LOW-RISK SPINAL FUSION

PRE-HOSPITAL MANAGEMENT

- Assessment
  - Evaluate learning needs, psychosocial assessment, nutrition assessment, and sleep assessment
- Education
  - Patients 11 years and older attend pre-op spine class, patients younger than 11 years receive 1:1 teaching
- Pre-operative skin care (at home) the night before surgery
  - Shower, dry off, use 1 packet of 2% chlorhexidine gluconate cloths to wipe entire back, air dry, clean pajamas

PRE-OPERATIVE MANAGEMENT

- Assessment | Radiographs
  - PA and lateral standing radiographs in EOS prior to surgery with spine-bending films as clinically indicated
- Assessment | Laboratory
  - MRSA nasal culture, Urine Analysis (UA) as clinically indicated, Urine pregnancy test (females age 12 and older), type and screen, type and crossmatch
- Antibiotics and Pain Medications
  - See Table 2. Suggested Pre-operative Medications
  - See Algorithm for 'Standard' Surgical Prophylaxis Surgery Patients

POST-OPERATIVE MANAGEMENT

- Assessment | Monitoring
  - Vital signs and neurovascular assessment every 4 hours for the first 24 hours, then every 8 hours until discharge.
  - Continuous pulse oximetry if patient requires oxygen or is on patient-controlled analgesia
  - Record output from indwelling catheter every 4 hours for the first 24 hours, then every 8 hours until discontinued
- Medications
  - See Table 3. Suggested Post-operative Medication
  - See Algorithm for 'Standard' Surgical Prophylaxis Surgery Patients
- Activity
  - Day of surgery: logroll every 2 hours, elevate head of the bed, dangle edge of bed as tolerated
  - Post-op Day 1: logroll, up to chair, begin ambulation, parent of child assistance in activities
  - Post-op Day 2 to Discharge: Dress, get out of bed, ambulate in room and hallway, walk up and down stairs
- Treatments
  - Incentive spirometry, cold therapy, and SCD stockings

DISCHARGE CRITERIA

- The following criteria must be met:
  - Off oxygen as clinically indicated, tolerate oral intake, voiding, pain well controlled with orals meds, cleared by PT, outer dressing removed, receive and understand discharge instructions

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TARGET POPULATION

Inclusion Criteria

- Patients 8 to 21 years of age with idiopathic or congenital scoliosis, kyphosis, or spondylolysis without complex chronic conditions

Exclusion Criteria

- Patients less than 8 years of age
- High-risk spinal fusion patients

PRE-HOSPITAL MANAGEMENT

Assessment

- Evaluate the learning needs of the patient and caregivers prior to admission
  - Note: Evidence indicates a large portion of parents have limited literacy [Yin, 2009]. Parent health literacy may be linked to child health outcomes [Yin, 2009; DeWalt, 2009]

- Complete a psychosocial assessment prior to admission
  - Note: The psychosocial assessment should include evaluation of the family support system, plan for family post-surgery, school issues/concerns, guardianship, and resources
  - Nutrition assessment by registered dietician for patients with a body mass index (BMI) less than 10% for age or greater than 85% for age
  - Complete sleep assessment prior to surgery by asking the following four questions:
    - Does your child pause in their breathing at night?
    - Does your child struggle to take a breath at night?
    - Does your child feel sleepy during the day?
    - Does your child snore more than half of the night?

Education

- Patients over 11 years: should attend a pre-operative spine class
- Patients less than 11 years of age: should receive 1:1 pre-operative teaching
- Patients unable to attend a spine class: should receive 1:1 pre-operative teaching
  - Note: caregivers should receive education along with the patient
- It is suggested that patients and caregivers receive a tour of the hospital prior to surgery

Nutrition

- Encourage a well-balanced diet during the pre-operative period
  - Note: Adequate pre-operative nutrition has been associated with improved healing and decreased infection [Hatlen, 2010]
- Nil per os (NPO) guidelines according to anesthesia guidelines
  - Note: The American Society of Anesthesiologists recommends a minimum fasting period of six hours for solids and nonhuman milk/formula and a minimum of two hours fasting from clear liquids [Practice guidelines for pre-operative fasting, 2011]

