IHS Advancements in Diabetes Webinar

Evaluation and Management of Pediatric Obesity: An Overview of the AAP Clinical Practice Guideline

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Learning Objectives

Upon completion of this session, participants will improve their competence and performance by being able to:

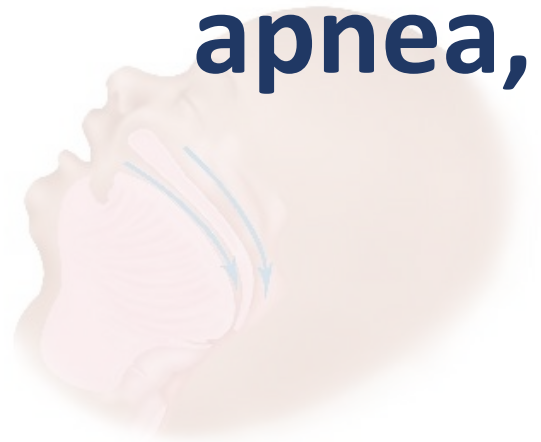
1. Recognize that obesity is a complex and chronic disease that requires longitudinal care to decrease susceptibility of acquiring diabetes.
2. Identify components of a comprehensive evaluation and summarize the four recommended treatment options.
3. Identify AAP resources for implementation of the pediatric obesity guideline into practice for the interprofessional team.

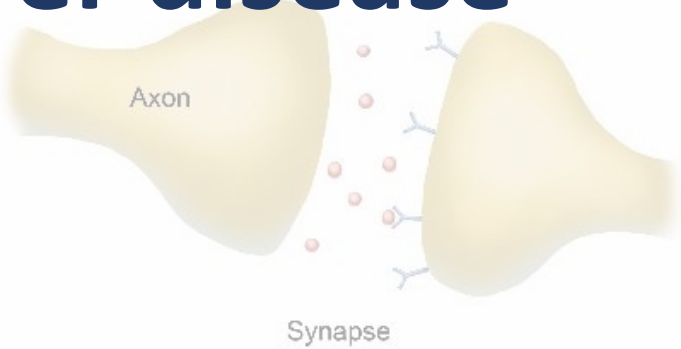
14.1

Million children and adolescents in the United States are affected by obesity

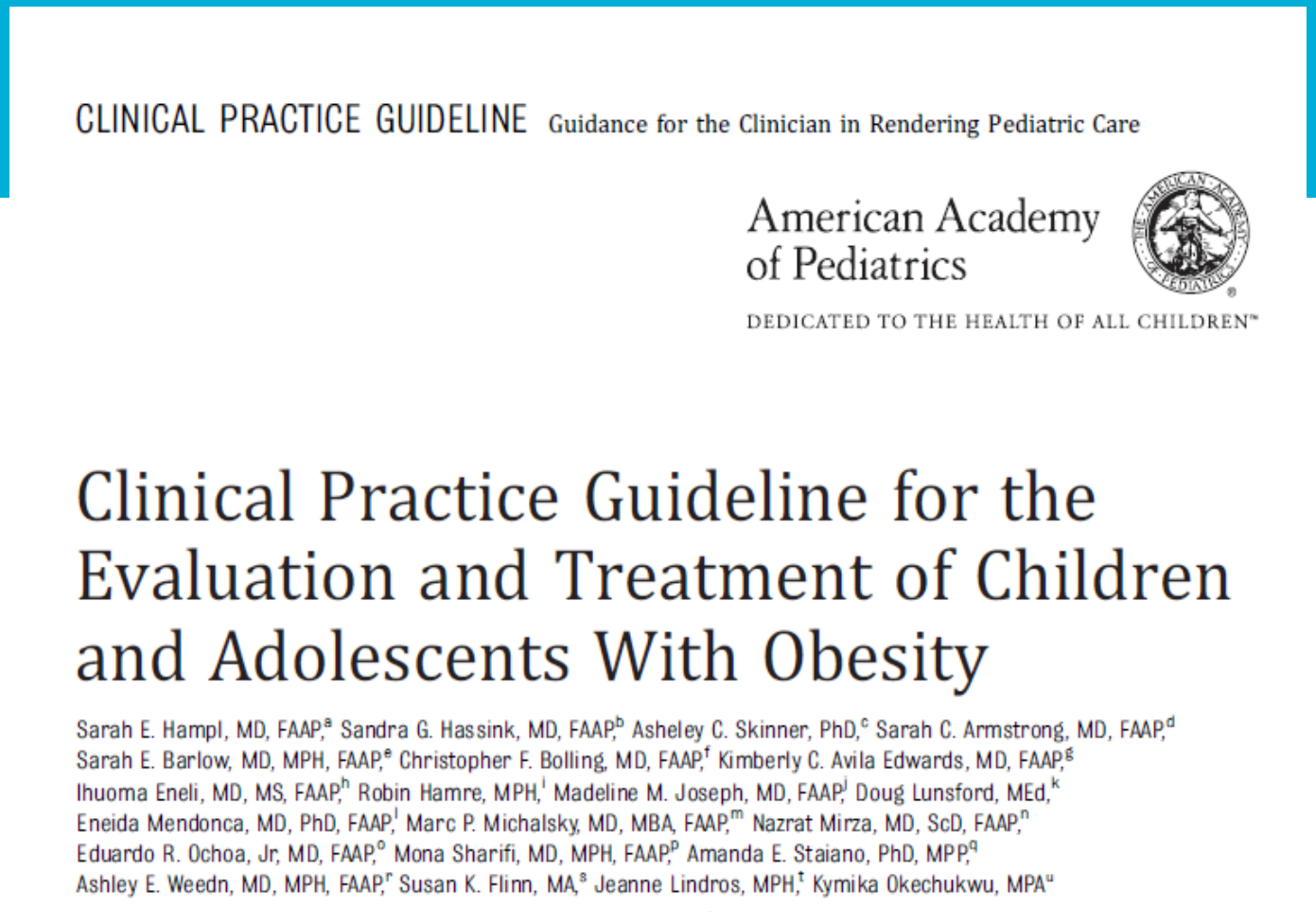
Obesity affects the immediate and long-term health of children

Children with overweight and obesity are susceptible to many diseases like type 2 diabetes, hypertension, sleep apnea, nonalcoholic fatty liver disease and depression





Evaluation and Treatment of Children and Adolescents with Obesity



CLINICAL PRACTICE GUIDELINE Guidance for the Clinician in Rendering Pediatric Care

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

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

Sarah E. Hampl, MD, FAAP,[a] Sandra G. Hassink, MD, FAAP,[b] Asheley C. Skinner, PhD,[c] Sarah C. Armstrong, MD, FAAP,[d] Sarah E. Barlow, MD, MPH, FAAP,[e] Christopher F. Bolling, MD, FAAP,[f] Kimberly C. Avila Edwards, MD, FAAP,[g] Ihuoma Eneli, MD, MS, FAAP,[h] Robin Hamre, MPH,[i] Madeline M. Joseph, MD, FAAP,[j] Doug Lunsford, MEd,[k] Eneida Mendonca, MD, PhD, FAAP,[l] Marc P. Michalsky, MD, MBA, FAAP,[m] Nazrat Mirza, MD, ScD, FAAP,[n] Eduardo R. Ochoa, Jr, MD, FAAP,[o] Mona Sharifi, MD, MPH, FAAP,[p] Amanda E. Staiano, PhD, MPP,[q] Ashley E. Weedn, MD, MPH, FAAP,[r] Susan K. Flinn, MA,[s] Jeanne Lindros, MPH,[t] Kymika Okechukwu, MPA[u]

FOLLOW NBC NEWS

KIDS' HEALTH

New guidelines for treating childhood obesity include medications and surgery for first time

The American Academy of Pediatrics updated its recommendations on childhood obesity for the first time in 15 years.

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healthline

HEALTH NEWS ✓ Fact Checked

Criticism Emerges Over New AAP Guidelines for Childhood Obesity

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HEALTH

Obesity Add Topic +

Weight loss drugs and surgery – for kids? Why new obesity guidance is drawing scrutiny.

Adrianna Rodriguez
USA TODAY

Published 6:00 a.m. ET Jan. 19, 2023 | Updated 7:43 a.m. ET Jan. 24, 2023

Key Points

- The American Academy of Pediatrics recommends early and proactive treatment for children who have obesity, including surgery or weight loss drugs.
- The guidance has drawn scrutiny from advocates who say it contributes to weight stigma and could fuel disordered eating.
- They also argue it's impossible to know the long-term effects of these weight loss interventions on young children.

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CHILDREN'S HEALTH

New childhood obesity guidance raises worries over the risk of eating disorders

Updated February 22, 2023 · 8:15 PM ET

By Kaitlyn Radde

Children share apples in Sydney, Australia.

Natalie Board/Getty Images/EyeEm

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“Pediatricians and other PHCPs play a crucial role in providing comprehensive obesity treatment as primary treatment providers, in coordinating care with subspecialists and in the community, and in advocating for obesity treatment resources and elimination of weight bias and stigma. – CPG”

CPG Development

Comprehensive Process

2017

Evidence Review & Technical Reports

Subcommittee Examines TRs & Confirms CPG Outline

Evidence Grading and KAS recs along with narrative

Internal and External Review

Published

2023

Methodology – Scope of the Review

Key Question 1

What are clinic-based, effective treatments for obesity?

Key Question 2

What is the risk of comorbidities among children with obesity?

Original search period ended April 6, 2018.
An additional search was conducted covering the time period April 7, 2018 - February 15, 2020.

- 15 988 Articles screened
- 1642 Full text articles reviewed
- 382 Studies included

CPG By the Numbers

CPG
Evaluation & Treatment of Pediatric Obesity

15
Years Since Last Comprehensive Guidance

16K Abstracts Reviewed

1642
Full Text Articles

382
Studies Included

13
CPG Key Action Statements

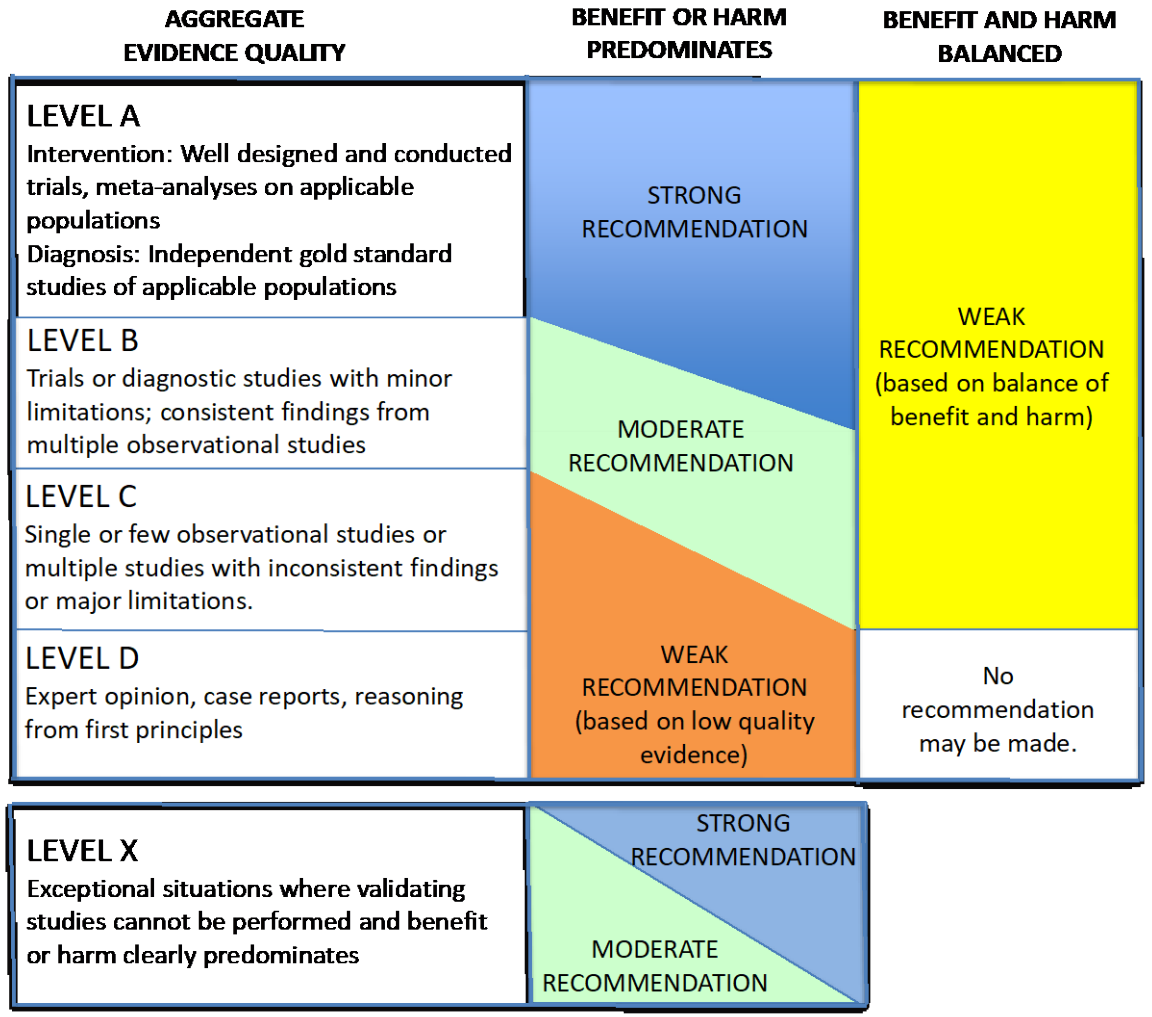
11
CPG Consensus Recommendations

2
Technical Reports

CPG in a nutshell

- 13 Key Action Statements
- 11 Consensus Recommendations
- Key Topics:
  - ✓Assessment & evaluation
  - ✓Comorbidities
  - ✓Multiple evidence-based treatment options

