

Understanding the AAP's New Childhood Obesity Guidelines

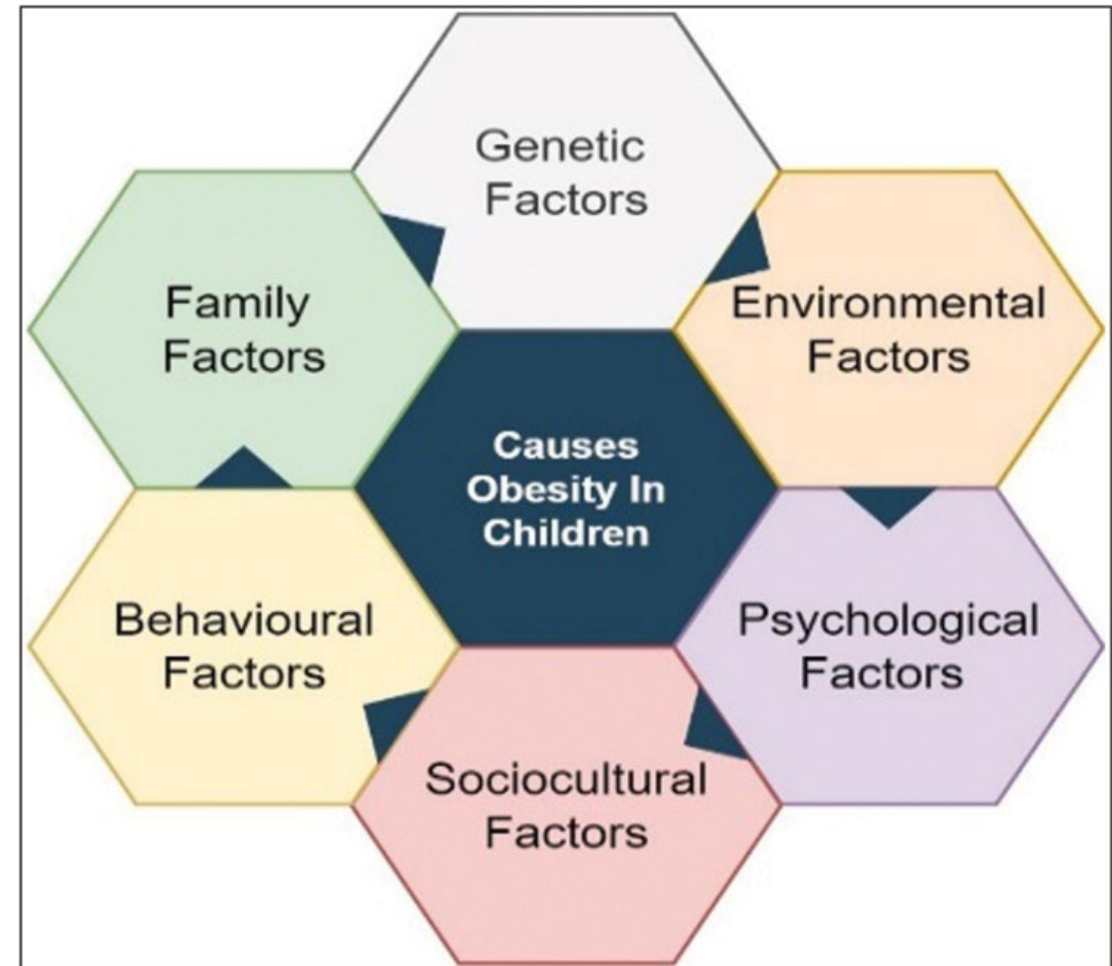
March 30th, 2023

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Overview

- Review the 2023 AAP Clinical Practice Guidelines
 - What's new
 - Screening & Diagnosis
 - Screening for Comorbidities
 - Treatment
- Applying these guidelines with two recent patients
- Reflections
- Discussion



What's New in the CPGs

1. **“Obesity is a complex chronic disease- similar to asthma and diabetes.”**
2. **Regularly screen all children ages 2 years and up for overweight and obesity**
3. **“Immediate, intensive obesity treatment to each patient.”**
 - **No watchful waiting**

What's New in the CPGs

4. Emphasis on **Motivational Interviewing** and “**Intensive Health Behavior and Lifestyle Treatment**”
5. Offer **weight-loss pharmacotherapy** to adolescents ages 12 and older as adjunctive therapy.
6. Offer referrals for **metabolic and bariatric surgery to adolescents ages 13 and older** with severe obesity.

The AAP Guidelines have been controversial.... So where can we find common ground?

- We all want what's best for kids.
- Obesity leads to negative health outcomes.
- Childhood obesity is a complex issue, including forces well beyond the control of individual children.
- It is incumbent upon us to develop ways to help children and families lead healthy lives.
- Medical professionals are too often a source of stigma for patients.
 - Obesity treatment should never contribute to the trauma of a child or family.

Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents With Obesity

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Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents With Obesity

- 13 Key Action Statements
 - Diagnosis & Evaluation
 - Screening for comorbidities
 - Treatment
- Does not cover the prevention of obesity

Greetings

You have in your hands, or at your fingertips, the first edition of the American Academy of Pediatrics clinical practice guideline for evaluation and management of children and adolescents with overweight and obesity. Putting together this guideline was no small task, and the Academy is grateful to the efforts of all the professionals who contributed to the production of this document. This work is a true testament to their passion and dedication to combatting childhood and adolescent overweight and obesity.

The Subcommittee responsible for developing this guideline comprises a diverse group of professionals from a variety of disciplines representing both governmental entities and private institutions. Experts all, they are united by a common desire to provide the finest, most effective care and treatment to children and adolescents with overweight and obesity. Over the course of several months, the members of the Subcommittee reviewed the technical reports produced from the study review, then worked in concert to develop the Key Action Statements and Expert Consensus Recommendations contained within this guideline. These were crafted with meticulous care by the Subcommittee members, to align with current literature and to place appropriate emphasis on each statement.

While representing such a broad spectrum of perspectives, the members of this committee are all keenly aware of the multitude of barriers to treatment that patients and their families face. These barriers impact not only their access to treatment, but their ability to follow prescribed treatment plans. Whereas some patients are able to adopt the lifestyle changes and habitualize elements of their prescribed treatment plans, so many others struggle to do so for a wide variety of reasons. The members of the Subcommittee understand all of this. To assist with optimizing health equity and overcoming these barriers, guidance on a number of multilevel factors related to barriers to treatment have been included in this guideline. During the course of their work, members of the Subcommittee acknowledged that, although so much has been learned to advance the treatment of children and adolescents with overweight and obesity, there is still so much we have yet

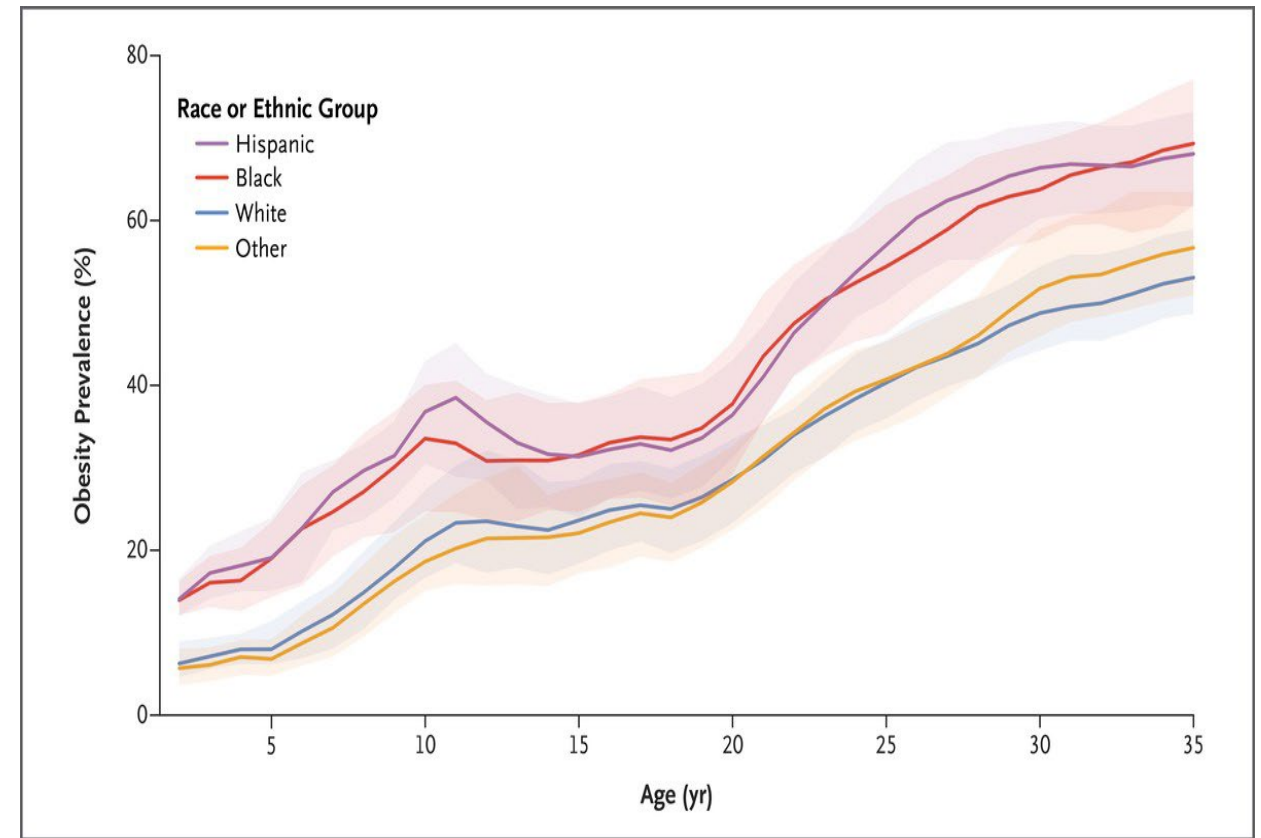
Health Equity Considerations

Clinical Practice Guideline for the
Evaluation and Treatment of Children
and Adolescents With Obesity

- Poverty
- Racism
- Weight Bias and Stigma
- Adverse Childhood Experiences

The role of Historical and Intergenerational Trauma among AIAN people cannot be overestimated.

Predicted Prevalence of Obesity, According to Race or Ethnic Group



Gen Z & Beyond: Born in the 21st Century

- Born in a Post-9/11 world
 - Heightened sense of threat and security
 - Near continuous state of war involving the US
- School shootings and lockdown drills
- Hyperpolarized and toxic political messaging
- Economic uncertainty (e.g. 2009 Financial Crisis, student loan crisis, COVID layoffs)
- Existential threat of climate change
- COVID Pandemic

All in the context of being the first generations raised entirely tethered to technology

Evaluation of Patients With Overweight or Obesity

Non-stigmatizing conversation about weight with patients and families:

1. **Ask permission** to discuss the patient's BMI and/or weight.
2. **Avoid labeling** by using person-first language ("Child with obesity"; not "obese child" or "my patient is affected by obesity; not "my patient **is** obese").
3. Use words that are **perceived as neutral** by parents, adolescents, and children (e.g. "unhealthy weight, gaining too much weight for age, height, or health)."

