



**Pennington Biomedical
Research Center**
Louisiana State University



Be the Reason Kids Greaux Healthy

Annual Childhood Obesity Conference

Pediatric Obesity Treatment in Practice

From Clinical Cases to Coordinated Care

Presented by Bhakti Samant, MD, MBA, FAAP and Margaret Crittell, MD, FAAP

PEDIATRIC OBESITY MEDICINE • BE THE REASON KIDS GROW HEALTHY

Pediatric Obesity Treatment in Practice

From Clinical Cases to Coordinated Care

Bhakti Samant, MD, MBA, FAAP

Margaret Crittell, MD, FAAP

Meet the Speakers

- Bhakti Samant MD, MBA , FAAP
- Physician- Scientist Professional
- Residency in Pediatrics at the Our Lady of the Lake Children's Hospital
- 15 years of experience in Global healthcare and clinical research
- Pediatric Obesity medicine Specialist at OLOL Healthy Weight and Nutrition Clinic
- GME Co-Director for Pediatric Residency Research Rotation
- I have no disclosures for this presentation.



Meet the Speakers

- Margaret Crittell, MD, FAAP
- Louisiana State University School of Medicine in Shreveport and graduated in 2000.
- Residency in Pediatrics at the University of Nebraska/ Creighton University Joint Residency Program
- Joined Pierremont Pediatrics
- Started Wonder Kids Clinic in 2024, where families are seen by a physician and a Registered Dietician and offered education and treatment for Obesity in a compassionate and comprehensive manner.
- I have no disclosures for this presentation.



ROADMAP

What We'll Cover

A practical, case-anchored walk through the 2023 AAP guideline in daily clinical use.

01 The scope of pediatric obesity today

02 Obesity as a chronic disease — the guideline shift

03 Comprehensive evaluation in practice

04 Clinical cases

05 Matching treatment intensity to need

06 Building your coordinated care team

WHY THIS MATTERS

The Scope of the Problem

~1 in 5

U.S. children and adolescents live with obesity (NHANES data)

~6%

have severe obesity — the fastest-growing BMI category

Widening

disparities by race, ethnicity, and household income

The comorbidity burden starts young

Cardiometabolic

Type 2 diabetes, dyslipidemia, hypertension, fatty liver disease

Psychosocial

Depression, anxiety, disordered eating, weight-based bullying

Long-term risk

Adult obesity, cardiovascular disease, and reduced life expectancy

Source: CDC / NHANES national prevalence estimates; AAP 2023 Clinical Practice Guideline.

From “Watchful Waiting” to Early, Sustained Treatment

THE OLD APPROACH

- ✗ “Wait and see” if the child outgrows it
- ✗ Treatment offered only after other approaches fail
- ✗ Single-modality: diet advice alone
- ✗ Weight discussed without stigma safeguards

THE 2023 AAP GUIDELINE

- ✓ Immediate evaluation at BMI $\geq$ 85th percentile — no watchful waiting
- ✓ Intensive Health Behavior & Lifestyle Treatment (IHBLT) as the foundation for every patient
- ✓ Pharmacotherapy offered as an adjunct for eligible patients 12+
- ✓ Metabolic/bariatric surgery referral for eligible adolescents 13+
- ✓ Stigma-free, family-centered care addressing social drivers of health throughout

Obesity is treated as a complex, chronic disease — not a phase or a behavior problem.

PART ONE

Comprehensive Evaluation

The Four Pillars of Assessment

H

History

- BMI-percentile trend, not a single point
- Diet, activity & screen-time patterns
- Family history of obesity, T2D, CVD
- Medications with weight-related effects

P

Physical Exam

- BMI percentile & growth trajectory
- Blood pressure
- Acanthosis nigricans, striae
- Tonsillar size / OSA signs, Tanner stage

L

Labs & Comorbidities

- Fasting lipid panel
- ALT for fatty liver disease
- HbA1c / fasting glucose if risk factors
- Vit D
- TSH ?

S

Psychosocial & SDOH

- Depression / anxiety screening
- Disordered-eating screen
- Weight-based teasing or bullying
- Food security, housing, access to care



Status	Description
Normal weight	BMI >5 th percentile and <85 th percentile
Overweight	BMI ≥85 th percentile and <95 th percentile
Class I obesity	BMI ≥95 th percentile
Class II obesity	BMI ≥120% of the 95 th percentile, or BMI ≥ 35 and <40
Class III obesity	BMI ≥140% of the 95 th percentile or BMI ≥ 40

Obesity Classification

PART TWO

Clinical Cases in Practice

Case 1

- Our patient is a 12 yo male who was referred for a BMI > 95%ile for his age and height and elevated blood pressure.
 - Weight = 248 lb 3oz / 112.6 kg
 - Height = 5 ft 3 in / 159.8 cm
 - BMI = 44.1 (179% of the 95%ile or Class 3 Obesity)
 - Vital signs: HR = 67 RR = 18 BP = 132/75

Case 1

...ctd

- PMHx: Healthy. Has always been overweight but has been gaining weight faster over the past few years.
- Surgeries: T&A, circumcision
- Medicines: None
- Social Hx: Lives with Mom, 2 sisters, niece and nephew. Has no relationship with his father. Mom works and he is often home alone. He is a good student.
- Activity history: Plays soccer at school. Will be transferring to a new school and wants to play football.

Case 1

...ctd

- 5-2-1-0 Screen
- 2 servings of fruits/vegetables a day
- 10 hours of screen time a day (not including school work)
- 1 hour of physical activity a day
- 0 SSBs a day
- PHQ-9 = 2
- GAD-7 = 0
- ACEs = 0
- He indicated that on a scale of 1 (very willing) to 5 (not willing) to make changes in his eating habits, he was a 2.

Case 1

...ctd

↵ Physical Exam:

- Gen: WD young man of AAPI heritage who is in NAD. He is frequently scrolling on his phone

↵ Pertinent positives: Acanthosis and striae are present on his skin. He has no other remarkable findings.

