Approved by Quality & Patient Care Committee
16/3/17

NALOXONE – Treatment of opioid induced over-sedation, respiratory depression, pruritis and nausea

This LOP is developed to guide clinical practice at the Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this LOP.

1. AIM

Naloxone is usually administered for opioid induced respiratory depression with over sedation to prevent an opioid induced respiratory arrest. Patients on long acting opioids and patients who are administered intraoperative neuraxial morphine are more likely to be at risk of persistent respiratory depression. The desired outcome is reversal of opioid related side effects including respiratory depression, over sedation, pruritus and nausea, without reversal of analgesia.

2. PATIENT

- Adult patient who are not responsive or difficult to rouse after an opiate dose (Sedation Score 3)
- Adult patients who are constantly drowsy after an opiate dose (Sedation Score 2) plus have a respiratory rate ≤ 5 breaths per minute after opiate dosage.
- Adult patients who are suffering from pruritus after opioid dosage.
- Adult patients who are suffering from post-operative nausea and vomiting (PONV), after an opioid dose, where a conventional antiemetic has failed.

3. STAFF

- Registered Midwives
- Student Midwives
- Medical Staff
- Anaesthetist

4. EQUIPMENT

- Prescription (unless standing order)
- Blue Tray
- Syringe (1 mL) plus (10mL)
- 18g Blunt tip drawing up needle
- 26g needle (for subcutaneous use)
- 21g needle (for IM use)
- 400mcg naloxone ampule
- 10mL sodium chloride 0.9%

5. CLINICAL PRACTICE

Nursing management of respiratory depression and/or over sedation from opiates

- Stop all opioid infusions or remove PCA button from patient and do not administer any further opioids.
- Place patient in coma position.
- Administer oxygen at 10L/minute via a Hudson Mask.
- Take a full set of vital signs including oxygen saturations and respirations
- Call PACE Tier 1 if sedation score 2 or RR 6-10 per minute
- Call PACE Tier 2 if sedation score 3 (difficult to rouse)
- Call Code Blue if sedation score 3 (unresponsive) or RR ≤ 5 per minute
- Remain with the patient and administer naloxone as a standing order (below)

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LOCAL OPERATING PROCEDURE

CLINICAL POLICIES, PROCEDURES & GUIDELINES

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Prescribing

NALOXONE							
Purpose	**Route**	**Dosage**	**Concentration**	**Frequency**	**Flush**	**MAX. Dose**	**Notes**
Standing order for sedation score 3 or sedation score 2 + respiratory rate ≤ 5	IV	100mcg	100mcg/mL (Dilute 400mcg in 4mL sodium chloride 0.9%)	Every 2-3 minutes	10ml Sodium Chloride 0.9%	400mcg	**STANDING ORDER** ***To be signed by Medical Officer within 24 hours***
Standing order for sedation score 3 or sedation score 2 + respiratory rate ≤ 5	SC/IMI	400mcg	400mcg/mL (Draw up complete ampule)	Single Dose Only	N/A	400mcg	
Persistent sedation or respiratory depression	IV Inf.	400mcg-800mcg/hour Or (100-200mL/hour)	4mcg/1mL (Dilute 2000mcg (2mg) in 500mL Sodium Chloride 0.9%)	Titrate to patient response	N/A	N/A	***To be prescribed by MO before commencement***
Pruritus and Nausea	IV/SC	40mcg	40mcg/1mL (Dilute 400mcg in 10mls sodium chloride 0.9%)	Every 10-20 minutes	10ml Sodium Chloride 0.9%	3 Doses initially THEN regimen may be repeated 2 hours after last dose	***To be prescribed by MO before commencement***
Pruritus and Nausea *(if received neuraxial opioid may need more*)	IV/SC	100mcg	100mcg/1mL (Dilute 400mcg in 4mL sodium chloride 0.9%)	Every 30 minutes	10ml Sodium Chloride 0.9%	3 Doses	***To be prescribed by MO before commencement***

Observations for IV/IM/SC Naloxone

- Monitor the patient's sedation and respiratory status and encourage the patient to take deep breaths every 1-2 minutes until the patient is more alert and the respiratory rate is ≥ 10 breaths per minute.
- The half-life of naloxone is shorter than most opioid drugs so repeat doses may be required.
- Monitor and record vital signs and pain score hourly until stable and then 4 hourly for 24 hours.

Observations for IV infusion of Naloxone

- Monitoring for symptoms of persistent opioid toxicity - record hourly observations including respiratory rate, sedation levels and oxygen saturations until patient is more alert and the respiratory rate is ≥ 10 breaths per minute.
- Monitor pain score hourly until stable.
- Continuous cardiac monitoring for adverse cardiovascular effects – ventricular tachycardia, fibrillation, acute pulmonary oedema, hypotension, hypertension, ventricular arrhythmias.

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- Monitor symptoms of rapid reversal of opioid effects – nausea, vomiting, sweating, tachycardia, tremor and tachypnoea.
- Monitor for symptoms of opioid withdrawal – severe pain, agitation, dilated pupils, rapid respiratory rate, increased pulse and blood pressure.

6. DOCUMENTATION

- Integrated Clinical Notes
- National Inpatient Medication Chart
- SACO, SMOC, HDU, Partogram
- PACE documentation
- Relevant pain charts (e.g. NSW State Pain Charts and RHW pain chart)

7. EDUCATIONAL NOTES

Precautions

- Administration of naloxone to narcotic dependant patients may precipitate severe withdrawal symptoms ie. Pain, agitation and aggression
- If naloxone does not produce the desired effect other differential diagnoses must be considered. (e.g. Hypoglycaemia).

8. RELATED POLICIES / PROCEDURES / CLINICAL PRACTICE LOP

- Epidural Analgesia PCA – Delivery Suite
- Epidural Analgesia Programmed Intermittent Bolus (PIEB) and Patient Controlled Epidural Analgesia (PCEA) – Delivery Suite
- Epidural Anaesthesia - Continuous Infusion Adult
- Neuraxial (Intrathecal or Epidural) Opioid – Single Dose Morphine
- Pain Protocol – Recovery Room Only
- Sedation - Respiratory Depression
- Patient Controlled Analgesia 9PCA) – Intravenous or Subcutaneous
- Morphine Sulphate – Sub Cutaneous (Non-Maternity)
- Morphine SC for Antenatal and Labour Pain
- Remifentanil Patient Controlled Analgesia (PCA) - in Labour
- Relevant NSW State Pain Charts

9. RISK RATING

Medium

10. REFERENCES

1. Goodman and Gillman
2. MIMs online accessed 20/3/15
3. Therapeutic guidelines access 20/3/15
4. POWH Naloxone policy

REVISION & APPROVAL HISTORY

Reviewed and endorsed Therapeutic & Drug Utilisation Committee 16/2/17
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