PRESCRIBING GUIDELINES FOR SYMPTOM MANAGEMENT IN THE DYING PATIENT

A collaboration between:
St. Rocco's Hospice,
Bridgewater Community Healthcare NHS Trust,
NHS Warrington Clinical Commissioning Group,
and Warrington and Halton Hospitals NHS Foundation Trust

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This guidance has been developed as a tool to support safe and effective prescribing of medication that alleviates the common symptoms that occur in the dying patient.

1. Pain
2. Nausea and Vomiting
3. Agitation
4. Respiratory Tract Secretions
5. Dyspnoea

Most patients who are dying will experience one or more of these symptoms and will require medication that is administered subcutaneously either PRN or via a syringe driver. The IV or IM routes are not routinely recommended in the dying patient.

It is good practice to prescribe PRN medication in advance of the last few days of life. This prevents delays in patients receiving medication.

Suggested quantities of **standard as required medication** prescribed in anticipation and dose / ampoule.

CYCLIZINE	50mg/1ml amps x **10**
MIDAZOLAM	5mg/ml 2ml amps x **10**
GLYCOPYRRONIUM	200 micrograms/ml amps x **20**
WATER FOR INJECTIONS	10ml amps x **20**
MORPHINE	10mg/1ml amps x **10**
OR	
DIAMORPHINE	5mg amps x **10**

For patients who have epilepsy or have experienced seizures and are no longer able to take oral medication commence a syringe driver with 20mg **MIDAZOLAM** over 24 hours to prevent seizures. Ensure **MIDAZOLAM** 5mg SC PRN is also prescribed in addition for seizures.

Where patients have been prescribed **DEXAMETHASONE** for symptoms associated with raised intracranial pressure continue with an equivalent dose either once or twice daily as an SC injection or via a separate syringe driver over 24 hours.

PAIN MANAGEMENT – S/C Diamorphine

Patient established on oral morphine or opioid naive.

Important; It is the responsibility of the prescriber to ensure that guidelines are followed when prescribing opioids. Every member of the team has a responsibility to check that the intended dose is safe for the individual patient. Knowledge of previous opioid dose is essential for the safe use of these products. Advice should be sought if prescribing outside of these guidelines or when the limits of own expertise are reached (National Patient Safety Alert/2008/RRR05)

CONTACT THE PALLIATIVE CARE TEAM (Details Below) FOR ADVICE IF:

- The patient has moderate to severe renal failure.
- The patient has new severe pain or pain that has persisted after 24 hours on a syringe driver.

PATIENT IS TAKING ORAL MORPHINE

YES

- Stop all **oral Morphine**
- Convert total daily dose of **oral Morphine** to subcutaneous Diamorphine by dividing by 3 and prescribe this dose subcutaneously via a syringe driver over 24 hours (see example (a) below).
- Prescribe a **breakthrough** pain dose of **Diamorphine** that is 1/6TH of the calculated total **Diamorphine** dose IN SYRINGE DRIVER, SC hourly PRN (see example (b) below).(Commence at 2.5mg)
- Reassess after 24 hours.

- If patient has required additional **Diamorphine** for breakthrough pain calculate total dose given over 24 hours and **increase** dose in syringe driver by **50%** of this amount.
- Ensure breakthrough dose remains at 1/6TH of syringe driver dose.

NO

Patient has pain

YES

- Prescribe and give **Diamorphine** 2.5mg - 5mg SC STAT
- Prescribe **Diamorphine** 7.5mg via syringe driver over 24 hours
- Prescribe **Diamorphine** 2.5mg - 5mg SC PRN hourly for breakthrough pain.

NO

Prescribe in anticipation of sympton **Diamorphine** 2.5 mg-5mg SC PRN hourly

Example (a) syringe driver dose

Converting from oral Morphine to syringe driver

e.g. **Zomorph** 60mg 12 hourly = 120mg

120mg/3= 40mg

Diamorphine subcutaneously via syringe driver over 24 hours = 40mg

Example (b) calculating breakthrough dose

The breakthrough dose is 1/6TH of total daily **Diamorphine** dose

e.g. Patient requires 60mg via syringe driver over 24 hours

60/6 = 10mg **Diamorphine** SC PRN

KEY

SC = Subcutaneous

PRN = As Required

PAIN MANAGEMENT - S/C Morphine

Patient established on oral Morphine or opioid naive.