↵ Labs:

- | | |
|--------------------------|-----------------------|
| ○ HgbA1C = 5.2% | ○ Triglycerides = 113 |
| ○ Total Cholesterol = 91 | ○ ALT = 39 |
| ○ LDL Cholesterol = 32 | ○ TSH = 1.2 |
| ○ HDL Cholesterol = 36 | |

Case 1

...ctd

Impression: 12 yo male with Class 3 Obesity, Elevated Blood Pressure and elevated ALT (NHANES recommends < 25 u/L for boys)

Plan: IHBLT Goals were set. The RD set specific goals of eating a fruit or vegetable with each meal and commended him for cutting out SSBs. We set a goal of decreasing his screen time. He is about to move to another school where he is planning to play football so his physical activity should increase.

Medicine: They were interested in starting medications so we discussed options and decided that Qsymia (phentermine/topiramate) would be a good fit for him, so we started the low dose and planned to see him back in 2 months.

Case 1

...ctd

2 month follow up

Wt. = 107kg (down 5.6kg) Ht. = 160 cm BMI 41.8 (169% of 95%ile)

BP = 102/62

IHBLT Goals: His cell phone broke so he is getting much less screen time. He is doing well on the Qsymia and we continue the 7.5mg/46mg dose and set goals of starting body weight exercises because he had lost a little skeletal muscle mass. He is told to follow up in 2 months.

4 month follow up

Wt = 103.7kg (down 4.3kg) Ht = 160.6cm BMI = 40.2 (161% of 95%ile)

BP = 107/68

He is at his new school and playing football. He will also do soccer after football is done. He is still working on increasing his intake of fruits and non-starchy vegetables. He has a new phone and his screen time is climbing back up. He would like to increase his Qsymia and he is instructed to follow up in 3 months.

Case 1

...ctd

7 month follow up

Wt. 99.8kg (down 3.5kg) Ht = 160.6cm BMI = 38.7 (154% of 95%ile)

Blood pressure = 119/73

He is still increasing his exercise in the off-season from football.

His screen time has continued to increase (9 hours) and he has been instructed in trying to decrease his screen time. He is still just getting 2 servings of fruits and vegetables a day. He continues Qsymia.

10 month follow up

Wt = 100kg (up 0.2kg) Ht. = 162cm BMI = 38.1 (150% of 95%ile)

BP = 119/68 (83%/71%)

He has decreased his screen time to 7 hours and he is lifting weights. His skeletal muscle mass has increased and his percent body fat has decreased. His BMI went down because he grew taller. We continued Qsymia and made plans to follow up in 3 months.

Case 1

...ctd

13 month follow up

Wt = 97.7kg (down 2.7kg) Ht = 163cm BMI = 36.8 (143% of 95%ile). BP = 118/71
He has decreased his screen time to 5 hours a day mostly when he is playing music while he lifts weights. He is interested in golf for recreation. He is struggling to get exercise due to limited access to indoor workout facilities and excessive heat. School is starting. He will continue the Qsymia. He is on the highest dose (15mg/92mg).

Summary

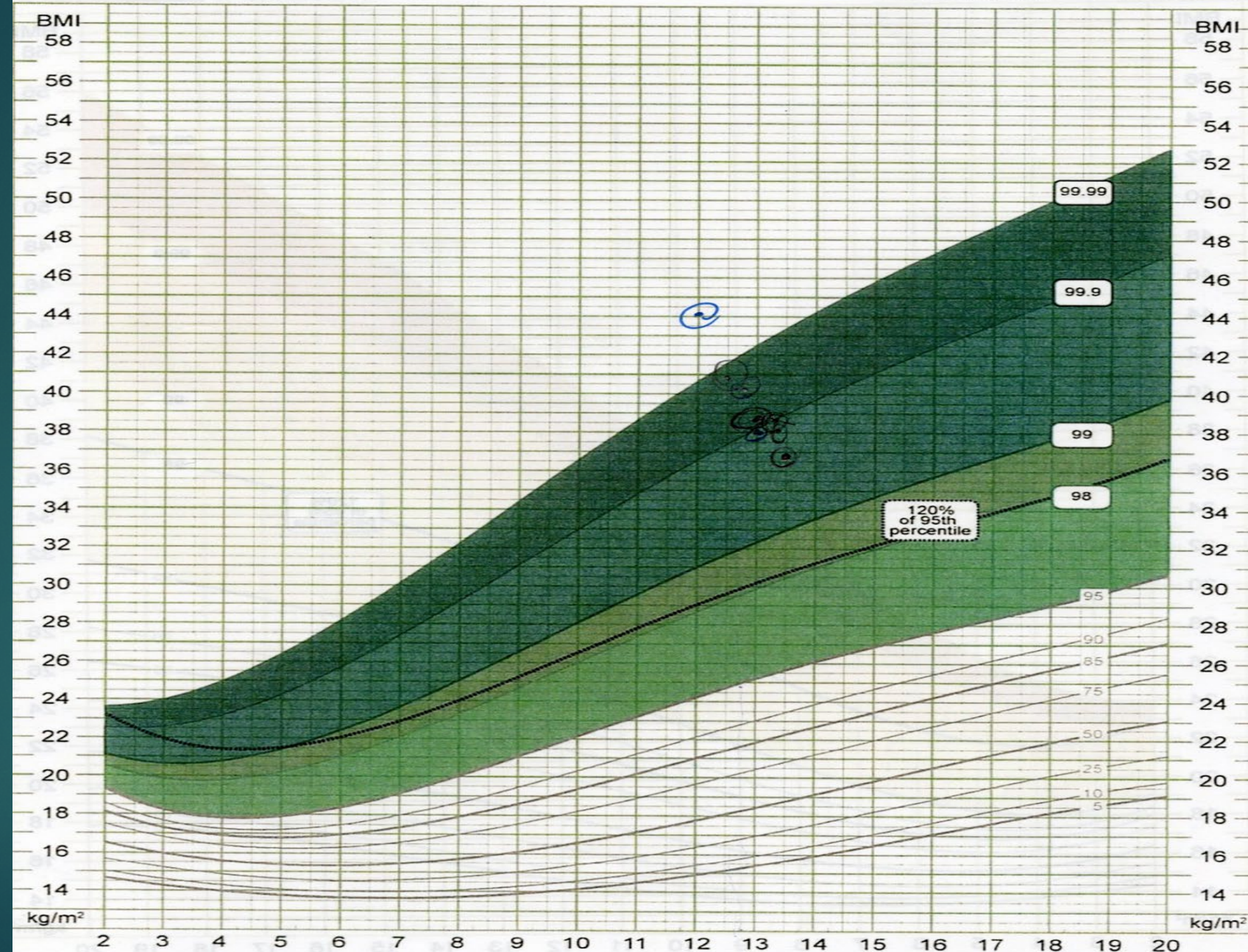
Weight loss of 15kg over 13 months. Body composition shows increase in skeletal muscle mass and % body fat decreasing from 51.7% to 38%. This is 13% weight loss. His BMI is still elevated but he is noticing positive changes in his body and that is really motivating him to continue to work on his IHBLT goals. We are planning to recheck his ALT at a future visit but otherwise we will just continue the Qsymia. In the future he may benefit from a GLP-1 medicine, but at the time they are cost-prohibitive.

