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ANTICIPATORY PRESCRIBING FOR DYING PERSON – STANDARD DRUGS

DRUG	FORMULATION	SIZE OF AMPOULE	AMOUNT TO PRESCRIBE	USUAL PRN DOSE	INITIAL 24 HOUR CSCI DOSE	RECOMMENDED MAXIMUM DOSE	GUIDANCE FROM/ COMMENTS
MORPHINE For pain in opiate naïve person • Note doses will be higher if person already established on opioids • Seek advice if any concern about converting oral doses	10mg/1ml ampoule	1ml	5 (five) ampoules	5mg hourly subcutaneously	10-20mg	• If 3 or more prn doses required seek medical review • Consider syringe pump if needed 2 or more doses in 24 hours • No ceiling dose – review frequently and titrate dose according to response	• PCF5 (Palliative Care Formulary 5th edition) • L&SC Palliative & End of Life Prescribing Guidelines 2014 • East Lancashire Medicines Management Board (ELMMB) 2015
MORPHINE For breathlessness	10mg/1ml ampoule	1ml	5 (five) ampoules	2.5mg 4 hourly subcutaneously	5-10mg	Consider syringe pump if 2 or more doses needed in 24 hours	• ELMMB 2015
MIDAZOLAM For agitation & terminal restlessness	10mg/2ml ampoule (5mg/ml)	2 ml	5 (five) ampoules	2.5mg 2 hourly subcutaneously	10-20mg	• Consider syringe pump if 3 or more doses needed in 24 hours • Seek advice from Palliative Care Helpline when 24 hour dose reaches 30mg	• PCF5 says can give hourly prn • ELMMB 2015 • L&SC Palliative & End of Life Prescribing Guidelines say 6 hourly prn
HYOSCINE HYDROBROMIDE For respiratory tract secretions	400micrograms/ 1ml ampoule	1ml	5 ampoules	400micrograms 2 hourly subcutaneously	1200 micrograms	2400micrograms	• Start syringe pump when first stat dose given to reduce build up of new secretions • Paradoxical agitation can occur • ELMMB 2015
CYCLIZINE For nausea and vomiting	50mg/1ml ampoule	1ml	5 ampoules	50mg 8 hourly subcutaneously	150mg	150mg	• Use water for injection diluent in syringe pump • Incompatible with oxycodone • ELMMB 2015

Author: Dr Elizabeth Bailey, Medical Director, East Lancashire Hospice. November 2015

ANTICIPATORY PRESCRIBING FOR DYING PERSON – ALTERNATIVE DRUGS TO CONSIDER

DRUG	FORMULATION	SIZE OF AMPOULE	AMOUNT TO PRESCRIBE	USUAL PRN DOSE	INITIAL 24 HOUR CSCI DOSE	RECOMMENDED MAXIMUM DOSE IN 24 HOURS	GUIDANCE FROM/ COMMENTS
GLYCOPYYRONIUM For respiratory tract secretions	200 micrograms/1ml ampoule	1ml	5 ampoules	200 micrograms 2 hourly subcutaneously	600 micrograms	1200micrograms	• Less sedative than Hyoscine Hydrobromide • ELMMB 2015
HALOPERIDOL	5mg/ml ampoule	1ml	5 ampoules	1.5mg sc 4-6 hourly	5mg	10mg • Seek advice if needing > 5mg/24hours	• ELMMB 2015
LEVOMEPROMAZINE For nausea and vomiting	25mg/1ml ampoule	1ml	5 ampoules	6.25mg sc 4 – 6 hourly	Titrate up according to response	25mg	• Sedative • Long acting – can be given by bolus sc injection 1-2 x in 24hours
LEVOMEPROMAZINE For terminal restlessness and agitation	25mg/1ml	1ml	5 ampoules	6.25mg – 12.5mg sc hourly	Titrate up according to response	• Much higher doses may be needed for terminal restlessness – up to 300mg • Seek advice from Palliative Care helpline	• Useful in addition to midazolam if restlessness not settled • PCF5
OXYCODONE For pain in opiate naïve person with impaired renal function Note doses will be higher if person already established on opioids	10mg/1ml ampoule	1ml	5 ampoules	2.5mg hourly sc	5-10mg	• If 3 or more prn doses required seek medical review • Consider syringe pump if needed 2 or more doses in 24 hours	• No ceiling dose – review frequently and titrate dose according to response • Incompatible with cyclizine in syringe pump