Evaluation of Patients With Overweight or Obesity

Clinical Practice Guideline for the
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- Both a **complete medical history and physical examination are necessary** to evaluate *any* patient with a chronic disease.
 - Chief complaint: “What concerns, if any, do you have about your child’s growth and health?”
 - History of the present illness
 - Family history
 - Social history, including home environment
 - Nutrition and Physical Activity History
 - Behavior health and eating disorder concerns
- **Assessment of Patient Readiness to Change**
 - Motivational interviewing (MI)



Pediatrics. 2023;151(2). doi:10.1542/peds.2022-060640

Aggregate Evidence Quality	Benefit or Harm Predominates	Benefit and Harm Balanced
Level A Intervention: well designed and conducted trials, meta-analyses on applicable populations Diagnosis: independent gold standard studies of applicable populations	Strong recommendation	Weak recommendation (based on balance of benefit and harm)
Level B Trials or diagnostic studies within minor limitations; consistent findings in from multiple observational studies	Moderate recommendation	
Level C Single or few observational studies or multiple studies with inconsistent findings or major limitations	Weak recommendation (based on low quality evidence)	
Level D Expert opinion, case reports, reasoning from first principles	Weak recommendation (based on low quality evidence)	No recommendation may be made
Level X Exceptional situations in which validating studies cannot be performed, and there is a clear preponderance of benefit or harm	Strong recommendation Moderate recommendation	

Screening for Comorbidities

- **KAS 2: Evaluate for Comorbidities Grade B**
- **KAS 3: Obtain Blood Work for Children 10 and older Grade B**
 - Obesity: check fasting lipids, DM screening*, and ALT
 - Overweight: fasting lipids
 - If risk factors for DM II for NAFLD, may check ALT and DM screening* **Grade C**
 - **For children 2 to 9 y of age** with obesity: “may evaluate” for lipid abnormalities **Grade C**
- **KAS 4: Treat overweight, obesity, and comorbidities concurrently. Grade A**

*DM Screening: fasting plasma glucose, 2-h plasma glucose after 75-g oral glucose tolerance test, or glycosylated hemoglobin (HbA1c)

Interpretation of Test Results[#]

NHLBI Criteria for Lipid Testing Results[▲]

Lipid Category	Low (mg/dL)	Acceptable (mg/dL)	Borderline High (mg/dL)	High (mg/DL)
Total cholesterol	-	<170	170-199	≥200
LDL cholesterol	-	<110	110-129	≥130
HDL cholesterol	<40	>45	-	-
Triglycerides				
• 0-9 years	-	<75	75-99	≥100
• 10-19 years	-	<90	90-129	≥130
Non-HDL cholesterol	-	<120	120-144	≥145

▲From CPG Table 8, adapted from the NHLBI Expert Panel on Integrated Guidelines for Cardiovascular Health

Criteria for Diagnosing Prediabetes and T2DM[◆]

	Prediabetes/Impaired Glucose tolerance	Diabetes Mellitus ^a
Fasting plasma glucose (FBG) ^b	100-125 mg/dL	≥126 mg/dL
2-hour plasma glucose (OGTT) ^c	140-199 mg/dL	≥200 mg/dL
Random plasma glucose (RBG) ^d	Not applicable	≥200 mg/dL
Hemoglobin (HbA1c) ^e	5.7% - 6.4%	≥6.5%

^a In the absence of unequivocal hyperglycemia, diagnosis is confirmed if 2 different tests are above threshold or a single test is above threshold on 2 separate occasions.

^b Fasting for at least 8 hours with no calorie intake.

^c Oral glucose tolerance test (OGTT) using a load 1.75 g/kg of body weight of glucose with a maximum of 75 g.

^d In patients with hyperglycemic crises or classic symptoms of hyperglycemia (eg, polyuria, polydipsia).

^e Glycosylated hemoglobin (HbA1c) is the preferred test for monitoring prediabetes.

<https://www.aap.org/en/patient-care/institute-for-healthy-childhood-weight/clinical-supports-for-obesity-prevention/>

◆From CPG Table 10, based on American Diabetes Association Standards of Medical Care in Diabetes- 2021

Screening for Comorbidities

- **KAS 8: Blood Pressure Measurement**
Grade C

- Evaluate for hypertension by measuring blood pressure at every visit starting at 3 y of age in children and adolescents with overweight and obesity.

*Obesity is the strongest risk factor
for HTN in childhood*

Age	8	years
Decimal values recommended (e.g. for a child who is 5 years and 6 months, enter 5.5)		
Sex	<input checked="" type="radio"/> Male	<input type="radio"/> Female
Height	67	in ⇌
Systolic BP	112	mm Hg
Normal values are age-dependent; do not use this calculator in patients with hypotension		
Diastolic BP	78	mm Hg
Normal values are age-dependent; do not use this calculator in patients with hypotension		
Elevated BP		
Elevated BP in this 8-year-old boy is SBP 120-134 and/or DBP 78-78 (see Evidence for details)		
Initiate lifestyle interventions; re-check BP in 6 months. See Next Steps for details.		
Copy Results 📄		Next Steps >>>



Screening for Comorbidities

- **Obstructive Sleep Apnea**

- Children with obesity have a 5 times higher prevalence of OSA
- Ask about snoring, daytime somnolence, nocturnal enuresis, morning headaches, and inattention
- A polysomnogram is recommended for children and adolescents with obesity and at least 1 symptom of disordered breathing.

- **Polycystic ovarian syndrome (PCOS)**

- Evaluate for menstrual irregularities and signs of hyperandrogenism (ie, hirsutism, acne) among female adolescents with obesity

Screening for Comorbidities

- **Depression**

- Monitor for symptoms of depression in children and adolescents with obesity
- Conduct annual evaluation for depression for adolescents 12 years and older with a formal self-report tool.

- **Orthopedic Comorbidities**

- Perform a musculoskeletal review of systems and physical examination as part of their evaluation for obesity
 - Hip or knee pain: Slipped Capital Femoral Epiphysis (SCFE)
 - Pes planus (flat feet): risk for early knee OA




Treatment

- **KAS 9: Obesity is a chronic disease** **Grade B, Strong**
 - Treat overweight and obesity following the principles of the medical home and the chronic care model (i.e. family-centered and non-stigmatizing approach that acknowledges obesity's biologic, social, and structural drivers).
- **KAS 10: Motivational Interviewing** **Grade B, Moderate**
 - Pediatricians and other PHCPs should use motivational interviewing (MI) to engage patients and families in treating overweight and obesity.

Treatment

- **KAS 11: Intensive Health Behavior and Lifestyle Treatment **Grade B for ages 6 and older. Grade C for Ages 2-5****
 - Criteria for IHBLT includes at least 26 hours of face-to-face, family-based, multicomponent treatment over a 3- to 12-mo period.
 - Ideally close to 75 hours over 6 months
 - Refer as soon as possible



Intensive Health Behavior & Lifestyle Treatment: Provide or refer children ages 6 years and older and may provide or refer children ages 2-5 years with overweight or obesity to intensive health behavior and lifestyle treatment.

IHBLT is the foundational approach to achieve body mass reduction in children. It is rooted in strong evidence. The table below describes key components of evidence-based IHBLT. To learn more about existing evidence-based IHBLT programs, visit www.aap.org/obesitycpg.

Who	Patient and family in partnership with a multidisciplinary treatment team (e.g., PHCPs with training in obesity as well as other professionals trained in behavior and lifestyle fields such as dietitians, exercise specialists and behavioral health practitioners)
When	Promptly for child or adolescent with overweight or obesity
What	<ul style="list-style-type: none"> • Health education and skill building on multiple topics (i.e., both nutrition & physical activity; also, mental health, parenting skills, stigma & bias, sleep, and reducing sedentary screen time) • Behavior modification and counseling
Where	<ul style="list-style-type: none"> • Healthcare setting • Community-based setting with linkage to medical home
Dosage	Longitudinal treatment across 3-12 months with ideally ≥26 contact hours
Format	Group, individual, or both
Channel	Face-to-face (strongest evidence), virtual (growing evidence)

When Intensive Programs Are Not Available

- “The major factor driving the effectiveness of IHBLT is the intensity (or dose) of the intervention, measured in **hours of face-to-face patient contact.**”
 - ... ideally 75 hours
- When an IHBLT is not available: Deliver the best available intensive treatment to all children with overweight and obesity.
 - i.e. nutrition and physical activity counseling ...

Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents With Obesity

Help your patients **ZigZag Zoom!** ZigZag away from TV, soda, and junk food...**Zoom** into healthy eating, getting active, and feeling great! Help your patients



Next Steps

A Practitioner's Guide of Themed Follow-up Visits to Help Patients Achieve a Healthy Weight

FLIP CHART

Help your patients **ZigZag Zoom!**

ZigZag away from TV, soda, and junk food...

Zoom into healthy eating, getting active, and feeling great!

American Academy of Pediatrics



NICHQ
National Initiative for Children's Healthcare Quality



American Academy of Pediatrics



Maine Chapter

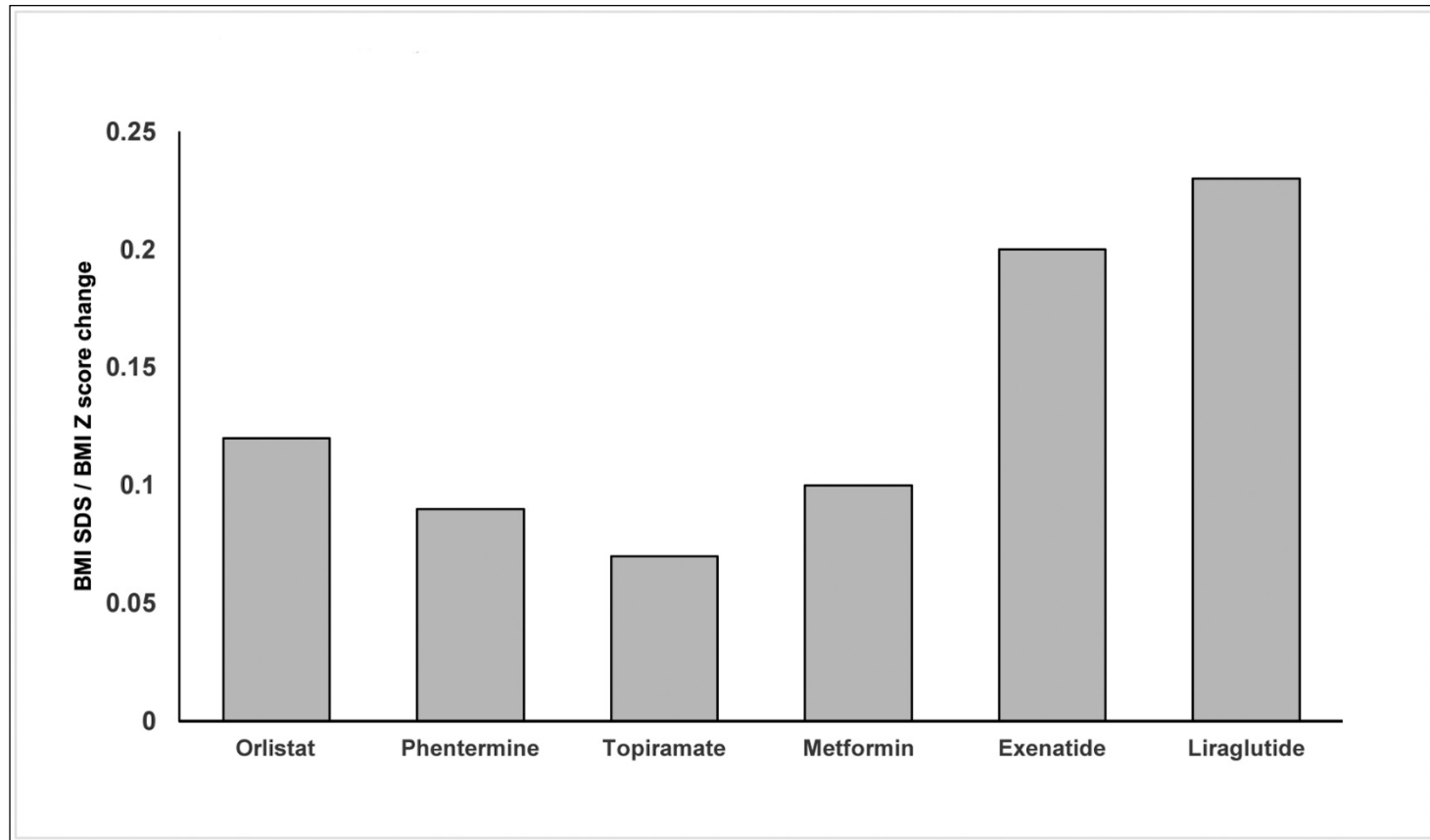


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great! Help your patients **ZigZag Zoom!** ZigZag away from TV, soda, and junk food...**Zoom** into healthy eating, getting active, and feeling

Treatment

- **KAS 12: Pharmacotherapy**
Grade B
 - Offer adolescents 12 y and older with obesity weight loss pharmacotherapy, according to medication indications, risks, and benefits, as an adjunct to health behavior and lifestyle treatment.



