Eating Disorders and Substance Use

Jonathan Fanburg, MD, MPH
MaineHealth
Chief, Division of Young Adult Medicine
April 2026

New 4/6/26

MaineHealth Division of Young Adult Medicine

Ages 10-26

- Jonathan Fanburg
- Brock Libby
- Cynthia Robbins
- Lucy Rosenbaum

- South Portland

1. Specialty Clinic - Eating Disorders
2. Specialty Clinic - Young Adult Contraception
3. Specialty Clinic – Gender Health
4. Specialty Clinic - Young Adult Medicine
   A. Substance use
   B. Acne
   C. Mental Health
   D. Primary Care

Disclosures

- Nothing to disclose related to this talk.
- I am a speaker for Organon (maker of Nexplanon).

Goals – What is useful to know?

- DSM5 - definitions
- Focus on Anorexia Nervosa
  - Detect it Early
- Levels of intervention
- What goes on at those treatment levels
- How do Eating Disorders intersect with Substance Use Disorders?

Types of Eating Disorders – DSM 5 (2013)

- Anorexia Nervosa
  - Atypical Anorexia Nervosa
  - With Restricting type
  - With Purging type
- Avoidant Restrictive Food Intake DO (ARFID)
- Bulimia Nervosa
- Overeating Disorder
- Other specified feeding or eating disorder (OSFED)

Types of Eating Disorders – DSM 5

- Anorexia Nervosa– low body wt, fear of gaining, body image distortion
  - Atypical Anorexia Nervosa
  - With Restricting type
  - With Purging type
- Avoidant Restrictive Food Intake Disorder (ARFID)
- Bulimia Nervosa
- Binge Eating Disorder
- Other specified feeding or eating disorder (OSFED)

Types of Eating Disorders – DSM 5

- Anorexia Nervosa– low body wt, fear of gaining, body image distortion
  - Atypical Anorexia Nervosa – BMI > 50%ile for age
  - With Restricting type
  - With Purging type
- Avoidant Restrictive Food Intake Disorder (ARFID)
- Bulimia Nervosa
- Binge Eating Disorder
- Other specified feeding or eating disorder (OSFED)

Types of Eating Disorders – DSM 5

- Anorexia Nervosa– low body wt, fear of gaining, body image distortion
  - Atypical Anorexia Nervosa
  - With Restricting type
  - With Purging type
- Avoidant Restrictive Food Intake Disorder (ARFID) – No body image concerns
  - Types – Sensory, Choking, Too busy
- Bulimia Nervosa
- Binge Eating Disorder
- Other specified feeding or eating disorder (OSFED)

Types of Eating Disorders – DSM 5

- Anorexia Nervosa – low body wt
  - Atypical Anorexia Nervosa
  - With Restricting type
  - With Purging type
- Avoidant Restrictive Food Intake Disorder (ARFID)
- Bulimia Nervosa – recurrent binge eating, no control, compensation
  - Weight is normal (or even high)
  - qWk x 3mo.
- Binge Eating Disorder
- Other specified feeding or eating disorder (OSFED)

Types of Eating Disorders – DSM 5

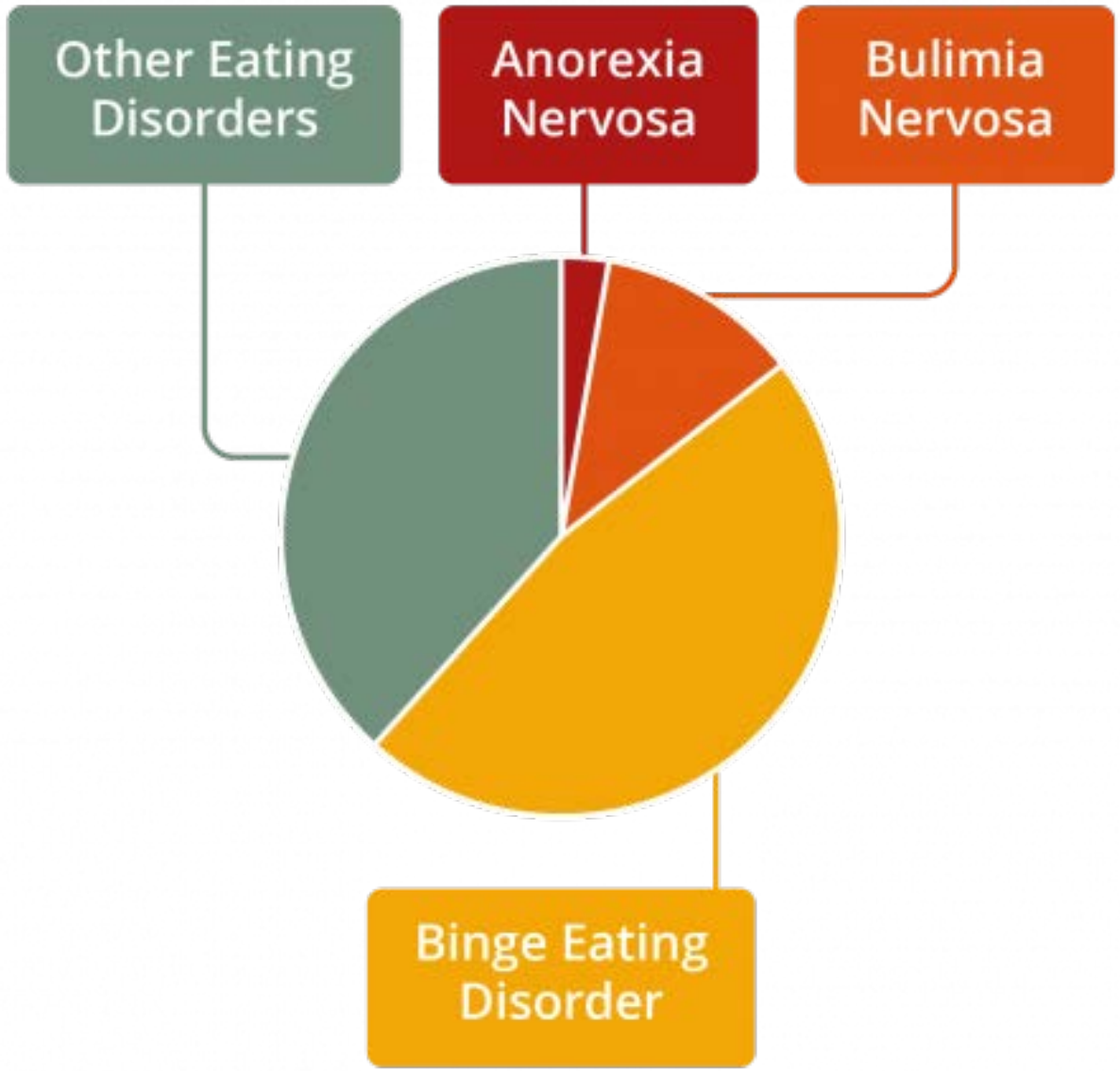
- Anorexia Nervosa
  - Atypical Anorexia Nervosa
  - With Restricting type
  - With Purging type
- Avoidant Restrictive Food Intake Disorder (ARFID)
- Bulimia Nervosa
- Binge Eating Disorder – Overeating, distress, qWk x 3mo.
- Other specified feeding or eating disorder (OSFED)

