FBT)[111]	• Typically 15–20 sessions over 6–12 months • Targeted to adolescents and young adults who live with parents/caregivers • Focuses on current presentation (not causes of the eating disorder) • Parents/caregivers take primary responsibility for renourishment and interruption of eating disorder behaviors (e.g., restriction, purging) in initial phase • Return of responsibility to person with the eating disorder and addressing cognitions and emotions in later phases • Adaptable for anorexia nervosa, bulimia nervosa, and avoidant/restrictive food intake disorder
Adolescent-focused therapy (AFT)[112]	• Individual therapy for adolescents • Especially indicated when FBT is not appropriate or feasible or following a course of FBT • Focuses on coping strategies to promote behavior change and manage challenges of adolescent development
Dialectical behavioral therapy (DBT)[113]	• Structured treatment, typically 20–40 sessions including individual therapy, skills groups, and phone coaching • Focuses on emotion dysregulation and distress tolerance as core contributors to disordered eating behaviors • Targets symptoms like binge eating, purging, and self-harm through skills training in mindfulness, interpersonal effectiveness, and emotion regulation

PHARMACEUTICAL INTERVENTIONS

To date, there are no U.S. Food and Drug Administration (FDA)–approved pharmaceutical treatments for anorexia nervosa. Clinical trials of antidepressants (fluoxetine, amitriptyline, citalopram), antipsychotics (olanzapine, risperidone, quetiapine, pimozide, sulpiride), and lithium have been conducted—with a systematic review concluding that insufficient evidence exists to support pharmaceutical interventions for the treatment of either eating disorder–related psychopathology or weight gain.[114] Considerable interest has emerged in investigating the potential benefit of medications in the treatment of avoidant/restrictive food intake disorder, but presently studies have consisted primarily of retrospective chart review and case reports/series. As a result, no medications have established efficacy as a routine first-line treatment for ARFID; however, pharmacotherapy may be considered adjunctively to target comorbidities or specific symptoms when clinically indicated.[115-118]

For adults with bulimia nervosa, fluoxetine is the selective serotonin reuptake inhibitor of choice with the greatest evidence of efficacy and the only drug with FDA approval for the condition. A randomized controlled trial found that a dose of 60 mg was more effective than 20 mg or placebo;[119] prescribers should evaluate side effects and other clinical factors in determining the best dose for an individual. It can be prescribed either when starting psychotherapy or if a person does not respond to an initial course of psychotherapy. In treating binge-eating disorder, evidence supports the effectiveness of antidepressant medications, topiramate, and lisdexamfetamine for reducing the frequency of binge episodes and reducing obsessions and compulsions around eating. Only lisdexamfetamine has FDA approval for the treatment of moderate to severe binge-eating disorder; prescribers should consider misuse potential and other contraindications/precautions when clinically relevant. There was no evidence to support the choice of one antidepressant versus another.[120] For all eating disorders, bupropion is contraindicated in individuals with current or prior bulimia nervosa or anorexia nervosa due to increased seizure risk.

SCREENING TOOLS FOR USE IN MEDICAL AND PUBLIC MENTAL HEALTH SETTINGS

There are a number of screening tools (**Appendix A**) that can be used to assess problematic eating behaviors and eating disorders. Which screening is most useful depends on the setting and the population being screened. Additionally, when determining which tool to use, an important consideration is whether the goal is to maximize ruling in an eating disorder or ruling one out.

The **SCOFF questionnaire**[121] is a brief screener that looks at the core features of anorexia nervosa and bulimia nervosa. It consists of five questions that have been shown to be equally reliable when asked orally or in written format.[122] This questionnaire was designed for use in primary care settings to identify probable cases to refer for assessment with a trained clinician. It is not designed to be a diagnostic tool. The SCOFF is found to be most sensitive in women with anorexia nervosa and bulimia nervosa and less sensitive in men and in people with binge-eating disorder.[123]

Leveraging the usefulness of the SCOFF screening, the National Center of Excellence for Eating Disorders developed **Screening, Brief Intervention, and Referral to Treatment for Eating Disorders**[124] to assist healthcare providers to manage eating disorders in their practice.

It provides an online tool to administer the SCOFF to an individual and provides real-time scores and assessment of risk level, guidance on talking points based on the individual's responses, pre-written notes for use in an electronic health record, and a referral guide to assist the individual with connecting to specialty care. Information about the screening is located at https://nceedus.org/sbirt-screening-tool/.

The **Eating Disorder Screen for Primary Care (EDS-PC)** is a four-question screening that was developed using questions shown to be associated with disordered eating or eating disorders in previous studies with populations of college-age females,[125] bulimia nervosa in primary care settings,[126] and male active duty Navy service members.[127] While both the EDS-PC and the SCOFF are similarly effective at identifying potential eating disorders (sensitivity), the EDS-PC is superior at correctly identifying those who do not have one (specificity).[125]

The **Screen for Disordered Eating (SDE)** is the first screening tool designed to detect binge-eating disorder alongside anorexia nervosa and bulimia nervosa, as it was developed after binge-eating disorder was added as a unique diagnosis in the DSM-5. The SDE is a five-item screening that draws its questions from other validated measures including the SCOFF, the Patient Health Questionnaire (PHQ)-9, the Minnesota Eating Behavior Survey, and the Eating Attitudes Test-26. A study showed that for detecting any eating disorder, the screening captures 9 out of 10 people who have an eating disorder, but it also produces false positives approximately 4 out of 10 times. When compared with the SCOFF and EDS-PC in terms of correctly classifying cases of binge-eating disorder, anorexia nervosa, bulimia nervosa, and any eating disorder, the EDS-PC was superior to the SDE and SCOFF at identifying any eating disorder, as well as bulimia nervosa and binge-eating disorder, and the SDE was superior at identifying anorexia nervosa. However, the SCOFF was superior to both in ruling out cases of any eating disorder and each specific eating disorder diagnosis, while the SDE was superior in all categories to the EDS-PC.[128]

The seven-item **Binge Eating Disorder Screener (BEDS-7)** is a brief screening for binge-eating disorder that aligns with the diagnostic criteria in the DSM-5. It is intended for use in general medical settings to identify people with probable binge-eating disorder for additional evaluation or referral. In a validation of the BEDS-7 across 42 countries and 26 languages, the screener was found to be structurally valid across languages and countries, but the authors highlight the need to consider how cultural factors may influence clinical presentations and how people may respond to screening questions.[129-130]

Existing state and local initiatives for eating disorders

State and local governments have taken a number of different approaches to addressing eating disorders in their residents, examples of which are described below. Some advocacy efforts and legal actions at the state and federal level have yielded gains in policymaking and enforcement that have brought attention to the needs of people with eating disorders. For example, in 2008, class action lawsuits for eating disorder treatment health insurance coverage denials in New Jersey resulted in Aetna and Horizon Blue Cross reaching settlements of $250,000 and $1.2 million, respectively. Further, after introducing it multiple times beginning in 2009, in 2015, Missouri's legislature passed a law that incorporated specific requirements that insurers base their medical necessity determinations not only on weight but also on consideration of the APA

guidelines. Despite slow and steady work, research on spikes in hospital admissions for eating disorders during the acute phases of the COVID-19 pandemic[131-133] and increased media coverage in major outlets[134-138] in the last 5 years have brought renewed attention and action at the state and federal level.

In addition to insurance coverage regulations, to enhance the ability to recognize and treat eating disorders across a life course, some states have signed resolutions to recognize Eating Disorder Awareness Week, some have convened official working groups, committees, or councils to study eating disorders in their residents, and others have taken steps to formalize resources and services.

Below are a range of approaches states and counties have taken. Some initiatives are ongoing (New York, California, Missouri, Kentucky), and others are targeted and time limited (San Francisco County, Vermont). Across all the initiatives is an emphasis on the need to provide training to larger numbers of healthcare professionals across disciplines and increase availability for specialty services—especially for low-income and geographically varied populations.

NEW YORK COMPREHENSIVE CARE CENTERS FOR EATING DISORDERS

In 2004, the New York State legislature codified comprehensive care centers for eating disorders (CCCEDs) as MHY Chapter 27, Title E, Article 30, which defines a CCCED as

> a provider system of care, organized by either corporate affiliation or clinical association for the common purpose of providing a coordinated, individualized plan of care for an individual with an eating disorder, across a continuum that includes all necessary non-institutional, institution and practitioner services and treatments, from initial screening and evaluation, to treatment, follow-up care and support.