Evidence Grading for Key Action Statement (KAS) Development

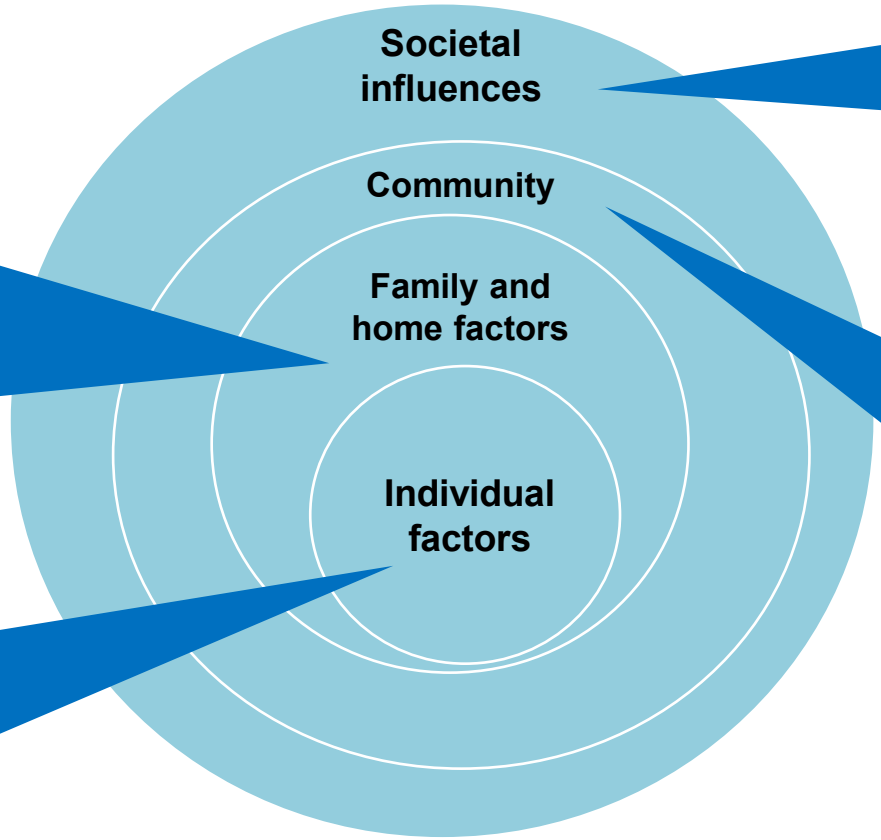


The Use of “Should” Within the KAS

- The words "should" and "may" used in the KAS statements in the CPG:
  - are based on the level of associated evidence
  - reflect the action that is meant to be taken based on the evidence, under what circumstances to take that action and the level of obligation to follow the evidence-based recommendation
- The use of “should” is meant to represent an **intermediate** level of obligation:
  - NOT a required action
  - an evidence-based recommendation that allows for some variation based on the circumstances
- Clinical decision making is undertaken in partnership with the patient/family:
  - based on a comprehensive evaluation and understanding the components of evidence-based treatment to create an individualized and tailored treatment plan that includes longitudinal care

Obesity is a Complex Disease

- Family structure & socio-economics
- Parental knowledge & feeding practices
- Parental lifestyle behaviors
- Food quality
- Family meals
- Screen time
- Activity level
- Sleep duration
- Family stress
- ACES



- Culture
- Media
- Marketing
- Public policy

- School environment
- Weight stigma/bullying
- Access to healthy foods
- Fast food proximity
- Access to safe physical activity

- Biologic
  - Genetics
  - Epigenetics
- Neurohormonal
- Lifestyle behaviors
- Psychosocial
- Medications

Adapted from Davidson & Birch, *Obesity Reviews*, 2001

Whole Child Approach

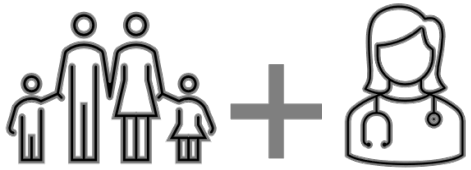
Underlying **genetic**, **biological**, **environmental**, and **social determinants** that are risks for obesity is the foundation of evaluation and treatment.

- AAP Clinical Practice Guideline

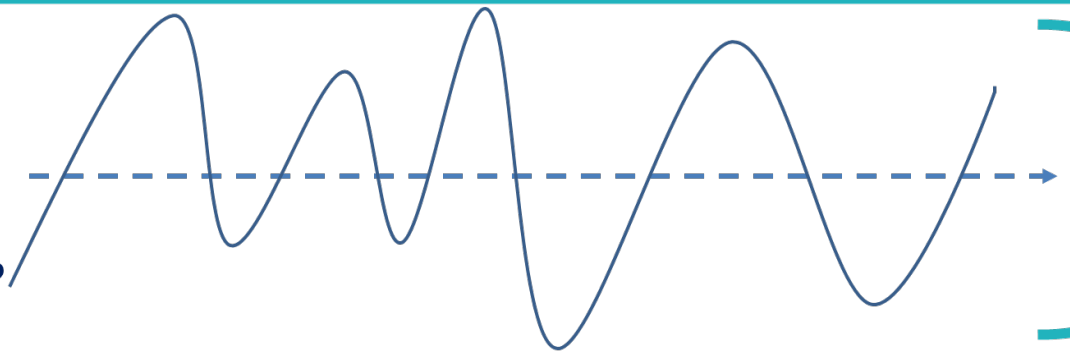
Treatment Experience of Obesity as a Chronic Disease

Longitudinal Non-Stigmatizing Care Coordinated Patient-Centered Treatment Across Lifespan

- Shared decision making with patient & family
- Culturally competent care
- Treatment coordinated in the medical home
- Transition planning



Patient & Family & PCP/PHCP Partnership



Treatment intensity & support vary to address relapsing & remitting nature of obesity as a chronic disease

Structural and Contextual Factors That Impede & Influence Health & Treatment

- Access to Care
- Weight Bias and Stigma
- Obesogenic Environments
- Adverse Child Experiences
- Racism
- Health Inequities

New from previous recommendations

NEW

- We understand more fully the implications of obesity as a chronic disease
- We understand the physiological impacts of social determinants of health on obesity more completely
- We know more fully that weight bias and stigma is pervasive and harmful and can be a barrier to treatment

New from previous recommendations

NEW

- Offer treatment early and immediately – **there is no benefit to watchful waiting**
- Treat obesity and comorbid conditions **concurrently**
- There are **multiple evidence-based strategies** that can be used collectively to deliver intensive & tailored obesity treatment
- **Structured**, **supervised** weight management interventions **decrease current & future eating disorder symptoms**

Assessment & Evaluation

- [x] BMI Measurement
- [x] Comprehensive Evaluation (PE, ROS, Hx, etc)
- [x] Risk Assessment (Whole child)
- [x] Comorbidity Evaluation (labs, tests)

Assessment & Evaluation

BMI Measurement

Comprehensive Evaluation
(PE, ROS, Hx, etc)

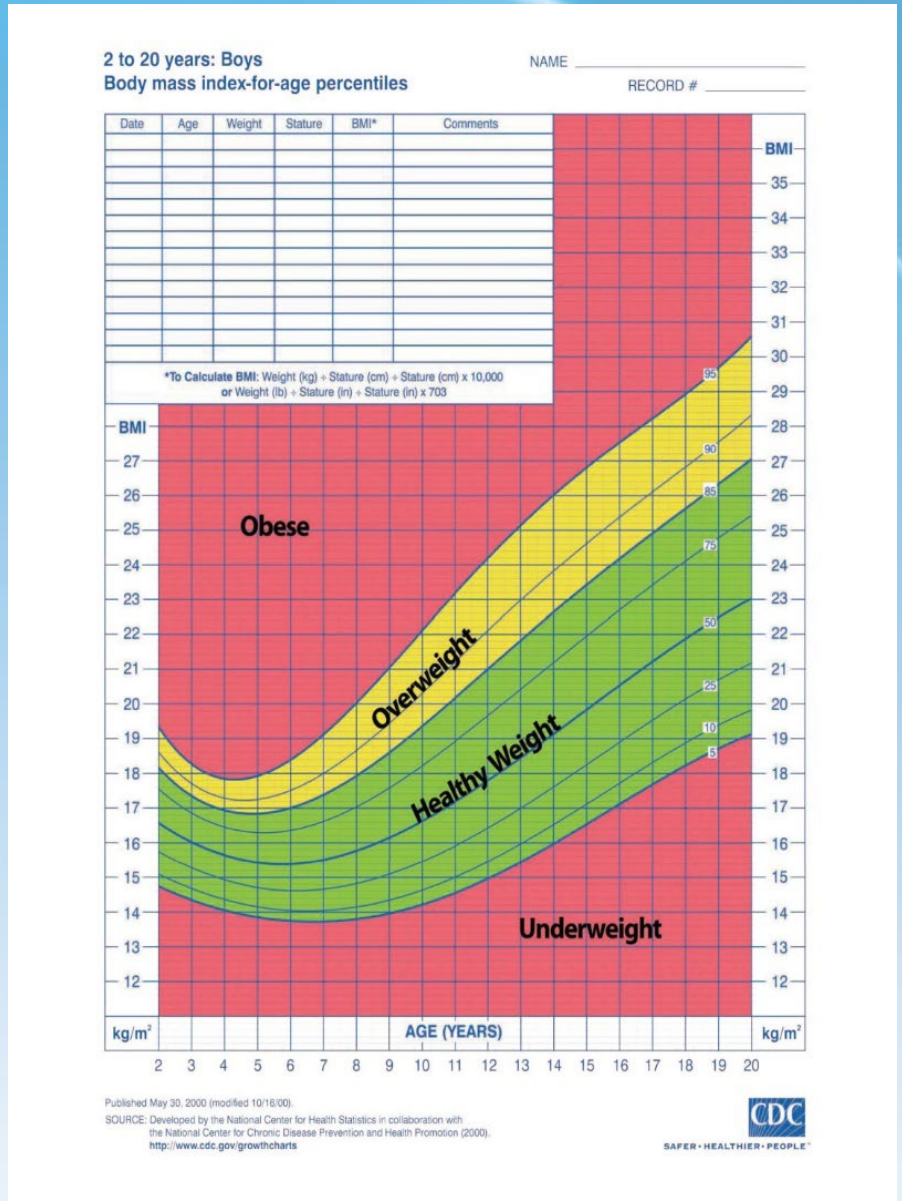
KAS. Pediatricians and other PHCPs **should measure height and weight, calculate BMI, and assess BMI percentile using age- and sex-specific CDC growth charts** or growth charts for children with severe obesity at least annually **for all children 2 to 18 y of age** to screen for overweight (BMI ≥85th percentile to <95th percentile), obesity (BMI ≥95th percentile), and severe obesity (BMI ≥120% of the 95th percentile for age and sex).