Treatments

Preadmission pre-operative skin care

- Parents instructed not to shave or use depilatory on the patient's back for at least a week prior to surgery
- No new tattoos or piercings in the 3 months prior to surgery date

Preadmission pre-operative skin care the night before surgery

- Patient to shower the night before surgery
- After drying off from the shower, patient to use one packet (= 2 cloths) of 2% chlorhexidine gluconate cloths to wipe their entire back; do not rinse with water; allow to air dry
- Put on clean pajamas

Pre-operative cleanse by pre-op nurse with 2% chlorhexidine gluconate (CHG) antiseptic cloth the morning of the surgery

- Use one packet (= 2 cloths) to wipe the entire back from top of shoulders to upper buttocks, including sides, completely wetting the skin; discard cloths
- Allow skin to completely air dry – do not rinse

- Note: The use of a 2% chlorhexidine gluconate-coated cloth or 4% CHG soap with a standardized, timed process before hospital admission is an effective infection prevention strategy for reducing the risk of post-operative surgical site infections (SSIs) [Edmiston, 2010]

PRE-OPERATIVE MANAGEMENT

Assessment | Radiographs

- Posterior/Anterior (PA) and lateral standing radiographs in standard EOS prior to surgery
  - Scoliosis patients: AP supine bending radiographs,
  - Kyphosis patients: AP lateral bolster radiographs of the thoracic spine
  - Other radiographs as clinically indicated
  - MRI as clinically indicated

Assessment | Laboratory

- **Nasal culture** for methicillin-resistant *Staphylococcus aureus* (MRSA) within 30 days prior to surgery
  - Note: Pre-operative testing and treatment of patients positive for MRSA has been shown to decrease the incidence of post-operative infections [Epstein, 2011]
- **Urine analysis** (UA) with microscopy obtained if clinically indicated

  Questions for verbal assessment for UA
  - Do you have a history of urinary tract infections (UTIs)? If yes, when was the most recent UTI?
    - Answer: NO – No UA is needed
    - Answer: YES – Clean catch UA and hold for culture if positive UTI in the past 3 months or has history of frequent (definition of 'frequent' based on clinical judgment) UTIs
  - Do you currently have any frequency, burning or foul-smelling urine?
    - Answer: NO – No UA is needed
    - Answer: YES – Clean catch UA and culture
      - Note: If UA is suggestive of UTI, a urine culture should be obtained and appropriate antibiotic coverage should be initiated
  - A 'positive' UA would include any of the following and should be sent for culture (per Dr. Nyquist)
    - Positive for white cells, greater than 0-5/hpf
    - Positive for red cells, greater than 0-3/hpf
    - Positive for nitrates
    - Positive for leukocytes
      - Note: Pre-operative bacteriuria may increase post-operative complications [Hatlen, 2010]
- **Urine pregnancy test** for all females 12 years and older and/or postmenarchal
- **Day of pre-op visit: HCT and Type and screen** to determine if antigens are present
- Type and crossmatch on day of surgery

Assessment | Other Tests

- Pulmonary function tests (PFTs) for patients with a thoracic scoliosis curve greater than 70°, kyphosis greater than 70°, any planned chest wall violation during surgery, or history of uncontrolled asthma

Medications

- Please refer to Table 2. Suggested Medications for the Pre-operative Period and refer to the Orderset in Epic: **Ortho IP Spinal Fusion Admission**.

