Management of PAIN in the last days of life: PAEDIATRIC AND NEONATAL

Document 4

PAIN DOSE OF MORPHINE WILL ALSO TREAT BREATHLESSNESS. DO NOT PRESCRIBE 2 SEPARATE DOSES TO TREAT PAIN AND BREATHLESSNESS

Assess patient in the last days of life a minimum of every 4 hours to allow existing and emerging symptoms to be detected, assessed and treated effectively.

- Use the *Comfort Observation Symptom Assessment: Paediatric and Neonatal (COSA: P&N)* to document assessments
- In addition to pharmacological measures implement non-pharmacological measures to manage pain. Environmental considerations may include: decrease room lighting and noise, increase airflow (including handheld fan), position to maximise comfort (consider pressure relieving mattress), the presence of parents/carers including kangaroo cuddles, favourite toys, books, music, electronics that are developmentally appropriate. Rationalise visitor numbers
- Consider and manage other causes of pain such as urinary retention or symptoms which may present as pain such as distress related to anxiety and fear

Route of medication administration

- **Enteral:** whilst the patient is able to tolerate this, the enteral route (oral/buccal/gastrostomy/naso-gastric [NG]) is preferred. (NB: absorption will be slower with enteral administration in the last days of life). If patient experiences acute, severe pain then subcutaneous (subcut) or intravenous (IV) route of administration is preferred
- **Subcut or IV:** consider using subcut route of administration or use IV access [Intravenous Cannula (IVC)/Central Venous Access Device (CVAD)] if available as per local policy. In tertiary children's hospitals, consider local IV/subcut infusion guidelines
  Avoid intramuscular injections
- For the majority of patients in the last days of life, MORPHINE should be used as the first line opioid (check allergies). Discuss with SPPC (including out of hours) regarding alternative opioid choices

IF YOU HAVE DOUBTS OR CONCERNS, CONTACT A SPECIALIST PAEDIATRIC PALLIATIVE CARE SERVICE (SPPC) VIA ANY OF THE NSW CHILDREN'S HOSPITAL'S SWITCHBOARDS (INCLUDING OUT OF HOURS)

If patient has NOT been on regular opioids in the last 7 days

As required medication should be prescribed, even if the patient is not currently in pain

ENTERAL (oral/gastrostomy/NG)

Starting PRN MORPHINE dose:

- < 50 kg patient (including neonates)
  0.1 mg/kg hourly prn for pain
  (Maximum 6 prn doses in 24 hours)
  Be aware of longer clearance time in neonates
- > 50 kg patient
  5 mg hourly prn for pain
  (Maximum 6 prn doses in 24 hours)

OR

For patients unable to swallow tablets but who can swallow oral liquid medicine, consider oxycodone liquid as it is more palatable than oral MORPHINE liquid.

Starting PRN OXYCODONE dose:

- < 50 kg patient (excludes neonates)
  0.06 mg/kg hourly prn for pain
  (Maximum 6 prn doses in 24 hours)
- > 50 kg patient
  2.5 mg hourly prn for pain
  (Maximum 6 prn doses in 24 hours)
  (1 mg oxycodone =1.5 mg morphine - see table overleaf)

OR

SUBCUTANEOUS OR INTRAVENOUS

Starting PRN MORPHINE dose:

- < 50 kg patient (including neonates)
  0.05 mg/kg hourly prn for pain
  (Maximum 6 prn doses in 24 hours)
  Be aware of longer clearance time in neonates
- > 50 kg patient
  2.5 mg hourly prn for pain
  (Maximum 6 prn doses in 24 hours)

Assess response and if patient remains in pain after prn dosing or has required more than 3 prn doses in 24 hours, prescribe regular MORPHINE.
If enteral dosing is becoming difficult, then convert to subcut/IV morphine.

If patient HAS been taking regular enteral opioid and is no longer able to tolerate this or pain is uncontrolled

Convert regular dose of enteral opioid to subcut/IV morphine AND prescribe prn subcut/IV medication
(See Opioid Conversion Table overleaf)

Discontinue regular enteral opioid and prescribe regular subcut/IV MORPHINE
OR
subcut infusion of MORPHINE *(dependant on local guidelines)*
(To calculate dose, use table overleaf to calculate equivalent total 24 hr subcut/IV morphine dose. NB. Second person to check medication calculation)

Regular subcut/IV MORPHINE dose:
= one sixth (1/6th) parenteral equivalent of total 24 hour dose given as a subcut/IV dose every 4 hours
OR
Give at an (subcut/IV infusion) hourly rate of 1/24th of calculated total 24-hour dose, Infuse over 24 hours
Additional dose guidance can be obtained by contacting SPPC