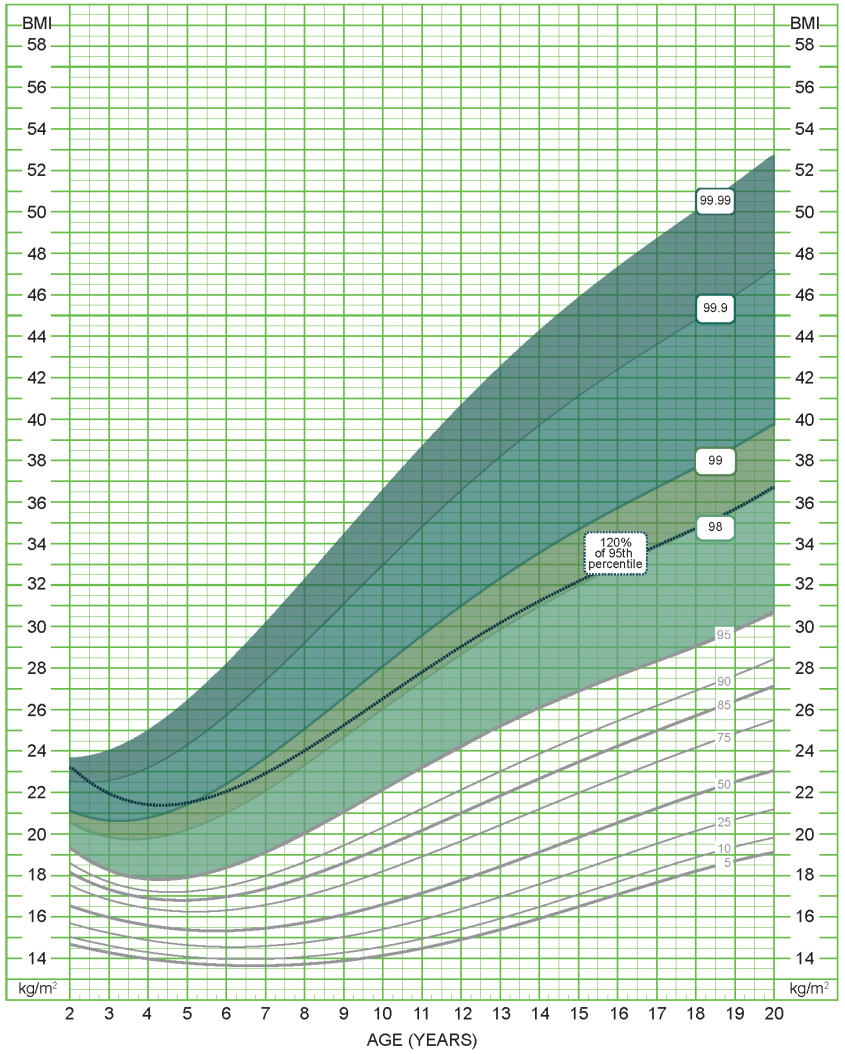
Why BMI percentile?

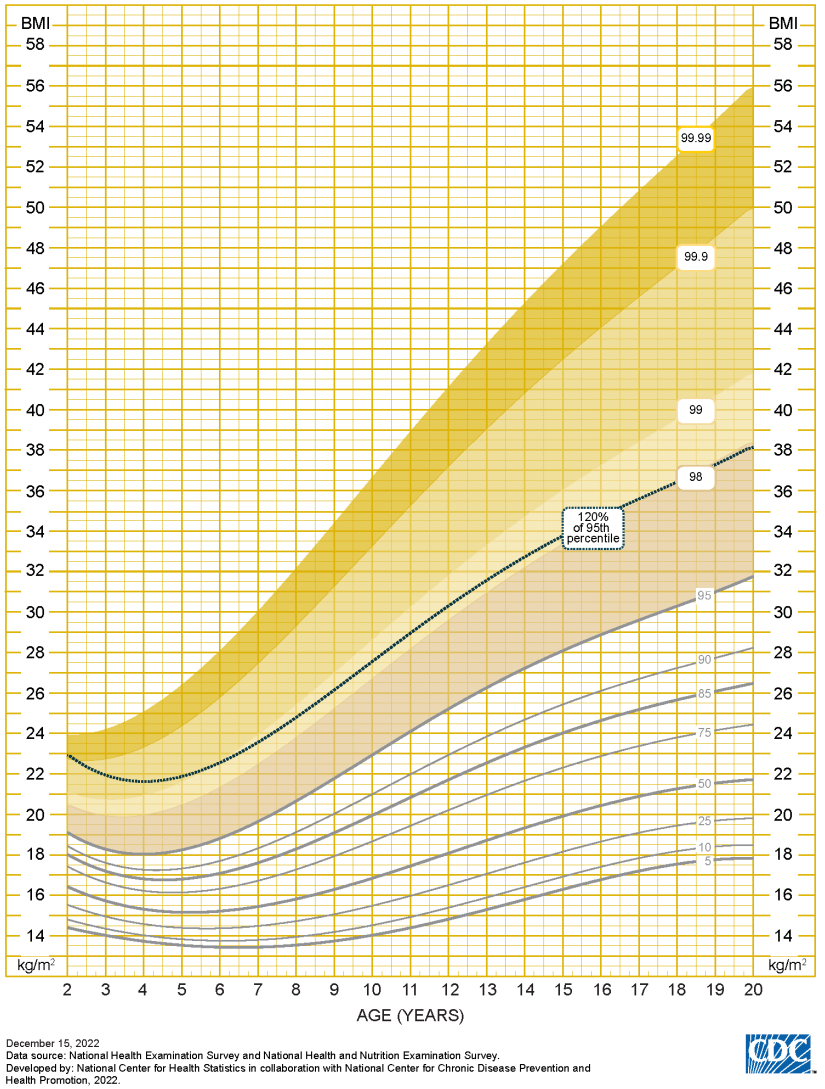
Validity in children

- Correlates with adiposity[1]
- Correlates with adult adiposity[2]
- Correlates with cardiovascular risk factors[3] and long-term mortality[4]

[1] Field AE, *Obes Res*, 2003
[2] Freedman DS, *Pediatrics*, 2005
[3] Freedman DS, *J Pediatr*, 2007
[4] Skinner AC, *Pediatrics* 2023







New CDC Extended BMI- for-Age Growth Curves

Assessment & Evaluation

- [x] BMI Measurement
- [x] Comprehensive Evaluation (PE, ROS, Hx, etc)
- [x] Risk Assessment (Whole child)
- [x] Comorbidity Evaluation (labs, tests)

Evaluation Sets the Stage for Treatment

Socioecological Model

- Child
- Family
- Community
- Society

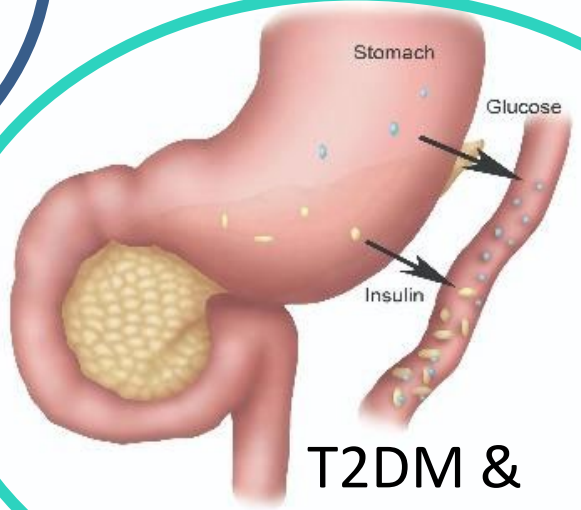
Iceberg Model

Assessment & Evaluation

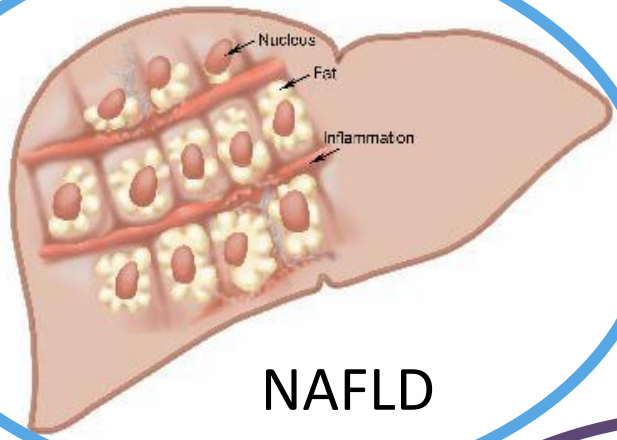
- [x] BMI Measurement
- [x] Comprehensive Evaluation (PE, ROS, Hx, etc)
- [x] Risk Assessment (Whole child)
- [x] Comorbidity Evaluation (labs, tests)

Comorbidities Addressed Include

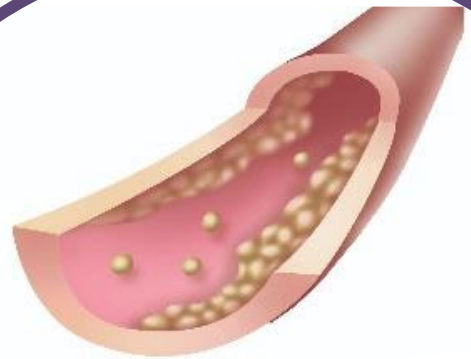
Hypertension



T2DM &
Prediabetes



NAFLD

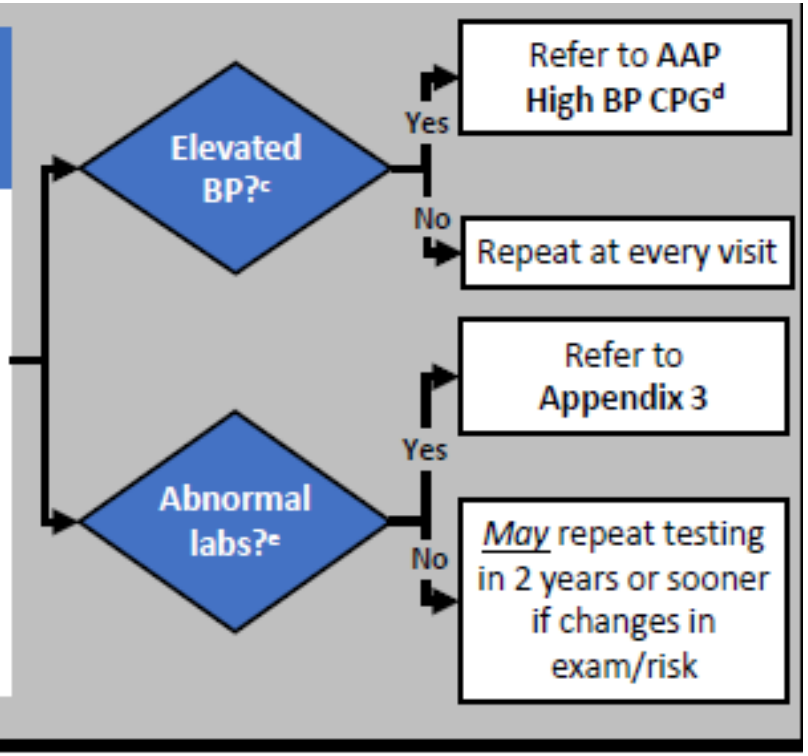


Dyslipidemia

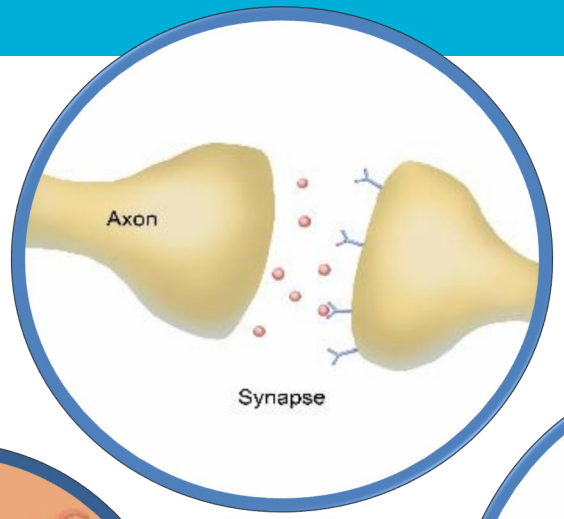
Evaluation

EVALUATION

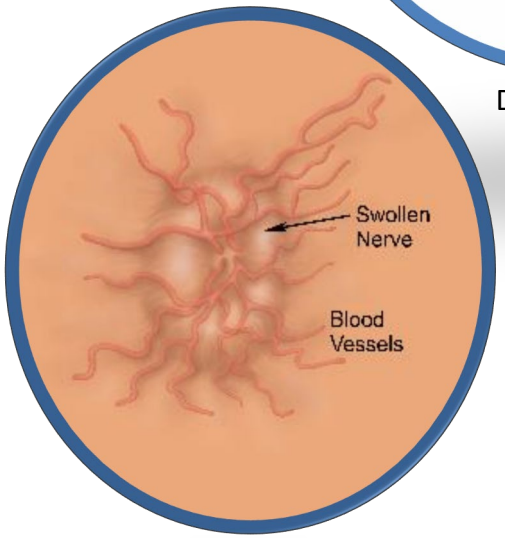
Components of Comprehensive Evaluation	Overweight		Obesity	
	<10y	≥10y	<10y	≥10y
Comprehensive history, MBH screening, SDOH evaluation, physical examination, & diagnostic studies (KAS 2)	✓	✓	✓	✓
Blood pressure (KAS 8)	✓[a]	✓	✓[a]	✓
Fasting lipid panel (KAS 3, 3.1, 5)		✓	⚖	✓
FPG, OGTT, or HgbA1C (KAS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