Antibiotics

- Please refer to Spine Surgery Patient Algorithm for "Standard" Surgical Prophylaxis for guidance on antibiotic ordering.
- Cefazolin 30 mg/kg (max of 2,000 mg) IV completion of antibiotic within 60 minutes of surgical incision. If patient is greater than or equal to 120 kg, dose is 3,000 mg. ***AND***
- Vancomycin 15 mg/kg (max of 2,000 mg) IV completion of antibiotic within 60 minutes of incision for patients with a beta-lactam allergy, patients colonized or at high-risk for colonization with MRSA, patients over the age of 13, or post-menarchal, or with acne, or with signs of maturity such as pubic hair or breast buds.
    - For patients with documented hypersensitivity to vancomycin (Red Mans Syndrome), infuse over 120 mintues and pre-medicate with PO or IV diphenhydramine (see Table 2 for dosing).
- Alternative antibiotics for allergies:
    - Clindamycin 10 mg/kg (max of 900 mg) IV completion of antibiotic within 60 minutes of surgical incision **for patients allergic to vancomycin**.
- If patient is currently on antibiotics, consult Epi MD for recommended antibiotic prophylaxis.

Pain Medications

- For patients who can swallow pills, give acetaminophen tablet on arrival to the pre-op area
- For patients who can't swallow pills, give acetaminophen oral solution, chewable tablets, or IV acetaminophen will be given in the OR

POST-OPERATIVE MANAGEMENT

Assessment | Monitoring

- Vital signs and neurovascular assessment every 4 hours for 24 hours, the every 8 hours until discharge.
- Continuous pulse oximetry if patient requires supplemental oxygen or is on patient-controlled analgesia
- Record output from indwelling catheter every 4 hours for the first 24 hours and then every 8 hours until discontinued
- Discontinue urinary catheter as soon as the patient can ambulate to the bathroom (post-op day 1 or 2)

Laboratory

- Hematocrit (HCT) every morning for the first three post-operative days unless:
    - If HCT greater than (≥)30 on post-operative day 1, discontinue
    - If HCT greater than (>)27 on post-operative day 2, discontinue
- Decision to transfuse should be based on clinical symptoms and hematocrit
    - Persistent tachycardia not due to pain
    - Oxygen requirement despite aggressive pulmonary toilet
    - Symptoms of hypotension on standing

Medications

See Table 3. Suggested Medications for the Post-operative Period

Antibiotics

- Continue antibiotic prophylaxis **for 24 hours** post-operatively. Please refer to Spine Surgery Patient Algorithm for "Standard" Surgical Prophylaxis for guidance on antibiotic dosing.

Pain Medication – confirm with Anesthesia

- Patient-Controlled Analgesia (PCA) (Morphine or Dilaudid)
  - No basal rate should be ordered due to intrathecal morphine given in OR. Only demand those ordered.
  - Discontinue PCA after patient has tolerated 2 doses of oral pain medications on post-op day 1
  - See Patient-controlled Analgesia (PCA) Set-up, Administration, and Documentation
- Acetaminophen
  - Oral every 4 hours for 48 hours, then every 4 hours per PRN
- Oxycodone
  - Every 4 hours scheduled for 48 hours, then every 4 hours PRN
  - First post-op dose to begin first post-op day at 0900 ("*Start PRN dose 4 hours after scheduled dose.*")
- Ketorolac
  - Around the clock for 48 hours beginning 0900 on the first post-operative day, then ibuprofen PRN until discharge
- Diazepam
    - Every 6 hours as needed for spasms

Bowel Regimen

- Senna/Docusate twice a day
- Polyethylene glycol once a day
- Fleets enema PRN

Other Medications

- Nalbuphine
- Ondansetron
- Scopolamine, for patients 12 years of age and older
- Multivitamin

Activity

Day of surgery

- If morning surgery, dangle patient on side of the bed and/or stand and/or sit in the chair if the patient is able (standing and chair are optional based on clinical assessment)
- Logroll patient every 2 hours and as needed
- Elevate head of bed up to 90^{o} (optional)

Post-operative Day 1

- Logroll patient every 2 hours and as needed
- Physical therapy (PT) twice daily
- Encourage and assist patient to sit on the edge of the bed, stand and to chair
- Begin ambulation

