The Weight is Over

What Every Family Medicine PA Needs to Know About the Disease of Obesity and Surgical Obesity Management

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Disclosures

Non-Declaration Statement: I have no relevant relationships with ineligible companies to disclose within the past 24 months. (Note: Ineligible companies are defined as those whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.)

Educational Objectives

At the conclusion of this session, participants should be able to:

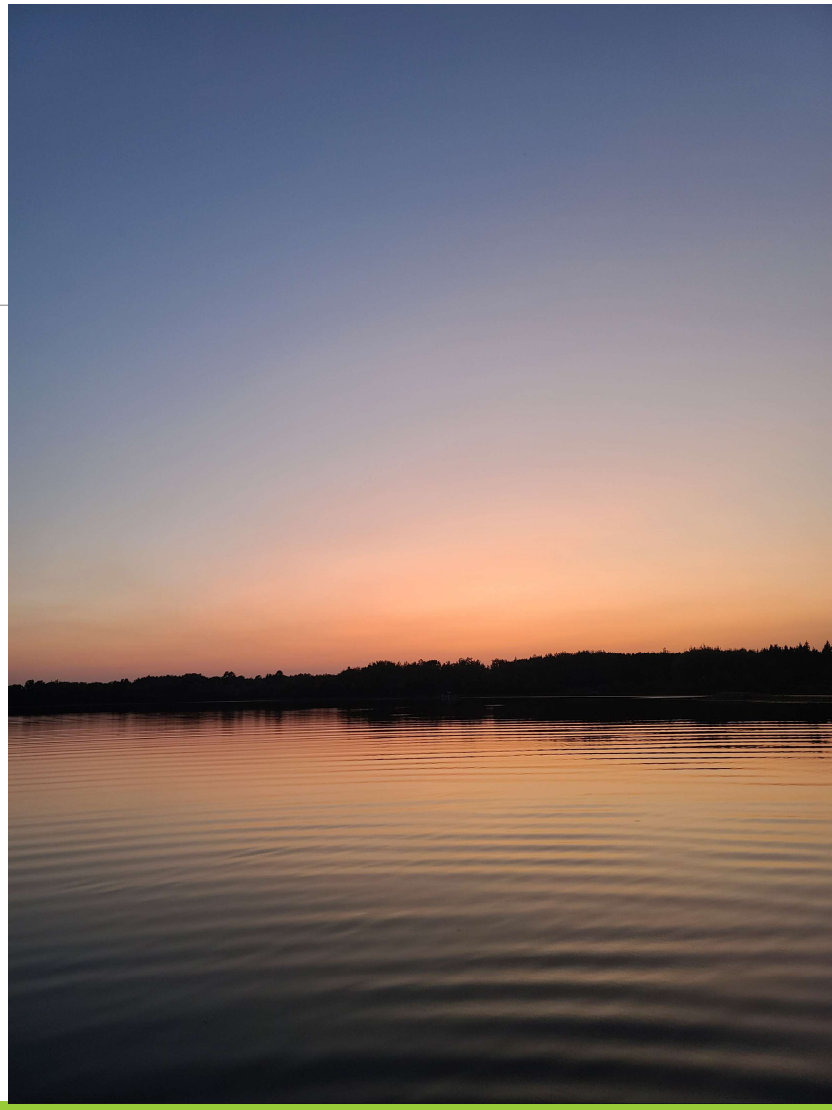
1. Define the chronic disease of obesity.

2. Identify patients who may qualify for surgical obesity management.

3. Identify the most commonly performed bariatric surgeries and their basic anatomic and physiologic changes.

4. Discuss how to approach and counsel patients on obesity and surgical obesity management options.

5. Discuss the post-operative lifestyle changes required for success that are common to all bariatric surgery procedures.



Changing Thought Patterns: Obesity as a Chronic Disease

Declaration of Obesity as a Disease:

- National Institutes of Health-1998
- Social Security Administration-1999
- Centers for Medicare and Medicaid Services-2004
- American Association for Clinical Endocrinology-2012
- American Medical Association-2013

Defining Obesity

- The 6 leading U.S organizations whose primary focus is addressing obesity include:
  - Obesity Medicine Association (OMA)
  - American Society for Metabolic and Bariatric Surgery (ASMBS),
  - Obesity Society (TOS)
  - Obesity Action Coalition (OAC)
  - Stop Obesity Alliance (STOP)
  - Academy of Nutrition and Dietetics (AAND)
- In 2022, these organizaions provided the following definition as part of a joint consensus statement:

*"…**a highly prevalent chronic disease** characterized by excessive fat accumulation or distribution that presents a risk to health and requires lifelong care. Virtually every system in the body is affected by obesity. Major chronic diseases associated with obesity include diabetes, heart disease, and cancer."*

