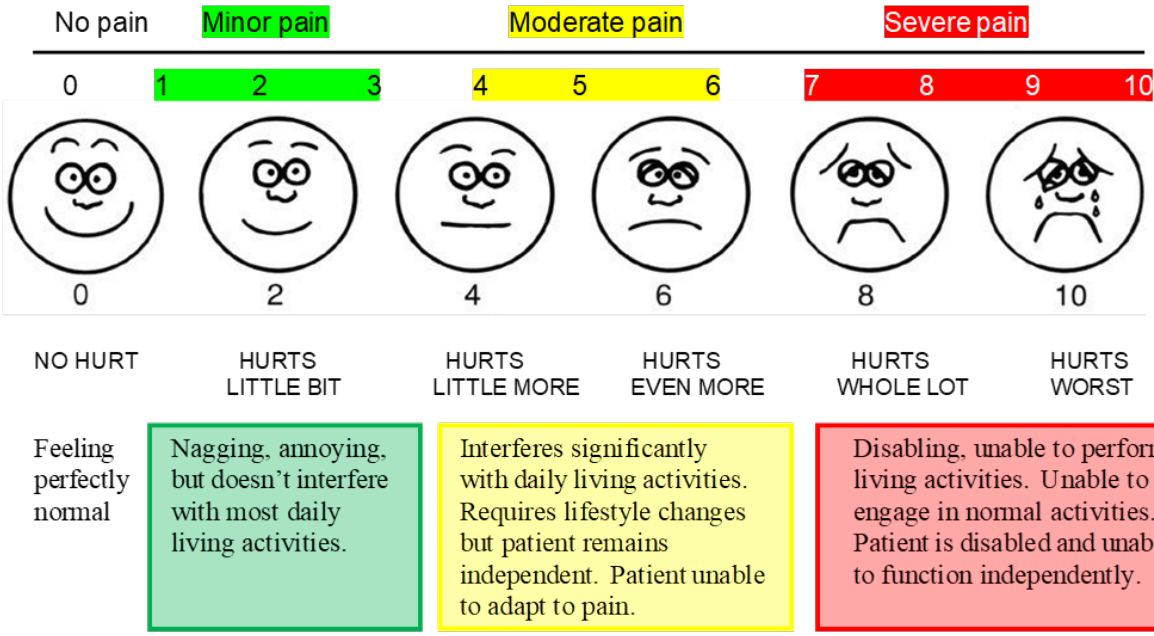
# PAIN MANAGEMENT

For patients with suspected cardiac chest pain, refer to the **Chest Pain/Acute Coronary Syndrome Treatment Protocol.**

Patient care provided under this protocol is focused on reducing the level of pain for patients in the prehospital setting.

All pain should be assessed and scored using the "Wong Pain Scale." Reassessment should be timed according to medication onset of action, changes in patient condition, patient positioning, and other treatments. Pain treatment should be based on pain scale but may need modification based on patient assessment and/or condition.

*Wong Pain Scale: Pain* Assessment Scale
Choose a number from 1 to 10 that best describes your pain




**Note**: Medical Control contact is required for patients with special circumstances such as having an established care plan that deters pain management or having an established pain management care plan that differs in dose or administration from this protocol.

1. Place the patient in a position of comfort.
2. Verbally reassure the patient to control anxiety.
3. Administer basic interventions per applicable protocol (e.g., positioning, splinting, ice, etc.). If pain does not improve with basic interventions, consider analgesia.
4. Start an IV if required for medication administration, or per applicable treatment protocol. Refer to **Vascular Access & IV Flued Therapy Procedure Protocol.**

5. For pediatric patients (< 14 years), utilize MI MEDIC for appropriate medication dosage. When unavailable utilize pediatric dosing listed within protocol.
6. Per MCA selection, for mild to moderate pain (described as a 1-6 on the Wong Pain Scale), consider non-opioid analgesia.
7. For patients with suspected kidney stone pain at any level, ketorolac should be the first line medication if available.

**MCA Selected Non-Opioid Analgesia**
(MCA must select at least one)

■ **Acetaminophen**:
1. Adults (patients > 14 years of age), administer 650 mg PO
2. Pediatrics refer to MI MEDIC. When MI MEDIC is unavailable refer to dosing table below.