- Parent of child (POC) should be encouraged to participate in assisting with turning, ambulation, and activities of daily living, as well as with guided imagery, distraction and other forms of pain management
- Once cleared by PT, nursing or parent of child should assist patient with standing, sitting in chair, and ambulation at least 4 times per day until discharge

Post-operative Day 2 to Discharge

- Patient should dress in own clothing once the urinary catheter has been discontinued
- Assist patient up to chair and to ambulate in patent room and hallway at least 3-4 times per day
- Patient should be able to get out of bed with minimal family assistance
- Walk up and down stairs
- Patient must be able to climb stairs to pass PT
- After patient has been discharged from PT, patient and caregiver should be competent with independent transfers prior to discharge from hospital

Nutrition

- Idiopathic or otherwise healthy patients should only have clear liquids on the day of surgery
- Provide a light diet for breakfast on postoperative day 1 and then advance to regular diet as tolerated
- A well-balanced, high fiber diet with small frequent meals and increased caloric intake should be provided to encourage healing.

Treatments

VTE prevention

- Patients at risk for Venous Thromboembolism (VTE) receive prophylaxis in accordance with the VTE guideline

Cold therapy

- As needed to decrease pain
- Cold therapy is provided to patients for comfort and not necessarily to manage swelling or drainage
- If the patient does not tolerate cold therapy, it does not need to be used
- Family to take cold therapy unit home upon discharge

Foley catheter

- Discontinue when the patient is able to ambulate to the bathroom (post-op day 1 or day 2)

Incentive spirometry (14cc/kg)

- 10 times per hour while awake
- If not able to consistently achieve 14cc/kg on incentive spirometer, EZ pap treatments should be implemented per lung expansion protocol

Dressing care

- Reinforce dressings if saturated until first dressing change
- Dressing options (3)
  - MediHoney and Mepilex
    - First dressing change is day prior to or day of discharge (or sooner if soiled with feces or urine)
    - Keep the dressing clean and dry
    - Parents remove dressing 3 days after discharge

- Prineo w/Mepilex and Tegaderm
  - Remove mepilex and tegaderm before discharge
    - Do not replace mepilex prior to discharge
    - Leave prineo intact upon discharge
  - Parents to remove Prineo 3 weeks after day of surgery
- Zipline
  - Remove medihoney and mepilex before discharge
  - Do not replace mepilex prior to discharge.
  - Caregiver may remove zipline 3 weeks after discharge by applying baby oil along the whole length of the zipline, which will allow for gentle separation from the skin. The zipline is allowed to get wet in the shower (no bathing) and can take up to 2-3 days to remove.

- Assess for clinical signs and symptoms of surgical site infection and, if present, report to surgical team
- Discharge teaching includes hand hygiene and dressing/wound care

DISCHARGE CRITERIA

Patient should not be discharged until the following criteria have been met:

- Off oxygen as clinically indicated
- Tolerating oral intake
- Voiding
- Bowel movement (BM) not required prior to discharge if NOT symptomatic (nausea, vomiting, distention)
- Pain well controlled with oral medications
- Cleared by PT
- Patient or caregiver can verbalize understanding of discharge teaching instruction

FOLLOW-UP

- Follow-up visits should occur at 4 to 8 weeks post-operatively and annually from the surgical date until discharged from care by the provider.
- Additional visit may be advised per provider discretion

