Palliative Care (Adult): Symptom Management Guidelines

November 2021

DOCUMENT PROFILE	
Document Registration	HSS-GD-MG-0633-01
Document Type	Guideline
Title	Palliative Care (Adult): Symptom Management Guidelines
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Publication Date	November 2021
Target Audience	Jersey Health and Community Services (HCS), Family Nursing and Home Care (FNHC), Primary Care Body (PCB), Care Federation (CF) & Jersey Hospice Care (JHC)
Circulation List	All HCS, FNHC, PCB, CF & JHC clinical areas
Description	Guideline for the symptom management of adult palliative care patients
Linked Policies	Ambulatory Syringe Pump Policy Anticipatory Prescribing Policy Medicines Policy Non-Medical Prescribing Policy Prescription Writing Standards
Approval Forum	HCS Medicines Governance Committee FNHC Policies & Procedures Group PCB Committee CF Committee JHC Senior Nurse Group
Review Date	November 2024
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CONTENTS LIST:

1. INTRODUCTION

1.1 Rationale

This guideline provides an overview of palliative care, Gold Standards Framework (GSF) resources and prescribing advice.

Palliative care is the active holistic care of patients with advanced progressive illness. Management of pain and other symptoms, as well as provision of psychological, social and spiritual support is paramount.

The goal of palliative care is achievement of the best quality of life for patients, their families and carers. Many aspects of palliative care are also applicable earlier in the course of the illness in conjunction with other treatments.

1.2 Scope

This guideline is intended to be used by registered clinical professionals who manage adult palliative care patients within Jersey Health and Community Services (HCS), Family Nursing & Home Care (FNHC), Primary Care Body (PCB), Residential / Nursing Homes and Jersey Hospice Care (JHC).

This will include medical, nursing and pharmacy staff, as well as other allied health professionals.

It should be noted that these guidelines are intended to support generalist clinicians. The Specialist Palliative Care Team (SPCT) may advise using medications in situations or at doses that would usually not be given, this will usually take place where the risk versus benefit ratio to the patient makes it appropriate to do so.

1.3 Principles

This guideline was produced to assist healthcare professionals prescribing, dispensing and administering medications for palliative care patients. It will also promote a procedural uniformity amongst those professionals working in the hospital, hospice or primary care setting.

2. GUIDELINE PURPOSE

The guideline aim is to promote consistency and sustain improved clinical practice and care standards to adult palliative care patients across Jersey.

3. PROCEDURE

3.1 Specialist Palliative Care Team (SPCT)

The SPCT welcome referrals for any patient in their expected last year of life who have symptom control, advance care planning or psychosocial issues that cannot easily be resolved by you. It is also appropriate to refer patients with life-limiting illnesses who require support, but have an estimated prognosis of more than one year (GSF Blue).

Jersey Hospice Care (JHC)

JHC helps support palliative care services across Jersey and includes the:

- SPCT for advice and symptom management which includes hospital, care home and patient own home visits
- Inpatient unit (IPU) which has 12 single en-suite rooms for short stay admissions
- King Centre which provides out-patient services
- Community Bereavement Service and Emotional Support Service

Further information is available on the JHC website: www.jerseyhospicecare.com

3.2 Priorities for care of the dying person

When a patient approaches the last days of life it is important to recognise the dying phase, and confirm that all **reversible causes** have been considered and managed as appropriate.

We commonly see this phase as patients becoming bedbound, drowsy and having difficulty swallowing their tablets.

It is vitally important to communicate this with the patient and family, involve and support those closest to the patient, and then put in a plan such as:

- do not attempt cardiopulmonary resuscitation (DNACPR) form
- check the patient is in their preferred place of death (if possible)
- initiate the Personalised Care Record (PCR)
- discontinue unnecessary medication (if needed discuss with SPCT / pharmacy)
- discontinue unnecessary investigations and observations (e.g. NEWS2)
- discuss hydration and nutrition
- prescribe anticipatory medication (leaflet)
- discuss the possible use of a syringe pump (leaflet)
- provide the family information on coping with dying (leaflet)
- check for any spiritual, cultural and religious needs

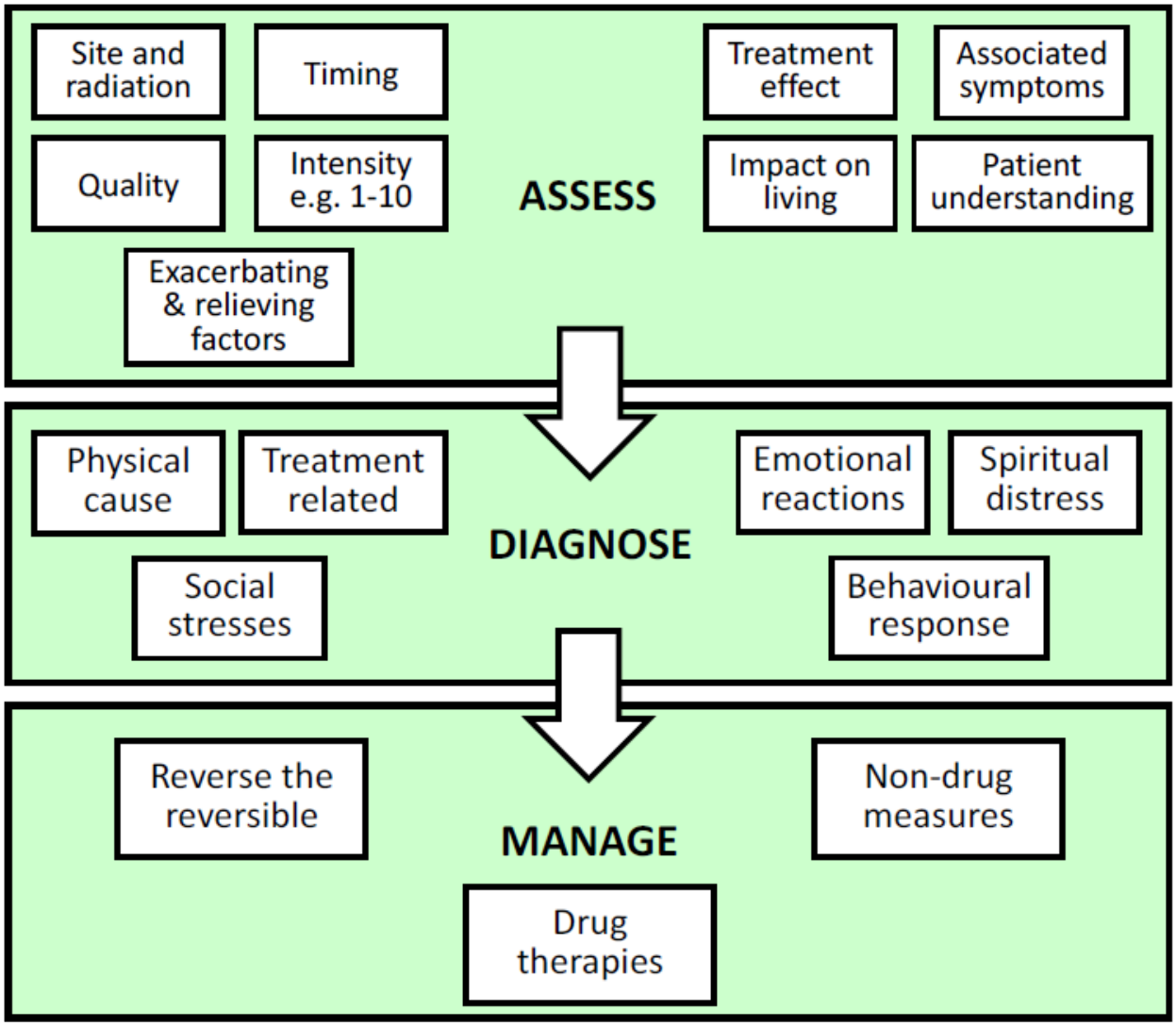
And remember to continue reviewing your patient and their comfort.

