RPMG

Palliative Care in partnership

HSC Public Health Agency

# Guidance for the Management of Symptoms in Adults in the Last Days of Life

This guidance provides recommendations to healthcare professionals on managing commonly experienced symptoms at the end of life.

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**The focus of this guidance is on administration by subcutaneous (SC) injection and SC syringe pump over 24 hours, recognising that the dying person may be unable to take or tolerate oral medicines.** It includes the management of the following five symptoms:

**Pain**

**Breathlessness**

**Nausea and vomiting**

**Anxiety, delirium and agitation**

**Noisy respiratory secretions**

When it is recognised that a person may be entering the last days of life:

- Review their current medicines.
- Stop any prescribed medicines not providing symptomatic benefit or that may cause harm.
- Discuss and agree any medication changes with the dying person and those important to them (as appropriate).

Anticipatory prescribing by the subcutaneous route to cover the five symptoms above ensures a supply of medicines are available to relieve symptoms as soon as they occur.

- These recommendations are a GUIDE, and should be used as such. They may differ from other recommendations but have been chosen to reflect expert opinion, best evidence and safety.
- Users are advised to monitor patients carefully for side effects and response to treatment. Responsibility for the use of these recommendations lies with the healthcare professional(s) managing each patient.
- When prescribing, **always start with the lowest dose** in the range specified in this guide.
- Seek specialist advice in moderate to severe renal or hepatic impairment or those with complex needs.
- Consider the non-pharmacological management of symptoms at the end of life.

**Further information is available from your Specialist Palliative Care Team, the Palliative Adult Network Guidelines (PANG) Book 2016 and at www.book.pallcare.info**

# Opioid Conversions Tables

- **Refer also to HSC Guidance "Northern Ireland guidelines on converting doses of opioid analgesics for adult use 2018".**

**Table 1. Opioid Conversions**

| PO (Oral) to PO |
|---|
| **Oral Morphine** to **Oral Oxycodone -** Divide by 2<br>Eg. 30mg Oral Morphine = 15mg Oral Oxycodone |
| **Oral Codeine / Dihydrocodeine / Tramadol to Oral Morphine -** Divide by 10<br>Eg. 240mg Oral Codeine = 24mg Oral Morphine |
| **PO (Oral) to SC (Subcutaneous)** |
| **Oral Morphine** to **SC Morphine -** Divide by 2<br>Eg. 30mg Oral Morphine = 15mg SC Morphine |
| **Oral Morphine** to **SC Diamorphine -** Divide by 3<br>Eg. 30mg Oral Morphine = 10mg SC Diamorphine |
| **Oral Oxycodone** to **SC Oxycodone -** Divide by 2<br>Eg. 10mg Oral Oxycodone = 5mg SC Oxycodone |
| **Oral Morphine** to **SC Alfentanil -** Divide by 30<br>Eg. 30mg Oral Morphine = 1mg SC Alfentanil<br><br>Alfentanil may be used in patients with severe renal impairment; seek specialist advice when necessary |
| **SC (Subcutaneous) to SC** |
| **SC Morphine** to **SC Diamorphine** – Divide by 1.5<br>Eg. 15mg SC Morphine = 10mg SC Diamorphine |
| **SC Morphine** to **SC Oxycodone** – Divide by 2<br>E.g. 20mg SC Morphine = 10mg SC Oxycodone<br>Note this may differ from other available conversions |

**Table 2. Transdermal Patch Conversions**

| Fentanyl Patch eg. Mezolar®, Durogesic® Replace patch every 3 DAYS | |
|---|---|
| **Fentanyl Patch (micrograms/hr)** | **Oral Morphine Dose over 24 hours (mg)** |
| 12 | 30-59 |
| 25 | 60-89 |
| 37 | 90-119 |
| 50 | 120-149 |
| 62 | 150-179 |
| 75 | 180-239 |
| 100 | 240-299 |
| 125 | 300-359 |
| 150 | 360-419 |
| 175 | 420-479 |
| 200 | 480-539 |
| **Buprenorphine Patch eg. Butec®, BuTrans® Replace patch every 7 DAYS** | |
| **Patch Strength (micrograms per hr)** | **Oral Morphine Dose over 24 hours (mg)** |
| 5 | ~10 - 12 |
| 10 | ~20 - 24 |
| 20 | ~40 - 48 |