Boys: Ages 2–20 Years

Body mass index-for-age percentiles

NAME _____

RECORD # _____



Take away lessons

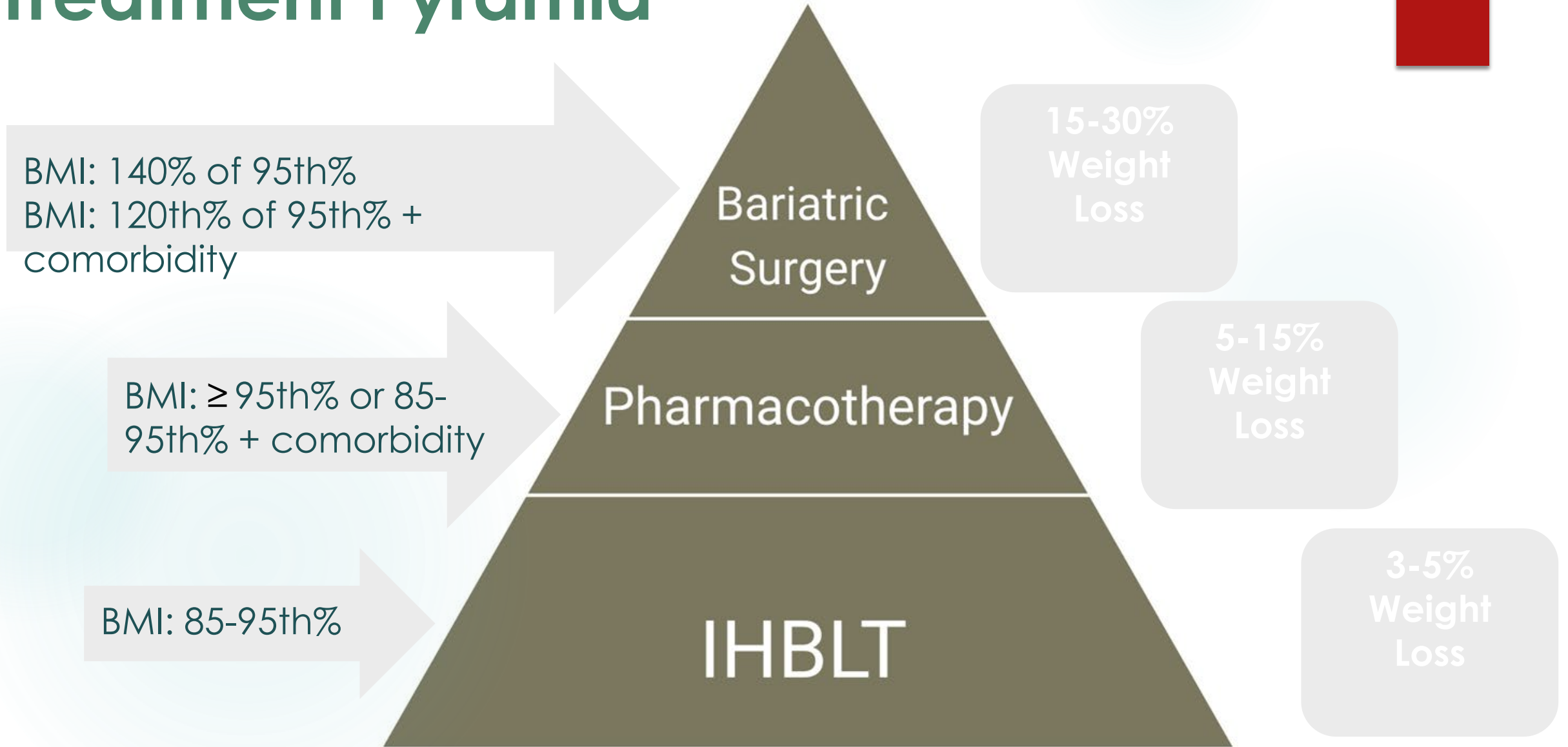
1. His pediatrician started his journey by emphasizing cutting out SSBs. This had already started him on a path to improved health.
2. He was motivated to make changes in his body, but he still had very high screen time usage. He has started to make more changes now that he is seeing the positive changes in his body. I see this a lot in kids. When they have a little weight loss, they feel motivated and the things you have discussed with them start to become easier for them to accomplish.
3. Qsymia can be highly effective for many kids and is often more affordable than a GLP-1.

IHBLT

We always talk about the foundation of good health and we focus on these at each visit. They complete the 5-2-1-0 questionnaire each time they come to the clinic. We encourage them to set goals based on what is important to them (motivational interviewing is key!) but we almost always set a nutrition goal and another goal. This can be regarding sleep, screen time and / or physical activity. We write them out and send them home with the patient each time they come in. We follow the SMART guidelines for goal setting and I always ask how they felt about their previous goals when they come for a follow up visit.