BMI SDS/BMI Z score change by weight loss medication

Drug	Function/Background	Age Approved	Dosage/Type	Impact	Side Effects
Metformin	<ul style="list-style-type: none"> Originally to treat T2DM Mechanism is to improve insulin sensitivity by increasing peripheral tissue uptake of glucose and by inhibiting hepatic glycogenesis 	<ul style="list-style-type: none"> 10 and older Some safety info down to age 8 	<ul style="list-style-type: none"> Recommended starting dose is 500 mg 1 or 2x daily Gradual increase up to 2500mg Extended release recommended for fewer side effects 	<ul style="list-style-type: none"> 2/3 of studies show BMI reduction 1/3 of studies show no benefit Successful BMI reduction is more common in older children and adolescents 	<ul style="list-style-type: none"> Lactic acidosis is a rare but serious side effect Side effects are dose dependent and include bloating, nausea, flatulence, & diarrhea
Orlistat	Intestinal lipase inhibitor that blocks fat absorption through inhibition of pancreatic and gastric lipase	Age 12 and older	120 mg 3X per day	2-3% BMI reduction	Steatorrhea Fecal urgency Flatulence
Liraglutide & exenatide	<ul style="list-style-type: none"> Glucagon-like peptide-1 (GLP-1) receptor agonists Decrease hunger by slowing gastric emptying as well as through targets in CNS 	Age 12 and older	Starting dose is 0.6 mg/day up to a maximum dose of 3.0 mg/day	<ul style="list-style-type: none"> About 1/2 of patients will achieve a 5% BMI reduction About 20% will achieve a 10% BMI reduction 	<ul style="list-style-type: none"> Nausea Vomiting Increased risk of medullary thyroid cancer among patients with family history of multiple endocrine neoplasia
Phentermine	<ul style="list-style-type: none"> A central norepinephrine inhibitor Nonselectively inhibits serotonin and dopamine Suppresses appetite 	<ul style="list-style-type: none"> 16 and older Short term use only (3 months) 	7.5 mg, 15 mg, 30 mg or 37.5 mg	Effectiveness does not always increase with increased dosage	Side effects are dose dependent <ul style="list-style-type: none"> Elevated BP Dizziness Headache Tremor Dry mouth Stomach ache
Lisdexamphetamine	<ul style="list-style-type: none"> Stimulant Approved for ADHD 	6 and older with ADHD	Dose increments of 10mg, no clear effective dose for BMI reduction	Limited evidence of effectiveness	<ul style="list-style-type: none"> Elevated blood pressure Insomnia Irritability
Topiramate	<ul style="list-style-type: none"> Carbonic anhydrase inhibitor Suppresses appetite 	<ul style="list-style-type: none"> 2 and older for epilepsy 12 and older for headache 	<ul style="list-style-type: none"> Start 25mg qam/50mg qhs Max dose 100mg/day 	Limited evidence of effectiveness	Cognitive slowing
Setmelanotide	Recently approved for obesity caused by mutations in the MC4R pathway & leptin deficiency or leptin receptor deficiency	>= 6 years of age with POMC deficiency, PSK1 deficiency, LEPR deficiency confirmed by genetic testing	1-3 mg/day given subcutaneously	Weight loss of 12-25%	Injection site reaction Nausea
Phentermine and Topiramate	See above for mechanisms of action	<ul style="list-style-type: none"> Combination medication is approved for weight loss in adults. Recent data support BMI reduction in adolescents 12-17 years of age with documented history of failure to lose sufficient weight or maintain weight loss in a lifestyle modification program. (mean age = 14 years; mean 	<ul style="list-style-type: none"> Starting dose; 3.75mg/23mg Mid-dose; 7.5mg/46mg High dose; 15 mg/92mg 	<ul style="list-style-type: none"> BMI percent change at 56 weeks was -10.44 (high dose; 15mg/92mg) and -8.11 (mid-dose; 7.5 mg/46 mg) as compared with placebo Treatment also improved HDL and TG cholesterol profiles 	Adverse event reports in the high- to mid-dose range were no more common than placebo.

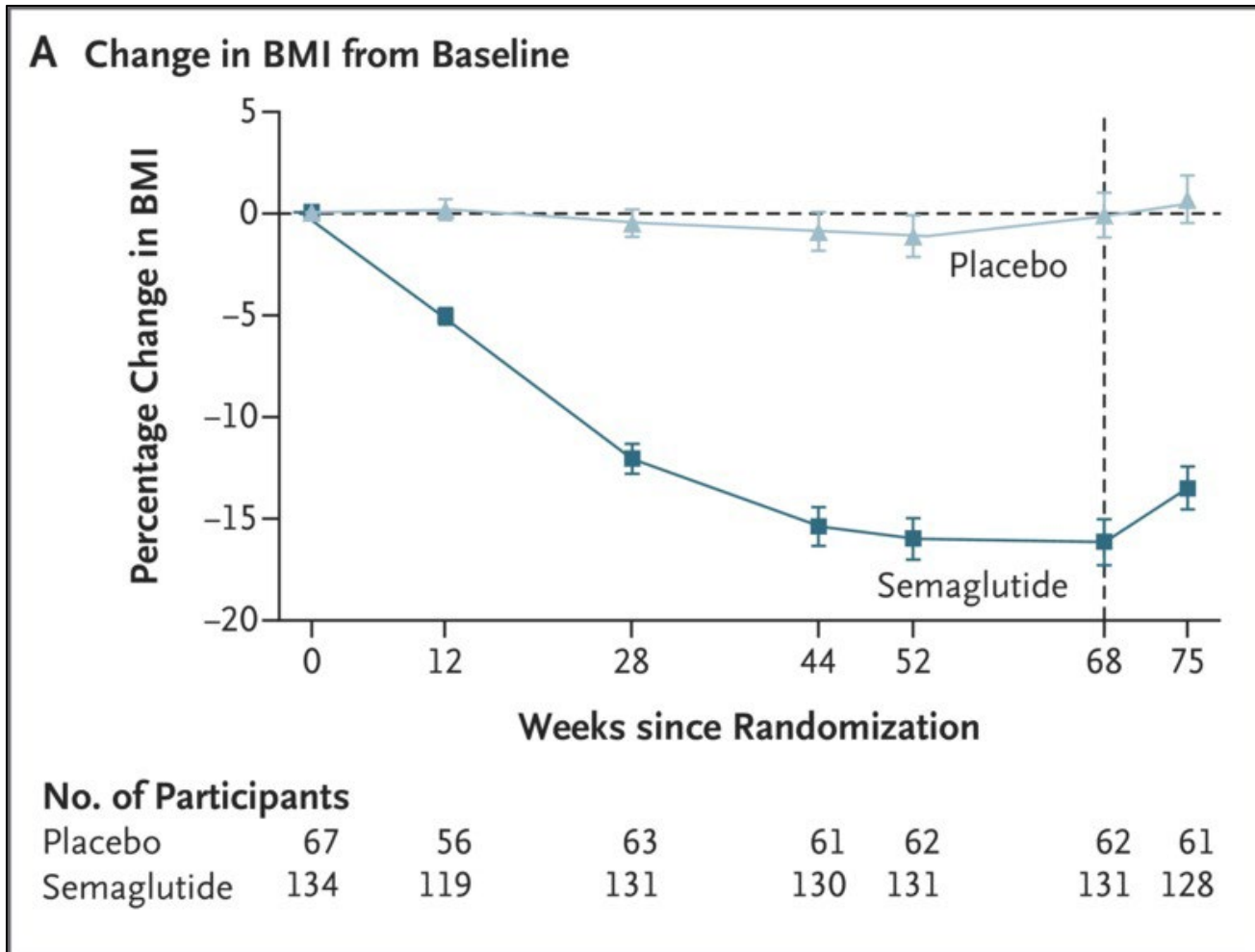
Minimal weight loss
Reasonable if DM or pre-DM

Stimulant medicine with a greater risk of causing side effects than meaningful weight loss

Niche drug for genetic obesity caused by a rare single-gene mutation

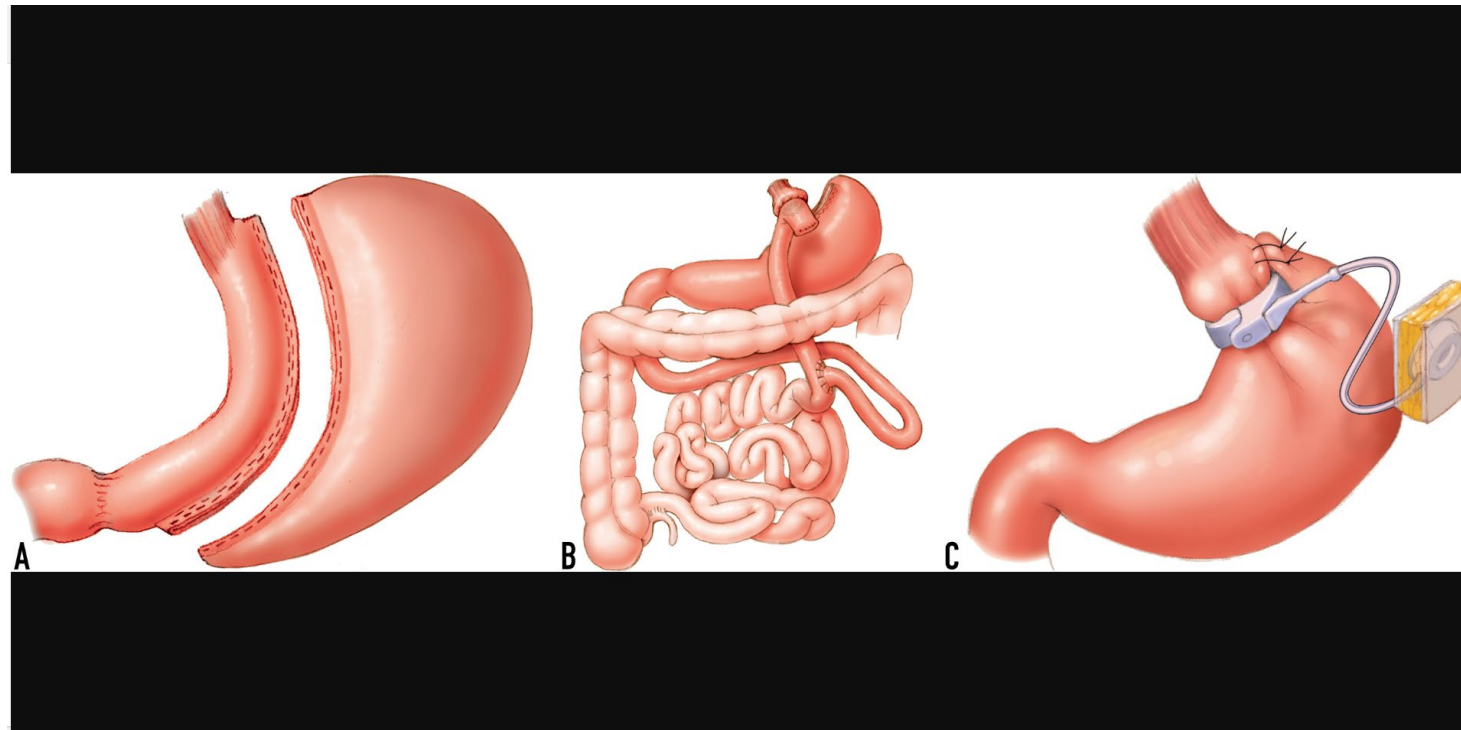
More of the same ...