# Pain

## Patient does not have pain or pain controlled by current prescription

(patient unable to take oral analgesia)

| **No analgesia prescribed or PRN analgesia.** | **Already on regular "weak" opioid (max dose)** e.g. Co-codamol 30/500, Tramadol | **Already on Oral Morphine Sulfate or other opioid (see Table 1)** | **Already on Fentanyl or Buprenorphine patch (See Table 2)** |
|---|---|---|---|
| ↓ | ↓ | ↓ | ↓ |
| **Anticipatory prescribing**<br><br>Prescribe **Morphine Sulfate** 2mg – 5mg SC 2-4hourly PRN<br><br>**AND**<br><br>Review after 24 hours. If patient has required 2 or more doses consider prescribing up to this total of **Morphine Sulfate** dose by SC syringe pump over 24 hours.<br><br>In moderate/severe renal or hepatic impairment consider an alternative opioid. | Stop current oral analgesia.<br><br>**AND**<br><br>Prescribe **Morphine Sulfate** 10mg-15mg by SC syringe pump over 24hrs.<br><br>**AND**<br><br>Prescribe **Morphine Sulfate** 2mg SC 2-4hourly PRN for breakthrough pain* | Use conversion **Table 1** to change from total daily oral **Morphine Sulfate** to SC **Morphine Sulfate** or **other opioid.** Prescribe by SC syringe pump over 24 hours.<br><br>**AND**<br><br>Prescribe breakthrough analgesia* **i.e.** divide total **Morphine Sulfate** or **other opioid** dose by 6 and give 2-4 hourly PRN | Continue prescribing patch<br><br>**AND**<br><br>Use conversion **Table 2** and prescribe SC **Morphine Sulfate** for breakthrough pain* 2-4 hourly.<br><br>Note **Table 2** gives oral morphine equivalence – further conversion to **SC** required, see **Table 1** |

- **Morphine Sulfate** is the first line choice of strong opioid in non-specialist settings.

| **Recommended strengths and pack size to prescribe** | |
|---|---|
| Morphine Sulfate 10mg/ml injection | Pack of 10 |
| Morphine Sulfate 30mg/ml injection | Pack of 10 |

* Breakthrough analgesia is usually worked out as 1/6$^{th}$ of the total 24 hour opioid dose, but can also be given as 1/10$^{th}$ of the total 24 hour opioid dose. Refer to BNF "Prescribing in Palliative Care" section.

# Pain

## Patient currently experiencing pain
(patient unable to take oral analgesia)

### No regular analgesia prescribed

Give stat SC PRN dose of **Morphine Sulfate** 2mg–5mg

**AND**

Prescribe **Morphine Sulfate**

5mg – 10mg by SC syringe pump over 24 hours

**AND**

Prescribe **Morphine Sulfate**

2mg – 5mg SC 2-4 hourly PRN for breakthrough pain*

(This can be given more frequently with medical discussion and/or palliative care input)

### Already on Oral Morphine Sulfate or other opioid (See Table 1)

Use **Table 1** to change from total daily oral **opioid** dose to SC **opioid**. Prescribe by SC syringe pump over 24hrs. If on a long-acting twice daily oral opioid e.g. MST®, start the pump 8 hours after last dose.

**AND**

Prescribe for breakthrough pain* SC 2-4 hourly PRN i.e. divide new total daily SC **opioid** dose by 6. Give a stat dose.

Review regularly

If two or more PRN doses are given in 24 hours increase syringe pump dose by 30% to 50% to control pain. Increase SC PRN dose accordingly.

### Already on Fentanyl Patch or Buprenorphine patch (See Table 2)

Give stat **Morphine Sulfate** SC PRN dose (Use **Table 2**. This gives oral morphine equivalence – further conversion to **SC** required, see **Table 1**).

**AND**

Continue prescribing patch

**AND**

Add additional **Morphine Sulfate** (or other **opioid**) for uncontrolled pain by SC syringe pump over 24 hours (equivalent of 2 breakthrough doses* of **Morphine Sulfate)**

**AND**

Prescribe SC **Morphine Sulfate** for breakthrough pain* (1/6$^{th}$ of **total** 24 hour opioid dose) and give 2-4hourly PRN

* Breakthrough analgesia is usually worked out as 1/6$^{th}$ of the total 24 hour opioid dose, but can also be given as 1/10$^{th}$ of the total 24 hour opioid dose. Refer to BNF "Prescribing in Palliative Care" section.