-Consensus Statement on Obesity as a Chronic Disease

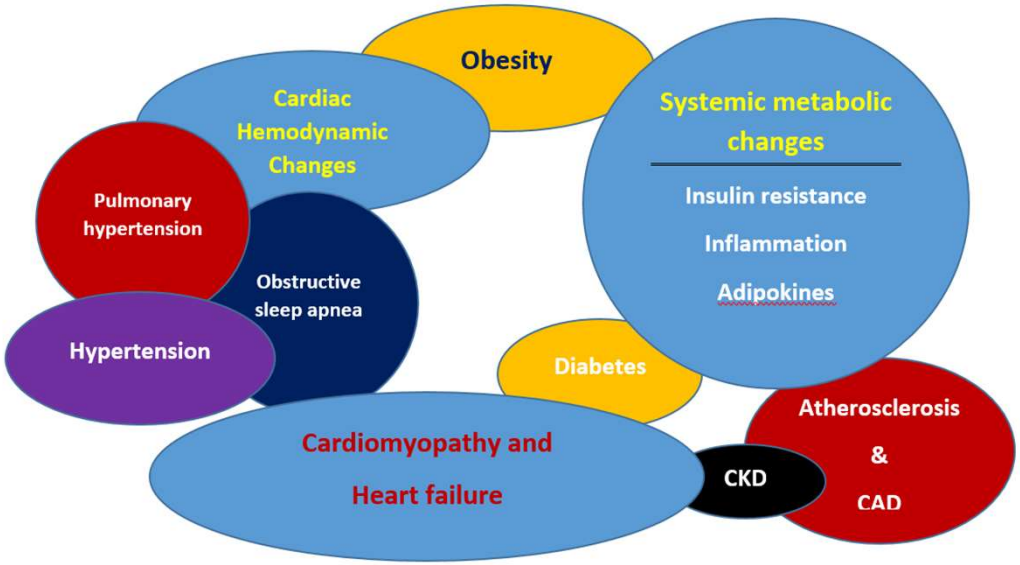
Brief Pathophysiology of Obesity

Increased adiposity leads to:

- Increased adipokine synthesis, pro-inflammatory cytokines, insulin resistance/impaired insulin signaling → Insulin resistance/type II DM
- Increased lipid production, hydrolysis of free fatty acids → dyslipidemia, CAD, NAFLD
- Activation of the Renin-Angiotensin-Aldosterone (RAS) system and sympathetic nervous system stimulation → hypertension
- Mechanical stress
  - Pharyngeal → OSA
  - Joints → Osteoarthritis
  - Intra-abdominal → GERD, Barrett's, renal dz
- Chronic inflammation and Hormonal changes → increased risk of many, many cancers

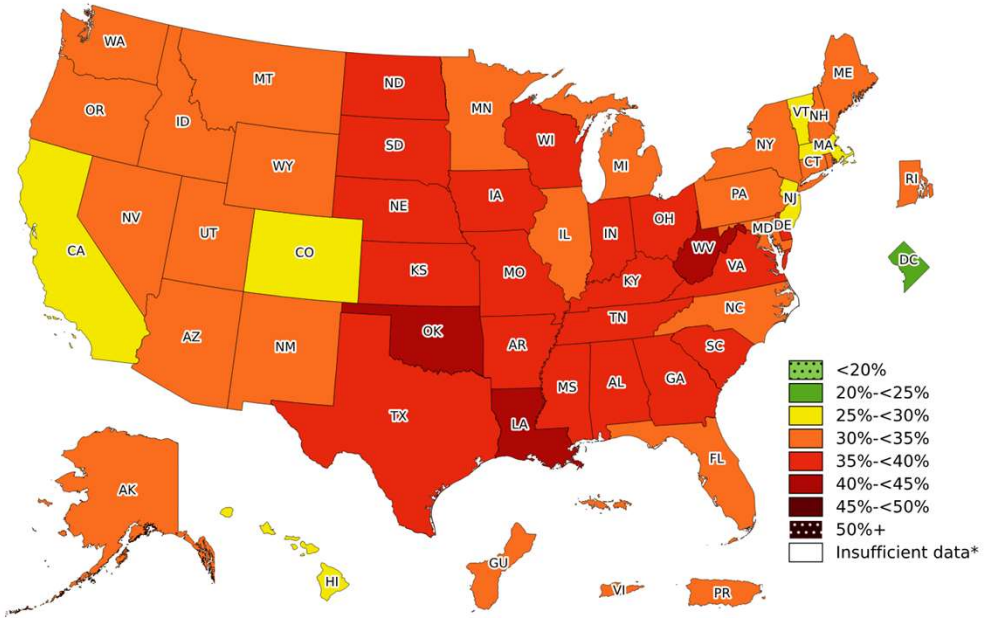
Brief Pathophysiology of Obesity

- Essentially, increased adiposity causes a number of mechanical, hormonal, and metabolic changes in the body that increase the risk for even greater fat accumulation, obesity, and risk/creation of other disease.
- The obesity-associated changes in the body further reduce fat utilization and enhance the body's capacity to store fat, creating a cycle that is difficult to overcome once begun.
- This situation is what makes obesity a progressive, chronic disease state.