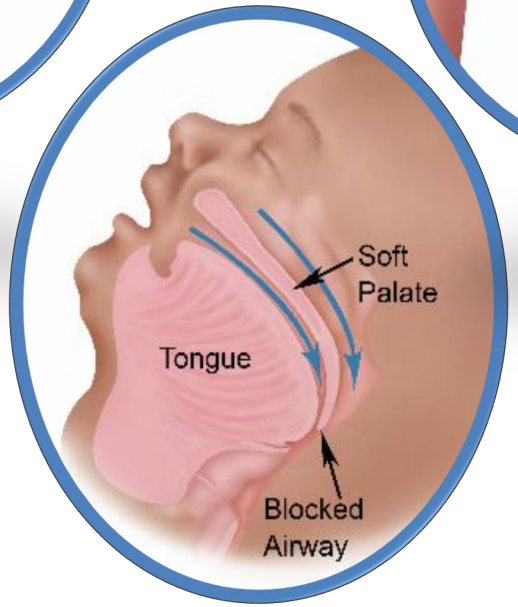
Comorbidities Addressed Include



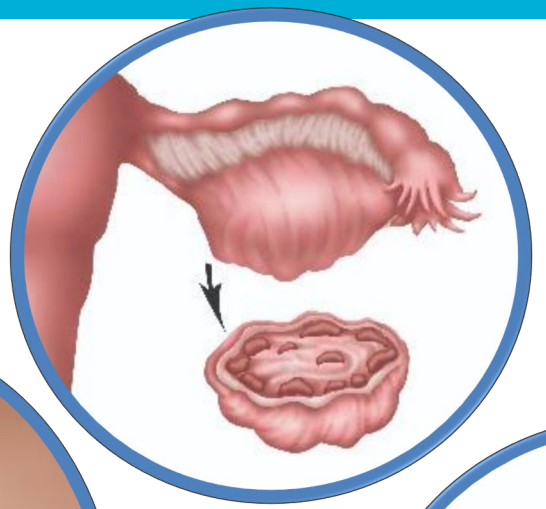
Depression



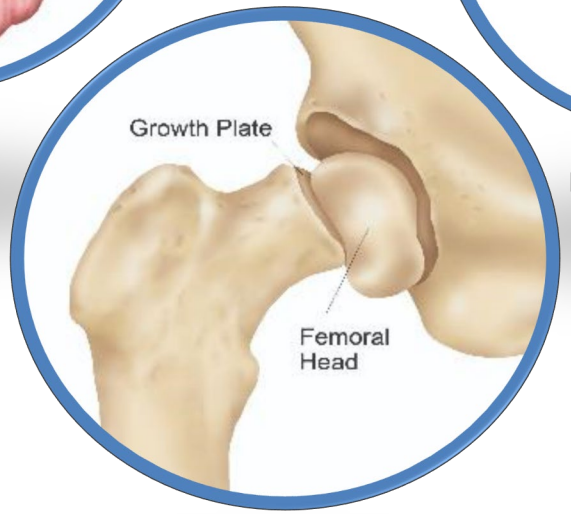
Idiopathic Intracranial Hypertension



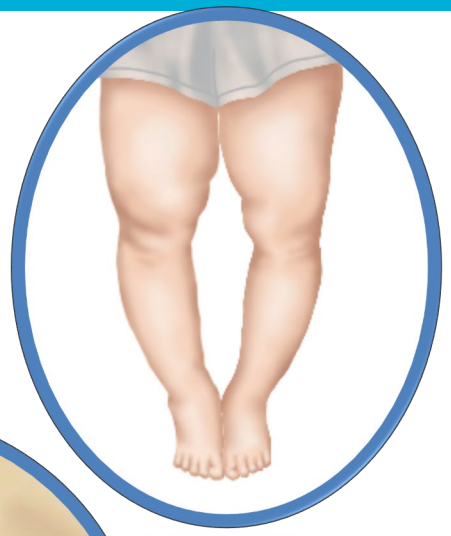
Obstructive Sleep Apnea



PCOS



SCFE



Blount disease

Comorbidities

"There is compelling evidence that obesity increases the risk for comorbidities, and that weight loss interventions can improve comorbidities. - CPG"

Concurrent Treatment

KAS: Pediatricians and other PHCPs should **treat** children and adolescents for overweight (BMI ≥85th percentile to <95th percentile) or obesity (BMI ≥95th percentile) and **comorbidities concurrently**.

CPG

Evaluation & Treatment of Pediatric Obesity

Treatment Recommendations

Comprehensive Obesity Treatment

KAS: Pediatricians and other PHCPs **should treat overweight** (BMI ≥85th percentile to <95th percentile) and **obesity** (BMI ≥95th percentile) in children and adolescents, following the principles of the **medical home** and the **chronic care model**, using a **family-centered** and **nonstigmatizing** approach that acknowledges **obesity's biologic, social, and structural drivers.**

Provide the most intensive longitudinal treatment in the medical home….

Provide or ensure ongoing medical evaluation & monitoring
What is happening with this patient and family physically, emotionally, and socially?

Develop & implement an individualized comprehensive treatment plan, using evidence-based strategies
What can help the patients & family develop & reach treatment goals and treat comorbidities?

Tailor treatment as needed
What else is needed to support the patient & family's immediate needs & longitudinal treatment progress?

Serve as medical home
What care coordination and/or advocacy does this patient/family need?

PCP & PHCP Evidence-Based Toolbox

- Motivational Interviewing
- Intensive Health Behavior & Lifestyle Treatment
- Pharmacotherapy
- Surgery

Motivational Interviewing

KAS: Pediatricians and other PHCPs **should use motivational interviewing** (MI) to engage patients and families in treating overweight (BMI ≥85th percentile to <95th percentile) and obesity (BMI ≥95th percentile).

Motivational Interviewing Process

Motivational Interviewing: *Use MI to engage patients and families in treating overweight and obesity.*

MI is a tool used aimed at encouraging nutrition and physical activity behavior change. MI can be effective even in low-intensity settings. The table below summarizes ways to use MI processes to evaluate and respond to patient *readiness to change*.

MI Process	Goal	Possible MI Tool
Engaging	Establishing collaborative role, understanding patient issues	Open-ended questions, affirmations, nonjudgmental graphics, empathic reflections
Focusing	Identifying appropriate and productive strategies to change weight status	Readiness ruler, elicit-provide-elicit, healthy habits survey, identifying and responding to change talk and sustain talk
Evoking	Triggering internal motivation, empowering change	Values statement, double-sided and amplified reflections
Planning	Carrying out effective change plan, dealing with relapse	Readiness ruler , action reflections, summarization, teach back, SMART goals (specific, measurable, achievable, realistic, and timely

Source: Obesity treatment and approach in the primary care office, Institute for Healthy Childhood Weight, 2023

Motivational Interviewing Resource

Change Talk: Interactive training program provided by the American Academy of Pediatrics to provide simulated patients to learn MI techniques to counsel families on childhood obesity.

Available at: https://go.kognito.com/changetalk

https://kognito.com/solution/change-talk-childhood-obesity/

Snapshot of the Virtual Role-Play Conversation

Intensive Health Behavior and Lifestyle Treatment

KAS: Pediatricians and other PHCPs **should provide or refer** children **6 y and older** (Grade B) and **may provide or refer children 2 through 5 y of age** (Grade C) **with overweight** (BMI ≥85th percentile to <95th percentile) and **obesity** (BMI ≥95th percentile) **to intensive health behavior and lifestyle treatment**. Health behavior and lifestyle treatment is more effective with greater contact hours; the most effective treatment includes 26 or more hours of face-to-face, family-based, multicomponent treatment over a 3- to 12-mo period

More about IHBLT

WHO:
- Patient & family
- Multidisciplinary treatment team

WHEN
- Upon diagnosis

WHAT
- Health education
- Skill building
- Behavior modification & counseling

FORMAT
- Group
- Individual, or
- Both

WHERE
- Healthcare setting
- Community –based setting with linkage to medical home

DOSAGE
- Longitudinal (3-12 months long)
- At least 26 contact hours

CHANNEL
- Face-to-face or
- Virtual

Strategies to intensify care

Strategies to Intensify Care

(when no pediatric weight management specialty program or IHBLT is available)

Frequency & Dosage#
- Increase number of touchpoints
- Decrease time between contacts

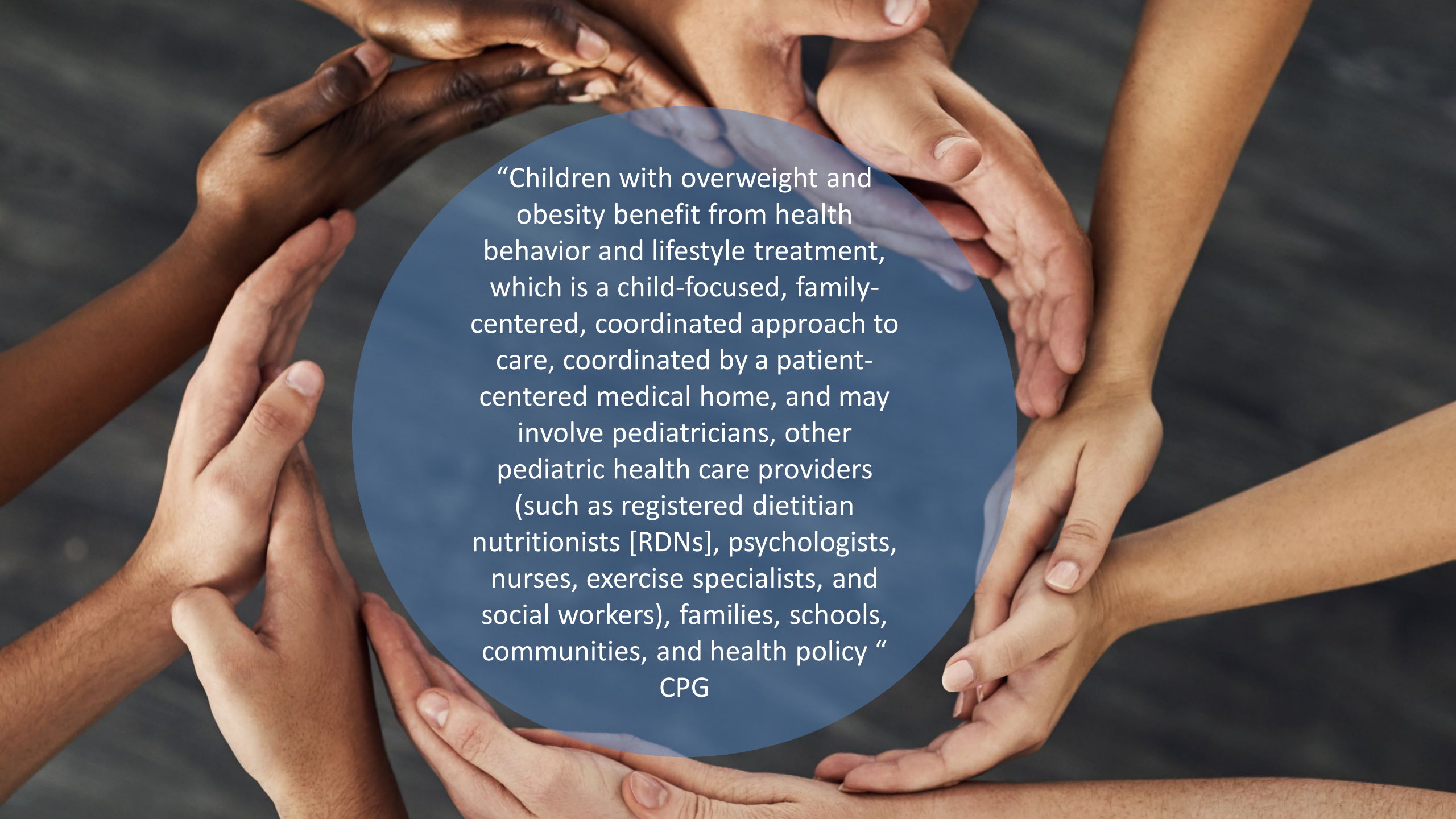
Community-clinic Connections#
Partner with community or other healthcare entities to adopt evidence-based IHBLT programs, or connect patients with existing community resources

Multiple Formats +
Explore:
- Group visits
- Telehealth
- Virtual touchpoints

Multi-disciplinary Approach#
Integrate additional providers (Dietitian, Physical Therapist, Health Educator, Behavioral Health Specialist, etc.)