Important; It is the responsibility of the prescriber to ensure that guidelines are followed when prescribing opioids. Every member of the team has a responsibility to check that the intended dose is safe for the individual patient. Knowledge of previous opioid dose is essential for the safe use of these products. Advice should be sought if prescribing outside of these guidelines or when the limits of own expertise are reached (National Patient Safety Alert/2008/RRR05)

CONTACT THE PALLIATIVE CARE TEAM (Details Below) FOR ADVICE IF:

- The patient has moderate to severe renal failure.
- The patient has new severe pain or pain that has persisted after 24 hours on a syringe driver.

PATIENT IS TAKING ORAL MORPHINE

YES

- Stop all **oral Morphine**
- Convert total daily dose of **oral Morphine** to subcutaneous Morphine by dividing by 2 and prescribe this dose subcutaneously via a syringe driver over 24 hours (see example (a) below).
- Prescribe a **breakthrough** pain dose of **Morphine** that is 1/6TH of the calculated total **Morphine** dose IN SYRINGE DRIVER, SC hourly PRN (see example (b) below).
- Reassess after 24 hours.

- If patient has required additional **Morphine** for breakthrough pain calculate total dose given over 24 hours and **increase** dose in syringe driver by **50%** of this amount.
- Ensure breakthrough dose remains at 1/6TH of syringe driver dose.

NO

Patient has pain

YES

- Prescribe and give **Morphine** 2.5mg - 5mg SC STAT
- Prescribe **Morphine** 10mg via syringe driver over 24 hours
- Prescribe **Morphine** 2.5 - 5mg SC PRN hourly for breakthrough pain.
- Reassess after 24 hours.

NO

Prescribe in anticipation of sympton **Morphine** 2.5mg-5mg SC PRN hourly

Example (a) syringe driver dose

Converting from oral Morphine to syringe driver

e.g. **Zomorph** 60mg 12 hourly = 120 mg

120mg/2 = 60mg

Dose of **Morphine** subcutaneously via syringe driver over 24 hours = 60mg

Example (b) calculating breakthrough dose

The breakthrough dose is 1/6TH of total daily **Morphine** dose

e.g. Patient requires 60mg **Morphine** via syringe driver over 24 hours

60/6 = 10mg **Morphine** SC PRN

KEY

SC = Subcutaneous

PRN = As Required

PAIN MANAGEMENT
Patients established on Fentanyl Patches

Important; It is the responsibility of the prescriber to ensure that guidelines are followed when prescribing opioids. Every member of the team has a responsibility to check that the intended dose is safe for the individual patient. Knowledge of previous opioid dose is essential for the safe use of these products. Advice should be sought if prescribing outside of these guidelines or when the limits of own expertise are reached (National Patient Safety Alert/2008/RRR05)

- **DO NOT COMMENCE** FENTANYL PATCHES FOR PAIN RELIEF IN THE DYING PHASE.
- If the patient has **severe** renal dysfunction and requires additional pain relief seek advice on prescribing from the palliative care team.

FENTANYL ESTABLISHED

DO NOT remove Fentanyl Patch and continue to re-apply every 72 hours.

PAIN CONTROLLED
Prescribe opioid for breakthrough pain as needed.
As table below.

PAIN PRESENT

- Prescribe adequate dose of breakthrough opioid analgesia as table below.
- Re-asses after 24 Hrs
- If 2 or more doses of breakthrough opioid are required in 24 hrs commence syringe driver. Prescribe **50%** of the total amount of breakthrough given in previous 24hrs via syringe driver **in addition** to Fentanyl patch.

OBTAIN SPECIALIST PALLIATIVE CARE ADVICE REGARDING CALCULATING SUBSEQUENT PRN DOSE OF OPIOID S/C ONCE OPIOID IS REQUIRED IN SYRINGE DRIVER			
Fentanyl patch strength	Hourly Diamorphine sc PRN	Hourly Morphine sc PRN	Hourly Oxycodone sc PRN
12 micrograms	2.5 mg	5 mg	2.5 mg – 5mg
25 micrograms	2.5 mg – 5 mg	7.5 mg	5 mg
37 micrograms	5 mg	10 mg	7.5 mg
50 micrograms	5 mg – 10 mg	15 mg	10 mg
62 micrograms	7.5 mg	20 mg	10 mg – 15 mg
75 micrograms	10 mg	25 mg	15 mg

KEY
SC = Subcutaneous
PRN = As Required

For further advice contact Specialist Palliative Care:

Community Team – 01925 570781 Hospice – 01925 575780 Hospital Team – 01925 662915

PAIN MANAGEMENT - S/C Oxycodone

For patients established on oral Oxycodone

Important; It is the responsibility of the prescriber to ensure that guidelines are followed when prescribing opioids. Every member of the team has a responsibility to check that the intended dose is safe for the individual patient. Knowledge of previous opioid dose is essential for the safe use of these products. Advice should be sought if prescribing outside of these guidelines or when the limits of own expertise are reached
(National Patient Safety Alert/2008/RRR05)

- BOTH 3:2 AND 2:1 CONVERSIONS FROM ORAL OXYCODONE TO THE SUBCUTANEOUS ROUTE CAN BE USED.

