



# Yolo County Emergency Medical Services Agency

## Protocols

Revised Date: May 1, 2025

PAIN MANAGEMENT	
Adult	Pediatric
BLS	
Mild Pain	
Assess Vital Signs O <sub>2</sub> , titrate SpO <sub>2</sub> to $\geq 94\%$ Provide calming measures Treat underlying cause for pain: reposition, bandage, splint, elevation, traction, compression, and/or cold pack	
ALS	
Moderate to Severe Pain	
Cardiac Monitor, Consider Vascular Access	
<p><b>Acetaminophen 15 mg/kg IV Infusion</b></p> <ul style="list-style-type: none"><li>Administer over 15 minutes</li><li>Total max dose 1,000 mg</li><li>No repeat</li></ul> <p><b>Fentanyl 50 mcg SIVP/IM</b></p> <ul style="list-style-type: none"><li>IV - May repeat every 5 minutes</li><li>IM - May repeat every 10 minutes</li><li>Single max dose 50 mcg</li><li>Total max dose 200 mcg</li></ul> <p><b>Ketorolac 15 mg IV/IO or 30 mg IM</b></p> <ul style="list-style-type: none"><li>No repeat</li></ul> <p><b>Ketamine (Ketalar) 0.3mg/kg in 100 mL NS IV Infusion</b></p> <ul style="list-style-type: none"><li>Administer over 10 minutes</li><li>Single max dose 30 mg</li><li>May repeat x 1 after 20 minutes</li></ul> <p>* Ketamine may be administered in addition to Acetaminophen and Fentanyl for <b>severe pain</b></p>	<p><b>Acetaminophen 15 mg/kg IV Infusion</b></p> <ul style="list-style-type: none"><li>Use a length based pediatric resuscitation tape to determine weight for dosing</li><li>Administer over 15 minutes</li><li>Total max dose 1,000 mg</li><li>No repeat</li></ul> <p><b>Patients &lt; 4 years – Base Physician contact required for Fentanyl</b></p> <p><b>Fentanyl 1 mcg/kg SIVP/IM</b></p> <ul style="list-style-type: none"><li>IV - May repeat every 5 minutes</li><li>IM - May repeat every 10 minutes</li><li>Single max dose 50 mcg</li><li>Total max dose 200 mcg</li></ul> <p><u>Or</u></p> <p><b>Fentanyl 1 mcg/kg IN</b></p> <ul style="list-style-type: none"><li><math>\frac{1}{2}</math> dose per nare</li><li>May repeat every 10 minutes</li><li>Single max dose 50 mcg</li><li>Total max dose 200 mcg</li></ul> <p><b>Ketorolac 0.5 mg/kg IV/IO or IM</b></p> <ul style="list-style-type: none"><li>Single max dose 15 mg</li><li>No repeat</li></ul>



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ALS (cont.)	
Contraindications	
<p><b>Acetaminophen</b></p> <ul style="list-style-type: none"><li>• Liver Disease or complications (e.g., Transplant)</li></ul> <p><b>Ketamine (Ketalar)</b></p> <ul style="list-style-type: none"><li>• <math>RR \leq 12</math></li><li>• <math>SBP \leq 100</math></li><li>• <math>GCS &lt; 15</math> or agitation</li></ul> <p><b>Ketorolac (Toradol)</b></p> <ul style="list-style-type: none"><li>• Active bleeding</li><li>• Age <math>&lt; 4</math> years old or <math>&gt; 75</math> years old</li><li>• Allergy to Non-Steroidal Anti-inflammatory agents (NSAIDs)</li><li>• Current Anticoagulation therapy, not including ASA</li><li>• Head Trauma</li><li>• History of peptic ulcer disease or GI bleeding</li><li>• History of kidney or liver disease or transplant</li><li>• Pregnancy</li></ul> <p><b>Fentanyl</b></p> <ul style="list-style-type: none"><li>• <math>SBP &lt; \text{normal range for age}</math></li><li>• <math>GCS &lt; 15</math></li></ul>	
Direction	
<ul style="list-style-type: none"><li>• Contact Base Hospital for additional pain management</li></ul>	