Evidence-based Behavioral Strategies to Explore with MI & IHBLT
- Reduction in sugar-sweetened beverages
- Nutrition education and counseling
- 60 minutes of moderate to vigorous physical activity daily
- Reduction in sedentary time
- Age-appropriate amount of sleep

Source: Obesity treatment and approach in the primary care office, Institute for Healthy Childhood Weight, 2023


“Children with overweight and obesity benefit from health behavior and lifestyle treatment, which is a child-focused, family-centered, coordinated approach to care, coordinated by a patient-centered medical home, and may involve pediatricians, other pediatric health care providers (such as registered dietitian nutritionists [RDNs], psychologists, nurses, exercise specialists, and social workers), families, schools, communities, and health policy “
CPG

Pharmacotherapy

KAS: Pediatricians and other PHCPs **should offer adolescents 12 years and older with obesity** (BMI ≥95th percentile) weight loss **pharmacotherapy,** according to medication indications, risks, and benefits, as an **adjunct to health behavior and lifestyle treatment**.

"No current evidence supports weight loss medication use as a monotherapy; thus, pediatricians and other PHCPs who prescribe weight loss medication to children should provide or refer to intensive behavioral interventions for patients and families as an adjunct to medication therapy."

- CPG

Medications

Pediatricians and other PHCPs who prescribe weight loss medications should have knowledge of:

- the patient selection criteria,
- medication efficacy,
- adverse effects, and
- follow-up monitoring guidelines
- injectable medications may require additional teaching for families that is not available in all primary care offices

Weight Loss Medication Use & Mechanism#

PHCPs who prescribe weight loss medications should have knowledge of the patient selection criteria, medication efficacy, adverse effects, and follow-up monitoring guidelines. Injectables may require additional teaching. PHCPs may choose to refer to pediatric obesity experts or treatment centers for prescribing weight loss medication. There is no evidence to support the use of weight loss medications alone. Medication should be used in conjunction with IHBLT.

Drug	Function/Background	Age Approved	Dosage/Type	Impact	Side Effects
Metformin	• Originally to treat T2DM • Mechanism is to improve insulin sensitivity by increasing peripheral tissue uptake of glucose and by inhibiting hepatic glycogenesis	• 10 and older • Some safety info down to age 8	• Recommended starting dose is 500 mg 1 or 2x daily • Gradual increase up to 2500mg • Extended release recommended for fewer side effects	• 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	• 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	• 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	• About 1/2 of patients will achieve a 5% BMI reduction • About 20% will achieve a 10% BMI reduction	• Nausea • Vomiting • Increased risk of medullary thyroid cancer among patients with family history of multiple endocrine neoplasia
Phentermine	• A central norepinephrine inhibitor • Nonselectively inhibits serotonin and dopamine • Suppresses appetite	• 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 • Elevated BP • Dizziness • Headache • Tremor • Dry mouth • Stomach ache
Lisdexamphetamine	• Stimulant • Approved for ADHD	• 6 and older with ADHD	• Dose increments of 10mg, no clear effective dose for BMI reduction	• Limited evidence of effectiveness	• Elevated blood pressure • Insomnia • Irritability
Topiramate	• Carbonic anhydrase inhibitor • Suppresses appetite	• 2 and older for epilepsy • 12 and older for headache	• 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	• 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 BMI=37.8 kg/m2)	• Starting dose; 3.75mg/23mg • Mid-dose; 7.5mg/46mg • High dose; 15 mg/92mg	• 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.

Source: Obesity treatment and approach in the primary care office, Institute for Healthy Childhood Weight, 2023

Metabolic and Bariatric Surgery

KAS: Pediatricians and other PHCPs should offer referral for adolescents 13 years and older with severe obesity (BMI ≥120% of the 95th percentile for age and sex) for evaluation for metabolic and bariatric surgery to local or regional comprehensive multidisciplinary pediatric metabolic and bariatric surgery centers.

Criteria for Pediatric Metabolic & Bariatric Surgery

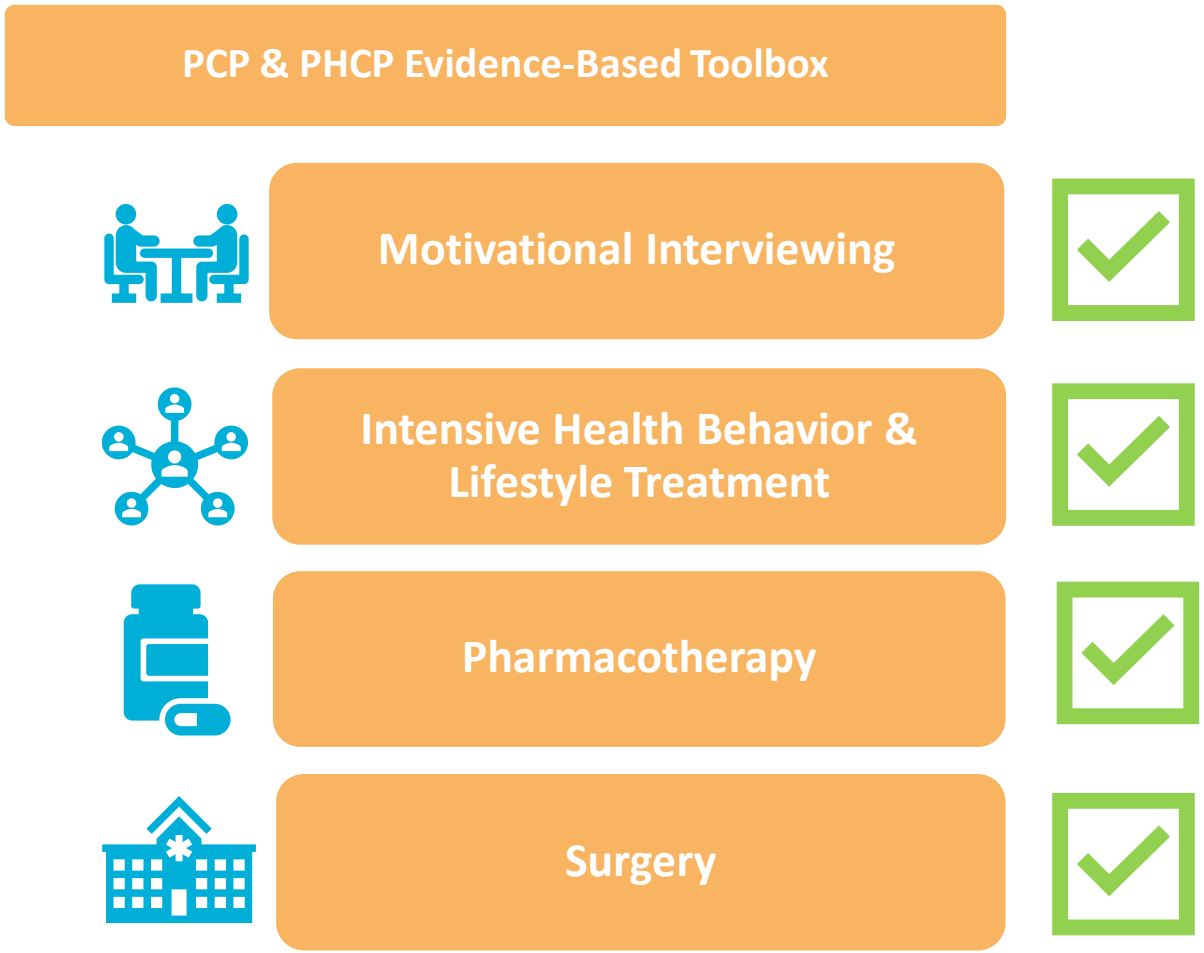
TABLE 20

Criteria for Pediatric Metabolic and Bariatric Surgery[733]

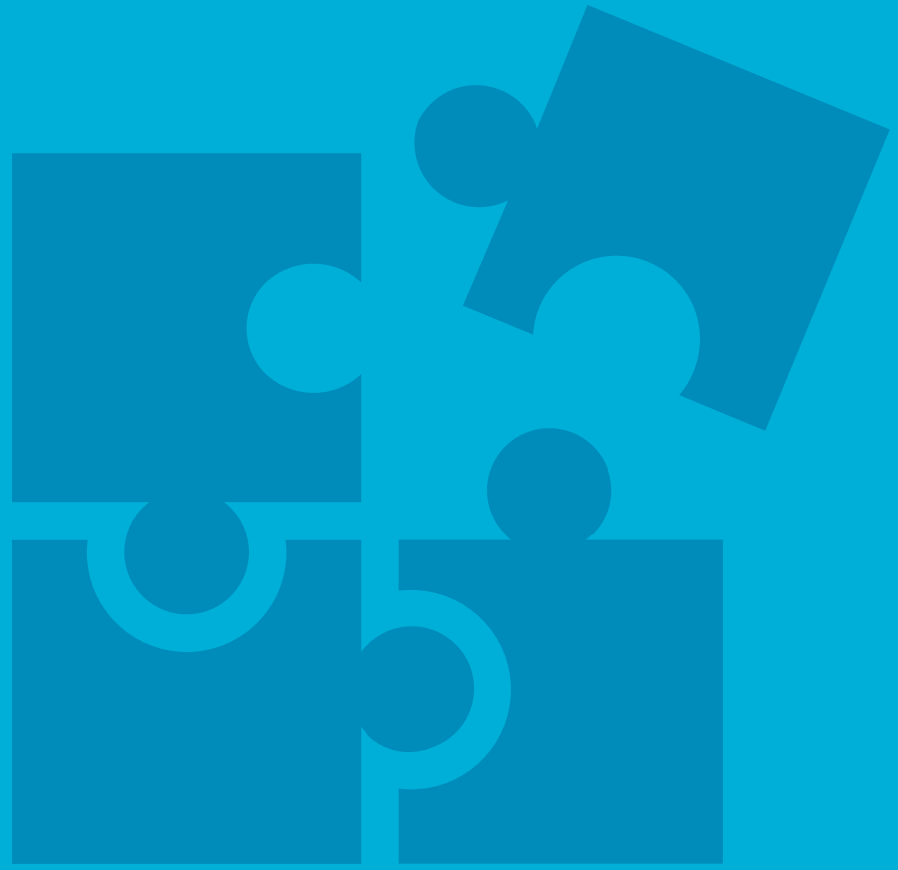
Weight Criteria	Criteria for Comorbid Conditions
Class 2 obesity, BMI ≥ 35 kg/m^2 or 120% of the 95th percentile for age and sex, whichever is lower	Clinically significant disease; examples include but are not limited to T2DM, IIH, NASH, Blount disease, SCFE, GERD, obstructive sleep apnea (AHI >5), cardiovascular disease risks (HTN, hyperlipidemia, insulin resistance), depressed health-related quality of life.
Class 3 obesity, BMI ≥ 40 kg/m^2 or 140% of the 95th percentile for age and sex, whichever is lower	Not required but commonly present.