Obesity in the U.S.

- Most recent CDC estimates of obesity prevalence in the U.S. (2022) show that **22 states** have an **adult obesity prevalence above 35%**
- **States with high obesity prevalence have more than doubled since 2018**
- No state in the U.S. has an obesity rate of less than 25% of their population
- Majority of states exceed 30%
- Highest prevalence ever recorded….



One Part of the Solution: Bariatric Surgery

Metabolic and Bariatric Surgery Procedure Types and Function

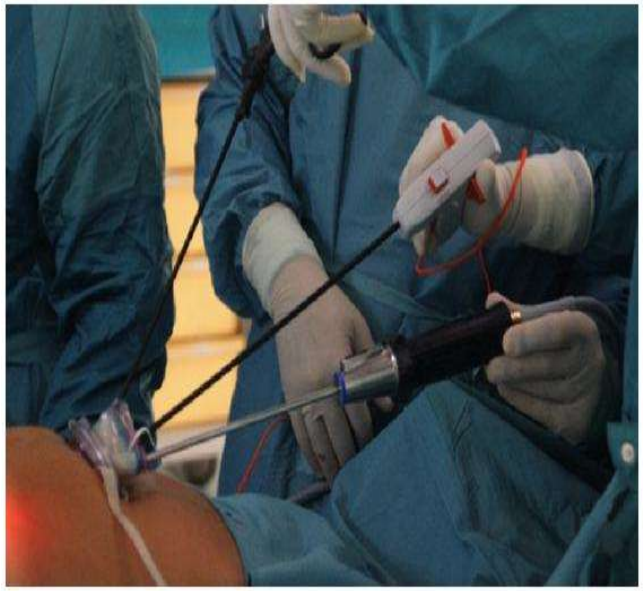
Bariatric surgery procedures function based on **the following overarching principles: restriction, malabsorption, behavioral/lifestyle changes**

Some procedures are only restrictive while others have elements of both restriction and malabsorption

The nature of some bariatric surgery structures can also lead to:

- Hormonal changes that lead to improved glycemic control
- Decreases in ghrelin, leptin, GIP
- Increases in bile acids which can also improve glycemic control
- Gut microbiome changes

Together with lifestyle changes, the resulting decreased adiposity can in turn effect many of the issues previously discussed by interrupting their pathophysiology.



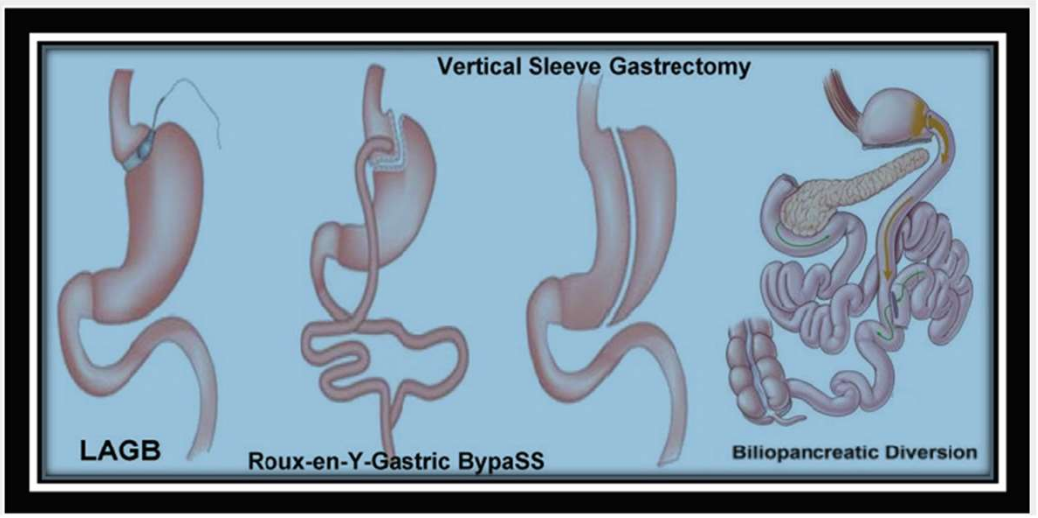
Metabolic and Bariatric Surgery Procedure Types and Function

The two **most common procedures** in the U.S. currently are the **sleeve gastrectomy** and the **Roux-en-Y gastric bypass**.

