Eating Disorders: Assessment and Management – Adult/Pediatric – Inpatient Clinical Practice Guideline

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Introduction

Eating disorders are complex illnesses that are affecting adolescent and adult patients with increasing frequency.[1] Unique features of adolescents and the developmental process of adolescence are critical considerations in determining the diagnosis, treatment, and outcome of eating disorders in this age group. Patients experiencing serious medical compromise often require hospitalization; however, significant variability in admission criteria and inpatient management exist across North America.[2] This clinical practice guideline works to outline an evidence-based approach for the inpatient management of UW Health patients with an eating disorder (EDO).

Scope

Intended Users: Physicians, Advance Practice Providers, Dietitians, Psychiatrists and Psychologists, Nursing, Pharmacists

CPG objective(s):
To provide evidence-based recommendations to health care professionals responsible for the management of patients acutely admitted to the hospital for medical stabilization with eating disorders including but not limited to Anorexia Nervosa, Avoidance/Restrictive Food Intake Disorder, Bulimia Nervosa, Binge Eating Disorder, and Other Specified Feeding and Eating Disorder (OSFED).

Target Population:
Pediatric patients (approximately 8 years or older) and adult patients (≥ 18 years) who are in a medically unstable condition secondary to an eating disorder.

Clinical Questions Considered:
- How often should vital signs and patient's weight be measured, including orthostatic vitals?
- Who is responsible for meal planning in admitted patients with eating disorders?
- What approach should be employed when presenting the treatment plan to the patient?

Definitions

The following definitions are verbatim from the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5)[3]:

Anorexia Nervosa is defined as:
- Restriction of energy intake relative to requirements leading to a significantly low body weight in the context of age, sex, developmental trajectory, and physical health.
- Either an intense fear of gaining weight or of becoming fat, or persistent behavior that interferes with weight gain (even though significantly low weight).
- Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or denial of the seriousness of the current low body weight.

Bulimia Nervosa is defined as:
- Recurrent episodes of binge eating characterized by BOTH of the following:
    1. Eating in a discrete amount of time (within a 2-hour period) large amounts of food.
    2. Sense of lack of control over eating during an episode.
- Recurrent inappropriate compensatory behavior in order to prevent weight gain (purging).

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- The binge eating and compensatory behaviors both occur, on average, at least once a week for three months.
- Self-evaluation is unduly influenced by body shape and weight.
- The disturbance does not occur exclusively during episodes of anorexia nervosa.

Binge eating disorder is defined as:

- Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
    A. Eating, in a discrete period of time (e.g., within any 2-hour period), an amount of food that is definitely larger than what most people would eat in a similar period of time under similar circumstances.
    B. A sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating).
- The binge-eating episodes are associated with three (or more) of the following:
    A. Eating much more rapidly than normal.
    B. Eating until feeling uncomfortably full.
    C. Eating large amounts of food when not feeling physically hungry.
    D. Eating alone because of feeling embarrassed by how much one is eating.
    E. Feeling disgusted with oneself, depressed, or very guilty afterward.
- Marked distress regarding binge eating is present.
- The binge eating occurs, on average, at least once a week for 3 months.
- The binge eating is not associated with the recurrent use of inappropriate compensatory behavior as in bulimia nervosa and does not occur exclusively during the course of bulimia nervosa or anorexia nervosa.

Avoidant/Restrictive Food Intake Disorder is defined as:

- An eating or feeding disturbance (e.g., apparent lack of interest in eating or food; avoidance based on the sensory characteristics of food; concern about aversive consequences of eating) as manifested by persistent failure to meet appropriate nutritional and/or energy needs associated with one (or more) of the following:
    A. Significant weight loss (or failure to achieve expected weight gain or faltering growth in children).
    B. Significant nutritional deficiency.
    C. Dependence on enteral feeding or oral nutritional supplements.
    D. Marked interference with psychosocial functioning.
- The disturbance is not better explained by lack of available food or by an associated culturally sanctioned practice.
- The eating disturbance does not occur exclusively during the course of anorexia nervosa or bulimia nervosa, and there is no evidence of a disturbance in the way in which one's body weight or shape is experienced.
- The eating disturbance is not attributable to a concurrent medical condition or not better explained by another mental disorder. When the eating disturbance occurs in the context of another condition or disorder, the severity of the eating disturbance exceeds that routinely associated with the condition or disorder and warrants additional clinical attention.

Other Specified Feeding and Eating Disorder is defined as:

- Presentations in which symptoms characteristic of a feeding and eating disorder that cause clinically significant distress or impairment in social, occupational, or other

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important areas of functioning predominate but do not meet the full criteria for any of the disorders in the feeding and eating disorders diagnostic class.

- The other specified feeding or eating disorder category is used in situations in which the clinician chooses to communicate the specific reason that the presentation does not meet the criteria for any specific feeding and eating disorder. This is done by recording "other specified feeding or eating disorder" followed by the specific reason (e.g., "bulimia nervosa of low frequency").
- Examples of presentations that can be specified using the "other specified" designation include the following:
  A. **Atypical anorexia nervosa:** All of the criteria for anorexia nervosa are met, except that despite significant weight loss, the individual's weight is within or above the normal range.
  B. **Bulimia nervosa (of low frequency and/or limited duration):** All of the criteria for bulimia nervosa are met, except that the binge eating and inappropriate compensatory behaviors occur, on average, less than once a week and/or for less than 3 months.
  C. **Binge-eating disorder (of low frequency and/or limited duration):** All of the criteria for binge-eating disorder are met, except that the binge eating occurs, on average, less than once a week and/or for less than 3 months.
  D. **Purging disorder:** Recurrent purging behavior to influence weight or shape (e.g., self-induced vomiting; misuse of laxatives, diuretics, or other medications) in the absence of binge eating.
  E. **Night eating syndrome:** Recurrent episodes of night eating, as manifested by eating after awakening from sleep or by excessive food consumption after the evening meal. There is awareness and recall of the eating. The night eating is not better explained by external influences such as changes in the individual's sleep-wake cycle or by local social norms. The night eating causes significant distress and/or impairment in functioning. The disordered pattern of eating is not better explained by binge-eating disorder or another mental disorder, including substance use, and is not attributable to another medical disorder or to an effect of medication.