☐ **Ibuprofen**
1. Adults (patients > 14 years of age), administer 400 mg.
   a. Do NOT use in pregnant patients.
2. Pediatrics (patients > 6 months of age and ≤ 14 years of age), refer to MI MEDIC. When MI MEDIC is unavailable refer to dosing table below.

■ **Ketorolac** (Toradol ®)
1. Adults (patients >14 years of age), administer 15 mg IM/IV.
   a. Do NOT use in pregnant patients.
2. Pediatrics (patients > 5 years of age and ≤ 14 years of age refer to MI MEDIC. When MI MEDIC is unavailable administer 0.5 mg/kg IM/IV (max dose 15 mg)

Children's Elixir Dosing Table

| Child's Weight | Child's Age | **Acetaminophen** 160 mg/5mL | **Ibuprofen** 100 mg/5mL |
|---|---|---|---|
| 3-5 kg (6-12 lbs.) | 0-2 mos. | 1.25 mL (40 mg) | DO NOT GIVE |
| 6-7 kg (13-16 lbs.) | 3-6 mos. | 3 mL (96 mg) | DO NOT GIVE |
| 8-9 kg (17-20 lbs.) | 7-10 mos. | 4 mL (128 mg) | 4 mL (80 mg) |
| 10-11 kg (21-25 lbs.) | 11-18 mos. | 5 mL (160 mg) | 5 mL (100 mg) |
| 12-14 kg (26-31 lbs.) | 19 mos.-35 mos. | 6 mL (192 mg) | 6 mL (120 mg) |
| 15-18 kg (32-40 lbs.) | 3-4 yrs. | 7 mL (224 mg) | 7.5 mL (150 mg) |
| 19-23 kg (41-51 lbs.) | 5-6 yrs. | 9 mL (288 mg) | 9.5 mL (190 mg) |
| 24-29 kg (52-64 lbs.) | 7-9 yrs. | 12 mL (384 mg) | 13 mL (260 mg) |
| 30-36 kg (65-79 lbs.) | 10-14 yrs. | 15 mL (480 mg) | 15 mL (300 mg) |

8. Patients with severe pain (described as >7 on the Wong Pain Scale) that receive ketamine or opioid analgesia require additional monitoring and administration considerations.
   a. Continuous pulse oximetry monitoring.

b. Continuous capnography monitoring.
c. IV/IO administration must be performed slowly.
d. IM administrations are single dose. No additional doses or other pain management medications may be administered.

9. For patients with severe pain (described as a 7 or greater on the Wong Pain Scale), consider ketamine if applicable per MCA selection.



MCA Selection for **Ketamine** use in pain management

☐ **Ketamine** not permitted.

☐ Contact Medical Control prior to **Ketamine** administration

■ Administer **Ketamine**

10. Ketamine for pain management given IV/IO should be diluted in 100 ml normal saline and administered via slow infusion over 5-10 minutes to avoid dissociation symptoms.
11. Ketamine may be administered IV/IO/IN as listed below.
    a. Adults (patients > 14 years of age):
        i. 0.2 mg/kg IV/IO (diluted in 100 ml NS), maximum single dose 25 mg.
        ii. 0.5 mg/kg IN, maximum single dose 50 mg.
        iii. May be repeated one time, at least 10 minutes after initial dose.
        iv. DO NOT administer Ketamine to patients who are pregnant or suspected of being pregnant.
    b. Pediatrics (>6 years of age and <14 years of age) refer to MI MEDIC. If MI MEDIC is unavailable:
        i. 0.2 mg/kg IV/IO (diluted in 100 ml NS), maximum single dose 25 mg.
        ii. 0.5 mg/kg IN, maximum single dose 50 mg.
        iii. May be repeated one time, at least 10 minutes after initial dose.
    c. Pediatrics (>6 months of age and <6 years of age) refer to MI MEDIC. If MI MEDIC is unavailable:
        i. 0.5 mg/kg IN.
        ii. May repeat one time, at least 10 minutes after initial dose.

