The Basics of Opioid Conversion
Hospice and Palliative Nurses Association (HPNA) E-Learning

The Basics of Opioid Conversion
Nancy Joyner, RN, MS, APRN-CNS, ACHPN®

Disclosures
Nancy Joyner has no real or perceived conflicts of interest that relate to this presentation.

Objectives
1. Identify four guidelines that impact opioid conversion.
2. Describe three reasons for changing opioids.
3. Calculate an oral opioid dose to an IV infusion opioid.
4. Using case studies, integrate three aspects to consider when converting opioids.
Case Study – Joe

Joe is a 72 y.o. gentleman with metastatic prostate cancer who is too weak to swallow MS Contin (extended release) tablets.

1) What is/are your first concern(s)?
2) What are your possible solutions?
3) Are you going to need to convert him administration route, formulation, medication, dose?

Case Study – Joe Answer

Joe is a 72 y.o. gentleman with metastatic prostate cancer. He is too weak to swallow MS Contin tablets.
1) What is/are your first concern(s)?
   A. Pain control, withdrawal, administration of opioid
2) Are you going to need to convert his administration route, medication, dose?
   A. Possibly one or all three
3) What are your possible solutions?
   A. To be explored/determined

General Principles of Opioid Administration (1 of 4)
(APS, 2008, Pasero et al, 2011)

• Individualize treatment
  A. Inter-individual variability, sensitivity
  B. Psychological state – anxiety, depression
  C. Variability – dose needs
  D. Age, cognition, CNS disease

• Give each opioid adequate trial
  A. Dosing increase until relief
  B. Intolerable adverse effects
General Principles of Opioid Administration (2 of 4)

(APS, 2008, Pasero et al, 2011)

• Administer analgesic regularly
  A. Pain most of the day?
  B. Titrating a short acting
  C. Implementing controlled release with as needed
  D. Observe for end of dose breakthrough pain
    1) Shorten dose interval
    2) Increase the dose

General Principles of Opioid Administration (3 of 4)

(APS, 2008, Pasero et al, 2011)

• Follow patients close to reassess response(s)
  A. Monitor relief
  B. Monitor adverse effects
  C. Adjustments – titrate/wean

• Anticipate, recognize and treat adverse effects
  A. Change dosing regimen or route
  B. Try a different opioid
  C. Consider multimodal
  D. Treat adverse effect with new medication

General Principles of Opioid Administration (4 of 4)

(APS, 2008)

• Do not use Meperidine (Demerol)
• Do not use placebos to assess nature of pain
• Monitor for tolerate & treat appropriately
• Expect physical dependence/prevent withdrawal
• Do not diagnose opioid addiction based only on the presence of opioid dependence
Opioid Use Considerations (1 of 3)
(Pasero et al, 2011, Layman-Goldstein, Coyle, 2013)
• Age, metabolic state, organ failure, coexisting disease
• Choice of opioid(s)
• Drug class, duration, pharmacokinetics
• Various formulations

Opioid Use Considerations (2 of 3)
(Pasero et al, 2011, Layman-Goldstein, Coyle, 2013)
• Routes of administration – least invasive
• Ability to follow prescribed regimen
• Goal: good pain relief, minimal adverse effects
• Costs, insurance coverage

Opioid Use Considerations (3 of 3)
(Pasero et al, 2011, Layman-Goldstein, Coyle, 2013)
• Opioid naïve vs. tolerant individual
• Prevent acute withdrawal syndrome
• Taper/wean – 25% of previous 24 hr dose
• Teach, teach, teach!
• Be aware of aberrant drug behaviors/drug diversion
Opioid Titration Guidelines
(Prescriber’s Letters, 2012)

1. Poorly controlled baseline pain
   a. Increase the basal rate or around the clock (ATC)
   b. Oral-sustained release/long-acting, transdermal subcutaneous, intravenous continuous infusion
2. Poorly controlled incident/rescue dose pain
   a. Increase the rescue or as needed dose by
   b. Increasing frequency and/or increasing the dose
3. Both baseline rescue doses poorly controlled
   a. Calculate the # of rescue doses in 24 hrs
   b. Increase the basal dose by that amounts
   c. Increase the rescue dose to 10-15% of 24 hr dose

Opioid-Induced Adverse Effects

Autonomic
• Postural hypertension
• Urinary retention
• Xerostomia (dry mouth)
Cutaneous
• Pruritus (itch)
• Diaphoresis (sweating)
Gastrointestinal
• Constipation
• Nausea and/or vomiting

Central Nervous System
• Cognitive impairment
• Delirium
• Drowsiness
• Hyperalgesia
• Myoclonus
• Respiratory depression
• Sedation
• Seizures

Is it Opioid Rotation or Conversion?