The sleeve is restrictive

The Roux-en-Y gastric bypass is both restrictive and malabsorptive

Others include biliopancreatic diversion/duodenal switch, single anastomosis duodenal-ileal bypass with sleeve (SADI-S) adjustable gastric banding, revisional



Sleeve Gastrectomy

About 80-85% of the stomach is removed

Creates banana-shaped pouch

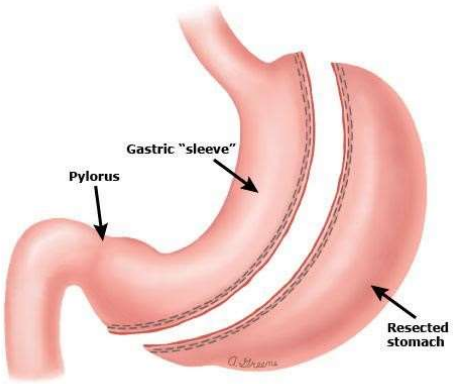
No re-routing of the small intestine

Restrictive only, but does also affect gut hormones, especially in regards to satiety

Can affect production of intrinsic factor (B12 absorption)

>50% excess weight loss

Maintenance of weight loss appears to be about 50% excess weight loss



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Roux-en-Y Gastric Bypass

Historical “gold standard” of weight loss surgery

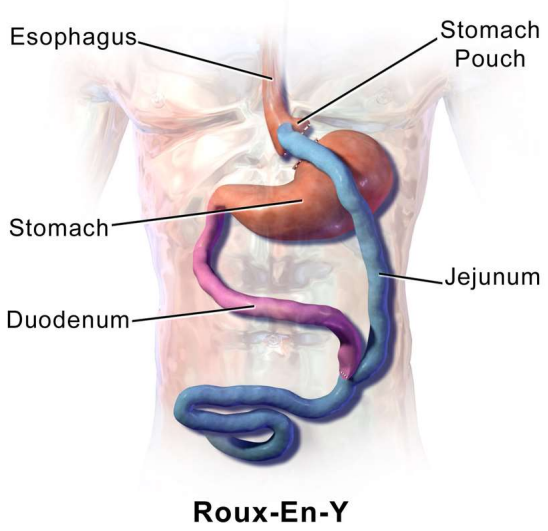
Previously the most commonly performed procedure

“Combined” type of procedure

Restrictive component=small stomach pouch

Malabsorptive component=skipping over the 1st part of the small intestine

The re-routed food stream also causes changes in gut hormones that promote satiety, suppress hunger, and more **significantly affect blood glucose control**



Roux-en-Y Gastric Bypass

60-80% excess weight loss

Typical maintenance of >50% excess weight loss

More complex operation

Can lead to deficits in vitamin B12, iron, calcium, folate, zinc, copper

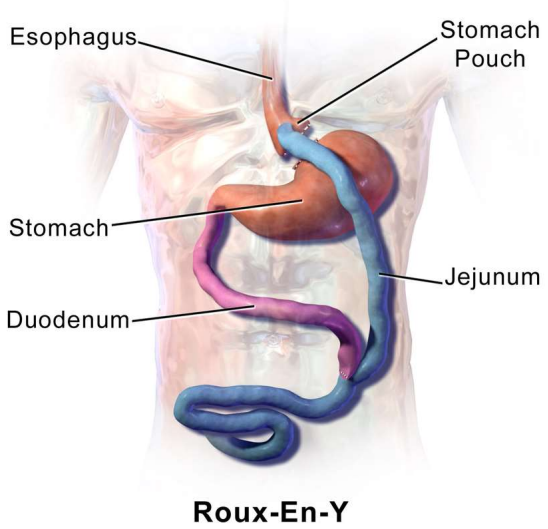
Dumping Syndrome possible

Excessive weight loss possible

Postprandial Hyperinsulinemic Hypoglycemia can be late complication

Really need to remind these patients to make sure they are taking multivitamin and calcium supplements every day

Extremely difficult and risky to reverse



A Word About the Adjustable Gastric Band

National trend is discontinuance of use (but these are still in many patients!)

Silicone band placed at superior portion of stomach, which has an inflatable balloon that creates a smaller stomach pouch above band

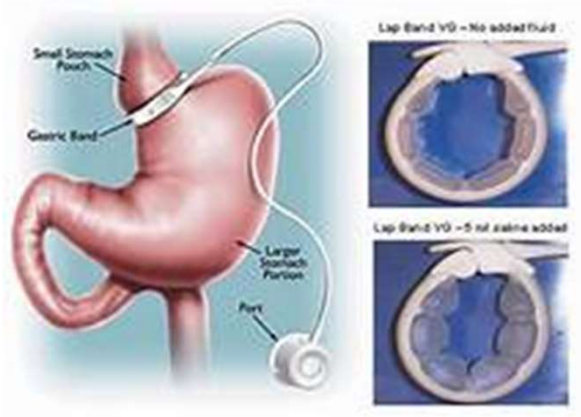
Considered restrictive

The feeling of restriction or fullness depends on the amount of saline in the balloon

This “filling” or “adjustment” is accomplished by injecting or removing sterile saline through a port under the skin with a Huber needle (non-coring)

These should be managed by a bariatric surgery team

If a patient has a history of gastric banding and has heartburn or other upper G.I. symptoms, please send them to a bariatric surgery practice for evaluation!



