

Children’s Wisconsin

Co-Management Guidelines

To support collaborative care, we have developed guidelines for our community providers to utilize when referring to, and managing patients with, the pediatric specialists at Children’s Wisconsin. These guidelines provide protocols for jointly managing patient cases between community providers and our pediatric specialists.

<h3 style="text-align: center;">Spinal Asymmetry / Scoliosis</h3> <p style="text-align: center;">Presence of a curve of the spine</p>				
Diagnosis/symptom	Referring provider’s initial evaluation and management:	When to consider referral to Orthopedic Clinic:	What can referring provider send to Orthopedic Clinic?	Specialist’s workup will likely include:
<p>Signs and symptoms</p> <ul style="list-style-type: none"> • Uneven shoulders • Uneven scapula • Uneven flank crease • Uneven waist • Rib hump / rib prominence • Uneven hip height / may appear like leg length difference <p>Causes</p> <ul style="list-style-type: none"> • Idiopathic → exact cause unknown, research indicates genetic factors • Congenital → vertebral anomalies • Neuromuscular → underlying conditions such as spina bifida, CP, MD 	<p>History</p> <ul style="list-style-type: none"> • Family history of scoliosis • Did family / pt note asymmetry • Associated symptoms: <ul style="list-style-type: none"> • Pain • Radiculopathy • Signs of neurogenic bladder or bowel • Exam – standing if patient able <ul style="list-style-type: none"> • Shoulder height • Pelvic crest height • Scapula asymmetry • Flank asymmetry • Adam’s forward bend test • Neuro exam to include DTR & strength of bilateral upper/ lower extremities • Skin <ul style="list-style-type: none"> • Freckling / birth marks • Hairy tuft along spine • Sacral dimple 	<p>May refer any patient with positive finding (with or without images)</p> <p>Recommend orthopedic referral:</p> <ul style="list-style-type: none"> • Otherwise healthy child (idiopathic) <ul style="list-style-type: none"> • Under 10 years old • Curves over 10 degrees • Family requesting treatment for scoliosis (e.g. bracing, chiropractor, or Physical Therapy) • Patients with underlying neuromuscular disorder or genetic condition, • Congenital scoliosis • Vertebral anomalies (wedging, spondy, hemivertebrae) • Sagittal profile abnormality (kyphosis) • Curve progression <p>AIM Spine Center at Children’s WI → Comprehensive Treatment Options</p>	<p>Internal Provider using Epic: Place Ambulatory Referral to Orthopedics</p> <p>External Provider using EPIC: Please complete the external referral order to CHW ORTHOPEDIC & SPORTS MEDICINE CLINICS - or - Fax to Central Scheduling at (414) 607-5288 - or - Online ambulatory referral form</p> <p>Please send</p> <ul style="list-style-type: none"> • Pertinent images – either push to CHW PACS or send with family on disc • Radiologist reports if imaging obtained – send with family or fax to (414) 604-7509 • Clinic notes with hip / lower extremity exam 	<p>Comprehensive history</p> <ul style="list-style-type: none"> • Family history • Medical & surgical history • Review of Systems <p>Neuromuscular exam</p> <ul style="list-style-type: none"> • Gait evaluation • Evaluate for spinal asymmetry and kyphosis • Strength of upper & lower extremities • Reflexes <p>Imaging review</p> <ul style="list-style-type: none"> • PA/Lat scoliosis x-ray will be ordered if not previously obtained <p>Determine next steps / treatment:</p> <ul style="list-style-type: none"> • Observation, bracing, or discussion of surgery



For questions concerning this work,
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<ul style="list-style-type: none"> • Syndromic → e.g. connective tissue disorders, neurofibromatosis, skeletal dysplasias, 22q deletion • Thoracogenic → previous history of thoracic surgery such as thoracotomy, open heart surgery <p><u>Incidence</u></p> <ul style="list-style-type: none"> • 3% of individuals are diagnosed with idiopathic scoliosis prior to 16 years old • Early Onset: from infant to 10 years of age <ul style="list-style-type: none"> • Infantile: 0-3 years old • Juvenile: 3-10 years old • Adolescent: onset ≥ 10 years old <ul style="list-style-type: none"> • Greatest risk of progression is during periods of rapid growth <p>Females with idiopathic scoliosis more likely to have progressive curve than males</p>	<p><u>Imaging</u> Can be obtained at Ortho visit, or can be ordered by referring provider. <u>This is per provider and patient/family preference</u></p> <p>If referring provider chooses to obtain images first recommend imaging:</p> <ul style="list-style-type: none"> • PA/Lateral Scoliosis series (DEL, Main Campus or MEQ) <ul style="list-style-type: none"> • Standing if patient able • Sitting if patient cannot stand independently <p><u>OR</u></p> <ul style="list-style-type: none"> • Lower radiation images option: PA/Lateral Scoliosis EOS x-ray (GFD Clinic) <ul style="list-style-type: none"> • Clear imaging • Potential for lower radiation https://childrenswi.org/medical-care/imaging/diagnostic-tests/x-ray/eos-scanner <p><u>Patient education:</u> https://childrenswi.org/medical-care/orthopedics/programs/scoliosis</p> <p><u>Patient population electing to continue spine care with PCP</u></p> <ul style="list-style-type: none"> • Over age 10 years of age • Otherwise healthy • Normal neuro exam • Pain free • Curve under 10 degrees 	<p>https://childrenswi.org/medical-care/aim-spine-center</p> <p><u>Observation</u> https://www.childrenswi.org/medical-care/orthopedics/programs/scoliosis/tests-and-treatments/observation</p> <ul style="list-style-type: none"> • Low dose radiation or no radiation <ul style="list-style-type: none"> • EOS low-dose radiation scanner has potential for significant decrease in radiation dose - up to 10 times less than a regular X-ray, and up to 99 percent less than a CT scan of spine • MTS or DIERS = radiation free topographical mapping • Scoliosis specific Physical Therapy if family desires • Chiropractic Care available if family desires <p><u>Bracing</u></p> <ul style="list-style-type: none"> • Often initiated for growing individuals with curves measuring ≥ 20° -25° • Type of brace & recommended hours worn depend up on curve pattern • Option of EDF Casting & Bracing for early onset scoliosis • Support forums for patients and families <p><u>Surgery</u></p> <ul style="list-style-type: none"> • Children’s performs 80% of the spine fusion surgeries in the state of WI. • Growing technology options: <ul style="list-style-type: none"> • VEPTR • Growing Rods • MAGEC rod, with less invasive lengthening 	<p><u>Contact Information</u></p> <ul style="list-style-type: none"> • Call Physician Consultation Line at (414) 266-2460 if you would like to speak directly to Pediatric orthopedic surgeon prior to referral • Contact Orthopedic Nurseline at (414) 604.7000 for general concerns • Spine Line: (414) 337-SPINE 	<ul style="list-style-type: none"> • PT and/or chiropractic referral if associated pain or per family preference • Possible advanced imaging
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*Approved by Specialty Medical Leader, CSG Clinical Integration, Primary Care Clinical Guidelines Core Team

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