

## Geriatric Trauma

### Inpatient Pain Medication Prescription Guidelines

Tips for med administration in older adults:

- Ensure pain medications are staggered and not administered all together
  - Last scheduled pain medication should be administered before 9 pm to allow for improved sleep hygiene.
  - For patients  $\geq$  55 years old
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#### **Tier 0 (mild pain)**

##### 1. Tylenol

- o Acetaminophen 1g TID while awake (scheduled) or
- o Acetaminophen 650 mg TID if liver dysfunction or CrCl <35ml/min

##### 2. NSAIDS

(do not use if baseline CrCl < 35 ml/min, active UGIB, or > 80, with elevated blood pressure)

- o Ibuprofen: ibuprofen 400mg Q6H
- o Toradol: 15mg Q6h x 5 days or 30mg Q6H x 72h

#### **Tier 1 (moderate to severe pain)**

##### 3. Oxycodone (Consider adding doses for both moderate and severe pain)

- o Oxycodone 2.5mg Q4H prn. If pain uncontrolled, escalate to ATC.
- o Oxycodone 5mg Q8H ATC, If pain uncontrolled, consider escalating to Q6H ATC dosing

**May also use other opioids as needed, for example, if patient is intolerant/allergic to oxycodone, for example:**

##### 4. Dilaudid

- o dilaudid 2 mg po q4h prn moderate pain; dilaudid 4 mg po q4h prn severe pain
- o dilaudid 0.1 mg IV q3h prn moderate pain; dilaudid 0.2 mg IV q3h prn severe pain

## 5. Gabapentin (optional)

-100% renally-cleared – please see dose changes below if pt has reduced CrCl

- **Initial dose:** 100 mg po qhs for at least 2 days
- **Up titration protocol:**
  - then if tolerating may uptitrate to 100 mg po tid for at least 2 days (8 hr intervals)
  - then if tolerating may uptitrate to 100 – 100 – 300 po for at least 2 days (8 hr intervals)
  - then if tolerating may uptitrate to 300 – 100 – 300 for at least 2 days (8 hr intervals)
  - then may up titrate to 300 tid (8 hr intervals)
- **Caution:** If at any time the patient develops delirium or gait disorder, consider down titrating to the last tolerated dose.
  - **If patients are already taking gabapentinoids at home, their home doses must be continued in hospital to avoid withdrawal delirium.**
  - **Renal Dosing:** CrCl =15-30 mL/min, max dose 600 mg/day, CrCl<15 mL/min, max dose 300mg/day

## 6. Local/Regional/Spinal Blocks

Consult anesthesia pain team: (520) 449-1468

- Rib fractures:
  - Lidocaine patches and other topicals
    - Effective only at relieving shallow surface pain. Can be helpful in the case of rib fractures and around the sites of chest tubes
  - Epidural catheters,
  - Erector Spinae / Paravertebral Blocks
  - Intercostal Nerve Blocks
- Extremity Fractures:
  - Regional Blocks
- Exploratory Laparotomy:
  - Transversus Abdominus Plane (TAP) Block

## Muscle Relaxants

### 7. Robaxin:

- 100% renally cleared, **do not use** with baseline CrCl < 35 ml/min or in patients with Acute Kidney Injury

- **Dosing:** 250 mg TID (po/IV) prn for muscle spasms
- **If patients are already taking baclofen at home for muscle spasm, their home doses must be continued in the hospital to avoid withdrawal delirium**

### **Tier 2 Severe Uncontrolled Pain**

#### **Other Considerations for severe pain:**

1. Hydromorphone- Dilaudid IV (0.25-0.5mg q4-q6h)
  - a. dilaudid 0.1 mg IV q3h prn moderate pain;
  - b. dilaudid 0.2 mg IV q3h prn severe pain
2. Ketamine Infusion: Moderate pain dose or sub-anesthetic dosing (0.1-0.5 mg/kg)

#### References:

1. <https://reference.medscape.com/drug/neurontin-gralise-gabapentin-343011>
2. Fleet JL, Dixon SN, Kuwornu PJ, Dev VK, Montero-Odasso M, Burneo J, Garg AX. Gabapentin dose and the 30-day risk of altered mental status in older adults: A retrospective population-based study. PLoS One. 2018 Mar 14;13(3):e0193134.
3. <https://www.uspharmacist.com/article/inappropriate-use-of-skeletal-muscle-relaxants-in-geriatric-patients>
4. <https://www.healthinaging.org/tools-and-tips/learn-more-ten-medications-older-adults-should-avoid-or-use-caution>
5. Kugler NW, Carver TW, Juul J, Peppard WJ, Boyle K, Drescher KM, Szabo A, Rein L, Somberg LB, Paul JS. Ketamine infusion for pain control in elderly patients with multiple rib fractures: Results of a randomized controlled trial. J Trauma Acute Care Surg. 2019 Nov;87(5):1181-1188.