OLOLCH Healthy Weight Program
Pathway for Pediatric Weight Management

Prevention and Screening

Starting at birth and with all well child visits, all patients should receive anticipatory guidance about healthy nutrition, physical activity, and limited screen time.
For older children, counseling should include the 5-2-1-0 message (5 fruits and vegetables daily, 2 hours or less of screen time per day, 1 hour of physical activity daily, and 0 sugar sweetened beverages).

All patients should have a screening lipid panel between age 9 and 11 and again between age 17 and 21, according to AAP Bright Futures guidelines.
A non-fasting cholesterol can be done for convenience if the patient is low risk based on BMI and family history. A concerning family history should prompt a fasting lipid panel: Parent, grandparent, aunt/uncle, or sibling with early cardiovascular disease (<55 years in males, <65 years in females) OR a parent with cholesterol ≥240 mg/dL or known dyslipidemia.

Starting at age 2, patients should have the BMI measured and percentile recorded at least yearly.

If patient's BMI ≥ 85% for age:

- Assess medical risk with an obesity focused review of systems, family history and physical exam
- Assess for behavior risk: sedentary time, physical activity, nutrition
- If risk factors are present, proceed with further lab assessment
- Add "overweight" and any comorbidities to the problem list
- Offer a follow up visit to further discuss lab work and risk factors
- Consider Stage 1 Treatment for Pediatric Weight Management.

If the BMI is ≥95% for age:

- Assess medical risk with an obesity focused review of systems, family history and physical exam
- Assess for behavior risk: sedentary time, physical activity, nutrition
- Proceed with appropriate labs, imaging, and referrals
- Add "obesity" and any co-morbidities to the problem list
- Schedule a follow up visit to further discuss lab work and risk factors
- Offer Stage 1 Treatment for Pediatric Weight Management.

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Stage 1 "Prevention Plus" Pediatric Weight Management in Primary Care clinics:

At the first visit, if not already completed, perform a medical risk assessment with a focused physical exam, review of systems, and family history.
- take baseline weight, height, BMI, blood pressure, pulse
- question about obstructive sleep apnea
- ask about joint pains especially hip and feet problems
- ask about exercise intolerance and asthma
- ask about skin problems and headaches (check for papilledema)
- screen for depression/anxiety
- review any medications (especially those that may cause weight gain)
- address common comorbid issues such as constipation or gastrointestinal reflux
- referral to specialist(s) if needed - see below.

Perform or review basic lab work to screen for comorbidities:

- Lipid panel (fasting preferred) – screen for dyslipidemia
- Comprehensive metabolic panel, Hemoglobin A1C - screen for pre-diabetes, liver, and kidney disease

Consider additional lab work based on family history or signs and symptoms:

- Urinalysis – to screen for glucosuria, hematuria, proteinuria. Consider kidney dysfunction if there is poor growth or elevated blood pressure.
- TSH, free T4 - Consider hypothyroidism if there is short stature, poor growth velocity, fatigue, constipation, or family history.
- TSH, free T4, LH, FSH, Prolactin, 17-hydroxyprogesterone, testosterone, prolactin, DHEA-S, +/- androstenedione, +/- US pelvic ultrasound - if considering Poly Cystic Ovarian Syndrome (females with irregular menstrual cycles, acne, hirsutism, acanthosis)
- 25-OH Vitamin D - if limited outdoor activity, dark-skinned, poor dairy intake (or recommend a Vitamin D supplement)

Assess patient readiness for change.
One tool to use is the Motivational Interviewing Readiness for Change Scale.

- If patient and/or family is not motivated to make changes, provide brief education and offer follow up visit in 1-3 months.
- If patient and family are motivated to make changes, encourage enrollment in the Stage 2 Structured Weight Management program. Schedule initial visit in 2-4 weeks. Refer for an initial visit with dietician/nutritionist.
- If there are moderate-severe comorbidities, consider advancing to Stage 3.

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Recommendations for referral to specialists:

Endocrinology –
- hemoglobin A1C > 6.5
- fasting blood sugar > 126, random sugar > 200
- short stature/poor height velocity
- suspected Cushing's syndrome (buffalo hump, moon face, gynecomastia, short stature)
- abnormal thyroid studies (TSH > 10, low free T4, anti-thyroid antibodies)

Nephrology – BP >95% with elevated creatinine or hematuria/proteinuria

Cardiology – BP>95% on 3 separate occasions, Triglycerides > 500, LDL >160, HDL <30

Gastroenterology – elevated liver enzymes or abnormal liver ultrasound

Sleep Clinic – disordered sleep breathing, daytime somnolence

Orthopedics – spinal asymmetry, flat feet with pain, severe bowed legs, concerns for slipped capital femoral epiphysis

Physical Therapy – for physical deconditioning or joint pains

Psychology/Psychiatry/Social Work – depression, anxiety, concern for eating disorder, severe bullying, school absenteeism

Genetics – developmental delay, dysmorphic features, hyperphagia, severe obesity < age 4

Neurology/Ophthalmology – persistent headaches concerning for increased intracranial pressure

Adolescent Medicine or Gynecology – irregular menses, acne, hirsutism (possible PCOS)

Stage 2 Structured Pediatric Weight Management in Primary Care clinics:

Monthly visits based on Next Steps themes

Conducted by a pediatric PCP with additional training and interest in obesity management

Initial visit

- Complete/review Stage 1 items as needed
- Schedule monthly PCP visits and dietician/nutrition visit(s). Telehealth visits are an option.
- Issue and review program materials
- Make and record patient centered goals (1-3 specific, measurable, achievable)

At each follow-up visit

- Repeat vital signs and plot BMI %
- Choose 1-2 health related topics to discuss for 15-20 min from Next Steps themes
- Review goals from prior visit and successes and challenges encountered
- Each visit should end with goal revisions and 1-2 new goals
- Consider offering incentives for logging dietary intake and exercise
  - Demonstrate a smartphone app (example: My Fitness Pal, Lose It)
- Encourage, empathize, and motivate – focus on success and praise
- Involve the entire family, offer to help caregivers make goals
- After 3-6 months of lifestyle change, consider rechecking labs if initially abnormal

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After 6 months of Stage 1-2:

If BMI % stabilizes or declines: continue until goals met and then space out appointments
If BMI% still increasing: Advance to Stage 3 Coordinated Clinic

Stage 3 Coordinated Pediatric Weight Management Clinic (in development stage)

For patients who need more intense management, consideration of a prescribed diet, and/or obesity medication

Team includes a general pediatrician trained in weight management, dietician, behavioral health coach, medical assistant, and clinic coordinator.

May involve research project participation through collaboration with Pennington

Visits with specialists can be scheduled as needed for the same day

Telehealth option available after initial visit

All care will be coordinated with the PCP

After 3-6 months of Stage 3 Coordinated Intervention:

If BMI % stabilizes or declines: continue until goals met and then space out appointments
If BMI% still increasing: Advance to Stage 4 Enhanced Intervention

Stage 4 – Enhanced Pediatric Weight Intervention (in development stage)

This clinic will be reserved for teen patients with either severe comorbidities or BMI >99th% with failed progress despite at least 9 months of the prior treatment stages

Options of prescribed diet and/or medication will be similar to Stage 3

In addition, consideration will be given to weight loss procedures or surgery

Patients must be emotionally stable with good family support and a willingness to commit to a more involved treatment plan.

*Modeled after the American Academy of Pediatrics Institute for Healthy Childhood Weight's Algorithm for Assessment and Management of Childhood Obesity – 2016.
Assessment and Management of Childhood Obesity Algorithm_FINAL.pdf (aap.org)