

Anticipatory prescribing avoids delays in treating the most common symptoms at the end of life, improves symptom control and may prevent unwanted admissions to Hospital or Hospice IPU.

‘Just in Case’ (JIC) boxes are a small part of anticipatory prescribing, and are a system to improve the security and audit trail of medications prescribed.

JIC boxes are only to be used in patients own homes, and **not** other care settings.

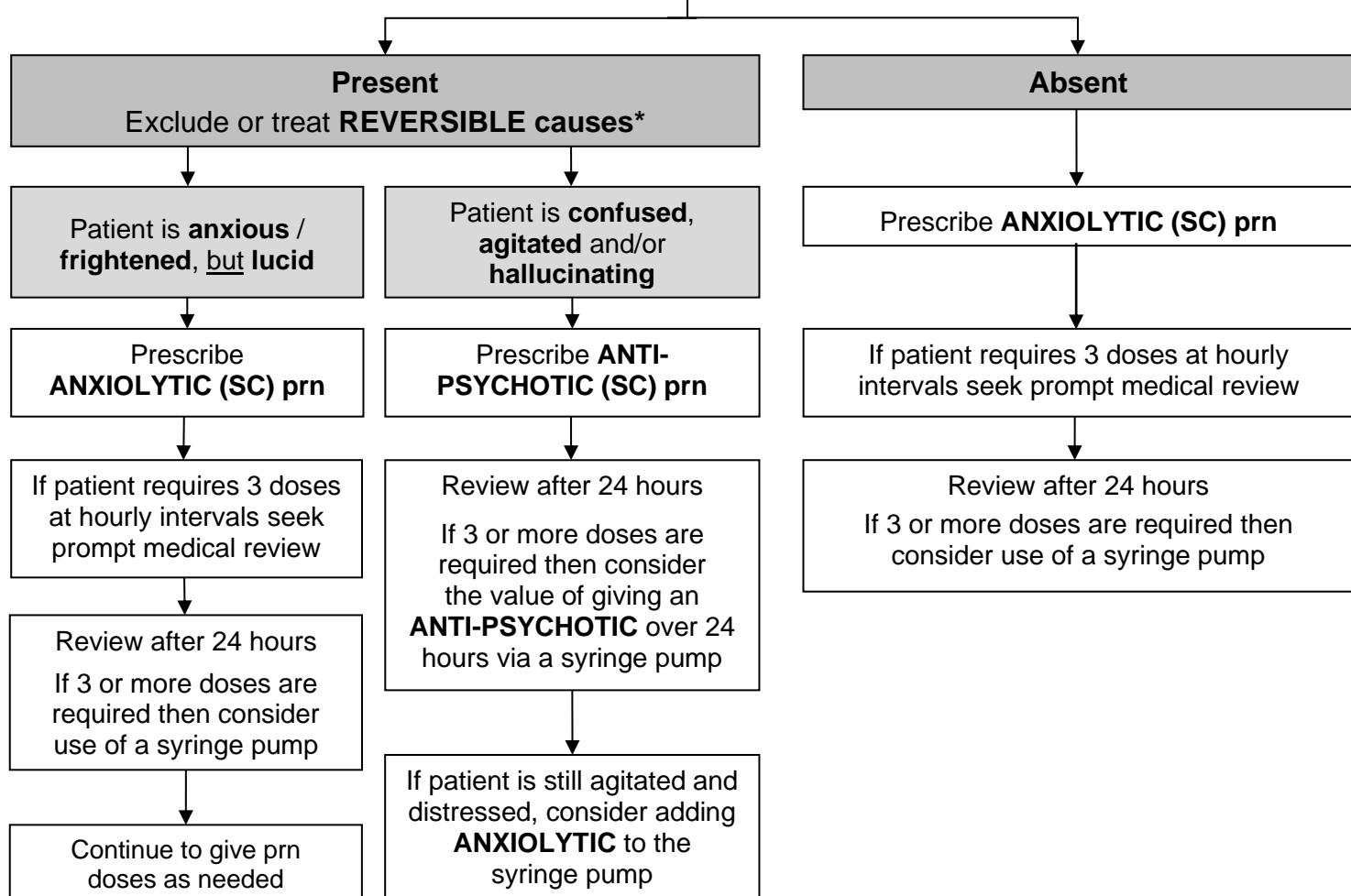
Refer to [Symptom management of adult palliative care patients](#) for advice on medications and doses recommended, the below table gives suggestions on quantities to prescribe if indicated.