Bariatric Surgery Effectiveness and Benefits

- We can expect about 77% excess weight loss one-year post-op
- Patients maintain an average of 50% of their excess weight loss at 5 years post-op
- Majority of patients see improvements or resolution of their obesity-associated co-morbid conditions (type 2 diabetes, hypertension, dyslipidemia, obstructive sleep apnea, etc.)
- Patients who undergo bariatric surgery can expect a 30-50% decrease in the risk of premature death

Metabolic and Bariatric Surgery Safety Profile

Bariatric surgery procedures are safe or safer than the most commonly performed surgeries in the U.S.

- Cholecystectomy (0.3-0.6% mortality rate)
- Knee replacements (0.3% mortality rate)

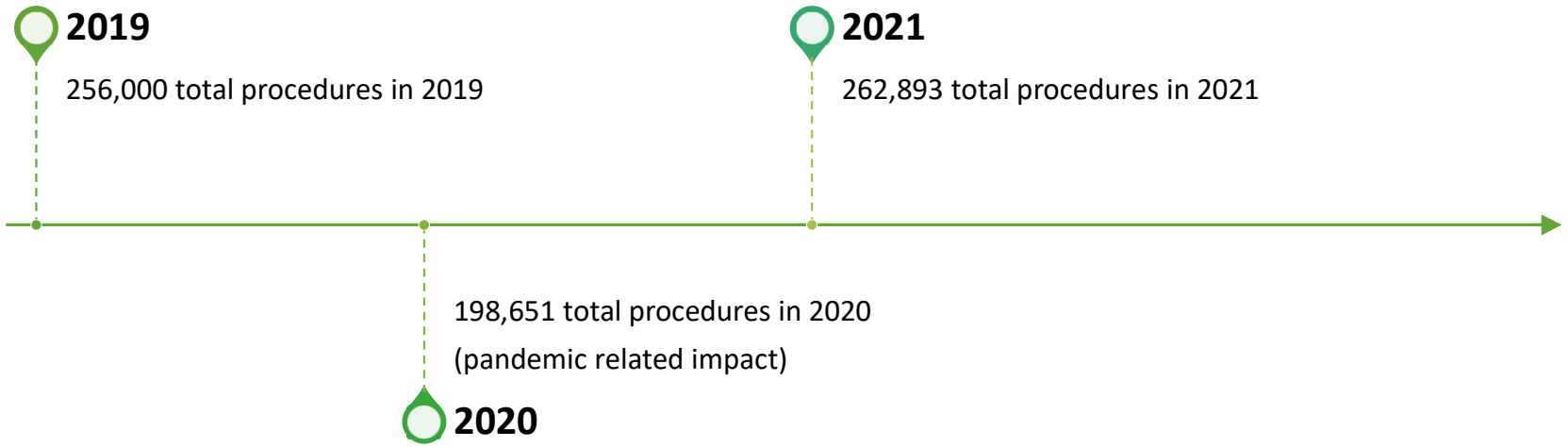
Mean mortality rate for all bariatric surgery procedures is 0.1-0.3%

- Mean mortality decreases to 0.04-0.1% at higher volume bariatric surgery centers

Risk of major complications 4% overall

The risks of not treating obesity and its associated co-morbid conditions generally surpasses the risks associated with bariatric surgery

Metabolic and Bariatric Surgery by the Numbers



****This represents less than 1% of the population currently eligible for bariatric surgery based on BMI status**

Who Qualifies for Bariatric Surgery?

BMI Requirements:
A Tale of Reality vs. Recommendations

Most insurances that cover bariatric surgery/programs follow this guideline:

- BMI 35-39.9 with co-morbid conditions that would likely improve with weight loss
- BMI greater than or equal to 40 with or without co-morbid conditions
  - Both have been unable to achieve substantial or durable weight loss through non-surgical means

The recommendations of the ASMBS are:

- BMI >/35 regardless of co-morbid condition status
- BMI >/30 for any patient with Type 2 Diabetes Mellitus
- BMI 30-34.9 who have not been able to achieve substantial or durable weight loss through non-surgical means

Where Should Patients Be Referred To?

The NIH, American College of Surgeons, and American Society for Metabolic and Bariatric Surgery recommend that patients have their surgeries with board-certified surgeons and in a center that has a multidisciplinary team of experts for pre- and post-operative care.