3.3 Palliative care golden rules

There are some key principles or **'Golden Rules'** which underpin symptom management (see diagram below).

Key principles of symptom management:

- **assess** and **diagnose** the cause of symptoms, before **planning** symptom **management**
- treat potentially **reversible causes** (where appropriate)
- always consider **non-drug approaches** as they can be as important as drug use
- the management plan is influenced by prognosis and patient choice and depends on the **therapeutic goal**



Plan regular **review** and **reassessment** for all symptoms.

State **therapeutic indications** for drugs prescribed, ensure use is clinically appropriate (e.g. use opioids for 'pain' and 'breathlessness', not for 'sedation' or 'distress').

All drugs need a **review** date; the goal is to use the **minimum** effective dose.

Adopt a **multi-disciplinary team (MDT)** approach.

Ask for specialist advice in difficult situations, or as indicated by this guideline.

3.4 Contact details

Specialist Palliative Care Team (SPCT)

This service is available to patients, carers / relatives and healthcare professionals in Jersey.

The **SPCT** is based at Jersey Hospice Care (Clarkson House) on Mont Cochon.
The **Hospital SPCT** is based in the Jersey General Hospital.

All referrals for the SPCT must be faxed to **(9)720292**, or as otherwise agreed between organisations.

The team **do not carry bleeps** as these are intrusive when reviewing dying patients.
For advice and urgent referrals call **(9)876555**.

HCS and **primary care healthcare staff** can seek advice from the SPCT, available:

- **9am to 5pm seven days a week** (subject to change)

Outside these hours an on-call palliative care consultant is available in Southampton. They should be contacted via hospital switchboard (tel. 442000), by a Registrar, Consultant or GP.

Hospital Pharmacy

HCS staff can also seek advice from hospital pharmacy on use of medications in palliative care.

Contact your ward pharmacist by bleep on weekdays, if they are unavailable or it is a weekend / bank holiday telephone dispensary **(4)42216**.

HCS pharmacy is open (subject to change):

- **8am to 5.30pm on Monday to Friday**
- **10am to 1.30pm on Weekends and Bank holidays**

Outside these hours an on-call pharmacist is available **24 hours a day**, who should be contacted via hospital switchboard (tel. 442000).

3.5 Information resources

For online resources access the information for professionals section of the Jersey Hospice Care website.

For HCS staff, information is also available on the HCS Palliative Care intranet page.

Jersey Palliative Care Resources

- Anticipatory Prescribing Policy
- Syringe Pump Policy
- Personalised Care Record (PCR)

UK Palliative Care Resources

In addition to local resources, the Palliative Care Adult Network Guidelines (PANG) have been endorsed in Jersey. These are available as:

- PANG Desktop version
- PANG Mobile version (access is free, but registration is required)

3.6 Anticipatory prescribing

When a patient is dying, swallowing often becomes difficult. In those patients where no reversible causes have been identified or whose agreed treatment escalation plan is solely for symptom management, it is good practice to prescribe medications in anticipation of their requirement to help with the management of these symptoms.

Anticipatory prescribing:

- avoids delay in treating the most common symptoms at the end of life
- improves symptom control
- may prevent unwanted admissions to the Hospital or Hospice in-patient unit

See appendix 2 for additional information.

The need for anticipatory prescribing should be reviewed for all patients assessed as GSF Amber (weeks prognosis) and GSF Red (days prognosis) – see appendix 3.

'Just in Case' (JIC) boxes

JIC boxes are a small part of anticipatory prescribing, and is 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 the Policy for anticipatory prescribing for additional information.

Symptoms which commonly develop in the last hours or days of life include (refer to the algorithms overleaf providing prescribing guidance):

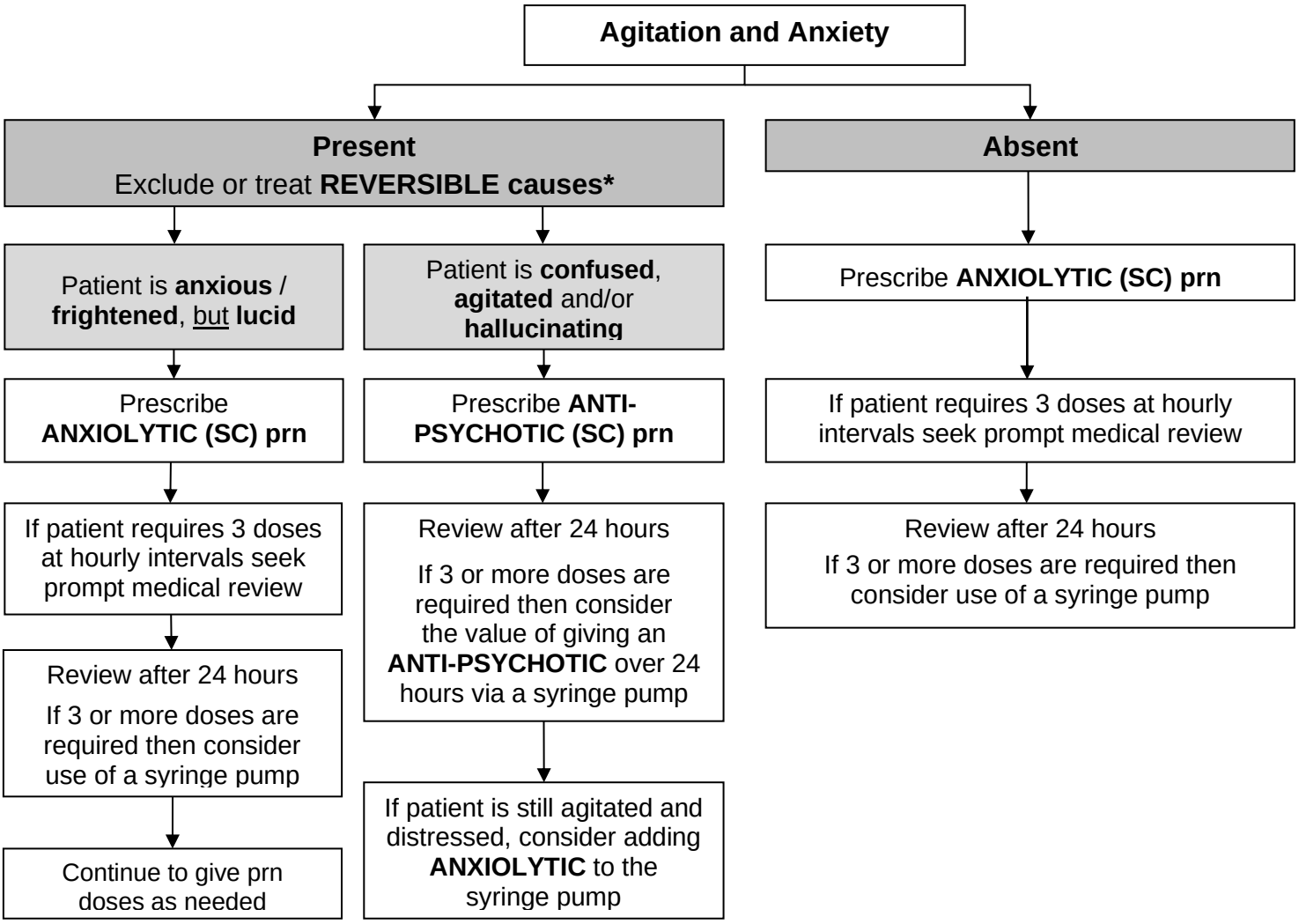
- anxiety and agitation
- breathlessness
- nausea and vomiting
- pain
- respiratory secretions

There may also be other symptoms depending on the patients underlying medical condition(s), such as seizures or those arising from bowel obstruction.