Symptom	Medication group	Medication and dosage form (refer to algorithms)	Suggested quantity ¹
Agitation	Anti-psychotic	Haloperidol 5mg/mL injection OR Levomepromazine 25mg/mL injection	5 ampoules
Anxiety	Anxiolytic	Midazolam 10mg/2mL injection	5 (Five) ampoules
Breathlessness	Opioid	Morphine 10mg/mL injection OR Oxycodone 10mg/mL injection	5 (Five) ampoules
Nausea and vomiting	Anti-emetic	Cyclizine 50mg/mL injection OR Haloperidol 5mg/mL injection ² OR Hyoscine BUTYLbromide 20mg/mL injection OR Levomepromazine 25mg/mL injection ² OR Metoclopramide 10mg/2mL injection OR Ondansetron 4mg/2mL injection	5 ampoules or use supply prescribed for agitation ²
Pain	Opioid	Morphine 10mg/mL injection OR Oxycodone 10mg/mL injection	Use supply prescribed for breathlessness
Respiratory secretions	Anti-secretory	Glycopyrronium bromide 200 micrograms/mL injection	10 ampoules
Flush / Diluent	N/A	Water for Injections (10mL), OR Sodium Chloride 0.9% (10mL)	10 ampoules
Crisis dose	Only prescribe if patient at risk of seizure and/or bleed	Midazolam 10mg/2mL injection	Use supply prescribed for anxiety
		Midazolam 10mg/2mL pre-filled oramucosal syringe	2 pre-filled syringes

¹**Suggested quantities** are a guide only, the amount and/or formulation prescribed should be adjusted if the patient is:

- receiving regular doses of injectable medications
- receiving high doses of injectable medications
- prescribed a syringe pump

Prescribers must complete the anticipatory prescribing medication administration record **AND** Health Insurance prescription form (primary care patients) **OR** HCS discharge prescription (HCS in-patients)



Anti-psychotic	When to use	PRN Dose (SC)	Other comments
Haloperidol	Use for patients who are confused, agitated and/or hallucinating	1mg to 2.5mg 4 hourly (max 10mg in 24 hours)	Avoid in Parkinson's disease and Lewy Body Dementia Caution in epilepsy at higher doses
Levomepromazine		12.5mg 4 hourly (max 50mg in 24 hours) Elderly, frail patients: 6.25mg to 12.5mg 4 hourly (max 50mg in 24 hours)	More sedative Caution in patients at risk of falls (can cause postural hypotension) Lowers threshold for convulsions Avoid in epilepsy, Parkinson's disease and Lewy Body Dementia
Anxiolytic	Indication	PRN Dose (SC)	Other comments
Midazolam	Use for patients who are anxious, frightened but lucid	2.5mg to 5mg hourly (max 30mg in 24 hours)	Add to antipsychotics for acute distress, or if patient is a severe risk to themselves or others and non-pharmacological methods are unsuccessful

Supporting Information:

Exclude or treat **REVERSIBLE causes***, e.g. pain, alcohol withdrawal, hypercalcaemia, infection, opioid toxicity, urinary retention or constipation.