ALGORITHM: 'STANDARD' SURGICAL PROPHYLAXIS FOR SURGERY PATIENTS

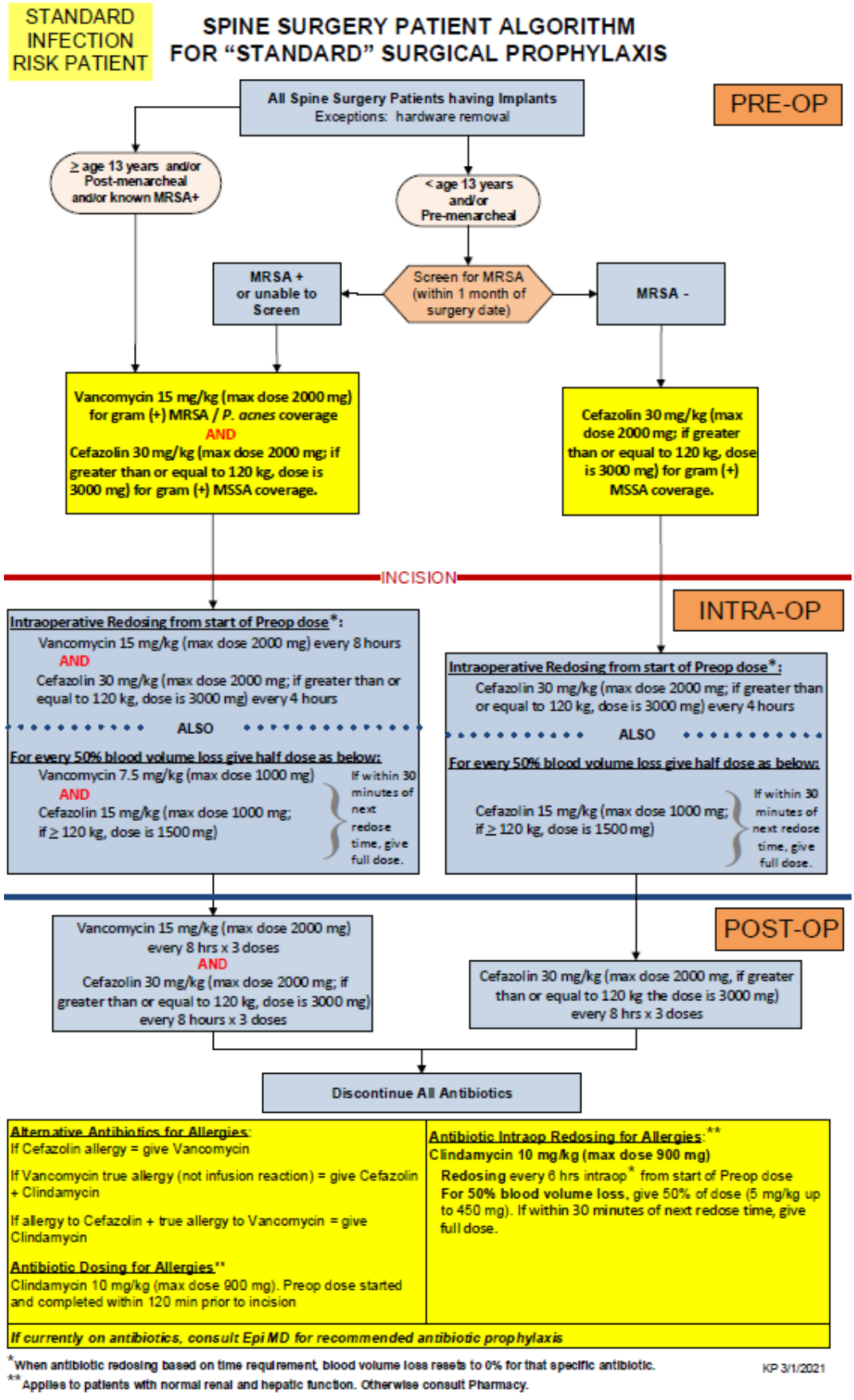

Table 1. Developmentally Normal Spine Fusion Care Path

Time frame	Within 1-2 months of scheduled spine fusion	Pre-op/ Day of Surgery	Post-op/ Day of Surgery	Post-op: Day 1	Post-op: Day 2 and 3	Remaining Days to Discharge
Assessment/ Monitoring	Assess learning needs. Screen for sleep apnea. Screen med/surg and social history . Nutritional assessment.	H&P and concents. Pre-op x-rays including benders and bolsters as ordered by provider. MRSA, type and screen (day of preop) . urine pregnancy test, type and crossmatch (day of surgery) PFTs if indicated.	Vitals, neurovascular checks, logroll q 4hrs. Foley. EMR every 4hrs x24. Pulse ox /CR monitor while on PCA or oxygen needed. Sedation score every 2hrs x24 hrs.	Vitals, neurovascular checks, logroll q 4hrs. Foley. EMR every 8hrs until discharge. Discontinue foley if able to ambulate to bathroom. Hematocrit every am x3 days. Reinforce dressing as needed.	Continue all applicable items from previous day. Doscontinue foley if able to ambulate to bathroom.	Dressing options If mepilex/ medihoney/steri strips: change dressing day before or day of discharge. Use medihoney and mepilex. Leave on for 3 more days at home. If prineo: remove mepilex prior to discharge and then leave open to air and have family remove in 3 weeks. Zipline Remove medihoney and mepilex before discharge. Do not replace mepilex prior to discharge. Caregiver may remove zipline 3 weeks after discharge by applying baby oil along the whole length of the zipline, which will allow for gentle separation from the skin. The zipline is allowed to get wet in the shower (no bathing) and can take up to 2-3 days to remove.
Fluids/ Medications	NA	Preop medication for anxiety per anesthesia . Antibiotics per surgical prophylaxis algorithm. If vancomycin indicated give diphenhydramine and famotidineand acetaminophen as ordered for pain management.	MIVF, PCA as ordered. famotidine until tolerating oral medications. Diazepam as needed. Ondansetron and ketorolac as scheduled. Cefazolin or vancomycin 3 doses post-op. Gabepentin and acetaminophen as ordered.	PCA: transition to oral pain medications. Give oral pain med every 4hrs ATC as ordered. Discontinue PCA after patient has tolerated 2 doses of oral pain medications. Bisacodyl suppository as ordered. Senna-docustae po QD	IVF may cap PRN. Start ibuprofen when ketorolac discontinued. Oral pain meds prn after 48 hours.Diazepam as needed	Orals every 4 to 6 hrs pm. Diazepam as needed.