CCCEDs are overseen by the state Office of Mental Health. The centers are located in Western New York, Northeastern New York, and Metropolitan New York to provide access broadly across the state. The state designates the CCCEDs based on applications—with the most recent request for applications in 2023. Presently, and since the legislation went into effect, the Western New York CCCED is being run out of the University of Rochester School of Nursing in partnership with Golisano Children's Hospital and a community partner, the Healing Connection; the Northeastern New York CCCED is run out of Albany Med Health System in partnership with HPA/LiveWell; and the Metropolitan New York CCCED is run out of Columbia University Medical Center/The New York State Psychiatric Institute, Weil Cornell Medical Center/New York-Presbyterian Hospital, and Cohen Children's Medical Center.

The specific structure and programming of each CCCED varies depending on the needs of the people it serves. In addition to treatment, services include support groups for patients and families, care management, care coordination, and resources and educational materials for community members and professionals including healthcare providers, schools, and insurers. For example, for education and training, the Western New York center hosts a Project ECHO (a learning framework for a cross-disciplinary, peer community for learning, sharing, and support) for eating disorders for professionals of all kinds and another for school professionals. The Metropolitan CCCED created an educational program called preparED that provides training

modules on eating disorders for generalist clinicians. Although the CCCEDs are codified in New York State law, they are subject to the budgetary allocations of the state legislature and must routinely advocate to ensure that they receive continued, sufficient funding to maintain the services they provide.[139-142]

CALIFORNIA MEDI-CAL SPECIALTY MENTAL HEALTH SERVICES PROGRAM

California's Medicaid program (Medi-Cal) is administered by the state's Department of Health Care Services (DHCS). The Specialty Mental Health Services (SMHS) program is run under the CalAIM 1115 demonstration and Section 1915(b) waiver.[143-144] This program is overseen by DHCS, which provides services through county mental health plans (MHPs). Having counties manage the Medicaid program for their residents allows for greater flexibility to deliver services in ways that make sense for the demographic and geographic distribution of the county.

While the general structure of California's model is not specific to eating disorders, in March 2022, DHCS issued Behavioral Health Information Notice No: 22-009 and All Plan Letter 22-003 to clarify the responsibilities of the MHPs and the Medi-Cal managed care plans (MCPs) in the provision of services to people with eating disorders. It is specified that MHPs manage the psychiatric care and MCPs manage the physical health care. The notice and letter outline who is responsible for what aspects of care specific to eating disorders, stating,

> For partial hospitalization and residential eating disorder programs, MHPs are responsible for the medically necessary SMHS components, and MCPs are responsible for the medically necessary physical health components.

The Behavioral Health Information Notice and All Plan Letter further elucidate the requirement that the MCPs are responsible for the medical case management services to include care coordination and ensure beneficiaries are receiving "medically necessary care, whether those services are delivered within or outside of the [MCP's] provider network."[145] They specify that the MCPs are responsible for identifying treatment, arranging care, and verifying that services were provided for partial hospitalization and residential eating disorder treatment.

The specification of responsibility to provide services and the explicit inclusion of eating disorders in Medi-Cal make such disorders more visible. These directives provide concrete documentation for people seeking care through Medi-Cal that their county and insurer are responsible for getting them appropriate care, and that extends to out-of-network options if that is the most appropriate care. The policy itself is significant, but counties and MCPs are still subject to variation and potential gaps in available services (for example, counties with academic medical centers are more likely to have access to specialty care), the ability and willingness of providers to treat individuals with eating disorders based on their complexity, insufficient clinician training and expertise, and difficulty with negotiating contracts or single-case agreements with higher levels of care (intensive outpatient treatment through inpatient hospitalization).[146]

SAN FRANCISCO COUNTY TRAINING IN FAMILY-BASED TREATMENT FOR CLINICIANS IN PUBLICLY FUNDED SETTINGS

In 2018, the San Francisco Department of Health coordinated a training with clinicians and researchers at the University of California, San Francisco to deliver a training in FBT as it had identified an increasing number of young people with anorexia nervosa and atypical anorexia nervosa. Clinicians from six mental health agencies were invited to participate in a two-day training followed by a year of weekly supervision. Consideration was given to the likely need to offer adaptations to the standard FBT protocol to align with the socioeconomic status and life experiences of the Medi-Cal population (compared with the participants who may have been studied in the FBT trials). Further, the training included skills in assessing for eating disorders given that many of the participating clinicians had little to no experience with them. Additionally, the county implemented a streamlined referral process to facilitate ease of placing individuals in outpatient FBT services.[147]

In a study examining the experiences of care providers that worked alongside the newly trained clinicians, physicians reported feeling increased optimism about patient outcomes when collaborating with clinicians delivering FBT. They expressed appreciation for the training of clinicians who spoke a range of languages and for clinicians being able to respond to the breadth of patient cultural backgrounds.[11] The training of providers already working in community settings and the attention to cultural context serves as a replicable model for states to consider. Moreover, the research on this training highlighted that many clinicians working in community settings do not recognize eating disorders, which presents another potential training target.

VERMONT HEALTH DEPARTMENT EATING DISORDERS WORKING GROUP

In May 2022 the Governor of Vermont signed Act 115, an act relating to miscellaneous Department of Health programs. Section 13 of Act 115 created a working group for eating disorders tasked with evaluating the status of services for people with eating disorders in the state and making recommendations to the General Assembly. The group comprised the Commissioner of Mental Health (or a designee) as chair, the Commissioner of Health (or a designee), a representative from each of Vermont Care Partners (a network of community-based agencies that provide services for mental health and substance use disorders and intellectual and developmental disabilities), the state's school nurses association, Vermont's colleges and universities, and a representative with relevant expertise from the Vermont Medical Society and the Vermont chapter of the American Nutrition Association. The group submitted its report to the General Assembly in February 2023, when it ceased to exist. In its report, it made the following recommendations:

1. Establish intensive outpatient program and partial hospitalization program offerings in Vermont.

2. Create opportunities for more eating disorder training (courses, seminars, webinars, conferences) for all healthcare professionals, especially those caring for youth.

3. Encourage routine screening for eating disorders in the primary care setting through the use of standardized tools and growth curves.

4. Establish a continuing medical education requirement for healthcare professionals on eating disorders, especially for pediatricians, family physicians, and psychiatrists.

5. Provide annual multidisciplinary and free-of-cost training to primary care physicians, mental healthcare providers, social workers, registered dietitians, and schools to increase awareness of informed approaches to detecting and supporting those in need of eating disorder treatment.

6. Provide education to school staff, including health educators, physical education teachers, coaches, school nurses, counseling staff, and administrators about prevention, the impact of language, and identification of eating disorders in young people.

7. Create public health messaging for individuals, families, school staff, and the general public about eating disorders: how to prevent, identify, and seek help early.[148]

In addition, in September 2024, the Department of Mental Health partnered with the National Alliance for Eating Disorders and the Emily Program to provide approximately 100 mental health clinicians with training on eating disorders over two days. The training addressed screening, assessment, diagnosis, and treatment of eating disorders in all age groups. Continuing education credits were awarded for psychologists and counselors.

MISSOURI EATING DISORDERS COUNCIL AND KENTUCKY EATING DISORDER COUNCIL

The Missouri Eating Disorders Council was passed into law by the Missouri General Assembly in 2010 and is codified in the Missouri Revised Statutes Section 630.575, with specific education and awareness programs codified in Section 630.580. The council's primary responsibilities include "leading eating disorders education, awareness, and treatment initiatives throughout the state, and promoting increased access to evidence-based therapies, and other treatments of proven effectiveness."[149] The council partners with the Department of Mental Health as well as the Departments of Health and Senior Services, Elementary and Secondary Education, and Higher Education and community partners and stakeholders. It provides online trainings (past trainings are available on its website) targeted at mental health professionals, dietitians, school nurses, and providers in medical settings in line with the specified programs in Section 630.580.

In 2020, through KRS 210.051, Kentucky created a similar program, the Kentucky Eating Disorder Council. One difference in the responsibilities of the Kentucky council is an explicit mandate to collaborate with the Cabinet for Health and Family Systems to identify potential research projects and take an active role in managing or coordinating those projects (as possible given the unpaid nature of the council members' work). In its first annual report to the legislature in December 2021, the council reported dividing into subcommittees to align with its mandated responsibilities, including subcommittees on education and prevention, research, and advocacy and legislation.[150] Its full council and subcommittee meetings are open to the public.[151]

Considerations for state mental health departments

A range of opportunities exist for state mental health departments to improve identification of and support for people with eating disorders. Specifically, opportunities to support people who are publicly insured and/or participate in other state-run mental health programming afford multiple avenues for change. The following are key actions state mental health departments can take to strengthen identification, treatment, and support for individuals with eating disorders:

- **Offer eating disorders–related training for nonclinician professionals and healthcare providers across disciplines**

  A major opportunity for mental health departments is to provide training in assessment, diagnosis, and treatment of eating disorders. For people who work outside of mental health, recognition of eating disorders and familiarity with available resources is a crucial step that can increase early identification, referral, and treatment (generally improving an individual's prognosis). Trainings can focus on medical providers such as primary care clinicians (physicians, nurses, nurse practitioners, physician assistants), teachers, school nurses, athletic coaches and trainers, religious leaders, or anyone who is in a role that would be appropriate. For mental health clinicians, more in-depth training opportunities in assessment, diagnosis, and treatment could facilitate expanding the number of providers available across the state and increase capacity in settings such as community mental health centers, federally qualified health centers, and clinics that serve remote populations who currently have fewer outpatient specialist options.