| Color | Weight | Child's Age | Dose | Volume | Route | Special Instructions |
|---|---|---|---|---|---|---|
| **Ketamine concentration 100mg / 1mL** | | | | | | |
| Purple | 10-11 kg (21-25 lbs.) | 11-18 mos. | 10 mg | 0.1 mL | IN | |
| Yellow | 12-14 kg (26-31 lbs.) | 19-35 mos. | 10 mg | 0.1 mL | IN | |
| White | 15-18 kg (32-40 lbs.) | 3 – 4 yrs. | 10 mg | 0.1 mL | IN | |
| Blue | 19-23 kg (41-51 lbs.) | 5 – 6 yrs. | 20 mg | 0.2 mL | IN | |
| Orange | 24-29 kg (52-64 lbs.) | 7 – 9 yrs. | 30 mg | 0.3 mL | IN | Divide dose equally between nostrils. |
| Green | 30-36 kg (65-79 lbs.) | 10 – 14 yrs. | 30 mg | 0.3 mL | IN | Divide dose equally between nostrils. |
| | | 10 – 14 yrs. | 10 mg | 0.1 mL in 100 mL NS | IV or IO | Mix dose in 100 mL NS, administer over 10 minutes. |
| Black | > 36 kg (> 80 lbs.) | > 14 yrs. | 30 – 50 mg | 0.3 – 0.5 mL | IN | Divide dose equally between nostrils. |
| | | > 14 yrs. | 10 – 20 mg | 0.1 mL in 100 mL NS | IV or IO | Mix dose in 100 mL NS, administer over 10 minutes. |

12. For patients with refractory pain after ketamine administration, contact medical control prior to opioid administration.
13. If ketamine has not been administered and the patient has significant pain (described as 7 or greater on the Wong Pain Scale), opioid analgesia may be administered per MCA selection.
    a. Patients should receive only one opioid medication.
    b. If an IV is not available, a single dose may be given IM.
    c. Do not administer additional pain medications after IM administration without online medical direction.
14. Administer opioids slowly when using IV or IO routes. Systolic BP should be maintained at >100 mmHg for adult patients and >80 + (2 x age) mmHg for pediatric patients.
15. For patients with evidence of hypotension or hypoperfusion, contact medical control.
16. For patients with refractory pain after opioid administration, contact medical control prior to the administration of additional medications.
17. For patients who are pregnant or suspected of being pregnant:
    a. Optimize non-pharmacologic interventions as directed above in #3.
    b. For mild to moderate pain, use acetaminophen as above.
    c. For severe pain (greater than 7 on the Wong Pain Scale), administer opioid as below. Administer IV/IO slowly, titrating to lowest dose needed to reduce pain score to less than 7.
    d. Opioids should not be used for labor pain.
18. If associated nausea, refer to **Nausea and Vomiting Treatment Protocol**.

**MCA Selected Opioid Analgesia**
(Must select at least one)

☐ **Morphine**

1. Adults (patients > 14 years of age), administer 0.1 mg/kg IV/IO/IM (maximum single dose 5 mg).
    a. IV/IO may repeat three times (total of four doses). Total dose may not exceed **20 mg**. Interval between doses is minimally 10 minutes.
    b. If IM administration, may NOT repeat.
2. Pediatrics (patients > 18 months of age and ≤ 14 years of age), refer to MI MEDIC. When MI MEDIC is unavailable, administer 0.1 mg/kg IV/IO/IM (maximum single dose 5 mg).
    a. IV/IO may repeat three times. Total dose may not exceed 20 mg. Interval between doses is minimally 10 minutes.
    b. If IM administration may NOT repeat.
3. Do NOT administer Morphine to children ≤ 18 months of age.

☐ **Fentanyl**

1. Adults (patients > 14 years of age), administer 1 mcg/kg IV/IO/IM/IN dosage, rounded as per below:
    a. Up to and including 25 kg - administer 25 mcg
    b. 26-50 kg – administer 50 mcg
    c. 51-75 kg - administer 75 mcg
    d. 76 kg and above – administer 100 mcg
    e. IV/IO/IN may repeat one-time, total dose may not exceed 200 mcg. Interval between doses is minimally 10 minutes.
    f. If IM administration may NOT repeat
2. Pediatrics (patients ≤ 14 years of age), refer to MI MEDIC. When MI MEDIC is unavailable, administer 1 mcg/kg IV/IO/IM/IN
    a. May repeat IV/IO/IN one time. Interval between doses is minimally 10 minutes.
    b. If IM administration may NOT repeat

If an IV is not available, a single dose of opioid may be given IM. DO NOT ADMINISTER ADDITIONAL PAIN MEDICATIONS after IM administration without online medical direction.

Medication Protocols: Acetaminophen, Fentanyl, Ibuprofen, Ketamine, Ketorolac, Morphine