Prescribe medicines essential to maintain comfort by non-oral routes (usually subcutaneous [SC]):

- 'when required' (prn)
- regularly as a background dose if the patient has an ongoing symptom, or was taking the drug regularly when they could swallow (e.g. analgesia, anti-psychotics, anti-seizure medications)
- consider using a syringe pump for continuous subcutaneous infusion (CSCI), although this is not always needed for some long acting medications (e.g. Dexamethasone, Levomepromazine, Parecoxib)
- choice of drug will be guided by the patient's current symptoms and previous medication requirements

If a patient is administered SC medication for symptom control the prescriber (or medical professional leading on the patient's care) should be made aware, and the patient should be reviewed at least every 24 hours (until symptoms are controlled), or with any change in condition.



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.

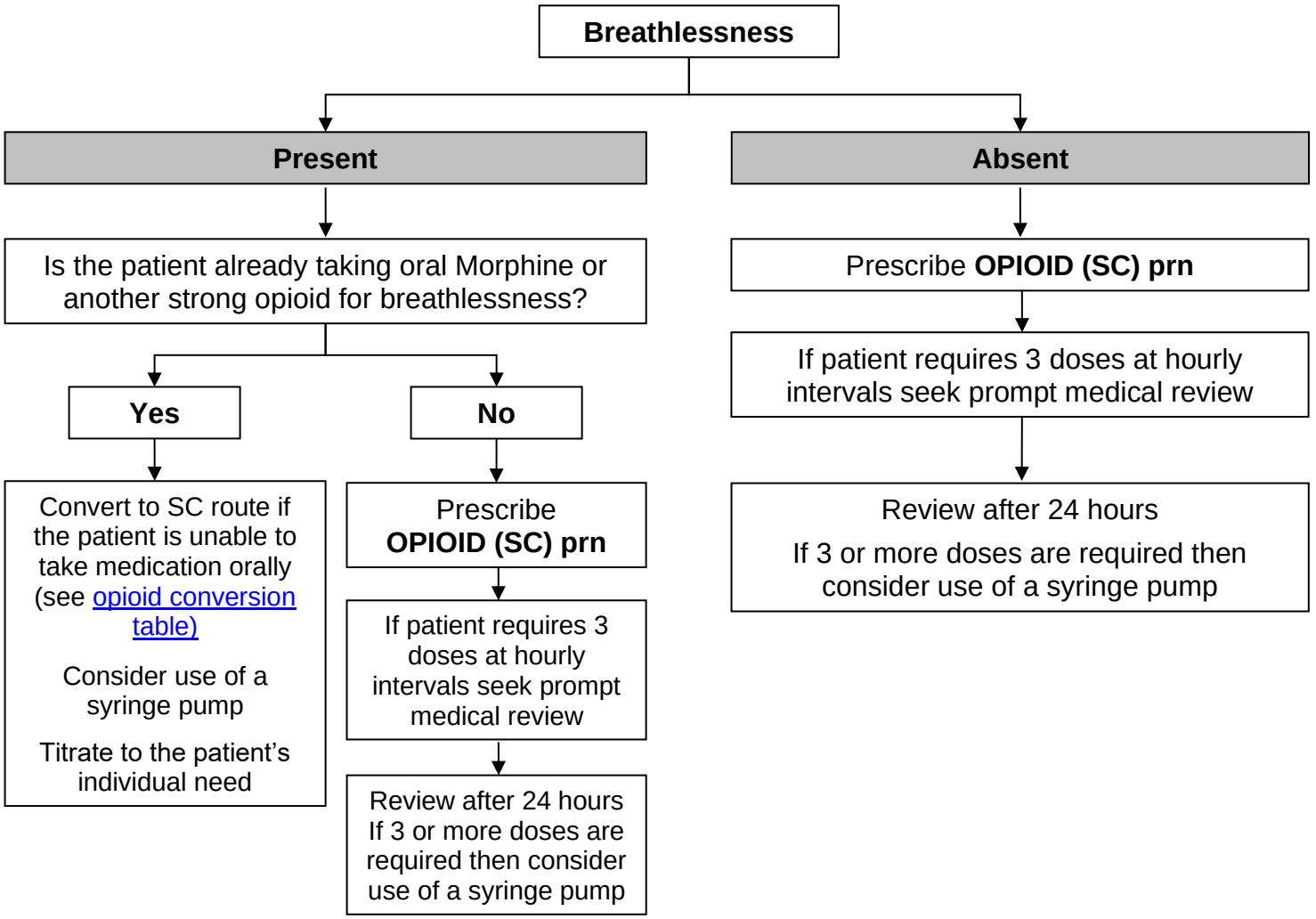
If a dose range is prescribed always commence at the lower dose.

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.

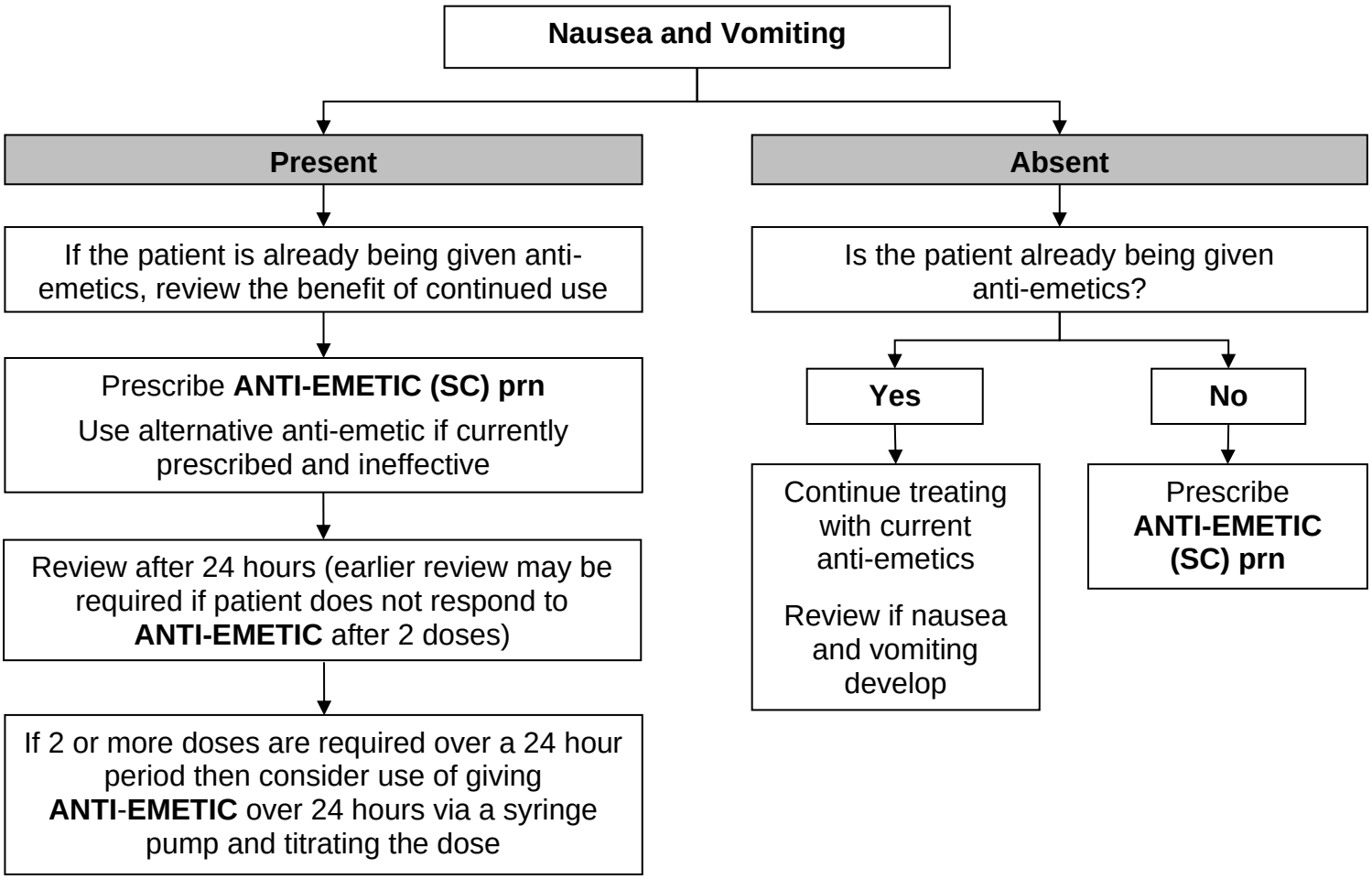
***For conversion of strong opioids into a syringe pump / prn doses, refer to the opioid conversion table.**

