

SA Palliative Care Community Pharmacy Update

A joint initiative of SA Palliative Care Services and Ambulatory & Primary Health

Community pharmacists may be presented with prescriptions for medication to be administered via a 'syringe driver' for palliative care patients being cared for at home.

Types of Syringe Drivers

A 'syringe driver' is a small, portable battery operated infusion pump used to administer medications by continuous subcutaneous infusion (CSCI). Two main types of syringe driver are currently in use; the Graseby® MS26 and the NIKI® T34.

The Graseby® has been in use since the 1970's but manufacture was discontinued several years ago. The infusion rate is calibrated by length (mm/24 hours) which has been found to contribute to medication errors. A lock-box is available but the pump is easily tampered with, adding the risk of undetected interference.

Many organizations are now using the NIKI® T34, a slightly larger and heavier pump, but still very portable. It is a volumetric pump (rate calculated in ml/hour), is tamper-resistant, and automatically calculates the infusion rate based on the syringe size, brand and infusion time.

Drugs used in syringe drivers

CSCI administration is utilised when the oral route is not appropriate and more stable blood levels are desired, including:

- > Loss of patient ability to swallow;
- > Uncontrolled vomiting;
- > Severe diarrhoea (poor oral absorption); and
- > Rapidly escalating, uncontrolled pain.

Drugs that are non-irritant to the tissue and available in a parenteral formulation may be appropriate for CSCI use. Most of this use is off-label and/or outside PBS indications. Drugs can be administered by CSCI as single agents or in combination (refer to useful resources below for assessment of compatibility).

Opioids – Morphine, hydromorphone and oxycodone are most frequently used.

Anti-emetics – Metoclopramide and/or haloperidol are the main drugs of choice. Other agents may be used by specialists.

Benzodiazepines – Midazolam is often given by CSCI. Clonazepam may also be used but can be irritant and because it is longer acting once or twice daily SC administration may be appropriate.

Anti-secretory agents – Hyoscine butylbromide, hyoscine hydrobromide and glycopyrronium bromide may be used to reduce/prevent secretions causing noisy breathing in terminally ill patients.

Diluents: Sodium Chloride 0.9% for injection or Water for Injection are used as diluents with most of the drugs listed above in usual doses, although there may be problems with high doses of some agents. Refer to specialist sources for information on compatibility.

Useful resources

- > Online learning package:
<http://www.health.qld.gov.au/cpcpre/subcutaneous/home.asp>
- > Care Search Resources:
<http://www.caresearch.com.au/caresearch/ProfessionalGroups/NursesHubHome/Clinical/PracticalCaringIssues/SyringeDrivers/tabid/1540/Default.aspx>

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.

