



**Pain Management**

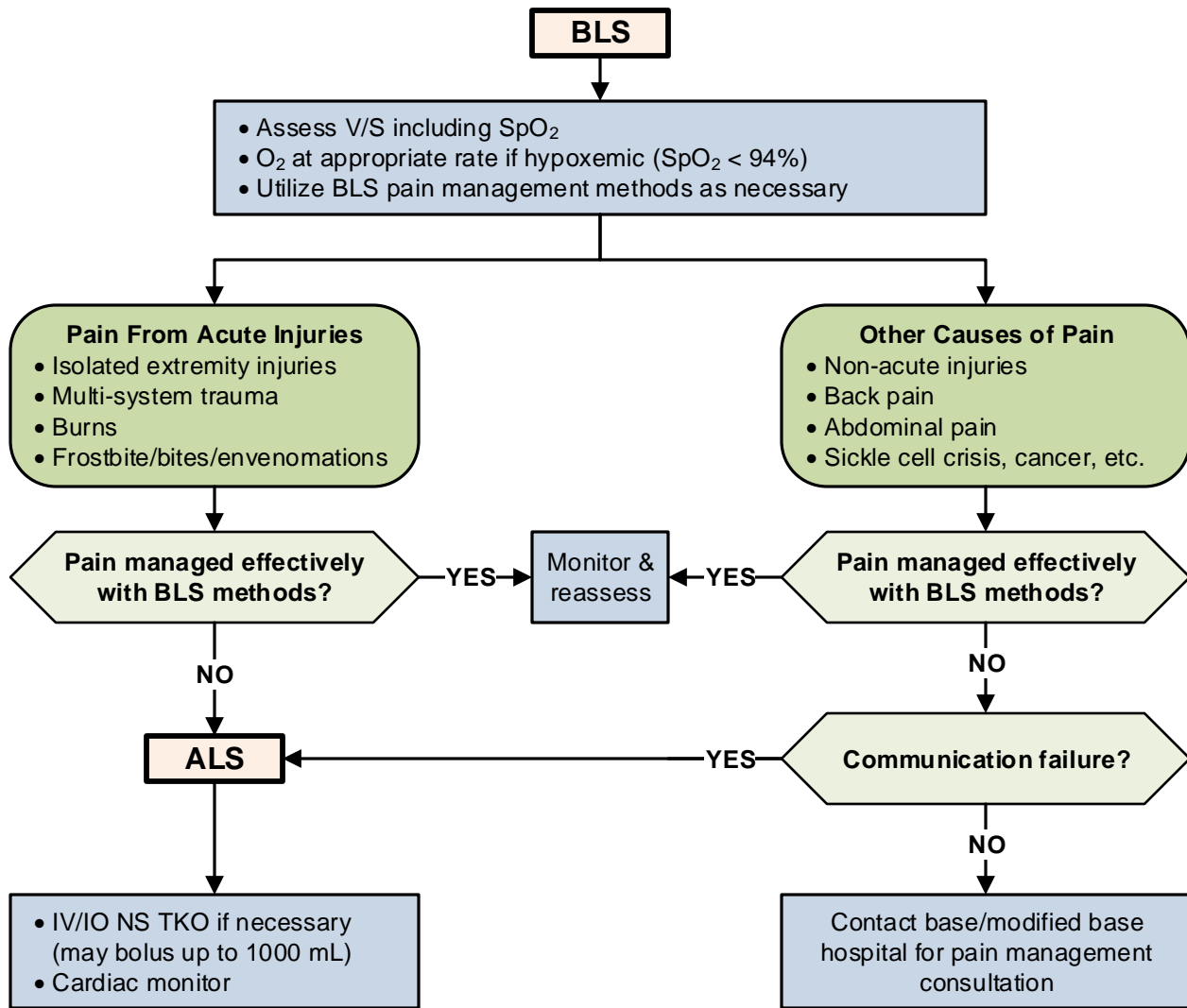
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Approval: Victoria Pinette – Executive Director