- **Partner with state education agencies to identify opportunities for staff training, student screening, and collaboration on resource development and planning**

  To provide trainings to teachers, school nurses, and school-based athletic coaches and trainers, state mental health departments could leverage existing relationships (or establish new partnerships) with state education agencies. In addition to the recognition of signs and symptoms, staff in educational settings are also responsible for ensuring students' academic success during and after medical leaves of absence, in compliance with Section 504 of the Rehabilitation Act of 1973[152] (protecting rights of individuals with disabilities in programs that receive federal funding from the Department of Education) and any state or local policies about facilitating a return to the classroom after a leave. State mental health departments could ensure that eating disorders are covered as part of any ongoing, school-based psychiatric screening initiatives or training programs and partner on the development of content in cases where it is not included. They could also collaborate with education departments to develop referral resources and pathways and guidance documents about any specific needs for students with eating disorders who are returning to school.

- **Leverage state mental health leadership and state Medicaid partnerships to identify potential gaps in coverage and treatment options for people with eating disorders**

  State-level design of Medicaid programs and variation in the availability of specialty eating disorder treatment options that accept public insurance can leave gaps in

treatment for children and adults enrolled in Medicaid. Collaboration between state behavioral health leaders, state Medicaid program leaders, and, if applicable, Medicaid managed care partners could identify where gaps in coverage may exist and strategize how to ensure that people with eating disorders receive appropriate, timely care.

- **Screen for and recognize eating disorders at touchpoints with state health and mental health programs or other social service programs**

  Whether state health and mental health departments offer services directly or through contracts, incorporating screenings into program intakes or routine touchpoints could improve recognition of people in need of additional supports or monitoring. For example, intake assessments for supported housing programs or psychiatric rehabilitation programs offer an opportunity to conduct a brief screening and make a referral for more in-depth evaluation if necessary.

- **Ask questions about eating behaviors in all psychiatric evaluations regardless of the presenting problem**

  In addition to opportunities to increase screening in state health and mental health programs, ensuring that people who are seen for a psychiatric evaluation in both acute and ambulatory care settings are screened can identify individuals who need help with eating disorders. These questions are often skipped—especially when the presenting problem or the patient demographics are less stereotypically associated with an eating disorder. Providing training and integrating eating disorder screening questions into standardized psychiatric intakes and comprehensive evaluations will improve clinicians' ability to treat people where symptoms of an eating disorder and one or more other psychiatric conditions may complicate the clinical picture. Routinely including such questions will also potentially improve insight into the epidemiology of eating disorders and their clinical picture as more real-world data on eating behaviors in other psychiatric conditions is gathered.

- **Provide guidance or support for individuals and families managing an eating disorder who access food assistance programs**

  Regardless of the specific eating disorder diagnosis, treatment and recovery typically involve a normalization of eating behaviors, potentially increasing the variety of foods eaten, and, for some people, significantly increasing the amount of food consumed. Given the variations in the design of nutrition assistance programs such as the Supplemental Nutrition Assistance Program (SNAP), Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and any state or local programs, people in recovery from eating disorders or caring for someone in recovery may need tailored assistance identifying how to maximize their benefits to align with prescribed treatment plans. Examples include having a registered dietitian aid in planning a recovery diet considering the financial limits of benefits or availability of food in areas where nutritious, affordable food is scarce and developing specific and easily accessible resources to help individuals and families. The development of such resources should be conducted by registered dietitians or other appropriate clinicians with expertise and training in eating disorders.

- **Recognize eating disorders and disordered eating in mental health programs, including observing or eating with the person receiving services, offering nutrition or exercise education, or assisting with grocery shopping or meal preparation**

  Programs where an individual may be observed eating a meal or working on skills around meal planning or preparation, such as partial hospitalization programs, psychiatric rehabilitation programs, or assertive community treatment teams, present opportunities for identification of disordered eating behaviors and eating disorders. Ensuring that programs have a staff member with appropriate training would allow individuals to be identified who may need additional support, adaptations to standard interventions (such as nutrition guidance or exercise recommendations), or consultation with an eating disorder specialist.

- **Conduct research on the epidemiology of eating disorders and the availability of treatment**

  Without information on the populations most affected by eating disorders and the barriers and facilitators to timely, appropriate care, it is difficult for states to know which interventions and approaches would be most beneficial. Opportunities exist for states either to collect data directly on the incidence and prevalence of eating disorders in their residents or to use existing data sources. States could conduct a specific study or include eating disorder–specific questions or modules in existing studies (such as including the eating disorder–specific items in the state-specific Youth Risk Behavior Surveillance System survey).[153] Another option to consider is using data from their Medicaid claims, an all-payer claims database, or hospital utilization records to examine treatment utilization and costs associated with treatment of eating disorders. By gaining insight into which residents are affected and in which locales, states can best allocate resources for awareness, education, prevention, and treatment.

- **Build capacity across the state hospital and public mental health system to recognize and treat eating disorders**

  Across the spectrum of treatment settings from outpatient, office-based clinical care to inpatient hospitalizations, people receiving care in the public system are typically less able to access specialized eating disorder services. Whether it is in community-based mental health centers, state psychiatric hospitals, or crisis services, providing education and training to clinical staff in the recognition and treatment of eating disorders would increase access to services for a population that cannot easily access private services. Ensuring that protocols exist to care appropriately for people with eating disorders in state hospitals would support staff in those settings in managing eating disorder behaviors for people with both primary eating disorders and those receiving treatment for another psychiatric condition with a co-occurring eating disorder. Given that states have an understanding of the needs of people who access public mental health services, they have the opportunity to take that understanding and ensure that there are eating disorder services designed to meet such people's needs. Academic medical centers and public hospitals with specialty eating disorder services may also serve a diverse population and have insight into the gaps in services for people who may access community mental health centers or state psychiatric facilities.

- **Recognize severe presentations that may require involuntary treatment**

  A lack of awareness of the severity of low weight is one of the diagnostic criteria for anorexia nervosa. Often, when someone presents for treatment, they do so at the behest of family members, medical providers, or peers. A subset of individuals may refuse treatment or be unable to make necessary changes such that they are at imminent risk of death from medical complications associated with the physical effects of significantly low body weight and malnutrition.

  In the case of treatment refusal, clinicians are tasked with considering the ethical issues of respecting the person's autonomy, beneficence, and the mandate to do no harm.[154] The central conflict addressed in literature on the ethics of involuntary treatment for anorexia nervosa is whether the benefits (preventing death and increased morbidity) outweigh potential harms (prolonging suffering and subjecting someone to highly negative treatment experiences). Studies on outcomes comparing individuals treated voluntarily versus involuntarily have found similar outcomes in terms of weight gain.[155] Legal interventions can be complex, but involuntary treatment is designed to help individuals who may be unable to help themselves despite the potential serious risk of harm to themselves related to their eating disorder or co-occurring suicidal thoughts.[156]

  Individuals needing involuntary treatment do not make up the majority of people hospitalized with anorexia nervosa.[157] Although it is sometimes a necessary, lifesaving measure, involuntary treatment is challenging and potentially traumatic for patients,[158-160] their family members (whether they are signing off on an involuntary treatment as medical decision makers or supporting a loved one through a civil commitment), and clinicians (both the clinicians tasked with ordering a commitment and those who administer involuntary treatment).[161] It is generally advised to avoid a cycle of repeated involuntary treatment episodes, but sometimes this becomes the only path available to help get an individual into care. States have an opportunity to collect data on involuntary hospitalizations of people with anorexia nervosa to provide direct support to affected individuals, families, and clinicians. Support could include connection to care management or additional clinical support or training for clinicians. States could also provide training or continuing education led by eating disorder experts and legal experts that reviews the ethical, clinical, and legal obligations of clinicians faced with assessing the need for involuntary treatment in individuals with anorexia nervosa, or states could identify a person or people to serve as a resource for clinicians struggling with making a clinical determination in a particular case or struggling with the ethical and moral implications of deciding in favor of or against an involuntary hospitalization for someone.