Treatment Pyramid



SMART GOALS

- Specific
- Measurable
- Achievable
- Relevant
- Time-bound



- Two of the downloads available on the IHCW website are the Capacity Considers for Obesity Evaluation and Treatment and the goal sheets
- There is also a treatment letter to explain the treatment of obesity for children and teens

My Goal Sheet

NAME	TODAY'S DATE
GOAL:	COMMUNITY RESOURCES:

↓
Ideas to help me achieve my goal:

Idea 1

→

Action Steps:

☐ _____

☐ _____

☐ _____

Idea 2

→

Action Steps:

☐ _____

☐ _____

☐ _____

I AM PROUD OF:

I HAD A HARD TIME WITH:

OTHER NOTES:

NEXT APPOINTMENT



American Academy of Pediatrics
Institute for Healthy
Childhood Weight

Effectiveness of Pharmacotherapies and Lifestyle Treatment

A recent systematic review and meta-analysis published in JAMA found that combining lifestyle treatment with Anti-Obesity Medications was associated with the greatest short-term (6-12 months) weight reduction in adolescents with obesity. This review found that all pharmacologic treatments were MORE EFFECTIVE when paired with IHBLT.

JAMA Pediatrics 2026;180; (9):961-974

CASE 2 —

Jordan, Age 15

- BMI at the 140% of the 95th percentile — Class III obesity
- Acanthosis nigricans; HbA1c 6.0% (prediabetes)
- Elevated ALT suggestive of MASH (fatty liver disease)
- History of weight-based bullying at school
- Two prior lifestyle-only attempts without sustained change

PRESENTING CONCERN

Jordan is motivated to make a change and asks directly about medication, having heard about it from friends. The family is supportive but has limited time and financial resources.

CLINICAL QUESTION

With severe obesity, prediabetes, and a failed lifestyle-only trial, does Jordan meet criteria to add pharmacotherapy — and how do we decide together?

The Stepped-Care Treatment Ladder

Each tier builds on — and never replaces — the one beneath it.

3

+ Metabolic & Bariatric Surgery

Referral for evaluation in eligible adolescents 13+ with Class III obesity and comorbidity.

2

+ Pharmacotherapy

Offered as an adjunct for eligible patients 12+ with obesity, alongside continued IHBLT.

1

IHBLT — the Foundation

Intensive Health Behavior & Lifestyle Treatment for every patient, at every tier of care.

KEY PRINCIPLE

Higher tiers add to — they never replace — behavioral and family support. Every decision to escalate is shared with the patient and family.

Eligibility for Tiers 2 and 3 follows AAP 2023 age, BMI, and comorbidity thresholds — not clinician discretion alone.

Shared Decision-Making with Pharmacotherapy

THE PLAN

- Continue IHBLT while discussing pharmacotherapy as an added tool, not a replacement
- Shared decision-making conversation on a GLP-1 receptor agonist, given BMI, prediabetes, and a prior failed lifestyle-only trial
- Review benefits, side effects, cost, and insurance realities openly with Jordan and family
- Coordinate with pediatric endocrinology given the prediabetes diagnosis
- Monitor labs, growth, and mental health at regular intervals

FOLLOW-UP OUTCOME

- *Improved metabolic labs, including HbA1c*
- *Meaningful reduction in BMI percentile*
- *Ongoing multidisciplinary follow-up with endocrinology*
- *Family reports better school engagement and mood*

Medication is an adjunct — the behavioral foundation continued throughout.

PART THREE

Antiobesity Pharmacotherapy

FDA-Approved Antiobesity Medications

Adjuncts to IHBLT — not replacements for it. All require ongoing behavioral treatment alongside medication.

Medication	Drug Class	Age Approval	Indication
Orlistat (Xenical)	Lipase inhibitor	12+	Obesity, BMI ≥ 95th percentile
Liraglutide (Saxenda)	GLP-1 receptor agonist — daily injection	12+	Obesity
Semaglutide (Wegovy)	GLP-1 receptor agonist — weekly injection	12+	Obesity, BMI ≥ 95th percentile
Phentermine (monotherapy)	Sympathomimetic amine	16+	Short-term adjunct (≤ 12 weeks)
Phentermine/Topiramate ER (Qsymia)	Sympathomimetic + anticonvulsant combination	12+	Obesity
Setmelanotide (Imcivree)	MC4R pathway agonist	6+	Rare monogenic obesity (POMC, PCSK1, LEPR deficiency; Bardet–Biedl syndrome)

Tirzepatide (Zepbound) is FDA-approved for adults only; adolescent obesity trials are ongoing — see “On the Horizon.”

Mechanisms & Clinical Indications

1 GLP-1 Receptor Agonists

liraglutide, semaglutide

Mimic the incretin hormone GLP-1: slow gastric emptying and act centrally to reduce appetite and food intake.

Best fit: adolescents 12+ with obesity, especially with prediabetes, T2D, or cardiometabolic risk factors.

2 Phentermine/Topiramate ER

sympathomimetic + anticonvulsant

Combines appetite suppression (norepinephrine activity) with an anticonvulsant that enhances satiety signaling.

Best fit: adolescents 12+ without cardiac or psychiatric contraindications, or when GLP-1 therapy isn't tolerated, available, or covered.

3 GLP and GIP Analog

Tirzepatide

Slows gastric emptying and increases satiety via combined incretin signaling

Best fit: Adults , Kids >10yrs with t2DM

4 MC4R Pathway Agonist

setmelanotide

Restores signaling in the leptin–melanocortin pathway that regulates hunger and energy expenditure.

Best fit: confirmed rare monogenic obesity (genetic testing required before initiation) — not for common obesity.

Semaglutide

MECHANISM OF ACTION

- GLP-1 receptor agonist; originally developed to treat type 2 diabetes
- Slows gastric emptying and increases satiety (NTS activation)
- Reduces hypothalamic appetite signaling and food reward
- Administered subcutaneously once weekly, pre-filled single-dose pens

STEP TEENS — ADOLESCENT RCT (68 WEEKS)

- **-16.1%** mean BMI change with semaglutide (vs. +0.6% placebo)
- **76%** of participants achieved $\geq 5\%$ BMI reduction
- **-0.22%** HbA1c change; ALT and blood pressure also improved

Weghuber D, et al. *N Engl J Med*. 2022 (STEP TEENS).