Types of Eating Disorders – DSM 5

- Anorexia Nervosa
  - Atypical Anorexia Nervosa
  - With Restricting type
  - With Purging type
- Avoidant Restrictive Food Intake Disorder (ARFID)
- Bulimia Nervosa
- Binge Eating Disorder
- Other specified feeding or eating disorder (OSFED) – not meeting criteria for above (includes Atypical Anorexia Nervosa)

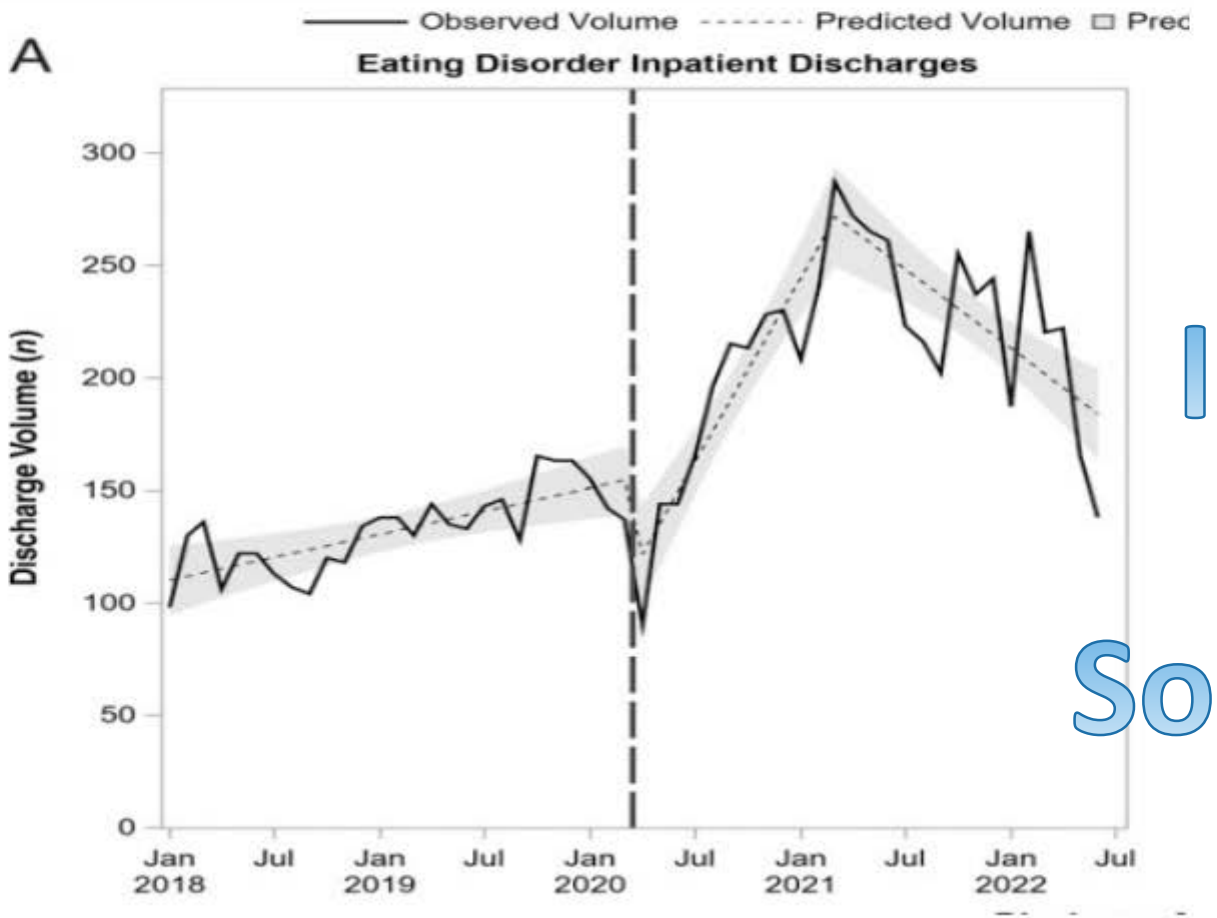
Anorexia is infrequent.

Why should you care?



