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Title:	**Intramuscular Morphine for Analgesia in Labour – Supply and administration by Midwives**		
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Responsible Director:	Brian Armstrong, Interim Director Unscheduled and Older People Services		
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If policy type is confirmed as ***Directorate Specific,** please list the name and date of the local Committee/Group that policy was **approved**			
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Links to other policies	Guidelines for the "Care of women in labour" RJMS BHSCT Controlled Drugs Policy – Inpatient Areas (2017) SG 01/11 BHSCT/SHWH/Mat (05) 2021 Administration and monitoring of intrathecal (spinal) morphine for caesarean section		

1.0 INTRODUCTION / SUMMARY OF POLICY

1.1 Background

Intramuscular morphine is recognised in the UK as an analgesia in labour. It is approved for administration by midwives without need for prescription by a doctor. This document provides guidance on the provision and administration of intramuscular morphine by midwives.

Painful labour, especially when prolonged, can adversely affect the foetus by reducing utero placental blood flow and causing fetal metabolic acidosis (Brownridge 1995). Since April 2004, morphine has been legally approved for provision and administration by midwives without the need for prescription by a doctor through Midwives Exemptions (Nursing and Midwifery Council, 2004).

Morphine is an opioid, which, due to its high lipid solubility, passes rapidly across the blood-brain barrier and placenta to produce analgesia and opioid induced side effects. It is half as potent as diamorphine;5 mg being equivalent to 2.5 mg of diamorphine when administered by intramuscular, subcutaneous or intravenous injection. The plasma elimination half-life of morphine is 1.7-4.5 hours, and it undergoes renal excretion. Opioid induced effects will accumulate with repeated doses of the drug, especially in patients with acute or chronic kidney disease. Entonox can be used to supplement opioid analgesia during labour, provided the mother is responsive to command and fetal heart rate is satisfactory.

The sedative and respiratory depressant effects of IM morphine on the mother and foetus are dose dependent and can potentiate the sedative and respiratory depressant effects of other opioids when they are administered by the same or different routes (e.g. epidural or intrathecal fentanyl). The likelihood and extent of Central Nervous System (CNS) and respiratory depression in the new-born depends on the dose of opioid, the route of administration and the time interval from giving the drug to delivery of the baby. Regular monitoring of maternal respiratory rate, sedation score and peripheral oxygen saturation and fetal and neonatal wellbeing (heart rate / CTG) is therefore advisable when the mother has been administered opioids.

1.2 Purpose

This document provides guidance on the circumstances and procedures to be followed when intramuscular morphine can be provided and administered by midwives for pain relief in labour.

1.3 Objectives

- To support intramuscular morphine as an analgesic for pain relief in labour
- To outline the indications and contraindications
- To recommend the dosage, preparation and administration of the drug
- To define standards of monitoring required
- To promote relevant staff training
- To outline actions to be taken in the event of morphine induced CNS or respiratory depression.

2.0 SCOPE OF THE POLICY

All medical and midwifery staff involved in the intrapartum care of pregnant women.

3.0 ROLES AND RESPONSIBILITIES

- To support intramuscular morphine as an analgesic for pain relief in labour
- To recommend the dosage, preparation and administration of the drug
- To define standards of monitoring required
- To promote relevant staff training
- To outline actions to be taken in the event of morphine induced CNS/respiratory depression

4.0 CONSULTATION

This guideline will be circulated amongst all key healthcare staff in Belfast Healthcare Trust, Excellence and Clinical Governance Committee, Labour Ward Forum and Supervisors of Midwives.

5.0 POLICY STATEMENT/IMPLEMENTATION

5.1 Policy Principles

5.1.1 CRITERIA for provision and intramuscular administration of morphine by a midwife:

- Morphine may be administered for relief of moderate or severe pain due to induction of labour or established labour.
- Verbal consent has been obtained from the woman after a discussion of the risks and benefits of morphine administration
- Oxygen delivery and resuscitation equipment including Naloxone must be readily available.
- Remifentanil PCA is not recommended until after 4 hours of IM morphine administration, especially if the woman is drowsy following morphine administration
- Mothers who have had morphine should not enter the water (pool or bath) within 2 hours of administration or if they feel drowsy (NICE CG55 Intrapartum Care 2007).

- Entonox may be used in addition to morphine, provided the woman is responsive to command.

