Let’s Go!
Childhood Obesity Project ECHO®

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**Housekeeping**

- This session will be recorded for educational and quality improvement purposes.
- Please do not provide any protected health information (PHI) during any ECHO session.
- Zoom trouble? Chat to Meg Nadeau

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**Introduce Yourself**
- Please turn on your video!
- Please enter your name, organization, and email address (needed for CME) in the chat.
- If you are watching as a group, please put everybody’s information in the chat.

**Microphones**
- Please mute your microphone when not speaking.

**Agenda**
- Welcome and Introductions (5 min)
- Lecture & Q&A (25 min)
- Case/Discussion (25 min)
- Close (5 min)
Focus of this Project ECHO®

- Increase the understanding and minimization of bias and stigma that is associated with obesity
- Promote a supportive, health-forward approach in your workforce and office environment around treatment of obesity
- Model health-focused language for parents
- Put Motivational Interviewing into practice
- Develop individualized treatment plans based on obesity physiology to help families reach their healthy goals
- Initiate treatment early and provide timely follow up
Bariatric Surgery

Kirk Sahagian, DO

MMC Weight & Wellness Program
Objectives

• The Price of a Passive/Ineffective Approach to the Treatment of Obesity

• WWP—What Patients and families can expect
The Price of a Passive/Ineffective Approach to the Treatment of Obesity
NOTE: Obesity is body mass index (BMI) at or above the 95th percentile from the sex-specific BMI-for-age 2000 CDC Growth Charts.

• 4.5 million adolescents in the U.S. affected by severe obesity
• Overweight adolescents have a 70% chance of becoming overweight or obese adults and an 80% chance if a parent is overweight or obese
• about half of obese teenage girls and a third of obese teenage boys become severely obese by the time they are 30.
• 1 in 12 teenagers become severely obese, or 100 pounds above their ideal weight, as they enter adulthood.
Figure 4. Trends in age-adjusted obesity and severe obesity prevalence among adults aged 20 and over: United States, 1999–2000 through 2017–2018

1Significant linear trend.
NOTES: Estimates were age adjusted by the direct method to the 2000 U.S. Census population using the age groups 20–39, 40–59, and 60 and over. Access data table for Figure 4 at: https://www.cdc.gov/nchs/data/databriefs/db380_tables-508.pdf#4.
Where we are now...

• The incidence of obesity is worsening, obesity related illness is associated with greater than 50% of deaths in the U.S. annually and that is at a tremendous cost in lives and actual dollars.

• Why are we losing this battle?
Very few get care...
What have we learned when we attempt to tackle obesity head on with an adult patient?
POUNDS Lost Study

- Randomized controlled trial of 4 diets
- Diets varied widely in carbohydrate, fat, and protein content
- Initial intensive calorie restriction followed by “maintenance” phase

**Conclusion:** Nutrient content doesn’t matter – a calorie is a calorie
Comparative Efficacy of Weight-Loss Medications

Percentage Weight Loss From Baseline After 1 Year*

- Phentermine/Topiramate
- Liraglutide 3 mg
- Naltrexone/Bupropion
- Lorcanerin
- Orlistat

**Table of Studies:**
- EQUIP, CONQUER, SEQUEL, (2-year data)
- Aastrup et al., SCALE, Maintenance
- COR-I, COR-II
- BLOOM, BLOSSOM, BLOOM-DM
- XENOS

**Study Notes:**
*All data placebo-subtracted, maximal dose, ITT-LOCF at 1 year, unless otherwise indicated.

ITT = intent to treat; LOCF = last observation carried forward.

Surgery is Safe

- Overall mortality rate is about 0.1%\textsuperscript{13} — less than gallbladder (0.7%)\textsuperscript{14} and hip replacement (0.93%) surgery\textsuperscript{15} — and overall likelihood of major complications is about 4.3%\textsuperscript{16}

- Clinical evidence shows risks of morbid obesity outweigh risks of metabolic and bariatric surgery\textsuperscript{17,18}

- Patients may reduce risk of premature death by 30-40%
Surgery is Effective
Surgery has a Metabolic Effect

- some studies find that surgery can increase energy expenditure
- bariatric surgery increases the production of certain gut hormones that interact with the brain to reduce hunger, decrease appetite, and enhance satiety
Disease will resolve