Semaglutide in Adolescents with Obesity



Treatment

- **KAS 13: Bariatric Surgery **Grade C****
 - Offer referral adolescents 13 y and older with severe obesity (BMI \geq 120% of the 95th percentile for age and sex) evaluation for metabolic and bariatric surgery

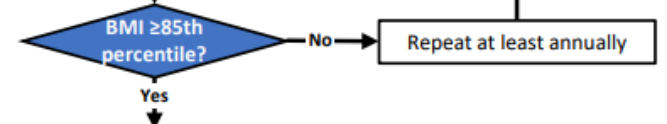


APPENDIX 1 Algorithm for Screening, Diagnosis, Evaluation, and Treatment of Children and Adolescents with C

Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents With Obesity

SCREENING

P&PHCPs *should* measure height & weight, calculate BMI, and assess BMI percentile using age- and sex-specific CDC growth charts or severe obesity growth charts for all children 2-18 years (KAS 1)



DIAGNOSIS

Overweight	Obesity	Severe Obesity
BMI ≥85th to <95th percentile	BMI ≥95th percentile	BMI ≥120% of the 95th percentile

EVALUATION

Components of Comprehensive Evaluation	Overweight		Obesity		
	<10y	≥10y	<10y	≥10y	
Comprehensive history, MBH screening, SDOH evaluation, physical examination, & diagnostic studies (KAS 2)	✓	✓	✓	✓	Elevated BP? ^c Yes -> Refer to AAP High BP CPG ^d No -> Repeat at every visit Abnormal labs? ^e Yes -> Refer to Appendix 4 No -> <u>May</u> repeat testing in 2 years or sooner if changes in exam/risk
Blood pressure (KAS 8)	✓ ^a	✓	✓ ^a	✓	
Fasting lipid panel (KAS 3, 3.1, 5)		✓	⚖️	✓	
FPG, OGTT, or HgbA1C (KAS 3, 3.1, 6) & ALT (KAS 3, 3.1, 7)		⚖️ ^b		✓	

TREATMENT

P&PHCPs *should* treat overweight/obesity & comorbidities concurrently (KAS 4) following the principles of the **medical home** and the **chronic care model**, using a **family-centered** and **non-stigmatizing** approach that acknowledges obesity's **biologic, social, and structural drivers**.(KAS 9)

Components of Comprehensive Treatment	Overweight			Obesity		
	<6y	6 to <12y	≥12y	<6y	6 to <12y	≥12y
Motivational Interviewing ^f (KAS 10)	✓	✓	✓	✓	✓	✓
Intensive Health Behavior and Lifestyle Treatment ^g (KAS 11)	⚖️	✓	✓	⚖️	✓	✓
Weight Loss Pharmacotherapy ^h (KAS 12)						✓
Offer referral to Comprehensive Pediatric Metabolic & Bariatric Surgery programs ⁱ (KAS 13)						✓ ⁱ

Case of LG

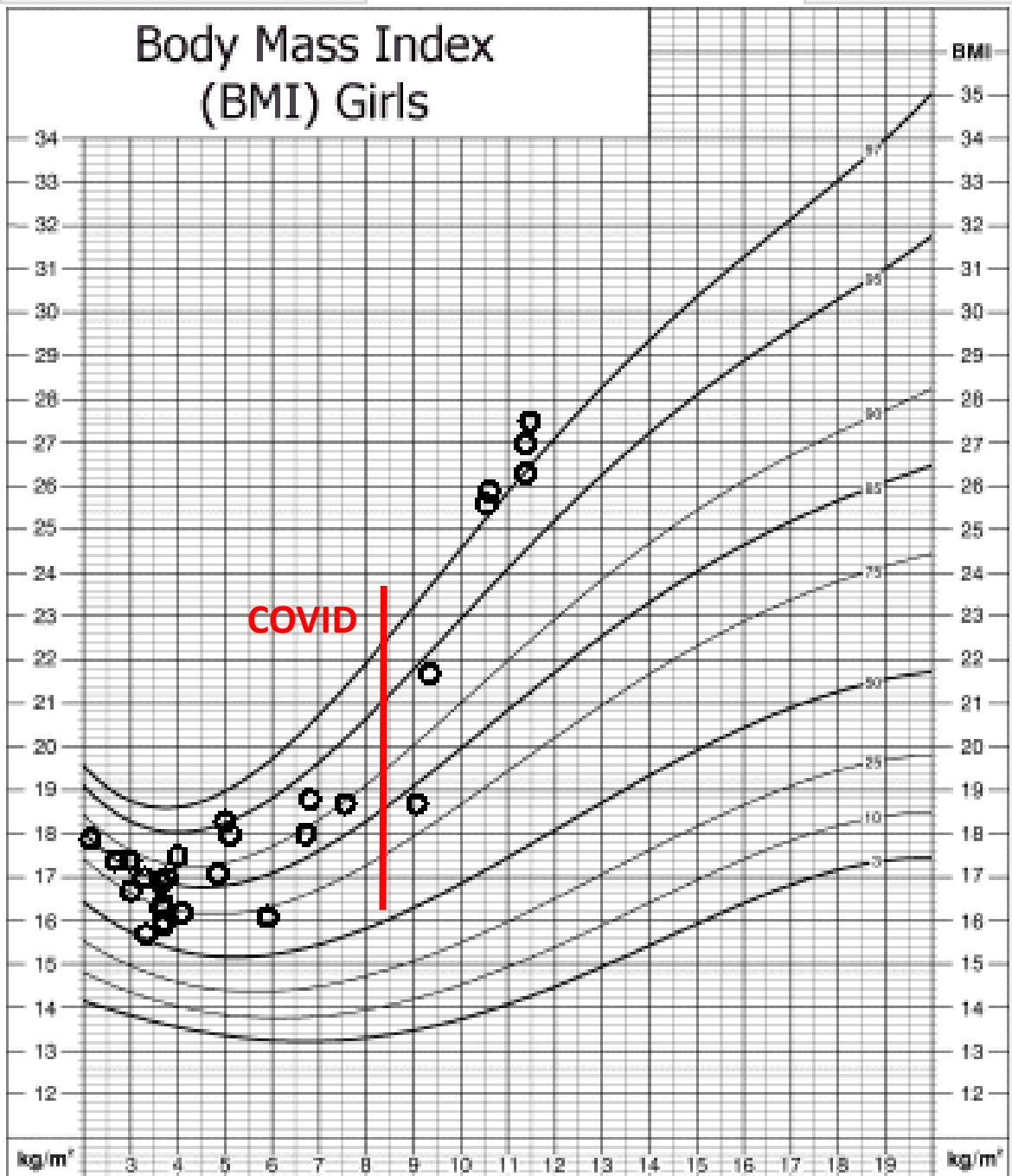
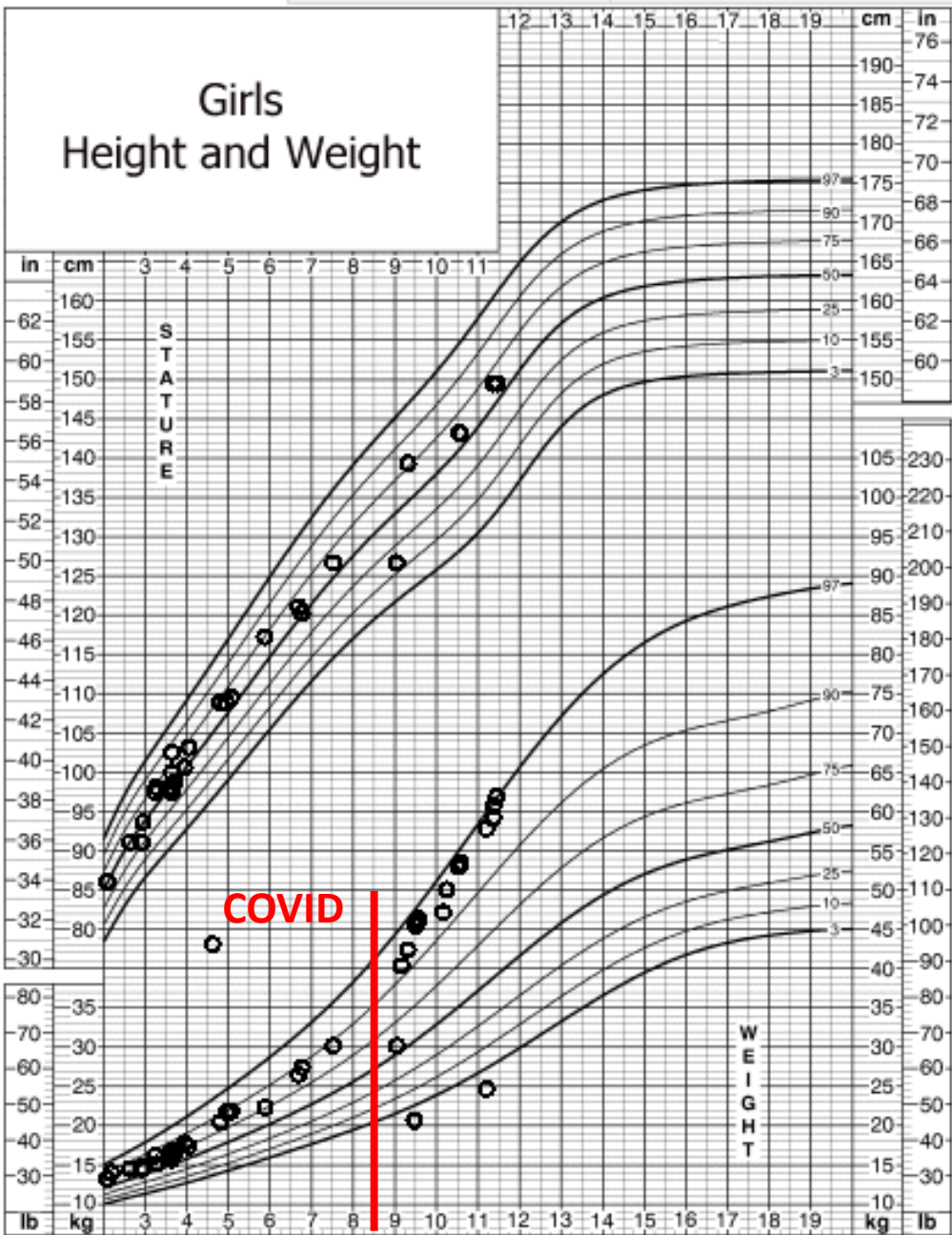
- 11 yo girl presents for Well Child Check
- Here with her grandfather, who is her guardian
- Only concern is mild, intermittent abdominal pain for which she went to the ED last month. A CT scan was “normal” per her grandfather.
- Last seen 1 year ago for primary care
 - Diet and exercise recommendations made
- She reports some bullying at school
- Screened negative for depression

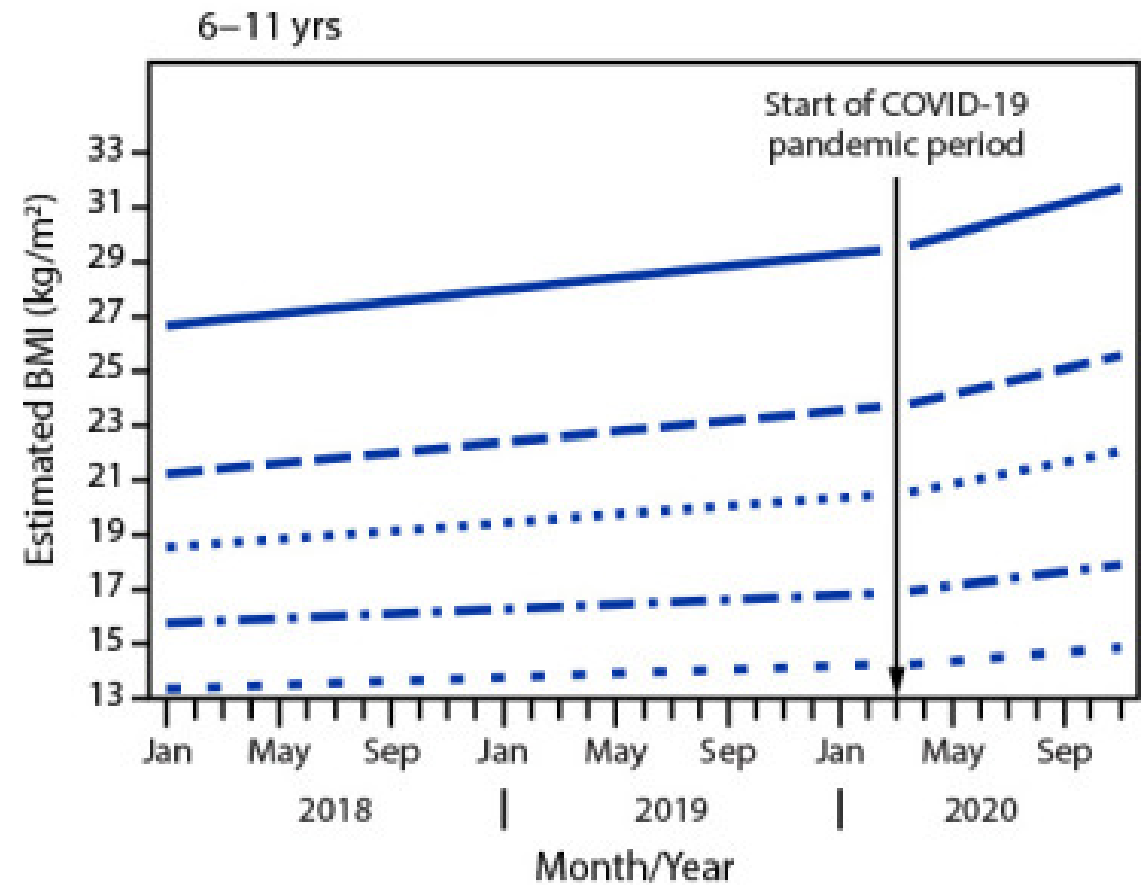
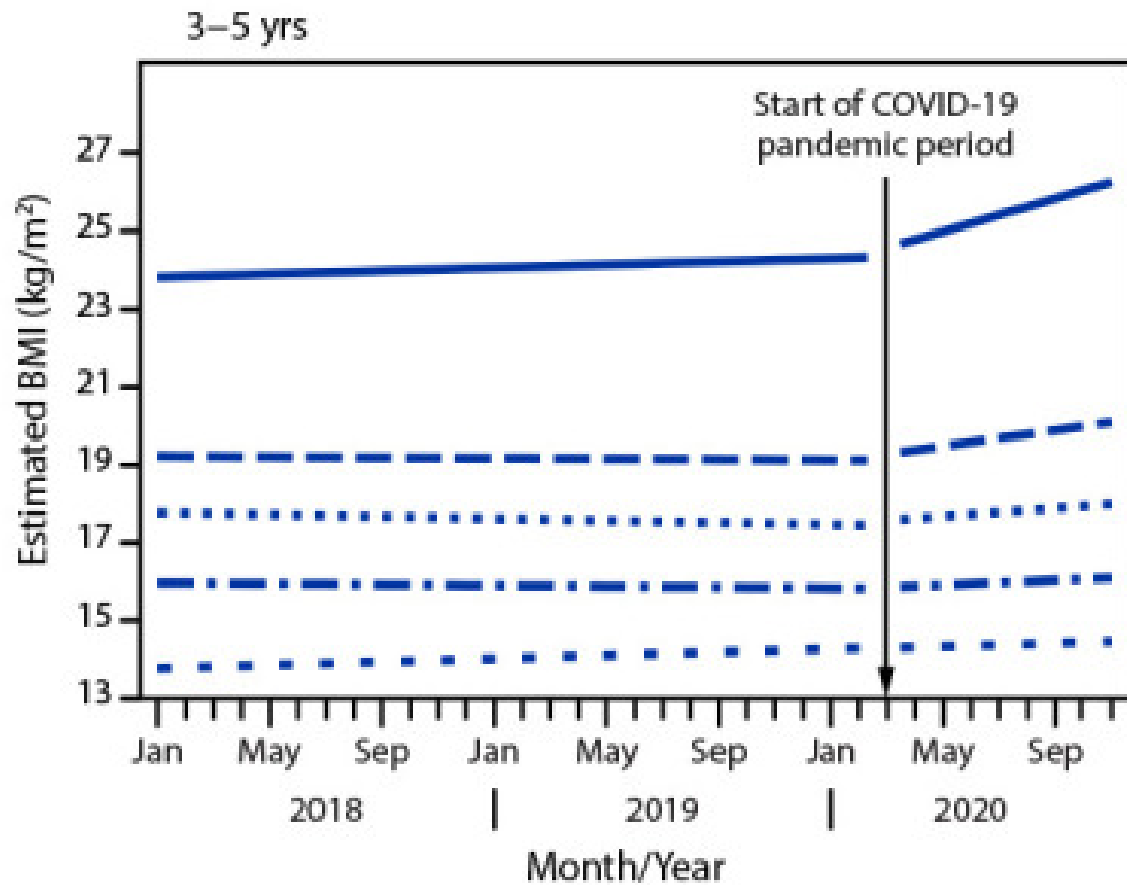
Case of LG