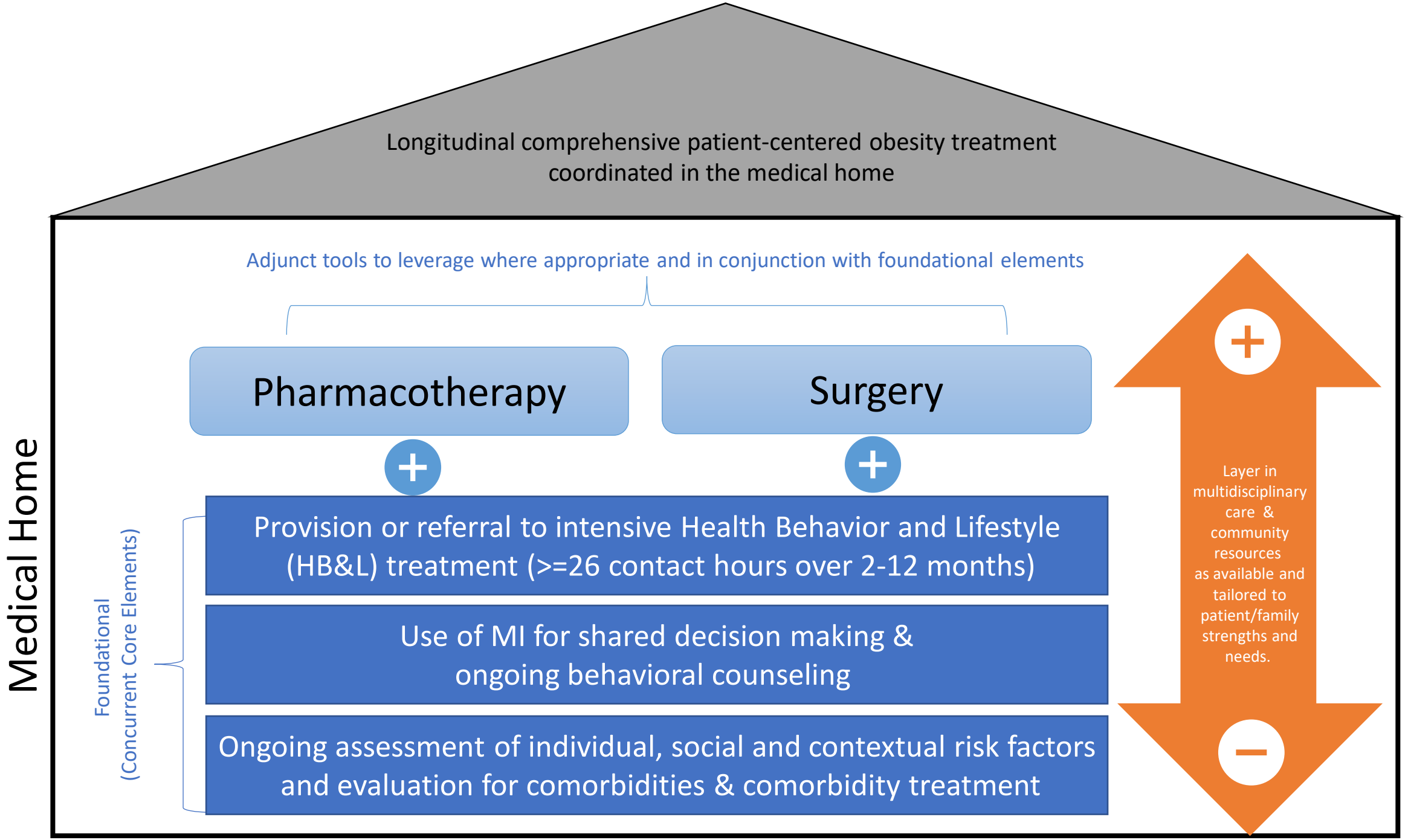
AHI, apnea-hypopnea index.

Treatment Take-Aways: “As soon as possible, as intensive as available”



Putting it all together




Longitudinal comprehensive patient-centered obesity treatment coordinated in the medical home
Medical Home
Adjunct tools to leverage where appropriate and in conjunction with foundational elements
Pharmacotherapy
Surgery
+
+
Foundational (Concurrent Core Elements)
Provision or referral to intensive Health Behavior and Lifestyle (HB&L) treatment (>=26 contact hours over 2-12 months)
Use of MI for shared decision making & ongoing behavioral counseling
Ongoing assessment of individual, social and contextual risk factors and evaluation for comorbidities & comorbidity treatment
+
Layer in multidisciplinary care & community resources as available and tailored to patient/family strengths and needs.
−

“Because obesity is a chronic disease with escalating effects over time, a life course approach to identification and treatment should begin as early as possible and continue longitudinally through childhood, adolescence, and young adulthood, with transition into adult care. – CPG”

Challenges

Implementation barriers

- Healthcare infrastructure and capacity limitations, especially facing primary care pediatricians
- Coverage
- Burden on family to participate in IHBLT
- Skill set of providers who use medications

CPG

Evaluation & Treatment of Pediatric Obesity

Implementation Supports

AAP Resources & Website

www.aap.org/obesitycpg

Types of AAP Implementation

Self-Paced CME Modules

Quality Improvement Opportunities

Clinical Decision Support Tools

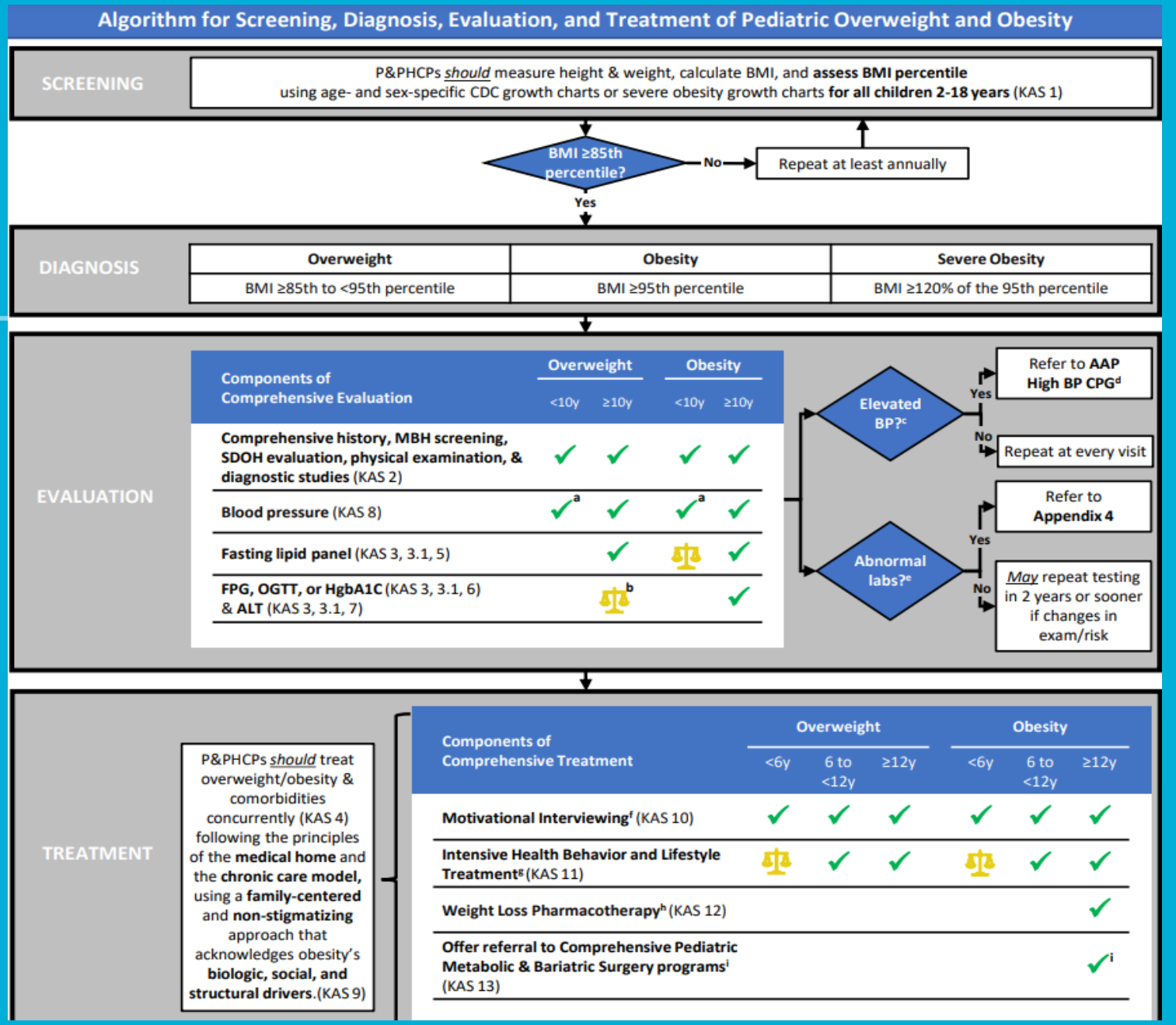
Coding Reference Card

FHIR Resource

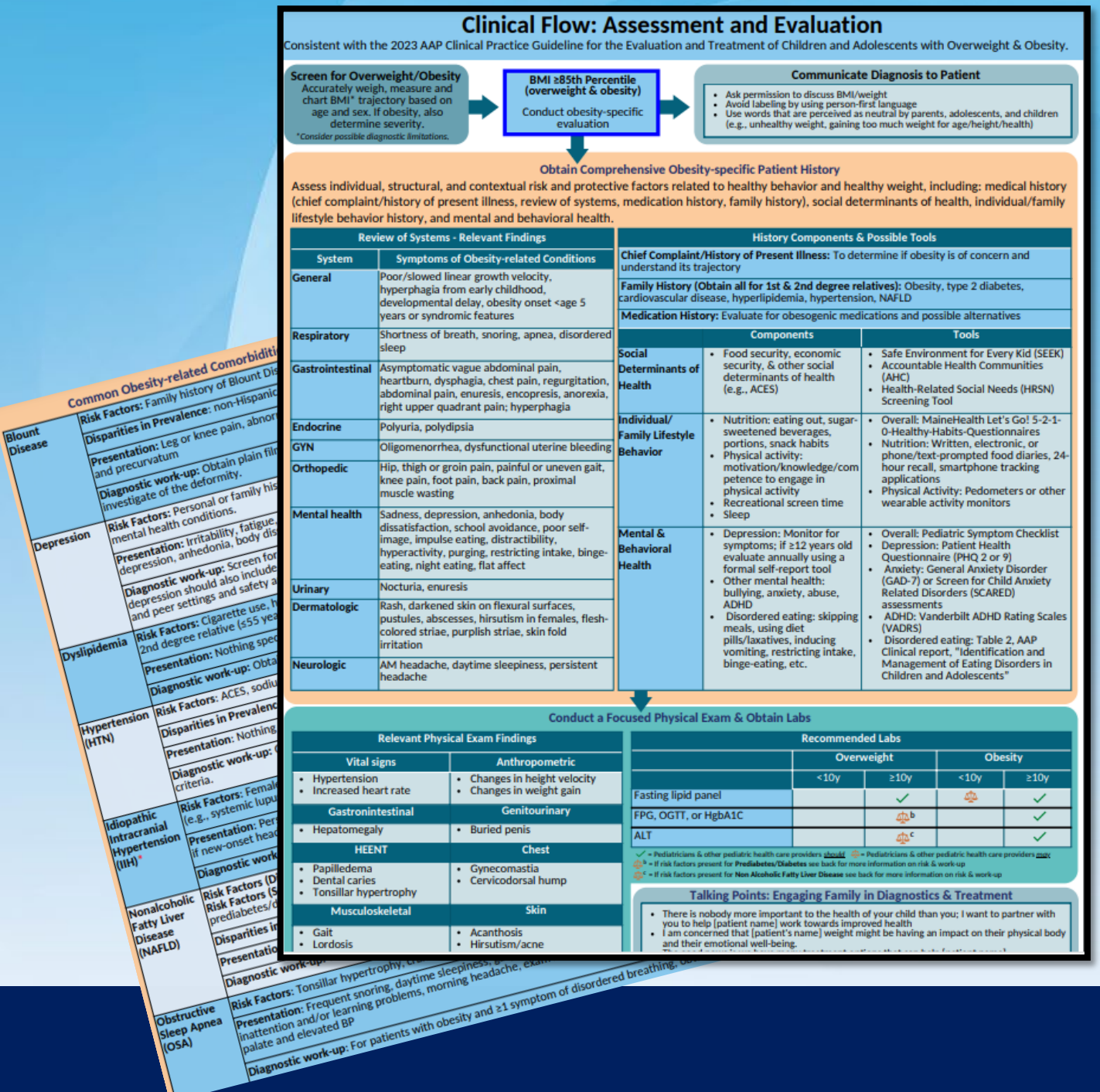
Multimedia Assets

Family Resources

CPG Algorithm



https://www.aap.org/en/patient-care/institute-for-healthy-childhood-weight/clinical-practice-guideline-for-the-evaluation-and-treatment-of-pediatric-obesity/



Clinical Flow: Assessment and Evaluation

Consistent with the 2023 AAP Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents with Overweight & Obesity.

Screen for Overweight/Obesity
Accurately weigh, measure and chart BMI* trajectory based on age and sex. If obesity, also determine severity.
*Consider possible diagnostic limitations.

BMI ≥85th Percentile (overweight & obesity)
Conduct obesity-specific evaluation

Communicate Diagnosis to Patient
- Ask permission to discuss BMI/weight
- Avoid labeling by using person-first language
- Use words that are perceived as neutral by parents, adolescents, and children (e.g., unhealthy weight, gaining too much weight for age/height/health)

Obtain Comprehensive Obesity-specific Patient History

Assess individual, structural, and contextual risk and protective factors related to healthy behavior and healthy weight, including: medical history (chief complaint/history of present illness, review of systems, medication history, family history), social determinants of health, individual/family lifestyle behavior history, and mental and behavioral health.