Activity	Ad lib	Ad lib	Logroll every 2 hrs (even through the night). If am surgery dangle/ stand/ sit in chair as tolerated in the afternoon/ evening	Physical therapy (PT) to see patient twice a day until cleared. Dangle on edge of bed with PT. Up to chair, begin ambulating .	PT to assist with standing, sitting in chair, and ambulation. Encourage patient to dress when foley discontinued.	Nursing and parent of child to get patient up at least four times a day to ambulate Patient and parent of child should practice and be competent with independent transfers.
Nutrition	Encourage well balanced diet	NPO per anesthesia guidelines	Clear liquids day of surgery	Light breakfast first post op day then advance as tolerated.	Advance as tolerated	Encourage well-balanced, high fiber diet with small frequent meals. Increase caloric intake for healing.

Table 1. Developmentally Normal Spine Fusion Care Path continued

Time frame	Within 1-2 months of scheduled spine fusion	Pre-op/ Day of Surgery	Post-op/ Day of Surgery	Post-op: Day 1	Post-op: Day 2 and 3	Remaining Days to Discharge
Treatments	NA	CHG wash night before surgery. SCD stockings VTE protocol. Respiratory – incentive spirometer (IS) 10x every hour while awake. Begin eZpap (if unable to do IS) 14ml/kg consistently per lung expansion protocol.	Oxygen to keep sats greater than 92%. Ice pack pm. SCD stockings per VTE protocol. Respiratory – incentive spirometer (IS) 10x every hour while awake. Begin eZpap (if unable to do IS) 14ml/kg consistently per lung expansion protocol.	Respiratory – incentive spirometer (IS) 10x every hour while awake. Begin eZpap (if unable to do IS) 14ml/kg consistently per lung expansion protocol.	Continue all applicable items from previous day	Continue all applicable items from previous day
Teaching	Pre-op spine class and hospital tour (can be done pre-op day if can't attend class)	Meet with PA or resident to sign consent forms. Review teaching with Spine RN.	Plan of care. Orient to unit. Teach parent of child to fill cold therapy unit, have help with logroll	Pain control plan. Encourage further parent involvement in logrolling and ambulating. Distraction and guided imagery techniques. Have parent review handout 'Guide to Postop Pain Management for Idiopathic Spine Patients' and handouts under 'Going Home' tab in spine book	Begin discussing discharge plans. Encourage parent of child to problem solve for home. Have patient and parent of child try things independently with standby assist from RN/CA. Complete discharge check list in spine book.	Review spine fusion discharge instruction handout, pain medications, and weaning constipation management, showering. Have parent of child take home cold therapy unit.