# Nausea and Vomiting

## No Symptoms Present

**Prescribed regular oral antiemetics?**

**No**

**Anticipatory prescribing**

Prescribe **Cyclizine** SC PRN **(see Table 3)**

**Yes**

(i.e. symptoms controlled by current prescription)

Stop oral antiemetics. Prescribe current antiemetic **by SC syringe pump over 24hrs.**

**AND**

Suitable SC antiemetic PRN

Review every 24 hours

If nausea and vomiting not controlled go to 'Symptomatic' column

## Symptomatic

Give stat dose of suitable SC antiemetic. (see **Table 3**)

**AND**

Start a SC syringe pump over 24hrs.

**AND**

Prescribe SC antiemetic for breakthrough symptoms

If nausea/vomiting persist, use maximum dose of current antiemetic

If nausea/vomiting persists, replace antiemetic drugs in syringe pump with **Levomepromazine**

(A combination of **Cyclizine** & **Haloperidol** may also be used)

**AND**

Prescribe **Levomepromazine** PRN SC for breakthrough nausea

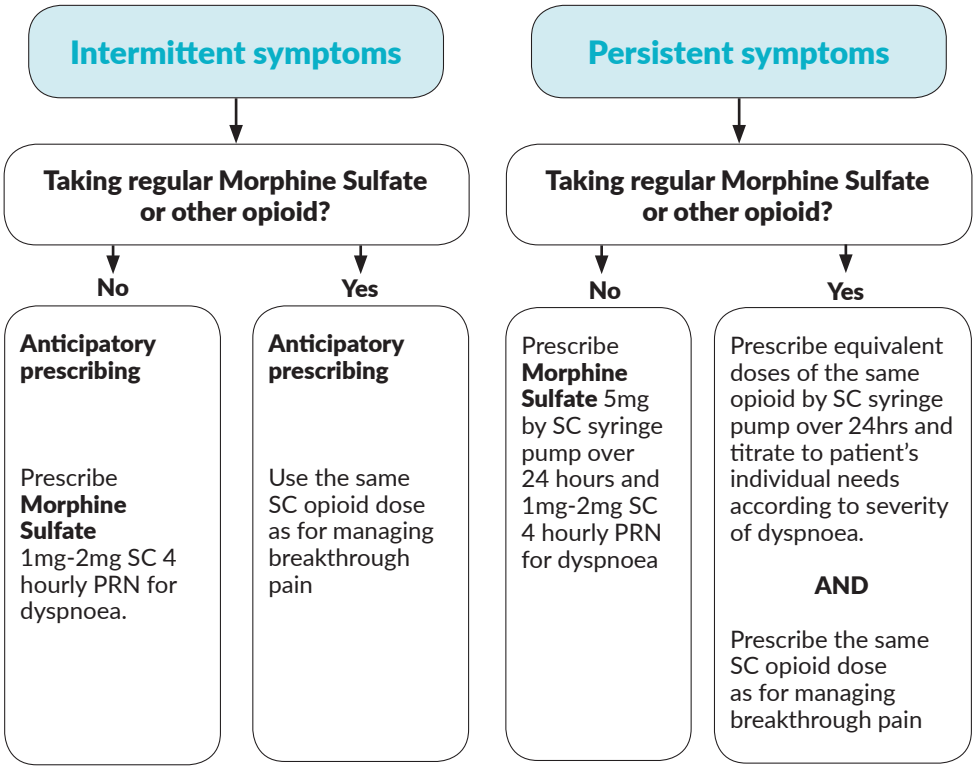
## Table 3. Choice of Antiemetic

## Lower doses are indicated in severe renal or hepatic impairment

| | Drug | Indications for Use | SC stat PRN dose | SC 24 hour dose | Strength and Pack size |
|---|---|---|---|---|---|
| **1st line** | **Cyclizine** | Non-specific nausea & vomiting Mechanical bowel obstruction. Raised intracranial pressure | 50mg every 8 hours PRN | 100mg – 150mg | 50mg injection Pack of 5 |
| | **Haloperidol** | Chemical/ Metabolic causes. | 500 micrograms - 1mg every 6 - 8 hours PRN | 1.5mg * | 5mg/ml injection Pack of 10 |
| | **Metoclopramide** | Partial mechanical bowel obstruction Gastric stasis (Prokinetic antiemetic - discontinue if colic develops). | 10mg every 6 - 8 hours PRN (max TDS) | 30mg * | 10mg/2ml injection Pack of 10 |
| **2nd line** | **Levomepromazine** | Broad spectrum antiemetic Sedation at high doses | 5mg every 4 - 6 hours PRN | 5mg - 25mg | 25mg/ml injection Pack of 10 |
| **3rd line** | **Ondansetron** | Intractable vomiting due to chemical, abdominal and cerebral causes when above approaches fail | 4mg - 8mg every 6 - 8 hours PRN | 8mg – 24mg | 4mg or 8mg injection Pack of 5 |

*Higher doses may be used in specialist practice.