FDA-APPROVAL

- Obesity (Wegovy 2.4mg): $\geq 12y$, BMI $\geq 95th$ %ile
- T2DM (Ozempic 2mg): $\geq 18y$ only

CONTRAINDICATIONS

- Personal/family history of MTC
- MEN2 syndrome
- Pregnancy

CAUTION

- Pancreatitis, gallbladder disease
- Gastroparesis
- Concurrent insulin use
- General anesthesia/deep sedation

CONSIDER FOR

- Diabetes/prediabetes, MASLD, OSA
- Strong food cravings
- Comfortable with weekly injections
- Insurance coverage confirmed

Titration: 0.25mg weekly $\times 4 \rightarrow 0.5mg \times 4 \rightarrow 1mg \times 4 \rightarrow 1.7mg \times 4 \rightarrow 2.4mg$ maintenance. Counsel on nausea, hydration, and small, slow meals to minimize GI side effects.

Liraglutide

MECHANISM OF ACTION

- GLP-1 receptor agonist; originally developed to treat type 2 diabetes
- Slows gastric emptying and increases satiety (NTS activation)
- Reduces hypothalamic appetite signaling and food reward
- Administered subcutaneously once daily, pre-filled multi-dose pens

SCALE TEENS — ADOLESCENT RCT (56 WEEKS)

- **-5.0%** mean BMI change vs. placebo (BMI SDS ETD – 0.22)
- **43%** achieved $\geq 5\%$ BMI reduction (vs. 19% placebo)
- **-7.4%** BMI change, ages 6–11y (Fox, NEJM 2024)

Kelly AS, et al. NEJM 2020 (SCALE Teens); Fox CK, et al. NEJM 2024.

FDA-APPROVAL

- Obesity (Saxenda 3mg): $\geq 12y$, BMI $\geq 95th$ %ile
- T2DM (Victoza 1.8mg, generic): $\geq 10y$

CONTRAINDICATIONS

- Personal/family history of MTC
- MEN2 syndrome
- Pregnancy

CAUTION

- Pancreatitis, gallbladder disease
- Gastroparesis
- Insulin, thyroid c-cell tumors
- General anesthesia/deep sedation

CONSIDER FOR

- Diabetes/prediabetes, MASLD, OSA
- Strong food cravings, poor satiety
- OK with daily injections
- Insurance coverage confirmed

Titration: 0.6mg SC daily $\times 7d \rightarrow 1.2mg \times 7d \rightarrow 1.8mg \times 7d \rightarrow 2.4mg \times 7d \rightarrow 3mg$ daily maintenance. Counsel on nausea, hydration, small/slow meals. Cost: \$\$\$.

Phentermine/Topiramate ER

MECHANISM OF ACTION

- Combination capsule: a sympathomimetic amine (phentermine) plus an anticonvulsant (topiramate)
- Phentermine stimulates norepinephrine release, reducing appetite
- Topiramate increases GABA activity and inhibits carbonic anhydrase, reducing food reward
- Administered orally once daily; mid-dose (7.5/46mg) and top-dose (15/92mg) capsules

ADOLESCENT RCT — TOP-DOSE VS. PLACEBO (56 WEEKS)

- 10.4%** mean BMI change, top-dose 15/92mg (vs. -0.2% placebo)
- +10%** increase in HDL-C; triglycerides fell ~20%
- 0** increase in systolic BP (fell 2–3 mmHg vs. baseline)

Kelly AS, et al. NEJM Evidence. 2022 (n=227, 56 weeks).

FDA-APPROVAL

- Youth ≥12y: BMI ≥95th %ile
- Adults ≥18y: BMI ≥30, or ≥27 with comorbidity

CONTRAINDICATIONS

- Pregnancy (teratogenic — counsel on contraception)
- Substance abuse history; MAOI use
- CVD, hyperthyroidism, glaucoma

CAUTION

- Kidney stones, metabolic acidosis
- Suicidality; mood changes
- Cognitive/academic challenges
- Concurrent SSRIs or insulin

CONSIDER FOR

- Strong hunger, poor satiation
- Binge eating; migraine headaches
- Insurance coverage (separate Rx)
- No cardiac/psych contraindication

Titration: 3.75/23mg QAM ×14d → 7.5/46mg ×14d → 11.25/69mg ×14d (if tolerating) → 15/92mg QAM maintenance. Check bicarbonate/creatinine q6–12mo. Cost: \$\$.

Tirzepatide

MECHANISM OF ACTION

- Dual GIP/GLP-1 receptor co-agonist — first-in-class
- Slows gastric emptying and increases satiety via combined incretin signaling
- Reduces appetite and food reward via hypothalamic and brainstem pathways
- Administered subcutaneously once weekly, pre-filled single-dose pens

SURPASS-PEDS — ADOLESCENT T2D RCT (30 WEEKS)

- 11.2%** mean BMI change, 10mg dose (vs. ~-1.2% placebo)
- 86%** of participants reached HbA1c ≤6.5% on 10mg dose
- 2026** SURMOUNT-ADOLESCENTS-2 (obesity) primary completion expected

Hannon TS, et al. *N Engl J Med*. 2025 (SURPASS-PEDS).

FDA-APPROVAL

- T2DM (Mounjaro 15mg): ≥10y
- Obesity (Zepbound): adults ≥18y only

CONTRAINDICATIONS

- Personal/family history of MTC
- MEN2 syndrome
- Pregnancy

CAUTION

- Pancreatitis, gallbladder disease
- Gastroparesis
- Insulin, thyroid c-cell tumors
- OCP users: add barrier method

CONSIDER FOR

- Diabetes/prediabetes; on GLP-1RA
- Poor response to semaglutide
- Comfortable with weekly injections
- Insurance coverage (off-label)

SURMOUNT-ADOLESCENTS-2 (NCT06439277): Phase 3 RCT, ages 12–17 with obesity + ≥2 comorbidities, ~82 weeks. Discuss off-label use carefully with families.

Naltrexone ER / Bupropion ER

MECHANISM OF ACTION

- Naltrexone: opioid receptor antagonist
- Bupropion: dopamine/norepinephrine reuptake inhibitor
- Combination reduces appetite via hypothalamic POMC activation
- Administered orally, extended-release tablets twice daily

COR-1 — ADULT RCT (56 WEEKS)

-4.8% mean weight loss vs. placebo (adults only)

42% achieved $\geq 5\%$ weight loss (vs. 17% placebo)

0 pediatric obesity trials completed to date

Apovian CM, et al. Lancet. 2010 (COR-1); Contrave PI, 2024.