- PMHx:
 - PTSD related to childhood neglect, recent deaths in family. Treated with Risperidone for about 1 year, ending March 2022
 - Last saw mental health 9 months ago
- Social History:
 - Lives on a rural reservation in New Mexico
 - In 5th grade, failing several classes
 - In grandparents custody since 3 months of age
 - Lives with her grandfather, uncle, aunt, and cousin
 - Her father died of COVID 2021, Mother's whereabouts are unknown, grandmother (primary guardian) died last year
 - Private interview does not reveal any substance use, sexual activity, abuse, or other concerns.

Case of LG

- Family History:
 - DM in father, grandmother and grandfather
- Diet and Exercise:
 - Enrolled in local youth sports leagues (basketball, flag football) in the past. Not in the past two years.
 - Grandfather reports that he buys fruits and vegetables, “but she won’t eat them.” “She spends a lot of time on her phone.”
- Physical Exam:
 - Ht: 149.6 cm, Wt: 61.7 Kg, BMI: 27.5, BP= 106/73 (Diastolic= 86 percentile)
 - Physical exam significant for acanthosis nigricans

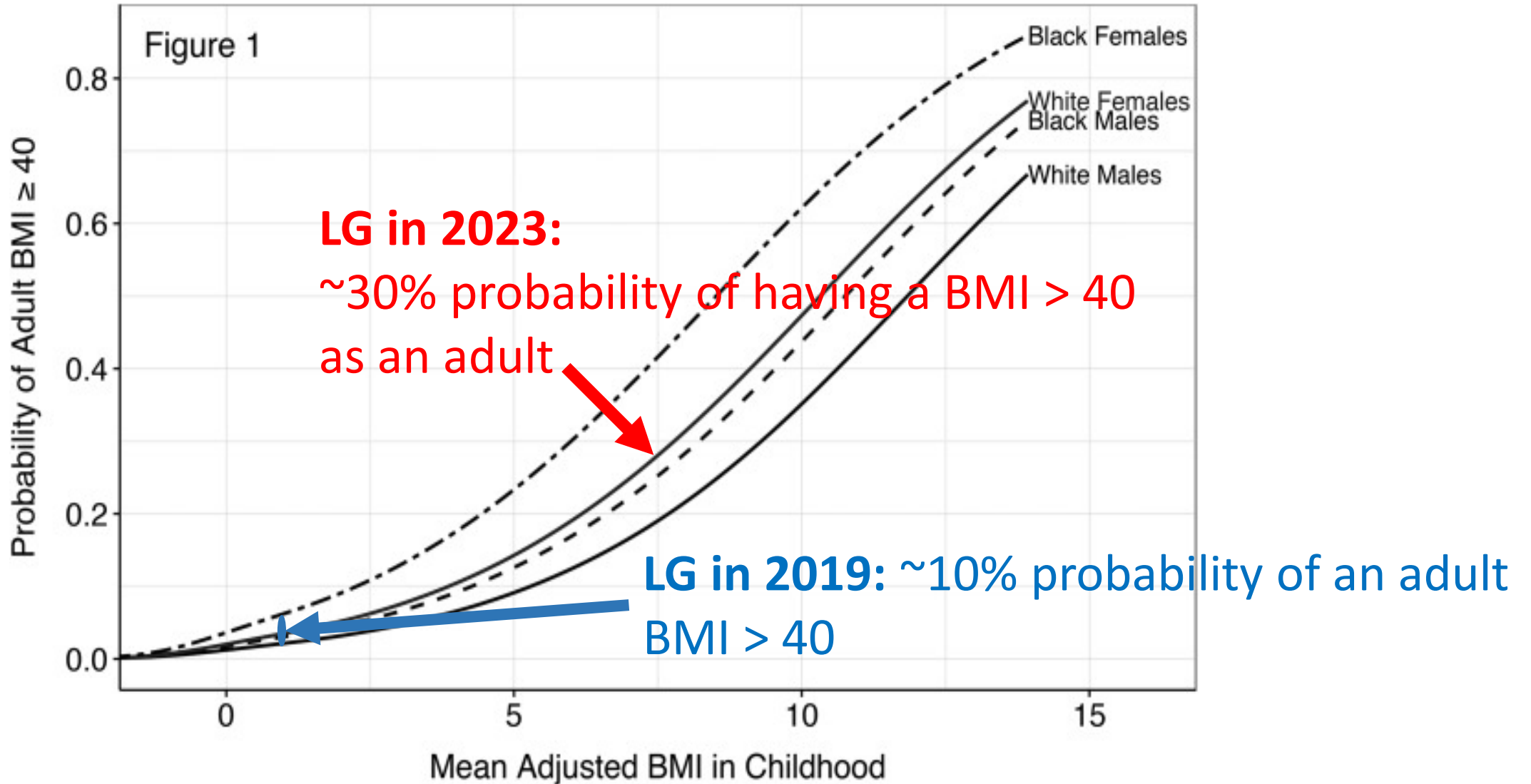




—— Severe obesity
 - - - Moderate obesity
 . . . Overweight
 - · - Healthy weight
 . . Underweight

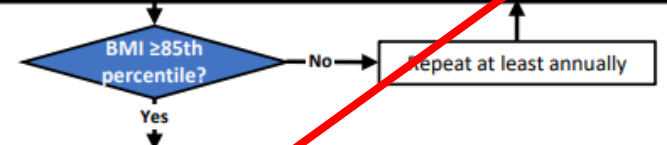
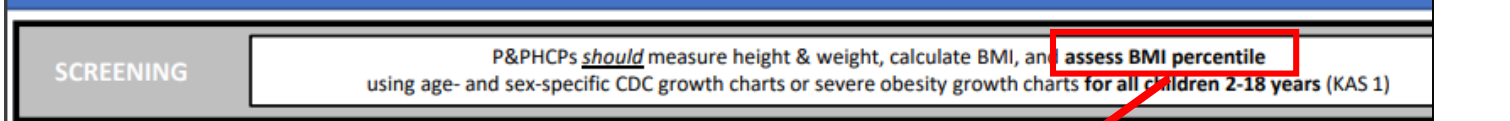
Lange SJ, Kompaniyets L, Freedman DS, et al; DNP3. Longitudinal trends in body mass index before and during the COVID-19 pandemic among persons aged 2-19 years—United States, 2018-2020. *MMWR Morb Mortal Wkly Rep.* 2021;70(37):1278–1283

Risk of Adult Obesity based on Childhood BMI



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Blood pressure (KAS 8)	✓ ^a	✓	✓ ^a	✓	
Fasting lipid panel (KAS 3, 3.1, 5)		✓	⚖️	✓	No → Repeat at every visit
FPG, OGTT, or HgbA1C (KAS 3, 3.1, 6) & ALT (KAS 3, 3.1, 7)		⚖️ ^b		✓	Abnormal labs? ^e
					No → <u>May</u> repeat testing in 2 years or sooner if changes in exam/risk

TREATMENT

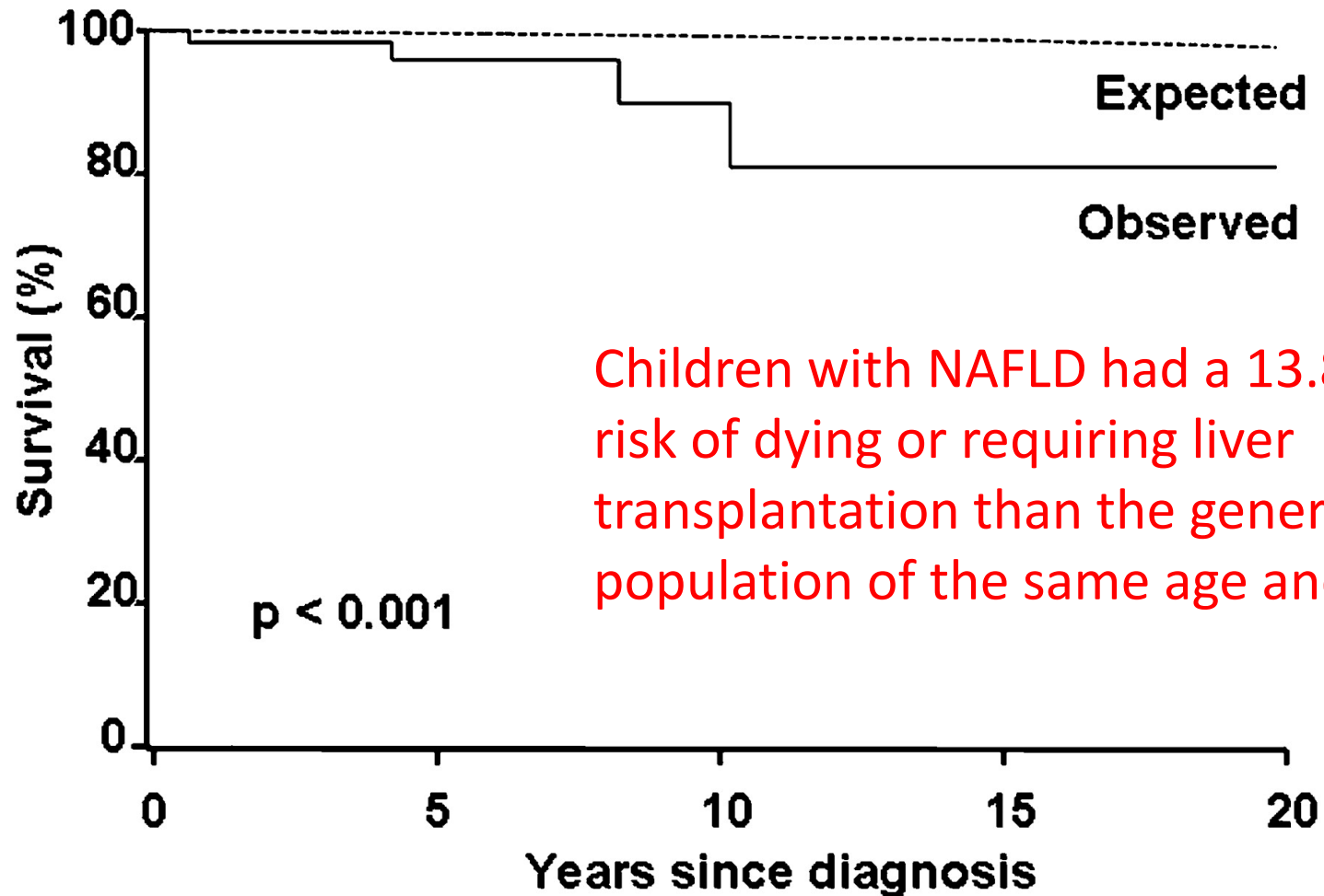
P&PHCPs *should* treat overweight/obesity & comorbidities concurrently (KAS 4) following the principles of the **medical home** and the **chronic care model**, using a **family-centered** and **non-stigmatizing** approach that acknowledges obesity's **biologic, social, and structural drivers**.(KAS 9)