Basically they are used interchangeably.
Analgesia is usually dose related – responsiveness, efficacy (not just specific opioid).

Opioid Rotation/Switching/Substitution
Changing from opioid to another to treat analgesic tolerance or unmanageable/intolerable adverse effects.

Opioid Conversion Calculations
Switching opioid therapy to maximize analgesia while minimizing adverse effects.
Advantages of Opioid Conversion
(Pasero et al, 2011, Layman-Goldstein, Coyle, 2013)

• Improving analgesia
• Reducing side effects
• Practical concerns
• Cost reduction
• Better compliance
• Use in organ failure

Disadvantages of Opioid Conversion
(Pasero et al, 2011, Layman-Goldstein, Coyle, 2013)

• Inaccurate/estimated equianalgesic tables
  • Equianalgesic Dose Ratio (EDR), cross tolerance
• Unknown patient sensitivity/variable
• Limited access
• Variable availability of opioids in pharmacies
• Drug-drug interactions
• Expense
• Difficulty in switching from methadone
• Attracting regulatory attention

Incomplete Cross Tolerance

• Similar drugs, different intrinsic efficacy
• Interact with different receptor subtypes
• Variable degree of tolerance
• Analgesic effect can be profound
• Adverse effects can be reduced
• When converting to different medications, 25-50% of the drug may be lowered to meet this incomplete cross tolerance
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Factors Affecting Opioid Conversion
(McPherson, 2010, Pasero et al, 2011)

- **Opioid Responsiveness** – the degree of analgesia achieved as the dose is titrated vs. adverse effects
- **Potency** – the intensity of the analgesic effect of a given dose, opioid receptor and binding (pharmacokinetics)
- **Equipotent/Equianalgesic Opioid Dosing** – two different opioids or two different routes of administering same opioid providing same degree of pain relief

Opioid Conversion Calculation Terminology/Abbreviations
(McPherson, 2010, Pasero et al, 2011)

- **Around the clock** (ATC)
- **As needed/pro re nata** (PRN)
- **Breakthrough dose/rescue dose** (BTD)
- **Breakthrough pain** (BTP)
- **By mouth/orally/per os** (PO)
- **Equianalgesic dose ratio** (EDR)
- **Extended release/sustained release/long acting** (ER)
- **Immediate release/short acting** (IR)
- **Total daily dose** (TDD)

Equianalgesic Opioid Dosing

<table>
<thead>
<tr>
<th>Drug</th>
<th>Parenteral dose (mg)</th>
<th>Oral Dose (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>0.1-0.2</td>
<td>n/a</td>
</tr>
<tr>
<td>Hydrocodone</td>
<td>n/a</td>
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<tr>
<td>Oxycodone</td>
<td>n/a (in U.S.)</td>
<td>20</td>
</tr>
<tr>
<td>Oxymorphine</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Tramadol</td>
<td>n/a (in U.S.)</td>
<td>120</td>
</tr>
</tbody>
</table>
Equianalgesic Pearls
• Equianalgesic dosing are only approximates
• Remember to consider individual factors:
  ▪ Age/co-morbidities
  ▪ Renal/hepatic function
  ▪ Current and previous opioid experience(s)/tolerance?
  ▪ Adverse effects?
  ▪ Nature/duration of pain – slow or quick titration?
  ▪ Psycho-social aspects – anxiety, depression, suffering
  ▪ Adjuvant/concomitant medications
• Individual response:
  ▪ Titrate dose accordingly, as needed, stay ahead
  ▪ Titrate interval as needed

Calculations Using Cross Multiplication

___________________ = ________________

Guidelines for Calculations – Oral Dosing
Different Medication

Equianalgesic dose & route for
current medication (EDR)

___________________ = ________________
Guidelines for Calculations – Oral Dosing Different Medication

For new, desired opioid (EDR):