Effects of SARS-CoV-19 Pandemic on Inpatient Admissions for Eating Disorders

16



Stress

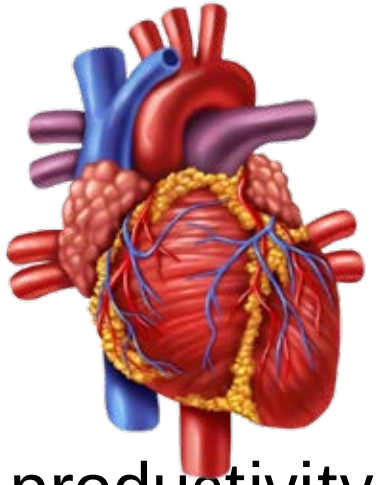
Isolation

Social Media

Why We Care?

- Mental health - #1 cause of teen female death from mental health issue

- Bones
- Brain
- Heart



- Social costs – healthcare costs, family stress, productivity costs

- AYA expects to see at least 165 new patients in 2026. (100 in 2024)

How Do You Identify An Eating Disorder

- Faint, Dizzy, Tired
- Visible weight loss
- Habits
  - Restricting behaviors
  - Increasing selectivity of foods
  - Vomiting – go to rest room after meals

- Growth charts

Growth Chart

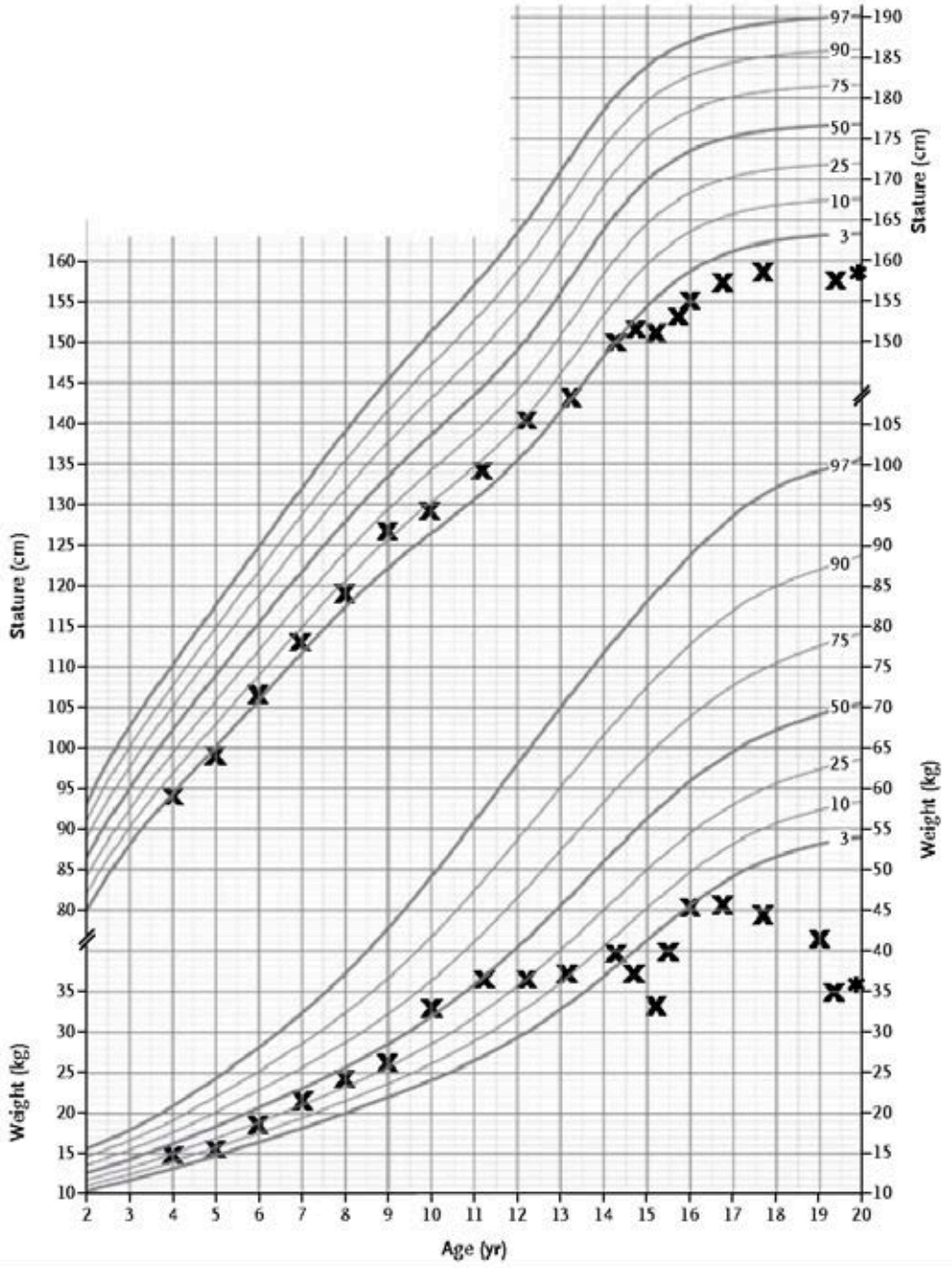
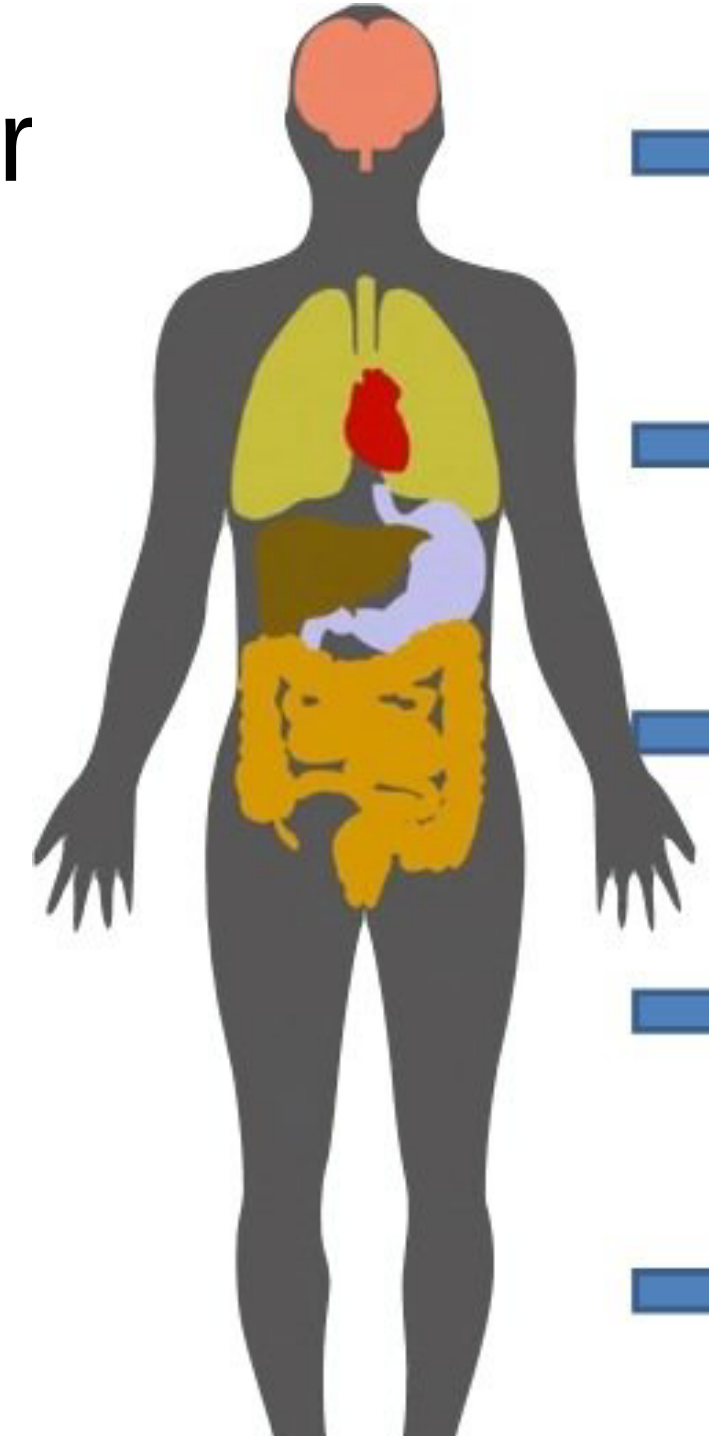