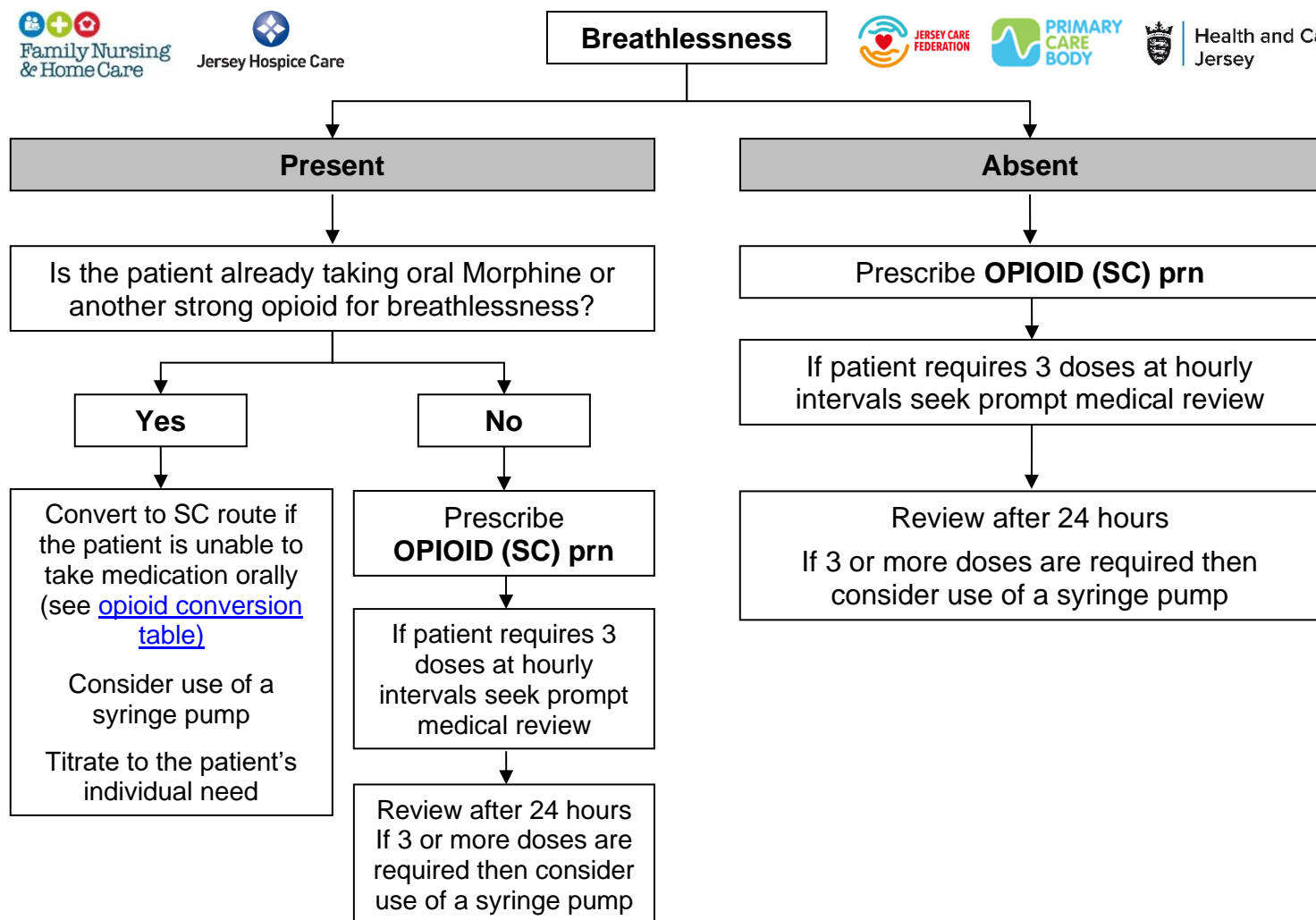
If a dose range is prescribed always commence at the lower dose.

Treatment of agitation and anxiety does not require the use of opioids **unless** it is thought to be caused by pain.

If using either Levomepromazine or Haloperidol for the management of nausea and vomiting this should be taken into account when titrating doses for agitation and restlessness.

Consider dose reduction for the elderly, frail or patients with dementia.

In patients with Parkinson's disease, do not use antipsychotics, use a benzodiazepine if required.