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- Whenever feasible, behavioral measurement of pain should be used in conjunction with self-report. Interpretation of pain behaviors and decision-making regarding treatment of pain requires consideration of the context in which the pain behaviors are observed.
- Not all painful conditions require ALS intervention. BLS pain management methods (splinting, positioning, compression, ice, verbal assurance, etc.) are effective in managing pain and may be sufficient for certain pts.
- Multiple factors must be considered in determining the most appropriate analgesic(s) to administer for pain management (medication availability & contraindications, clinical impression, pt. history, etc.).
- IV acetaminophen and/or ketorolac are considered first-line analgesics for pts with mild – moderate pain.
- Opioids or ketamine are considered first-line analgesics for pts with severe pain (pain score typically  $\geq 7$ ).
- Continuous cardiac and SpO<sub>2</sub> monitoring are required for all pts receiving analgesics.
- Medication doses, pt. response and reason for administration shall be adequately documented in the PCR.



**See Page 2 for ALS Pain Management**



**Pain Management**

**ALS Pain Management**

**Any Pain Severity Not Effectively Managed With BLS Methods  
May administer one or both of the following**

**Acetaminophen**

- 1 gram IV/IO infusion over 15 minutes (single dose only)

**Ketorolac**

- 15 – 30 mg IV/IO or IM (single dose only)

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- ① Acetaminophen and/or ketorolac may be administered in addition to opioids or ketamine for pts with severe pain (ketorolac is preferred for pts with suspected kidney stones or chronic back pain)
  - ① Do not administer acetaminophen to pts with severe hepatic impairment or active liver disease
  - ① Do not administer ketorolac to pts  $\geq$  65 yo, or who have any of the following contraindications:
    - Multi-system trauma
    - Active bleeding
    - Current anticoagulation therapy
    - Pregnancy
    - Current steroid use
    - Hx of GI bleeding or ulcers
    - Hx of asthma
    - NSAID allergy
    - Hx of renal disease/insufficiency/transplant



**Severe Pain, Pain Not Effectively Managed With Acetaminophen/Ketorolac,  
Acetaminophen/Ketorolac Contraindicated, or Acetaminophen/Ketorolac not available**

**Fentanyl (opioid)**

- 25 – 50 mcg slow IV/IO (over 1 minute) or IM/IN
- May repeat every 5 minutes (maximum cumulative dose = 200 mcg)

**Morphine Sulfate (opioid)**

- 2 – 5 mg slow IV/IO (over 1 minute) or IM
- May repeat every 5 minutes (maximum cumulative dose = 20 mg)

**Ketamine (non-opioid)**

- 0.3 mg/kg slow IV/IO (over 1 minute, maximum = 30 mg) or 0.5 mg/kg IM/IN (maximum = 50 mg)
- May repeat every 10 minutes (maximum cumulative dose = 100 mg)

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- ① Do not administer opioids to pts with any of the following contraindications:
    - Systolic BP < 100
    - Hypoxia or RR < 12
    - ALOC or evidence of traumatic brain injury
  - ① Do not administer ketamine to pts with any of the following contraindications:
    - Pregnancy
    - ALOC
    - Multi-system trauma or active bleeding
  - ① Do not administer opioids and ketamine to the same pt.
  - ① If administering fentanyl and morphine to the same pt., maximum cumulative dose = 100 mcg fentanyl and 10 mg morphine
  - ① Use lower doses of opioids/ketamine when co-administered with acetaminophen and/or ketorolac



**Severe Pain From Acute Isolated Extremity Injuries (including hip and shoulder injuries)**

**Midazolam (if pain not effectively managed with opioids/ketamine/acetaminophen/ketorolac)**

- 1 mg slow IV/IO
- May repeat x 1 in 5 minutes (max = 2 mg)

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- ① Do not administer midazolam to pts with any of the following contraindications:
    - Systolic BP < 100
    - Hypoxia or RR < 12
    - ALOC or evidence of traumatic brain injury
  - ① Use caution when administering opioids or ketamine and midazolam to the same pt.