

Analgesia in older people

Prescribing for older patients is complex. Many older patients are frail (25-50% of people older than 84 years) - characterised by physiological decline in multiple systems, resulting in patient vulnerability to medicines. Older people are at greater risk of harm, including iatrogenic harm. This bulletin discusses the problems with analgesia in older patients, and provides prescribing guidance.

Definition of older

- Variably reported as > 65 years old, with differing age based categories proposed along the continuum of ageing.
- For the purposes of this discussion of analgesia in older people we have focused on those > 74 years old.

Definition of frailty

- Frailty is non-specific and multisystem.
- It is the cumulative effect of age-related physiological changes and specific disease states.
- It is characterised by decreased physiological reserve and impaired homeostasis, making a patient more vulnerable to minor stressors.

General prescribing-related problems in frail older people

- Multiple co-morbidities and increased vulnerability to illness.
- Impaired homeostasis and decreased physiological reserve.
- Impaired response to injury e.g. acute kidney injury.
- Increased polypharmacy.
- Increased medication non-adherence.
- Changes in pharmacokinetics and pharmacodynamics.

Pharmacokinetic (PK) changes in frail older people

- Decreased drug clearance (both renal and hepatic). This declines by ~1% per year after the age of 40 and is further compromised by disease.

Pharmacodynamic (PD) changes in frail older people

- Increased sensitivity to the effects of most drugs including analgesics.
- Decreased sensitivity to some drugs e.g. beta blockers.
- Impaired ability to compensate for adverse effects.

Consequences of the above in frail older people

- More adverse drug reactions (ADRs).
- More drug/drug interactions.
- More drug/disease interactions.

Pain in older people

- Pain is common in older people.
- Always consider non-medication pain relieving measures.
- Gabapentin and nortriptyline are also used for pain relief but are not discussed here.
- Although they are high users of analgesics (~20% for > 6 months) few clinical trials include older people.
- 45-80% of older people with pain are inadequately treated.
- Poorly controlled pain can lead to loss of function, decreased quality of life, decreased independence and increased falls, anxiety and depression.
- In chronic pain, the dosing strategy of 'start low, go slow' is useful but may be misinterpreted as 'start low, stay low' resulting in inadequate pain relief.
- In acute pain, consider a loading dose followed by maintenance doses.
- Efficacy should be balanced against the risk of adverse drug reactions - 17% of hospital admissions due to medication-related adverse reactions are due to analgesics.

Preferred Medicines List in the ePink Book - 3rd December 2015
The inhaler pictures pages in the Respiratory section of the Preferred Medicines List (PML) have been updated to include the newly funded brands of salbutamol, fluticasone, salmeterol and fluticasone/salmeterol. These are not included in the current hard copy 20th Edition.

Paracetamol

- The mechanism of action of paracetamol is unclear. It may be a prodrug whose active metabolites affect various receptors including those in the cannabinoid system.
- Regular (rather than 'when required') paracetamol can be effective in older people – sometimes as an adjunct to opioids. It is the preferred analgesic for older people with musculoskeletal pain.
- Frail older people are more at risk of paracetamol-induced hepatotoxicity. A lower dose is therefore usually used e.g. 500 mg four times a day.
- Some studies have associated long-term paracetamol use (e.g. in osteoarthritis) with cardiovascular, gastrointestinal and renal adverse effects.
- Beware of over the counter use which may already be in place.

Non-steroidal Anti-inflammatory Drugs (NSAIDs)

- NSAIDs are effective in older people but the risk of adverse effects is high e.g. gastro-intestinal bleeding and renal toxicity and they **may be best avoided**.
- Avoid in patients on anticoagulant therapy.
- If used, prescribe the lowest effective dose for the shortest possible time and monitor renal function and for other adverse effects regularly.
- Consider potential drug interactions and over the counter use which may already be in place.

Opioids

- Adverse effects from opioids in older people are common, including an increased risk of falls.
- Constipation is a major issue - co-prescribe laxatives.
- Use low starting doses especially in opioid naïve e.g.
codeine po 15-30 mg 4-6 hourly
morphine po 2.5-5 mg 4-6 hourly (up to 2 hourly in acute pain)
- Titrate to pain using regular assessment/monitoring
- In acute pain - Hospital HealthPathways – Acute Pain <http://canterbury.hospitalhealthpathways.org.nz/1569.htm>
- Assessment of abuse potential, including by family/friends, should be considered.
- *For mild to moderate pain*
 - **codeine** (although low dose morphine may be a better option) is metabolised to morphine by CYP2D6. 5-10% of patients are CYP2D6 slow metabolisers and 2-5% are hypermetabolisers. Morphine's active metabolites are renally cleared.
(NB Tramadol is not recommended as it has serotonergic adverse effects and several interactions e.g. with SSRIs.)
- *For moderate to severe pain*
 - **morphine** is CDHB's first line opioid. Remember renal clearance of the active metabolite and dose adjust appropriately.
 - **oxycodone** also has a renally cleared active metabolite but the amount produced may be small. It is used 2nd line and has a higher abuse potential.
 - **fentanyl** (often used as a patch) is metabolised by CYP3A to inactive metabolites. Initiation of fentanyl patches in opioid naïve patients is contraindicated.