CONVERT ORAL OXYCODONE TO SUBCUTANEOUS ROUTE AS BELOW

- **CALCULATE DOSE REQUIRED OVER 24 HOURS IN SYRINGE DRIVER: SYRINGE DRIVER DOSE = 1/2 (half) OF ORAL DAILY DOSE.**

  e.g. **Oxycontin** 40mg 12 hrly = 80mg/24 hours
  1/2 (half) of 80mg = 40mg/24 hours
  dose required in syringe driver = 40mg

- **CALCULATE DOSE OF OXYCODONE REQUIRED FOR RELIEF OF BREAKTHROUGH PAIN. BREAKTHROUGH DOSE = 1/6TH DOSE IN SYRINGE DRIVER.**

  e.g. **Oxycodone** 60mg/24 hours in syringe driver = 10mg **Oxycodone** SC PRN

- **RE-ASSESS AFTER 24HRS** – if patient has required breakthrough analgesia calculate total amount given in previous 24 hrs and increase dose in syringe driver by **50%** of this amount.

- **ENSURE THAT BREAKTHROUGH DOSE REMAINS 1/6TH of DOSE IN SYRINGE DRIVER**

KEY

SC = Subcutaneous
PRN = As Required

NAUSEA & VOMITING – (for patients without heart failure)

PRESENT

- On anti-emetics
  - Seek advice from the Palliative Care Teams (as below)
- Not on anti-emetics
  - Prescribe **Cyclizine** 50mg SC stat dose and commence 150mg/24 hours via syringe driver. Thereafter maximum 150mg/24 hours
    - If symptoms persist use **Haloperidol** 0.5mg – 1mg SC PRN 4-6 hourly

ABSENT

- Prescribe in anticipation of symptom **Cyclizine** 50mg SC 8 Hourly PRN

NAUSEA & VOMITING – (for patients with heart failure)

CYCLIZINE IS NOT RECOMMENDED IN PATIENTS WITH HEART FAILURE.

Alternative anti-emetics according to local policy & procedure may be prescribed, e.g.

Haloperidol *0.5mg – 1mg SC PRN 4-6 hourly max or*

1.5mg-5mg via a syringe driver over 24 hours

Levomepromazine *6.25mg SC PRN 8 hourly or*

6.25 mg – 25 mg via a syringe driver over 24 hrs

KEY

SC = Subcutaneous
PRN = As Required

TERMINAL RESTLESSNESS & AGITATION

The intention of sedation in palliative care is to relieve distress – unconsciousness may occur but is not a desired outcome (refer to National Patient Safety Alert/2008/RRR011)

PRESENT

Urinary retention and rectal distension from constipation are common reversible causes of agitation – ensure these are excluded.

- Prescribe **Midazolam** 2.5mg – 5mg SC PRN until syringe driver commenced. If 2.5mg ineffective after 30 minutes, give a further 5mg (total 7.5mg in 1 hour) If patient remains agitated seek medical review and contact Specialist Palliative Care Team for advice.
- If agitation likely to persist commence **Midazolam** 10mg - 20mg SC via Syringe Driver over 24 hours.
- In addition prescribe **Midazolam** 2.5mg – 5mg SC PRN hourly if required.

To calculate the subsequent subcutaneous dose of **Midazolam** over 24 hours:

- Calculate and add total dose of **Midazolam** given on a PRN basis over previous 24 hours to current 24 hour dose via syringe driver.
- Increase the dose of **Midazolam** accordingly up to **30mg** in **syringe driver** over 24 hours.
- Continue with PRN **Midazolam** – calculate dose as 1/6TH of syringe driver dose.

If Midazolam 30mg in syringe driver is reached and symptoms are not controlled, please seek advice.

ABSENT

Prescribe in anticipation of symptom **Midazolam** 2.5mg – 5mg SC hourly PRN if required. Maximum 30mg in 24 hours.

KEY

SC = Subcutaneous
PRN = As Required

RESPIRATORY TRACT SECRETIONS

It is important to start treatment as soon as symptoms occur

PRESENT

- Prescribe **Glycopyrronium** 200 micrograms SC STAT &
- Commence syringe driver containing **Glycopyrronium** 1200 micrograms over 24 hours.
- Prescribe in addition **Glycopyrronium** 200 micrograms 6 hourly prn (max dose 2400 micrograms in 24 hours)

If respiratory tract secretions persist over the next 24 hours, increase **Glycopyrronium** to 2400 micrograms over 24 hours. This is a maximum dose. There is no benefit from additional PRN doses.

