# Pain Management

REFRESHER

## RECOGNIZE IT

- Assessment, evaluation, and treatment of acute pain to improve comfort and outcomes
- Indication: help lessen severe pain
- Contraindication: known allergy
- Use pharmacological and non-pharmacological strategies, tailored to the patient and their response

## ASSESS

- Four drugs on the page: fentanyl, hydromorphone, ketorolac, and ketamine — each with its own routes and repeat interval
- Ketorolac's listed use here: non-traumatic back/flank pain
- Ketamine has two roles on this page: refractory pain, and extreme pain (severe burns, traumatic amputations, prolonged extrications)

## ACT — FIRST MOVES

1. Fentanyl 25–100 mcg IV/IO/IM/IN, may repeat every 5–10 minutes as needed; pediatric 2–3 mcg/kg on the same interval
2. Hydromorphone 0.5–1 mg IV/IO/IM, may repeat every 10–15 minutes as needed
3. Ketorolac 10 mg IM — non-traumatic back/flank pain
4. Ketamine, refractory pain: 20 mg/100 mL D5W, or 0.2 mg/kg in 100 mL D5W slow IV/IO over 5–10 minutes; may discontinue once pain is controlled
5. Ketamine, extreme pain: 1 mg/kg IV/IO (max first dose 500 mg), may repeat once at 0.5 mg/kg; IM 4 mg/kg pathway also listed

## PEARLS

- Push ketamine slowly, and consider all potential negative side effects — and patients whose airway you cannot quickly control
- Tailor the drug and dose to the patient's condition and response, per the page's definition

**Take Home Message:**

Four tools, four jobs: fentanyl and hydromorphone for severe pain, ketorolac for back/flank pain, ketamine when pain is refractory or extreme.