Table 2. Suggested Medications for the Pre-operative Period

ANTIBOITCS						
Cefazolin	Pre-operative antibiotic prophylaxis for MSSA	30 mg/kg	ONCE Intra-op: re-dose every 4 hours or 50% of dose with one-half blood volume loss	IV	2,000 mg (if greater than or equal to 120 kg, dose is 3,000 mg)	Complete infusion within 60 minutes before surgical incision
Vancomycin	Pre-operative antibiotic prophylaxis for beta-lactam allergy, MRSA positive, *P. acnes* coverage also for age > 13 years and/or post-menarchal	15 mg/kg	ONCE Intra-op: re-dose every 8 hours or 50% of dose with one-half blood volume loss	IV	2,000 mg	Pre-op dose completed within 60 minutes of incision. Patients with documented Red Mans Syndrome should receive diphenhydramine pre-medication and 120 minute infusion of vancomycin
Clindamycin	Pre-operative antibiotic prophylaxis for patients allergic to vancomycin	10 mg/kg	ONCE Intra-op: re-dose every 6 hours or 50% of the dose with one-half blood volume loss	IV	900 mg	Complete infusion within 60 minutes of surgical incision
Diphenhydramine	Vancomycin pre-medication for patients with documented Red Mans Syndrome	Tablets: 11-29.9 kg: 12.5 mg 30-50 kg: 25 mg >50 kg: 50 mg	ONCE	PO	50 mg	For patients who cannot swallow pills give: • Diphenhydramine oral liquid 1 mg/kg (max dose 50 mg) **OR** • IV diphenhydramine 1 mg/kg (max dose 50 mg)
PAIN MEDICATIONS						
Acetaminophen	Pre-operative pain medication	Tablets: 11-16 kg: 162.5 mg 16.1-21.5 kg: 250 mg 21.6-32.5 kg: 325 mg 32.6-43 kg: 500 mg >43 kg: 650 mg	ONCE	PO	650 mg	For patients who cannot swallow pills give IV acetaminophen 15 mg/kg (max dose 650 mg)

