NEURAXIAL (Intrathecal or Epidural) ANALGESIA – Single Dose Morphine ONLY

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
This document details the management of patients receiving single dose Neuraxial (intrathecal or epidural) morphine for the management of pain, enabling the patient to receive optimum pain relief safely and effectively.

Morphine given via the Neuraxial (spinal or epidural) route has a long duration of action and can provide excellent analgesia for up to 24 hours. There is however the potential for delayed complications through drug migration to the CSF. The side effect of most concern is delayed respiratory depression.

2. PATIENT
- Post Caesarean Section.
- Management of acute pain for patients with prior complex pain issues.
- Patients having abdominal or pelvic procedures that may benefit from neuraxial analgesia
- Refer to precautions in the educational Notes

3. STAFF
- Acute Pain Relief Service (APRS)
- Anaesthetists
- O&G Doctors
- Registered Nurses and Midwives

4. EQUIPMENT
- Not applicable

5. CLINICAL PRACTICE

Prescribing
- Follow guidelines for prescribing schedule 8 drugs
- Prescribe on the NSW Health Neuraxial Opioid Single Dose (Adult) Chart. (NH606623)
- Document dose on the Anaesthetic chart.
- Alert other clinicians that intrathecal or epidural morphine was given by placing a sticker on the National Inpatient Medication Chart (NIMC).
- Ensure an analgesic plan is in place for when the Neuraxial morphine wears off.
- Select observations for the patient by checking the box corresponding to hourly for 6 hours (Post Natal) or hourly for 12 hours.

Dosing
- Intrathecal morphine is administered by an Anaesthetist peri-operatively.
- Category A = Caesarean Section post op pain relief suggested dose 100-125 microgram
- Category B = Non Caesarean Section post op pain relief suggested maximum dose 200 microgram
NEURAXIAL (Intrathecal or Epidural) ANALGESIA – Single Dose Morphine ONLY cont’d

<table>
<thead>
<tr>
<th>Drug single dose only</th>
<th>Average dose range in adults</th>
<th>Route of administration</th>
<th>Anticipated duration of action</th>
<th>Observation period post dose in hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine</td>
<td>2-3mg</td>
<td>Epidural</td>
<td>8-12 hours</td>
<td>24</td>
</tr>
<tr>
<td>Morphine</td>
<td>100-200 microgram</td>
<td>Intrathecal</td>
<td>Up to 24 hours</td>
<td>24</td>
</tr>
</tbody>
</table>

Patient Management Post Neuraxial Morphine
- Apply oxygen at 2-4 litres per minute via nasal prongs or 6 litres per minute via mask at all times unless otherwise ordered.
- Ensure naloxone is available on the ward and is prescribed for sedation on the Neuraxial chart.
- Ensure naloxone for other purposes e.g. (nausea or pruritus) is prescribed separately on the NIMC.
- Do not administer other opioids or sedatives unless ordered by the Acute Pain Relief Service or Anaesthetist.
- Maintain intravenous access for a minimum of 24 hours post epidural/intrathecal opioid dose.

Observations

Recording
- Record pain observations on the NSW Health Neuraxial Opioid Single Dose (Adult). (Appendix 2)
- Use this chart concurrently with the Standardised Adult General Observation (SAGO) chart or Standard Maternity Observation Chart (SMOC).

Frequency
- Perform and record hourly vital signs and pain observations for 6 hours post-operatively then record pain observations second hourly for the remaining 24 hours.
- Perform and record observations hourly for four hours if an additional opioid is administered.
- Perform and record observations as guided by the patients overall clinical condition and concurrent medications, after the first 24 hours.

Pain Score
- Assess pain both at rest (record as R) and with relevant movement (record as M) e.g. deep breathing and coughing.
- Use the Verbal Numerical Rating Scale 0 to 10 or Verbal Descriptor Scale: no pain, mild pain, moderate pain, severe pain or worst possible pain.