EDR currently administered opioid

= _____________________________

Guidelines for Calculations – Oral Dosing Different Medication

For new, desired opioid (EDR):

EDR currently administered opioid

= _____________________________

Guidelines for Calculations – Oral Dosing Different Medication

24 hour dose (TDD) of currently administered opioid

(new, desired opioid) (basal with bolus)

= _____________________________

Guidelines for Calculations – Oral Dosing Different Medication

EDR currently administered opioid

= _____________________________

EDR for new, desired opioid

TDD currently administered opioid

x TDD

(new, desired opioid)

Calculation Pearls:

1) Write it down
2) Re-check own calculations
3) Verify with websites/pharmacists/colleagues after #1 & #2
Helen's Converted Calculated Dose (Step 1)

\[
\text{PO Morphine: } 30 \text{ mg (EDR)} \quad = \quad \text{PO Oxycodone: } 20 \text{ mg (EDR)}
\]
Helen’s Converted Calculated Dose (Step 2)

<table>
<thead>
<tr>
<th>PO Morphine</th>
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<td>30 mg (EDR)</td>
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\[
\frac{120 \text{ mg PO Morphine}}{(60 \text{ mg x 2) in 24 hours (TDD)}} = \phantom{0000}
\]

Helen’s Converted Calculated Dose (Step 3)

<table>
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\[
\frac{120 \text{ mg PO Morphine}}{(\text{(Total Daily Dose) approximate, equal 24 hour dose (TDD) of PO Oxycodone)}} = \phantom{0000}
\]

1) Cross multiply 120 mg x 20 mg = 2400 mg
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Helen’s Converted Calculated Dose
(Step 5)

PO Morphine PO Oxycodone
30 mg = 20 mg
120 mg (24 hr) x (24 hr)
PO Morphine PO Oxycodone

1) Cross multiply 120 mg x 20 mg = 2400 mg
2) Divide dose 2400 mg ÷ 30 mg = 80 mg in 24 hrs

Helen’s Converted Calculated Dose
(Step 6)

PO Morphine PO Oxycodone
30 mg = 20 mg
120 mg (24 hr) x (24 hr)
PO Morphine PO Oxycodone

1) Cross multiply 120 mg x 20 mg = 2400 mg
2) Divide dose 2400 mg ÷ 30 mg = 80 mg in 24 hrs
3) 80 mg ÷ # doses (ex 2) = 40 mg every 12 hrs
4) Cross tolerance conversion?

Breakthrough Pain/Rescue Dosing

• Are they being used at certain times?
• Do not calculate for just situational dosing of breakthrough pain.
• Are they being used for catch up and around the clock (ATC)?
• Have you calculated changes in dosing based on increase of basal rate?
Converting Different Drug, Different Formulation

Case Study – Mary Ann

Mary Ann is a 84 y.o. lady with multiple co-morbidities, including a large stage 3 decubitus ulcer. She has been on hydromorphone infusion 1.5 mg/hr with PCA dose of 2.5 mg every 10 minutes. She uses much more demand prior to, during and after dressing changes, up to 20 mg, but is comfortable in-between dressing changes. She is getting ready to go home and will be switched to oral morphine.

Equianalgesic Opioid Dosing (EDR)

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</table>
Mary Ann’s Calculated Conversion Dose (Step 1)

IV hydromorphone \(1.5\) mg (EDR) = PO morphine \(30\) mg (EDR)

Mary Ann’s Calculated Conversion Dose (Step 2)

IV hydromorphone PO morphine
\(1.5\) mg (equianalgesic) = \(30\) mg (equianalgesic)
36 mg hydromorphone TDD (1.5 mg/hr x 24)

Mary Ann’s Calculated Conversion Dose (Step 3)

IV hydromorphone PO morphine
\(1.5\) mg (EDR) = \(30\) mg (EDR)
36 mg hydromorphone x mg Morphine for 24 hours (TDD)

1) Cross multiply 36 mg x 30 mg = 1080 mg
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Mary Ann’s Calculated Conversion Dose (Step 4)

IV hydromorphone = PO morphine
1.5 mg (EDR) = 30 mg (EDR)
36 mg hydromorphone x mg Morphine TDD
TDD (1.5 mg/hr)

1) Cross multiply 36 mg x 30 mg = 1080 mg
2) **Divide 1080 mg by 1.5 mg = 720 mg**