Figure 1. Growth Chart.

The Xs indicate growth points. The patient's rate of weight gain slowed between the ages of 11 and 15 years, increased slightly at the age of 16 years, but then fell again during his 19th year. Growth in stature decreased after

Looking closer at exam



BRAIN
- Distorted thought process

SKIN/HAIR
- Dry skin, Thin hair, Lanugo

HEART
- Bradycardia

INTESTINES
- Abdominal pain, dysmotility

BONES
- Stress fractures

HORMONES
- Low estrogen, no periods
- low testosterone

MUSCLES
- Weakness, wasting

1st Step – Is Weight Loss A Medical Cause?

- History – diarrhea? Vomiting? Headaches? Body image?
- Blood – CBC, CMP, ESR, Thyroid, Celiac

Set your goals (and the parents)

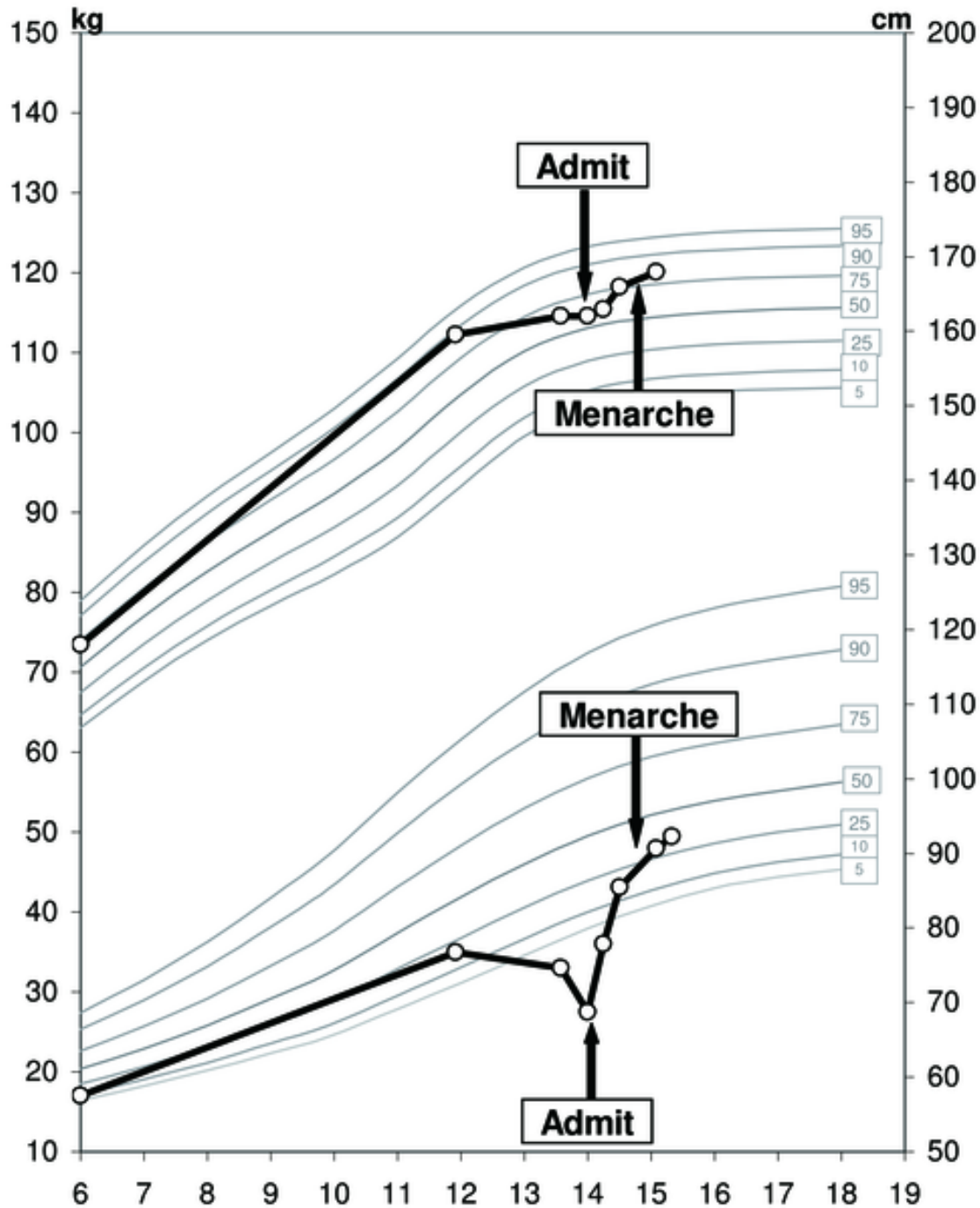
- Weight normalization
- Normalization of eating patterns
- Return of menses
- Prevention of short-term and long-term complications
- Helping family/friends cope with the disorder
- Normal quality of life

