

Palliation from the Doctor's Bag

Medication and form	Palliative care indication	Mode of action	Comment
Adrenaline Injection 1 mg/mL (1 in 1000)	Malignant bleeding	Vasoconstriction	Can be used topically (ie. Adrenaline soaked gauze) for small volume bleeding at superficial sites otherwise difficult to control (eg. Fungating wounds)
Atropine Injection 600 µg in 1 mL	Noisy breathing/terminal secretions ('death rattle')	Anticholinergic – may reduce bronchial secretions	Side effects of atropine can be distressing for conscious or semiconscious patients. Terminal secretions do not always require treatment. Treatment is often ineffective once secretions are well established. Repositioning may reduce breathing noises.
Chlorpromazine Injection 50 mg in 2 mL OR Haloperidol Injection 5 mg in 1 mL	Nausea Delirium/acute confusional state	Antipsychotic with antiemetic action via dopamine antagonism at the chemoreceptor trigger zone	Haloperidol preferred as it can be given subcutaneously and is less sedating than chlorpromazine, and (unlike metoclopramide) has no prokinetic effect
Dexamethasone Injection 4 mg in 1 mL OR Hydrocortisone Injection 100 mg in 2 mL or 250 mg in 2 mL	Central causes of nausea and vomiting, raised intracranial pressure, malignant spinal cord compression, neuropathic pain or other poorly controlled pain, superior vena cava obstruction, dyspnoea caused by lymphangitis	Corticosteroids – act to reduce malignant inflammation and cytokine production, reduce perineural oedema, mechanism of antiemetic effect not known	Dexamethasone is the more commonly used drug for these indications, but equipotent dose of hydrocortisone is a reasonable alternative. High dose dexamethasone (16 mg daily) may prevent long term neurological consequences of some spinal cord compressions if started immediately. If active treatment of cord compression or raised intracranial pressure is appropriate, it should be instituted without delay and further investigations urgently arranged
Diazepam Injection 10 mg in 2 mL	Agitation and restlessness, myoclonus, seizures, muscle spasm anxiety from dyspnoea or other difficult symptoms	Benzodiazepine – GABA agonist, effective as anticonvulsant, muscle relaxant and anxiolytic	Benzodiazepines can worsen delirium. If delirium is suspected an antipsychotic should be used in preference to a benzodiazepine initially. Myoclonus suggests renal or hepatic encephalopathy or neuroexcitatory effects of medications including accumulating opioid metabolites. Further investigation may be appropriate depending on the stage of the patient's disease. Benzodiazepines may precipitate or worsen hepatic encephalopathy due to cirrhotic liver disease
Metoclopramide Injection 10 mg in 2 mL OR Prochlorperazine	Nausea	Antiemetics which act by dopamine antagonism at the chemoreceptor trigger zone; metoclopramide	Metoclopramide is preferred as it can be given subcutaneously; contraindicated in suspected high bowel obstruction; is also prokinetic and increases tone in the gastro-oesophageal sphincter
Morphine Injection 15 mg in 1 mL OR 30 mg in 1 mL	Pain Dyspnoea, acute pulmonary oedema	Opioid agonist – mode of action in relieving dyspnoea not known, may act by modulating ventilatory drive centrally	Morphine has been shown to relieve dyspnoea in end stage respiratory disease and should not be withheld from distressed patients because of underlying lung disease. Nebulised morphine has not been shown to be effective – the parenteral route is most appropriate in an emergency
Promethazine Injection 50 mg in 2 mL	Nausea (vestibular type in particular) Itch	Antihistamine – acts on vestibular apparatus and vomiting centre by H1 receptor antagonism	Sedating effects of promethazine can also be beneficial in contributing to symptom control for selected patients. Considerable patient variability in response

To achieve the goal of optimal comfort in the last days of life, appropriate medications can be used safely to manage common and anticipated symptoms and syndromes associated with the last days of life. These guidelines provide general advice only, and the prescribing physician is responsible for determining the clinical appropriateness of all medications.

Minimum medication set designed to managed the anticipated potential symptoms of pain, nausea/vomiting, anxiety/agitation and excessive respiratory secretions that are commonly encountered (individually or in combination) in the last days of life

Pain

Morphine Sulphate is prescribed PRN in anticipation of pain. The recommended starting dose is dependent on the opioid status of the patient. If the patient is opioid naive, then the recommended initial dose is 2.5mg subcutaneously 2 hourly PRN. This does is reviewed on the basis of efficacy. If >3 doses are given in a 24 hour period then regular subcutaneous administration 4th hourly or a continuous subcutaneous infusion via syringe driver may be considered. However, a PRN order will still be required to manage breakthrough pain.

If the patient has been receiving opioid analgesia, then the existing opioid order is continued by regular subcutaneous administration (converting to morphine equivalent where indicated). The recommended concurrent PRN subcutaneous dose is one sixth (1/6) of the total parenteral regular dose. This dose is administered 2 hourly PRN and is reviewed on the basis of efficacy.

Nausea / Vomiting

Haloperidol is prescribed PRN in anticipation of episodes of **nausea and/or vomiting**. Other anti-emetics may be more appropriate in certain clinical situations.

❖ The recommended initial dose is **0.5mg subcutaneously 6 hourly PRN**. This dose is reviewed on the basis of efficacy.

Anxiety / Agitation

Midazolam is prescribed PRN in anticipation of **anxiety and/or agitation** associated with the last days of life.

❖ The recommended initial dose is **2.5mg subcutaneously 2 hourly PRN**. This dose is reviewed on the basis of efficacy.

❖ **If more than 3 doses are given in a 24-hour period a continuous infusion of Midazolam should be considered.**

Alternatively the substitution of a regularly administered long acting benzodiazepine subcutaneously (eg Clonazepam) may be appropriate.

Excessive Respiratory Secretions

Glycopyrrolate is prescribed PRN in anticipation of **excessive respiratory secretions** associated with the last days of life. (**Glycopyrrolate is advised as this does not cross the blood-brain barrier and therefore does not add to delirium. Hyoscine Hydrobromide does cross the blood-brain barrier and can cause confusion and sedation**)

❖ The recommended initial dose is **200 micrograms subcutaneously 4 hourly PRN**. This dose is reviewed on the basis of efficacy and can be added to a continuous infusion (**600 – 1200 mcg per day, subcutaneous**)

NB: Hyoscine Hydrobromide can also be administered – dose is **400 micrograms subcutaneously 4 hourly PRN**. This dose is reviewed on the basis of efficacy and can be added to a continuous infusion (**800 – 1600 mcg per day, subcutaneous**) (NB: this can cause confusion and sedation)

Refs: Adapted from the Central Coast Palliative Care Service Guidelines for use of PRN medication for the management of symptoms and syndromes of the dying process and the Therapeutic Guidelines for Palliative Care (2005) Version 2

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