# Breathlessness




- **For patients on other opioids use Table 1 for opioid conversions and use guidance as above**
- For patients who are conscious and can tolerate oral medicines consider oral opioid in a dose equivalent to the SC doses recommended above.
- Oxygen is only indicated for patients who are hypoxic.

| **If patient is breathless *AND* anxious, consider:**<br>**Midazolam** 2mg SC PRN and/or **Midazolam** 5mg-10mg via SC syringe pump over 24 hours. If tolerating oral medicines consider **Lorazepam** tablets 500 micrograms sublingually 4-6 hourly PRN. | |
|---|---|
| **Recommended strengths and pack size to prescribe** | |
| Morphine Sulfate 10mg/ml injection | Pack of 10 |
| Midazolam 10mg/2ml injection | Pack of 10. Preferred strength to use in palliative care to provide low volume SC injections |
| Lorazepam 1mg tablets | Pack of 28. Annotate 'Genus brand' as this preparation dissolves more easily sublingually than other brands |

# Anxiety, Delirium and Agitation

**Assess the patient first to exclude potentially reversible and treatable causes such as pain, drug withdrawal including nicotine, urinary retention or severe constipation.**

## No Symptoms Present

**Anticipatory Prescribing**

Prescribe **Midazolam** 2mg – 5mg SC 2 - 4 hourly PRN

↓

If two or more PRN doses required in 24 hours

→ (to Symptomatic)

## Symptomatic

Prescribe **Midazolam** 2mg – 5mg SC and assess response after 30 minutes

If effective:-

↓

Prescribe **Midazolam** 5mg - 10mg by SC syringe pump over 24hrs.

**AND**

Continue to give PRN dose as required

↓

Re-assess regularly. If symptoms persist add total SC PRN dose over 24 hours to current syringe pump dose (increase breakthrough dose accordingly)

↓

If poor response to increasing dose of **Midazolam** reassess cause of agitation.
Consider prescribing stat dose of:
**Levomepromazine** 5mg - 15mg SC
or
**Haloperidol** 500 micrograms – 1mg SC

↓

Assess response and if effective add:
**Levomepromazine** 10mg-25mg
or
**Haloperidol** 1mg-3mg by SC syringe pump over 24 hrs.

| **Recommended strengths and pack size to prescribe** | |
|---|---|
| Midazolam 10mg/2ml injection | Pack of 10. Preferred strength to use in palliative care to provide low volume SC injections |
| Levomepromazine 25mg/ml injection | Pack of 10 |
| Haloperidol 5mg/ml injection | Pack of 10 |

# Noisy Respiratory Secretions

**Review the use of intravenous or subcutaneous fluids and decrease or discontinue if appropriate.**

## No Symptoms Present

**Anticipatory Prescribing**

Prescribe **Glycopyrronium** 200 micrograms SC 4-6 hourly PRN

If two or more PRN doses are required in 24 hours

## Symptomatic

Give stat dose of **Glycopyrronium** 200 micrograms SC

**AND**

Prescribe **Glycopyrronium** 600 micrograms by SC syringe pump over 24hrs.

**AND**

Prescribe **Glycopyrronium** 200 micrograms SC 4-6 hourly PRN for breakthrough symptoms

If symptoms persist, increase total 24 hour dose to 1.2mg.

Review after 24 hours. If symptoms persist consider changing to:
**Hyoscine Butylbromide** 120mg by SC syringe pump over 24hrs.

or

**Hyoscine Hydrobromide** 2.4mg* by SC syringe pump over 24hrs.
*Hyoscine Hydrobromide may cause sedation and paradoxical agitation

| **Recommended strengths and pack size to prescribe** | |
|---|---|
| Glycopyrronium Bromide 200 micrograms/ml injection | Pack of 10 |
| Hyoscine Butylbromide 20mg/ml injection | Pack of 10 |
| Hyoscine Hydrobromide 400 micrograms/ml injection | Pack of 10 |