Opioid	When to use	PRN Dose (SC)	Other comments
Morphine	First line (unless patient already takes Oxycodone)	1.25mg to 2.5mg hourly (opioid naïve)*	Avoid in renal impairment (eGFR < 30mL/min)
Oxycodone	Patient already taking oral Oxycodone Renal impairment (eGFR < 30mL/min)	1.25mg hourly (opioid naïve)*	Avoid in renal failure (eGFR < 10mL/min), except for breakthrough doses
Diamorphine	Morphine dose in syringe pump > 300mg Seek specialist advice if Diamorphine indicated	Seek specialist advice	Avoid in renal impairment (eGFR < 30mL/min) Useful if Morphine volume too large to fit in syringe
Alfentanil	Renal failure (eGFR < 10mL/min) Seek specialist advice if Alfentanil indicated		Alfentanil has a short half-life Use Oxycodone for breakthrough doses

Supporting Information:

If the patient is breathless **and** anxious, consider Midazolam 2.5mg SC hourly prn.

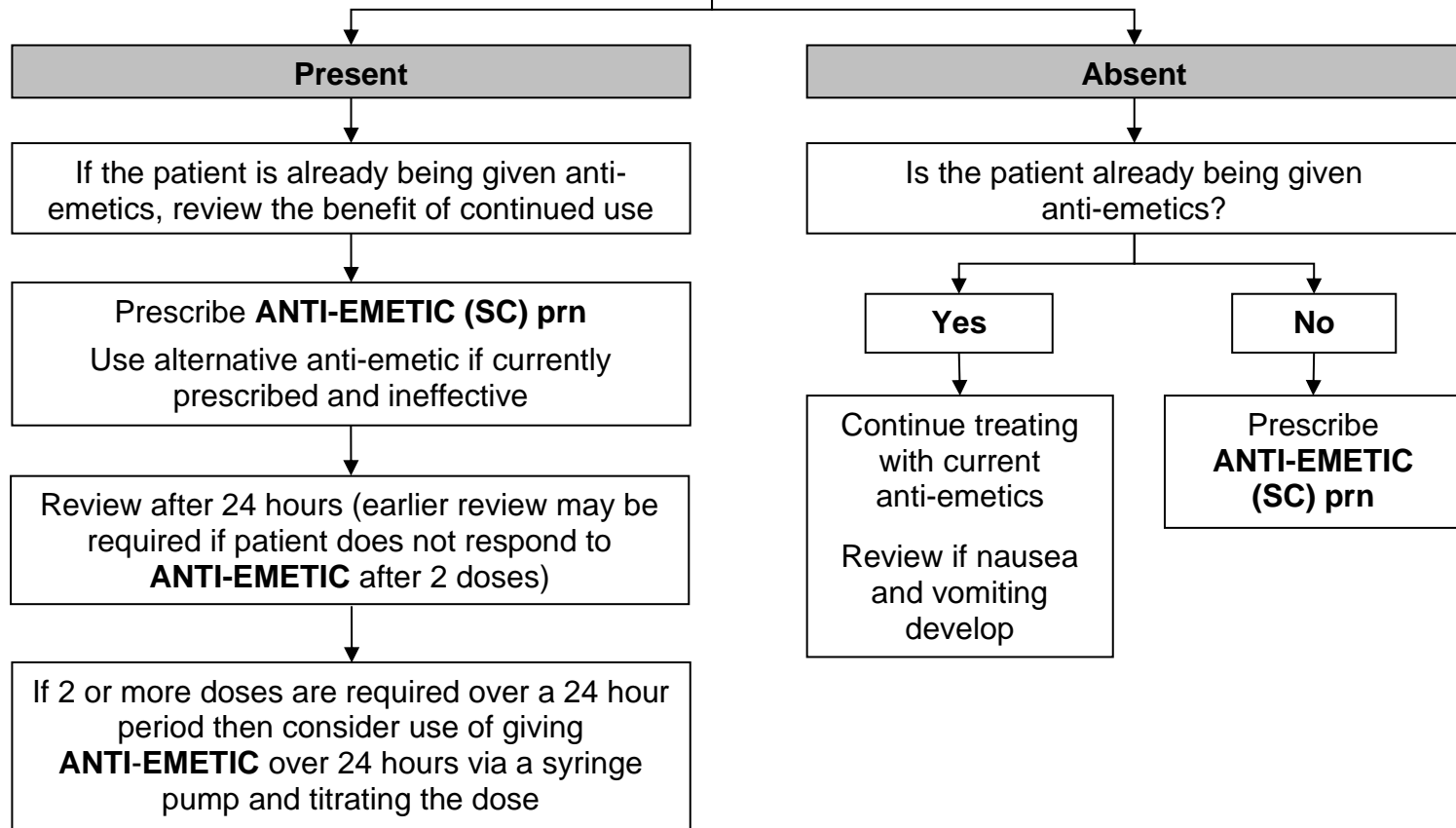
*For conversion of strong opioids into a syringe pump / prn doses, refer to the [opioid conversion table](#).