Mary Ann’s Calculated Conversion Dose (Step 5)

IV hydromorphone = PO morphine
1.5 mg (EDR) = 30 mg (EDR)
36 mg hydromorphone x mg Morphine TDD
TDD (1.5 mg/hr)

1) Cross multiply 36 mg x 30 mg = 1080 mg
2) Divide 1080 mg by 1.5 mg = 720 mg
3) **Less 25% cross tolerance (720 x .75) = 540 mg**

Mary Ann’s Calculated Conversion Dose (Step 6)

IV hydromorphone = PO morphine
1.5 mg (EDR) = 30 mg (EDR)
36 mg hydromorphone x mg Morphine TDD
TDD (1.5 mg/hr)

1) Cross multiply 36 mg x 30 mg = 1080 mg
2) Divide 1080 mg by 1.5 mg = 720 mg
3) Less 25% cross tolerance (720 x .75) = 540 mg
4) **Dose in divided times (3 doses) = 180 mg every 8 hrs**
Converting to a Different Opioid and Formulation Using Patient Controlled Analgesia (PCA)

Patient Controlled Analgesia Terms

- Patient Controlled Analgesia (PCA)
- Authorized Agent Controlled Analgesia (AACA)
- Basal rate – Continuous Infusion
- Bolus dose – demand dose – as needed dose
- Medication on Demand (MOD)
- Patient Controlled Epidural Analgesia (PCEA)
- PCA by Proxy
- Nurse Activated Dosing/Nurse Controlled analgesia (NAD)
- Family Controlled Analgesia (FCA)
- Caregiver Controlled Analgesia (CCA)

Case Study – Jeff

Jeff is a 69 y.o. gentleman with bony mets from lung cancer. He is on extended release morphine 30 mg PO every 12 hours plus morphine solution 10 mg PO every 2 hours as needed for breakthrough pain, 6 times daily. He is admitted to the hospital for pain control and significant adverse effects of pruritis and nausea. An IV is started for continuous fentanyl infusion with PCA. What is the basal rate? What is the bolus rate?
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**Equianalgesic Opioid Dosing**


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<td>Fentanyl</td>
<td>0.1-0.2 n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Hydrocgonone</td>
<td>n/a</td>
<td>30</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>1.5</td>
<td>7.5</td>
</tr>
<tr>
<td>Oxycodonone</td>
<td>n/a (in U.S.)</td>
<td>20</td>
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<tr>
<td>Oxymorphone</td>
<td>1</td>
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<td>Tramadol</td>
<td>n/a (in U.S.)</td>
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</table>

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**Jeff’s Calculated Conversion Dosing**

(Step 1)

PO Morphine 30 mg (EDR) = IV Fentanyl 0.2 mg (EDR)

TDD – 120 mg PO morphine (60 mg Scheduled + 60 mg breakthrough)

---

**Jeff’s Calculated Conversion Dosing**

(Step 2)

PO Morphine 120 mg (EDR) = IV Fentanyl 0.2 mg (EDR)

\[ \frac{x \text{ mg IV Fentanyl}}{\text{TDD}} \]

1) Cross multiply 120 mg x 0.2 mg = 24 mg

---
Jeff’s Calculated Conversion Dosing
(Step 3)

\[
\frac{30 \text{ mg (EDR)}}{120 \text{ mg PO morphine (TDD)}} = \frac{0.2 \text{ mg (EDR)}}{x \text{ mg Fentanyl (TDD)}}
\]

1) Cross multiply 120 mg x 0.2 mg = 24 mg
2) Divide 24 mg by 30 mg = 0.8 mg

Jeff’s Calculated Conversion Dosing
(Step 4)

\[
\frac{30 \text{ mg (EDR)}}{120 \text{ mg PO morphine (TDD)}} = \frac{0.2 \text{ mg (EDR)}}{x \text{ mg Fentanyl (TDD)}}
\]

1) Cross multiply 120 mg x 0.2 mg = 24 mg
2) Divide 24 mg by 30 mg = 0.8 mg
3) Less 25% cross tolerance (0.8 x 0.75) = 0.6 mg

