ARTICLE:
- USA
- funding sources not reported

PURPOSE:
- **Objective:** To review clinical trials of intravenous opioids for severe acute pain in the ED and to provide an approach for optimization of therapy

DESIGN:
- **Study Design:** Review of background literature and combination of RCT, prospective, and restrospective comparative studies

SETTING / SUBJECTS:
- **Research Setting:** ED and pre-hospital
- **Subjects:**
  - **Study population:** Adults
  - **Exclusion criteria:** Most studies reviewed excluded patients with any prior opioid consumption or chronic pain. No studies included with other routes of administration.

METHODS:
- **Data Sources:** Ovid/MEDLINE, PubMed, Cochrane, Google Scholar
- **Search terms:** pain, opioid, emergency department

DATA ANALYSIS:
- **Level of Data:** Interval (pain score on 11-point scale or visual analog scale)

RESULTS:
- Morphine, hydromorphone, fentanyl, and meperididine produce similar analgesic effects at equianalgesic doses.
- Meperidine not recommended secondary to accumulation of metabolites in renal failure and possibility of neurotoxicity.
- The authors recommend a dosing strategy that they feel achieves adequate analgesia without respiratory depression.
- The authors suggest institutional protocols (nurse-initiated or patient-driven) can improve time to analgesic provision and reduce the prevalence of oligoanalgesia.
Limitations: no studies evaluating doses >.15mg/kg or >10mg morphine (or equivalent) for efficacy or safety.

IMPLICATIONS FOR PRACTICE:

- This review of the literature is applicable to our adult, opiate-naive population with acute severe pain.
- We should consider implementing a protocol for treating acute severe pain, but we first need to examine how well our current system works. Time to delivery and quantity of opioids is provider-dependent in our ED. I feel that nurses are pretty good about requesting pain medication in a timely fashion. This is not a protocol, but is nurse-initiated. A nurse-initiated protocol (repeated doses every 5-15 minutes) may be a burden for nursing and may result in medication “stacking”. Initial single weight-based dose followed by repeat dosing if needed seems easiest.

LEVEL OF EVIDENCE / DECISION FOR USE:

- Author’s recommendations based on level Ia evidence.

- Level of Evidence:
  - Ia Evidence obtained from meta-analysis of randomized controlled trials
  - Ib Evidence obtained from at least one RCT
  - IIa Evidence obtained from at least one well-designed controlled study without randomization
  - IIb Evidence obtained from at least one other type of well-designed quasi-experimental study
  - III Well-designed non-experimental studies
  - IV Expert committee reports, opinions of experts