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Inclusion Criteria:

- Pts with complex care needs and neuromuscular scoliosis undergoing posterior spinal fusion

Exclusion Criteria:

- Previous index surgery
 - For example, re-operations for previous VEPTR, posterior spinal fusion, growing rod procedure
- Pre-existing spinal or hardware infection
- Trauma/tumor/spondylolisthesis without risk factors

Referral to Orthopedics for NM spinal fusion surgery

- Surgeon alerts Complex Care Coordinator (CCC) to enroll patient in Complex Care

Patient seen in Orthopedics

- Review medical history - CCC
- Complete evaluation - surgeon
- Meet with family via telehealth to review history and plan - CCC

Dietitian through Beacon or Primary Care Clinic or a specialist who manages their nutrition (Genetics, Neurology, or Nephrology)

Imaging

- Manual traction scoliosis X-rays in Orthopedic Clinic – positioned by surgeon
- If obtained > 6 months before surgery, repeat:
 - X-ray AP/LAT Scoliosis:
 - Standing/weight bearing (preferred)
 - Seated
 - Supine
 - Traction (if pt can tolerate)

Laboratory Testing

- Ordered by Orthopedics
 - CBC with differential
 - BMP
 - LFTs
 - PT/PTT/INR
 - ABO
 - Albumin/Prealbumin

GI/Nutrition

All patients need to be evaluated

Referral at least 6 months prior to surgery to avoid surgery delays

Review growth chart, if **malnutrition** concerns identified, referral options to an RD include:

- Patient **has dietitian or specialist** managing nutrition through CM Clinic:
 - Request follow up with RD and their provider
- Patient **is not** followed by a CM dietitian:
 - Pre-existing G-tube
 - Referral to CMH GI G-tube clinic (unless already seen in GI G-tube clinic) to include 'evaluation with RD/ERAS pathway'
 - Oral Feeders
 - Referral to GI Clinic to include 'evaluation with RD/ERAS pathway'
- Follow up referral with EMR message to GI nutrition team asking RD to be available for appointment

Pulmonology

All patients need to be evaluated

- In referral, mention "priority/urgent" followed by "NMS patient (insert tentative surgery date/timeframe)"
- Obtain PFT, if appropriate (spirometry, MIP, MEP, peak cough flow, lung volume, ET/CO₂)
- Pulmonology team to determine if further workup needed (e.g., sleep study, chest CT, CBG)
- **Referral at least 6 months prior to surgery to avoid surgery delays**

Additional Consults

Orthopedic Team

- Initiate consultation with necessary subspecialties
 - Ex: Cardiology, Home Care, Case Management, Endocrinology

CCC to schedule **Complex Care Management Team** huddle once surgery is planned (to be reviewed **1 - 2 months** prior to surgery)

Complex Care Management Team (CCM)

- Pediatric Hospital Medicine
- Beacon
- Anesthesia
- Ortho
- Any other identified specialty team involved in case

Abbreviations

- CCC: Complex Care Coordinator
- RD: Registered Dietitian
- VEPTR: vertical expandable prosthetic titanium rib

Prior to Surgery

Pre-Admission Testing (PAT) Evaluation

- Appointment typically occurs **2 - 4 weeks prior to surgery** (ideally on the same day that Ortho clinic completes H&P and consents)
- Introduction to ERAS principles, e.g., multimodal analgesia, **carb rich drink** 2 hours prior to surgery start time, ERAS handout given)
- Discuss anesthesia risks and plan (including mitigation of pre-op anxiety)

Ortho Clinic Pre-Admission (Ideally same day as PAT evaluation)

- Complete H&P and consents
- Order and complete 2nd Set Labs
 - CBC with differential
 - Type and screen

Pre-Operative Testing

- Echo & ECG (to be determined by Cardiology and Ortho)

**Instruct patients to call Ortho Advanced Practice Provider (APP) manager if they have questions prior to surgery*

Patients on ketogenic diet will not receive the carbohydrate rich drink

• [Intraoperative](#)

• [PICU](#)

• [Inpatient Floor - Discharge](#)