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Policy Code: BHSCT/SHWH/Mat (05) 2021

Title:	**Administration and monitoring of intrathecal (spinal) morphine for caesarean section**		
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Responsible Director:	Janet Johnson, Interim Director Surgery and ACCTSS		
Policy Type: (tick as appropriate)	*Directorate Specific ☑	Clinical Trust Wide ☐	Non Clinical Trust Wide ☐
If policy type is confirmed as *Directorate Specific please list the name and date of the local Committee/Group that policy was approved			
Intrathecal Morphine Working Group - Maternity	03/03/2021		
Approval process:	Standards and Guidelines Committee Executive Team Meeting	**Approval date:**	09/06/2021 25/08/2021
Operational Date:	August 2021	**Review Date:**	August 2026
Version No.	1	**Supercedes**	New policy
Key Words:	Intrathecal, Spinal, Subarachnoid, Morphine, Fentanyl, Opioid(s), Anaesthetic, Caesarean section		
Links to other policies	BHSCT Postoperative analgesia with intrathecal opioids for non obstetric patients (draft) BHSCT Guideline for the administration of intravenous paracetamol SG 49/13 (2017)		

1.0 INTRODUCTION / SUMMARY OF POLICY

Intrathecal opioids can provide additional analgesia when administered in to the intrathecal space as part of a spinal anaesthetic. Intrathecal morphine has an analgesic onset time of 45-60 minutes, with a duration of 12-24 hours. Intrathecal opioid administration requires small doses, with no significant placental transfer to the fetus.

This guideline has been produced to assist healthcare professionals who administer and monitor patients receiving intrathecal opioids and promote a safe and uniform delivery of perioperative care to patients.

2.0 SCOPE OF THE POLICY

This guideline is applicable to all adult patients (16 years or older) who are administered intrathecal morphine in the peripartum period at the Royal Jubilee Maternity Hospital. It excludes use of intrathecal therapy in level 3 theatres, paediatrics, oncology and palliative care.

Intrathecal opioids should only be administered in a suitable area (e.g. Theatres) with appropriate monitoring and equipment to perform the procedure safely and effectively.

This guideline has been created is in the context of a planned change from intrathecal diamorphine to intrathecal morphine.

3.0 ROLES AND RESPONSIBILITIES

All Healthcare Staff involved in the care of maternity patients who have had intrathecal morphine administered peri-operatively should use this evidence based guideline.

Only anaesthetists with the appropriate training and competence to administer intrathecal drugs should perform this procedure.

4.0 CONSULTATION

Stakeholders to include: Dr Dominic McAtamney and Dr Sinead McGuirk (Anaesthetic consultants), Aideen O'Kane (Pharmacy), Roisin Cosgrove and Gillian Morrow (Delivery suite sisters), Katherine Ivery (Theatre suite sister), Heather Watson (Postnatal sister), Dr Katie Johnston (Obstetric consultant).

Policy text also reviewed by Royal Jubilee Maternity Hospital Anaesthetic Department.

5.0 POLICY STATEMENT/IMPLEMENTATION

5.1 Dose of Intrathecal Opioid

For both elective and emergency caesarean section both fentanyl andmorphine may be co-administered intrathecally with hyperbaric local anaesthetic. The pharmacokinetic properties of intrathecal fentanyl provide a fast onset and short duration analgesia, whereas intrathecal morphine is slower in onset with a longer duration. The goal of co- administration is to provide both fast onset and longer duration analgesia.

The standard dose of intrathecal fentanyl is 15 – 20 micrograms.

The standard dose of intrathecal morphine is 100 micrograms. **Only preservative free drug preparations to be used for intrathecal administration.** Preservative free morphine should be confirmed both verbally and visually by administering anaesthetist.

The use of intrathecal morphine poses a risk of delayed respiratory depression. Therefore, the recommended dose should be observed.

In addition, use of intrathecal opioids should be clearly documented on the front of the drug prescription chart stating the drug, dose and time ofadministration (use the pre-printed adhesive label if available).

5.1.1 Patient monitoring

Following administration of intrathecal morphine all patients should have continuous one-to-one observation until they are haemodynamically stable (for example when pulse and blood pressure have returned to baseline values).

For patients at increased risk of respiratory depression (for example, admission BMI $\geq$ 40, or diagnosed obstructive sleep apnoea syndrome), increased observations to include:

- Continuous pulse oximetry for 24 hours
- 2 hourly monitoring of:
  - Respiratory rate
  - Heart rate
  - Blood pressure
  - Temperature
  - Pain
  - Sedation
- Monitoring the woman for 24 hours, followed by routine observation in accordance with ward policy.

The anaesthetist must highlight at theatre sign out and again in postoperative recovery those patients that require high risk monitoring.