Sedation
- Assess and record using the following scale:
  - 0 - Wide awake
  - 1 - Easy to rouse
  - 2 - Constantly drowsy, unable to stay awake (Yellow Zone, activate PACE Tier 1)
  - 3 - Difficult to rouse (Red Zone activate a PACE Tier 2) or unresponsive (Red Zone activate Code Blue).
- A sedation score of 2 and a respiratory rate less than or equal to 5 breathes per minutes requires a Code Blue call.
NEURAXIAL (Intrathecal or Epidural) ANALGESIA – Single Dose Morphine ONLY cont’d

Respiratory rate
- Assess at rest, when asleep and if patient is drowsy.
  - A respiratory rate between 6 to 10 breaths per minute *(Yellow Zone, activate PACE Tier 1)*
  - A Respiratory Rate < 5 breaths per minute *(Red Zone, activate CODE BLUE)*

Oxygenation
- Perform and record via continuous or periodic pulse oximetry monitoring.

Motor Block Assessment
- Perform and record hourly assessment until the return of motor function.
- Document left (L) and right (R).
- Contact the APRS or Anaesthetist if motor function has not returned within 6 hours
- Cease administration of all opioids.
- Give oxygen
- Check respiratory rate
- Activate a PACE Tier 2
- Give naloxone as prescribed OR as per naloxone LOP
- Contact APRS

- Refer to possible complications and their management – *(Appendix 1)*

6. DOCUMENTATION
- NSW Health Neuraxial Opioid Single dose (Adult) Chart
- Integrated Clinical Notes
- NIMC
- NSW Health SAGO/SMOC Chart

7. EDUCATIONAL NOTES

Precautions
The following factors may increase the risk of respiratory depression:
- History of sleep apnoea
- Co-existing diseases e.g. obesity, diabetes
- >65 years and opioid naïve
- Current opioid or sedative medications
- History of adverse effects after opioid administration
- Drug dose

Patient Education
The patient should be educated by the prescribing Anaesthetist regarding:
- Anticipated duration of action and any potential side effects.
- Breakthrough analgesia, anti-emetics or antipruritic therapy.

Nursing and Midwifery Education
- RN/RM should participate in the Opioid Workshop Part 1 which is facilitated by APRS.
NEURAXIAL (Intrathecal or Epidural) ANALGESIA – Single Dose Morphine ONLY cont’d

8. RELATED POLICIES / PROCEDURES / CLINICAL PRACTICE LOP
   - Accreditation of Staff to give in specific units
   - Epidural Analgesia – Continuous Infusion (Adult)
   - Epidural Policy and Guidelines
   - Naloxone – guidelines for use of naloxone HCL for the treatment of opioid induced over sedation, respiratory depression, Pruritus and Nausea.

9. RISK RATING
   High

10. REFERENCES

REVISION & APPROVAL HISTORY
Reviewed and endorsed Therapeutic & Drug Utilisation Committee 11/8/15
Approved Quality & Patient Safety Committee August 2012 (titled ‘Neuraxial (intrathecal and/or epidural) Opioid Analgesia’)
Approved Quality & Patient Safety Committee 18/8/11
Endorsed Therapeutic & Drug Utilisation Committee 14/6/11
Replaced previous title Intrathecal = Subarachnoid = Spinal Analgesia
Approved Quality Council 15/12/03
Endorsed Therapeutic & Drug Utilisation Committee 21/10/03