Components of Comprehensive Treatment	Overweight			Obesity		
	<6y	6 to <12y	≥12y	<6y	6 to <12y	≥12y
Motivational Interviewing ^f (KAS 10)	✓	✓	✓	✓	✓	✓
Intensive Health Behavior and Lifestyle Treatment ^g (KAS 11)	⚖️	✓	✓	⚖️	✓	✓
Weight Loss Pharmacotherapy ^h (KAS 12)						✓
Offer referral to Comprehensive Pediatric Metabolic & Bariatric Surgery programs ⁱ (KAS 13)						✓ ⁱ

Recommended Labs

- Ordered over a month ago ... not done yet
- From ED visit on two months ago:
 - HgbA1c: 5.5%
 - Random glucose: 96
 - ALT: 54 (0-33)
 - AST: 45 (0-32)
 - CT Scan of the abdomen and pelvis
 - “Diffuse hepatic steatosis”

Kaplan–Meier survival curve of children with non-alcoholic fatty liver disease (NAFLD) (n=66) as compared to the general United States population of same age and sex.



A E Feldstein et al. Gut 2009;58:1538-1544

How can we do the most good for this child?

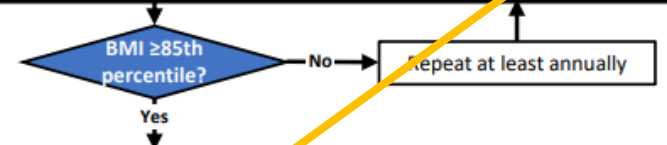
- 11 year old girl with obesity and significant medical complications
- Any treatment plan will need to address several factors:
 - Trauma and grief
 - Disrupted caregiver support due to death and abandonment
 - Cared for by her grandfather after the death of her grandmother last year
 - PTSD
 - Rural setting with few resources to promote fitness
 - Home and school environment with unhealthy food choices
 - Uncertain expectations about health and the future

APPENDIX 1 Algorithm for Screening, Diagnosis, Evaluation, and Treatment of Children and Adolescents with Obesity

Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents With Obesity

SCREENING

P&PHCPs *should* measure height & weight, calculate BMI, and **assess BMI percentile** using age- and sex-specific CDC growth charts or severe obesity growth charts for all children 2-18 years (KAS 1)



DIAGNOSIS

Overweight	Obesity	Severe Obesity
BMI ≥85th to <95th percentile	BMI ≥95th percentile	BMI ≥120% of the 95th percentile

EVALUATION

Components of Comprehensive Evaluation	Overweight		Obesity	
	<10y	≥10y	<10y	≥10y
Comprehensive history, MBH screening, SDOH evaluation, physical examination, & diagnostic studies (KAS 2)	✓	✓	✓	✓
Blood pressure (KAS 8)	✓ ^a	✓	✓ ^a	✓
Fasting lipid panel (KAS 3, 3.1, 5)		✓	⚖️	✓
FPG, OGTT, or HgbA1C (KAS 3, 3.1, 6) & ALT (KAS 3, 3.1, 7)		⚖️ ^b		✓

Elevated BP? ^c	Yes	Refer to AAP High BP CPG ^d
	No	Repeat at every visit
Abnormal labs? ^e	Yes	Refer to Appendix 4
	No	May repeat testing in 2 years or sooner if changes in exam/risk

TREATMENT

P&PHCPs *should* treat overweight/obesity & comorbidities concurrently (KAS 4) following the principles of the **medical home** and the **chronic care model**, using a **family-centered** and **non-stigmatizing** approach that acknowledges obesity's **biologic, social, and structural drivers**.(KAS 9)

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Weight Loss Pharmacotherapy ^h (KAS 12)						✓
Offer referral to Comprehensive Pediatric Metabolic & Bariatric Surgery programs ⁱ (KAS 13)						✓ ⁱ

Can I find an IHBLP?



Intensive Health Behavior and Lifestyle Treatment Programs

[Home](#) / [Patient Care](#) / [Institute for Healthy Childhood Weight](#) / [Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents With Obesity](#) / Intensive Health Behavior and Lifestyle Treatment Programs

Intensive Health Behavior and Lifestyle Treatment (IHBLT) is an evidence-based tool that is part of comprehensive obesity treatment and is recommended in the AAP CPG for children aged 6 and older (Grade B evidence) and 2-5 years of age (Grade C) with overweight or obesity. Learn more about the program below and find the best program for you.

If your program meets the inclusion criteria and you are interested in having it reviewed for consideration to appear on this site, please complete the program survey or [contact us](#).



Feedback Form

About IHBLT
Learn more about IHBLT and why it is recommended for comprehensive obesity treatment.

Inclusion Criteria
Review the requirements a program must meet in order to be included in the list of IHBLT programs.

Help Find the Best Program for You
Find out the best programs that may be best for you.

IHBLT Programs
See a list of all IHBLT Programs.



IHBLT Programs

[Home](#) / [Patient Care](#) / [Institute for Healthy Childhood Weight](#) / [Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents With Obesity](#) / [Intensive Health Behavior and Lifestyle Treatment Programs](#) / IHBLT Programs



Curated list of programs with overviews, contact info, etc.

- [Bright Bodies Healthy Lifestyles Program \(BBHLP\)](#)
- [Building Healthy Families \(BHF\)](#)*
- [Fit Together](#)
- [Family-based Behavioral Treatment \(FBT\)](#)*
- [Healthy Weight and Your Child \(HWYC\)](#)
- [Healthy Weight Clinic \(HWC\)](#)*
- [The MEND \(Mind, Exercise, Nutrition...Do It!\) and Healthy Together Programs \(MEND\)](#)

*All of the CORD 3.0 programs are working through a current funding cycle to address implementation strategies and their ability to spread broadly. Each program has varying capacity to address broad dissemination and implementation at this point in time, please contact the programs to learn more.

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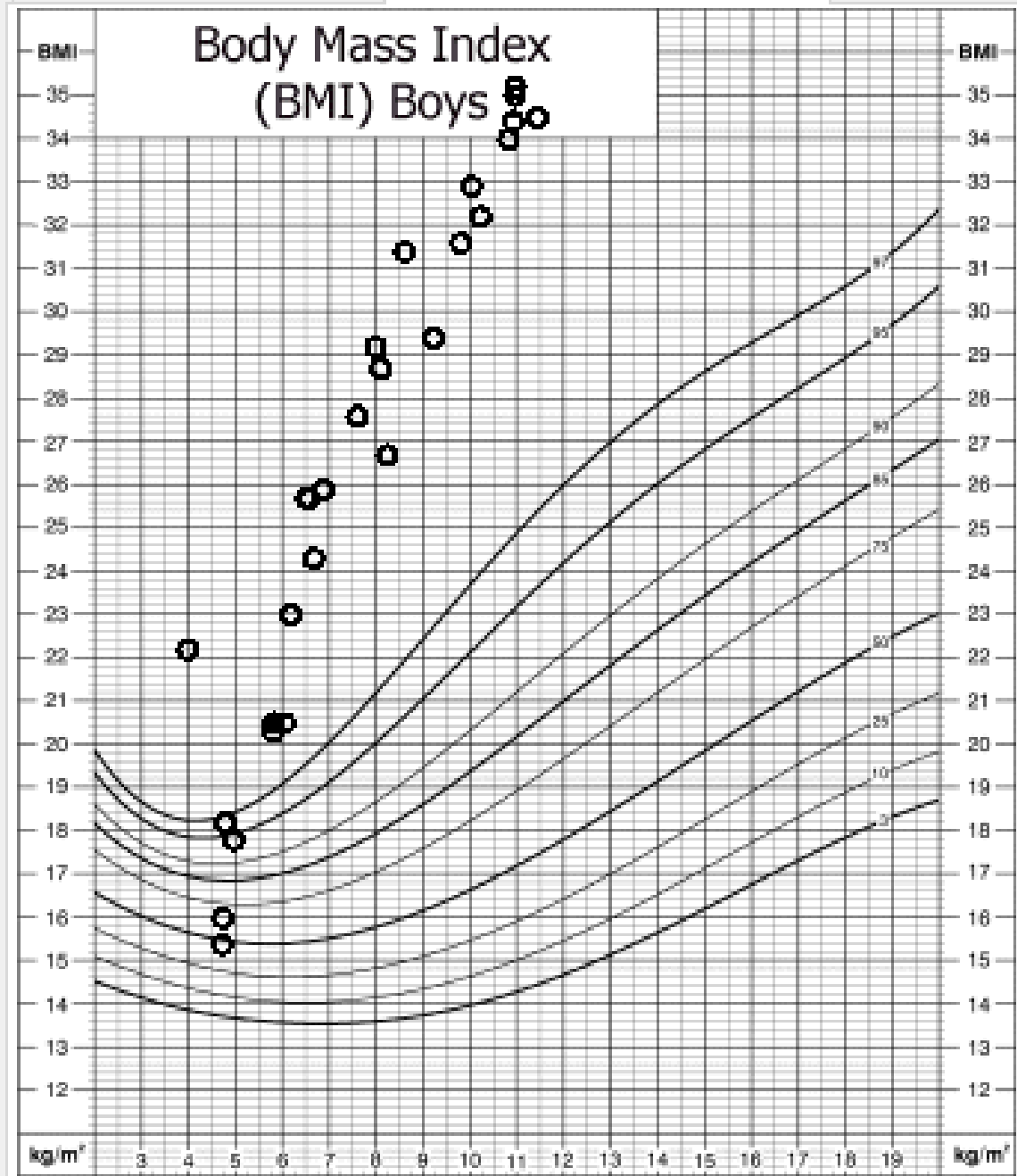
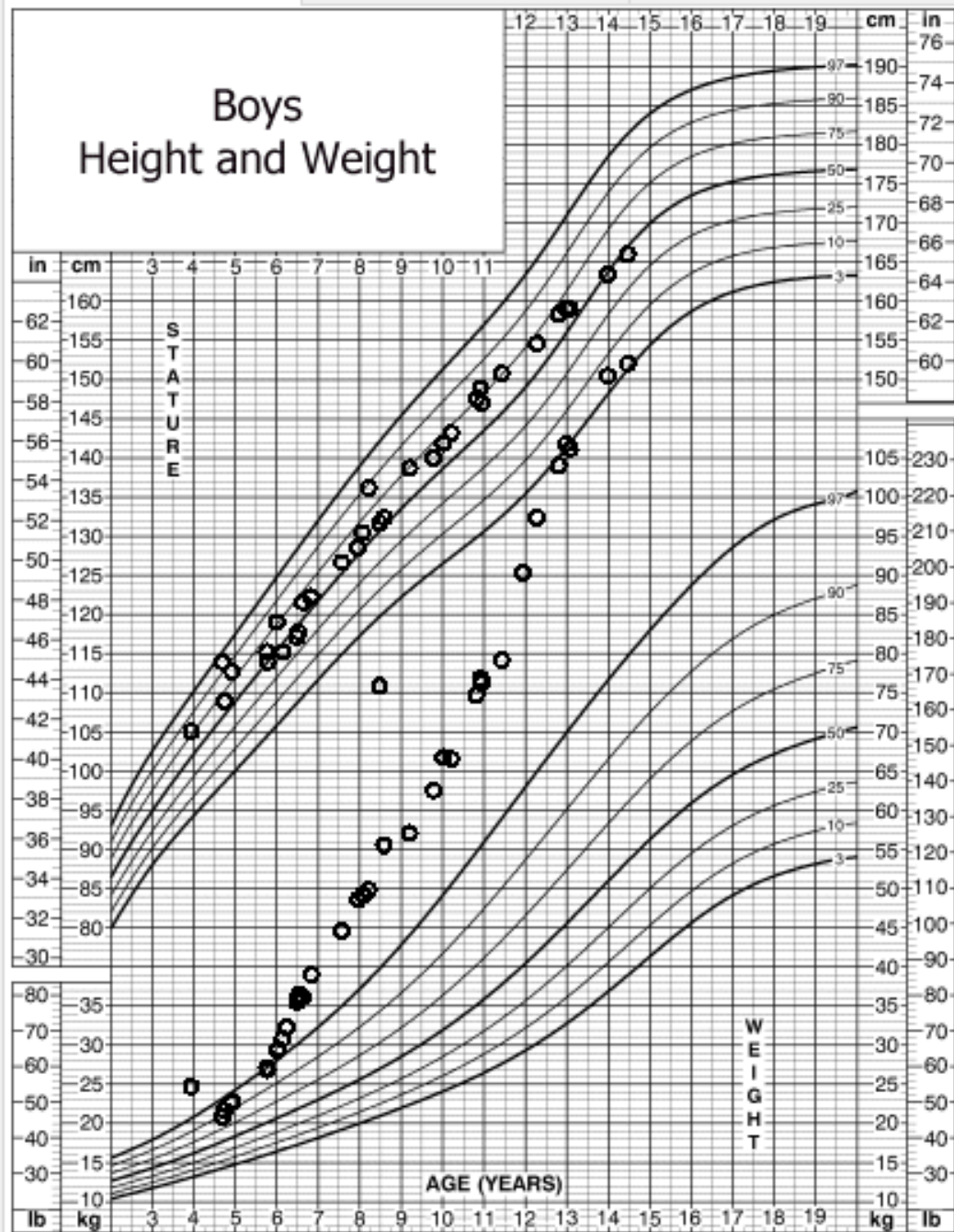
These are not resources for patients.