The ASMBS also has a Metabolic and Bariatric Surgery Center for Excellence program

Some insurances actually require that bariatric surgery programs have the Center for Excellence designation in order to provide coverage

More on access to care issues in a moment…

- **Know that referrals for bariatric surgery are much different surgical referrals you will send because they require significant pre-surgical teaching and evaluation**

Metabolic and Bariatric Surgery Quality Improvement Program (MBSAQIP)

- Look for an accredited program!
- In 2012, The American Society for Metabolic and Bariatric Surgery and The American College of Surgeons combined their bariatric surgery center of excellence programs to create one national accreditation standard for bariatric surgery
- The **Metabolic and Bariatric Surgery Quality Improvement Program (MBSAQIP)**
  - Set of 8 standards addressing:
    - Institutional/Administrative Commitment
    - Program Scope and Governance
    - Facilities and Equipment Resources
    - Personnel and Services Resources
    - Patient Care Expectations and Protocols
    - Data Surveillance Systems
    - Quality Improvement
    - Education (patient and professional)

Bariatric Care Team

Multifaceted, interdisciplinary core team dedicated to the bariatric practice

- Medical team (MD/DO Surgeons, PAs, NPs)
  - Credentialing criteria
- Bariatric RNs
- Nutrition team: RDs
- Mental Health Team: Psychologists with bariatric surgery evalution training and experiences
- Other health professionals as needed: Pharmacists, PTs, OTs, Social Work
- Support Staff (insurance, scheduling, etc.)

Specialized staff training provided for those caring for bariatric patients (Ex: obesity sensitivity, patient transfer, recognizing post-op complications)

What Should Pre-Operative Preparation Look Like For My Patient?

Pre-Surgery Patient Education and Preparation

Indications/contraindications for surgery

Review of all procedure options available

- Full informed consent process: Risks, benefits, alternatives

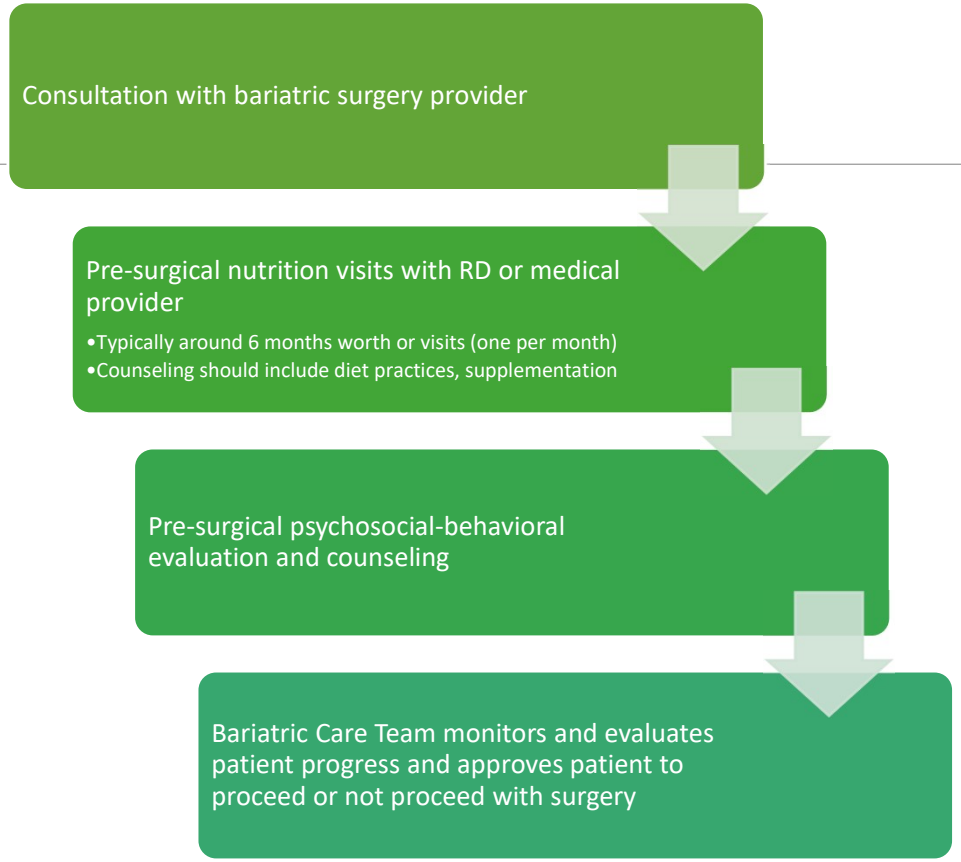
Lifestyle changes required

- Nutritional and psychological counseling
- Teaching on how to eat post-op
- Exercise counseling
- Vitamin/Mineral Supplementation counseling

Review of post-op care

- Discharge instructions
- Follow up appointment plan (medical team, nutrition, mental health, etc.)
- Recognizing signs and symptoms of complications

The Pre-Op Patient Pathway



What Happens Post-Operatively For My Patient?

