CLINICAL PATHWAY:

Posterior Spinal Fusion for Adolescent Idiopathic Scoliosis

THIS PATHWAY SERVES AS A GUIDE AND DOES NOT REPLACE CLINICAL JUDGMENT.

2 Months Preoperative

- Outpatient Physical Therapy (PT) orders placed 2 months pre-op for 6-8 weeks of PT 1x/week to work on strengthening, stretching, postural exercises, post-op mobility training (with precautions and diaphragmatic breathing) and pain neuroscience education

Preoperative

- Patient to be given prescriptions for the following medications, which are to be started 1 day prior to surgery:
  - **Gabapentin** PO 5 mg/kg/dose TID (max 300 mg/dose) for 3-7 days total (at the discretion of orthopedics)
  - **Polyethylene glycol** 17 g daily (give a 7 day supply)
  - **CHG cloths** for skin cleansing
  - **Oxycodone, Valium, Tylenol, Motrin, Senna, Narcan** (Rx and instructions per Ortho clinic)
- For uncomplicated cases, set the expectation that discharge will be POD#2-3 (POD#4 if necessary)

Perioperative

CHG cloth prep by patient in pre-op area

- Antibiotics: cefazolin 30 mg/kg/dose x1 (within 60 min of surgical incision)
  - If cefazolin allergy: vancomycin IV
    - ≤44 weeks PMA‡/about ≤1 month old: 15 mg/kg x1
    - >44 weeks PMA‡/about >1 month old: 20 mg/kg x1 (max dose 2 g/dose)
    - ‡PMA (Post-Menstrual Age) = gestational age + postnatal age

Intraoperative

Prep:

- Chloraprep to skin when prone on table x2

Hemostasis:

- Transexamic acid bolus (50 mg/kg) with continuous rate of 10 mg/kg/hr
- Aquamantys bipolar cautery for neuromuscular cases or long fusions

Adjunctive Pain and Infection Control:

- Toradol, dexamethasone, hydromorphone, ketamine x1 (as per Anesthesiology)
- Tobramycin (1.2 g powder) or Vancomycin (1 g powder) mixed with allograft or layered on top
- Hemovac drain placed sub or suprafascial
- Antibiotics: cefazolin 30 mg/kg/dose q4hr intra-operatively (start 4 hours after first dose).
  - If cefazolin allergy: vancomycin IV
    - *If initial doses of vancomycin already given perioperatively*: subsequent doses to be given per hospital pharmacy vancomycin protocol to avoid AKI
    - *If initial doses of vancomycin not yet started*:
      - ≤44 weeks PMA‡/about ≤1 month old: 15 mg/kg x1
      - >44 weeks PMA‡/about >1 month old: 20 mg/kg x1 (max dose 2 g/dose)
      - Subsequent doses per hospital pharmacy vancomycin protocol to avoid AKI
    - ‡PMA (Post-Menstrual Age) = gestational age + postnatal age

Closure:

- 1 Vicryl pop-offs for fascia supplemented with #2 Quill stitch
- 0 and 2-0 vicryls for subcutaneous
- 3-0 monocryl for skin
- Dermabond for skin

Postoperative

Plan to admit to MS6
(or PICU, per Orthopedics/PICU decision)
See Page 2: Post-op Care.

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Connecticut Children's

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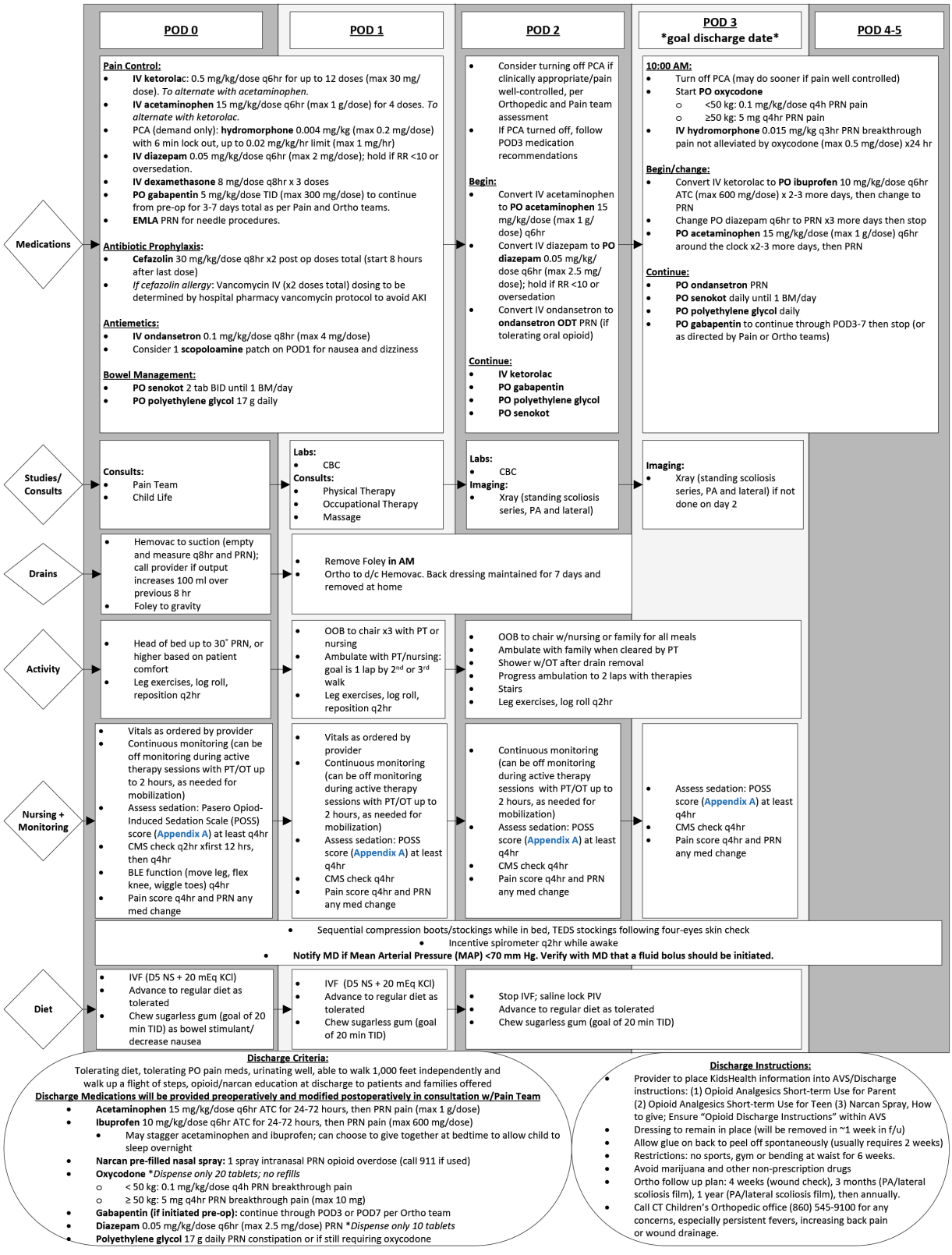

