

**Sickle Cell Disease Acute Evaluation and Management - Pediatric -
Emergency Department - Pain Suspected to be a Vaso-Occlusive Event Algorithm**

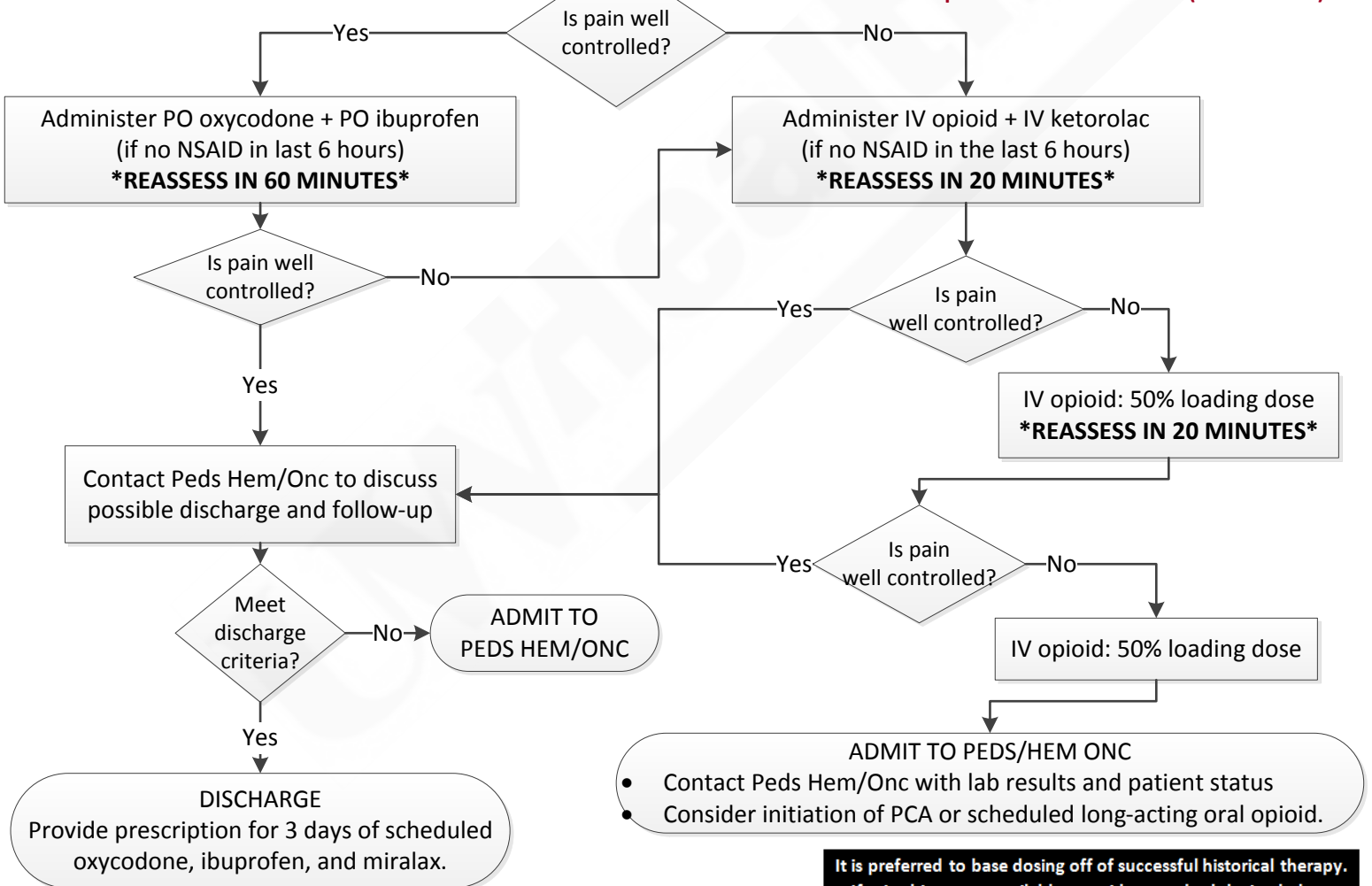
Patient Population:
HbSS, SC, S β ⁰-thalassemia

Patient Presentation

- Perform cardiorespiratory monitoring, pulse oximetry, and pain screen/assessment
- Administer O₂ if O₂ saturation < 95%
- Administer IN fentanyl 1.5 mcg/kg (max 100 mcg/dose) ASAP (until IV access established)
- Obtain initial labs: CBC with differential, reticulocyte count, Type and Screen

- Give normal saline bolus 20 mL/kg (max 1 L) as indicated
- Consider 2 view chest x-ray if tachypneic, chest pain, shortness of breath and/or rales
- If fever, obtain blood culture and refer to [Evaluation and Initial Management of Children with Sickle Cell Disease and Fever – Pediatric – Emergency Dept. Algorithm](#)

Reference historical therapy received and/or pain plan documented in the patient's medical record (Problem List)



Discharge Considerations

- Pain well-controlled
- Tolerating PO liquids
- Absence of other acute SCD complications

References:
 1. National Heart L, and Blood Institute. Evidence-based Management of Sickle Cell Disease. Expert Panel Report: U.S. Department of Health and Human Services National Institutes of Health; 2014:32-38.
 2. Rees DC, Olujohungbe AD, Parker NE, et al. Guidelines for the management of the acute painful crisis in sickle cell disease. Br J Haematol. 2003;120(5):744-752.
 3. Fein DM, Avner JR, Scharbach K, Manwani D, Khine H. Intranasal fentanyl for initial treatment of vaso-occlusive crisis in sickle cell

It is preferred to base dosing off of successful historical therapy. If prior history unavailable, consider standard dosing below.

NSAID	Loading Dose
Ibuprofen PO	10 mg/kg/dose (max 600 mg/dose)
Ketorolac IV	0.5 mg/kg/dose (max 30 mg/dose)
Opioid	Loading Dose
Fentanyl IV	1 mcg/kg (max 100 mcg/dose)
Morphine IV	0.1-0.15 mg/kg/dose (max 10 mg/dose)
Hydromorphone IV	0.02-0.03 mg/kg/dose (max 2 mg/dose)
Oxycodone PO	0.1-0.2 mg/kg (max 10 mg for initial dose)