FDA-APPROVAL

- Obesity (Contrave): adults $\geq 18y$ only
- BMI ≥ 30 , or ≥ 27 with comorbidity

CONTRAINDICATIONS

- Uncontrolled hypertension
- Seizure disorder; anorexia/bulimia
- Current or recent MAOI use

CAUTION

- Abrupt d/c of alcohol or sedatives
- Other bupropion-containing products
- Boxed warning: suicidality in youth
- Chronic opioid use

CONSIDER FOR

- Food cravings, reward-driven eating
- Comorbid depression or tobacco use
- Not first-line; limited peds data
- Insurance coverage confirmed

Titration: 1 tab QAM $\times 1wk \rightarrow 1 tab BID \times 1wk \rightarrow 2 AM/1 PM \times 1wk \rightarrow 2 tabs BID$ maintenance. Avoid high-fat meals (seizure risk). Cost: \$\$.

Side Effects & Safety

- **GLP-1 RAs
(liraglutide, semaglutide, tirzepatide)**
Nausea, vomiting, diarrhea, constipation (usually transient); injection-site reactions. Rare: pancreatitis, gallbladder disease. Boxed warning: avoid with personal/family history of medullary thyroid carcinoma or MEN2.
- **Phentermine/Topiramate ER**
Increased heart rate, insomnia, dry mouth, paresthesia, concentration/memory effects. Teratogenic — REMS program requires monthly pregnancy testing. Avoid in glaucoma or hyperthyroidism.
- **Orlistat**
Oily spotting, fecal urgency, flatulence with fatty meals. Can cause fat-soluble vitamin (A, D, E, K) deficiency — pair with a daily multivitamin.
- **Setmelanotide**
Injection-site reactions, skin hyperpigmentation, nausea, headache. Sexual adverse effects reported. Monitor mood and for suicidal ideation.

Always counsel on pregnancy prevention, set a follow-up monitoring schedule, and confirm insurance prior authorization before starting therapy.

Side Effects & Safety,

- **Phentermine (monotherapy)**

Elevated heart rate and blood pressure, palpitations, insomnia, restlessness. Contraindicated in CVD, hyperthyroidism, glaucoma, MAOI use; potential for abuse/dependence (Class IV).

- **Topiramate (monotherapy)**

Paresthesia, dysgeusia, difficulty with concentration/memory, mood changes. Teratogenic — counsel on contraception. Wean slowly to avoid precipitating seizures.

- **Lisdexamfetamine**

Anxiety, irritability, insomnia, dry mouth, decreased appetite. Not FDA-approved for obesity (ADHD/binge-eating disorder only) — document off-label use and rationale.

- **Also in Your Resources**

Metformin, orlistat, and bupropion/naltrexone ER are additional FDA-approved-for-other-indications options — see handouts for dosing and side effect profiles.

Phentermine and topiramate are frequently combined (as separate prescriptions) for cost and dosing flexibility — see Prescribing Practicalities.

Starting, Titrating & Stopping

Monthly visits ×3 to start for every agent — monitor BMI, vitals, and side effects at each visit.

Medication	Starting Dose	Discontinue If	Titration / Maintenance
Semaglutide (Wegovy)	0.25mg SC weekly	Not tolerated; BMI↑	×4wk → 0.5 → 1 → 1.7 → 2.4mg (×4wk each)
Liraglutide (Saxenda)	0.6mg SC daily	Not tolerated; BMI↑	×7d → 1.2 → 1.8 → 2.4 → 3mg (×7d each)
Phentermine (monotherapy)	15mg QAM (≥12y); 8mg QAM (8–11y)	BMI↑ or tolerance	FDA-labeled “short-term” use — ≤12 weeks
Topiramate (monotherapy)	25mg QAM	BMI↑; wean slowly	↑25mg/wk to 75–100mg QAM (max 75–200mg BID)
Phentermine/Topiramate ER (Qsymia)	3.75/23mg QAM ×14d	BMI↑ at max; wean	→ 7.5/46 ×14d → 11.25/69 ×14d → 15/92mg QAM
Lisdexamfetamine (Vyvanse, generic)	30mg QAM (10–20mg if anxious/behavioral concerns)	Not tolerated; BMI↑	↑10–20mg q1–2mo as tolerated (max 70mg)

All agents are adjuncts to IHBLT. See each Drug Spotlight for full contraindications, caution, and consider-for criteria.

Tailoring Treatment to Patient Phenotype

1 Frequent Hunger & Snacking

consider: phentermine or a GLP-1RA

Strong, frequent hunger with large portions responds well to appetite-suppressing agents.

Best fit: phentermine (norepinephrine); a GLP-1RA if injectable therapy is acceptable.

2 Binge Eating & Food Cravings

consider: topiramate, lisdexamfetamine

Binge-pattern eating, loss-of-control eating, and strong cravings respond to agents that dampen food reward.

Best fit: topiramate and/or lisdexamfetamine, dosed to target the eating pattern.

3 Comorbidity-Driven Choice

diabetes, MASLD, PCOS, HTN

Let existing comorbidities steer the mechanism — e.g., a GLP-1RA for prediabetes, T2D, MASLD, or PCOS.

Best fit: use caution with stimulants in hypertension, anxiety, or arrhythmia risk.

4 Special Populations

psychotropic-induced, autism, hypothalamic obesity

Antipsychotic-induced weight gain may respond to metformin/topiramate; non-verbal autism often needs higher topiramate doses.

Best fit: hypothalamic obesity may respond to a GLP-1RA or stimulant — individualize by driver.

On the Horizon: Investigational Antiobesity Medications

Tirzepatide

Dual GIP/GLP-1 receptor agonist — approved for adults (Zepbound) and pediatric T2D (Mounjaro, $\geq 10y$). SURMOUNT-ADOLESCENTS-2 (NCT06439277) obesity trial ongoing; SURPASS-PEDS (T2D) showed ~11% BMI reduction at 30 weeks.

Orforglipron

Oral, non-peptide GLP-1 receptor agonist. Positive adult phase 3 (ATTAIN) results in 2025; no pediatric obesity trial active yet.

