Canterbury District Health Board
Te Poari Hauora ō Waitaha

Clinical Pharmacology Bulletin

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Morphine MedChart Quick List Change

SUMMARY

- The oral morphine PRN prescriptions in the MedChart Adult Quick List are changing from q4h PRN to q2h PRN e.g. morphine 2.5-5mg q4h PRN will become morphine 2.5-5mg q2h PRN
- This reflects appropriate dosing for *most* but not *all* patients
- Increasing the dose interval should be considered for: elderly, renal impairment, cognitive impairment, non-acute pain, dosing in palliative care and outpatient use
- The initial dose is a starting point only - reviewing the patient's response is essential
- This change is scheduled for 19th April 2017

WHAT DO I NEED TO KNOW?

Reviewing patients

Empiric doses for morphine are only ever a starting point!
It is critical to review patients every time morphine is started for:

- **efficacy** – is it working? If not, increase the dose not the frequency. Remember: not all pain is opioid responsive!
- **toxicity** – is it causing harm? Adverse effects of morphine include:
  - sedation (this is the most sensitive sign of toxicity, use sedation scores to monitor)
  - hallucinations
  - confusion
  - respiratory depression
  - nausea and vomiting
  - constipation

Special patient populations

Some patient groups will need lower doses and frequency of dosing, including:

- **older patients** are more sensitive to morphine side effects and usually have liver and renal impairment, causing higher morphine plasma concentrations (for recommended adjustments for age, see acute pain in adults pathway).
- **renal failure** causes accumulation of toxic metabolites of morphine and dose adjustment is essential (see Pink Book for general advice on dose adjustment in renal impairment). Consider an alternative agent if CrCL < 30ml/min.
- **patients with cognitive impairment** are more vulnerable to neurocognitive side effects including delirium.

Special circumstances

- **non-acute pain:** longer dose intervals e.g. q4h may be more appropriate
- **regular dosing** of immediate-release morphine should remain q4-6h, the Quick List change applies only to PRN prescriptions
- **opioid tolerant** patients should have individualised dosing
- **palliative care** dosing is more variable and needs more individualised prescribing, see palliative care guidelines
- **outpatient dosing:** the MedChart Quick Lists and protocols are not designed for outpatient use. Longer dose intervals than q2h are usually advised at discharge

RATIONALE FOR CHANGE

- Oral PRN morphine has historically been given q4h. However, since the maximal effect is usually achieved well within 2 hours of ingestion, it is reasonable from first principles to give a further dose if the patient is still sore 2 hours after the first dose.
- There are currently no published studies clearly demonstrating superiority of either the q2h or q4h regimen for safety or efficacy. Choice of regimen is based on expert opinion and local guidelines.
- The majority of morphine prescribing in Christchurch is in surgical areas, where the acute pain in adults HealthPathway and corresponding Severe Acute Pain MedChart protocol are most applicable. Both of these recommend q2h PRN dosing empirically. The Quick List is changing to reflect the HealthPathway and to be applicable to the majority of patients.

FURTHER GUIDANCE

- See Hospital HealthPathways acute pain in adults, pain in cancer and palliative care and palliative care guidelines
- Seek advice from clinical pharmacists, the acute pain team or the palliative care team

The information contained within this bulletin is provided on the understanding that although it may be used to assist in your final clinical decision, the Clinical Pharmacology Department at Christchurch Hospital does not accept any responsibility for such decisions.