5.1.2 CONTRAINDICATIONS to provision and administration of morphine by a midwife:

- Mothers who have recently been administered opioid:
    - Morphine by any route in the last 3 hours
    - 2 doses of Morphine by any route in the last 24 hours
    - Epidural containing fentanyl in the last 2 hours
    - PCA remifentanil in the last 30 minutes
    - Or any other recent opioid medication
- Evidence of fetal distress, e.g., suspicious or pathological CTG trace
- Maternal history of allergy or excessive sedation or respiratory depression following opioid administration
- Maternal history of sleep apnoea
- Alcohol, opioid, benzodiazepine or other drug misuse
- Known sensitivity to morphine or other opioids

RELATIVE CONTRAINDICATIONS to provision and administration of morphine by a midwife i.e., may be used with caution in women with:

- Obesity (booking BMI >35)
- Hypothyroidism, even if adequately treated
- Asthma
- Neuromuscular diseases, e.g., multiple sclerosis
- Hepatic impairment
- Renal impairment

In these circumstances seek advice from an obstetrician or anaesthetist.

N.B. Avoid the **intramuscular** route of administration in

- Morbidly obese women (BMI > 40) and
- Women with a low platelet count (less than 75 X 109)
- Abnormal coagulation screen.

In these circumstances, please seek medical advice for management of analgesia.

5.1.3 VERBAL CONSENT for intramuscular morphine administration

A pregnant woman should be informed of the risks and benefits of this analgesic technique and verbal consent obtained before morphine administration.

The following points should be discussed with the woman +/- her partner (NICE guidance ‘intrapartum care for healthy women and babies’ 2014).

- Morphine provides limited pain relief during labour.
- It can cause maternal drowsiness.
- It can cause nausea or vomiting, but additional medication can be administered for this.
- It can temporarily affect the baby’s breathing at birth and cause drowsiness that may last several days especially if it has been administered to the mother within 1-4 hours of delivery.
- It may interfere with breastfeeding.

A record of the verbal consent must be made in the clinical notes and prescription completed in Medicine Kardex.

5.1.4 MATERNAL/FETAL MONITORING prior to intramuscular Morphine administration:

- Intermittent fetal auscultation is sufficient monitoring, providing the woman is low risk and CTG monitoring is not warranted for another reason.
- A vaginal examination is not required unless one has not been performed within the previous 4 hours.

5.1.5 MORPHINE DOSE AND FREQUENCY

5.1.5.1 DOSAGE of Morphine

- Morphine must be checked and recorded in the once only section of the Medicines prescription and Administration Record. The administration record must be endorsed “Midwives’ Exemptions”.
- Controlled drug handling and record keeping must adhere to the BHSCT controlled drug policy. The dose administered, and the dose wasted must be entered in the Controlled Drug Record Book (CDRB).
- The Standard dose is 10mg IM Morphine, limited to 5mg if booking weight is less than 50kg.
- 50 mg IM cyclizine should also be administered as anti-emetic prophylaxis. It should be administered via a separate injection site. It can be considered 8-hourly after the first dose.

5.1.5.2 FREQUENCY of provision and administration of intramuscular Morphine by a Midwife

- Maximum of 2 doses in a 24-hour period with a minimum interval of 3 hours between doses.
- A 3rd dose may be prescribed by a doctor if deemed appropriate.

5.1.6 MATERNAL MONITORING following administration of intramuscular Morphine

- Maternal observations should be assessed and documented
    - Heart rate, blood pressure, respiratory rate and peripheral oxygen saturation (SpO2) measurements at 15-minute intervals for one hour after IM morphine administration.
    - Return to usual frequency of observations, thereafter, provided observations are satisfactory and there are no concerns about maternal or fetal wellbeing i.e., every 30 minutes for women in labour and every 2 hours for women having induction of labour.
- Fetal heart rate should be monitored closely if the mother becomes drowsy or unresponsive to verbal stimulus on AVPU scale (see below for management of maternal respiratory or central nervous system depression following Morphine or alternative opioid administration).