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Recommendations

Admission

Patients with an eating disorder who meet *at least one of the indications* listed in Table 1 should be admitted for inpatient care. [4-7] *(UW Health Low quality evidence, C recommendation)* Hospitalization on units specializing in the care and treatment of patients with an eating disorder produce better outcomes than hospitalization across general medical units.[7,8] *(APA Class II) .*

Patients may be admitted for medical stabilization of an eating disorder; however, the patient is being admitted for an "acute exacerbation" of a "chronic disease". Therefore, the admitting diagnosis should be accompanied by a description of the acute symptoms/exacerbation (e.g., bradycardia, severe weight loss). For example, admitting a patient with cystic fibrosis for "*CF bronchopulmonary exacerbation"* not just *"cystic fibrosis"*.

Whenever possible, adult patients (18 years and older) who are admitted with an eating disorder should be admitted to the Hospitalist or Family Medicine service and assigned to the D4/6 for Family Medicine patients and F6/4 for Hospital Medicine patients. Pediatric patients (17 years or younger) should be admitted to American Family Children's Hospital and assigned to the P5 unit.

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Table 1. Admission Criteria for Inpatient Treatment[5-7,9]

Medical Indications for Inpatient Treatment			
Weight			
• ≤ 75% IBW/EBW (Approximate BMI ≤ 15.99 in adults) • Rapid Weight Loss (i.e., ≥ 10 lbs. in 2 wks.) • Arrested growth and development			
Temperature			
• Hypothermia (< 96.0°F or 35.6°C)			
Cardiovascular			
• Heart rate < 50 bpm (daytime) or < 45 bpm (nighttime) • Orthostatic blood pressure measurements that feature a decrease in systolic blood pressure of > 20 mmHg OR decrease in diastolic blood pressure of > 10 mmHg OR increase in heart rate of > 20 bpm. • ECG abnormalities (e.g., arrhythmias) • Chest Pain			
Lab Values *Clinically significant abnormal lab values in the following:*			
Electrolytes	**Anemia evaluation**	**Malnutrition indicators**	**For Females only (order serum labs only if in amenorrhea)**
• Sodium • Potassium • Chloride • Magnesium • Calcium • Phosphorus	• Red Blood Cell count • Hemoglobin • Hematocrit	• Blood Urea Nitrogen • Creatinine • Glucose • Albumin	• Prolactin • Urine Beta- HCG
Additional symptoms			
• Acute medical complications (e.g., syncope, seizures, cardiac failure, esophageal tears, etc.) • Acute food refusal • Uncontrollable bingeing and purging			
Failure of ambulatory/outpatient therapy			

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Calculation of the Body Mass Index (BMI) for pediatric and adult patients

1. Identify the patient's height (meters, m) and weight (kilograms, kg).
2. Calculate the patient's body mass index (BMI) via the following equation:

$$BMI = Weight / (Height)^2$$

Calculation of Ideal Body Weight (IBW) for adult patients

For Males:

1. Identify the patient's height (inches, in).
2. For the first 60 inches, or 5 feet, establish 106lbs for the IBW.
3. Add 6 lbs. to 106 lbs. for every inch greater than 5 feet.

For Females:

1. Identify the patient's height (inches, in).
2. For the first 60 inches, or 5 feet, establish 100 lbs. for the IBW.
3. Add 5 lbs. to 100 lbs. for every inch greater than 5 feet.

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Calculation of Expected Body Weight (EBW) via the BMI method for pediatric patients

1. Identify the patient's height (meters, m) and weight (kilograms, kg).

2. Identify the median (50th percentile) BMI for the patient using the appropriate CDC BMI-for-Age Growth Chart (by gender and age).

3. Calculate the EBW or body weight needed for the patient to achieve a BMI-for-age at the 50th percentile using the following equation:

$$EBW\ (kg) = \text{median BMI-for-age}\ (kg/m^2) \times (\text{Height}, m)^2$$

4. To obtain the %EBW, compare the patient's actual body weight (ABW) to the calculated EBW using the following equation:

$$\%EBW = ABW/EBW \times 100$$

Initial Discussion of Treatment Plan with the Patient

Most children and adults with eating disorders are rule-followers and will respond to quiet, firm and kind limit-setting. Therefore, it is recommended to present the treatment plan matter-of-factly without offering options – this should be a "take-it-or-leave-it" approach. *(UW Health Low quality evidence, C recommendation)* Allow the patient to understand how the treatment of their condition will proceed from the outset. Clear presentation of the plan will avoid bargaining and dissent when he/she arrives to the floor.

In general, trigger words such as "food", "calories" and "weight" should be avoided. *(UW Health Low quality evidence, C recommendation)* Instead, refer to the treatment in medical terms such as "medicine", nourishment", or "energy." The patient will receive energy to keep their body safe and provide what the heart and vital organs need to perform basic functions. The word "nutrition" may be used after the provider has introduced to the patient the idea that "nutrition" is the "treatment needed to make the body safe."

Emergent Behavioral Situations

It is important to follow good general de-escalation strategies

- Have any people who are targets for the crisis behavior step out of the room.
- Keep as few staff as possible in the room but keep enough to provide for safety.
- Do not engage in bargaining or argument.
- Use simple, declarative statements to tell the patient what to do with their body to stay safe.
- If there is agitation, consider calling Security right away. They are unlikely to put hands on the patient but can be a calming "show of force" whose presence can remind the patient to be civil.

