Principles of Pharmacologic Management:

1. Base the initial choice of analgesic on the severity and type of pain: non-opioids for mild pain (rating 1-4); opioids, often in combination with a non-opioid, for moderate (rating 5-6) to severe (rating 7-10) pain. Neuropathic pain is not responsive to NSAIDs and may require an antidepressant or anticonvulsant drug.

2. Dose to ceiling of non-opioid if side effects permit. Increase opioid dose until pain relief is achieved or side effects are unmanageable before changing medications.

3. Administer drugs orally whenever possible. Avoid intramuscular injections.

4. Administer analgesics “around the clock” rather than prn.

5. Use balanced, multi-modal treatment plans when possible (regional techniques + nonopioid + opioid + adjuvant + nondrug methods). Avoid using multiple opioids or multiple non-opioids (drugs from the same class at the same time).

6. Anticipate and vigorously treat side effects.

7. Avoid dosing with meperidine (no more than 48 hours or at doses greater than 600mg/24 hours).

8. Addiction occurs very rarely in patients who receive opioids for pain control. Drug addiction, when suspected should be investigated and ruled in or out but not implied and “left hanging” because it interferes with pain management. The hallmarks of addiction include: a) compulsive use, b) loss of control, and c) use in spite of harm.

9. Do not use placebos to determine if the pain is “real”.

10. Assess pain, pain relief, and side effects frequently and adjust the dose accordingly. Change to another drug if side effects are unmanageable.

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Opioid Equivalency Table

Equianalgesic doses are approximate. Individual patient response must be observed. Doses and intervals between doses are titrated according to the patient's response.

<table>
<thead>
<tr>
<th>DRUG</th>
<th>Dose (mg)</th>
<th>Parenteral</th>
<th>Oral</th>
<th>Duration (hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>morphine (IR)</td>
<td>10</td>
<td>30</td>
<td>3-4</td>
<td></td>
</tr>
<tr>
<td>hydromorphone (Dilaudid)</td>
<td>1.5</td>
<td>7.5</td>
<td>3-4</td>
<td></td>
</tr>
<tr>
<td>codeine</td>
<td>130</td>
<td>200</td>
<td>3-4</td>
<td></td>
</tr>
<tr>
<td>oxycodone (Roxicodone, *Percocet)</td>
<td>-</td>
<td>20-30</td>
<td>3-4</td>
<td></td>
</tr>
<tr>
<td>oxymorphone (Opana, Opana ER)</td>
<td>1</td>
<td>10</td>
<td>24-6</td>
<td></td>
</tr>
<tr>
<td>hydrocodone (**Vicodin, Lortab)</td>
<td>-</td>
<td>30</td>
<td>3-4</td>
<td></td>
</tr>
<tr>
<td>meperidine (Demerol)</td>
<td>100</td>
<td>300</td>
<td>2-3</td>
<td></td>
</tr>
<tr>
<td>levorphanol (Levo-Dromoran)</td>
<td>2</td>
<td>4</td>
<td>6-8</td>
<td></td>
</tr>
<tr>
<td>methadone (Dolophine)</td>
<td>1-2</td>
<td>3-5</td>
<td>6-8</td>
<td></td>
</tr>
<tr>
<td>Fentanyl† (Sublimaze)(Duragesic)</td>
<td>0.1</td>
<td>topical</td>
<td>17 mcg/h</td>
<td>48-72</td>
</tr>
</tbody>
</table>

1 Available in extended release preparation with duration 8-12 hours and 24 hours.
2 Meperidine is not recommended for chronic administration. Oral administration is not recommended.
3 Risk of CNS depression with repeated use; accumulation in elderly or persons with impaired renal function with regular dosing, monitor for patient variability in duration of efficacy.
4 Caution! The equianalgesic dose of methadone compared with other opioids varies widely in patients on chronic opioids. PO morphine : PO methadone ratio may range from 4:1 to 14:1. For more detail see [http://www.aafp.org/afp/20050401/1353.html](http://www.aafp.org/afp/20050401/1353.html)

* Percocet may contain 5, 7.5, or 10 mg oxycodone per tablet.
* Vicodin and Lortab may contain 5, 7.5 or 10mg of hydrocodone per tablet.
* Morphine and hydromorphone are available in suppository form.
† Oral transmucosal (Actiq) and buccal tablets (Fentora) are also available. See Fast Facts and in UConnect and package insert for information on dosing and approximate equianalgesia.

Equianalgesic calculations are NOT recommended for patients on brief therapy or for postoperative pain when converting from IV PCA to oral analgesia.

\[
\begin{align*}
\text{Equianalgesic dose and route for currently administered opioid} & \quad \text{Equianalgesic dose and route for desired new opioid} \\
\text{Total 24 hr dose and route for currently administered opioid} & \quad \text{Total 24 hr dose with route for desired new opioid} \\
\end{align*}
\]

Depending on situation, decrease new dose by 30-50%