Table 3. Suggested Medications for the Post-operative Period continued

Medication	Indication	Dose	Frequency	Route	Maximum Dose	Comments
ANTIBIOTICS						
Cefazolin	Post-operative antibiotic prophylaxis for MSSA	30 mg/kg/dose	Every 8 hours x 24 hours post-op (3 doses)	IV	2,000 mg (if greater than or equal to 120 kg, dose is 3,000 mg)	
Vancomycin	Post-operative antibiotic prophylaxis for beta-lactam allergy, MRSA positive, *P. acnes* coverage also for age > 13 years and/or postmenarchal	15 mg/kg/dose	Every 8 hours x 24 hours post-op (3 doses)	IV	2,000 mg	Patients with documented Red Mans Syndrome should receive diphenhydramine pre-medication and 120 minute infusion of vancomycin
Clindamycin	Post-operative antibiotic prophylaxis for patients allergic to vancomycin	10 mg/kg/dose	Every 8 hours x 24 hours post-op (3 doses)	IV	900 mg	
PAIN MEDICATIONS						
Acetaminophen	Mild pain	10-15 mg/kg/dose	Every 4 hours x 48 hours, then every 4 hours prn	Oral	650 mg	Tablet or suspension
Oxycodone	Moderate to severe pain	0.1 to 0.15 mg/kg/dose	Every 4 hours x 48 hours, then every 4 hours prn	Oral	10 mg/dose	Start on post-op day 1 at 0900. Use conservative dosing for patients with OSA (start on the low end of the dosing range)
Ketorolac	• Post-operative, around-the-clock analgesia • Patients on NPO status	0.5 mg/kg/dose	Every 6 hours x 48 hours, then ibuprofen every 6 hours prn pain	IV	30 mg/dose	Maximum duration: 48 hours. Start on post-op day 1 at 0900. Do not use in patients with underlying kidney disease
Ibuprofen	• Mild to moderate pain • Adjunct for more severe pain	10 mg/kg/dose	Every 6 hours prn	Oral	800 mg/dose	Start 6 hours after last ketorolac dose. Do not use in patients with underlying kidney disease
Diazepam	Muscle spasms	0.05 to 0.1 mg/kg/dose	Every 6 hours prn	Oral	4 mg/dose	
Nalbuphine	Opioid related pruritis	0.05 mg/kg/dose	Every 3 hours prn	IV	5 mg	
ANTIEMETICS						

Ondansetron	Post-operative nausea/vomiting (PONV)	0.1 mg/kg	Every 6 hours x 24 hours, then q6h prn	Oral or IV	4 mg/dose	May be given undiluted over 2 to 5 minutes when used as a single dose for prevention of PONV
Scopolamine patch	Post-operative nausea/vomiting (PONV)	1 patch	Every 72 hours	Transdermal	1 patch	For patients 12 years and older
ACID BLOCKERS						
Famotidine	Stress ulcer prophylaxis	<3 months: 0.5 mg/kg every 24 hours 3 months and older: 0.5 mg/kg every 12 hours	Start post-op day 1	PO	20 mg/dose	
LAXATIVES						
Bisacodyl (Magic Bullet)	Constipation	2 to <12 years: 5 mg 12 years and older: 10 mg	Once daily	Rectally	10 mg/dose	Start on post-op day 2
Fleets enema	Constipation	2 to <4 years: 33 mL 4 to <10 years: 66 mL 10 years and older: 133 mL	Once daily prn	Rectally	2 to <4 years: 33 mL/dose 4 to <10 years: 66 mL/dose 10 years and older: 133 mL/dose	Start on post-op day 2
Senna-docusate (8.6-50mg/tablet)	Constipation	2 to <6 years: ½ tablet 6 to <12 years: 1 tablet 12 years and older: 2 tablets	Twice daily	Oral	2 to <6 years: 1 tablet twice daily 6 to <12 years: 2 tablets twice daily 12 years and older: 4 tablets twice daily	Start on post-op day 1
Sennosides 8.8mg/5ml syrup	Constipation	2 to <6 years: 4.4 mg (2.5 mL) 6 to <12 years: 8.8 mg (5 mL) 12 years and older: 17.6 mg (10 mL)	Twice daily	Oral	2 to <6 years: 6.6 mg (3.75 mL) twice daily 6 to <12 years: 13.2 (7.5 mL) mg twice daily 12 years and older: 26.4 mg (15 ml) twice daily	Start on post-op day 1
Polyethylene glycol 3350 oral powder	Constipation	0.5-1.5 g/kg/dose Standard dosing: 4.25 g, 8.5 g, 17 g	Once daily	Oral	17 g	Start on post-op day 1

CAREGIVER EDUCATION MATERIALS

See the Spine Program book given to the patient at the pre-operative visit.

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Pharmacy & Therapeutics Committee – March 3, 2016; Medication updates April 9, 2021

MANUAL/DEPARTMENT	Clinical Care Guidelines/Quality
ORIGINATION DATE	February 2, 2012
LAST DATE OF REVIEW OR REVISION	April 18, 2016
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REVIEW/REVISION SCHEDULE

Scheduled for full review on April 18, 2020

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