Pediatric patients

Child Psychiatry can be paged at any time for consultation/advice; there is someone in the hospital about half of the time. If after hours, page the psychiatry resident on call. The Provider can contact the UW Main Hospital Adult Psychiatry Unit for other support or guidance as necessary.

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Adult Patients
If patients are threatening to leave AMA, providers may call or page Psychiatry (Adult Psychiatry: pager 0079). Questions regarding whether to implement emergency detention may be directed to Psychiatry. Additional information on whether to implement the emergency detention plan may be found in the UW Health Clinical Policy 1.2.1 Emergency Detention- State Mental Health Act. Clinicians can request physical detention of a patient when they lack decisional capacity and their medical condition poses an imminent risk. Security and the Behavioral Response Team may be able to assist with physically holding a patient sufficiently long to have the patient evaluated for their decisional capacity and medical condition.

For adult patients:
Unlike other medical disorders, patients with an eating disorder require providers to kindly, quietly, but firmly assume control. It is important not to negotiate. Providers should express concern for the patient's well-being and use simple, declarative statements to tell the patient what they need to do to stay safe. If done in a kind, caring manner, and in the context of a trusting relationship, patients have later reflected that the action was perceived as care and help rather than compulsion or coercion.[10-12] *(UW Health Moderate quality evidence, C recommendation)*

Adult providers often express concerns regarding patient right of refusal in eating disorders. Patients with an eating disorder demonstrate impaired judgment in this area of their lives, even though they may demonstrate capacity in areas not influenced by obsession with food and/or body weight.[13,14] Decision-making regarding capacity is a complex process in patients with eating disorders. If questions arise regarding decisional capacity, providers may request assistance from the Psychiatry consultation service or page the Ethics provider on-call. *(UW Health Moderate quality of evidence, C recommendation)*

It is suggested to have a plan to consult Psychiatry BEFORE it becomes an emergent or against medical advice (AMA) discharge situation. Do NOT rely solely on Psychiatry as an emergency backup.

Health Care Team Communication

The assessment and treatment of patients with an eating disorder should be an interdisciplinary team with regular communication between medical, nursing, nutritional, and mental health providers.[5,7,15] This includes representation from hospitalist team, staff nurse, clinical nurse specialist, nurse manager, psychiatry, health psychology, case management, social work, nurse practitioner or physician assistant, adolescent medicine and clinical nutrition.

Vital Signs and Patient Monitoring

All patients should have their vital signs measured and neurologic status assessed every 4 hours while on continuous cardiac monitoring.[11,16] This interval may be increased to every 8 hours when continuous cardiac monitoring is discontinued. *(UW Health Very low quality evidence, S recommendation)* Orthostatic vitals should be measured daily (preferably in the morning) while lying down and standing.[17] *(UW Health Very low quality evidence, S recommendation)* Vital signs then should be taken while standing after 1 and 3 minutes. Patients may sit if they are not able to stand.[18] *(UW Health Low quality evidence, S recommendation)*

Refeeding syndrome is of concern in patients with an eating disorder and can occur in severely malnourished patients who receive nutritional replenishment. Patients can exhibit

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cardiovascular, neurological, and hematological complications. These complications arise as a result of electrolyte abnormalities (e.g., shifts from extracellular to intracellular spaces in patients who have total body depletion) caused by malnutrition.[19-21] Therefore, continuous monitoring of cardiac rhythm/telemetry should be completed (including when the patient is outside of their room), until all ECG and electrolyte abnormalities are resolved for 24 hours *(UW Health Very low quality evidence, S recommendation)*

Height should be measured on admission. Weight measurements should be obtained daily in the morning, post-void and prior to eating or drinking anything.[11] Patients should be dressed in a hospital gown and underwear (no bra) with dry hair (i.e., before showering). All measurements should be obtained with the patient facing away from the scale. ***Weight should not be discussed with the patient.***

Adult Patients MyChart access should be disabled for any adult inpatient admitted for acute exacerbation of an eating disorder.

Activity and Supervision

Patients are placed on bedrest restriction; however patient may walk to and from the bathroom with supervision.[11] *(UW Health Very low quality evidence, C recommendation)* Initially, patients may be allowed to sit in up in bed, but not in a chair. Due to the risk of falling, patients who request to attend hospital activities outside of their room should be escorted in a wheelchair pending the approval of the attending physician. Activity progression is dependent upon absence of near-syncopal/syncopal symptoms. *(UW Health Very low quality evidence, C recommendation)*

Patients with eating disorders need continual observation for safety and compliance which may include video monitoring or in-person observation.[22,23] *(UW Health Low quality evidence, S recommendation)*. Additional information on constant observation may be found in the UW Health Nursing Patient Care Policy 14.40AP – Constant Observation. Patients will have a staff member present at all meal and snack times, as well as during bathroom/shower use. Minimum supervision may be considered after 2-3 days of weight gain or after 1 week.

Under minimum supervision, the patient will still have a staff member present at all meal and snack times, as well as during bathroom/shower use. **Family members or friends CANNOT SUBSTITUTE for staff who are providing constant observation under ANY circumstances.** Patient Safety Observers (PSO) are NOT utilized to monitor patients with eating disorders.

If there is a concern for self-harm or suicidal behavior, an order for suicide precautions (Suicide Precautions- Non-Psychiatry) is placed. Upon assessment of suicidality, if constant observation is required for monitoring of suicide/self-harm behavior, a Patient Safety Attendant (PSA) should be used for constant observation.

