History
- Age
- Location and duration
- Severity (0 – 10 scale)
- Past medical history
- Pregnancy status
- Drug allergies and medications

Signs and Symptoms
- Severity (pain scale)
- Quality (e.g. sharp, dull, or stabbing)
- Radiation
- Relation to movement or respiration
- Increased with palpation of area

Differential
- Per the specific TG
- Musculoskeletal
- Visceral (abdominal)
- Cardiac
- Pleural/respiratory
- Neurogenic
- Renal (colic)

**Assess pain severity**
Use combination of pain scale, circumstances, MOI, injury, or illness severity

**Position of comfort**
Apply cold pack *if applicable*
Monitor and reassess
Consider IV/IO procedure
Assess and monitor respiratory status
Monitor continuous EtCO₂
Apply and monitor cardiac rhythm

**Moderate to severe pain**

**Fentanyl 25 – 50mcg IV/IO**
titrated in 25 – 50mcg increments to pain relief. Consider 25mcg increments in elderly patients

**Fentanyl 100mcg IN**
If no IV access. May repeat once after 15 minutes

**Fentanyl 50 – 100mcg IM**
If no IV access and IN route not advisable. May repeat once after 15 minutes

**Maximum of 200mcg total**
Monitor and reassess every 5 minutes following administration

**Ketamine IV/IO**
500mg/10ml = 50mg/ml

<table>
<thead>
<tr>
<th>Weight</th>
<th>Dose</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-69 kg</td>
<td>15mg</td>
<td>0.3 ml</td>
</tr>
<tr>
<td>70-89 kg</td>
<td>20mg</td>
<td>0.4 ml</td>
</tr>
<tr>
<td>90+</td>
<td>30mg</td>
<td>0.6 ml</td>
</tr>
</tbody>
</table>

Drawn in a tuberculin syringe

**Maximum of 30mg total**
Administer slowly over 2 minutes

Monitor and reassess every 5 minutes following administration

**DO NOT ADMINISTER FENTANYL AND KETAMINE TO THE SAME PATIENT.**

**Notify receiving facility.**
Contact Base Hospital for medical direction as needed

**Fentanyl or Ketamine**
Contact Base Hospital for additional order

**Effective Jan. 2016**
Pearls

- **DO NOT ADMINISTER FENTANYL AND KETAMINE TO THE SAME PATIENT.**

- Pain severity (0 – 10 scale) is a vital sign to be recorded before and after all BLS pain control measures and ALS pain medication delivery. Monitor blood pressure and respirations closely as pain control medications may cause hypotension or respiratory distress.

- Patients may display a wide variation of response to opioid pain medication (Fentanyl). Consider the patient’s age, weight, clinical condition, other recent drugs, or alcohol and prior exposure to opiates when determining initial dosing. Minimal doses of opioids may cause respiratory depression in the elderly or those patients who weigh less.

- USE EXTREME CAUTION when administering opioids together with benzodiazepines; this combination results in a deeper level of anesthesia with a significant risk for airway and respiratory compromise.

- For patients who have a tolerance to opioids, non-narcotic therapies may be appropriate until evaluation at the receiving facility.

- Acetaminophen may be administered once in addition to Fentanyl or Ketamine for patients with severe pain.

- Do not administer Acetaminophen to patients with severe liver impairment or active liver disease.

- Contraindications of Fentanyl and Ketamine include:
  - Closed head injury
  - Hypotension (BP < 90)
  - Altered level of consciousness
  - Respiratory failure/worsening status
  - Headache
  - Childbirth/suspected active labor
  - Have Naloxone available to reverse respiratory depression should it occur.

- Burn patients may require higher than usual opioid doses to achieve adequate pain control. IF A PATIENT HAS SUFFERED BURNS THAT REQUIRE TRANSPORT TO A BURN CENTER, THE PATIENT MAY REQUIRE MORE THAN THE MAXIMUM TOTAL DOSE OF FENTANYL OR KETAMINE TO ACHIEVE PAIN CONTROL. CONTACT THE BASE HOSPITAL FOR ADDITIONAL ORDERS.