FOR REVIEW : AUGUST 2017

…./Appendix
### APPENDIX 1

#### Possible Adverse Effects and their Management

<table>
<thead>
<tr>
<th>Complication</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Respiratory Depression</strong></td>
<td>If Respiratory Rate 6-10 bpm and/or SpO2 &lt; 90%</td>
</tr>
<tr>
<td>- Peak 6-12 hours post dose</td>
<td>- Cease administration of all opioids.</td>
</tr>
<tr>
<td>- Increased risk with</td>
<td>- Give oxygen via mask and support airway if necessary</td>
</tr>
<tr>
<td>additional opioid or sedative</td>
<td>- Assess sedation level and if possible encourage patient to breathe deeply</td>
</tr>
<tr>
<td></td>
<td>- Activate a PACE Tier 1 call</td>
</tr>
<tr>
<td></td>
<td>- Contact APRS/Anaesthetist</td>
</tr>
<tr>
<td><strong>If Respiratory Rate ≤ 5 bpm</strong></td>
<td>- Cease administration of all opioids including PCA</td>
</tr>
<tr>
<td></td>
<td>- Give oxygen at 10L/min via Hudson mask and support airway if necessary</td>
</tr>
<tr>
<td></td>
<td>- Activate a CODE BLUE</td>
</tr>
<tr>
<td></td>
<td>- Give IV naloxone as prescribed OR as per naloxone LOP</td>
</tr>
<tr>
<td></td>
<td>- Contact APRS</td>
</tr>
<tr>
<td><strong>Increased Sedation</strong></td>
<td>Sedation Score 2</td>
</tr>
<tr>
<td></td>
<td>- Cease administration of all opioids.</td>
</tr>
<tr>
<td></td>
<td>- Give oxygen</td>
</tr>
<tr>
<td></td>
<td>- Check respiratory rate frequently</td>
</tr>
<tr>
<td></td>
<td>- Activate a PACE Tier 1 call</td>
</tr>
<tr>
<td></td>
<td>- Contact APRS</td>
</tr>
<tr>
<td><strong>Sedation Score 3</strong></td>
<td>- Cease administration of all opioids.</td>
</tr>
<tr>
<td></td>
<td>- Give oxygen</td>
</tr>
<tr>
<td></td>
<td>- Check respiratory rate</td>
</tr>
<tr>
<td></td>
<td>- Activate a CODE BLUE</td>
</tr>
<tr>
<td></td>
<td>- Give naloxone as prescribed OR as per naloxone LOP</td>
</tr>
<tr>
<td></td>
<td>- Contact APRS</td>
</tr>
<tr>
<td><strong>Inadequate Analgesia</strong></td>
<td>- Give breakthrough analgesia if ordered</td>
</tr>
<tr>
<td>- Neuraxial morphine may take</td>
<td>- If additional opioid is administered, <strong>hourly monitoring</strong> of sedation,</td>
</tr>
<tr>
<td>between 1 to 6 hours to</td>
<td>respiratory rate and pain must be performed for an <strong>additional 4 hours</strong></td>
</tr>
<tr>
<td>reach full analgesic effect</td>
<td><strong>after each opioid dose.</strong></td>
</tr>
<tr>
<td></td>
<td>- Notify APRS if breakthrough dose does not provide adequate analgesia</td>
</tr>
<tr>
<td><strong>Severe Headache (? Dural Tap)</strong></td>
<td>- Contact APRS or Anaesthetist</td>
</tr>
<tr>
<td><strong>Nausea and Vomiting</strong></td>
<td>If routine antiemetic’s i.e. metoclopramide, ondansetron, droperidol and</td>
</tr>
<tr>
<td>- Administer anti-emetics as</td>
<td>ineffective consider:</td>
</tr>
<tr>
<td>prescribed</td>
<td>- Low dose naloxone as per LOP</td>
</tr>
<tr>
<td></td>
<td>- Refer to APRS if treatment ineffective</td>
</tr>
<tr>
<td><strong>Pruritus</strong></td>
<td>- Low dose naloxone as per LOP</td>
</tr>
<tr>
<td></td>
<td>- Antihistamines may be effective but will increase the risk of respiratory</td>
</tr>
<tr>
<td></td>
<td>depression due to their sedative effect.</td>
</tr>
<tr>
<td></td>
<td>- Refer to APRS if treatment ineffective.</td>
</tr>
<tr>
<td><strong>Dizziness or Hypotension</strong></td>
<td>If SBP is ≤ 90mmHg activate PACE Tier 1</td>
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<tr>
<td></td>
<td>- Consider fluid challenge</td>
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<tr>
<td></td>
<td>- Seek medical review</td>
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<tr>
<td></td>
<td>- Note: Nausea may also be due to hypovolaemia and hypotension</td>
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</tbody>
</table>