Precautions for purging behavior are recommended and include removing all loose trash cans from the room, and providing direct supervision during bathroom and shower use. *(UW Health Very low quality evidence, S recommendation)*

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Bathroom privileges

Bathroom use is restricted during meal and snack times. Any patient with an eating disorder CANNOT use the bathroom for 1 hour after any meal or snack and must be observed when using the bathroom. The bathroom door should be open when the patient is using the bathroom or shower to ensure that the patient does not drink extra water while in the bathroom or purge their food. One 5-minute seated shower per day may be allowed when electrolytes are stable, no arrythymias are present, absence of dizziness when seated, and dizziness when standing resolves within one to two minutes.

Fluids and Medications

Patients who are dehydrated upon admission may receive intravenous fluid. Pediatric patients may receive a bolus of normal saline 10-20 mL/kg. Adult patients may receive 500 mL aliquots of normal saline, with interval reassessment due to possibility of precipitating heart failure. *(UW Health Moderate quality evidence, S recommendation)* Electrolyte or vitamin supplementation (see **Table 3**) may also be appropriate based upon laboratory values obtained at or during admission.[7,24,25] *(APA Class I)*

In/Outs should be strictly measured every 4 hours.[18] *(UW Health Moderate quality evidence, S recommendation)*

Maintenance fluids should be administered as part of meals. Clinical Nutrition should specify in the diet order the amount of additional water that the patient may have from Nursing. Ideally, all fluids should be provided orally. Patients are not allowed to drink any caffeine containing beverages.

Table 2. Holliday-Segar Method for Calculating Fluid Requirements

Weight	Holliday-Segar Method	Holliday-Segar Estimate
0-10 kg	100 mL/kg/day	4 mL/kg/hr
10-20 kg	1000 mL + 50 mL/kg for each kg above 10 kg	2 mL/kg/hr
> 20 kg	1500 mL + 20 mL/kg for each kg above 20 kg	1 mL/kg/hr
Total Fluid Order: IV + PO = maintenance (minimum) to 1.5x maintenance (maximum), as calculated by the Holliday-Segar Method for pediatric and adult patients.[26]		

Generally, home medications are continued during hospitalization except for stimulant medications (i.e., amphetamine, methylphenidate preparations) which should be discontinued due to their potential for misuse or abuse. *(UW Health Very low quality evidence, C recommendation)* If lisdexamfetamine (Vyvanse®) was prescribed for outpatient use to specifically treat binge eating disorder, it is at the discretion of the primary physician whether or not to continue the medication during the inpatient admission. *(UW Health Very low quality evidence, C recommendation)*

Bowel motility agents (such as senna-docusate) or fiber supplements should be avoided. Stimulant laxatives may cause painful cramping or even long-term damage to colonic nerve cells in patients with an eating disorder such as anorexia nervosa.[27] *(UW Health Very low quality evidence, S recommendation)* For patients who require bowel management medications for constipation, polyethylene glycol is preferred.[27] *(UW Health Low quality evidence, C recommendation)* Ondansetron may be considered for patients having ongoing nausea in the absence of prolonged QTc.[28] *(UW Health Very low quality evidence, C recommendation)*

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Table 3. Recommended Electrolyte/Vitamin Supplementation and Bowel Motility Agents

Suggested Medications	Recommended Dose-Pediatric	Recommended Dose-Adults
Multivitamin	1 tablet/day	1 tablet/day
Thiamine	----	100 mg/day[29]
Polyethylene glycol[27]	17 g	17 g

Laboratory Tests and Tests[7,11,16,24,30-32]

Upon admission it is recommended to obtain the following labs and tests *(UW Health Low quality evidence, C recommendation)*:

- Electrocardiogram (EKG)
- Serum labs: CBC without differential, CMP (sodium, potassium, chloride, total carbon dioxide, anion gap, glucose, BUN, creatinine, calcium, albumin, total protein, total bilirubin, AST, ALT, alkaline phosphatase), magnesium, phosphate.
- Urine labs: Urine specific gravity
- For Females only: Urine Beta-HCG; serum lab for protein only in presence of amenorrhea.

Subsequently, electrolytes (sodium, potassium, chloride, total carbon dioxide, anion gap), magnesium, and phosphate labs should be measured daily for 7 days. Once the patient achieves goal calorie intake, or maintains normal electrolyte levels, refeeding labs may be discontinued. *(UW Health Low quality evidence, C recommendation)* Urine specific gravity labs may be ordered to help ascertain if unexpected measured weight reflects excessive water intake.[7] *(APA Class I)*

Nutrition: Meal Planning

The primary goal of medical hospitalization for an eating disorder is to safely restore physiological stability through nutritional rehabilitation.[7,32] Meals should be planned by Clinical Nutrition using UW established calorie progressions and **patients should not be allowed to order their own meals**.[33] *(UW Health Low quality evidence, S recommendation)*

Clinical Nutrition will meet with the patient within 24 hours of admission to assess nutritional status and discuss mealtime expectations.[11] To capture patient preferences, see Personal Food Preferences Worksheet. Lactose-free, vegetarian diet, and documented food allergies will be honored in meals planning however vegan diets will not.

Most patients start at a minimum of 2000 kcal/day, with calorie provision increases by 200-400 kcal/day.[34] *(UW Health Low quality evidence, C recommendation)* Patients with an admission weight < 65% IBW will start at lower initial kcal/day, which will be discussed and agreed upon with nutrition and the medical team. The eventual goal is for weight gain of a minimum of 0.8 kg per week however mild weight loss and weight plateau may occur during early refeeding stage.[35] *(UW Health Low quality evidence, C recommendation)* Patients are required to consume 100% of their provided meals and snacks before requesting extra food. Any request for additional food should be discussed with Clinical Nutrition.

