Sierra – Sacramento Valley EMS Agency Treatment Protocol	M-8P
Pediatric Pain Management	
Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2024
Approval: John Poland – Executive Director	Next Review: 04/2027

- All pts with a report of pain shall be appropriately assessed and treatment decisions/interventions shall be adequately documented on the PCR.
- A variety of pharmacological and non-pharmacological interventions may be utilized to treat pain. Consider the pt's hemodynamic status, age, and previous medical history/medications when choosing analgesic interventions.
- Treatment goals should be directed at reducing pain to a tolerable level; pts may not experience complete pain relief.

BLS

- Assess V/S including pain scale & SpO_2, every 15 mins or as indicated by pt's clinical condition
- Assess/document pain score using standard 1-10 pain scale before and after each pain management intervention and at a minimum of every 15 mins
- O_2 at appropriate rate if hypoxemic (SpO_2 <94%) or short of breath
- Utilize non-pharmacological pain management techniques as appropriate, including:
  - Place in position of comfort and provide distraction/verbal reassurance to minimize anxiety
  - Apply ice packs &/or splints for pain secondary to trauma

Pain not effectively managed with non-pharmaceutical pain management techniques

Review/consider 'Medication Contraindications & Administration Notes' below & proceed to page 2

Medication Contraindications & Administration Notes

ⓘ **All slow IVP medications contained in this protocol shall be administered over 60 seconds**

Acetaminophen
- ⓘ Do not administer to pts with any of the following:
  - Severe hepatic impairment
  - Active liver disease
- ⓘ Discontinue infusion if patient becomes hypotensive (see table on page 2)

Ketamine
- ⓘ Do not administer to pts with any of the following:
  - Pregnancy
  - Multi-system trauma
  - Suspected internal bleeding
  - Active external bleeding

Ketorolac
- ⓘ Do not administer to pts with any of the following:
  - Pregnancy
  - NSAID allergy
  - Active bleeding
  - Multi-system trauma
  - ALOC or suspected moderate/severe TBI
  - Current use of anticoagulants or steroids
  - Hx of asthma, GI bleeding, ulcers
  - Hx of renal disease/insufficiency/transplant

Fentanyl/Midazolam
- ⓘ Do not administer to pts with any of the following:
  - Hypotension (Pediatric Hypotension Table – page 2)
  - SpO2 <94% or RR <12
  - ALOC or suspected moderate/severe TBI
- ⓘ There is an increased risk of deeper level of sedation & airway/respiratory compromise when administering midazolam to pts receiving fentanyl

ALS

- Continuous cardiac monitoring
- IV/IO NS TKO – if indicated by pt's clinical condition or necessary for medication administration
  - May bolus up to 20 mL/kg if indicated by pt's clinical condition
- Administer analgesic intervention as indicated below when appropriate

Non-Trauma Related/Chronic Pain

Acetaminophen: 15 mg/kg IV/IO infusion over 15 mins (max: 1000 mg) – single dose only; **OR**
Ketorolac: 0.5 mg/kg IV/IO or IM (max: 15 mg) – single dose only

If pain not effectively managed:

- Contact base/modified base hospital for additional pain management consultation

Pain Related to Acute Injury/Burns/Frostbite

ⓘ **For pts ≤ 4 yo, consult with base/modified base hospital prior to administration of fentanyl, ketamine, or midazolam**

Moderate Pain

Acetaminophen: 15 mg/kg IV/IO infusion over 15 mins (max: 1000 mg) – single dose
OR
Ketorolac: 0.5 mg/kg IV/IO or IM (max: 15 mg) – single dose

If pain not effectively managed:

- Continuous $EtCO_2$ monitoring

Fentanyl: 1 mcg/kg slow IV/IO or IM/IN (max single dose: 50 mcg) – may repeat every 5 mins to max 4 doses

Pediatric Normal SBP & Hypotension Table

Age	Normal SBP	Hypotension
1-12 mos	70-100	SBP <70
1-2 yrs	80-110	SBP <70 + age (yrs) x 2
3-5 yrs	90-110	
6-9 yrs	100-120	
10-14 yrs	100-120	SBP <90

Severe Pain

- Continuous $EtCO_2$ monitoring

Fentanyl: 1 mcg/kg slow IV/IO or IM/IN (max single dose: 50 mcg)
OR
Ketamine: 0.3 mg/kg slow IV/IO (max single dose: 30 mg)

Acetaminophen: 15 mg/kg IV/IO infusion over 15 mins (max: 1000 mg) – single dose

If pain not effectively managed:

- If fentanyl previously administered, may repeat fentanyl every 5 mins to max 4 doses
- If ketamine previously administered, may repeat once after 10 - 15 mins to max 2 doses

&/OR
Midazolam: 0.05 mg/kg slow IV/IO (max single dose: 1 mg)

- May repeat once after 5 mins to max 2 doses
- Wait 5 mins after fentanyl/ketamine administration before administering midazolam