Summary

Eating disorders are complex illnesses with psychiatric and medical complications that can severely disrupt the lives of individuals and families. With treatment, people with eating disorders can and do recover. Among the many challenges individuals face are limited availability of specialized treatment, insufficient provider knowledge about identifying and managing eating disorders, and financial barriers to accessing care. States are well positioned to provide training for people in a variety of roles including community members, teachers, and

healthcare providers in psychiatric and general medical settings. Additionally, opportunities exist to develop content and resources that support individuals and families affected by eating disorders and the professionals working with them. Finally, for mental health policymakers, providers, and others working to improve mental health service systems, improved knowledge of the prevalence and impact of eating disorders can drive targeted efforts to optimize resources and improve care delivery.

Resources

Substance Abuse and Mental Health Services Administration

- Eating disorders webpage
- Advisory on treating eating disorders and substance use disorders
- 988 Suicide & Crisis Lifeline: A 24/7 national hotline offering one-on-one support for mental health, suicide, and substance use–related problems

Web Resources

- Academy for Eating Disorders | AED Publications
- American Psychological Association | Eating Disorders
- MedlinePlus | Eating Disorders
- National Eating Disorders Association
- National Institute of Mental Health | Eating Disorders
- Office on Women's Health | Eating Disorders

References

1. Grilo CM, Pagano ME, Skodol AE, et al. Natural course of bulimia nervosa and of eating disorder not otherwise specified: 5-year prospective study of remissions, relapses, and the effects of personality disorder psychopathology. *J Clin Psychiatry*. 2007;68(5):738-746. doi:10.4088/jcp.v68n0511

2. Grilo CM, Pagano ME, Stout RL, et al. Stressful life events predict eating disorder relapse following remission: six-year prospective outcomes. *Int J Eat Disord*. 2012;45(2):185-192. doi:10.1002/eat.20909

3. Keel PK, Dorer DJ, Franko DL, Jackson SC, Herzog DB. Postremission predictors of relapse in women with eating disorders. *Am J Psychiatry*. 2005;162(12):2263-2268. doi:10.1176/appi.ajp.162.12.2263

4. Khalsa SS, Portnoff LC, McCurdy-McKinnon D, Feusner JD. What happens after treatment? A systematic review of relapse, remission, and recovery in anorexia nervosa. *J Eat Disord*. 2017;5:20. doi:10.1186/s40337-017-0145-3

5. Krug I, Liu S, Portingale J, et al. A meta-analysis of mortality rates in eating disorders: an update of the literature from 2010 to 2024. *Clin Psychol Rev*. 2025;116:102547. doi:10.1016/j.cpr.2025.102547

6. Schaumberg K, Welch E, Breithaupt L, et al. The science behind the Academy for Eating Disorders' Nine Truths About Eating Disorders. *Eur Eat Disord Rev*. 2017;25(6):432-450. doi:10.1002/erv.2553

7. Furfaro H. "Not sick enough": how insurance denials can delay livesaving eating-disorder treatment. *Seattle Times*. September 10, 2023. Accessed March 5, 2026. https://www.seattletimes.com/seattle-news/mental-health/how-insurance-denials-can-delay-lifesaving-eating-disorder-treatment/

8. Penwell TE, Bedard SP, Eyre R, Levinson CA. Eating disorder treatment access in the United States: perceived inequities among treatment seekers. *Psychiatr Serv*. 2024;75(10):944-952. doi:10.1176/appi.ps.20230193

9. 29 U.S.C. § 1185a.

10. Accurso EC, Buckelew SM, Snowden LR. Youth insured by Medicaid with restrictive eating disorders—underrecognized and underresourced. *JAMA Pediatr*. 2021;175(10):999-1000. doi:10.1001/jamapediatrics.2021.2081

11. Crest P, Vendlinski SS, Borges R, Landsverk J, Accurso EC. Interdisciplinary perspectives on accessing specialty evidence-based treatment for Medicaid-insured adolescents with eating disorders. *J Eat Disord*. 2024;12(1):167. doi:10.1186/s40337-024-01124-7

12. Haiken M. The deadly cost of eating disorders: how health insurers delay, restrict and deny care. *MindSite News*. May 12, 2025. Accessed March 5, 2026. https://mindsitenews.org/2025/05/12/the-deadly-cost-of-eating-disorders/

13. Welch R, Rao T, Karakus M, Scott E, Doreson A, Ghose SS. State-level analysis of access to intensive eating disorder care for Medicaid beneficiaries. *Psychiatr Serv.* 2026;77(3):209-216. doi:10.1176/appi.ps.20250233

14. 42 U.S.C. § 280g-16.

15. 42 U.S.C. § 280g-17.

16. 10 U.S.C. § 1079(a)(18), (r).

17. 10 U.S.C. § 1090a.

18. Substance Abuse and Mental Health Services Administration. Refocus and Renew: Moving towards Health for Adults with Serious Mental Illness and Youth with Serious Emotional Disturbances. PowerPoint presentation. 2025.

19. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR).* American Psychiatric Association Publishing; 2022:1 online resource.

20. Cost J, Krantz MJ, Mehler PS. Medical complications of anorexia nervosa. *Cleve Clin J Med*. 2020;87(6):361-366. doi:10.3949/ccjm.87a.19084

21. Nitsch A, Dlugosz H, Gibson D, Mehler PS. Medical complications of bulimia nervosa. *Cleve Clin J Med*. 2021;88(6):333-343. doi:10.3949/ccjm.88a.20168

22. Wassenaar E, Friedman J, Mehler PS. Medical complications of binge eating disorder. *Psychiatr Clin North Am*. 2019;42(2):275-286. doi:10.1016/j.psc.2019.01.010

23. Bourne L, Bryant-Waugh R, Cook J, Mandy W. Avoidant/restrictive food intake disorder: a systematic scoping review of the current literature. *Psychiatry Res*. 2020;288:112961. doi:10.1016/j.psychres.2020.112961

24. Leach K, Bauschka M, Watters A, Mehler PS. Medical and psychiatric characteristics of patients hospitalized for severe restrictive eating disorders: analysis of 545 consecutive patients with severe anorexia nervosa or avoidant/restrictive food intake disorder. *J Acad Consult Liaison Psychiatry*. 2024;65(4):347-356. doi:10.1016/j.jaclp.2024.02.001

25. Zimmerman J, Fisher M. Avoidant/restrictive food intake disorder (ARFID). *Curr Probl Pediatr Adolesc Health Care*. 2017;47(4):95-103. doi:10.1016/j.cppeds.2017.02.005

26. Birgegard A, Mantilla EF, Breithaupt LE, et al. Proposal for increasing diagnostic clarity in research and clinical practice by renaming and reframing atypical anorexia nervosa as "restrictive eating disorder" (RED). *Eat Behav*. 2023;50:101750. doi:10.1016/j.eatbeh.2023.101750

27. Kessler RC, Berglund P, Chiu WT, et al. The US National Comorbidity Survey Replication (NCS-R): design and field procedures. *Int J Methods Psychiatr Res*. 2004;13(2):69-92. doi:10.1002/mpr.167

28. National Institutes of Health. Data from: National Epidemiologic Survey on Alcohol and Related Conditions–III (NESARC-III). 2014.

29. Dinkler L, Wronski ML, Lichtenstein P, et al. Etiology of the broad avoidant restrictive food intake disorder phenotype in Swedish twins aged 6 to 12 years. *JAMA Psychiatry*. 2023;80(3):260-269. doi:10.1001/jamapsychiatry.2022.4612

30. Murray SB, Griffiths S, Mond JM. Evolving eating disorder psychopathology: conceptualising muscularity-oriented disordered eating. *Br J Psychiatry*. 2016;208(5):414-415. doi:10.1192/bjp.bp.115.168427

31. Smith KE, Mason TB, Murray SB, et al. Male clinical norms and sex differences on the Eating Disorder Inventory (EDI) and Eating Disorder Examination Questionnaire (EDE-Q). *Int J Eat Disord*. 2017;50(7):769-775. doi:10.1002/eat.22716

32. Udo T, Grilo CM. Prevalence and correlates of DSM-5-defined eating disorders in a nationally representative sample of U.S. adults. *Biol Psychiatry*. 2018;84(5):345-354. doi:10.1016/j.biopsych.2018.03.014

33. Lindvall Dahlgren C, Wisting L, Ro O. Feeding and eating disorders in the DSM-5 era: a systematic review of prevalence rates in non-clinical male and female samples. *J Eat Disord*. 2017;5:56. doi:10.1186/s40337-017-0186-7

34. Sanchez-Cerezo J, Nagularaj L, Gledhill J, Nicholls D. What do we know about the epidemiology of avoidant/restrictive food intake disorder in children and adolescents? A systematic review of the literature. *Eur Eat Disord Rev*. 2023;31(2):226-246. doi:10.1002/erv.2964