Discharge Criteria:

Tolerating diet, tolerating PO pain meds, urinating well, able to walk 1,000 feet independently and walk up a flight of steps, opioid/narcan education at discharge to patients and families offered

Discharge Medications will be provided preoperatively and modified postoperatively in consultation w/Pain Team

- **Acetaminophen** 15 mg/kg/dose q6hr ATC for 24-72 hours, then PRN pain (max 1 g/dose)
- **Ibuprofen** 10 mg/kg/dose q6hr ATC for 24-72 hours, then PRN pain (max 600 mg/dose)
  - May stagger acetaminophen and ibuprofen; can choose to give together at bedtime to allow child to sleep overnight
- **Narcan pre-filled nasal spray:** 1 spray intranasal PRN opioid overdose (call 911 if used)
- **Oxycodone** *Dispense only 20 tablets; no refills*
  - < 50 kg: 0.1 mg/kg/dose q4h PRN breakthrough pain
  - ≥ 50 kg: 5 mg q4hr PRN breakthrough pain (max 10 mg)
- **Gabapentin (if initiated pre-op):** continue through POD3 or POD7 per Ortho team
- **Diazepam** 0.05 mg/kg/dose q6hr (max 2.5 mg/dose) PRN *Dispense only 10 tablets*
- **Polyethylene glycol** 17 g daily PRN constipation or if still requiring oxycodone

Discharge Instructions:

- Provider to place KidsHealth information into AVS/Discharge instructions: (1) Opioid Analgesics Short-term Use for Parent (2) Opioid Analgesics Short-term Use for Teen (3) Narcan Spray, How to give; Ensure "Opioid Discharge Instructions" within AVS
- Dressing to remain in place (will be removed in ~1 week in f/u)
- Allow glue on back to peel off spontaneously (usually requires 2 weeks)
- Restrictions: no sports, gym or bending at waist for 6 weeks.
- Avoid marijuana and other non-prescription drugs
- Ortho follow up plan: 4 weeks (wound check), 3 months (PA/lateral scoliosis film), 1 year (PA/lateral scoliosis film), then annually.
- Call CT Children's Orthopedic office (860) 545-9100 for any concerns, especially persistent fevers, increasing back pain or wound drainage.

RETURN TO THE BEGINNING

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POSS Scale (Pasero Opioid-Induced Sedation Scale)

Sedation Level	Description	Nursing Intervention
S	Sleep, easy to arouse	**Acceptable** **No action necessary** • May consider increasing dose if needed
1	Awake and alert	
2	Slightly drowsy, easily aroused	
3	Frequently drowsy, arousable, drifts off to sleep during conversation	**Unacceptable** • Closely monitor respiratory status and sedation level • Notify prescriber
4	Somnolent, minimal or no response to verbal and physical stimulation	**PAUSE OPIOID INFUSION.** **Unacceptable** • Closely monitor respiratory status and sedation level • Notify prescriber • Consider Narcan

The POSS Scale is a validated tool used to assess sedation after every opioid administration (e.g.,, Fentanyl, Morphine, Oxycodone).

INSTRUCTIONS:

1. Complete POSS score within 1 hour of every opioid administration, including ATC and PRN dosing.
2. Complete POSS and pain re-assessment at the same time.
3. Document the level of sedation that best describes the assessment of your patient's sedation.

For patients on a PCA/NCA or continuous infusion:

1. Assess POSS sedation level/respiratory status every 1-2 hours for the first 24 hours, and with a dose change.
2. After 24 hours and stable, assess POSS every 4 hours with pain assessment and vital signs.

In the PICU, POSS is not used when the patient is intubated as long as the patient is being assessed with a validated sedation tool (e.g., SBS).

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