If a dose range is prescribed always commence at the lower dose.

For breakthrough doses prescribe a prn dose of opioid which is 1/6th of total 24 hour dose for breathlessness (i.e. the equivalent of Morphine 30mg SC via a syringe pump over 24 hours = 5mg SC hourly prn).

If using an opioid for pain management take this into account when titrating opiates for breathlessness.

Consider dose reduction for the elderly, frail or patients with dementia and mild / moderate renal impairment (avoid Morphine / Diamorphine if eGFR < 30mL/min).



Anti-emetic	When to use	PRN Dose (SC)	Other comments
Cyclizine	Raised intracranial pressure Intestinal obstruction	50mg TDS (max 150mg in 24 hours)	Avoid in severe heart failure Can cause skin irritation when given SC
Haloperidol	Metabolic or drug induced	0.5mg to 1.5mg 4 hourly (max 5mg in 24 hours)	Avoid in Parkinson's disease and Lewy Body Dementia Caution in epilepsy at higher doses
Hyoscine BUTYLbromide	Intestinal obstruction Intestinal colic	20mg 4 hourly (max 120mg in 24 hours)	Does not cross blood-brain barrier (BBB) so should not cause sedation / confusion
Levomepromazine	Broad spectrum anti-emetic	5mg 4 hourly (Max 25mg in 24 hours)	More sedative. Caution in patients at risk of falls (can cause postural hypotension) Lowers threshold for convulsions Avoid in epilepsy, Parkinson's disease and Lewy Body Dementia
Metoclopramide	Gastric stasis	10mg TDS (Max 30mg in 24 hours)	Avoid in bowel obstruction with colic Avoid with anticholinergic drugs, in Parkinson's disease/Lewy Body Dementia
Ondansetron	Chemotherapy Radiotherapy	4mg to 8mg TDS (max 24mg in 24 hours)	Avoid prolonged use (> 5 days) as causes constipation

