Preventing & Managing Opioid Side Effects

Nausea and vomiting *
Change route
Add anti-nausea
↓ opioid dose (by 10-25%)
Add or ↑ the nonopioid analgesic for additional pain relief
Switch to another analgesic

Itching, Pruritus *
↓ opioid dose
Consider antipruritic (antihistamininc)
Change route, switch analgesic

Sedation *
Evaluate the underlying cause
Eliminate nonessential CNS-acting drugs
↑ dosing frequency with a lower opioid dose to decrease peak serum concentration
↓ opioid dose (by 10-25%) & Add or increase the nonopioid analgesic for additional pain relief
If excessive sedation persists, switch opioid

Respiratory depression *
Monitor sedation level and respiratory status
Evaluate the underlying cause
↓ opioid dose, ↑ interval
Stop medication
If patient is unresponsive to stimulation, respirations are shallow or < 8 breaths/min or pupils are pinpoint, stop opioid administration and administer Naloxone (Narcan™)
To minimize opioid withdrawal symptoms (agitation, fever, emesis and pain) when Naloxone is needed.
* dilute Naloxone 1 vial (0.4mg) in 10cc NS
* administer 1 cc/min of diluted Naloxone

Constipation ¶
Manage Constipation prophylactically
With few exceptions all patients on opioid therapy need an individualized bowel regimen (including a stool softener and mild stimulant laxative). See some suggested bowel regimens below.

If the patient has not been on a bowel regimen then step 1 should be started. If there is no response in 24 hrs move to next step
Polyethylene Glycol (Miralax™), Naltrexone may be useful in managing Opioid induced constipation
Maintain a high index of suspicion for the possibility of bowel obstruction/ fecal impaction. Rule out impaction with rectal examination or abdominal x-ray when clinical suspicion exist.
Rectal disimpaction must occur before treating constipation with an oral laxative regimen

¶ Tolerance does not occur over time
* Tolerance occurs over time to this symptom

1. ASSESS PAIN:
• Use the pain scale, Ask the patient.
• Pain intensity, location, onset, duration, relieving or exacerbating factors, quality (sharp, dull throbbing)
• If the patient is unable to communicate, assess pain based on behavioral cues. Such as facial grimacing, guarding an area of the body, crying, moaning, decrease in social interaction, aggression, increase in body movements, irritability, confusion
• Assess pain at each clinical interview, every 8 hrs, and PRN (at least every 1 hr for moderate to severe pain).
• The cause of pain must always be properly addressed

2. PAIN TREATMENT
When the pain is not expected to resolve shortly, medications should be administered around the clock and additional prn doses should be available.
• Patients who are already taking opioids will require higher doses to control new or worsening pain.
• For Moderate-Severe pain use Short acting opioids
• Only start long acting preparations of opioids after pain has been controlled on short acting opioids.
• Never use long acting opioids for controlling acute pain
• There is no maximum or ceiling dose for analgesia with opioids unless the opioid is in combination with acetaminophen or aspirin.
### Equianalgesic Table: Changing Opioid Administration Routes or Agents:

<table>
<thead>
<tr>
<th>Opioid agonist</th>
<th>Oral/rectal mg</th>
<th>IV/SC mg</th>
<th>IV to PO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphone</td>
<td>30</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>20</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>7.5</td>
<td>1.5</td>
<td>5</td>
</tr>
<tr>
<td>Codeine</td>
<td>200</td>
<td>120 (IM)</td>
<td>N/A</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>30</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Oxymorphone</td>
<td>10</td>
<td>1</td>
<td>N/A</td>
</tr>
<tr>
<td>Fentanyl^1</td>
<td>N/A</td>
<td>100mcgr</td>
<td>N/A</td>
</tr>
<tr>
<td>Methadone^2</td>
<td>1-20</td>
<td>1-10</td>
<td>1.5</td>
</tr>
<tr>
<td>Codeine</td>
<td>200</td>
<td>130</td>
<td>1.5</td>
</tr>
</tbody>
</table>

**Equianalgesic Dose Conversion Formula**

\[
\text{Equianalgesic dose (route) current opioid} = \frac{\text{Equianalgesic dose (route) desired opioid}}{\text{24hr dose (route) current opioid}} = \frac{\text{24hr dose (route) desired opioid}}{\text{24hr dose (route) current opioid}}
\]

### Opioids Titrations

- **For moderate pain:** Titrate at least every 24 hrs
- **For severe pain:** Titrate every 2 hrs
- **Increase opioids depending on pain level**
  - Mild-mod pain: ↑ dose 25-50%
  - Mod-severe pain: ↑ dose 50-100%

### Opioids and Breakthrough Pain

- **For acute pain in patients with otherwise controlled pain use short acting opioids.**
- **Breakthrough dose is about 10% of the 24 hr standing opioid dose (scheduled dose)**
- **Make breakthrough dose available every 1-2 hrs**
- **Example:** pt on long acting Morphine 60 mg po q 12 hrs. The breakthrough dose would be 15 mg po q 1 hr prn

### Fentanyl

Indicated for patients with persistent, moderate to severe chronic pain who have been taking a regular, daily, around-the-clock opioid pain medicine for >1 week and are considered to be opioid-tolerant

- **For dosages of Fentanyl patch >100 μg/hr multiple patches can be used**
- **Patch duration 48-72 hrs. It takes 12-24 hrs before achieving full analgesic effect after the 1st patch**
- **Prescribe a short acting opioid for breakthrough pain.**
- **Increase the patch dose based on the average amount of additional short acting opioid required 72 hrs prior.**

### PATIENT CONTROLLED ANALGESIA (PCA)

Safe & effective way of delivering opioids for pain that is expected to resolve (post op pain) or Acute exacerbation of chronic pain. Patient self delivers fixed Opioid dose by pressing a button. Overdose infrequent as patient has to be alert to press the button.

Safe starting PCA Dose for average adult

- *Morphine 1 mg every 10 minutes or*
- *Hydromorphone 0.25 mg every 10 minutes*

Use a continuous Opioid infusion for patients who are suffering from pain not expected to resolve shortly.