Retatrutide

Triple GIP/GLP-1/glucagon receptor agonist. Adult phase 2 data show weight loss up to ~24%; pediatric studies not yet underway.

Maritide

Monthly injectable GIP receptor antagonist / GLP-1 receptor agonist, in adult development.

Cagrilintide (incl. CagriSema)

Long-acting amylin analog, studied alone and combined with semaglutide; adult pipeline.

Oral semaglutide

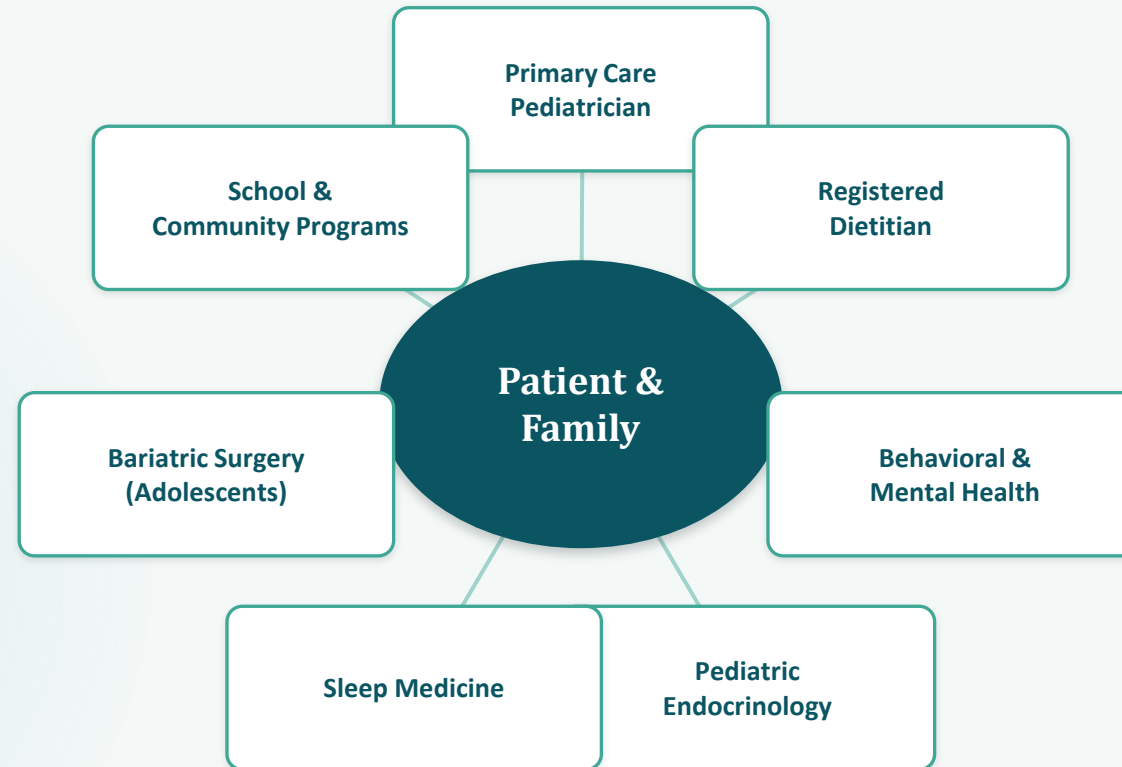
Approved oral GLP-1 formulation in adults; pediatric development ongoing.

Pediatric drug development typically lags adult approval by several years under FDA deferral allowances. Aside from tirzepatide's ongoing SURMOUNT-ADOLESCENTS-2 trial, none of these agents have an active pediatric obesity trial. Salama M, et al. Children. 2025;12(10):1390.

PART FOUR

Coordinated Care

The Multidisciplinary Care Model



The family stays at the center — every specialist coordinates around their goals, not the other way around.

Coordinating Care

Hypertension: When we have a patient with hypertension that either was not recognized by the referring PCP or has been gradually increasing as we have been seeing them, we will get an EKG and notify the PCP. Our cardiologists are great about managing hypertension and we work out of the same clinic so it is easy to make sure they are getting seen in the cardiology clinic.

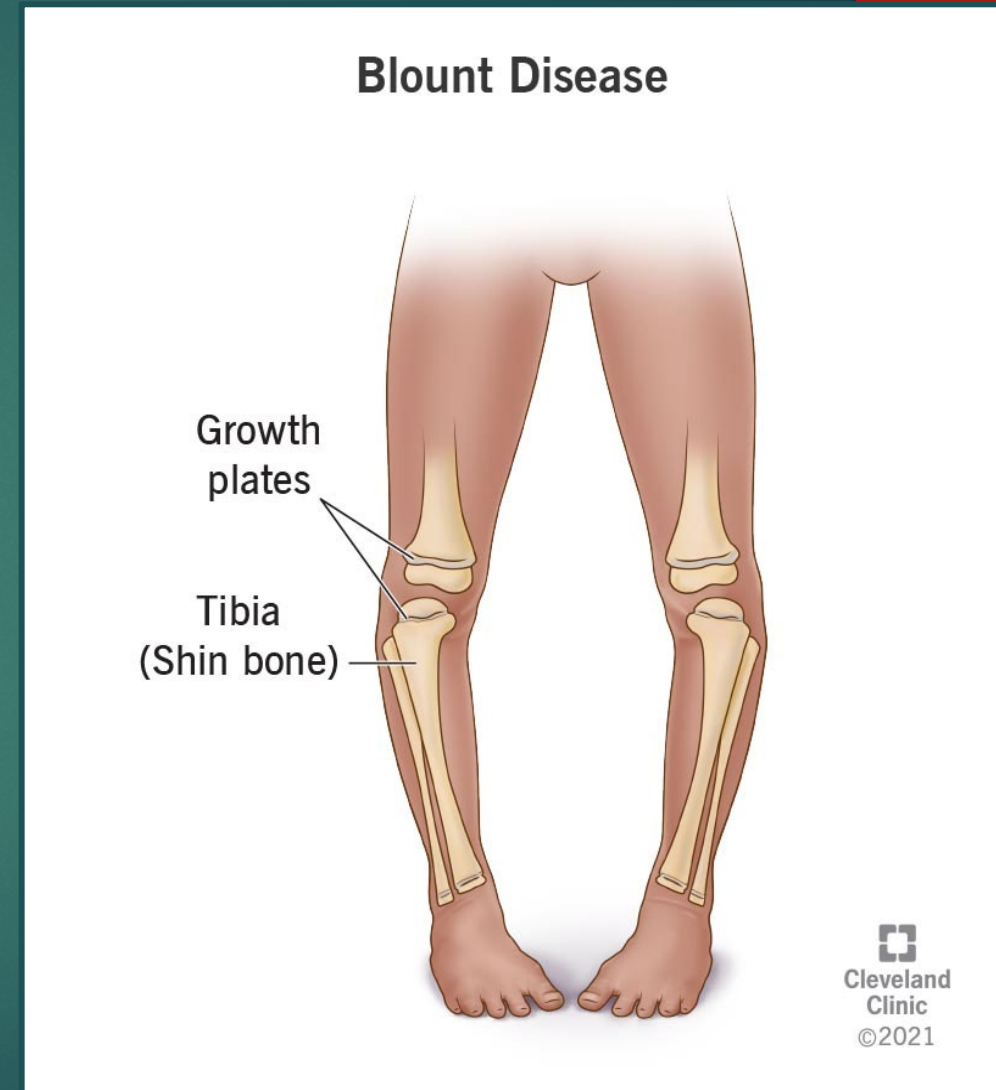
Dyslipidemia: We often get referrals from our pediatric endocrinologists when the patients have dyslipidemias so we work closely with them.