These are descriptions of programs that could be used to replicate one of these evidence-based programs.



Case of CD

- 14 yo boy with severe Obesity presents for primary care visit
- Here with his mother.
- He is concerned about developing Diabetes
- Seen by the University's "Healthy and Fit Children's Clinic" five months ago (after a 16 month waitlist)
 - Recommended a sleep study (not scheduled)
 - Dietary and exercise counseling provided
 - Meds and bariatric surgery were not noted in the clinic notes.
 - "FU in 3 months." Family has not received an appointment.

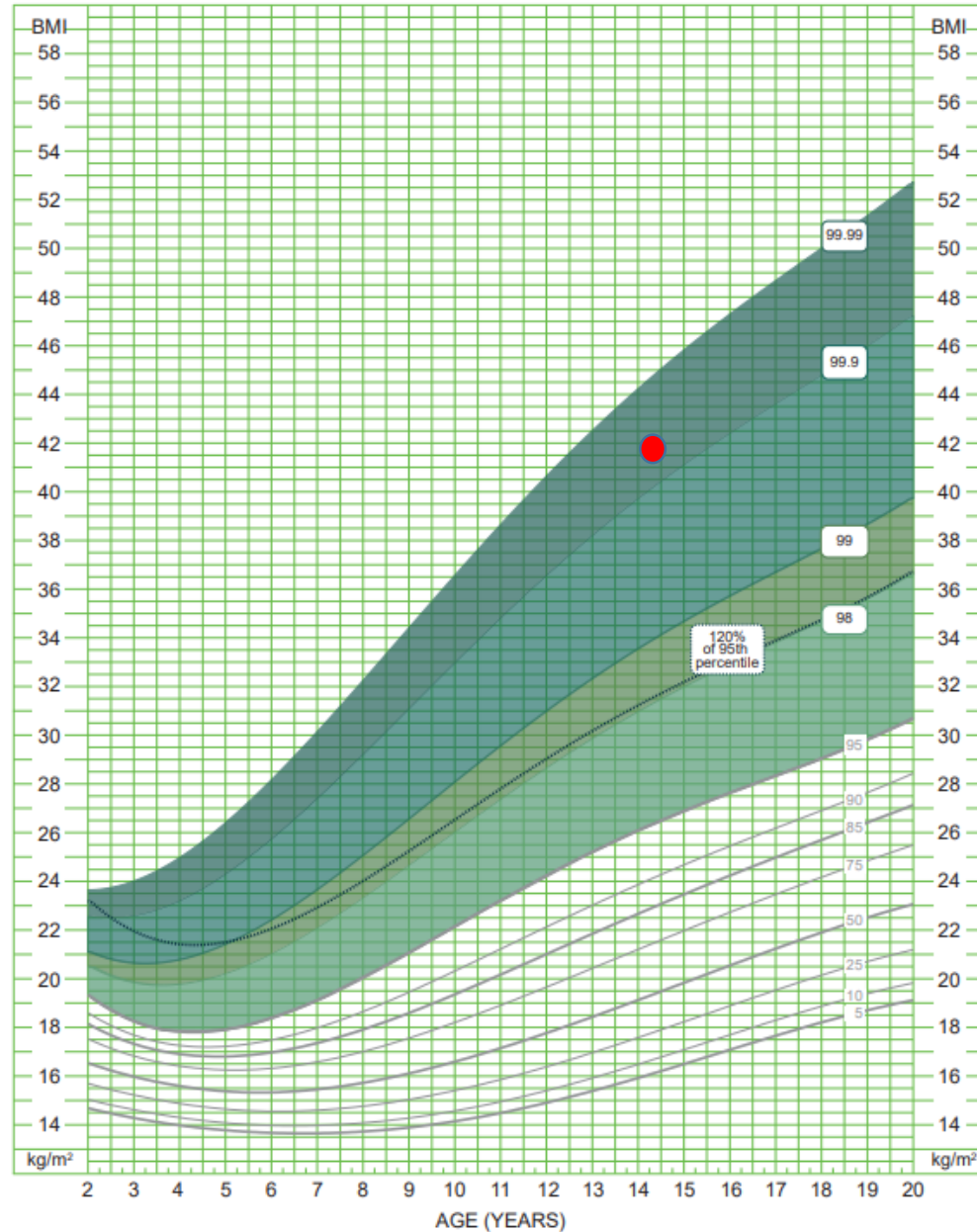


Boys: Ages 2–20 years

Body mass index-for-age percentiles

NAME _____

RECORD # _____



CD: 14 year old male

BMI= 42

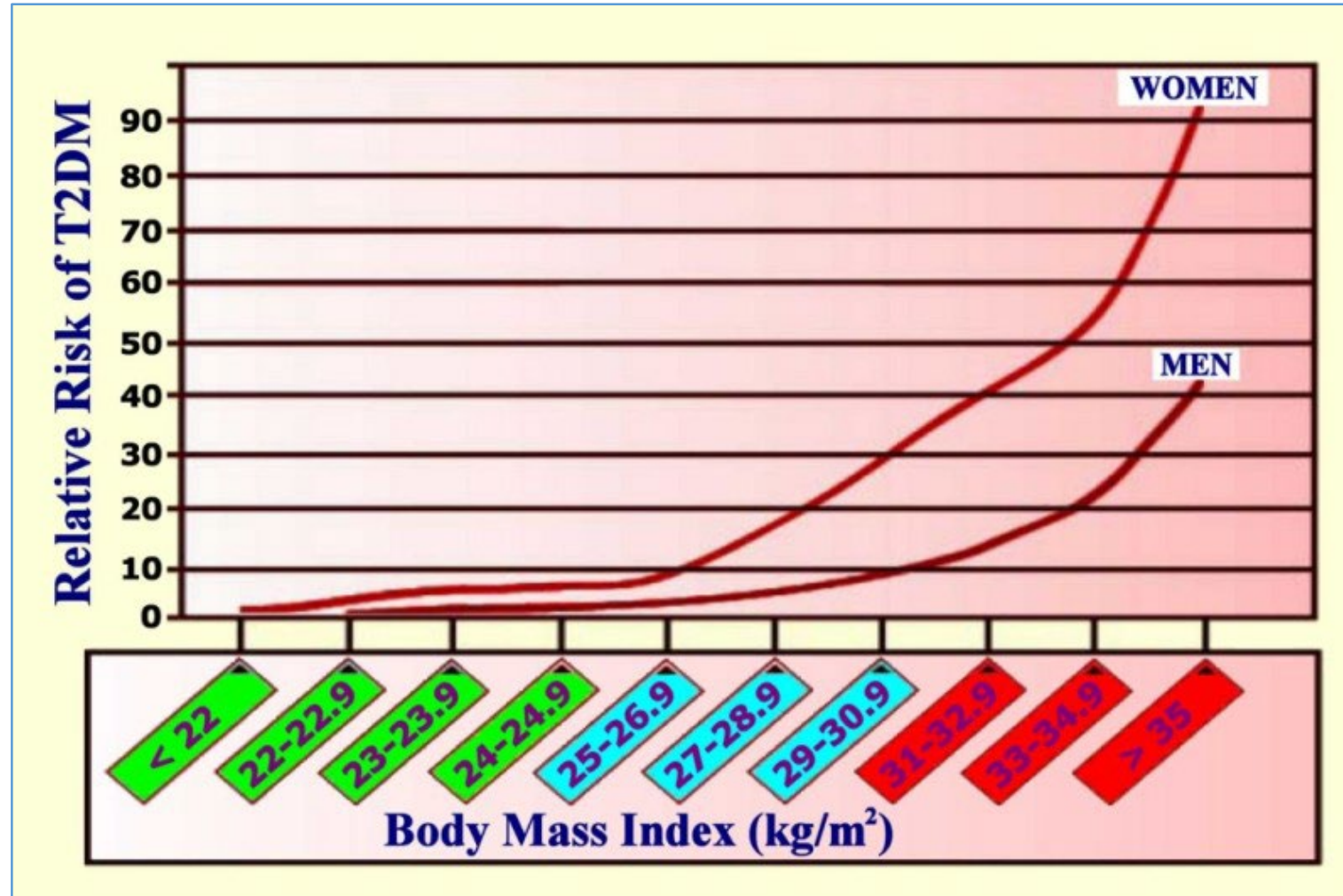
BP= 130/85 (95%
systolic)

A1c= 6.4

HDL 37 (> 40)

ALT= 67 (0-33)