- Migraines: 57% resolved
- Pseudotumor Cerbri: 96% resolved
- Dystipidemia/Hypercholesterolemia: 65% resolved
- Non-Alcoholic Fatty Liver Disease: 90% improved, 37% resolution of inflammation, 20% resolution of fibrosis
- Metabolic Syndrome: 80% resolved
- Type II Diabetes Mellitus: 83% resolved
- Polycystic Ovarian Syndrome: 75% resolution of hirsutism, 100% resolution of menstrual dysfunction
- Venous Stasis Disease: 95% resolved
- Gout: 77% resolved
- Depression: 65% resolved
- Obstructive Sleep Apnea: 74-98% resolved
- Asthma: 62% improved or resolved
- Cardiovascular Disease: 82% risk reduction
- Hypertension: 52-92% resolved
- GERD: 72-98% resolved
- Stress Urinary Incontinence: 44-86% resolved
- Degenerative Joint Disease: 41-76% resolved

Quality of Life - improved in 95% of patients

Mortality - 30-40% reduction in 10-year mortality
...but Dr. Sahagian, kids are different than adults
The Teen-Longitudinal Assessment of Bariatric Surgery (Teen-LABS)

- 242 patients, 5 US centers
- Largest ongoing observational cohort study of youth undergoing bariatric surgery
- 161 RYGBP, 67 VSG
- Mean age 17, mean preop BMI 53, 4 comorbid conditions
- Ongoing but now 3 yr f/u available, 99% f/u at 3 yrs
The Teen-Longitudinal Assessment of Bariatric Surgery (Teen-LABS)

- Mean Weight reduction 27%
- Resolution of comorbidities at 3 yrs
  - Type II DM 95%
  - HTN 74%
  - Dyslipidemia 66%
- Reduction overall prevalence of multiple concurrent CV disease risk factors.
  - dyslipidemia, DMII, EBP, and elevated hs-CRP.
- Surgical treatment shown more effective than med therapy for DMII.
- Weight related quality of life improved.
The Teen-Longitudinal Assessment of Bariatric Surgery (Teen-LABS)

• Surgical Complications
  - 15% minor (nausea and dehydration)
  - 8% major including 2.7 % re-operation before discharge; similar in adults
  - Mortality rate 0.3%

• Micronutrient Deficiencies
  - RYGBP
    » Iron 66%; higher than adults
    » B12 8%
    » Folate 10%
Philosophy & Approaches to Care
Role of the Pediatric Medical Bariatrician

• Patient seeing an obesity medicine specialist first allows for the most critical patients to be streamlined to surgery.
• Patients and families who work with an Obesity Medicine Specialist develop an **awareness** of the unique ways in which their bodies signal when treatment is no longer effective.
• The obesity medicine specialist serves as a **resource** for all team members to develop a deeper understanding of the disease of obesity.
• Patients working with an Obesity Medicine Specialist will have their **medication regimen revised** to be less obesogenic. This requires coordination with multiple specialists to assure maximum weight loss both pre and post operatively.
• Obesity Medicine Specialists **manage diabetes and hypertension** during preoperative weight loss and 6 months post-op.
• Obesity medicine Specialists will use **weight loss medication** in multiple combinations both “on label” and “off label” to assure safe and successful weight loss outcomes.
Adults

- Obesity is categorized as a body mass index (BMI) of between 30 and 39.9 and a co-morbidity including DMII, OSA, GERD, HLD...
- Severe Obesity is categorized as a BMI > 40

Children/adolescents

- Class II obesity 120% of the 95\textsuperscript{th} percentile or BMI of $>$ 35 and co-morbidity including DMII, OSA, NASH, Blount disease, SCFE, GERD and HTN.
- Class III obesity 140% of the 95\textsuperscript{th} percentile or BMI of $>$ 40

Some possible next steps for you....

1. Are there a few key take aways you can put into practice next week?
2. View the supplemental learning options - LetsGo.org/ECHO
3. Think about any bias you have that might get in the way with your patients
   - Bias screening test - https://implicit.harvard.edu/implicit/takeatest.html
4. Do you have a Team to help you?
   - Internal team
   - Community partners
   - Referring physicians
5. Do you need to develop new Workflows for Well Visits and Follow Up Visits?
6. Think about taking an MI course
New Resources

- We have two new handouts that you can share with parents and caregivers of children who carry extra weight:
  - Speaking with Your Child About Health when they Have Extra Weight
  - Why Consider Bariatric Surgery for Adolescents?

- Download at LetsGo.org/PedClinicalTools
  - Parent & Caregiver Resources Menu
Remaining ECHO Sessions

- August 4 | 12-1 pm
  - Advancing Diet Quality through Culinary Medicine and Diet Quality Screening

- September 1 | 12-1 pm
  - Use of BMI as a Marker of Disease
Evaluation and CMEs

*If you haven’t already done so, please enter your name and email address in the Chat*

- After each ECHO session, you will receive an email with a link to a brief evaluation survey and Post-Test.
  - Please complete within 1 week.

- Upon completion, a link to the CME credit will be sent to you.
Thank you

• Feel free to reach out to us at:
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