NOTES

- Anticipatory drugs may be indicated for those who are in their last weeks or months of life, not just the last days of life e.g if difficulties swallowing are anticipated
- Remember to sign controlled drugs and state quantities in WORDS and FIGURES
- An authorisation form as well as the prescription may be required for the administration of drugs at home
- Not all of the above medication may be indicated
- A quantity of FIVE ampoules is recommended, however, the doses and quantities may need to be adjusted depending on the patient's existing medication
- Remember to prescribe 10 ampoules of 10ml water for injection along with anticipatory medication for use as the diluent with a syringe pump
- Midazolam in doses as for agitation and terminal restlessness can be used with morphine to reduce the distress of severe breathlessness
- Midazolam in bigger doses (10mg sc) may be required if seizures are likely
- There are differences in recommended frequency of administration for Midazolam depending on the guidelines followed – it is important that the dying person receives what is needed when it is needed to control symptoms – contact the helpline if you have any concerns
- If the person is using transdermal opioids (fentanyl or buprenorphine) for pain control, keep the patch on and remember to change it at the scheduled times. Use subcut opioid for breakthrough pain; if needed regularly start CSCI in addition to patch; ensure prn opioid adequate for both patch and CSCI
- Remember the 24 hour Palliative Care Professional Helpline if you need advice **07730639399**

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Drugs for Nausea and Vomiting (N & V)

Always check for potential drug interactions and syringe pump drug compatibilities

Name of Drug	Dose	Class of drug	Site of action	Useful for	Side effects	Comments
Cyclizine	50mg PO/SC tds or 75-150mg CSCI/24 hours If on maximum dose can use haloperidol 0.5-1.5mg SC 8 hourly prn for 'breakthrough' N & V	Antihistamine & antimuscarinic	CNS VC	N & V related to raised intracranial pressure, bowel obstruction, motion sickness, intraabdominal organ damage	Dry mouth, blurred vision, constipation, drowsiness, urinary retention, tachycardia (caution in heart failure)	Dilute with WFI. Crystalises with saline. Incompatibility with oxycodone, diamorphine, ketorolac + others. Action blocked by metoclopramide and domperidone – do not combine
Dexamethasone	4-8mg PO/SC daily Up to 16mg/day for bowel obstruction	Corticosteroid	CNS cerebral cortex	Chemo induced nausea, raised intra cranial pressure, bowel obstruction, chronic nausea (2nd line)	Many – related to dose, timing of administration and duration of treatment. Include muscle wasting, fluid retention, confusion, insomnia, GI bleeding	Caution with sepsis, with NSAID use, diabetes. Balance risks v benefit
Domperidone	10mg TDS Maximum daily dose 30mg By rectum 30mg BD-QDS Injection not available Note:30mg suppository equivalent to 10mg oral	D2 Antagonist	CTZ and prokinetic effect at gastro-oesophageal junction and gastroduodenal junction. Stimulates gastric emptying	Gastric stasis, functional bowel obstruction (failure of gut motility), partial bowel obstruction (eg flatus PR, no colic) N & V due to medication for Parkinson's disease	Contra indicated in bowel obstruction. Cardiac- see BNF for important safety information Dry mouth, headache, colic, gynaecomastia	Does not cross blood brain barrier. Useful in people with Parkinson's disease. Do not combine with cyclizine. Absorption reduced by antacids and PPIs. PR preparation available
Glycopyrronium	200 micrograms SC 4 hourly prn or 600-1200 micrograms CSCI/24hours Maximum dose 2400 micrograms in 24 hours	Antimuscarinic	Works on GI tract to reduce secretions – reduces volume of vomit	Bowel obstruction, large volume vomits	Dry mouth, blurred vision, drowsiness, dizziness, inhibition of sweating, tachycardia, urinary retention	Does not cross blood brain barrier. Less likely to cause confusion, sedation or agitation than hyoscine hydrobromide
Haloperidol	Start with 0.5-1.5mg PO/SC stat and at bedtime Usual maintenance dose 1.5-3mg at bedtime or 0.5-1.5mg BD CSCI 3-5mg in 24 hours (PCF5 - maximum dose of 10mg in 24 hours)	D2 Antagonist	CTZ	Opioid induced nausea, other drug induced N & V, chemical causes of N & V -hypercalcaemia, uraemia	Parkinson's disease like effects (extrapyramidal), hypotension, constipation, dry mouth, headache	Commonly used in combination with cyclizine. Can exacerbate Parkinson's disease. SC route more potent than same dose orally (ratio 3:2 oral:SC)
Hyoscine Butylbromide	20mg SC stat and 60mg CSCI/24 hours If necessary increase to 120mg/24 hours. Review if higher doses needed (maximum reported dose 300mg/24 hours)	Antimuscarinic	Works on GI tract to reduce secretions and reduces smooth muscle spasm	Bowel obstruction with colic	Dry mouth, blurred vision, drowsiness, dizziness, inhibition of sweating, tachycardia, urinary retention	Poor absorption orally. May take up to 3 days to see full benefit.