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

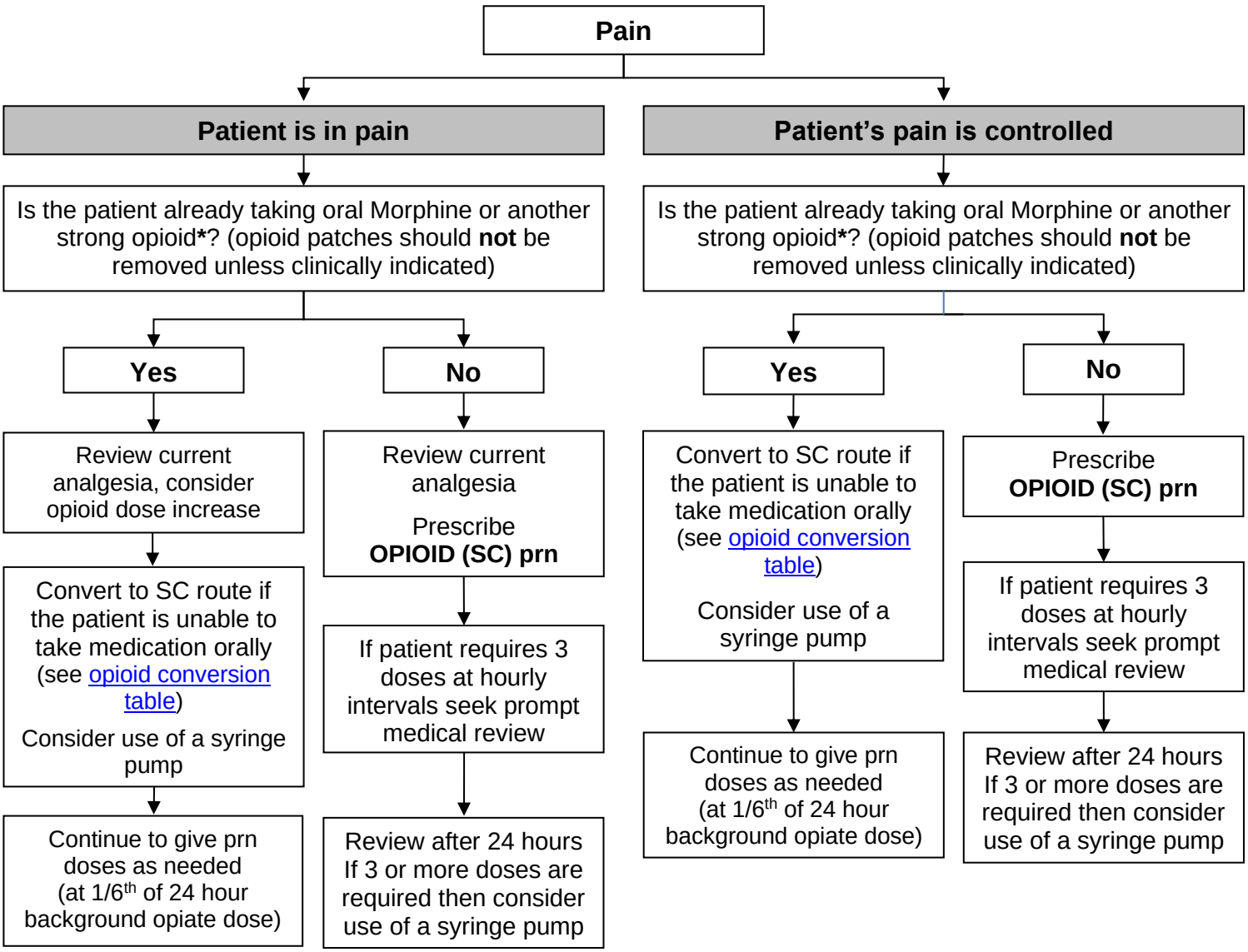
Supporting Information:

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:

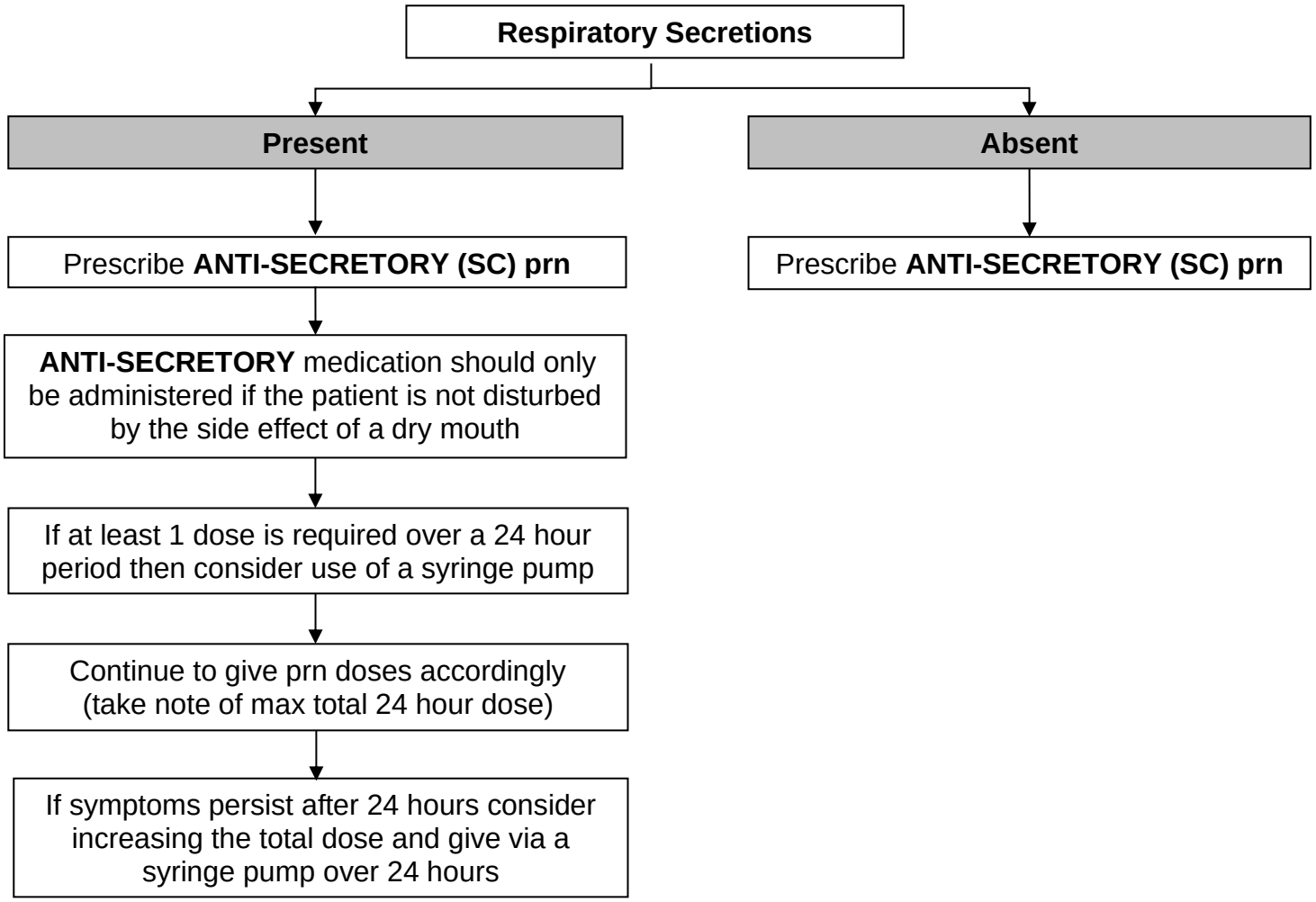
***For conversion of strong opioids into a syringe pump / prn doses, refer to the opioid conversion table.**

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).

