

AAEM White Paper on Acute Pain Management in the Emergency Department

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Effective, efficient, and safe pain management is a cornerstone of state-of-the-art patient care in the Emergency Department and is a specialty-defining skill.

The AAEM endorses this document with the hope that all ED patients experiencing acute pain have the option to receive appropriate expeditious, effective, and safe analgesia. The Academy emphasizes that acute pain management in the ED should be patient-specific, pain syndrome-targeted, and based on appropriate non-pharmacological and pharmacological approaches.

Acute Pain Management in the ED

EM clinicians and associates who work in an ED should acknowledge and assess a patient's pain in an empathetic manner by expressing an understanding of the patient's suffering and a willingness to alleviate pain using a multimodal analgesic approach. EM clinicians should communicate to patients that the goal of ED pain management, particularly in patients who are being discharged, includes restoration of functional ability and is not simply reducing pain; specifically, both emergency physicians and patients must recognize that clinicians are charged with managing pain while managing the potential for some pain medications to cause harm.¹⁻³

Management of acute pain in the ED should be patient-centered, meaning that emergency medicine clinicians should engage patients in shared decision-making by providing patients with details about overall treatment goals and expectations, the natural trajectory of the specific painful condition, and analgesic options including short-term and long-term benefits and risks of adverse effects.⁴⁻⁵

Pharmacological Management

Non-Opioid Analgesics⁶

- Non-steroidal anti-inflammatory drugs (NSAIDs) should be administered at their lowest effective analgesic dose both in the ED and upon discharge. They should be given for the shortest appropriate treatment course. Caution must be exercised when these analgesics are used in patients at risks for renal insufficiency, heart failure, gastrointestinal hemorrhage, as well as in elderly patients.⁷⁻⁹

- When a patient's acute painful condition (e.g., sprains, strains, bruises) warrant an NSAID but there are contraindications to their systemic use, strong consideration should be given to topical preparations (e.g., diclofenac gel) or other topical analgesics such as lidocaine patches.¹⁰⁻¹²
- Oral and rectal forms of acetaminophen either alone or in combination with other analgesics provide similar analgesia to intravenous acetaminophen but with slower onset of action. For patients who have contraindications to oral and rectal routes, the intravenous route is preferred.¹³
- Emergency clinicians should consider regional and local nerve blocks for traumatic and non-traumatic painful conditions, alone or in combination with pharmacological and non-pharmacological treatment modalities.¹⁴
- Sub-dissociative dose ketamine (SDK), administered alone or as part of a multimodal analgesic approach may be considered in the ED. Emergency clinicians should counsel patients that there is a high likelihood of minor but at times bothersome psychoperceptual side effects. Sub-dissociative ketamine should be administered under the same policies as other analgesics.¹⁵⁻¹⁹
- Limited data suggest that administration of intravenous lidocaine may alleviate specific painful conditions (renal colic, herpetic/post-herpetic neuralgia) and should be considered for patients without pre-existing structural heart disease and rhythm disturbances.^{20,21}
- EM clinicians should consider using trigger point injections with local anesthetics (Lidocaine, Bupivacaine) for patients with acute myofascial painful conditions such as back pain.²²
- EM clinicians should consider utilization of nitrous oxide for the treatment of acute painful conditions in the ED either alone or as an adjunct to other analgesics.²³

Opioid Analgesics

Emergency Medicine clinicians are uniquely positioned to combat the opioid epidemic by thoughtful prescribing of parenteral and oral opioids in the ED and upon discharge, and through their engagement with opioid addicted patients in the ED. Given the known harms of opioid analgesics, EM clinicians should make every effort to utilize non-pharmacological modalities and non-opioid analgesics to alleviate pain in the ED and especially on discharge, and to use opioid analgesics only when the benefits of opioids are felt to outweigh the harms.³

In the ED:

- **Parenteral opioids** when used in titratable fashion are effective, safe, and easily reversible analgesics that quickly relieve pain.²⁴⁻²⁸
- Emergency clinicians should consider administering these analgesics for patients in acute pain where the likelihood of analgesic benefit is judged to exceed the likelihood of harm.