NB - Hyoscine Hydrobromide can be used as an alternative to Glycopyrronium but not together, use 400 micrograms SC as PRN dose and 1200 micrograms via syringe driver (Max dose 2400 micrograms in 24 hours)

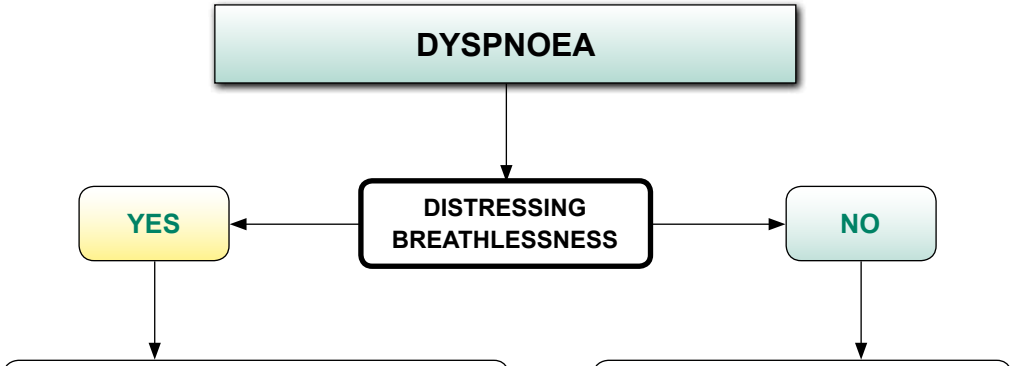
ABSENT

Prescribe **Glycopyrronium** 200 micrograms sc 6 hourly PRN (Max 2400 micrograms in 24 hrs)

Prescribing in anticipation of this common symptom may prevent delay in commencing treatment.

KEY

SC = Subcutaneous
PRN = As Required



- Prescribe Morphine 2.5mg – 5mg SC PRN hourly & **Midazolam** 2.5mg SC PRN hourly.
- **State on drug chart that indication is breathlessness**

  Or if breathlessness is constant
- **Diamorphine** 5mg via syringe driver over 24 hours **OR**
- **Morphine** 5mg -10mg via syringe driver over 24 hours (if previously taking oral opioid for breathlessness convert previous oral opioids dose) (see pain algorithm)

  AND

  Midazolam 5mg - 10mg via syringe driver over 24 hours.

Prescribe PRN opioids & anxiolytic in anticipation of symptom

Morphine 2.5mg SC PRN hourly

OR

Diamorphine 1.25mg – 2.5mg SC PRN hourly

AND

Midazolam 2.5mg SC PRN hourly

If patient has already got CSCI with Midazolam in place for other symptoms (e.g. agitation) then ensure the maximum daily dose of 30mg/24 hours is not exceeded.

GUIDANCE ON CONVERSIONS AND PROCEDURES TO/OR FROM ORAL OPIOIDS, PATCHES, CSCI (Continuous Sub Cutaneous Infusion)

TO START FENTANYL PATCH

FACTS: It takes 6-12 hours for the patch to work and 36-48 hours to reach stable dose.

CSCI	→	TO	→	FENTANYL PATCH
Apply the patch and continue CSCI for 8 hours then stop CSCI				

ORAL M/R OPIOIDS	→	TO	→	FENTANYL PATCH
Apply the patch with the last dose of controlled released opioids then discontinue the M/R after that.				

TO DISCONTINUE FENTANYL PATCH

FACTS: After Fentanyl patch is removed, a reservoir of the drug remains under the skin and continues to release for 17 hours (13-22 hours average)

FENTANYL PATCH	→	TO	→	ORAL M/R OPIOID

- Take off the patch
- For the next 12-24 hours use breakthrough medication
- After 24 hours start the M/R opioids
- Observe for opioid toxicity in this period

FENTANYL PATCH	→	TO	→	CSCI
When switching from Fentanyl patch to syringe driver, take the patch off, and start syringe driver 13 hours after.				