Figure out a “normal” weight. TBD

Target:

- Normal energy
- Normal thought process
- Normal BP, HR
- Normal menses

- Consider BMI%ile
- What was historical weight?
- When did one lose periods (10% higher)?


kg
cm
Admit
Menarche
95
90
75
50
25
10
5
Menarche
Admit

Estimate Goal Weight

Bone Size and Goal Weight:

an estimation method

- 5 feet- start at 100 lbs for girls, 106 for boys
- Add 5 lbs/inch for girls (6 lbs for boys), make it a range
- Add 10% if large boned (use their own pinkie and thumb around wrist to measure)
- Subtract 10% if small boned

Treatment

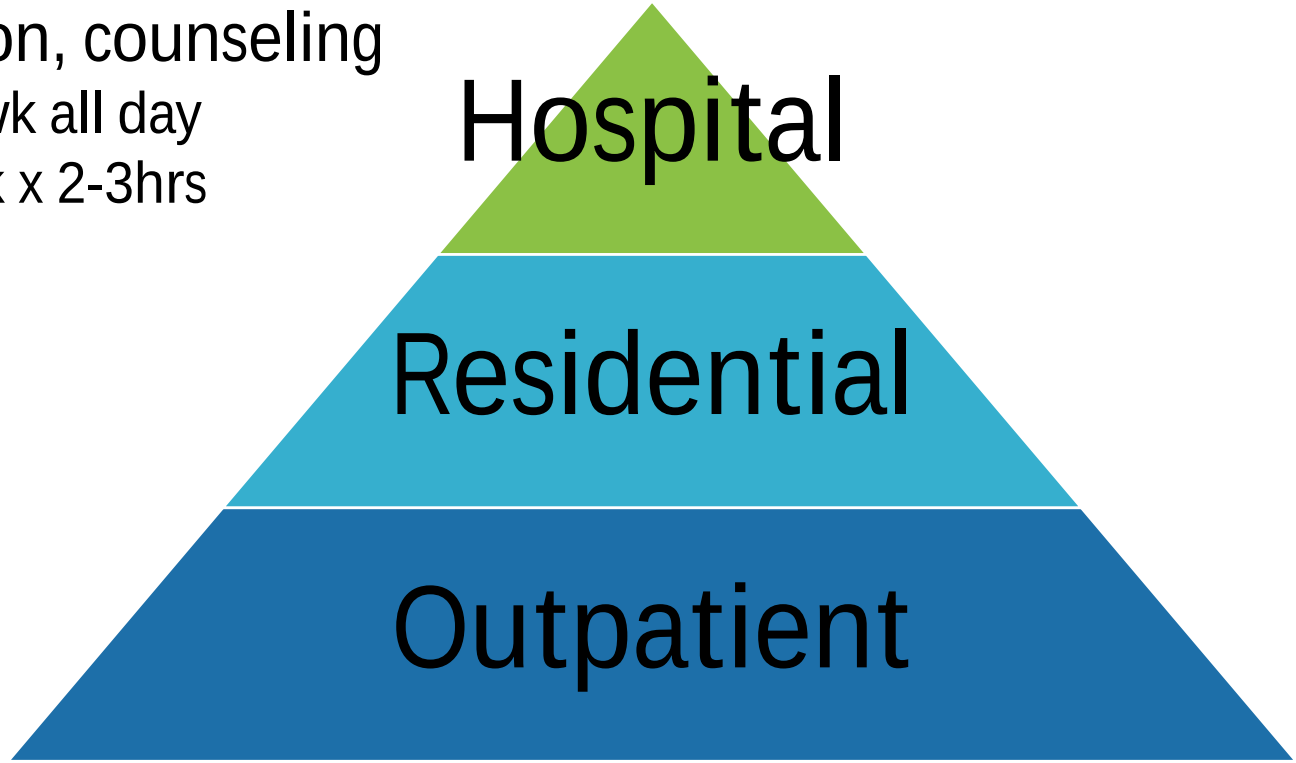
1. Location of treatment
2. Stages of treatment
3. Types of treatment

Treatment Locations

- Medical Admission – if low HR, recurrent vomiting, fainting, abnormal electrolytes or medical complication, failed outpatient therapy.