N.B. Intravenous access should be maintained for a minimum of 24 hours after intrathecal administration of morphine

5.1.2 Management of inadequate pain relief post-operatively

Caution should be practiced when administering additional opioid analgesia within 24 hours of intrathecal morphine administration. The risk of delayed respiratory depression is rare, but may have serious consequences. However, some patients may require additional analgesia within 24 hours of receiving intrathecal morphine.

The following should be administered in the first instance (unless contraindicated):

- Paracetamol orally (or intravenously if oral administration not possible - according to Trust guidelines)
- A non-steroidal anti inflammatory drug (NSAID) eg ibuprofen or diclofenac

If the patient has ongoing moderate to severe pain and further opioids are required consider:

- Immediate release morphine (e.g. Sevredol) 10mg **orally** 4 hourly.
- If pain is difficult to manage tramadol or oxycodone may be considered at the lowest effective dose.
- **IV** morphine may be required in rare cases with difficult to manage pain. This should only be directed by an anaesthetist.
- Breast feeding mothers and ward staff should be cautioned regarding risk of neonatal sedation / respiratory depression.

Contraindications following intrathecal morphine administration:

- Intramuscular or subcutaneous opioids within 24 hours following intrathecal opioids.
- Do not mix different opioids or give them via different routes.
- Sustained release opioids within 24 hours following intrathecal morphine.

Sustained release opioids may be given within 24 hours of intrathecal morphine administration at the anaesthetist's discretion and may be appropriate in certain situations EXAMPLES:

- Patients on long term (> 1month) opioid therapy.

5.1.3 Administration of drugs with sedative properties at ward level

Administration of drugs with sedative properties, such as benzodiazepines, within 24 hours of administration of intrathecal morphine should be avoided whenever possible.

5.1.4 Management of opioid induced CNS or respiratory depression

Risk factors for respiratory depression following intrathecal morphine

Patient factors	**Drug-related factors**
-Age >60 years	-Use of morphine
-Debilitated individuals	-Excessive dose (>300mcg)
-Coexisting respiratory disease	-Large volume of injectate
-Raised intrathoracic pressure	-Excessive dose frequency
-Trendelenburg position	-Concomitant administration of parenteral opioids

Management of respiratory depression (Respiratory rate < 8) or reduced level of consciousness (Responds to pain or unresponsive)

- ABC
- Call for medical team help
- Apply non-rebreathing O2 mask OR may require bag, valve mask and manual ventilation
- Administer Naloxone 400 micrograms intravenously or intramuscularly (if no immediate IV access). If there is no response after 60 seconds administer a further bolus of Naloxone. This can be repeated up to 5 times
- Monitor vital signs every 15 minutes for 1 hour after last dose of Naloxone. Consider transfer to a high dependency facility or similar.
- If there is no response after repeated dosing of Naloxone, consider other causes of CNS / respiratory depression

5.1.5 Management of nausea and vomiting

1st Line Antiemetics

1. Ondansetron 4-8 mg PO or slow IV injection.
2. Dexamethasone 4-8 mg IV (unless contraindicated).

2nd Line Antiemetics *(caution due to sedative properties)*

1. Prochlorperazine 6.75-12.5mg IM
2. Cyclizine 25-50mg slow IV

5.1.6 Management of pruritis (itch)

1. Ondansetron 4-8mg slow IV 8 hourly
2. Chlorpheniramine 4mg PO 8 hourly

If not improving with above, and distressing to patient, consider low dose naloxone - Naloxone 100-150 micrograms SC or IM

5.1.7 Management of urinary retention

All patients having a caesarean section will have been catheterised preoperatively. Management of catheters following administration of intrathecal morphine should follow standard postnatal care practice.

Patients should be monitored for urinary retention following urinary catheter removal.

5.2 Dissemination

This policy will be disseminated via local education and will be accessible via Belfast Trust: The Hub, policies and guidelines.
It will be relevant to all clinical staff in delivery suite, maternity theatres, and all post-natal care wards.

5.3 Resources

Regular multidisciplinary training to incorporate policy principles.
All local induction of relevant clinical staff to involve awareness of this policy.

5.4 Exceptions

This policy has been specifically designed for perioperative maternity care in Royal Jubilee Maternity Hospital only.
This policy does not cover the care of non-maternity patients.

6.0 MONITORING AND REVIEW

Regular and ongoing monitoring and review of incidents/ Serious Adverse Incidents, review of complaints, service user feedback, and audit of all patients under the scope of this policy by the multidisciplinary team.