3.7 Opioid conversion

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
  - opioid naïve
  - in renal impairment
  - in liver impairment
  - already on high doses of opioids

Opioid Conversion Table

Morphine					**Oxycodone**					**Buprenorphine**	**Fentanyl**	**Tramadol**	**Codeine phosphate**
Oral (mg)			**Subcutaneous (mg)**		**Oral (mg)**			**Subcutaneous (mg)**		**Transdermal patch (microgram/hr) Stable 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 7 days**	**Change every 3 days**	**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**		

3.8 Transdermal opioids

Opioid patches (e.g. Buprenorphine or Fentanyl):

- are only indicated when the patient has **stable chronic** pain, **and** the oral route is not appropriate (e.g. patient has nausea, dysphagia)
- are **contra-indicated** for acute pain and in severe uncontrolled pain requiring rapid dose titration (due to their long elimination half-life)
- should be used with caution in cachectic patients as absorption may be unpredictable
- should **not** be started as a form of pain control at the end of life
- should **not** be cut
- may cause opioid toxicity due to increased absorption rates in febrile patients, high ambient temperatures or following use of heat packs (which can cause vasodilation)
- should be monitored using the transdermal patch administration record

3.8.1 Recommended management (for stable pain)

Calculate current total 24 hour Morphine PO equivalent dose (consider including prn doses)

Use the opioid conversion table as a guide to which transdermal drug and dose to commence

For opioid naive patients, the lowest strength of Buprenorphine patch (e.g. 5micrograms/hour) may be appropriate

Fentanyl patches must **not** be prescribed for opioid naive patients

↓

Apply patch

Continue current opioid regime for 12 hours before stopping

Transdermal medications take at least 12-18 hours to reach effective plasma levels, this can be longer in elderly and cachectic patients

It can take up to 3 patch changes to reach steady-state plasma concentrations of transdermal drugs

↓

Options for breakthrough medications:

- PRN dose of IR Morphine or Oxycodone appropriate to the total daily Morphine PO equi-analgesic dose
- Morphine or Oxycodone SC if unable to take oral medication
- Consider other types of analgesia

Some patients experience a degree of withdrawal when switching from Morphine or Oxycodone to Fentanyl, which can be managed with small doses of regular IR PO Morphine or Oxycodone for the first few days (SC route can be used if patient unable to swallow)

Fentanyl is not as constipating as other opioids so laxatives may need to be reduced

↓

When using a patch, wait at least 72 hours before titrating dose

Titrate by a maximum of 25-50% of dose

Dose increases will take at least 12 hours to take effect

In the last days of life opioid patches should be continued and not removed. If the level of pain control needs to be increased a syringe pump should be used (seek specialist advice).

If an alternative to an opioid patch is required, for reasons such as poorly controlled pain, opioid toxicity, fever (increases drug absorption) or that the patient's sweating is difficult to control (e.g. the patch will not stick), seek specialist advice.

Note that plasma levels of transdermal drugs remain raised for at least 24 hours after removal of the patch. The patch should be removed for at least 12 hours prior to switching to alternative medication routes.

3.9 Breakthrough pain

Breakthrough pain is a transient exacerbation of pain occurring despite adequate background analgesia. This does not include poorly controlled background pain, or pain occurring shortly before the next dose of regular opioid (end-of-dose failure) which are managed by titrating up the regular opioid.

Breakthrough pain may:

- be associated with an exacerbating factor (incident pain), **or**
- be spontaneous

Problem	Features	Suggested management
Incident pain	Pain associated with an incident (e.g. movement, dressing changes, weight-bearing, coughing, defecating, swallowing)	• Manage precipitating factors • Rescue medication of IR opioid at least 30 minutes prior to incident • Consider NSAIDs / adjuvants • Seek specialist advice
Spontaneous breakthrough pain	Pain occurs without obvious trigger (e.g. neuropathic pain, colic)	• Rescue medication of IR opioid • Consider NSAIDs / adjuvants • Consider titrating background analgesia

Encourage patients or carers, to maintain a record of their pain (e.g. severity, location, triggers) and use of breakthrough doses in a 'pain diary'. This will help to guide when an increase in background pain relief may be needed.

Remember to prescribe an appropriate dose of rescue (prn) medication:

- this is usually 1/6th of the total daily opioid dose (see opioid conversion table)
- some clinicians may recommend 1/10th of the total daily opioid dose
- some patients will need individual titration to establish the breakthrough dose (seek specialist advice)
- prescribe maximum one hourly prn so patients do not have to wait for rescue analgesia
- for patients on a background opioid patch (e.g. Fentanyl or Buprenorphine), use IR Morphine or Oxycodone as the prn opioid for breakthrough pain

If the patient's pain is not controlled despite gradual titration of their opioids, seek specialist advice as the pain may not be opioid responsive and other management options may need to be considered. The use of adjuvants and a broader holistic approach addressing the 'Total pain' concept (involving physical, social, emotional and psychological factors) may be required.

Some patients appear to gain psychological as well as pain benefit from use of short acting opioids, possibly by allowing the patient to have control over their pain management. Increasing their background pain relief may lead to drowsiness or opioid toxicity without any reduction in the frequency of prn use. Accepting prn use >3 times per day and keeping background pain relief relatively low may work best in these patients.

3.10 Syringe pumps

A syringe pump is a small, portable battery-powered pump. It administers drugs subcutaneously by continuous infusion (over 24 hours). It offers an alternative route of drug administration with little impact on patient mobility or independence. By maintaining steady drug plasma levels, a syringe pump may improve symptom control.

3.10.1 Indications

For administering drugs when the oral route is difficult or inappropriate.

Syringe pumps can be used for symptom control as well as for patients who are in the final stages of their illness. If the problem resolves, it may be possible to return to the oral route.

Consider using a syringe pump if the patient has:

- severe nausea and/or vomiting
- severe oral tumours, sores or infections
- dysphagia
- intestinal obstruction
- poor absorption of oral drugs (rare)
- weakness, is unconscious or sedated

Clinical staff using syringe pumps must be competent in their use, see the syringe pump policy for further information on recommended training and available resources.

Before setting up the syringe pump, explain to the patient and family the reason for using it, how it works and the possibility of infusion site reactions. Provide a patient information leaflet.

Refer to the medication algorithms above for advice on prescribing in the last days / weeks of life and for additional guidance on when it is appropriate to commence a syringe pump.

In some cases it will be appropriate to use only breakthrough (prn) doses, and a syringe pump will not be needed.

When starting a syringe pump, if the patient is symptomatic it will be necessary to give a stat dose of the prescribed drugs as it takes around 4 to 6 hours to achieve a steady state.

3.10.2 Subcutaneous administration of drugs

Infusion site problems may be due to a number of reasons, however the following drugs are known to be irritant when administered subcutaneously.

Strongly irritant (do not use)	**Relatively irritant** (precautions may be needed)	
Chlorpromazine [1]	Cyclizine	Methadone
Diazepam	Diclofenac	Octreotide [2]
Lorazepam	Ketamine	Ondansetron
Prochlorperazine	Ketorolac	Phenobarbital
	Levomepromazine	Promethazine

[1] Can cause local tissue necrosis

[2] Painful if given by SC bolus injection, reduced if warmed to body temperature beforehand

Medications with a long duration of action (e.g. Dexamethasone and Levomepromazine) can be given by SC bolus injection once or twice daily, which eliminates the need for a syringe pump.