Review of Systems - Relevant Findings

System	Symptoms of Obesity-related Conditions
General	Poor/slowed linear growth velocity, hyperphagia from early childhood, developmental delay, obesity onset <age 5 years or syndromic features
Respiratory	Shortness of breath, snoring, apnea, disordered sleep
Gastrointestinal	Asymptomatic vague abdominal pain, heartburn, dysphagia, chest pain, regurgitation, abdominal pain, enuresis, encopresis, anorexia, right upper quadrant pain; hyperphagia
Endocrine	Polyuria, polydipsia
GYN	Oligomenorrhea, dysfunctional uterine bleeding
Orthopedic	Hip, thigh or groin pain, painful or uneven gait, knee pain, foot pain, back pain, proximal muscle wasting
Mental health	Sadness, depression, anhedonia, body dissatisfaction, school avoidance, poor self-image, impulse eating, distractibility, hyperactivity, purging, restricting intake, binge-eating, night eating, flat affect
Urinary	Nocturia, enuresis
Dermatologic	Rash, darkened skin on flexural surfaces, pustules, abscesses, hirsutism in females, flesh-colored striae, purplish striae, skin fold irritation
Neurologic	AM headache, daytime sleepiness, persistent headache

History Components & Possible Tools

Chief Complaint/History of Present Illness: To determine if obesity is of concern and understand its trajectory

Family History (Obtain all for 1st & 2nd degree relatives): Obesity, type 2 diabetes, cardiovascular disease, hyperlipidemia, hypertension, NAFLD

Medication History: Evaluate for obesogenic medications and possible alternatives

	Components	Tools
Social Determinants of Health	• Food security, economic security, & other social determinants of health (e.g., ACES)	• Safe Environment for Every Kid (SEEK) • Accountable Health Communities (AHC) • Health-Related Social Needs (HRSN) Screening Tool
Individual/ Family Lifestyle Behavior	• Nutrition: eating out, sugar-sweetened beverages, portions, snack habits • Physical activity: motivation/knowledge/competence to engage in physical activity • Recreational screen time • Sleep	• Overall: MaineHealth Let's Go! 5-2-1-0-Healthy-Habits-Questionnaires • Nutrition: Written, electronic, or phone/text-prompted food diaries, 24-hour recall, smartphone tracking applications • Physical Activity: Pedometers or other wearable activity monitors
Mental & Behavioral Health	• Depression: Monitor for symptoms; if ≥12 years old evaluate annually using a formal self-report tool • Other mental health: bullying, anxiety, abuse, ADHD • Disordered eating: skipping meals, using diet pills/laxatives, inducing vomiting, restricting intake, binge-eating, etc.	• Overall: Pediatric Symptom Checklist • Depression: Patient Health Questionnaire (PHQ 2 or 9) • Anxiety: General Anxiety Disorder (GAD-7) or Screen for Child Anxiety Related Disorders (SCARED) assessments • ADHD: Vanderbilt ADHD Rating Scales (VADRS) • Disordered eating: Table 2, AAP Clinical report, "Identification and Management of Eating Disorders in Children and Adolescents"

Conduct a Focused Physical Exam & Obtain Labs

Relevant Physical Exam Findings

Vital signs	Anthropometric
• Hypertension • Increased heart rate	• Changes in height velocity • Changes in weight gain
Gastronintestinal	**Genitourinary**
• Hepatomegaly	• Buried penis
HEENT	**Chest**
• Papilledema • Dental caries • Tonsillar hypertrophy	• Gynecomastia • Cervicodorsal hump
Musculoskeletal	**Skin**
• Gait • Lordosis	• Acanthosis • Hirsutism/acne

Recommended Labs

	Overweight		Obesity	
	<10y	≥10y	<10y	≥10y
Fasting lipid panel		✓	⚖	✓
FPG, OGTT, or HgbA1C		⚖[b]		✓
ALT		⚖[c]		✓

✓ = Pediatricians & other pediatric health care providers should; ⚖ = Pediatricians & other pediatric health care providers may
[b] = If risk factors present for **Prediabetes/Diabetes** see back for more information on risk & work-up
[c] = If risk factors present for **Non Alcoholic Fatty Liver Disease** see back for more information on risk & work-up

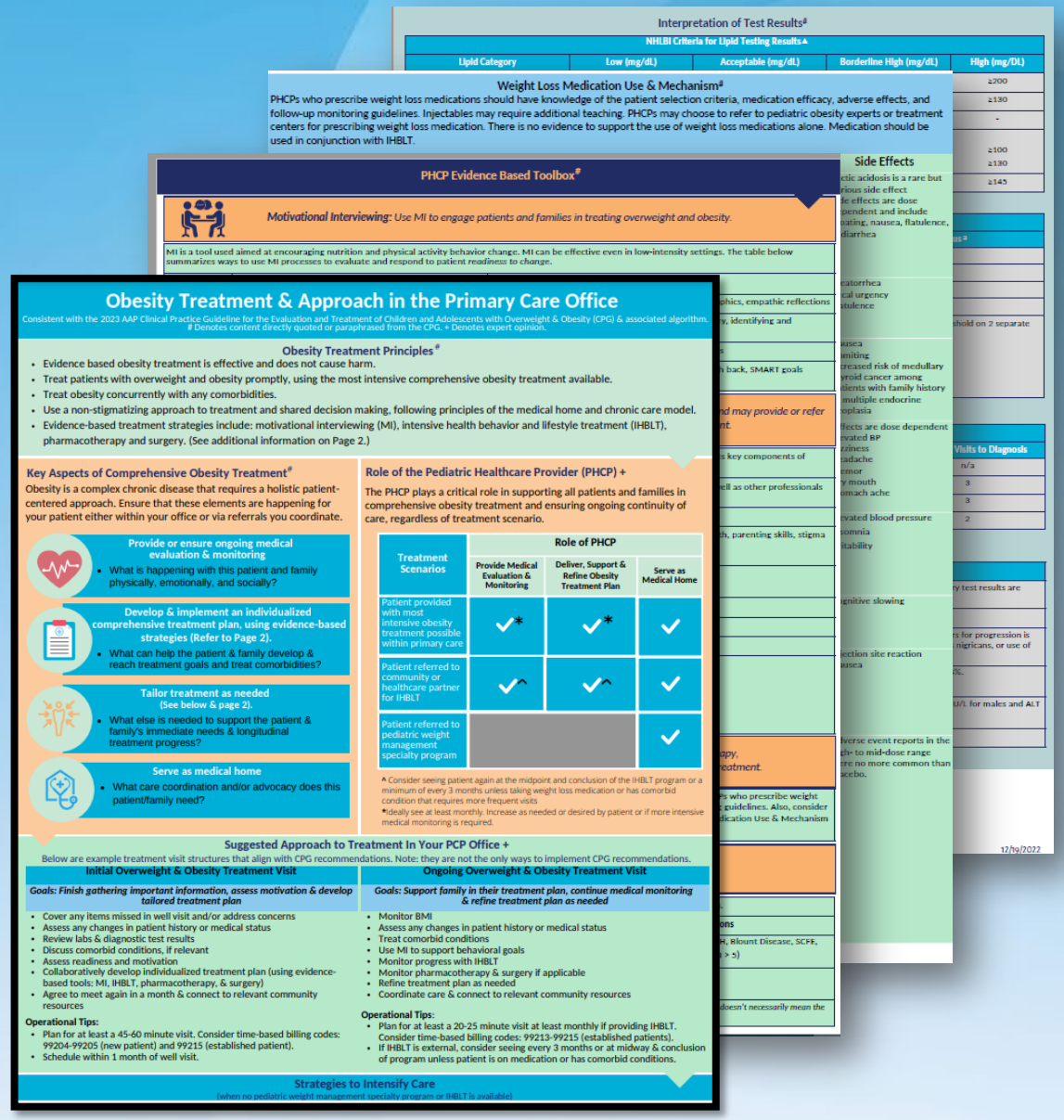
Talking Points: Engaging Family in Diagnostics & Treatment

- There is nobody more important to the health of your child than you; I want to partner with you to help [patient name] work towards improved health
- I am concerned that [patient's name] weight might be having an impact on their physical body and their emotional well-being.

Clinical Flow: Assessment and Evaluation

Screening, Diagnosis, and Evaluation

(How – Part 1)

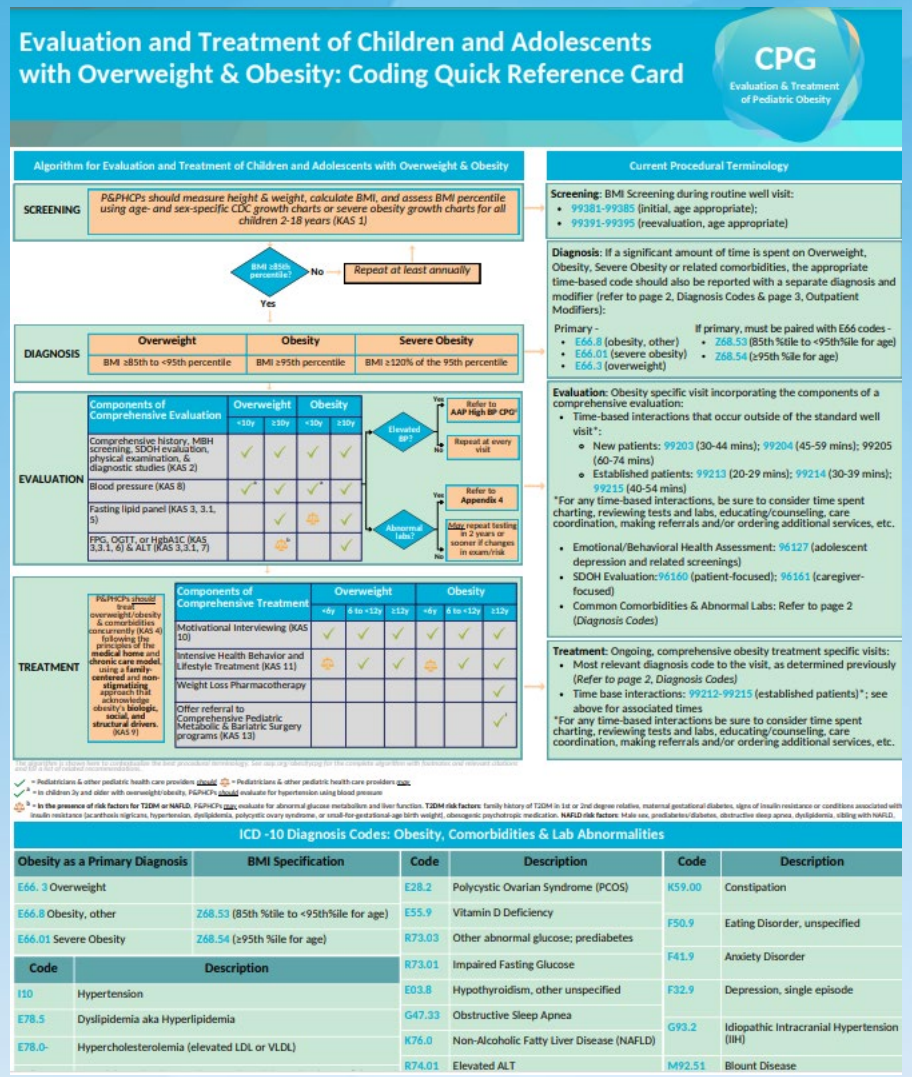


Clinical Flow: Treatment and Approach in Primary Care Office

Treatment

(How – Part 2)

- Suggested treatment approaches
- Strategies to intensify treatment
- Pediatrician's' toolbox of treatment options
- Medication considerations
- Support on interpreting lab results



Current Procedural Terminology

Screening: BMI Screening during routine well visit:
- 99381-99385 (initial, age appropriate);
- 99391-99395 (reevaluation, age appropriate)

Diagnosis: If a significant amount of time is spent on Overweight, Obesity, Severe Obesity or related comorbidities, the appropriate time-based code should also be reported with a separate diagnosis and modifier (refer to page 2, Diagnosis Codes & page 3, Outpatient Modifiers):

Primary -
- E66.8 (obesity, other)
- E66.01 (severe obesity)
- E66.3 (overweight)

If primary, must be paired with E66 codes -
- Z68.53 (85th %tile to <95th%ile for age)
- Z68.54 (≥95th %ile for age)

Evaluation: Obesity specific visit incorporating the components of a comprehensive evaluation:
- Time-based interactions that occur outside of the standard well visit*:
  - New patients: 99203 (30-44 mins); 99204 (45-59 mins); 99205 (60-74 mins)
  - Established patients: 99213 (20-29 mins); 99214 (30-39 mins); 99215 (40-54 mins)

*For any time-based interactions, be sure to consider time spent charting, reviewing tests and labs, educating/counseling, care coordination, making referrals and/or ordering additional services, etc.