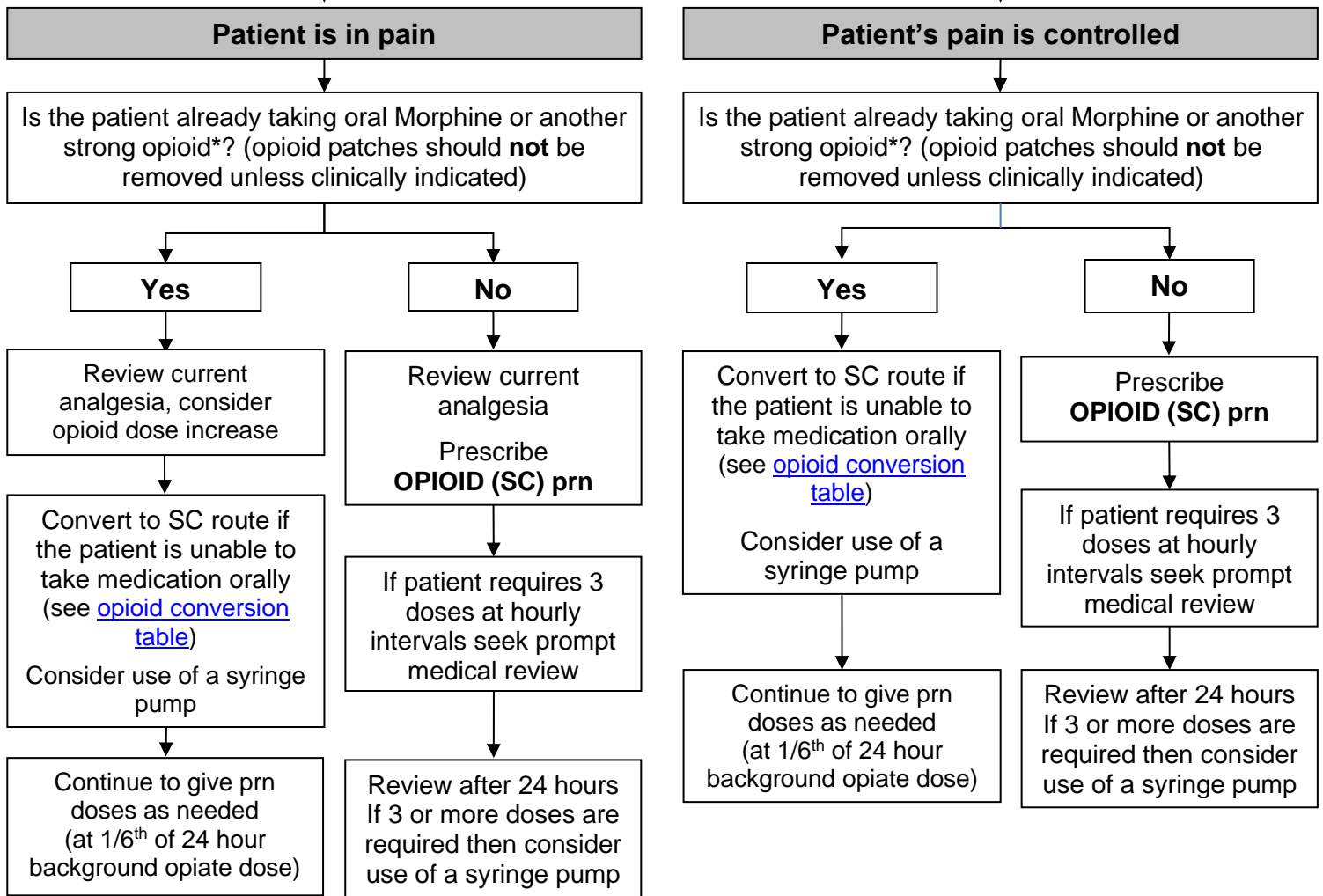
Supporting Information:

Exclude or treat **REVERSIBLE** causes, then tailor your prescribing accordingly.

Use the subcutaneous route if patient is vomiting, or the oral route has not worked.

If using either Levomepromazine or Haloperidol for the management of agitation and restlessness this should be taken into account when titrating doses for nausea and vomiting.

Consider dose reduction for the elderly, frail or patients with dementia.



Opioid	When to use	PRN Dose (SC)	Other comments
Morphine	First line (unless patient already takes Oxycodone)	2.5mg to 5mg hourly (opioid naïve)*	Avoid in renal impairment (eGFR < 30mL/min)
Oxycodone	Patient already taking oral Oxycodone Renal impairment (eGFR < 30mL/min)	1.25mg to 2.5mg hourly (opioid naïve)*	Avoid in severe renal failure (eGFR < 10mL/min), except for breakthrough doses
Diamorphine	Morphine dose in syringe pump >300mg Seek specialist advice if Diamorphine indicated	Seek specialist advice	Avoid in renal impairment Useful if morphine volume too large to fit in syringe
Alfentanil	Renal failure (eGFR < 10mL/min) Seek specialist advice if Alfentanil indicated		Alfentanil has a short half-life Use Oxycodone for breakthrough doses

Supporting Information:

*For conversion of strong opioids into a syringe pump / prn doses, refer to the [opioid conversion table](#).