35. Hudson JI, Hiripi E, Pope HG, Jr., Kessler RC. The prevalence and correlates of eating disorders in the National Comorbidity Survey Replication. *Biol Psychiatry*. 2007;61(3):348-358. doi:10.1016/j.biopsych.2006.03.040

36. Solmi M, Radua J, Olivola M, et al. Age at onset of mental disorders worldwide: large-scale meta-analysis of 192 epidemiological studies. *Mol Psychiatry*. 2022;27(1):281-295. doi:10.1038/s41380-021-01161-7

37. Pinhas L, Morris A, Crosby RD, Katzman DK. Incidence and age-specific presentation of restrictive eating disorders in children: a Canadian Paediatric Surveillance Program study. *Arch Pediatr Adolesc Med*. 2011;165(10):895-899. doi:10.1001/archpediatrics.2011.145

38. Kinasz K, Accurso EC, Kass AE, Le Grange D. Does sex matter in the clinical presentation of eating disorders in youth? *J Adolesc Health*. 2016;58(4):410-416. doi:10.1016/j.jadohealth.2015.11.005

39. Baker JH, Runfola CD. Eating disorders in midlife women: a perimenopausal eating disorder? *Maturitas*. 2016;85:112-6. doi:10.1016/j.maturitas.2015.12.017

40. Mangweth-Matzek B, Hoek HW. Epidemiology and treatment of eating disorders in men and women of middle and older age. *Curr Opin Psychiatry*. 2017;30(6):446-451. doi:10.1097/YCO.0000000000000356

41. Presskreischer R, Steinglass JE, Anderson KE. Eating disorders in the U.S. Medicare population. *Int J Eat Disord*. 2022;55(3):362-371. doi:10.1002/eat.23676

42. Oakley P, Kisely S, Baxter A, et al. Increased mortality among people with schizophrenia and other non-affective psychotic disorders in the community: a systematic review and meta-analysis. *J Psychiatr Res*. 2018;102:245-253. doi:10.1016/j.jpsychires.2018.04.019

43. Arcelus J, Mitchell AJ, Wales J, Nielsen S. Mortality rates in patients with anorexia nervosa and other eating disorders: a meta-analysis of 36 studies. *Arch Gen Psychiatry*. 2011;68(7):724-731. doi:10.1001/archgenpsychiatry.2011.74

44. Springall GAC, Caughey M, Zannino D, et al. (2023). Long-term cardiovascular consequences of adolescent anorexia nervosa. *Pediatr Res.* 2023;94:1457-1464. doi:10.1038/s41390-023-02521-5

45. Westmoreland P, Krantz MJ, Mehler PS. (2016). Medical complications of anorexia nervosa and bulimia. *Am J Med*. 2016;129(1):30-37. doi:10.1016/j.amjmed.2015.06.031

46. Morgan C, Carr MJ, Chew-Graham CA, et al. Adverse outcomes in patients with a diagnosis of an eating disorder: primary care cohort study with linked secondary care and mortality records. *BMJ Med.* 2025;4(1):e001438. doi:10.1136/bmjmed-2025-001438

47. Puckett L. Renal and electrolyte complications in eating disorders: a comprehensive review. *J Eat Disord.* 2023;11(26). doi:10.1186/s40337-023-00751-w

48. Soeby M, Gribsholt SB, Clausen L, Richelsen B. Overall and cause-specific mortality in anorexia nervosa: impact of psychiatric comorbidity and sex in a 40-year follow-up study. *Int J Eat Disord*. 2024;57(9):1842-1853. doi:10.1002/eat.24223

49. Plana-Ripoll O, Pedersen CB, Agerbo E, et al. A comprehensive analysis of mortality-related health metrics associated with mental disorders: a nationwide, register-based cohort study. *Lancet*. 2019;394(10211):1827-1835. doi:10.1016/S0140-6736(19)32316-5

50. Smith AR, Zuromski KL, Dodd DR. Eating disorders and suicidality: what we know, what we don't know, and suggestions for future research. *Curr Opin Psychol*. 2018;22:63-67. doi:10.1016/j.copsyc.2017.08.023

51. Amiri S, Khan MA. Prevalence of non-suicidal self-injury, suicidal ideation, suicide attempts, suicide mortality in eating disorders: a systematic review and meta-analysis. *Eat Disord*. 2023;31(5):487-525. doi:10.1080/10640266.2023.2196492

52. Bulik CM, Bertoia ML, Lu M, Seeger JD, Spalding WM. Suicidality risk among adults with binge-eating disorder. *Suicide Life Threat Behav*. 2021;51(5):897-906. doi:10.1111/sltb.12768

53. Qi B, Kalantzis MA, Thornton LM, et al. Suicidal ideation and avoidant/restrictive food intake disorder: findings from the ARFID-GEN study. *Psychiatry Res*. 2025;348:116471. doi:10.1016/j.psychres.2025.116471

54. Mazzeo SE, Bulik CM. Environmental and genetic risk factors for eating disorders: what the clinician needs to know. *Child Adolesc Psychiatr Clin N Am*. 2009;18(1):67-82. doi:10.1016/j.chc.2008.07.003

55. Yilmaz Z, Hardaway JA, Bulik CM. Genetics and epigenetics of eating disorders. *Adv Genomics Genet*. 2015;5:131-150. doi:10.2147/AGG.S55776

56. Watson HJ, Yilmaz Z, Thornton LM, et al. Genome-wide association study identifies eight risk loci and implicates metabo-psychiatric origins for anorexia nervosa. *Nat Genet*. 2019;51(8):1207-1214. doi:10.1038/s41588-019-0439-2

57. Termorshuizen JD, Davies HL, Lee SH, et al. Genome-wide association studies of binge eating behaviour and anorexia nervosa yield insights into the unique and shared biology of eating disorder phenotypes. *medRxiv*. Published online November 5, 2025. doi:10.1101/2025.01.31.25321397

58. Armour C, Mullerova J, Fletcher S, et al. Assessing childhood maltreatment and mental health correlates of disordered eating profiles in a nationally representative sample of English females. *Soc Psychiatry Psychiatr Epidemiol*. 2016;51(3):383-393. doi:10.1007/s00127-015-1154-7

59. Hazzard VM, Bauer KW, Mukherjee B, Miller AL, Sonneville KR. Associations between childhood maltreatment latent classes and eating disorder symptoms in a nationally representative sample of young adults in the United States. *Child Abuse Negl*. 2019;98:104171. doi:10.1016/j.chiabu.2019.104171

60. Molendijk ML, Hoek HW, Brewerton TD, Elzinga BM. Childhood maltreatment and eating disorder pathology: a systematic review and dose-response meta-analysis. *Psychol Med*. Jun 2017;47(8):1402-1416. doi:10.1017/S0033291716003561

61. Keel PK, Forney KJ. Psychosocial risk factors for eating disorders. *Int J Eat Disord*. 2013;46(5):433-439. doi:10.1002/eat.22094

62. Ulfvebrand S, Birgegard A, Norring C, Hogdahl L, von Hausswolff-Juhlin Y. Psychiatric comorbidity in women and men with eating disorders results from a large clinical database. *Psychiatry Res*. 2015;230(2):294-299. doi:10.1016/j.psychres.2015.09.008

63. Deep AL, Nagy LM, Weltzin TE, Rao R, Kaye WH. Premorbid onset of psychopathology in long-term recovered anorexia nervosa. *Int J Eat Disord*. 1995;17(3):291-297.

