



Yolo County Health and Human Services



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To: Yolo County EMS Providers

Subject: Pain Management Update

MEMORANDUM

The purpose of this memorandum is to inform all EMS Providers of changes to the Pain Management Protocol. It is the responsibility of the providers to ensure that their personnel receive this information.

The changes are intended to reflect that all three (3) analgesic agents are available for pain management. The goal of prehospital pain management is not to make all patients pain free, but to make extreme pain tolerable during treatment and transport.

ALS Pain Management should be limited to patients with moderate to severe pain (6-10 pain scale) with all three (3) analgesics being available to address pain management.

- Acetaminophen and Ketorolac are two (2) very effective agents with similar analgesic properties.
 - These two (2) agents should cover most pain management situations we encounter in the field (6-10 pain scale).
- Ketamine is an excellent agent for severely injured patients, multi-system trauma, or severely burned patients with long transport times.
 - Ketamine should be used as an escalating analgesic.

In addition, after discussion this week at the Physician Advisory Committee, we standardized the dose for Ketorolac.

- Ketorolac 15 mg SIVP/IM with no repeat

Included with this memo is an information sheet with some facts about the Yolo County analgesic options.

If you have any questions or concerns, please contact us.

Acetaminophen	
<p>IV administration is the route of choice for rapid analgesia for moderate to severe pain, and reduces the need for other analgesics such as opioids.</p> <p>In 5 trials it showed patients who received IV Acetaminophen reported excellent satisfaction with pain control.</p>	
Pros	Cons
<ul style="list-style-type: none"> • Relatively safe • Does not change mental status • Can be combined with other agents with little risk 	<ul style="list-style-type: none"> • Infusion set up is time consuming • Infusion can slow the onset
Challenges	
<p>IV Acetaminophen FDA recommended infusion rate is over 15-minutes. This is due to report of pain at the infusion site with rapid infusion during the initial trials.</p>	

Ketorolac	
<p>Moderate to severe pain especially musculoskeletal pain (extremity injuries, back pain) and other prostaglandin-mediated pain such as renal colic.</p>	
Pros	Cons
<ul style="list-style-type: none"> • Easy to administer • Does not change mental status • Can be combined with other agents 	<ul style="list-style-type: none"> • More contraindications than Acetaminophen
Challenges	
<p>All non-steroidal agents have an effect on the clotting mechanism. Some physicians will not use Ketorolac if the patient needs immediate surgery or there is the chance of occult bleeding.</p>	

Ketamine	
<p>Ketamine works on the midbrain to change pain perception. Ideal for severe pain with multi-system trauma.</p>	
Pros	Cons
<ul style="list-style-type: none"> • Minimal respiratory depression • Does not cause hypotension 	<ul style="list-style-type: none"> • Can cause hypertension • Can produce a dissociative effect on the brain affecting mentation
Challenges	
<p>In the elderly population (> 65), it may produce increased sympathetic outflow. There is limited published data on use of ketamine in the elderly population. Use with caution.</p>	