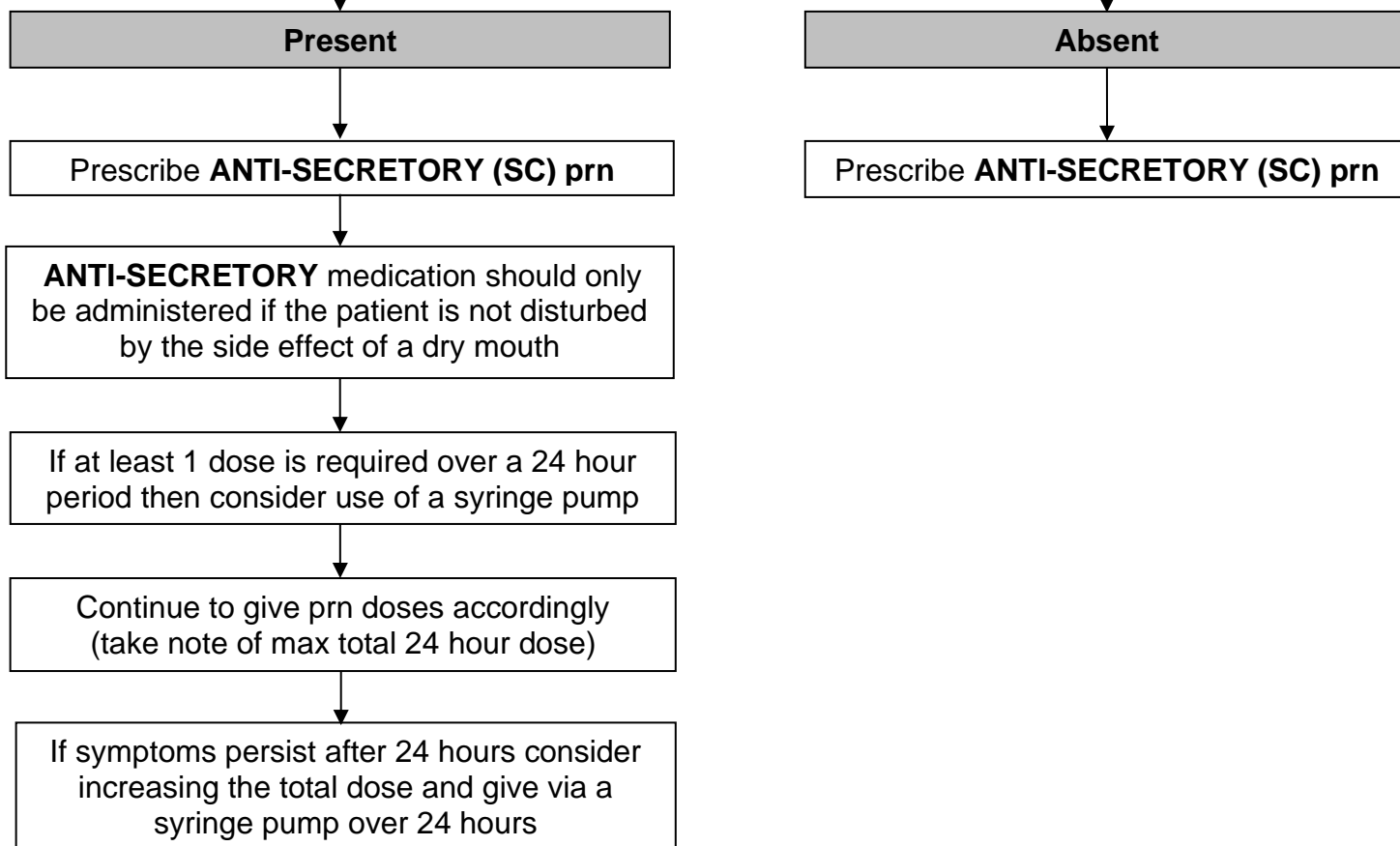
If a dose range is prescribed always commence at the lower dose.

For breakthrough doses prescribe a prn dose of opioid which is 1/6th of total 24 hour dose for pain (i.e. the equivalent of Morphine 30mg subcutaneously over 24 hours = 5mg SC hourly prn).