- Residential – groups, daily supervision, counseling
  - Partial Hospitalization (PHP) – 5 days/wk all day
  - Intensive Out Patient (IOP) – 3 days/wk x 2-3hrs

- Outpatient Care – visits 1-3x/wk
  - Physician
  - Counselor
  - Dietician

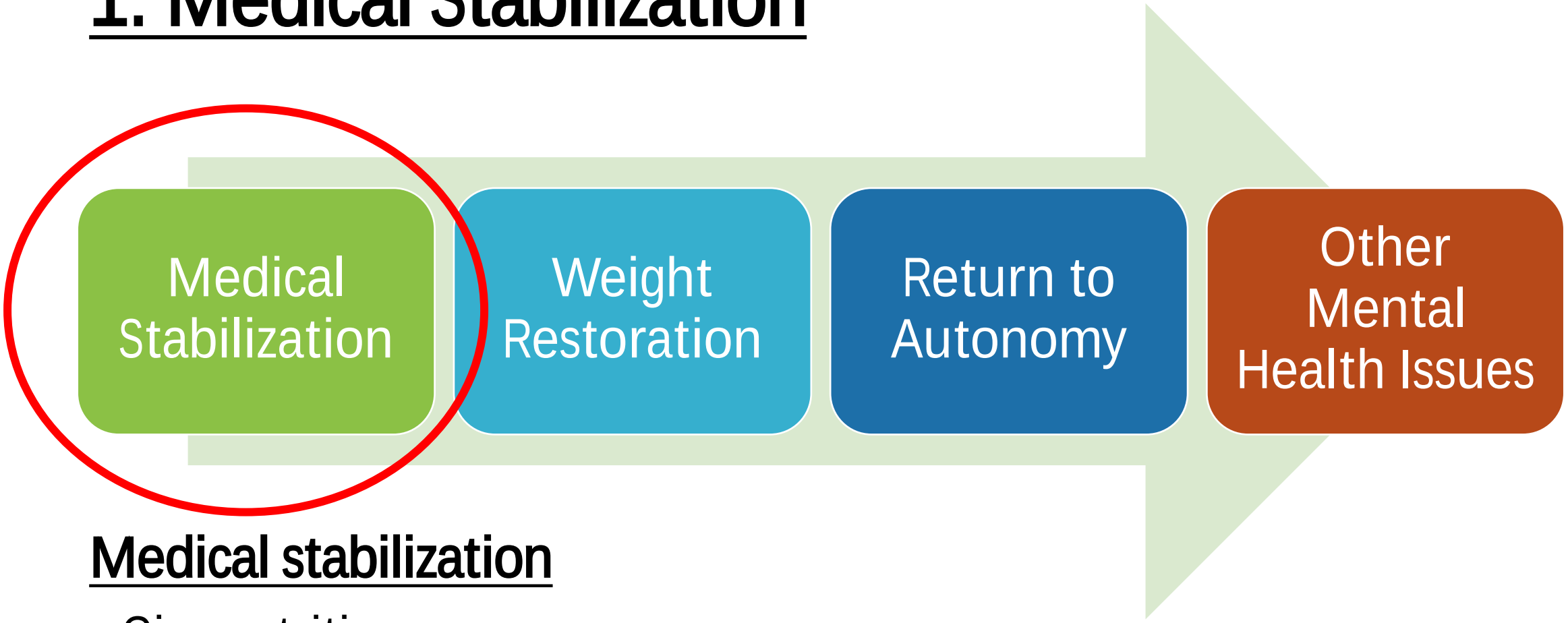


Stages of Treatment

Types of Treatment

- Family Based Therapy (Maudsley) – 70-80% of patients do well.
- Adolescent Based Therapy

1. Medical Stabilization



Medical stabilization

- Give nutrition
- Distress management
- Watch for refeeding syndrome (low K, Phos, Mg)

Hospitalization at MMC: Eating Disorder Protocol – **Admission Criteria**

- **Admission Criteria:**
- Day HR* <50bpm
- Night HR* <45bpm
- SBP* <90mm
- Hypothermia (T<35.5C)
- Electrolyte imbalances
- Arrhythmias
- Severe malnutrition (<70%mBMI, BMI z score -3, or weight loss >20% in 1 year)
- OTHER – acute food refusal, uncontrolled binging and purging, failure of outpatient treatment, acute medical complications of malnutrition (pancreatitis, seizure, syncope, etc.)
- Orthostatic* in conjunction with other criteria (systolic BP drop >10mm or HR change is >20bpm)

Hospitalization at MMC: Eating Disorder Protocol

- **Location:**
  - BBCH – up to 21yr old for eating disorders (space available)
  - Adult wards – 21+ (modified protocol)
- **Meals:**
  - 2000 cal/day (new), increase by 200cal/day
  - Blinded to calories and weight
  - 3 dislikes, all else is fair game
  - Trained coach for meals (BBCH)
  - Solid food – Ensure replacement – NGT
  - 18+ must agree to all of this prior to admission
  - Privileges if no NGT needed

Hospitalization at MMC: Eating Disorder Protocol

- Monitoring
  - Screen for other diseases – CBC, CMP, ESR, Thyroid, Celiac
  - Watch for Refeeding Syndrome – K, Mg, Phos
  - Watch for arrythmias – CR monitor

- **Team approach**
  - Hospitalist, Adolescent Medicine, Psychiatry, Dietary, Nursing, Family

Medications? Best Medicine is FOOD.

- Anorexia –
  - **Atypical Neuroleptics (olanzapine)** – decrease anxiety and depression, decreased delusional thinking, increase appetite, improved sleep
  - **Mirtazepine** – treats depression, increases appetite (efficacy?)
  - **Cyproheptadine** – increases appetite (efficacy?)