If patient is dying or pain unstable and needs additional analgesia

- Leave patch on and continue to replace every 72 hours
- Add CSCI of Diamorphine or an alternative

TO START AND DISCONTINUE CSCI

FACTS: CSCI takes 3-4 hours to establish a steady level in plasma

ORAL M/R OPIOIDS	→	TO	→	CSCI

- Start CSCI 8 hours after the last dose of M/R opioids
- For the next 8 hours use breakthrough medication

CSCI	→	TO	→	ORAL M/R OPIOIDS

- Give the first dose of oral M/R opioids
- Remove CSCI 4 hours later

*For procedure guidelines follow Merseyside & Cheshire Palliative Care Network Audit Group Standard & Guidelines 4th Edition 2010

GUIDANCE ON PRESCRIBING DRUGS TO BE GIVEN SUBCUTANEOUSLY VIA SYRINGE PUMP OR AS REQUIRED

PRESCRIBING OPIOIDS – It is the responsibility of the prescriber to ensure that guidelines are followed when prescribing opioids. Advice should be sought if prescribing outside of these guidelines or when the limits of own expertise is reached (Ref: NPSA Alert/2008/RRR05)

OPIOIDS FOR PAIN RELIEF

DIAMORPHINE may be used subcutaneously, see conversion boxes below.

OPIOID NAIVE PATIENT IN PAIN - Prescribe **DIAMORPHINE** 5 – 10 mg/24 hours via continuous subcutaneous infusion (CSCI) and an as required dose of 2.5-5mg sc hourly PRN.

OXYCODONE- If a patient is established on oral **OXYCODONE** convert to the subcutaneous route as below.

TRANSDERMAL OPIOID PATCHES. e.g. FENTANYL, BUPRENORPHINE (TRANSTEC®/BUTRANS®) – in dying phase patch should remain in situ and be replaced regularly according to the prescribing guidance for individual patches. If patient has pain, seek advice from Specialist Palliative Care Team. **DO NOT COMMENCE PATCHES IN THE DYING PHASE.**

CONVERSIONS OF OPIOIDS FROM ORAL TO SUBCUTANEOUS SYRINGE PUMP

SC DIAMORPHINE	SC OXYCODONE	OTHER SC OPIOIDS	AS REQUIRED DOSES
Subcutaneous dose is 1/3rd of total oral daily dose **e.g. MORPHINE MR** 30mg bd = 60mg orally/24 hours. Prescribe OPIOID as SC PRN 20mg over 24 hours via syringe pump	**Subcutaneous dose is 1/2 (half) of total oral daily dose** e.g. **OXYCODONE MR** 30mg bd = 60mg orally/24 hours. Prescribe OPIOID as SC PRN 30mg over 24 hours via syringe pump	**MORPHINE – subcutaneous dose is (1/2) half the total oral daily dose** **ALFENTANIL – seek advice from list below** **HYDROMORPHONE– seek advice from list below**	Prescribe 1/6th of the 24 hour dose of **OPIOID as SC PRN** SC PRN maximum of 6 doses in 24 hours

OTHER SYMPTOMS - DOSES SUBCUTANEOUSLY OVER 24 HOURS.

NAUSEA & VOMITING	1st Line **CYCLIZINE** 150mg (avoid in end stage heart failure) (MAX 150mg/24 hrs including PRN) + **HALOPERIDOL** 1.5-5mg if vomiting persists 2nd Line **LEVOMEPROMAZINE** 6.25-25mg.
AGITATION	**MIDAZOLAM** 10-30mg.
BRONCHIAL SECRETIONS	**GLYCOPYRRONIUM** 1200-2400 micrograms
DYSPNOEA	**DIAMORPHINE** 5-10mg + **MIDAZOLAM** 5-10mg

MEDICATION WHICH SHOULD BE PRESCRIBED AS REQUIRED IN ANTICIPATION OF COMMON SYMPTOMS.

NAUSEA & VOMITING	1st Line – **CYCLIZINE** 50mg sc 8 hourly PRN unless already in syringe pump (avoid in end stage heart failure)(MAX 150mg/24hrs) 2nd Line – **LEVOMEPROMAZINE** 6.25mg sc 8 hourly PRN or HALOPERIDOL 0.5 – 1 mg sc PRN (seek advice if more than 1mg needed)
BRONCHIAL SECRETIONS	**GLYCOPYRRONIUM** 200 micrograms sc PRN (MAX 2400 micrograms sc/ 24 hours including PRN)
***AGITATION**	**MIDAZOLAM** 2.5mg-5mg sc PRN for any indication
***DYSPNOEA**	**MIDAZOLAM** 2.5mg-5mg sc 4 HRLY PRN + **DIAMORPHINE** 2.5-5mg sc 4HRLY PRN

* MAXIMUM cumulative dose in 24 hours is 30mg irrespective of indication

FOR FURTHER ADVICE CONTACT SPECIALIST PALLIATIVE CARE: Community team – 01925 570781 Hospice – 01925 575780 Hospital team– 01925 662915