This may need to be reduced to 1/10th when using higher doses.

If using opiates for breathlessness management take this into account when titrating opiates for pain.

Consider dose reduction for the elderly, frail or patients with dementia and mild / moderate renal impairment (avoid Morphine / Diamorphine if eGFR < 30mL/min).



Anti-Secretory	When to use	PRN Dose (SC)	Other comments
Glycopyrronium	First line	200 microgram 4 hourly (max 1.2mg in 24 hours)	Does not cross blood-brain barrier (BBB) so should not cause sedation / confusion
Hyoscine BUTYLbromide	First line if patient also has intestinal obstruction	20mg 4 hourly (max 120mg in 24 hours)	
Hyoscine HYDRObromide	Only to be used if Glycopyrronium / Hyoscine butylbromide not tolerated	400 microgram 4 hourly (max 2.4mg in 24 hours)	Does cross BBB so can cause sedation / confusion

Supporting Information:

Respiratory secretions can be very distressing to those around the patient, however patients themselves are rarely distressed by noisy secretions. It is helpful to explain this and that the patient is not choking.

It is appropriate to treat if the patient appears distressed by the secretions, and are not disturbed by the side effects of a dry mouth. Treatment may also be needed if the patient is unconscious and symptoms are distressing to the patient's loved ones despite explaining the above.

Anti-secretory medication should ideally be started early as a preventative measure if they are going to be used, and the patient is not going to be distressed by a dry mouth.

It is easier to prevent secretions forming than to remove secretions that have gathered in the upper airways or oropharynx if treatment with the above medications is withheld.

Despite re-positioning (including tipping the head of the bed down) and using all available medication, some patients will continue to breathe noisily. It is sometimes appropriate to consider intermittent suction, but this needs to be assessed on an individual basis; taking into account associated risks including soft tissue trauma.

If one anti-secretory medication has been used and found to be ineffective, do not switch to the alternative option (seek specialist advice).

Key points:

- **Key:** **IR** (immediate release), **MR** (modified release), **PRN** (pro re nata – ‘when required’)
- the below dose conversions are approximate only and vary between individuals (use as a guide only)
- in the table, doses have been rounded up or down to fit with the preparations available
- use the lowest dose of medication needed to achieve symptom control
- seek specialist advice when doses are greater than equivalent to Morphine (oral) 180mg in 24 hours, due to the risk of opioid toxicity
- regularly review patients after switching to a different opioid, checking for signs of toxicity and their level of pain control
- consider reducing the equi-analgesic dose by 30% to 50% if converting to an alternative opioid (e.g. Fentanyl to Morphine or Oxycodone)
- due to toxicity risk it may be necessary to use lower doses in patients who are:
 - elderly or frail
 - in renal impairment
 - already on high doses of opioids
 - opioid naïve
 - in liver impairment

Opioid Conversion Table

Morphine			Oxycodone						Buprenorphine	Fentanyl	Tramadol	Codeine phosphate	
Oral (mg)			Subcutaneous (mg)		Oral (mg)			Subcutaneous (mg)		Transdermal patch (microgram/hr) <u>Stable</u> pain only		Oral (mg)	Oral (mg)
PRN dose (IR)	12 hr dose (MR)	24 hr total dose	PRN dose	24 hr total dose	PRN dose (IR)	12 hr dose (MR)	24 hr total dose	PRN dose	24 hr total dose	Change every <u>7 days</u>	Change every <u>3 days</u>	24 hr dose	24 hr dose
1.25	5	10								5		100	120
2.5	10	20	1.25	10	1.25	5	10	1.25	5	10		200	240
5	15	30	2.5	15	2.5	10	20	1.25	10	15		300	
7.5	20	40	3.75	20	3.75	10	20	1.25	10	20	12	400	
10	30	60	5	30	5	15	30	2.5	15				
15	45	90	7.5	45	7.5	20	40	3.75	20		25		
20	60	120	10	60	10	30	60	5	30		37		
30	90	180	15	90	15	45	90	7.5	45		50		
40	120	240	20	120	20	60	120	10	60		75		