- Bulimia – SSRI's decrease agitation/anxiety (fluoxetine)
  - Avoid Buproprion (lowers seizure threshold if vomiting).

- Binge Eating Disorder –**Lisdexamfetamine** has FDA indication

2. Weight restoration

Team: Parents, Counseling, Dietician, Physician

Apply Family Based Therapy. Empower/Support the parent.

Alleviate anxiety and discomfort of the patient.

Achieve 0.5-1 pound/wk out-patient or 2-4 pound/wk residential

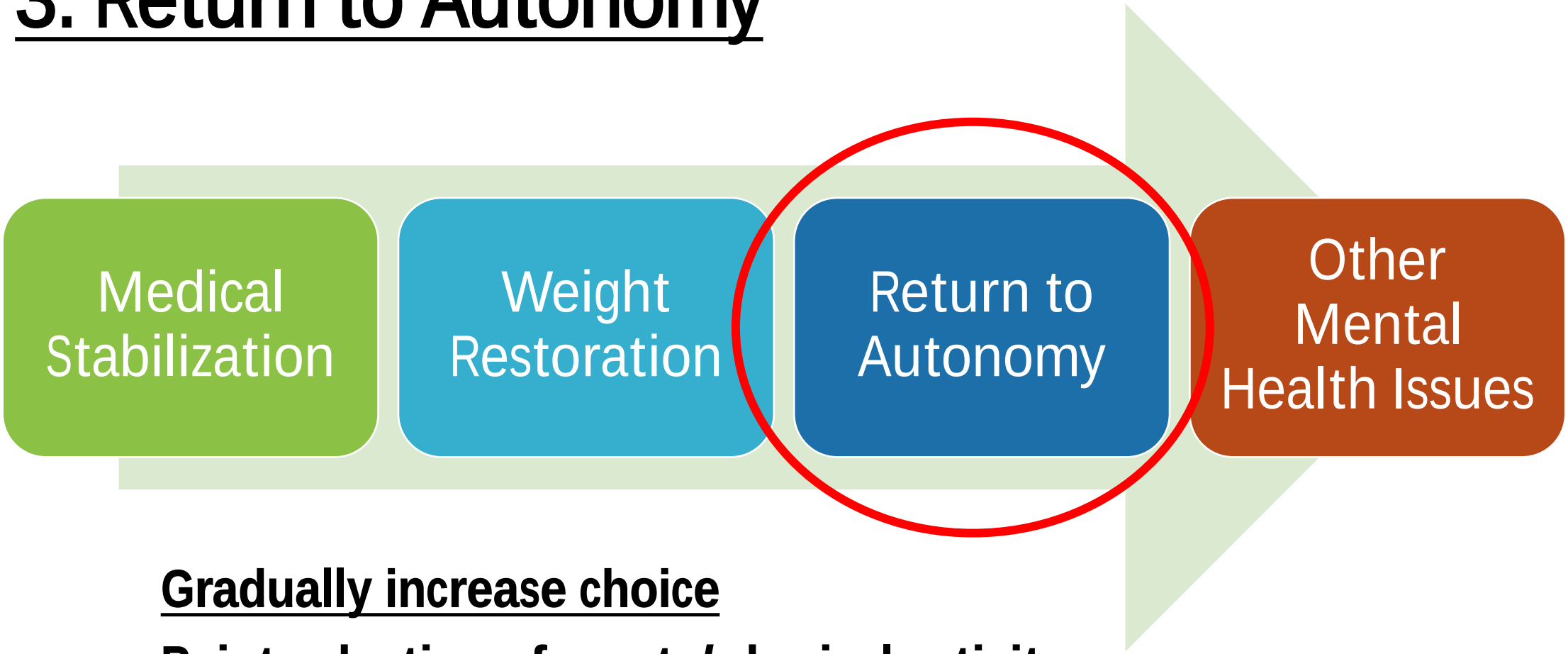
2. Weight restoration

Acknowledge that refeeding is hard.

FEAR is strong

Stomach has shrunk. Intestines don't work. Swelling hands/feet.

3. Return to Autonomy



Gradually increase choice

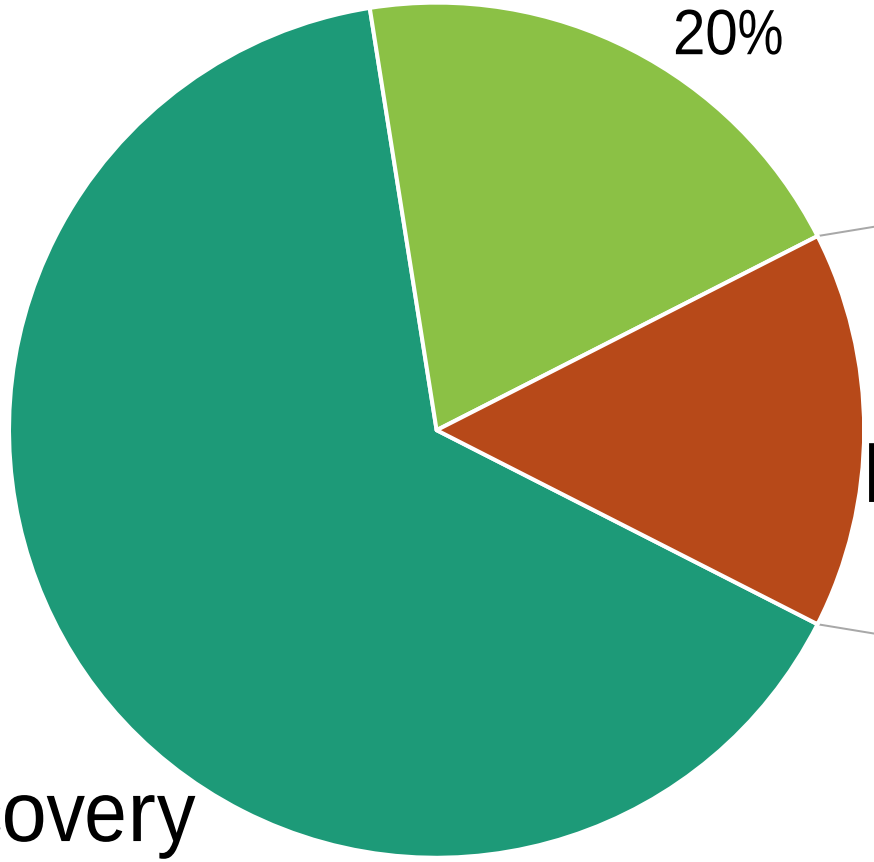
Reintroduction of sports/physical activity

