

SA Palliative Care Community Pharmacy Update

A joint initiative of South Australian Palliative Care Services

Pharmacists may provide advice when converting between opioid formulations. Part 1 of Marya's case can be found [here \(129kb pdf\)](#)

Syringe Driver

Marya has deteriorated and is unable to reliably take oral or buccal medications. She has been receiving oxycodone SR 60mg twice a day with two 100mcg buccal fentanyl breakthrough doses within the last 24hours. The GP asks for advice to start a continuous subcutaneous infusion (CSCI).

Useful resources

- > [Palliative Care Therapeutic Guideline](#)
Approximate potencies of various opioids relative to 10 mg parenteral morphine
- > [AMH](#) Opioid comparative information
- > SA Palliative Care Community Pharmacy [Update #3 \(344kb pdf\)](#) & [Update #15 \(304kb pdf\)](#)

Process	Calculation
1. Calculate the total 24 hour opioid dose - include breakthrough doses <i>NB: Due to the variability of fentanyl pharmacokinetics and lack of opioid equivalence data, the prn fentanyl dose cannot be included in the total opioid calculation</i>	Regular: Oxycodone 60mg x 2 =120mg oral As required: fentanyl 100mcg x 2 = 200mcg buccal Total: Oxycodone 120mg oral
2. Convert the total 24 hour opioid dose to subcut morphine equivalence (See resources)	Oxycodone 120mg oral = morphine 60mg subcut
3. Convert the total 24 hour subcut morphine dose to the equivalent dose of the new opioid (hydromorphone)	Morphine 60mg subcut= hydromorphone 12mg subcut
4. When changing from one opioid to another, commence with 50% of the calculated equianalgesic dose <i>NB: This step reduces risk of toxicity. Any deficit in efficacy can be made up with breakthrough doses. In this case, the exclusion of prn fentanyl in the initial calculations will result in potentially more breakthrough doses to provide adequate analgesia.</i>	50% of hydromorphone 12mg subcut = hydromorphone 6mg CSCI over 24hours
5. Calculate an appropriate breakthrough dose, 1/12 to 1/6 the baseline opioid dose, each hour prn	1/6 th of hydromorphone 6mg = hydromorphone 1mg subcut prn every hour
6. Give a loading dose, equivalent to the breakthrough dose, at the start of the infusion	Hydromorphone 1mg subcut stat

Opioid Choice

The choice of parenteral opioid for Marya is influenced by the prohibitive cost of oxycodone injection (non PBS) and her previous intolerance to morphine. Hydromorphone is a suitable choice.

Monitoring

After titrating, monitor her by reviewing and titrating dose according to:

- > number of breakthrough doses required
- > pain score
- > presence of adverse effect

For more information

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This update is intended to provide practical up to date and factual information relating to pharmacy and medicines management in the setting of Palliative Care and is based on critical review of available evidence. Individual patient circumstances must be considered when applying this information. Please feel free to distribute this update further to interested colleagues.