3.10.3 Syringe pump medications

Key points

General advice

- refer to the island wide syringe pump policy for further information
- prescriptions may include a combination of the below medications
- **HCS sites:**
  - use of syringe pumps must be authorised by HCS pharmacy
  - only start a syringe pump outside pharmacy opening hours on SPCT advice or in exceptional circumstances

Starting the syringe pump

Medicines administered via a syringe pump may take some time to achieve steady state:

- once commenced it will take 4 to 6 hours to see the effect of the syringe pump
- use prn medications to relieve symptoms if necessary during this period
- it takes 5 half-lives for a drug to reach a steady state when first commenced
- a loading dose (stat) will reduce the time to a steady state
- when switching from oral to CSCI at equi-effective doses a steady state may already exist

Medication doses

- all doses are administered via syringe pump over 24 hours
- when deciding drug doses, titrate according to the total of regular and prn drug requirements in previous 24 hours
- **always** start at the lower end of the dose range
- take into consideration co-morbidities, medication history and blood results (renal and liver function) for starting doses and medication choices
- seek specialist advice **before** exceeding typical maximum doses

Drug compatibility

- use as few medications in syringe pump as possible (maximum of 3 unless advised by the SPCT or hospital pharmacy)
- **not all drug combinations are compatible** (refer to the syringe pump policy, or seek advice from the SPCT or hospital pharmacy)
- if there are signs of incompatibility (e.g. precipitation, discolouration), stop the syringe pump and consider undertaking one or more of the below:
  - check drugs are compatible
  - switch to Sodium Chloride 0.9% as diluent (where compatible)
  - dilute the solution as much as possible (e.g. dilute to a total volume of 22mL)
  - separate drugs into two syringe pumps
  - draw up Dexamethasone and Ranitidine last when used in combination with other medications
  - avoid exposure of solution to sunlight and heat (e.g. electric blankets)
  - seek specialist advice on alternative drug combinations

Diluent

- Water for injections is the commonest recommended diluent, **however**
- Sodium Chloride 0.9% must be used for several drugs (e.g. Levomepromazine, Dexamethasone, Octreotide and Ketorolac)
- Sodium Chloride 0.9% is incompatible with Cyclizine (use Water for injections)

OPIOID			
Medication	**Dose ranges in CSCI over 24 hours**		**Comments**
	Usual start dose	**Typical maximum**	
Morphine	5mg to 15mg if opioid naïve (or base on prior oral opioid dose)	Seek SPCT advice for rapid titration or doses higher than 60mg	**First line opioid** **Avoid** in renal impairment (eGFR < 30mL/min)
Oxycodone	5mg to 10mg if opioid naive (or base on prior oral opioid dose)	Seek SPCT advice before exceeding 30mg or if previous increases / prn doses are ineffective	Use if patient already taking oral Oxycodone, or in renal impairment (eGFR < 30mL/min) **Avoid** in renal failure (eGFR<10mL/min), except for breakthrough doses Note relatively expensive
Diamorphine	Use if Morphine dose in syringe pump >300mg, and/or total volume is too high when mixed with other medications Seek specialist advice		**Avoid** in renal impairment (eGFR < 30mL/min) Use if Morphine volume is too large to fit in syringe (note more expensive than Morphine)
Alfentanil	Use if renal failure (eGFR < 10mL/min) Seek specialist advice		Alfentanil has a short half-life do not use prn Use Oxycodone for breakthrough doses
ANTI-EMETIC			
Medication	**Dose ranges in CSCI over 24 hours**		**Comments**
	Usual start dose	**Typical maximum**	
Cyclizine	75mg to 100mg	150mg	**Avoid** in severe heart failure Can cause skin irritation when given SC
Haloperidol	1.5mg to 3mg	10mg	**Avoid** in Parkinson's disease and Lewy Body Dementia Caution in epilepsy at higher doses
Levomepromazine	5mg	25mg	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	30mg	60mg	**Avoid** in bowel obstruction with colic **Avoid** with anticholinergic drugs, in Parkinson's disease and Lewy Body Dementia
ANXIOLYTIC			
Medication	**Dose ranges in CSCI over 24 hours**		**Comments**
	Usual start dose	**Typical maximum**	
Midazolam	5mg to 10mg	30mg (up to 60mg if imminently dying)	**Anxiolytics are used first line for patients who are anxious, but lucid** Seek specialist advice if uncertain about appropriateness of higher doses, or if to be used as an anti-convulsant

ANTI-PSYCHOTIC			
Medication	**Dose ranges in CSCI over 24 hours**		**Comments**
	Usual start dose	**Typical maximum**	
Haloperidol	0.5mg to 3mg	5mg to 10mg	**Anti-psychotics are used first line for patients who are confused, agitated and/or hallucinating** Note comments for 'anti-emetics' Seek specialist advice if uncertain about appropriateness of higher doses
Levomepromazine	12.5mg to 25mg	50mg	

ANTI-SECRETORY			
Medication	**Dose ranges in CSCI over 24 hours**		**Comments**
	Usual start dose	**Typical maximum**	
Glycopyrronium	600 micrograms	1.2mg	**First line (Respiratory Secretions)**
Hyoscine BUTYLbromide	60mg	120mg	**Respiratory Secretions** (use if intestinal obstruction / colic)
	60mg	180mg	**Intestinal obstruction / colic** (higher dose needed)
Hyoscine HYDRObromide	400 micrograms	2.4mg	**Rarely used** Sedating, may cause agitation

OTHER MEDICATIONS			
Medication	**Dose ranges in CSCI over 24 hours**		**Comments**
	Usual start dose	**Typical maximum**	
Dexamethasone	Dose depends on indication 3.3mg SC = 4mg orally		Alternatively, give as a separate morning SC bolus May precipitate when higher doses used with other drugs
Levetiracetam	500mg to 1g	3g doses >2g need to be split into two syringe pumps	For seizure management Allows continuation of previous oral medication (1:1 conversion ratio from PO dose)
Octreotide	300 micrograms to 600 micrograms	1.2mg	Seek specialist advice Use for intestinal obstruction and fistulae
Sodium Valproate	Allows continuation of previous oral medication (1:1 conversion ratio from PO dose)		For seizure management and neuropathic pain

MEDICATIONS OCCASSIONALLY USED (only on specialist advice)		
Alfentanil	Ketamine	Ondansetron
Diamorphine	Ketorolac	Parecoxib
Fentanyl	Methadone	Phenobarbital
Furosemide	Octreotide	Ranitidine

If a patient's symptoms are not adequately controlled using the medications in the above tables, seek specialist advice.

The SPCT may advise to use medications in situations or at doses that would usually not be given, this will take place where the risk versus benefit ratio to the patient makes it appropriate to do so.

3.10.4 Titrating medication doses in the syringe pump

When reviewing medication doses in the syringe pump, titrate according to the total of regular and prn drug requirements in previous 24 hours.

If a patient needs two or more breakthrough doses of their opioid or benzodiazepine over a 24 hour period consider increasing the background dose (i.e. the dose in the syringe pump) by one third (approx. 30%).

However note that doses for breakthrough symptoms should only be included if they are used to manage **spontaneous** symptoms. Doses for **incident related** breakthrough symptoms (e.g. pain on movement, or anxiety related to a procedure) should not be added to the background dose used in the syringe pump.

3.10.5 Dose range prescriptions for syringe pumps (Primary care)

Medication dose ranges can be used in syringe pumps to help avoid:

- unnecessary GP call-outs
- delays in treatment

Dose ranges should only be used in primary care settings, **not** HCS sites:

Syringe pump dose ranges	
Settings acceptable to use	Settings **not** acceptable to use
Hospice in-patient unit Patient own home Residential homes Nursing homes	HCS sites

Medication dose ranges in syringe pumps should only be used where deemed appropriate by the prescriber, and should not be the default position.