AND

Prescribe prn subcut MORPHINE
prn dose = one sixth (1/6th) total daily parenteral dose
(see Opioid Conversion Table overleaf)
Given every 1- 2 hours prn
(Maximum 6 prn doses in 24 hours)

Patient is on a regular TRANSDERMAL opioid

(e.g. FENTANYL Patch)

LEAVE THE PATCH IN SITU
(Prescribe patch at the same dose and change as usual)
DO NOT START A FENTANYL PATCH IF PATIENT HAS UNCONTROLLED PAIN AT END OF LIFE
Fentanyl patch should NOT be used/initiated in neonates

AND

Prescribe prn subcut/IV MORPHINE
Subcut every 1 - 2 hours prn for pain according to the current patch dose. See table below

Fentanyl Patch every 72hrs	PRN subcut morphine dose
12 micrograms/hr every 72 hours	1.5 mg
25 micrograms/hr every 72 hours	3 mg
50 micrograms/hr every 72 hours	6 mg
75 micrograms/hr every 72 hours	10 mg

Maximum of 6 prn doses in 24 hours

Discuss with SPPC if FENTANYL patch 75 mcg/hr or higher/other strength/frequency transdermal opioid

Review symptom control at least daily. If 3 or more prn doses are required in the previous 24 hrs, continue patch dose unaltered and add regular opioid analgesia (regular subcut/IV opioid or opioid infusion)
Seek advice from SPPC if needed

If 3 or more prn doses are required in the previous 24 hours, increase regular and/or prn doses of MORPHINE (subcut/IV or infusion) by one third (1/3rd).
Seek advice from SPPC if pain is not controlled.

**For management of adverse effects of excess opioid DO NOT give an opioid antagonist (e.g. naloxone), as this may precipitate uncontrolled pain and/or opioid withdrawal symptoms.
Please seek URGENT advice from SPPC for medication excess management.**

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OPIOID CONVERSION PATHWAY

N.B. Second person must check medication calculation

CONVERTING TO ORAL MORPHINE		
Oral to oral	**Conversion ratio**	**Example**
Oxycodone to morphine	1:1.5	Oral oxycodone 1 mg = oral morphine 1.5 mg
HYDROmorphone to morphine	1:5	Oral HYDROmorphone 1 mg = oral morphine 5 mg

OPIOID CONVERSION: ORAL TO SUBCUTANEOUS (subcut) /INTRAVENOUS (IV) - same drug to same drug			
Oral	**Subcut/IV**	**Conversion ratio**	**Example**
Morphine	Morphine	3:1	Oral morphine 15 mg = subcut/IV morphine 5 mg
Oxycodone	Oxycodone	3:1	Oral oxycodone 15 mg = subcut/IV oxycodone 5 mg
HYDROmorphone	HYDROmorphone	3:1	Oral HYDROmorphone 3 mg = subcut/IV HYDROmorphone 1 mg

MORPHINE DOSING EXAMPLE

To calculate patient's total daily dose and conversion to subcut/IV

Patient (25 kg) currently prescribed 15 mg dose of regular oral morphine and has received a total 7.5 mg PRN subcut morphine in last 24 hours

STEP 1	Determine total oral/gastrostomy/NG (=enteral) morphine dose in last 24 hours	15 mg
STEP 2	Determine total parenteral morphine dose in last 24 hours	7.5 mg
STEP 3	Calculate total daily parenteral equivalent of morphine 1/3 total morphine enteral dose (from step 1) PLUS total parenteral morphine dose in 24 hours (from step 2)	(15 mg/3) + 7.5 mg= 12.5 mg
	Current total = morphine parenteral dose 24 hours	12.5 mg in 24 hours
STEP 4	Calculate new REGULAR DOSE Calculate quantity for each dose: divide by 6 for every 4 hour dosing (12.5 mg/6 = 2mg) OR Calculate infusion rate if SC/IV infusion: divide by 24 for hourly infusion rate (12.5 mg/24 = 0.52 mg) **PLUS** Calculate new PRN DOSE Calculate quantity for each PRN dose: divide by 6 and give every 1-2 hours PRN	**NEW Regular Dose** 2 mg subcut/IV every 4 hours OR 0.52 mg/hour subcut/IV INFUSION **PLUS** **NEW PRN DOSE** 2 mg subcut/IV every 1-2 hours PRN