Healthier You
Via Christi Health

Pediatric Obesity Care Path

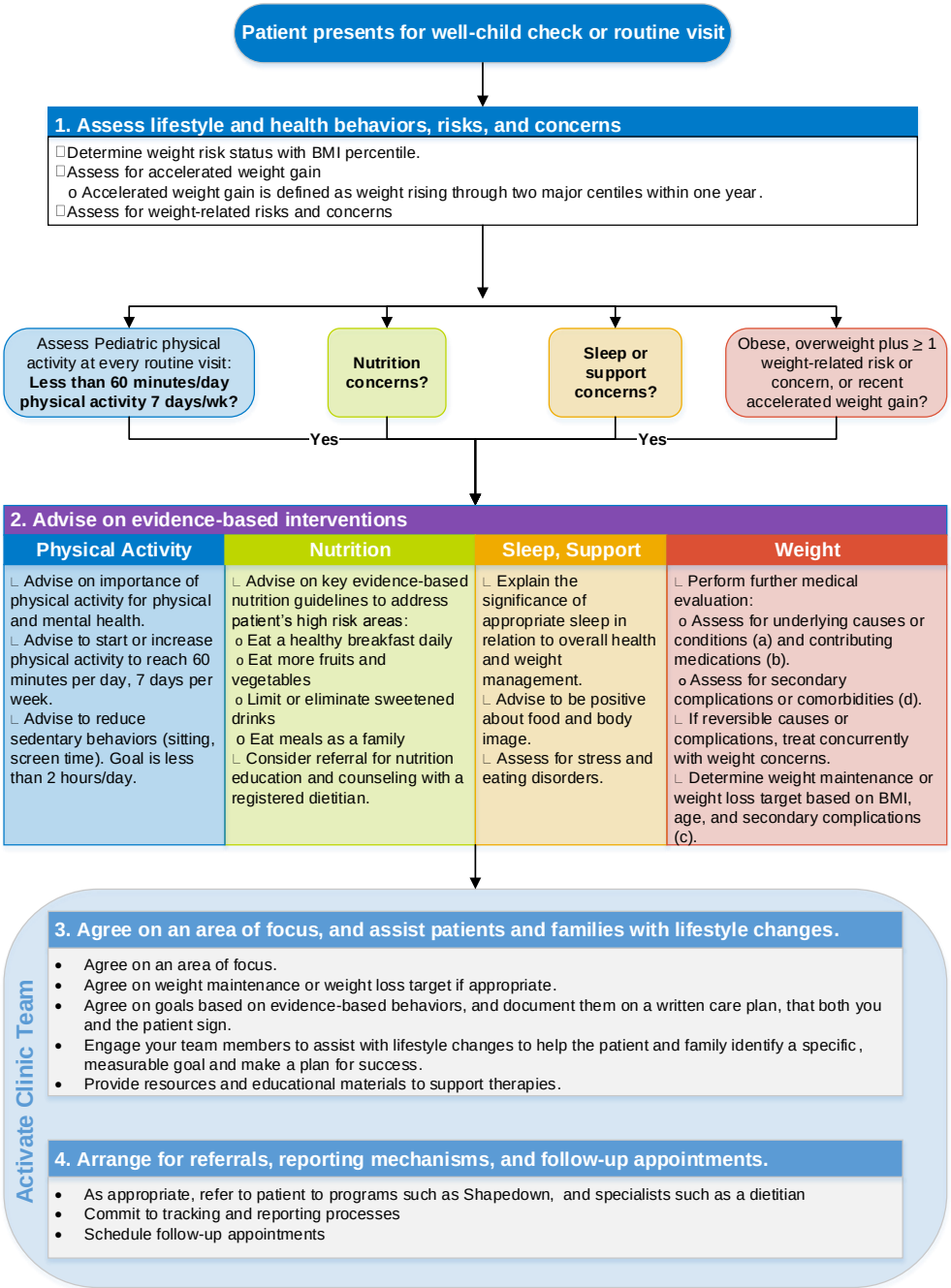
(Ages 3-17)