4. Other Mental Health Issues

Treat Depression, Anxiety, Stress management, ADHD, Bipolar, other

Prognosis

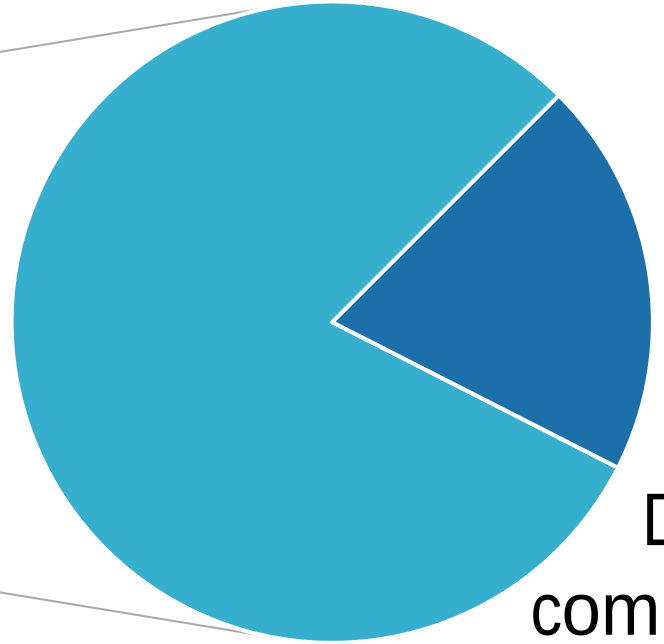
Higher risk:
- Long duration of illness
- Older age
- Purging behaviors
- Anxiety
- Lower socioeconomics



Partial Recovery
20%

Chronic Relapsing
15%

Full Recovery
65%



Die of complications
20%

SAHM and AAP Policy Statement and New Understandings

New Understandings – Males

1. Males need to be diagnosed and treated for eating disorders

- Need higher caloric intake for wt restoration
- Have similar issues with bone density to females
- Have risk for decreased Testosterone levels and libido
- Some have distortion in the form of being too small in muscle mass.
  - **BIGOREXIA**

  - **Looksmaxing** movement (TikTok)
    - Chiseled jawline, “hunter” eyes, muscular physique

New Understandings – New Weight Measure

2. We need a better measure for weight loss.

- Assessment degree of malnutrition now includes evaluation of weight history.
  - **Magnitude = (Highest body wt – wt) / highest body wt**
  - **Duration = months from highest body weight to weight**
  - **Rapidity = magnitude / duration**

- **Percent Median BMI** – (% mBMI) = absolute BMI/median BMI x 100
- Term such as IBW, EBW, MBW should be avoided.

New Understandings – Heavier Weight Patients

3. Atypical Anorexia (above 50%ile for BMI)

- Heavier weight to start – drop large amounts of weight.
- At risk for cardiac problems
- Tend to recover more effectively
- The goal weight is TBD.

New Understandings – Refeeding Syndrome

3. Initial caloric intake HIGHER (2000 cal/day)

4. Hypophasphatemia
   - More likely with rapid wt loss (as is bradycardia)
   - More likely with amenorrhea
   - Not associated with weight at admission

New Understandings – Weight Loss Medications

5. Fuel risk for unhealthy weight loss while not addressing underlying mental health issues.

- More to come on this.

New Understandings – Treatments – not yet

- Psychedelics – psilocybin (10 patients, 60% full remission)
- Transcranial magnetic stimulation for binge eating?

Substance Use Disorder and Eating Disorder

- Comorbid dx
  - Of patients with **eating disorders**, 22% also had SUD. (meta-analysis 43 studies)
    - Tobacco use disorder 36%
    - Caffeine use disorder 23%
    - Alcohol use disorder 20%
  - Of patients with **SUD**, 2.5-3.0 higher risk of also having an Eating disorder.

Psychiatry Research. 2019. Bahji A, Mazhar MN, Hudson CC, et al.
Drug and Alcohol Dependence. 2020. Munn-Chernoff MA, Few LR, Matherne CE, et al.

Most overlap

- Bulimia Nervosa
- Binge Eating Disorder
- Anorexia Nervosa – binge-eating/purging subtype

- Common issues – neural reward circuits, dopamine and opioid systems, and impulsivity, emotional regulation, and anxiety

- Anorexia Nervosa – restrictive subtype - May actually be protective against substance use because of their extreme inhibitory self-control.

Treatment considerations - TBD

- GLP’s
- Vyvanse
- DBT

(Nothing is FDA approved for this presently.)

Case: Johnny

- 17yr old using Testosterone (injections), GLP (injections), and isotretinoin (oral).
- Won’t use other drugs because they are unhealthy.
- Will be going off to college soon.
- Strong body image thoughts.
- Weight lifting
- Looksmaxing

Questions

Jonathan Fanburg, MD, MPH

Jonathan.Fanburg@mainehealth.org
Office: 662-1100

Brock Libby
Cynthia Robbins
Lucy Rosenbaum