Post-Op Diet Transitions

Common Diet transitions:

Pre-surgery liquid diet 1-2 weeks before

Liquid diet 1-2 weeks after surgery

Pureed/very soft diet 1-2 weeks after liquid diet

Regular bariatric diet

Post-Op Diet Practices "Forever Guidelines"

Regular bariatric diet afterwards:

- Hydration is extremely important
- Goal of 64 oz. calorie free fluids/day
- Minimal caffeinated & carbonated beverages
- Protein supplementation encouraged
- Goal of 60-80g protein/day
- Separate solids and liquids when eating
- Chew very well and eat slowly
- Daily multivitamin, calcium, B12, Vitamin D important

Appointment Timeline	Lab Draw	Paired Nutrition Visit
2 weeks post-op	No	Yes
5-6 weeks post-op	No	Yes
3 months post-op	Yes	Yes
6 months post-op	Yes	Yes
9 months post-op	No	No
12 months post-op	Yes	Yes
18 months post-op	Yes	No
24 months post-op	Yes	No
Annually	Yes	Yes

The Post-Op Patient Pathway

-There should be a standardized, well-defined plan for ongoing follow up
-Support group offering

Support Group Offering

A regular support group offering run by a licensed healthcare professional is another critical piece to good post-operative long term bariatric care

- Early post-operative needs
- Late post-operative needs
- Community patient support and experiences

A Few Other Pointers…

- **PSA: IT IS SO VERY IMPORTANT TO KNOW WHICH PROCEDURE YOUR PATIENT HAS HAD**
  - **And document it accurately, consistently**
- NSAIDs are essentially contraindicated in patients with a bariatric surgery history because of the significantly increased risk of ulceration.
- Nicotine use (of any kind!) is also a significant risk for ulceration in patients with a bariatric surgery history
- Medication absorption may be affected by procedures (changes in stomach/pouch pH, malabsorptive process in Roux-en-Y)
- Some patients may need alternative delivery routes (chewables, liquids, patches, etc.) as tablets (especially big ones….think metformin…)may get stuck
  - But ask your patients….some have no problems what so ever

What if my patient has weight re-gain?

First and foremost check to ensure they are eating according to the “forever guidelines”

- Tool/shovel analogy
- How someone eats is just as important as what someone eats after a bariatric surgery procedure.

If you are uncomfortable with addressing these or aren’t sure, please just send them back to the bariatric surgery team….we work to get people back on track all the time!

Obesity Medicine Services

Obesity medicine services may also be available and can be used in conjunction with surgical interventions

Obesity medicine services, if available, should include:

- Comprehensive medical examination
- Evaluation for medical complications related to obesity
- Assessment of personal and family history of obesity
- Laboratory testing
- Nutrition counseling
- Fitness and exercise counseling
- Behavior and lifestyle counseling
- Anti-obesity medication
- Evaluation and treatment for abnormal weight gain

Common Access to Care Issues

Common Bariatric Surgery Access to Care/Insurance Issues

- Approximately 25% of patients preparing for bariatric surgery are denied insurance coverage three times before getting approval
  - 60% report their health worsened during this waiting period
- Policy may not include coverage at all
- Patient may fall outside of BMI requirements listed on policy (even by a small fraction) and be denied
- Policy may require travel to facility away from home for care, even if a quality center is local, to decrease costs to company
- Policy may have onerous pre-operative requirements
- Policy may require procedure to be completed at a facility that also has a specific insurance-related designation
- These are just a few of the issues…

- These significant, continued issues with bariatric surgery coverage often lead to patients seeking care elsewhere.

Medical Tourism

- Traveling outside of the patient's home location or country to have medical procedures completed that are either not available/accessible or may be lower cost than the person's home area.
- Medical tourism packages for bariatric surgery are widespread (within the U.S. and internationally)
- While this may make sense for some smaller procedures, bariatric surgery is more complex and involves a significant amount of pre-operative preparation and evaluation and long-term post-operative care.
- Medical tourism in the setting of bariatric surgery often eliminates routine follow up and presents major continuity of care issues.
- Long term cost issues as well (insurance coverage for follow up care upon return, individual cost to patients if complications arise)

Medical Tourism and Bariatric Surgery

- No consistent standard of care
- Pre-op teaching may be minimal to non-existent
- No strict guidelines on patient selection criteria
- After care is also minimal to non-existent
- If complications arise, there may be significant out of pocket costs to patient

What do I do if my patient has traveled for bariatric surgery?