Screening and Diagnosis

- Determine BMI-for-age percentile (Per EMR growth charts or cdc.gov/growthcharts/clinical_charts.htm)
- <85th percentile NOT OVERWEIGHT
- 85th—94th percentile OVERWEIGHT
- ≥95th percentile OBESE

(For infants and children under 2 years. overweight is determined as weight-for-length greater than the 95th percentile, not by BMI)

Treatment



Weight-related risks & concerns

Even if BMI for age is below the 85th percentile, the patient may be at risk for overweight/obesity and require further evaluation if they have any of the following:

- Parental obesity. This increases risk of overweight children by 2- or 3-fold.
- Family history of type 2 diabetes, heart disease before age 55 in father or 65 in mother, high blood pressure, high cholesterol, or eating disorders.
- High blood pressure. Measure at every well-child visit or least once annually. Refer to NIH chart to measure percentiles, then see (h) below for guidelines.
- Patient or family concern about the patient's weight.
- Medical signs and symptoms: short stature/developmental delay, acanthosis nigricans, hepatomegaly/right upper-quadrant pain, symptoms of sleep apnea.

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(a) Possible underlying causes or conditions

Conditions	*Whom to test*	*Tests/referrals*
Endocrine • Thyroid disorder • Cushing syndrome	Short stature, goiter, history of decelerated linear growth, or Cushingoid appearance	• TSH • 24-hour urine cortisol OR late-night salivary cortisol
Genetic Prader-Willi, BardetBiedl, BeckwithWiedemann, and other genetic syndromes	Developmental delay, dysmorphic features (short stature, big tongue, large head, facial dysmorphia), infantile obesity, hypogonadism.	• Refer for genetic testing, counseling

(b) Medications that may contribute to weight gain

- High-dose, chronic glucocorticoid treatment
- Progestins (e.g. depo medroxyprogesterone acetate, norethindrone)
- Valproate
- Tricyclic antidepressants (e.g. imipramine, amitriptyline)
- Cyproheptadine
- Trazodone
- Atypical neuroleptics, e.g., olanzapine, risperidone, quetiapine, ziprasidone, aripiprazole

(c) Weight Maintenance or Weight-loss Targets

		OVERWEIGHT (85-95%ile)	**OBESE** (>95%ile)
Age 2-7 years	No secondary complications	**MAINTENANCE***	**MAINTENANCE***
	Secondary complications	**MAINTENANCE***	**LOSS** [no more than 1 pound (0.5kg) per month]
Age >7 years	No secondary complications	**MAINTENANCE***	**LOSS** [2-4 pounds (1-2kg) per month]
	Secondary complications	**LOSS** [2-4 pounds (1-2kg) per month]	**LOSS** [up to 1-2 pounds (0.5kg) per week]

*Maintain weight to decrease BMI with increasing height

(d) Secondary complications or comorbidities

Conditions	Whom to test	Tests/referrals
Dyslipidemia	• Overweight or obese	• Random total cholesterol, HDL (to calculate non-HDL cholesterol; if >145, fasting lipid
Hypertension	• Everyone	• Over 95th%ile for gender, age, and height; confirmed at 3 consecutive visits
Hyperglycemia	• Age 10 (or onset of puberty) AND • Family ethnic history OR signs of insulin resistance (acanthosis nigricans, PCOS, etc.)	• Random plasma glucose; if >140, follow with fasting plasma glucose (FPG) within 1-2 days OR • HbA1c • If FPG is 100-120, repeat
Non-alcoholic fatty lived disease	• Right upper quadrant pain • Enlarged liver	• Liver enzymes
Sleep apnea, airway obstruction	• Sleep disturbances • Snoring • Daytime somnolence	• Fully polysomnogram in certified sleep lab
Orthopedic problems	• Hip, knee, or foot pain • Flat feet • Limited range of motion • Lower-leg bowing	• X-ray if positive, refer to orthopedic specialist • Physical Therapy
Depression/anxiety	• Everyone	• Child/adolescent Mental health specialist
Polycystic ovary syndrome (PCOS)	• Hirsutism • Abnormal periods	• Free and total testosterone • DHEAS

References: "Lifestyle and weight management for children and adolescents." Intermountain Healthcare, n.d. Web. 26 March 2018.