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Nutrition: Meal and Snack Time Procedures

There is limited evidence to support a single most effective method of achieving weight restoration during inpatient treatment.[36] However, uniform, structured meal practices have been shown to produce weight gain in patients admitted with eating disorders.[37]

If a patient is admitted in the evening when Clinical Nutrition is unavailable, nursing will order one of the pre-planned meal options (Table 4). Patients may choose to either eat the meal or drink one can of 1.5 kcal/mL oral nutritional supplement (e.g., Boost Plus®, Ensure Plus®). If a dinner is needed after 2000, cold items can be requested from Central Services.

Table 4. Admission Meals Menu for Evenings/Weekends

Breakfast 0800-0830		
Standard	**Dairy Free**	**Vegetarian**
Breakfast Sandwich English Muffin- 1 each = 130kcal Scrambled Egg- 1 Egg = 90kcal Cheddar Cheese- 1 slice = 60kcal Ham- 2oz = 61kcal *Fruit* Banana- 1 each= 116kcal Total: 457kcal	*Breakfast Sandwich* English Muffin- 1 each = 130kcal Scrambled Egg- 1 Egg = 90kcal Ham- 2oz = 61kcal *Breakfast Side* Shredded Hash brown- ½ cup = 103kcal *Fruit* Orange Slice- 6 slices = 65kcal Total: 449cal	*Cereal* Oatmeal- ½ cup = 76kcal *Toppings for Breakfast* Berry Compote- 2.5oz = 36kcal *Bakery* Blueberry Muffin- 2oz = 228kcal *Fruit* Banana- 1 each= 116kcal Total: 456kcal
Lunch 1200-1230 or Dinner 1700-1730		
Standard	**Dairy Free**	**Vegetarian**
Hot Sandwich Grilled Chicken Sandwich- 1 each = 342kcal *Toppings for Sandwich* Lettuce- 1 leaf = 1kcal Tomato- 1 slice = 4kcal Mustard- 1 each = 4kcal *Fruit* Fruit Cocktail- 4oz = 70kcal *Salad* Baby Carrot- 1 serving = 24kcal Total: 445kcal	*Hot Sandwich* Grilled Chicken Sandwich- 1 each = 342kcal *Toppings for Sandwich* Lettuce- 1 leaf = 1kcal Tomato- 1 slice = 4kcal Mustard- 1 each = 4kcal *Fruit* Fruit Cocktail- 4oz = 70kcal *Salad* Baby Carrot- 1 serving = 24kcal Total: 445kcal	*Hot Sandwich* Spicy Black Bean Burger- 1 each= 322kcal *Toppings for Sandwich* Lettuce- 1 leaf = 1kcal Tomato- 1 slice = 4kcal Ketchup- 1 each = 10kcal *Fruit* Orange Slice- 6 slices = 65kcal *Salad* Relish Plate- 1 serving = 49kcal Total: 451kcal

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After Hours Dinner (2000 and after)*		
Standard/Dairy Free/Vegetarian		
Cold Sandwich Ham and Cheese Sandwich – 1 each = 250 kcal *Toppings for Sandwich* Mayonnaise – 1 each = 74 kcal *Fruit* Banana = 116 kcal Total: 440 kcal	*Cold Sandwich* Peanut Butter & Jelly Sandwich – 1 each = 409 kcal *Fruit* ½ Banana = 58 kcal Total: 467 kcal	*Cold Sandwich* Peanut Butter & Jelly Sandwich – 1 each = 409 kcal *Fruit* ½ Banana = 58 kcal Total: 467 kcal
Snacks		
Standard/Dairy Free/Vegetarian		
Snack Relish Plate- 1 serving = 49kcal Hummus- 2oz = 150kcal *Fruit* Watermelon- ½ cup = 25kcal Total: 224kcal	*Cold Sandwich Half* Whole Wheat Bread- 1 slice = 70kcal Peanut Butter- 1 Tbsp = 103kcal *Fruit* Fresh Fruit Cup- ½ cup = 48kcal Total: 221kcal	*Bakery* Banana Bread- 1 slice = 202kcal *Fruit* Watermelon- ½ cup = 25kcal Total: 227kcal

Patients receive 3 meals and 2-3 snacks per day, depending on calorie level. Meals should be scheduled to arrive between 0800-0830, 1200-1230, 1700-1730. Snacks should arrive between 1000-1030, 1500-1530, and 2000-2030. If a tray is late, the RN should page Clinical Nutrition.

Patient should be required to eat 100% of the food on their tray within 30 minutes (for meals) or 20 minutes (for snacks). Meals include calorie-containing beverages and condiments. Water bottles that come with meals may be kept on the patient's bedside table for > 30 minutes but must be consumed prior to the arrival of the next tray.
If the patient eats <100% of a meal or snack, then the patient should be offered a specified volume of 1.5 kcal/mL oral nutritional supplement (e.g., Boost Plus®, Ensure Plus®) (see Calorie Progression "Bell Meal Replacement Guidelines"). The actual can of 1.5 kcal/mL oral nutritional supplement should NOT be given to the patient- the appropriate portion should be poured into a separate cup for consumption. If the patient is unable or unwilling to drink the nutritional supplement within 15 minutes, then (at first refusal) a nasogastric feeding tube (NG) will be placed. The 1.5 kcal/mL oral nutritional supplement will then be given via NG tube bolus.[7,20,32]

If the patient refuses the NG tube, it is important to remind the patient that the NG tube is a valuable part of a safe treatment plan since it may be challenging to eat the full amount of nourishment the patient's heart and body needs. Providers should emphasize that the NG tube allows the patient to receive the nourishment safely, without worry or pressure. Providers should not negotiate, and the NG tube should NOT be conveyed as punishment.

