

	COUNTY OF SACRAMENTO EMERGENCY MEDICAL SERVICES AGENCY	Document #	9018.10
	PROGRAM DOCUMENT: Pediatric Pain Management	Initial Date:	07/23/13
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Signature on File

EMS Medical Director

Signature on File

EMS Administrator

Purpose:

- A. To establish the treatment standard in treating pediatric patients with complaints of pain.

Authority:

- A. California Health and Safety Code, Division 2.5
- B. California Code of Regulations, Title 22, Division 9

Protocol:

Every patient deserves to have their pain managed. Not all painful conditions require advanced life support (ALS) intervention. Basic life support (BLS) pain management methods (reassurance, adjusting the position of comfort, ice or heat, and gentle transport) can be considered before deciding to treat with analgesic medication.

NOTE: ~~Analgesic medications should be considered in ALL patients complaining of pain. With the exception of Ketamine and Acetaminophen, analgesics should be avoided if the patient's systolic blood pressure (SBP) is <90 mmHg, respiratory rate (RR) is ≤ 10 breaths per minute, and/or decreased sensorium or suspicion of traumatic brain injury.~~

BLS
<ol style="list-style-type: none"> 1. Assess and support ABCs as needed 2. Supplemental O₂ as necessary to maintain SpO₂ ≥ 94%. Use the lowest concentration and flow rate of O₂ possible. 3. Assess and treat as appropriate for the underlying cause. 4. Transport.
ALS
<ol style="list-style-type: none"> 1. Advanced Airway Adjuncts as needed. 2. Cardiac Monitor and SpO₂. 3. Initiate vascular access 4. Document the pain scale (sample scale attached below) with initial assessment/vital signs after each administration of medication and after all procedures. 5. Pain medication shall be titrated to relief if the pain is not effectively managed with basic life support (BLS) pain management methods. <ol style="list-style-type: none"> a. Fentanyl Citrate <ul style="list-style-type: none"> • 1 mcg/kg (maximum single dose 100 mcg) slow IV, IO, or IN every 5 minutes. Maximum cumulative dose of 3 mcg/kg (300 mcg) total. b. Morphine Sulfate (if Fentanyl is unavailable) <ul style="list-style-type: none"> • 0.1 mg/kg (maximum single dose 10mg) slow IV, IO, or IN every 5 minutes.

- Maximum cumulative dose of 0.2 mg/kg (20 mg).
- c. Ketamine (Ages \geq 3 years old)
 - ~~Mix 0.3 mg/kg Ketamine (maximum single dose = 30mg) in 50-100cc normal saline solution (NSS) or D5W and administer slow IV drip over ten (10) minutes.~~
 - ~~If after 20 minutes and pain remains at, or returns to, moderate or severe, you may administer a second dose of 0.3 mg/kg Ketamine (max dose=30 mg) in 50-100cc NSS or D5W and administer slow IV drip over ten (10) minutes.~~
 - **Indications:** Moderate-to-severe pain not relieved by ketorolac, ibuprofen, or BLS measures; also indicated if patient has a fentanyl allergy.
 - **Dosing (all routes):**
 - IV/IO: 0.25 mg/kg in 100 mL NS/D5W IV slow infusion over 10 minutes
 - IM/IN: 0.25 mg/kg
 - **Max dose:** 30 mg per dose
 - **Repeat:** Every 20 minutes \times up to 2 doses (with base hospital contact if further analgesia needed)
 - **Monitoring:** Continuous cardiac monitoring, SpO₂, EtCO₂, and level of consciousness.
- d. Acetaminophen (~~Ages \geq 4 years and/or \geq 10 kg~~).
 - 15 mg/kg IV/IO infusion over 15 minutes (maximum dose 1000 mg) or 15 mg/kg PO (maximum dose 1000 mg).
 - Do not repeat.
- e. Ketorolac (ages \geq 4 years and/or \geq 10 kg).
 - 0.5 mg/kg slow IV/IO push or IM.
 - Maximum single dose of 15 mg (by any route).
 - Do not repeat.

Precautions/Contraindications:

1. ~~Check the patient's allergies before administering any medication.~~
2. ~~Ketamine should be avoided in the following patients:~~
 - ~~Chest pain of suspected cardiac origin~~
 - ~~Pregnancy~~
3. ~~Ketorolac should be avoided in the following patients:~~
 - ~~Active bleeding.~~
 - ~~Active wheezing.~~
 - ~~Age $<$ 4 years old or $<$ 10 kg or $>$ 65 years old.~~
 - ~~Allergy to Non-Steroidal Anti-inflammatory agents (NSAIDs).~~
 - ~~Current Anticoagulation therapy.~~
 - ~~Head or Multisystem trauma.~~
 - ~~History of peptic ulcer disease or upper GI bleeding.~~
 - ~~History of renal disease or kidney transplant.~~
 - ~~Known or suspected pregnancy.~~
 - ~~Suspected sepsis or septic shock.~~

Examples of a 0-10 Pain Scales

	0
	1 Very Mild
Minor Able to adapt to pain	2 Discomforting
	3 Tolerable
Moderate Interferes with many activities.	4 Distressing
	5 Very Distressing
	6 Intense
Severe Patient is disabled and unable to function independently.	7 Very Intense
	8 Utterly Horrible
	9 Excruciating Unbearable
	10 Unimaginable Unspeakable

Wong-Baker FACES Pain Rating Scale



From Wong D.L., Hockenberry-Eaton M., Wilson D., Winkelstein M.L., Schwartz P.: *Wong's Essentials of Pediatric Nursing*, ed. 6, St. Louis, 2001, p. 1301. Copyrighted by Mosby, Inc. Reprinted by permission.

Cross Reference: PD# 9004 - Pediatric Burns
 PD# 9016 - Pediatric Parameters
 PD# 9017 - Pediatric Trauma