64. Laessle RG, Kittl S, Fichter MM, Wittchen HU, Pirke KM. Major affective disorder in anorexia nervosa and bulimia: a descriptive diagnostic study. *Br J Psychiatry*. 1987;151:785-789. doi:10.1192/bjp.151.6.785

65. Keck PE, Jr., Pope HG, Jr., Hudson JI, McElroy SL, Yurgelun-Todd D, Hundert EM. A controlled study of phenomenology and family history in outpatients with bulimia nervosa. *Compr Psychiatry*. 1990;31(4):275-283. doi:10.1016/0010-440x(90)90034-p

66. Schwalberg MD, Barlow DH, Alger SA, Howard LJ. Comparison of bulimics, obese binge eaters, social phobics, and individuals with panic disorder on comorbidity across DSM-III-R anxiety disorders. *J Abnorm Psychol*. 1992;101(4):675-681. doi:10.1037//0021-843x.101.4.675

67. Welch E, Jangmo A, Thornton LM, et al. Treatment-seeking patients with binge-eating disorder in the Swedish national registers: clinical course and psychiatric comorbidity. *BMC Psychiatry*. 2016;16:163. doi:10.1186/s12888-016-0840-7

68. Grilo CM, White MA, Masheb RM. DSM-IV psychiatric disorder comorbidity and its correlates in binge eating disorder. *Int J Eat Disord*. 2009;42(3):228-234. doi:10.1002/eat.20599

69. Kerr-Gaffney J, Harrison A, Tchanturia K. Social anxiety in the eating disorders: a systematic review and meta-analysis. *Psychol Med*. 2018;48(15):2477-2491. doi:10.1017/S0033291718000752

70. Sawaoka T, Barnes RD, Blomquist KK, Masheb RM, Grilo CM. Social anxiety and self-consciousness in binge eating disorder: associations with eating disorder psychopathology. *Compr Psychiatry*. 2012;53(6):740-745. doi:10.1016/j.comppsych.2011.10.003

71. Godart NT, Flament MF, Curt F, et al. Anxiety disorders in subjects seeking treatment for eating disorders: a DSM-IV controlled study. *Psychiatry Res*. 2003;117(3):245-258. doi:10.1016/s0165-1781(03)00038-6

72. Thornton LM, Dellava JE, Root TL, Lichtenstein P, Bulik CM. Anorexia nervosa and generalized anxiety disorder: further explorations of the relation between anxiety and body mass index. *J Anxiety Disord*. 2011;25(5):727-730. doi:10.1016/j.janxdis.2011.03.010

73. Mandelli L, Draghetti S, Albert U, De Ronchi D, Atti AR. Rates of comorbid obsessive-compulsive disorder in eating disorders: a meta-analysis of the literature. *J Affect Disord*. 2020;277:927-939. doi:10.1016/j.jad.2020.09.003

74. Godart NT, Perdereau F, Rein Z, et al. Comorbidity studies of eating disorders and mood disorders: critical review of the literature. *J Affect Disord*. 2007;97(1-3):37-49. doi:10.1016/j.jad.2006.06.023

75. Eskild-Jensen M, Stoving RK, Flindt CF, Sjogren M. Comorbid depression as a negative predictor of weight gain during treatment of anorexia nervosa: a systematic scoping review. *Eur Eat Disord Rev*. 2020;28(6):605-619. doi:10.1002/erv.2787

76. Riquin E, Raynal A, Mattar L, et al. Is the severity of the clinical expression of anorexia nervosa influenced by an anxiety, depressive, or obsessive-compulsive comorbidity over a lifetime? *Front Psychiatry*. 2021;12:658416. doi:10.3389/fpsyt.2021.658416

77. Patel RS, Olten B, Patel P, Shah K, Mansuri Z. Hospitalization outcomes and comorbidities of bulimia nervosa: a nationwide inpatient study. *Cureus*. 2018;10(5):e2583. doi:10.7759/cureus.2583

78. Fornaro M, Daray FM, Hunter F, et al. The prevalence, odds and predictors of lifespan comorbid eating disorder among people with a primary diagnosis of bipolar disorders, and vice-versa: systematic review and meta-analysis. *J Affect Disord*. 2021;280(Pt A):409-431. doi:10.1016/j.jad.2020.11.015

79. Brietzke E, Moreira CL, Toniolo RA, Lafer B. Clinical correlates of eating disorder comorbidity in women with bipolar disorder type I. *J Affect Disord*. 2011;130(1-2):162-165. doi:10.1016/j.jad.2010.10.020

80. McElroy SL, Crow S, Blom TJ, et al. Clinical features of bipolar spectrum with binge eating behaviour. *J Affect Disord*. 2016;201:95-98. doi:10.1016/j.jad.2016.05.003

81. Thiebaut S, Jaussent I, Maimoun L, et al. Impact of bipolar disorder on eating disorders severity in real-life settings. *J Affect Disord*. 2019;246:867-872. doi:10.1016/j.jad.2018.12.128

82. Bahji A, Mazhar MN, Hudson CC, Nadkarni P, MacNeil BA, Hawken E. Prevalence of substance use disorder comorbidity among individuals with eating disorders: a systematic review and meta-analysis. *Psychiatry Res*. 2019;273:58-66. doi:10.1016/j.psychres.2019.01.007

83. Mellentin AI, Mejldal A, Guala MM, et al. The impact of alcohol and other substance use disorders on mortality in patients with eating disorders: a nationwide register-based retrospective cohort study. *Am J Psychiatry*. 2022;179(1):46-57. doi:10.1176/appi.ajp.2021.21030274

84. Claudat K, Simpson CC, Bohrer BK, Bongiornio GM. The connection between eating disorders and substance use disorders. In: Patel VB, Preedy VR, eds. *Eating Disorders*. Springer International; 2023:223-247.

85. Andersson HW, Wenaas M, Nordfjaern T. Relapse after inpatient substance use treatment: a prospective cohort study among users of illicit substances. *Addict Behav*. 2019;90:222-228. doi:10.1016/j.addbeh.2018.11.008

86. Dennis AB, Pryor T, Brewerton TD. Integrated treatment principles and strategies for patients with eating disorders, substance use disorder, and addictions. In: Brewerton TD, Baker Dennis A, eds. *Eating Disorders, Addictions and Substance Use Disorders: Research, Clinical and Treatment Perspectives*. Springer Berlin Heidelberg; 2014:461-489.

87. Convertino AD, Mendoza RR. Posttraumatic stress disorder, traumatic events, and longitudinal eating disorder treatment outcomes: a systematic review. *Int J Eat Disord*. 2023;56(6):1055-1074. doi:10.1002/eat.23933

88. Liebman RE, Hernandez KM, Ip J, Burdo J, Trottier K. Psychological treatment of co-occurring trauma history, posttraumatic stress disorder, and eating disorders: a systematic review of clinical outcomes. *Eur Eat Disord Rev*. 2025;33(5):957-973. doi:10.1002/erv.3195

89. National Association of State Mental Health Program Directors. *Medical Directors' Recommendations on Trauma-Informed Care for Persons with Serious Mental Illness*. 2018.

90. Nazar BP, Bernardes C, Peachey G, Sergeant J, Mattos P, Treasure J. The risk of eating disorders comorbid with attention-deficit/hyperactivity disorder: a systematic review and meta-analysis. *Int J Eat Disord*. 2016;49(12):1045-1057. doi:10.1002/eat.22643

91. Huke V, Turk J, Saeidi S, Kent A, Morgan JF. Autism spectrum disorders in eating disorder populations: a systematic review. *Eur Eat Disord Rev*. 2013;21(5):345-351. doi:10.1002/erv.2244

92. Westwood H, Tchanturia K. Autism spectrum disorder in anorexia nervosa: an updated literature review. *Curr Psychiatry Rep*. 2017;19(7):41. doi:10.1007/s11920-017-0791-9

93. Lockwood Estrin G, Milner V, Spain D, Happe F, Colvert E. Barriers to autism spectrum disorder diagnosis for young women and girls: a systematic review. *Rev J Autism Dev Disord*. 2021;8(4):454-470. doi:10.1007/s40489-020-00225-8

94. Nimbley E, Sharpe H, Maloney E, Gillespie-Smith K, Tchanturia K, Duffy F. A mixed method systematic review into the impact of ED treatment in autistic people and those with high autistic traits. *Int J Eat Disord*. 2025;58(1):117-138. doi:10.1002/eat.24311

95. Crone C, Fochtmann LJ, Attia E, et al. The American Psychiatric Association Practice Guideline for the Treatment of Patients with Eating Disorders. *Am J Psychiatry*. 2023;180(2):167-171. doi:10.1176/appi.ajp.23180001

96. Hay PJ, Claudino AM, Touyz S, Abd Elbaky G. Individual psychological therapy in the outpatient treatment of adults with anorexia nervosa. *Cochrane Database Syst Rev*. 2015;2015(7):CD003909. doi:10.1002/14651858.CD003909.pub2

97. Le Grange D, Eckhardt S, Dalle Grave R, et al. Enhanced cognitive-behavior therapy and family-based treatment for adolescents with an eating disorder: a non-randomized effectiveness trial. *Psychol Med*. 2020;52(13):1-11. doi:10.1017/S0033291720004407

98. Lock J, Le Grange D, Agras WS, Moye A, Bryson SW, Jo B. Randomized clinical trial comparing family-based treatment with adolescent-focused individual therapy for adolescents with anorexia nervosa. *Arch Gen Psychiatry*. 2010;67(10):1025-1032. doi:10.1001/archgenpsychiatry.2010.128

99. Stewart MP, Baumann O. The effectiveness of adolescent-focused therapy and family-based therapy for anorexia nervosa. *Psychol Rep*. 2024:332941241226687. doi:10.1177/00332941241226687