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All intake should be documented in the designated Oral (mL), % of Diet Eaten, Nutritional Supplement Type, and Nutritional Supplement Intake (mL) rows. *For adult patients* only: Food on trays should be recorded via the Mobile Intake application as well.

Absolutely no outside food is permitted. Family members may eat in a patient's room but cannot share food with the patient. All food must be disposed of OUTSIDE the patient's room.

Discharge Planning and Criteria

The goal of treatment in the inpatient and outpatient setting is to help the patient achieve and maintain physical and psychological health. It is recommended that the multidisciplinary team meet weekly (at a minimum) to set discharge goals. The patient's family may be included in these meetings at the team's discretion.

Weight is never used as the sole criterion for discharge from inpatient care. *(APA Class I)* Patients must meet *at least one of the following* discharge criteria[17,22] (**Table 5**) and have a discharge plan in place (i.e., discharge to referral inpatient facility vs. outpatient follow-up). *(UW Health Low quality of evidence, C recommendation)*

If the patient is being discharged home, a discharge meal plan is coordinated between the patient and the dietitian (see Discharge Meal Planning Guide), and exercise parameters are provided by the provider to the patient at discharge.

Table 5. Discharge Criteria from Inpatient Treatment

Medical Indications for Discharge
Weight: > 75% IBW **OR** weight stabilization
Temperature: Normothermia for 24 hours
Cardiovascular*
• Heart rate > 40 bpm **OR** stable heart rate per attending physician discretion • Resolution of EKG abnormalities • Resolution of orthostatic symptoms (e.g., dizziness, light-headedness, etc.)
Normal labs*
* *Note*: The following **MAY BE REQUIRED 72 hours prior to discharge** if the patient is transferring to a referral inpatient facility (e.g., Rogers Memorial) that requires them: EKG; CBC with differential, CMP (sodium, potassium, chloride, total carbon dioxide, anion gap, glucose, BUN, creatinine, calcium, albumin, total protein, total bilirubin, AST, ALT, alkaline phosphatase), magnesium, phosphate, Urine Pregnancy, Urinalysis with Microscopy, TSH, Free T4, Urine Drug Screen Labs

Given the high rates of relapse, recurrence, crossover (i.e., change from anorexia nervosa to bulimia nervosa) and comorbidity in patients with an eating disorder, smooth transitions of care are important.[7] Prior to discharge, necessary appointments should be made with the following *(APA Class I)*:

- Primary Care Provider
- Outpatient Registered Dietitian
- Eating Disorder MD- Adolescent Medicine OR Primary Care Doctor, per team discretion
- Psychiatrist and/or Psychologist

(Note: *Appointments are not necessary if the patient is transferring to another inpatient unit)*

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Disclaimer
Clinical practice guidelines assist clinicians by providing a framework for the evaluation and treatment of patients. This guideline outlines the preferred approach for most patients. It is not intended to replace a clinician's judgment or to establish a protocol for all patients. It is understood that some patients will not fit the clinical condition contemplated by a guideline and that a guideline will rarely establish the only appropriate approach to a problem.Methodology

Development Process
Each guideline is reviewed and updated a minimum of every 3 years. All guidelines are developed using the guiding principles, standard processes, and styling outlined in the UW Health Clinical Practice Guideline Resource Guide. This includes expectations for workgroup composition and recruitment strategies, disclosure and management of conflict of interest for participating workgroup members, literature review techniques, evidence grading resources, required approval bodies, and suggestions for communication and implementation.

Methods Used to Collect the Evidence:
The following criteria were used by the guideline author(s) and workgroup members to conduct electronic database searches in the collection of evidence for review.

Literature Sources:
- Electronic database search (e.g., PubMed)
- Hand-searching journals, external guidelines, and conference publications

Time Period: July 2018 to October 2018

The following is a list of various search terms that were used individually or in combination with each other for literature searches on PubMed: eating disorder, stimulant, medication, nursing, management, hospitalization, acute, inpatient.

Methods to Select the Evidence:
Literary sources were selected with the following criteria in thought: English language, publication in a MEDLINE core clinical journal and strength of expert opinion (e.g., professional organization or society).

Methods Used to Formulate the Recommendations:
The workgroup members agreed to adopt recommendations developed by external organizations and/or created recommendations internally via a consensus process using discussion of the literature and expert experience/opinion. If issues or controversies arose where consensus could not be reached, the topic was escalated appropriately per the guiding principles outlined in the UW Health Clinical Practice Guideline Resource Guide.

Methods Used to Assess the Quality of the Evidence/Strength of the Recommendations:
Recommendations developed by external organizations maintained the evidence grade assigned within the original source document and were adopted for use at UW Health.

Internally developed recommendations, or those adopted from external sources without an assigned evidence grade, were evaluated by the guideline workgroup using an algorithm adapted from the Grading of Recommendations Assessment, Development and Evaluation (GRADE) methodology (see **Figure 1**).