Jeff’s Calculated Conversion Dosing
(Steps 5 & 6)

\[
\frac{30 \text{ mg (EDR)}}{120 \text{ mg PO morphine (TDD)}} = \frac{0.2 \text{ mg (EDR)}}{x \text{ mg Fentanyl (TDD)}}
\]

1) Cross multiply 120 mg x 0.2 mg = 24 mg
2) Divide 24 mg by 30 mg = 0.8 mg
3) Less 25% cross tolerance (0.8 x 0.75) = 0.6 mg
4) Dose in divided times hourly (0.6 ÷ 24) = 0.025 mg
5) Dose is in mcg = 25 mcg/ hr. Demand of 50% or 12.5 mcg every 8-10 minutes
Case Study Patricia

Patricia is a 93 y.o. lady with end stage CHF and dementia who was started on Fentanyl infusion of 25 mcg/hr with PCA dose of 12.5 mcg every 10 minutes for severe chest pain on admission. She never complains, has difficulty swallowing and has never used the PCA button. The nurses have given doses occasionally when she was appeared in pain. Overall it is reported appearance of comfort and she has no adverse effects. She is being scheduled for discharge in two days and her insurance will cover transdermal fentanyl.

Converting to Transdermal Fentanyl (TDF)

A. For 25 mcg/hr, must be opioid tolerant for a week or longer at least 60 mg Morphine/day
B. Pain should be relatively stable control
C. Fentanyl is 75-100 x more potent than morphine
   (0.6 mg Fentanyl/day = 25 mcg/hr) or
   Easy 2:1 (mg oral morphine/day to mcg/h of TDF)

Steps:
1) Apply the patch, continue or give 12 hour ER dose
2) Six hours later, reduce the current ER opioid by ½
3) Twelve hours later, stop the current ER opioid
4) Include the BTD for PRN use
### Patricia’s Converted Calculated Dosing

**Step 1**

- **IV Fentanyl**
  - \( 0.2 \text{ (EDR)} = 0.2 \text{ mg (EDR)} \)
- **TDD**
  - \( 0.6 \text{ mg Fentanyl} \times \text{mcg Fentanyl/hr TDD} \)
  - \( 25 \text{ mcg/hr} \times 24 = 600 \text{ mcg} \)

1. Fentanyl infusion: Fentanyl transdermal = 1:1

### Patricia’s Converted Calculated Dosing

**Step 2**

- **IV Fentanyl**
  - \( 0.2 \text{ (EDR)} = 0.2 \text{ mg (EDR)} \)
- **TDD**
  - \( 0.6 \text{ mg Fentanyl} \times \text{mcg Fentanyl/hr TDD} \)
  - \( 25 \text{ mcg/hr} \times 24 = 600 \text{ mcg} \)

1. Fentanyl infusion: Fentanyl transdermal = 1:1

2. 25 mcg/hr TDF, change every 72 hours

3. Breakthrough pain?

---

**Converting From Transdermal Fentanyl**
Case Study Thomas

Thomas is a 63 y.o. admitted to hospice with end stage lung cancer. He is receiving 50 mcg/hr Transdermal Fentanyl (TDF) every 3 days, with MSIR 15 mg PO every 2 hours PRN BTP. TDF is not on your formulary. Thomas is agreeable to switch to MS Contin since MSIR is working without significant adverse effects.

Converting From Transdermal Fentanyl (TDF)

Time Considerations:
1) Remove TDF, keep PRN IR opioid entire time
2) For the first 12 hours, use PRN opioid if pain occurs
3) Twelve (12) hours after patch removed, begin with 50% calculated scheduled opioid regimen
4) Twenty-four (24) hours after patch removed, increase to 100% calculated scheduled opioid regimen

Thomas Calculated Conversion Dose (Step 1)

Remembering Easy Rule of Thumb
2:1 (mg oral morphine/day to mcg/h of TDF)
TDF 50 mcg/hr = 100 mg PO morphine/day
1) Remove patch – continue MSIR 15 mg every 2 hours
### Thomas Calculated Conversion Dose (Step 2)
**Remembering Easy Rule of Thumb**
2:1 (mg oral morphine/day to mcg/h of TDF)

<table>
<thead>
<tr>
<th>TDF 50 mcg/hr = 100 mg PO morphine/day</th>
</tr>
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</table>

1) Remove patch – continue MSIR 15 mg every 2 hours
2) **Twelve (12) hours after patch removed, begin with 50% calculated scheduled opioid regimen**
   