- Emotional/Behavioral Health Assessment: 96127 (adolescent depression and related screenings)
- SDOH Evaluation:96160 (patient-focused); 96161 (caregiver-focused)
- Common Comorbidities & Abnormal Labs: Refer to page 2 (Diagnosis Codes)

Treatment: Ongoing, comprehensive obesity treatment specific visits:
- Most relevant diagnosis code to the visit, as determined previously (Refer to page 2, Diagnosis Codes)
- Time base interactions: 99212-99215 (established patients)*; see above for associated times

*For any time-based interactions be sure to consider time spent charting, reviewing tests and labs, educating/counseling, care coordination, making referrals and/or ordering additional services, etc.

Coding Quick Reference Card: maps billing codes to the CPG algorithm for easier integration

Patient & Family Resources:

- Updated content for HealthyChildren.org and fact sheet formats
- Goal sheets

Source: https://www.aap.org/en/patient-care/institute-for-healthy-childhood-weight

Office Resource

Capacity Considerations for Obesity Evaluation and Treatment

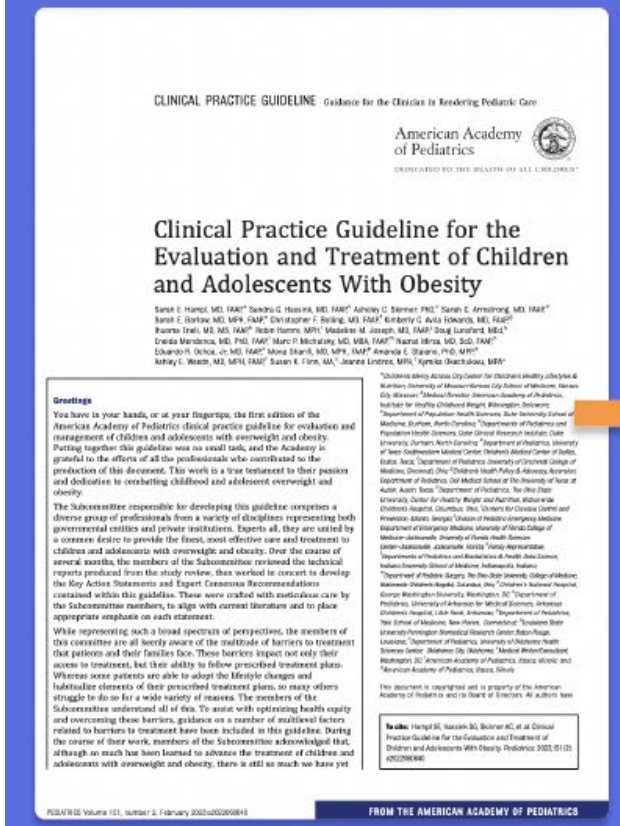
This tool was designed to help you and your care team reflect on your current practice capacity related to obesity treatment that is consistent with the AAP CPG on Evaluation and Treatment of Pediatric Obesity and identify areas to continually assess and work on as a team. The information is based on the CPG, implementation science and characteristics of sustainable programs and clinics.

Your care team has had staff training on:	Your office environment/physical space has:
☐ The clinical recommendations in the CPG ☐ Weight bias and stigma, including the use of non-stigmatizing language ☐ Motivational interviewing ☐ Appropriate billing and coding recommendations for obesity-related visits	☐ Respectful and private opportunities for height and weight measurements ☐ Appropriately sized equipment, furniture, gowns, etc. ☐ Non-stigmatizing imagery in the practice/clinic environment and on family education materials

Define roles & responsibilities	Consider EHR documentation & capacity
☐ Your staff team has clearly defined roles and responsibilities for the key functions/components of obesity assessment & evaluation (see back side) and obesity treatment (see back side).	☐ Your electronic health record has designated, readily available space for documentation for key components of obesity assessment & evaluation (see back side) and obesity treatment (see back side).

EMR Integration

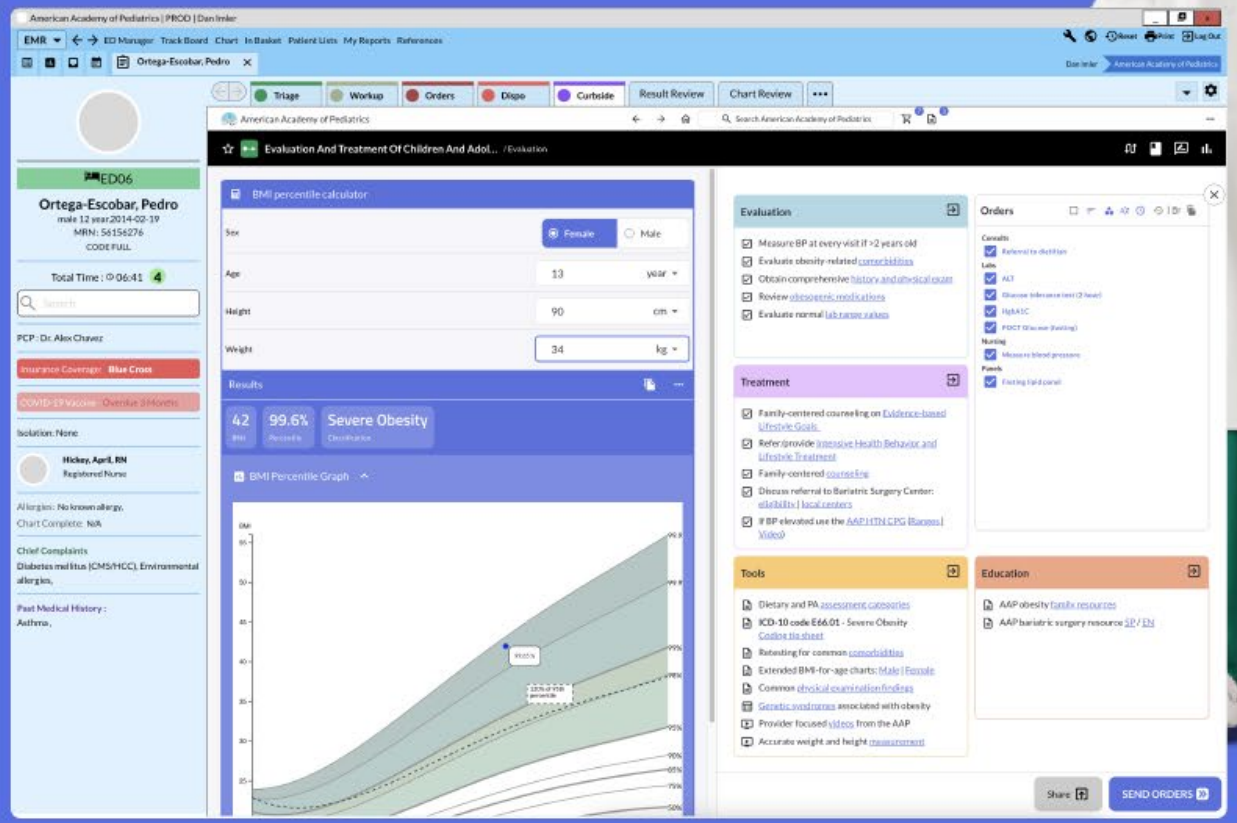
Empower your clinicians with access to patient specific logic directly derived from the 2023 AAP Obesity CPG with the Institute for Healthy Childhood Weight and Curbside Health!

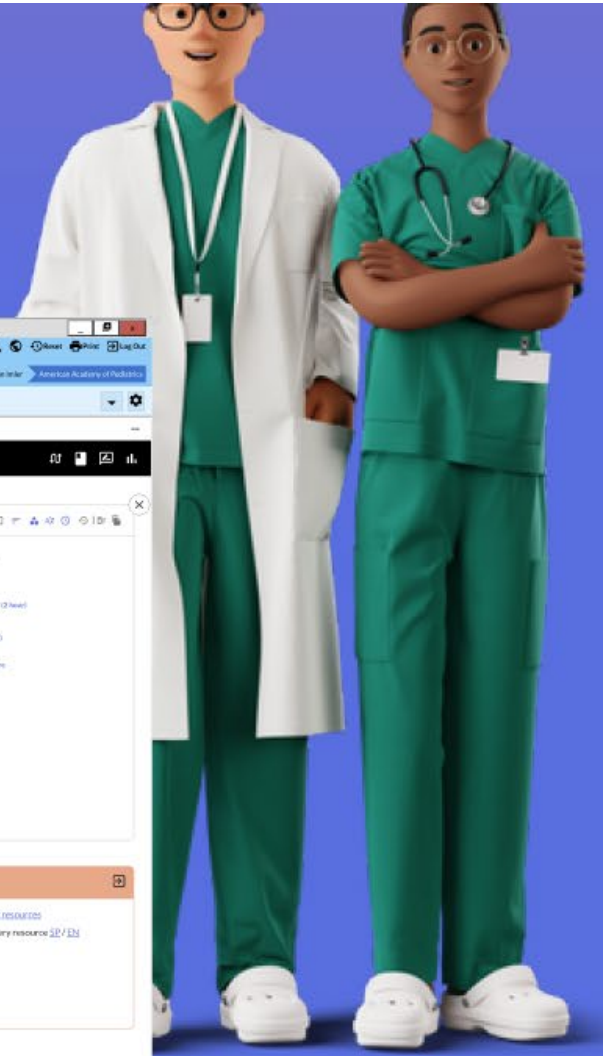

CLINICAL PRACTICE GUIDELINE Guidance for the Clinician in Rendering Pediatric Care

American Academy of Pediatrics

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

FROM THE AMERICAN ACADEMY OF PEDIATRICS





100 pages of expert literature

One click patient specific recommendations at the point-of-care

Self-paced CME Modules:

- Assessment & Evaluation
- Treatment

★ **Now Integrated with PediaLink!**

Multi-media Assets:

- Explainer videos (4)

Multi-media Assets:

Podcasts (14)

Key Takeaways

- Obesity is a complex chronic disease
- There are effective evidence-based strategies for treatment
- Comprehensive whole child evaluations are important
- Treating obesity also means treating comorbidities
- Obesity treatment is safe and effective
- Children with overweight or obesity should be offered treatment upon diagnosis

"This CPG supports early treatment at the highest level of intensity appropriate for and available to the child. It is hoped that pediatricians and other PHCPs, health systems, community partners, payers, and policy makers will recognize the significance and urgency outlined by this CPG to advance the equitable and universal provision of treatment of the chronic disease of obesity in children and adolescents. – CPG"

Roster & Acknowledgements

Obesity CPG Subcommittee

- Sarah Hampl, MD - Chair
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Institute for Healthy Childhood Weight
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- Jan Liebhart
- Jeremiah Salmon
- Stephanie Womack
- Savanna Torres

References

Hampl SE, Hassink SG, Skinner AC, Armstrong SC, Barlow SE, Bolling CF, Avila Edwards KC, Eneli I, Hamre R, Joseph MM, Lunsford D, Mendonca E, Michalsky MP, Mirza N, Ochoa ER, Sharifi M, Staiano AE, Weedn AE, Flinn SK, Lindros J, Okechukwu K. Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents with Obesity. *Pediatrics*. 2023 Feb 1;151(2):e2022060640. doi: 10.1542/peds.2022-060640. PMID: 36622115.

Skinner AC, Staiano AE, Armstrong SC, Barkin SL, Hassink SG, Moore JE, Savage JS, Vilme H, Weedn AE, Liebhart J, Lindros J, Reilly EM. Appraisal of Clinical Care Practices for Child Obesity Treatment. Part I: Interventions. *Pediatrics*. 2023 Feb 1;151(2):e2022060642. doi: 10.1542/peds.2022-060642. PMID: 36622110.

Skinner AC, Staiano AE, Armstrong SC, Barkin SL, Hassink SG, Moore JE, Savage JS, Vilme H, Weedn AE, Liebhart J, Lindros J, Reilly EM. Appraisal of Clinical Care Practices for Child Obesity Treatment. Part II: Comorbidities. *Pediatrics*. 2023 Feb 1;151(2):e2022060643. doi: 10.1542/peds.2022-060643. PMID: 36622098.

Thank you

Website: **https://ihcw.aap.org**

www.aap.org/obesitycpg

American Academy of Pediatrics
Institute for Healthy Childhood Weight