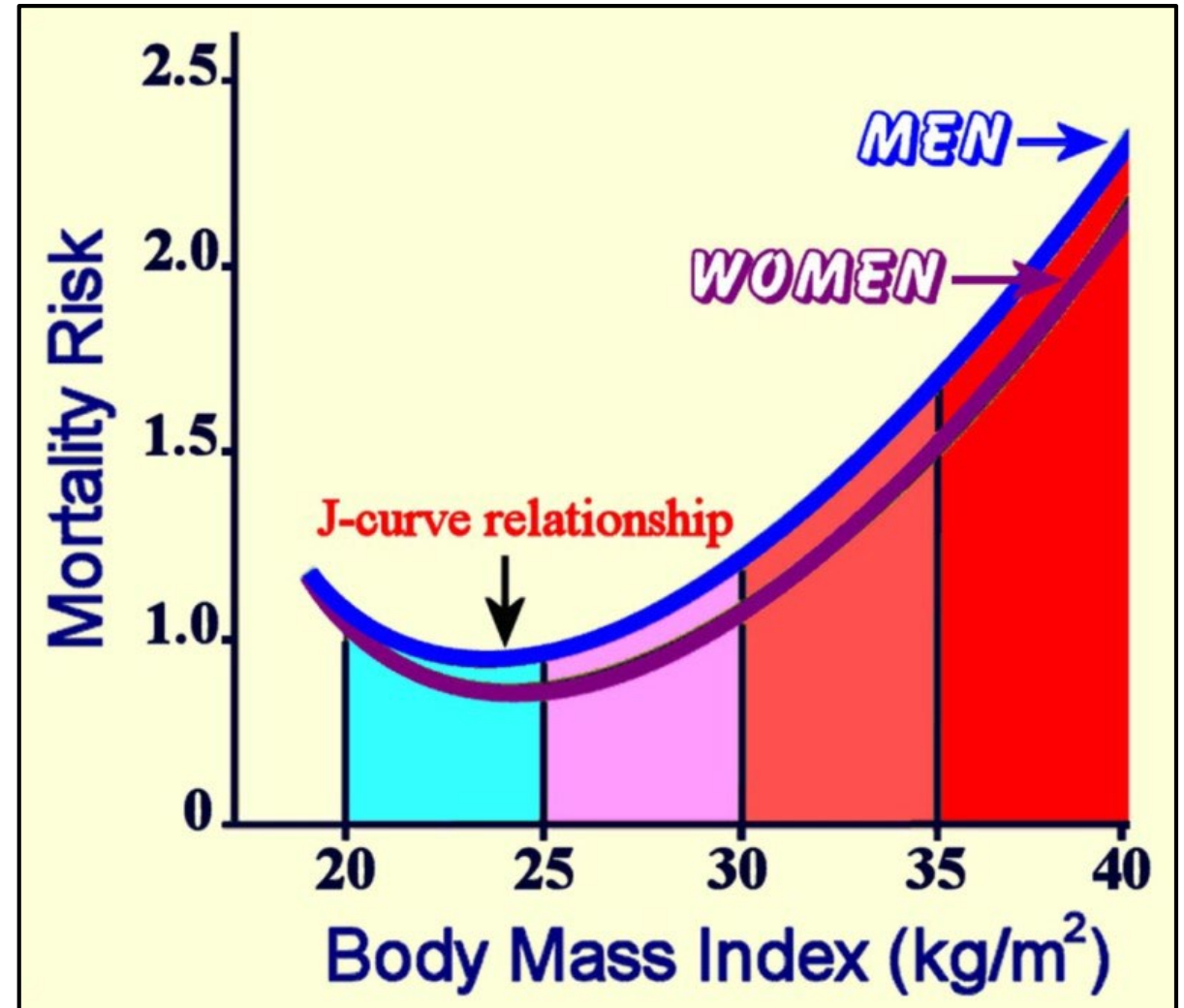
What's at stake in childhood obesity?



What's at stake in childhood obesity?

Obesity associated with

- diabetes
- hypertension
- nonalcoholic fatty liver dz
- dyslipidemia
- obstructive sleep apnea
- asthma
- orthopedic complications
- anxiety, depression, bullying
- shorter life

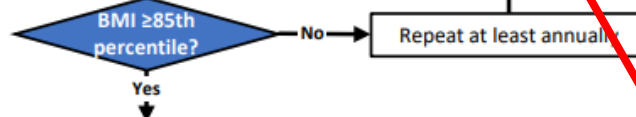


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Abnormal labs?^e
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Weight Loss Pharmacotherapy ^h (KAS 12)						✓
Offer referral to Comprehensive Pediatric Metabolic & Bariatric Surgery programs ⁱ (KAS 13)						✓ ⁱ

Case of CD

- 14 year old boy with severe obesity and numerous comorbidities, including HTN, pre-DM, NAFLD.
- He lives in a remote Native American reservation without access to IHBLT, and his family is not interested in family-wide changes to nutrition.
- Will more education and MI alone will alter his trajectory?
 - In 10 years, will CD's health be better or worse without medications and/or bariatric surgery?



Reflections on the Clinical Practice Guidelines

- The growing pandemic of obesity is a societal responsibility caused, in part, by devaluing what we know leads to physical and emotional health.
 - “Problems cannot be solved with the same mind set that created them.”
- Albert Einstein
- Medications and bariatric surgery do not solve the problem for children with obesity.
 - At best, they offer a less toxic alternative
 - At worst, they may actually contribute to the trauma that underlies obesity.

Reflections on the Clinical Practice Guidelines

- Is Grade C evidence really good enough to recommend surgical changes to the anatomy of an adolescent??
 - How realistic is bariatric surgery for AIAN adolescents living in remote reservations anyway?
- Can meds really help solve this problem?
 - GLP-1 agonists can cost ~ \$1,000 per month
 - Will teens really take a medication that will likely include side effects and needles?
 - Lifelong therapy is probably necessary



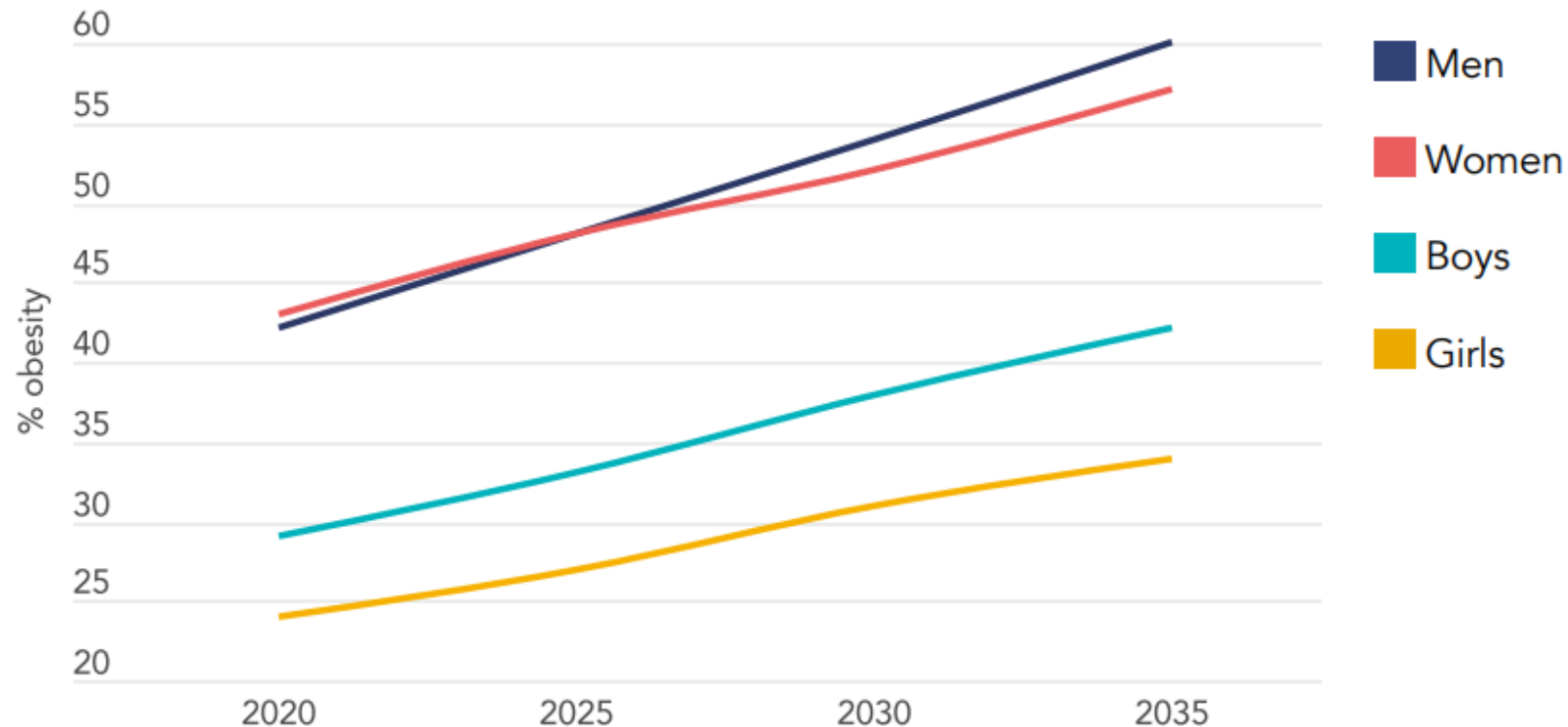
United States of America

ADULTS WITH OBESITY 2035

58%

VERY HIGH

PROJECTED TRENDS IN THE PREVALENCE OF OBESITY (BMI $\geq 30\text{kg/m}^2$)

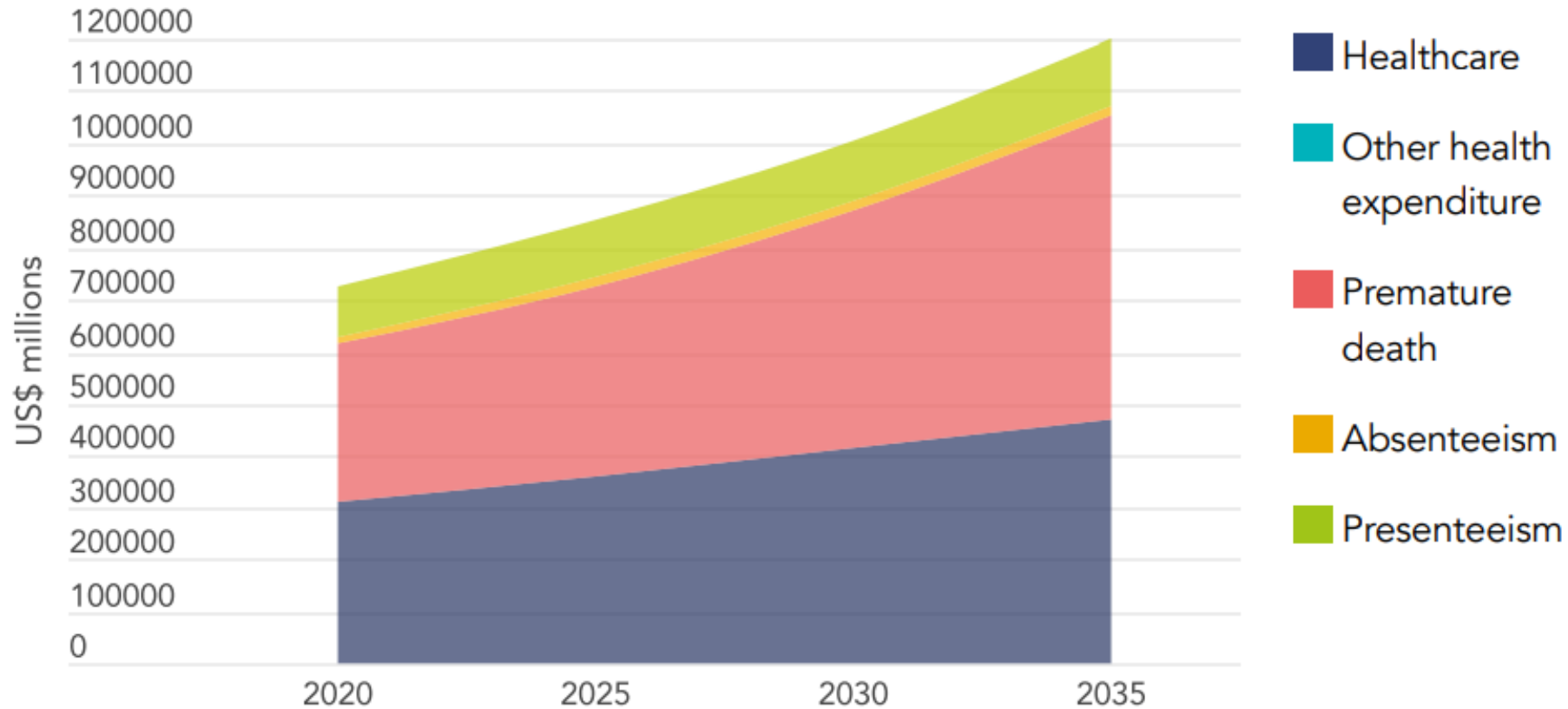


ANNUAL INCREASE
IN ADULT OBESITY
2020–2035

2.1%

HIGH

PROJECTED ECONOMIC IMPACT OF OVERWEIGHT (BMI $\geq 25\text{kg/m}^2$)



ANNUAL INCREASE
IN CHILD OBESITY
2020–2035

2.4%

HIGH

OVERWEIGHT
IMPACT ON
NATIONAL GDP
2035

4.0%

VERY HIGH

Reflections on the Clinical Practice Guidelines

- The guideline's emphasis on IHLBT feels out of touch
- The Guidelines cite racism and ACEs as *causes* of obesity, but they do not address this in their treatment recommendations.
 - Recommended treatment may even exacerbate ACEs
 - Our current healthcare system does not have a way for easily providing this type of care.



“Every system is perfectly designed to get the result that it does.”

- W. Edwards Deming

Top perceived barriers to effective obesity treatment



Based on findings from over 274 obesity specialists from 68 countries (Leach et al, 2020)

Reflections on the Clinical Practice Guidelines

- On the other hand ... these are clinical guidelines for children and adolescents who *are in real trouble*
 - Focusing only on societal changes will not help the child in front of us.
- In the end, these are complex and sometimes heart wrenching questions that bely easy solutions

Thank you