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**PURPOSE:**
To provide guidelines for managing acute pain via a multi-modal approach that improves outcomes while minimizing adverse events related to opioids.

**DEFINITIONS:**

**Acute Pain:** Any pain suffered directly from soft tissue or bony damage sustained through a traumatic injury or operation.

**Multi-modal therapy:** Multiple drugs are employed simultaneously to prevent some of the more serious adverse effects associated with excessive dosing, allowing each medication to portend its best characteristics and provide synergistic effects.

**INITIAL SCREENING:**

When determining a proper multi-modal treatment plan for all patients suffering from acute pain, one must consider age, weight, allergies, renal/hepatic function, and prior opioid use. Based on patient response, dosing adjustments may be necessary. Multi-modal pain management therapy should be initiated as early as possible.

- Do not restart home analgesic medications, but consider them when initiating inpatient dosing
    - MME conversion should be performed, and starting doses should be within 10-20% of chronic doses.
- Multi-modal therapy should be initiated in the ED and continued throughout the hospital stay
- A physician should be called for unrelieved pain
- Transition from IV pain regimen to an oral regimen as soon as feasible
- All IV pain medications should be discontinued at least 24 hrs before discharge

**PROTOCOL:**

**<u>All Patients:</u>**
**Tylenol** (clear with trauma/SICU attending in patients with severe hepatic dysfunction - Child's Class B and C)
- Acetaminophen 975 mg PO q6 hrs (preferred)\
    - If no oral or upper GI access: suppository 650 mg per rectum q6h

**NSAIDs** (hold if eGFR<30) **(limit to 3 weeks in patients with long bone or spinal fractures)**
- Ibuprofen 400-600 mg PO q6 hrs (max dose 2400 mg/24 hrs)
    - If no enteral access or complete bowel rest: Toradol 15mg q6-8 hr
        - *Can only be ordered/continued for 5 days max; do not renew order after 5 days of therapy

**<u>Breakthrough Pain (PRN)</u>**
- Oxycodone (immediate-release) 5 mg PO or 5 ml Elixir (1mg/ml) via NG/NJ q4-6 hrs PRN
    - DO NOT ORDER Oxycodone 10mg unless the ptn demonstrates a need for more than 5mg q4hr

**Special Populations**

**Patients with Neuropathic or Extremity Pain**

**Gabapentinoids (hold if patient is somnolent)**

- Gabapentin 100-300 mg PO q8 hrs (may titrate up to max 1200 mg PO q8 hrs)
  - If renal dysfunction (eGFR<30): Gabapentin 100-200 mg PO q12 hr (max 400 mg PO q12 hr)

**For Refractory Pain (typically chronic opioid users – provide at the discretion of the rounding attending)**

- Schedule oxycodone 5mg q4-6 hr and order a separate prn 5mg oxycodone q4 hr
- Ketamine infusion
  - The patient must be monitored in ICU or on F4 (does not require progressive status). The anesthesia pain team must manage all other patients requiring ketamine.
  - 0.1 to 0.25 mg/kg/hr continuous infusion (an initial bolus of 0.1-0.5 mg/kg can be provided at the discretion of the attending physician, if present)
  - Avoid if poorly controlled cardiovascular disease, significant psychiatric history, or severe hepatic disease (e.g., cirrhosis)
  - Stop if the patient develops symptoms consistent with delirium
- Pain team consults for:
  - Regional blocks
  - Management of chronic pain patients (palliative care may also manage these patients)
  - Ketamine infusions outside of ICU or F4
- Methadone 5 mg q8 hrs (may advance to 10mg at attending discretion)
  - Only attempt in chronic opioid users
  - Avoid if respiratory issues (long half-life - 96 hrs) or elevated QTc (>500 msec)
  - **Do not prescribe at discharge**

**HOW TO PERSONALIZE MULTI-MODAL THERAPY:**

- Always maintain a PRN pain medication (it does not have to be an opioid)
- Each morning the number of PRN medications given should be determined:
  - If ALL allowable PRN medications were given and the patient is still having uncontrolled pain, schedule the PRN medication and add another PRN (e.g., an additional 5mg Oxycodone PRN q4-6 hrs)
  - If a few of the PRN medications were given, keep the same dosage
  - If NO PRN medications were given, remove that medication and make something else PRN (e.g., ibuprofen, Tylenol)
- Enlist the assistance of the APRNs, chief residents, team pharmacist, or the attending with prescribing pain medications until you are comfortable with this protocol

**Increasing levels of pain with dosing adjustments need to be reported to the attending physician on daily rounds**

**Acute Pain Management Guidelines – Discharge and Follow-up**

At Discharge:

- For all medications: do not prescribe if the patient has not been using them in the hospital
- Acetaminophen 975 mg PO q6 hrs (do not exceed 4 grams/24 hrs)
- Ibuprofen 600-800 mg PO q8 hrs (do not exceed 2.4 grams/24 hrs)
- Oxycodone 5 mg (Prescribe 5x the number used in the 24 hrs before discharge)
- Salonpas patches should be recommended if the patient benefits from using lidocaine patches during hospitalization (these are more affordable and can be found over the counter at Walmart, Walgreens, etc.)
- Gabapentin Rx for **only 14 days** (only if the patient was taking it before discharge)
    - Epic's default is 12 months – change this to 14 days!
- Methocarbamol (Robaxin) Rx for 15 days (only if the patient was taking it before discharge)
    - Epic's default is 12 months – change this to 14 days!

At Follow-up Clinic:

- **NO** narcotic refills
- May consider 1-time refill of gabapentin/methocarbamol OR until the patient establishes with PCP
- If unrelieved or becomes chronic patient will need a referral to a specialty pain clinic

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