100. Peat CM, Berkman ND, Lohr KN, et al. Comparative effectiveness of treatments for binge-eating disorder: systematic review and network meta-analysis. *Eur Eat Disord Rev*. 2017;25(5):317-328. doi:10.1002/erv.2517

101. Slade E, Keeney E, Mavranezouli I, et al. Treatments for bulimia nervosa: a network meta-analysis. *Psychol Med*. 2018;48(16):2629-2636. doi:10.1017/S0033291718001071

102. Le Grange D, Lock J, Agras WS, Bryson SW, Jo B. Randomized clinical trial of family-based treatment and cognitive-behavioral therapy for adolescent bulimia nervosa. *J Am Acad Child Adolesc Psychiatry*. 2015;54(11):886-894 e2. doi:10.1016/j.jaac.2015.08.008

[103.] Hellner M, Cai K, Freestone D, Baker JH, Menzel J, Steinberg DM. Clinical outcomes in a large sample of youth and adult patients receiving virtual evidence-based treatment for ARFID: a naturalistic study. *Int J Eat Disord*. 2025;58(4):680-689. doi:10.1002/eat.24355

[104.] Kambanis PE, Thomas JJ. Assessment and treatment of avoidant/restrictive food intake disorder. *Curr Psychiatry Rep*. 2023;25(2):53-64. doi:10.1007/s11920-022-01404-6

[105.] Fairburn CG. *Cognitive Behavior Therapy and Eating Disorders*. Guilford Press; 2008.

[106.] Waller G, Beard J. Recent advances in cognitive-behavioural therapy for eating disorders (CBT-ED). *Curr Psychiatry Rep*. 2024;26(7):351-358. doi:10.1007/s11920-024-01509-0

[107.] Friederich H-C. *Anorexia Nervosa: Focal Psychodynamic Psychotherapy*. Hogrefe Publishing Corporation; 2019.

[108.] Weissman MM, Markowitz JC, Klerman GL. Eating disorders. In: Weissman MM, Markowitz JC, Klerman GL, eds. *The Guide to Interpersonal Psychotherapy: Updated and Expanded Edition*. Oxford University Press; 2017. Accessed December 11, 2025. https://doi.org/10.1093/med-psych/9780190662592.003.0020

[109.] Schmidt U, Startup H, Treasure J. *A Cognitive-Interpersonal Therapy Workbook for Treating Anorexia Nervosa: The Maudsley Model*. 1st ed. Routledge, Taylor & Francis Group; 2019.

[110.] McIntosh VVW JJ, Bulik CM, Robinson P. Specialist supportive clinical management and eating disorders. In: Robinson P WT, Herpertz-Dahlmann B, Fernandez-Aranda F, Treasure J, Wonderlich S, eds. *Eating Disorders: An International Comprehensive View*. Springer Nature; 2023:1137-1151.

[111.] Rienecke RD, Le Grange D. The five tenets of family-based treatment for adolescent eating disorders. *J Eat Disord*. 2022;10(1):60. doi:10.1186/s40337-022-00585-y

[112.] Lock J. *Adolescent-Focused Therapy for Anorexia Nervosa: A Developmental Approach*. Guilford Press; 2020.

[113.] Wisniewski L SD, Adler S. DBT and eating disorders. In: Dimeff LA RS, Koerner K, eds. *Dialectical Behavior Therapy in Clinical Practice: Applications across Disorders and Settings*. 2nd ed. Guilford Press; 2021:285–305.

[114.] Cassioli E, Sensi C, Mannucci E, Ricca V, Rotella F. Pharmacological treatment of acute-phase anorexia nervosa: evidence from randomized controlled trials. *J Psychopharmacol*. 2020;34(8):864-873. doi:10.1177/0269881120920453

[115.] Brewerton TD, D'Agostino M. Adjunctive use of olanzapine in the treatment of avoidant restrictive food intake disorder in children and adolescents in an eating disorders program. *J Child Adolesc Psychopharmacol*. 2017;27(10):920-922. doi:10.1089/cap.2017.0133

[116.] Colak Sivri R, Hizarcioglu Gulsen H, Yilmaz A. Phagophobia successfully treated with low-dose aripiprazole in an adolescent: a case report. *Clin Neuropharmacol*. 2018;41(4):148-150. doi:10.1097/WNF.0000000000000288

[117.] Mosheva M, Sela Y, Arad-Rubinshtein S, et al. The use of atypical antipsychotic medications in the treatment of children and adolescents with avoidant/restrictive food intake disorder. *Eur Child Adolesc Psychiatry*. 2025;34:3083-3095. doi:10.1007/s00787-025-02713-w

[118.] Okereke NK. Buspirone treatment of anxiety in an adolescent female with avoidant/restrictive food intake disorder. *J Child Adolesc Psychopharmacol*. 2018;28(6):425-426. doi:10.1089/cap.2018.0005

[119.] Bello NT, Yeomans BL. Safety of pharmacotherapy options for bulimia nervosa and binge eating disorder. *Expert Opin Drug Saf*. 2018;17(1):17-23. doi:10.1080/14740338.2018.1395854

[120.] Williams AM. Pharmacological management of binge eating disorder. *Ment Health Clin*. 2025;15(6):285-297. doi:10.9740/mhc.2025.12.285

[121.] Morgan JF, Reid F, Lacey JH. The SCOFF questionnaire: a new screening tool for eating disorders. *West J Med*. 2000;172(3):164-165. doi:10.1136/ewjm.172.3.164

[122.] Hill LS, Reid F, Morgan JF, Lacey JH. SCOFF, the development of an eating disorder screening questionnaire. *Int J Eat Disord*. 2010;43(4):344-351. doi:10.1002/eat.20679

[123.] Kutz AM, Marsh AG, Gunderson CG, Maguen S, Masheb RM. Eating disorder screening: a systematic review and meta-analysis of diagnostic test characteristics of the SCOFF. *J Gen Intern Med*. 2020;35(3):885-893. doi:10.1007/s11606-019-05478-6

[124.] The University of North Carolina at Chapel Hill. Free screening tool for eating disorders. NCEED: National Center of Excellence for Eating Disorders. Accessed April, 2025. https://nceedus.org/sbirt-screening-tool/

[125.] Cotton MA, Ball C, Robinson P. Four simple questions can help screen for eating disorders. *J Gen Intern Med*. 2003;18(1):53-56. doi:10.1046/j.1525-1497.2003.20374.x

[126.] Freund KM, Graham SM, Lesky LG, Moskowitz MA. Detection of bulimia in a primary care setting. *J Gen Intern Med*. 1993;8(5):236-242. doi:10.1007/BF02600088

[127.] McNulty PA. Prevalence and contributing factors of eating disorder behaviors in active duty Navy men. *Mil Med*. 1997;162(11):753-758.

[128.] Maguen S, Hebenstreit C, Li Y, et al. Screen for Disordered Eating: improving the accuracy of eating disorder screening in primary care. *Gen Hosp Psychiatry*. 2018;50:20-25. doi:10.1016/j.genhosppsych.2017.09.004

[129.] Gewirtz-Meydan A, Spivak-Lavi Z, Kraus SW, et al. Cross-cultural validation of the Binge Eating Disorder Screener-7 (BEDS-7) across 42 countries. *Int J Eat Disord*. 2025;58(5):926-938. doi:10.1002/eat.24365

[130.] Herman BK, Deal LS, DiBenedetti DB, Nelson L, Fehnel SE, Brown TM. Development of the 7-Item Binge-Eating Disorder Screener (BEDS-7). *Prim Care Companion CNS Disord*. 2016;18(2). doi:10.4088/PCC.15m01896

[131.] Asch DA, Buresh J, Allison KC, et al. Trends in US patients receiving care for eating disorders and other common behavioral health conditions before and during the COVID-19 pandemic. *JAMA Netw Open*. 2021;4(11):e2134913. doi:10.1001/jamanetworkopen.2021.34913

[132.] Milliren CE, Richmond TK, Hudgins JD. Emergency department visits and hospitalizations for eating disorders during the COVID-19 pandemic. *Pediatrics*. 2023;151(1). doi:10.1542/peds.2022-058198

133. Valtuille Z, Trebossen V, Ouldali N, et al. Pediatric hospitalizations and emergency department visits related to mental health conditions and self-harm. *JAMA Netw Open*. 2024;7(10):e2441874. doi:10.1001/jamanetworkopen.2024.41874

134. Damour L. Eating disorders in teens have "exploded" in the pandemic. *New York Times*. April 28, 2021. https://www.nytimes.com/2021/04/28/well/family/teens-eating-disorders.html

135. Ellin A. Anorexia in middle age and beyond. *New York Times*. June 3, 2025. https://www.nytimes.com/2025/06/03/health/anorexia-older-women-eating-disorders.html