3.10.6 Opioid and benzodiazepine dose ranges

As a general rule the upper limit for opioid and benzodiazepine dose ranges should **not exceed 50% of the baseline dose**, except at low doses:

Medication	Baseline dose in range	Acceptable dose range
Morphine	< 20mg over 24 hours	Upper limit of dose range should not exceed **100%** of the baseline dose
Oxycodone		
Midazolam		
Morphine	≥ 20mg over 24 hours	Upper limit of dose range not exceed **50%** of the baseline dose
Oxycodone		
Midazolam		

Examples of **acceptable** dose ranges:

- Morphine 10mg to 20mg (over 24 hours)
- Morphine 20mg to 30mg (over 24 hours)

Examples of **unacceptable** dose ranges:

- Morphine 5mg to 30mg (over 24 hours)
- Morphine 20mg to 40mg (over 24 hours)

3.10.7 Administration of medication in syringe pumps using dose ranges

Refer to the syringe pump policy for further information on administration of medications via a syringe pump.

Nurses should commence the syringe pump at the lowest dose in the range, unless otherwise agreed with the prescriber. This should then be reviewed every 24 hours, or with any change in the patient condition.

Specialist Palliative Care nurses (e.g. SPCT and Hospice in-patient unit) are permitted to use their clinical judgement as to when dose adjustments within the range prescribed will be appropriate.

Other nursing staff (e.g. FNHC, Nursing homes) should only change the dose administered within the range prescribed where they have the necessary skills to assess the dose requirement competently, and in line with any relevant policies or procedures of their organisation. Alternatively, advice should be sought from the prescriber, a member of the SPCT or an experienced colleague competent in this area.

Adjusting medication doses in the syringe pump

The decision to adjust syringe pump medication doses within the prescribed dose range should take into account:

- the patient's overall clinical condition and symptom management
- the patient's background dose (i.e. current dose in the syringe pump)
- doses needed for spontaneous breakthrough symptoms in the previous 24 hours, **exclude** doses for incident breakthrough symptoms such as:
  - pain on patient movement (e.g. turns)
  - pain on dressing changes
  - anxiety related to a procedure or home visit

4. DEVELOPMENT AND CONSULTATION PROCESS

4.1 Consultation schedule

Name and Title of Individual	Date Consulted
Dr Mark Banting (Palliative Care Consultant, University Hospital Southampton)	March 2021
Dr Meera Rajasekaran (Palliative Care Consultant, HCS)	March 2021
Dr Deborah Wheddon (Palliative Care Clinical Fellow, HCS)	March 2021
Dr Steve Perchard (GP)	March 2021
Dr Marcelle Buture (GP)	March 2021
Gail Cadell (Acting Chief Executive, JHC)	November 2020
Hilary Hopkins (Acting Director Palliative Care Services, JHC)	March 2021
Michelle Nelson (Deputy Director Palliative Care Services, JHC)	March 2021
Karen Eloury (IPU Manager, JHC)	November 2020
Lorraine Dyer (SPCT CNS, JHC)	November 2020
Gail Edwards (GSF Nurse Champion, JHC)	November 2020
Tia Hall (Operational lead Adult Services, FNHC)	March 2021
Elspeth Snowie (Clinical Effectiveness Facilitator, FNHC)	March 2021
Wendy Baugh (Lead Nurse, HCS)	March 2021
Tim Hill (Practice Development Sister, HCS)	March 2021
Paul McManus (Prescribing Advisor, Government of Jersey)	March 2021
Naomi Mews (Prescribing Support Pharmacist, Government of Jersey)	March 2021
Sarah-Jane Stead (Clinical Pharmacy Manager, HCS)	March 2021
Sebastian McNeilly (Lead Pharmacist Medicines Governance & Safety, HCS)	March 2021
Jenna McNeilly (Clinical Pharmacist, HCS)	March 2021

Name of Committee/Group	Date of Committee / Group meeting
CF Committee	November 2021
HCS Medicines Governance Committee	October 2021
PCB Committee	September 2021
FNHC Policies & Procedures Group	July 2021
JHC Senior Nurse Group	June 2021

5. REFERENCE DOCUMENTS

Gold Standards Framework [GSF] (2021). The Gold Standards Framework. Available at: https://www.goldstandardsframework.org.uk (Accessed 27th January 2021)

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Wessex Palliative Physicians (2019). The Palliative Care Handbook: A Good Practice Guide 9th Ed.

Wilcock A, Howard P, Charlesworth S. (2020). PCF 7: Palliative Care Formulary 7th Ed. London: Pharmaceutical Press.

7. IMPLEMENTATION PLAN

A summary of how this document will be implemented.

Action	Responsible Officer	Timeframe
E-mail to all clinical staff	Communications Officer (HCS) PCB committee (PCB) / GP Champions Information Governance (FNHC) Specialist Palliative Care Team (JHC) CF Secretary / Care Home Managers (CF)	1 week prior to launch
Policy to be uploaded on each organisations intranet / internet	Information Governance (HCS) PCB Lead (PCB) Information Governance (FNHC) Governance Facilitator (JHC) CF Secretary (CF)	1 week prior to launch

8. GLOSSARY OF TERMS

Anticipatory Prescribing	Advance provision of medications in anticipation of symptoms occurring at the end of life
BBB	Blood Brain Barrier
CF	Care Federation
CSCI	Continuous Subcutaneous Infusion
DNACPR	Do Not Attempt Cardiopulmonary Resuscitation
FNHC	Family Nursing and Home Care
FY1 / FY2	Foundation Year 1 or 2 doctor
GP	General Practitioner
eGFR	Estimated Glomerular Filtration Rate
GSF	Gold Standards Framework
HCS	Health and Community Services
IPU	In-patient unit (Hospice)
IR	Immediate Release
JHC	Jersey Hospice Care
JIC	Just in Case
MDT	Multi-disciplinary team
MR	Modified Release
NICE	National Institute for Health and Care Excellence
NSAID	Non-Steroidal Anti-Inflammatory Drugs
PANG	Palliative Care Adult Network Guidelines
PCB	Primary Care Body
PCR	Personalised Care Record
PO	Per os (by mouth)
PRN	Pro re nata (when required)
SC	Subcutaneous
SPCT	Specialist Palliative Care Team
TDS	Ter die sumendum (to be taken three times daily)

9. APPENDICES

Appendix 1: Prescribing responsibilities based on professional roles

Role	HCS sites				Primary care		
	Syringe pumps (including for discharge)	Anticipatory prescribing (in-patient)	Anticipatory prescribing chart (for discharge)	Prescribe palliative care medications for dispensing (HCS pharmacy)	Syringe pumps	Anticipatory prescribing chart	Prescribe palliative care medications for dispensing (community pharmacy)
Health & Community Services (HCS) staff							
Medical Team (Staff Grade or above)							
Medical Team (FY2 / Clinical Fellow)[1]							
Medical Team (FY1)							
Independent prescribers[2]							
Specialist Palliative Care Team (SPCT)							
Medical Team							
Independent Prescribers							
Palliative Care (Visiting consultants)							
Primary Care							
GPs[3]							
Primary Care Independent Prescribers[2]							

1. In exceptional circumstances (e.g. more senior prescribers are unavailable), FY2 / Clinical Fellow Drs can complete the syringe pump and / or anticipatory chart for discharge (providing they have SPCT support, and this has been agreed with an HCS pharmacist).
   For in-patients the syringe pump chart should be countersigned by a staff grade or above at the earliest opportunity.
2. Independent prescribers (not linked to the SPCT) can prescribe palliative care medications providing it is part of their scope of practice and they are competent to do so.
3. GPs contracted to provide services by HCS can prescribe palliative care medications on HCS sites.

Key: Authorised to prescribe | Authorised to prescribe in specific situations | **Not** authorised to prescribe

Appendix 2: Anticipatory prescribing guidance

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)

Appendix 3: Gold Standards Framework (GSF)

Gold Standards Framework (GSF)

GMC definition of end of life care:

"People are approaching the end of life when they are **likely to die within the next 12 months**."