- Parenteral opioids should be titrated regardless of the initial dosing regimen (i.e., weight-based, fixed, or nurse-initiated) at 20-30 min intervals until pain is relieved to acceptable levels with frequent re-assessment and evaluation for development of opioid-related adverse effects.²⁴⁻²⁸
- A reasonable approach to parenteral opioid management involves using lower doses initially and titrating to higher doses as needed.^{27,28}
- At higher doses, however, opioids cause respiratory depression. Therefore, patients in acute pain who are not accustomed to opioids and who are administered higher doses of opioids should have their respiratory status monitored.²⁶
- Hydromorphone use in the ED should be utilized with caution due to potential for dosing errors leading to dangerous respiratory and central nervous system depression. Should hydromorphone be administered in higher than equianalgesic morphine milligram equivalents, close cardiopulmonary monitoring is strongly recommended.^{29,30}
- When parenteral opioids are used, patients should be engaged in shared-decision making regarding the route of administration, as repetitive attempts of IV cannulation and intramuscular injections are associated with pain. In addition, intramuscular injections are associated with unpredictable absorption rates, and complications such as muscle necrosis, soft tissue infection and the need for dose escalation.
- When intravascular access is unobtainable, EM clinicians should consider utilization of intranasal (fentanyl), nebulized (fentanyl and morphine), or transmucosal (rapidly dissolvable fentanyl tablets) routes of analgesic administration for patients with acute painful conditions.³¹⁻³³
- **Oral opioid** administration is effective for most patients in the ED, however, while there is no appreciable analgesic difference between commonly used opioids (oxycodone, hydrocodone and morphine), immediate release morphine sulfate administration is associated with lesser degree of euphoria and consequently, less abuse potential.^{34,35}
- EM clinicians and other acute care providers without clinic-based practices and specialized expertise in pain management should not administer or prescribe long-acting, extended-release, or sustained-release opioid formulations, which include both oral and transdermal (fentanyl) medications in the ED. These formulations (long-acting, extended- or sustained-release opioids) are not indicated for acute pain and carry a high risk of overdose, particularly in opioid-naïve patients.³⁶
- EM clinicians should follow their state's specific regulatory requirements for accessing a prescription drug monitoring program when prescribing opioids for acute pain in the ED. If voluntary, emergency medicine clinicians should strongly consider routinely accessing this database. The information obtained should be used to inform prescribing, to identify and counsel patients with aberrant-drug related behaviors, and to offer referral for addiction treatment.³⁷⁻³⁹

Upon discharge from the ED,

- EM clinicians should involve patients in shared decision-making by discussing the benefits and harms (short-term and long-term) and alternative analgesic modalities.^{3,4}
- If a patient's acute painful condition warrants opioid analgesics, EM clinicians should prescribe only immediate-release formulations at the lowest effective dose and for the shortest course (generally 2-3 days' supply).³
- EM clinicians should consider co-prescribing opioid and non-opioid analgesics at discharge whenever possible.
- Special caution should be taken when prescribing combinations of acetaminophen-oxycodone and acetaminophen-hydrocodone as to not exceed the maximum daily dose of acetaminophen as to decrease potential of liver injury. (<https://www.fda.gov/Drugs/DrugSafety/ucm239821.htm>)
- EM clinicians should evaluate the patient's medical history when opioids are considered as a discharge prescription. Patients with or at risk for obstructive sleep apnea or with pulmonary disease are at increased risk for respiratory depression. Patients with a history of substance abuse and family history of addiction are at an increased risk for relapse of their use disorder.³
- Patients discharged with an opioid prescription should be counseled regarding common adverse effects related to opioid use such as pruritus and constipation as well as more serious adverse effects as sedation, respiratory depression, the development of tolerance and dependence (which can occur within days), and the risk of developing opioid use disorder.³
- Patients discharged with an opioid prescription should be counseled about safe opioid storage and disposal, as well the consequences of failure to do this.³
- Emergency clinicians should consider non-pharmacological and non-opioid analgesics modalities for patients presenting to the ED with exacerbations of chronic pain, as opioid analgesics are more likely to cause harm than benefit in these cases. Opioids should be prescribed for chronic pain a physician who will provide ongoing care and can use opioids as part of an analgesic care plan that includes specific analgesic and functional goals as well as opioid contract. Emergency clinicians should attempt to contact patient's principle opioid prescriber prior to prescribing an opioid analgesic for exacerbation of chronic pain, however, should patient require an opioid analgesic, a short course (up to 3 days) of immediate release opioids might be prescribed at discharge from the ED. (<https://www.cdc.gov/drugoverdose/prescribing/guideline.html>)

Non-Pharmacological Management ^{40,41}

- ED clinicians should consider applications of heat or cold and specific recommendations for activity and exercise, and/or early referral to physical therapy.

- The use of alternative and complementary therapies, such as acupuncture, guided imagery, cognitive-behavioral therapy, and hypnosis, have not been systematically evaluated for use in the ED. In general, their application may be limited in the context of an ED, although continued investigation into their safety and efficacy is strongly encouraged.⁴⁰
- ED clinicians might consider utilization of osteopathic manipulation techniques (high-velocity-low-amplitude techniques, muscle energy techniques, and soft tissue techniques) for patients presenting to the ED with pain syndromes of skeletal, arthrodial, and myofascial origins.⁴²⁻⁴⁴

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