7.0 EVIDENCE BASE/REFERENCES

Atkinson S & McLaughlin J, Postoperative analgesia with intrathecal opioids for adult non obstetric patients BHSCT guideline, 2016.
[Accessed 07/02/2021)

Hindle A. Intrathecal opioids in the management of acute postoperative pain. Continuing Education in Anaesthesia, Critical Care & Pain Journal 2008; 8: 81-5

Schug SA, Palmer GM, Scott DA, Halliwell R, Trinca J; APM:SE Working Group of the Australian and New Zealand College of Anaesthetists and Faculty of Pain Medicine (2015), Acute Pain Management: Scientific Evidence (4th edition), ANZCA & FPM, Melbourne

Caesarean Section: NICE Guideline, 2011, UK

Caesarean Birth: NICE Guideline, 31 March 2021, UK
[Accessed 05/05/2021]

8.0 APPENDICES

None.

9.0 NURSING AND MIDWIFERY STUDENTS

Nursing and/or Midwifery students on pre-registration education programmes, approved under relevant 2018/2019 NMC education standards, must be given

the opportunity to have experience of and become proficient in **Administration and monitoring of intrathecal (spinal) morphine for caesarean section** where required by the student's programme. This experience must be under the appropriate supervision of a registered nurse, registered midwife or registered health and social care professional who is adequately experienced in this skill and who will be accountable for determining the required level of direct or indirect supervision and responsible for signing/countersigning documentation.

Direct and indirect supervision

- Direct supervision means that the supervising registered nurse, registered midwife or registered health and social care professional is actually present and works alongside the student when they are undertaking a delegated role or activity.
- Indirect supervision occurs when the registered nurse, registered midwife or registered health and social care professional does not directly observe the student undertaking a delegated role or activity. (NIPEC, 2020)

This policy has been developed in accordance with the above statement.

Wording within this section must not be removed.

11.0 EQUALITY IMPACT ASSESSMENT

The Trust has legal responsibilities in terms of equality (Section 75 of the Northern Ireland Act 1998), disability discrimination and human rights to undertake a screening exercise to ascertain if the policy has potential impact and if it must be subject to a full impact assessment. The process is the responsibility of the Policy Author. The template to be complete by the Policy Author and guidance are available on the Trust Intranet or via this **link**.

All policies (apart from those regionally adopted) must complete the template and submit with a copy of the policy to the Equality & Planning Team via the generic email address equalityscreenings@belfasttrust.hscni.net

The outcome of the equality screening for the policy is:

Major impact ☐
Minor impact ☐
No impact ☐

Wording within this section must not be removed

12.0 DATA PROTECTION IMPACT ASSESSMENT

New activities involving collecting and using personal data can result in privacy risks. In line with requirements of the General Data Protection Regulation and the Data Protection Act 2018 the Trust considers the impact

on the privacy of individuals and ways to militate against any risks. A screening exercise must be carried out by the Policy Author to ascertain if the policy must be subject to a full assessment. Guidance is available on the Trust Intranet or via this **link**.

If a full impact assessment is required, the Policy Author must carry out the process. They can contact colleagues in the Information Governance Department for advice on Tel: 028 950 46576

Completed Data Protection Impact Assessment forms must be returned to the Equality & Planning Team via the generic email address equalityscreenings@belfasttrust.hscni.net

The outcome of the Data Protection Impact Assessment screening for the policy is:

Not necessary – no personal data involved ☐
A full data protection impact assessment is required ☐
A full data protection impact assessment is not required ☐

Wording within this section must not be removed.

13.0 RURAL NEEDS IMPACT ASSESSMENT

The Trust has a legal responsibility to have due regard to rural needs when developing, adopting, implementing or revising policies, and when designing and delivering public services. A screening exercise should be carried out by the Policy Author to ascertain if the policy must be subject to a full assessment. Guidance is available on the Trust Intranet or via this **link**.

If a full assessment is required the Policy Author must complete the shortened rural needs assessment template on the Trust Intranet. Each Directorate has a Rural Needs Champion who can provide support/assistance.

Completed Rural Impact Assessment forms must be returned to the Equality & Planning Team via the generic email address equalityscreenings@belfasttrust.hscni.net

Wording within this section must not be removed.

14.0 REASONABLE ADJUSTMENT ASSESSMENT

Under the Disability Discrimination Act 1995 (as amended) (DDA), all staff/ service providers have a duty to make Reasonable Adjustments to any barrier a person with a disability faces when accessing or using goods, facilities and services, in order to remove or reduce such barriers. E.g. physical access, communicating with people who have a disability, producing information such as leaflets or letters in accessible alternative formats. E.g. easy read, braille,

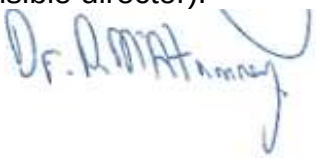
or audio or being flexible regarding appointments. This is a non-delegable duty.

The policy has been developed in accordance with the Trust's legal duty to consider the need to make reasonable adjustments under the DDA.

Wording within this section must not be removed.

SIGNATORIES

(Policy – Guidance should be signed off by the author of the policy and the identified responsible director).



26/05/2021

_____ **Date:** _____

Policy Author

08/09/2021

_____ **Date:** _____

Director