   
   100 mg ÷ 2 = 50 every 12 hours scheduled
   
   *But we want 50% = 25 mg – continue MSIR or start 25 mg MS ER (15 mg MS Contin vs 30 MS Contin)*

### Thomas Calculated Conversion Dose (Step 3)
**Remembering Easy Rule of Thumb**
2:1 (mg oral morphine/day to mcg/h of TDF)

<table>
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<th>TDF 50 mcg/hr = 100 mg PO morphine/day</th>
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1) Remove patch – **continue MSIR 15 mg every 2 hours**
2) Twelve (12) hours after patch removed, begin with 50% calculated scheduled opioid regimen
3) **Twenty-four (24) hours after patch removed, increase to 100% calculated scheduled opioid regimen – 50 mg MS Contin every 12 hours**

---

**Methadone**
Methadone Advantages
(McPherson, 2010, Pasero et al, 2011)
• True morphine allergy
• Significant renal impairment
• Neuropathic pain
• Opioid induced hallucinations
• Refractory pain/uncontrolled pain
• Cost issues
• Oral = prolonged/long acting even via gastric tube
• Less constipating than morphine

Methadone Disadvantages
(McPherson, 2010, Pasero et al, 2011)
• Very limited prognosis
• Numerous drug-drug interactions – inhibitors/inducers
• Wide individual pharmacokinetics
• Perceived stigma
• Requires patient/family adherence
• Requires close monitoring during titration
• Not for pain emergency
• Variable dose when converting to/from other opioids

Methadone Conversion Calculations?
(McPherson, 2010, Pasero et al 2011)
• Not a linear conversion
• The higher the dose of original opioid, the more potent the methadone is
• More advanced conversion calculations – another course!

<table>
<thead>
<tr>
<th>Morphine Dose</th>
<th>Morphine:Methadone Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than or equal to 100 mg</td>
<td>3:1</td>
</tr>
<tr>
<td>101-300 mg</td>
<td>5:1</td>
</tr>
<tr>
<td>301-600 mg</td>
<td>10:1</td>
</tr>
<tr>
<td>601-800 mg</td>
<td>12:1</td>
</tr>
<tr>
<td>801-1000 mg</td>
<td>15:1</td>
</tr>
<tr>
<td>More than 1000 mg</td>
<td>20:1</td>
</tr>
</tbody>
</table>
Opioid Calculator Websites

- Chronic Pain Management Charts  
- Equivalent Opioid Calculator – Equianalgesic dosage conversion calculator  
  http://clincalc.com/Opioids/
- GlobalRPh Advanced Opioid Converter  
  http://globalrph.com/narcotics.html
- The Hopkins Opioid Program  
  http://www.hopweb.org/
- Narcotic Equivalence Converter  
  http://www.medcalc.com/narcotics.html
- Opioid Calculator  
  http://opioidcalculator.practicalpainmanagement.com/
- Opioid Dose Calculator  
  http://agencymeddirectors.wa.gov/mobile.html

Remember Joe?

Joe is a 72 y.o. gentleman with metastatic prostate cancer who is too weak to swallow his MS Contin (extended release) tablets.

1) What is/are your first concern(s)?
2) What are your possible solutions?
3) Are you going to need to convert his administration route, medication, dose?

Case Study Joe

Joe is a 72 y.o. gentleman with metastatic prostate cancer who is too weak to swallow his MS Contin tablets.

1) What is/are your first concern(s)?
   A. To manage his pain quickly, efficiently
2) What are your possible solutions?
   A. Depending on his dosing/prognosis, oral solutions, sublingual OTC, fentanyl transdermal, rectal dosing
3) Are you going to need to convert his administration route, medication, dose?
   A. Depending on his dosing/prognosis, stay with morphine if it is effective, possible fentanyl, etc.
Conclusion

- Individualize each patient/resident = Person
- Treatment plan different, cannot standardize
- Assess frequently with changes/titration/weaning
- Once stabilized management, as needed
- Prevent AND treat adverse effects
  - Serious/life threatening
    - Sedation – Pasero Opioid-Induced Sedation Scale (POSS)
    - Respiratory depression
  - Educate yourself, then educate others

References (1 of 3)


References (2 of 3)

References (3 of 3)