- Try to connect patient with local bariatric surgery program
  - Preferably MBSAQIP accredited center
- If unable to connect with local bariatric surgery program, use ASMBS resources to help guide post-op care
  - Essentials of Bariatric and Metabolic Surgery App (Free!)
  - Modules on pre-op assessment, intra-op considerations, post-op management, complications

Take Home Points

- Obesity is a chronic, progressive disease
- Metabolic and bariatric surgery is a safe, effective treatment for obesity, but the procedures should be performed at centers with specific resources, training, and capability to handle the patient population and all potential outcomes.
- The “Forever Guidelines” are like the ‘quick start guide’ for how to make the procedures function optimally…and you can counsel on these, too!
- Finding an MBSAQIP-accredited bariatric surgery program near you is one of the best ways to ensure the standards of care are met when referring patients.
- If your patient is experiencing insurance coverage issues, there isn’t an easy answer.
- Medical tourism does exist, and it is critical that the patients who are medical tourists get plugged into a bariatric surgery program close to home for comprehensive education, follow up care, and support if at all possible.

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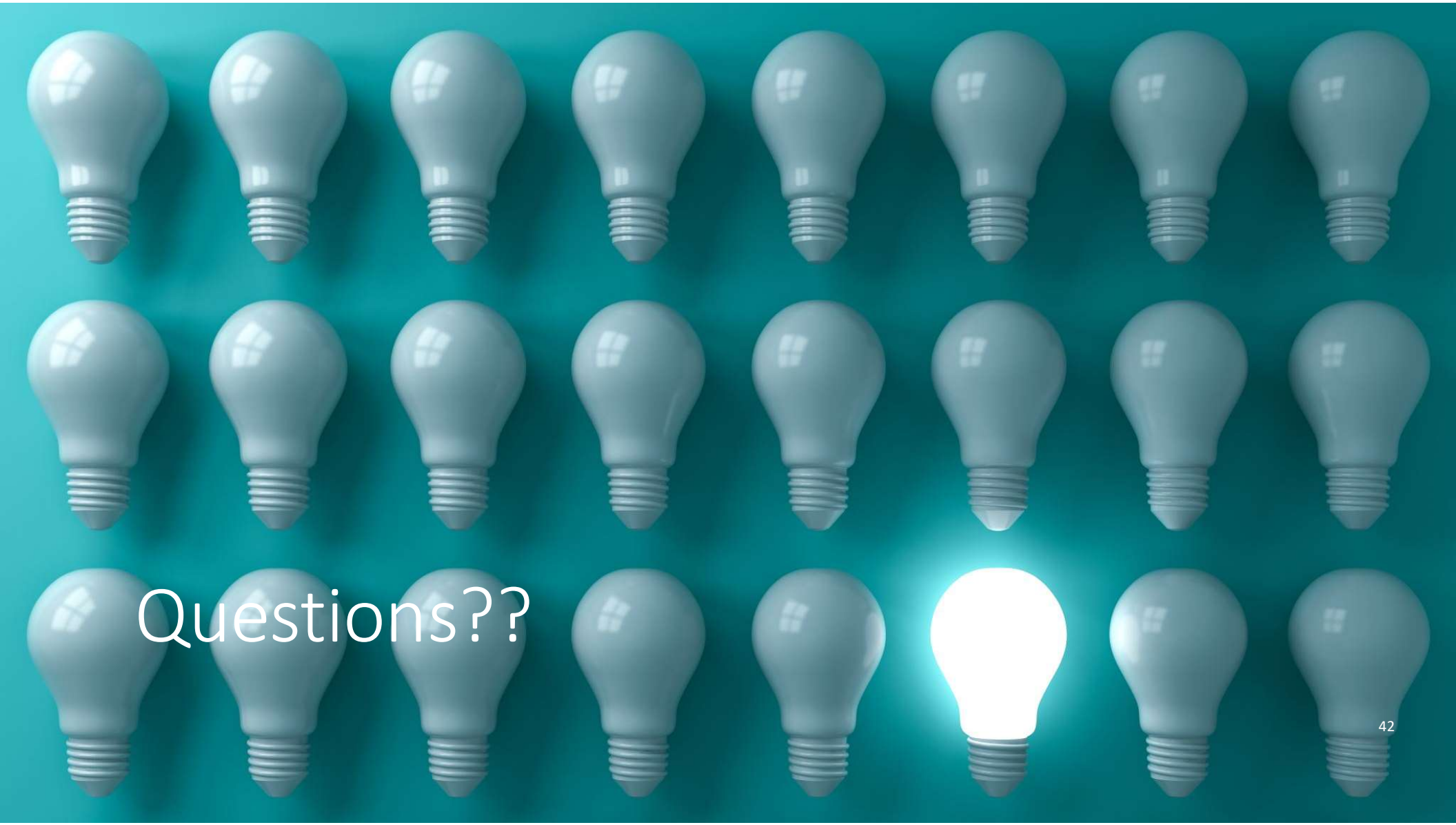
Questions??

Thank You!!

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