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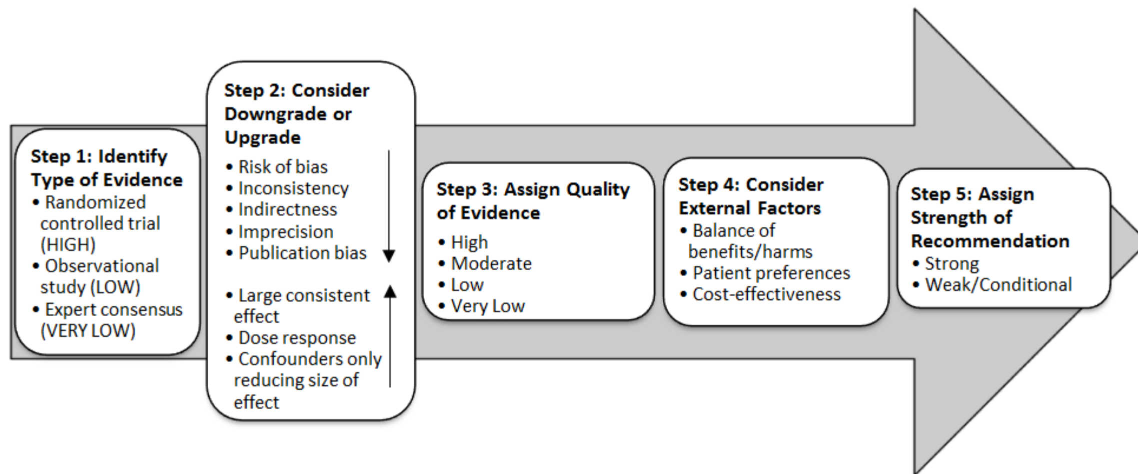
Figure 1. GRADE Methodology adapted by UW Health



Rating Scheme for the Strength of the Evidence/Recommendations:

GRADE Ranking of Evidence

High	We are confident that the effect in the study reflects the actual effect.
Moderate	We are quite confident that the effect in the study is close to the true effect, but it is also possible it is substantially different.
Low	The true effect may differ significantly from the estimate.
Very Low	The true effect is likely to be substantially different from the estimated effect.

GRADE Ratings for Recommendations For or Against Practice

Strong (S)	Generally should be performed (i.e., the net benefit of the treatment is clear, patient values and circumstances are unlikely to affect the decision.)
Conditional (C)	May be reasonable to perform (i.e., may be conditional upon patient values and preferences, the resources available, or the setting in which the intervention will be implemented.)

Figure 2. APA Grading Scheme

I	Recommend with substantial clinical confidence.
II	Recommend with moderate clinical confidence.
III	May be recommended on the basis of individual circumstances.

Recognition of Potential Health Care Disparities:
Eating disorders have historically been thought to afflict skinny, white, affluent girls however epidemiologic studies have demonstrated diversity among individuals with eating disorder symptoms by way of race/ethnicity, weight sex and socioeconomic background.[38]

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Collateral Tools & Resources

Metrics

- Staff satisfaction with virtual NA video monitoring, percentage of time virtual monitoring switched to physical patient safety attendant
- Average length of stay for patients with an eating disorder
- Readmission rate
- Number of pages to Clinical Nutrition
- Number of PSN events filed related to meal time procedures

Pertinent UW Health Policies & Procedures

1. UW Health Clinical Policy 1.2.1- Emergency Detention – State Mental Health Act

Clinical Practice Guidelines

UW Health Concentrated Intravenous Electrolytes – Adult – Inpatient Clinical Practice Guideline
UW Health Use of Oral and Enteral Electrolytes – Adult – Inpatient Clinical Practice Guideline

Patient Resources

1. Health Information- Eating Disorders, Cultural and Social Factors
2. Health Information- Eating Disorders: Feeling Better About Yourself
3. Health Information- Eating Disorders: Malnutrition Tests
4. Health Information- Eating Disorders: Things That Put a Person at Risk

Guideline Metrics:

Implementation Plan/Clinical Tools

1. Guideline will be housed on U-Connect in a dedicated folder for CPGs.
2. Release of the guideline will be advertised in the Clinical Knowledge Management Corner within the Best Practice newsletter.
3. Appropriate Health Link or equivalent tools will be reviewed, revised, or created to match the guideline recommendations, including:
    - IP – Eating Disorders – Pediatric – Admission [5036] Order Set
    - IP – Eating Disorders – Adult – Admission [6075] Order Set

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Appendix A. Personal Food Preferences Worksheet

UWHealth Personal Food Preferences Worksheet

Patient Name	
Date	

Top 3 Foods: Favorites

List three favorite foods and we will do our best to include them as often as possible into your meal plan. Please remember we do not honor vegan diets and we do not serve diet foods or caffeinated or diet beverages.

1.____

2.____

3.____

Top 3 Foods: To Avoid

List three that you do not care to eat. We will do our best to limit these foods in your meal plan, although there may need to be exceptions. Please know that we cannot exclude an entire food group such as dairy or carbohydrates.

1.____

2.____

3.____

***Please note that this food preference sheet will be used for your whole admission. It cannot be updated or changed while you are here.

Contact Clinical Nutrition for questions

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Appendix B. Calorie Progression "Bell Meal Replacement Guidelines"

NOTES: For patients with an eating disorder, Clinical Nutrition will determine the starting calorie level. See nutrition assessment note for details.

1.5 kcal/mL oral supplement (ONS) (e.g. Boost Plus, Ensure Plus) should be presented to patient pre-measures in a cup without nutrition information visible.

1200 Calorie Meal Plan 3 meals of 300 kcal 2 snacks of 150 kcal	
1.5 kcal/mL oral nutrition supplement replacement	
If pt eats <50% of MEAL	6.5 oz
If pt eats 50-99% of MEAL	3.5 oz
If pt eats <50% of SNACK	3.5 oz
If pt eats 50-99% of SNACK	2 oz

1400 Calorie Meal Plan 3 meals of 350 kcal 2 snacks of 200 kcal	
1.5 kcal/mL oral nutrition supplement replacement	
If pt eats <50% of MEAL	8 oz
If pt eats 50-99% of MEAL	4 oz
If pt eats <50% of SNACK	4.5 oz
If pt eats 50-99% of SNACK	2.5 oz

1600 Calorie Meal Plan 3 meals of 400 kcal 2 snacks of 200 kcal	
1.5 kcal/mL oral nutrition supplement replacement	
If pt eats <50% of MEAL	9 oz
If pt eats 50-99% of MEAL	4.5 oz
If pt eats <50% of SNACK	4.5 oz
If pt eats 50-99% of SNACK	2.5 oz