MASLD: We have patients that have elevated ALT levels and when it is continuing to increase we will recommend that they see the Peds GI for further evaluation.

Coordinating Care

PMOS- This is typically managed by the pediatric endocrinologist although many of our older patients are seeing a gynecologist.

Orthopedic Complications- Blounts disease and SCFE are rare but they are managed by the pediatric orthopedic surgeons. We see a lot of minor issues, pes planus and non-specific joint pain, and often encourage them to discuss PT with their PCP.



Coordination of Care

Psych- Psych D in the clinic and then a counselor. Most difficult aspect to manage as many of these children have been bullied. We do screen every patient for anxiety and depression at each visit and we make sure that their PCPs are aware of their mental well being. However, we are still looking to get a counselor back in the clinic to work with the patients on mindfulness and goal setting strategies.

Eating Disorders: We will use the SCOFF screen in patients 12 and over and then have them complete an EAT 26 if there are concerns. This is one of the areas that is tricky as 10-30% of patients with Obesity have an Eating Disorder, most commonly Binge Eating Disorder. However, the DSM-5-TR Criteria have to be modified for children's developmental stage. Overall, we focus on mindfulness and portion control when it comes to eating and when we see kids really struggling to achieve these goals, we will discuss medication options.



Coordination of Care

Sleep Apnea: 45% of children with Obesity have OSA as opposed to children with a normal BMI.

- Snoring is required
- Daytime sleepiness, nocturnal enuresis, morning headaches and inattention are common symptoms
- Witnessed apnea/hypopnea is more reliable symptom than snoring
- Sleep study should be ordered if they have 1 symptom of disordered breathing
- Surgical treatment (T&A) is not as effective in children with obesity as children with a normal BMI.



Barriers We Navigate Together



Insurance & Coverage Gaps

IHBLT programs, medications, and surgery are inconsistently covered; document medical necessity and appeal denials early.



Limited Program Availability

Intensive lifestyle programs are scarce, especially in rural areas; telehealth and group visits can extend reach.



Time & Transportation Burden

Frequent visits strain working families; bundle labs, consolidate visits, and offer flexible scheduling.



Weight Stigma in Healthcare Settings

Bias from staff and equipment (cuffs, gowns, scales) erodes trust; audit your own clinic environment.

Communicating Without Stigma

Use people-first language, ask permission before discussing weight, and focus on health behaviors — not appearance or a number on a scale.

SAY THIS

- ✓ “Can we talk about your health and growth?”
- ✓ “A child with obesity” (people-first language)
- ✓ “What’s one change that feels doable this month?”
- ✓ Celebrate non-scale victories: energy, sleep, mood, endurance

AVOID THIS

- ✗ Discussing weight in front of siblings or peers unprompted
- ✗ “Obese child” or other identity-first labels
- ✗ Blame-oriented language about willpower or effort
- ✗ Equipment that doesn’t fit — undersized cuffs, gowns, chairs

Key Takeaways to Take Home

- 1 Treat early and consistently — no watchful waiting.
- 2 IHBLT is the foundation for every patient, at every treatment tier.
- 3 Offer pharmacotherapy and surgery referral per guideline criteria, through shared decision-making.
- 4 Build your referral network before you need it.
- 5 Lead with empathy — stigma-free care improves engagement and outcomes.

RESEARCH

SURMOUNT- ADOLESCENTS-2

Ongoing phase 3 RCT (NCT06439277): tirzepatide, ages 12–17 with obesity + ≥ 2 weight-related comorbidities, ~82 weeks. Expected to support pediatric obesity labeling;

SURPASS-PEDS (Published)

Phase 3 RCT in adolescent T2D (ages 10–17, n=99): tirzepatide 10mg cut BMI 11.2% at 30 weeks (vs. ~1.2% placebo); HbA1c fell 2.3 points. Hannon TS, et al. Lancet. 2025.

STEP TEENS (Established)

Semaglutide remains the only GLP-1RA FDA-approved for adolescent obesity — 16.1% mean BMI reduction at 68 weeks (see the Semaglutide spotlight).

STEP-Young (age 8-11)

85% of the children at the baseline had either class II or III severe obesity and 40.4% of those treated with semaglutide were no longer classified as having obesity at week 68.

The Regulatory Gap

Trends in GLP-1 Receptor Agonist Prescriptions for Children Ages 8 to 11 With Obesity: 2019–2026

Key Reference

Salama M, Hassan D, Kumar S. Updates on Anti-Obesity Medications in Children and Adolescents. Children (Basel). 2025;12(10):1390.

This field moves quickly — verify FDA-approval status and trial results before counseling families, and revisit this slide each time the deck is presented.

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Thank You



Q&A

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Thank you for investing in our children's future!