136. Klamann S. Colorado—a national hub for eating disorder treatment—hopes to slow surging rate of stigmatized illness. *Denver Post*. March 20, 2023. https://www.denverpost.com/2023/03/20/colorado-eating-disorders-mental-health-legislature/

137. Richtel M. More adolescent boys have eating disorders. Two experts discuss why. *New York Times*. February 8, 2024. https://www.nytimes.com/2024/02/08/health/adolescents-boys-eating-disorders.html

138. Sharp S. A surge in eating disorders in Medi-Cal patients shows stark gaps in care. *Los Angeles Times*. August 11, 2023. https://www.latimes.com/california/story/2023-08-11/eating-disorders-surging-medi-cal-patients-care-hard-to-get

139. Albany Med Health System. Comprehensive Care Center for Eating Disorders of Northeastern New York. Accessed April 2025. https://www.albanymed.org/specialty/eating-disorders/

140. Columbia University Department of Psychiatry. Metropolitan Comprehensive Care Center for Eating Disorders (CCCED). Accessed April 2025. https://www.columbiapsychiatry.org/join-study/research-clinics/eating-disorders-clinic/metropolitan-comprehensive-care-center-eating

141. New York State Department of Health. Comprehensive Care Center for Eating Disorders in New York State. Accessed April 2025.

142. Western New York Comprehensive Care Center for Eating Disorders. The heart of eating disorders is disconnection . . . The heart of recovery is connection. Accessed April 2025. https://www.nyeatingdisorders.org

143. California Department of Health Care Services. CalAIM 1115 Demonstration & 1915(b) Waiver. Accessed April 2025. https://www.dhcs.ca.gov/provgovpart/Pages/CalAIM-1115-and-1915b-Waiver-Renewals.aspx

144. California Department of Health Care Services. Medi-Cal Specialty Mental Health Services. Accessed April 2025. https://www.dhcs.ca.gov/services/Pages/Medi-cal_SMHS.aspx

145. Behavioral health information notice 21-034: dispute resolution process between mental health plans and Medi-Cal managed care plans. 2022.

146. Accurso EC, Ling J, Mu KJ, et al. Managing eating disorders within Medicaid-funded health care systems in California. *Int J Eat Disord*. 2025;58(1):206-215. doi:10.1002/eat.24320

147. Accurso EC, Mu KJ, Landsverk J, Guydish J. Adaptation to family-based treatment for Medicaid-insured youth with anorexia nervosa in publicly-funded settings: protocol for a

mixed methods implementation scale-out pilot study. *J Eat Disord*. 2021;9(1):99. doi:10.1186/s40337-021-00454-0

148. Klein K, McGowan H, Karambelas A, Omland L. *Working Group on Services for Individuals with Eating Disorders Report*. Vermont Department of Mental Health, Agency of Human Services; 2023. https://mentalhealth.vermont.gov/sites/mentalhealth/files/doc_library/Eating_Disorder_Report_Act_114_Section_13.pdf

149. Missouri Department of Mental Health. Missouri Eating Disorders Council. Accessed April 2025. https://dmh.mo.gov/eating-disorders-council

150. Kentucky Eating Disorder Council. *Kentucky Eating Disorder Council Annual Report*. 2022. https://dbhdid.ky.gov/documents/dbh/kedc/KEDC_2022AnnualReport.pdf

151. Commonwealth of Kentucky. Kentucky Eating Disorder Council. Team Kentucky. Accessed April 2025. https://dbhdid.ky.gov/mh/kedc

152. 29 U.S.C. § 794.

153. U.S. Department of Health and Human Services. Youth Risk Behavior Surveillance System (YRBSS). Accessed April 2025. https://odphp.health.gov/healthypeople/objectives-and-data/data-sources-and-methods/data-sources/youth-risk-behavior-surveillance-system-yrbss

154. Varkey B. Principles of clinical ethics and their application to practice. *Med Princ Pract*. 2021;30(1):17-28. doi:10.1159/000509119

155. Atti AR, Mastellari T, Valente S, Speciani M, Panariello F, De Ronchi D. Compulsory treatments in eating disorders: a systematic review and meta-analysis. *Eat Weight Disord*. 2021;26(4):1037-1048. doi:10.1007/s40519-020-01031-1

156. Substance Abuse and Mental Health Services Administration. *Legal Tools throughout the Behavioral Health Continuum*. In press.

157. Mac Donald B, Bulik CM, Larsen JT, Carlsen AH, Clausen L, Petersen LV. Involuntary treatment in patients with anorexia nervosa: utilization patterns and associated factors. *Psychol Med*. 2023;53(5):1999-2007. doi:10.1017/S003329172100372X

158. Mac Donald B, Gustafsson SA, Bulik CM, Clausen L. Living and leaving a life of coercion: a qualitative interview study of patients with anorexia nervosa and multiple involuntary treatment events. *J Eat Disord*. 2023;11(1):40. doi:10.1186/s40337-023-00765-4

159. Rienecke RD, Dimitropoulos G, Duffy A, et al. Involuntary treatment: a qualitative study from the perspectives of individuals with anorexia nervosa. *Eur Eat Disord Rev*. 2023;31(6):850-862. doi:10.1002/erv.3010

160. Tan JOA, Stewart A, Fitzpatrick R, Hope T. Attitudes of patients with anorexia nervosa to compulsory treatment and coercion. *Int J Law Psychiatry*. 2010;33(1):13-19. doi:10.1016/j.ijlp.2009.10.003

161. Offringa T, Vermeiren R, Bouman C, et al. Clinicians' experiences of providing compulsory care for youth with anorexia nervosa: a qualitative study. Published online May 29, 2024. doi:10.2139/ssrn.4845130

Acknowledgments

Rachel Presskreischer, PhD, MSSW
Department of Psychiatry, University of North Carolina at Chapel Hill

Cynthia M. Bulik, PhD
Departments of Psychiatry and Nutrition, University of North Carolina at Chapel Hill

Appendix A: Screening tools

THE SCOFF QUESTIONS:

- Do you make yourself **S**ick because you feel uncomfortably full?
- Do you worry that you have lost **C**ontrol over how much you eat?
- Have you recently lost more than **O**ne stone (14 pounds) in a 3-month period?
- Do you believe yourself to be **F**at when others say you are too thin?
- Would you say that **F**ood dominates your life?
- *A "yes" answer to each question is 1 point, with 2 points or more indicating likely AN or BN.*

THE EDS-PC QUESTIONS:

- Are you satisfied with your eating patterns?
- Do you ever eat in secret?
- Does your weight affect the way you feel about yourself?
- Do you currently suffer with or have you ever suffered in the past with an eating disorder?
- *A "no" response to the first question and "yes" responses to the remaining is considered abnormal, and abnormal responses to 2 or more questions is considered a positive screening.*

THE SBE QUESTIONS:

- Do you often feel the desire to eat when you are emotionally upset or stressed?
- Do you often feel that you can't control what or how much you eat?
- Do you sometimes make yourself throw up (vomit) to control your weight?
- Are you often preoccupied with a desire to be thinner?
- Do you believe yourself to be fat when others say you are too thin?
- A "yes" response is 1 point, with a score of 2 or more considered a positive screening.

THE BEDS-7 QUESTIONS:

1. During the last 3 months, did you have any episodes of excessive overeating (i.e., eating significantly more than what most people would eat in a similar period of time)? YES/NO

2. Do you feel distressed about your episodes of excessive overeating? YES/NO

   Within the last 3 months

3. During your episodes of excessive overeating, how often did you feel like you had no control over your eating (e.g., not being able to stop eating, feel compelled to eat, or going back and forth for more food)? NEVER or RARELY, SOMETIMES, OFTEN, ALWAYS

4. During your episodes of excessive overeating, how often did you continue eating even though you were not hungry? NEVER or RARELY, SOMETIMES, OFTEN, ALWAYS

5. During your episodes of excessive overeating, how often were you embarrassed by how much you ate? NEVER or RARELY, SOMETIMES, OFTEN, ALWAYS

6. During your episodes of excessive overeating, how often did you feel disgusted with yourself or guilty afterward? NEVER or RARELY, SOMETIMES, OFTEN, ALWAYS

7. During the last 3 months, how often did you make yourself vomit as a means to control your weight or shape? NEVER or RARELY, SOMETIMES, OFTEN, ALWAYS

   A "no" response to the first question ends the screening. A "yes" answer to question 2 and SOMETIMES, OFTEN, or ALWAYS answers on questions 3–6 or NEVER or RARELY or SOMETIMES on question 7 indicates a positive screening which should include follow-up questions about eating behaviors or a referral for further evaluation.