1800 Calorie Meal Plan 3 meals of 450 kcal 2 snacks of 220 kcal	
1.5 kcal/mL oral nutrition supplement replacement	
If pt eats <50% of MEAL	10 oz
If pt eats 50-99% of MEAL	5 oz
If pt eats <50% of SNACK	5 oz
If pt eats 50-99% of SNACK	2.5 oz

2000 Calorie Meal Plan 3 meals of 450 kcal 3 snacks of 220 kcal	
1.5 kcal/mL oral nutrition supplement replacement	
If pt eats <50% of MEAL	10 oz
If pt eats 50-99% of MEAL	5 oz
If pt eats <50% of SNACK	5 oz
If pt eats 50-99% of SNACK	2.5 oz

2200 Calorie Meal Plan 3 meals of 500 kcal 3 snacks of 230 kcal	
1.5 kcal/mL oral nutrition supplement replacement	
If pt eats <50% of MEAL	11 oz
If pt eats 50-99% of MEAL	5.5 oz
If pt eats <50% of SNACK	5 oz
If pt eats 50-99% of SNACK	2.5 oz

2400 Calorie Meal Plan 3 meals of ~530 kcal 3 snacks of 270 kcal	
1.5 kcal/mL oral nutrition supplement replacement	
If pt eats <50% of MEAL	12 oz
If pt eats 50-99% of MEAL	6 oz

2600 Calorie Meal Plan 3 meals of ~570 kcal 3 snacks of ~300 kcal	
1.5 kcal/mL oral nutrition supplement replacement	
If pt eats <50% of MEAL	13 oz
If pt eats 50-99% of MEAL	6.5 oz

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If pt eats <50% of SNACK	6 oz
If pt eats 50-99% of SNACK	3 oz

If pt eats <50% of SNACK	6.5 oz
If pt eats 50-99% of SNACK	4 oz

2800 Calorie Meal Plan 3 meals of ~630 kcal 3 snacks of ~310 kcal	
1.5 kcal/mL oral nutrition supplement replacement	
If pt eats <50% of MEAL	14 oz
If pt eats 50-99% of MEAL	7 oz
If pt eats <50% of SNACK	7 oz
If pt eats 50-99% of SNACK	3.5 oz

3000 Calorie Meal Plan 3 meals of ~660 kcal 3 snacks of ~340 kcal	
1.5 kcal/mL oral nutrition supplement replacement	
If pt eats <50% of MEAL	15 oz
If pt eats 50-99% of MEAL	7.5 oz
If pt eats <50% of SNACK	7.5 oz
If pt eats 50-99% of SNACK	4 oz

3200 Calorie Meal Plan 3 meals of ~720 kcal 3 snacks of ~350 kcal	
1.5 kcal/mL oral nutrition supplement replacement	
If pt eats <50% of MEAL	16 oz
If pt eats 50-99% of MEAL	8 oz
If pt eats <50% of SNACK	8 oz
If pt eats 50-99% of SNACK	4 oz

3400 Calorie Meal Plan 3 meals of ~760 kcal 3 snacks of ~380 kcal	
1.5 kcal/mL oral nutrition supplement replacement	
If pt eats <50% of MEAL	17 oz
If pt eats 50-99% of MEAL	8.5 oz
If pt eats <50% of SNACK	8.5 oz
If pt eats 50-99% of SNACK	5 oz

3600 Calorie Meal Plan 3 meals of ~800 kcal 3 snacks of ~400 kcal	
1.5 kcal/mL oral nutrition supplement replacement	
If pt eats <50% of MEAL	18 oz
If pt eats 50-99% of MEAL	9 oz
If pt eats <50% of SNACK	9 oz
If pt eats 50-99% of SNACK	4.5 oz

3800 Calorie Meal Plan 3 meals of ~850 kcal 3 snacks of ~420 kcal	
1.5 kcal/mL oral nutrition supplement replacement	
If pt eats <50% of MEAL	19 oz
If pt eats 50-99% of MEAL	9.5 oz
If pt eats <50% of SNACK	9.5 oz
If pt eats 50-99% of SNACK	5 oz

4000 Calorie Meal Plan 3 meals of ~900 kcal 3 snacks of ~440 kcal	
1.5 kcal/mL oral nutrition supplement replacement	
If pt eats <50% of MEAL	20 oz
If pt eats 50-99% of MEAL	10 oz
If pt eats <50% of SNACK	10 oz
If pt eats 50-99% of SNACK	5 oz

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Appendix C. Discharge Meal Planning Guide for Patients with an Eating Disorder

	Calories Per Exchange	Approximate Exchanges Per Day								
		800	1000	1200	1400	1600	1800	2000	2200	2400
Grains	80	3	4	5	6	7	8	9	10	11
Protein	55	3	3	4	4	5	6	7	8	9
Milk	90	2	2	2	3	3	3	3	3	3
Fruit	60	2	3	3	4	4	5	5	6	6
Fat	45	2	3	4	4	4	5	5	6	6
Vegetable	25	2	2	2	2	3	3	4	4	5

	Calories Per Exchange	Approximate Exchanges Per Day							
		2600	2800	3000	3200	3400*	3600	3800	4000
Grains	80	12	13	14	15	16	18	19	21
Protein	55	10	11	12	13	14	14	14	14
Milk	90	4	4	4	4	4	4	4	4
Fruit	60	6	7	7	7	7	7	7	7
Fat	45	6	6	7	8	9	11	13	14
Vegetable	25	5	5	5	6	6	6	6	6

* For meal plans >3400 calories, consider adding oral nutrition supplements to help patients achieve their exchange goals.

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