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Drugs for Nausea and Vomiting (N & V)

Name of Drug	Dose	Class of drug	Site of action	Useful for	Side effects	Comments
Leveomepromazine	6.25mg PO/SC stat, at bedtime and prn 8 hourly (use a quarter of a 25mg tablet) Or 6.25-12.5mg CSCI over 24 hours. Can increase to maximum 25mg in 24 hours Doses above 25mg not any more effective for N & V	Dopamine antagonist	CNS VC	N & V of unknown cause, chemical causes, intractable vomiting	Sedation, hypotension, dry mouth, weakness	Broad spectrum. Replaces other antiemetics – do not give as well as other antiemetics unless an antisecretory drug needed too. Much bigger doses can be used for terminal agitation
Lorazepam	0.5mg PO/SL 3 hourly prn maximum dose 4mg in 24 hours	Benzodiazepine	CNS cerebral cortex	N & V associated with anxiety and chemotherapy	Drowsiness, confusion, dizziness, fatigue Care re risk of falls due to sedation	Usually used in combination with other antiemetics. Does have specific antiemetic effect – not just sedative
Metoclopramide	10mg tds PO 30-60mg CSCI/24 hours Maximum 100mg/24hours CSCI	D2 antagonist and 5HT4 agonist	GI tract – prokinetic effect	Gastric stasis, functional bowel obstruction (failure of gut motility), partial bowel obstruction (eg flatus PR, no colic)	Contra indicated in bowel obstruction. Dry mouth, headache, colic, gynaecomastia, extrapyramidal symptoms	Restrictions on dose and use because of risks of iireversible movement disorders do not apply in palliative care. Do not combine with cyclizine
Nabilone	1mg BD increased to 2mg BD if necessary starting night before chemotherapy- continue for 48 hours after chemotherapy	Cannabinoid	CNS cerebral cortex	Chemotherapy related N & V only when conventional therapy failed	Drowsiness, euphoria, vertigo, dry mouth, ataxia	Specialist use only (usually oncologist)
Octreotide	Start with 250-500micrograms CSCI/ 24 hours Increase dose in steps if necessary to 1000micrgrams/24hours	Somatostatin analogue	GI tract – antisecretory effect and other effects	Bowel obstruction – reduces volume of vomits	Headache, dizziness, dehydration, anorexia, impaired glucose tolerance	Seek specialist advice. Multi dose vial available. Caution in diabetes – increased risk of hypoglycaemia
Ondansetron	8mg PO/SC bd – tds or 16-24mg CSCI/24 hours Limit dose to 8mg/24 hours in liver impairment	5HT3 antagonist	CNS CTZ	Chemotherapy related N & V, radiotherapy, post bowel surgery, inflammation and damage to bowel when 5HT3 released	Headache, constipation, flushing	Limited range of action – only effective in conditions where excessive amounts of 5HT3 released

Abreviations: CNS = Central Nervous System; VC = Vomiting Centre; CTZ = Chemoreceptor Trigger Zone; GI = Gastrointestinal; D = Dopamine 5HT3 = 5 hydroxytryptamine type 3; OD = once a day; BD = twice a day, TDS = 3 times a day; PO = by mouth; SL = Sublingual; SC = Subcutaneous; CSCI = Continuous Subcutaneous Infusion; PCF5 = Palliative Care Formulary 5th Edition; prn = as required; BNF = British National Formulary

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East Lancashire Hospice 24 hour Palliative Care Professional Helpline: 07730639399