Includes people whose death is imminent (expected within a few hours or days) and those with:

- advanced, progressive, incurable conditions
- general frailty and co-existing conditions that mean they are expected to die within 12 months
- existing conditions if they are at risk of dying from a sudden acute crisis in their condition
- life threatening acute conditions caused by sudden catastrophic events

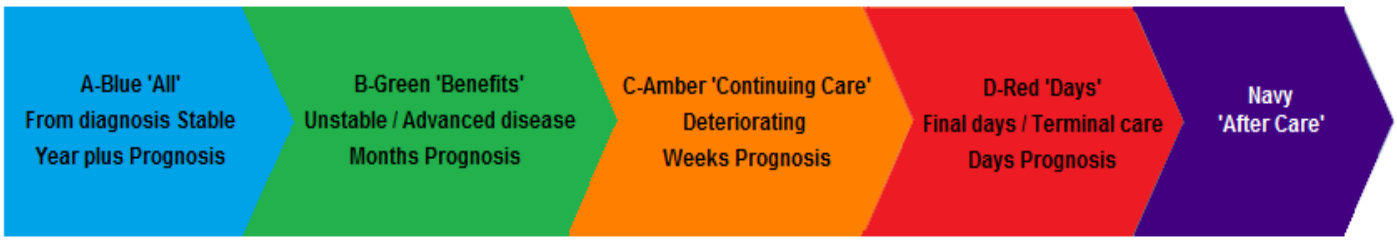
Why is it important to identify patients early?

Earlier identification of people who may be in their final stage of life leads to more proactive person-centred care.

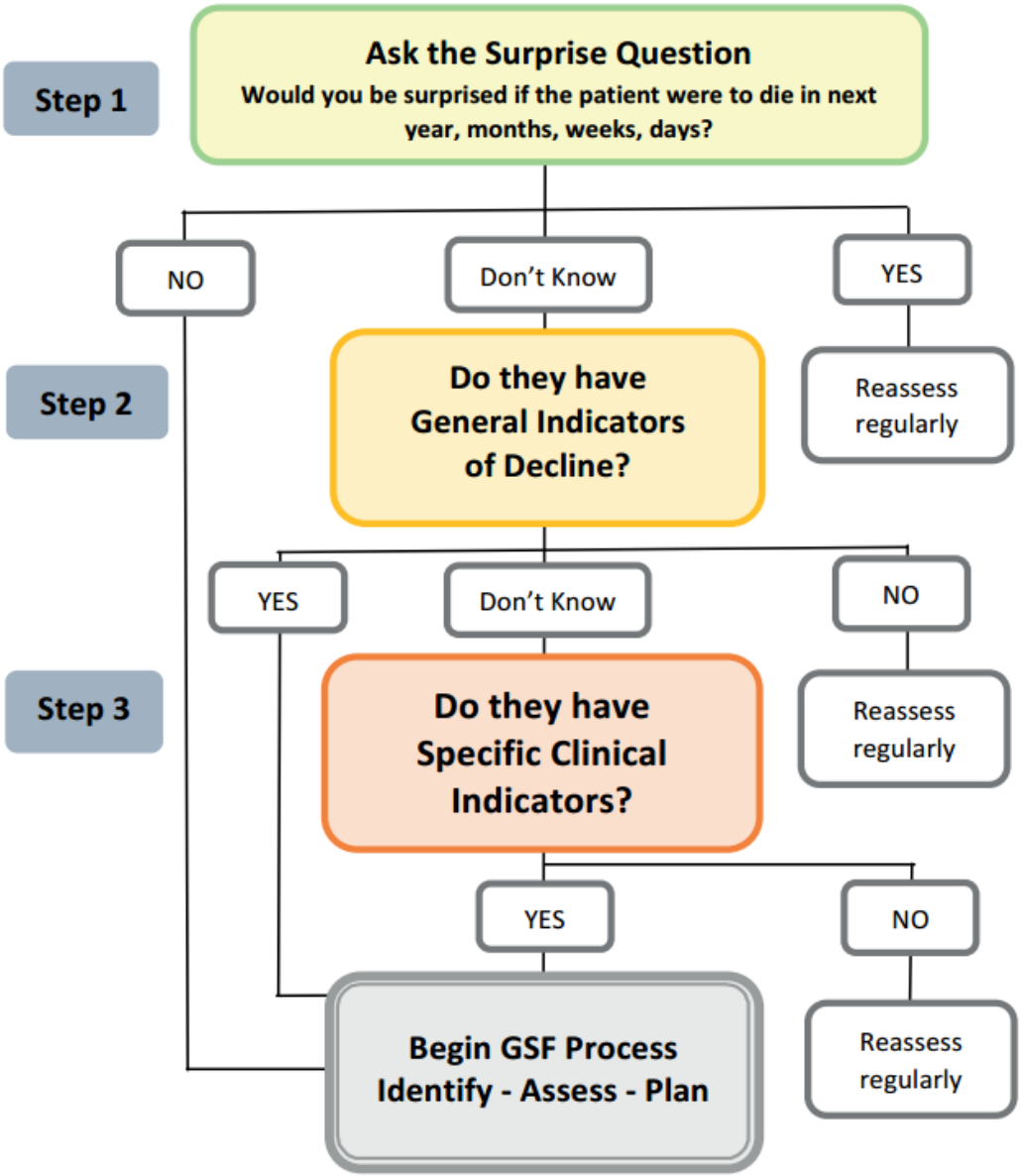
GSF Needs based coding

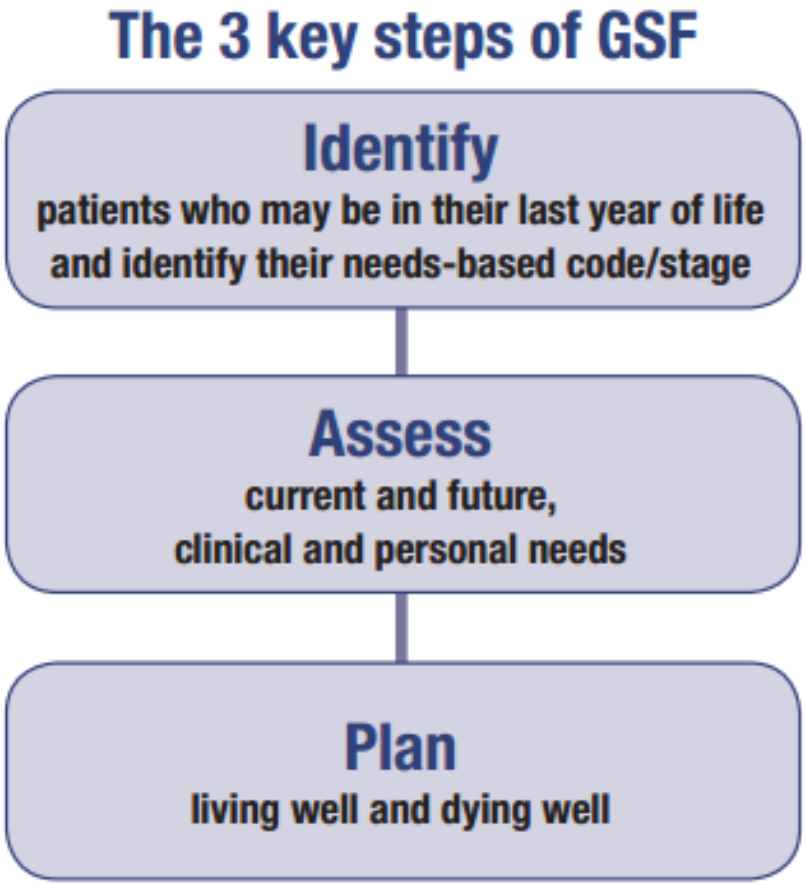
Identify the stage of patient illness – to deliver the right care at the right time for the right patient.

Needs based coding	Stage of illness	Prognosis
Blue (A)	Stable from diagnosis	Year plus
Green (B)	Unstable / Advanced disease	Months
Amber (C)	Deteriorating, exacerbations	Weeks
Red (D)	Last days of life / Terminal care	Days
Navy	'After care' (Bereavement period)	Not applicable



Proactive Identification Guidance – GSF PIG Flow-chart





Further information on general and specific indicators of decline can be found on the Gold Standards Framework website.