5.1.7 ADVERSE EFFECTS

Morphine can produce adverse effects, like any other opioid. Health professionals who provide peripartum care must be aware of the potential side effects of opioids

for the mother and the foetus. They must also know how to manage a patient with opioid induced sedation or respiratory depression including morphine.
Side effects of Morphine when administered by any route include:

- Nausea and vomiting
- Drowsiness, hallucinations, dysphoria
- Urticaria, pruritus
- Difficulty with micturition, constipation
- Respiratory depression, palpitations, postural hypotension
- Fetal bradycardia or non-reassuring CTG trace

5.1.8 MANAGMENT of Maternal Respiratory or Central Nervous system Depression following Morphine or alternative opioid administration:

A doctor should be called immediately if:

1. Respiratory rate is less than 8 breaths/min or peripheral oxygen saturation (SpO2) falls below 94% or there is no response to physical stimulus.
2. Maintain clear airway and administer oxygen 10 litres per minute by face mask.
3. Check for carotid pulse.
4. Administer 400 micrograms Naloxone intravenously. If no intravenous access, administer 400 micrograms of Naloxone intramuscularly (Midwives who have undertaken the appropriate training are legally covered to administer drugs intravenously).
5. Provide manual ventilation with bag valve mask reservoir bag if no spontaneous respiration.
6. Avoid aortocaval compression and consequent maternal hypotension by placing woman in left lateral tilt or full lateral position.
7. If no response to verbal stimulus after 60 seconds, give 800 micrograms of Naloxone hydrochloride intravenously or intramuscularly.
8. If there is still no response after another 60 seconds, give another 800 micrograms of Naloxone intravenously or intramuscularly.
9. Secure intravenous access if not already obtained.
10. Monitor SpO2, respiratory rate, blood pressure and maternal and fetal heart rate every 30 minutes for at least 6 hours after administration of Naloxone, since it has a short duration of action, compared to Morphine or other opioids (www.toxbase.org).
11. Seek senior medical advice for ongoing management of analgesia, labour and delivery of baby.

5.1.9 REGIONAL ANALGESIA / ANAESTHESIA

5.1.9.1 REGIONAL ANALGESIA in labour following IM Morphine administration

Epidural analgesia can be established after IM Morphine has been administered. However, the anaesthetist should assess the morphine – epidural interval before deciding whether or not an opioid (usually alfentanil or fentanyl) is to be administered via the epidural catheter. Epidural infusions used in Delivery Suite contain 2

microgram/ml fentanyl in prefilled bags of 0.1% Levobupivacaine. Pre- filled bags of 0.125% Levobupivacaine without opioid are available from Pharmacy.

For spinal analgesia in labour, bupivacaine without opioid should be considered when IM morphine has been administered in the last 4 hours.

5.1.9.2 REGIONAL ANAESTHESIA for Caesarean section, instrumental delivery, manual removal of placenta or perineal / vaginal repair following IM Morphine administration

The anaesthetist should consider the risks and benefits of administering epidural or intrathecal opioid in this circumstance and also the time and number of doses of IM opioid administered in labour, as per a separate Trust Guideline, Administration and Monitoring of Intrathecal (spinal) morphine for Caesarean available at: http://intranet.belfasttrust.local/policies/Documents/Intrathecal%20(spinal)%20morphine%20for%20caesarean%20section%20-%20Administration%20and%20monitoring%20of.pdf

5.2 Dissemination

This guideline will be circulated amongst all key healthcare staff in Belfast Healthcare Trust, Excellence and Clinical Governance Committee, Labour Ward Forum and Supervisors of Midwives.

5.3 Resources

Regular educational sessions are being provided within the Belfast Trust to raise awareness of current legislation and support midwives in their understanding of the legislative and governance framework of medicines. These sessions support midwives in exercising their role in the supply and administration of medicines to women within the framework of Midwives Exemptions, Midwife Supply and Patient Group directions.

Equipment and preparation of Morphine for IM Administration

- Dilution of morphine:
  - Available in in 10 mg/ml solution
  - When a 5 mg dose is to be administered, aspirate the ampoule of the 10mg/ml concentration into a 2 ml syringe. Waste 0.5 ml of this solution, leaving 0.5 ml (5 mg) for administration.
- Clinell (Chlorohexidine / alcohol) swab to clean the skin
- 2ml syringe
- Filter needles
- 23G needle for IM injection
- Monitor(s) for pulse or heart rate, blood pressure and peripheral oxygen saturation
- Naloxone 400 micrograms ampoule in room

5.4 Exceptions

This policy applies to the Belfast Trust Maternity Service without exceptions.

6.0 MONITORING AND REVIEW

This guideline contains the current evidenced based thinking on use of IM Morphine in Labour.

There will be regular monitoring and review of incidents/ Serious Adverse Incidents, review of complaints, service user feedback, and audits. All audits must be registered with the Quality Improvement Team, outcomes reported, and an action plan prepared, where appropriate. Audit Project Registration and Post Project Report and Action Plan Forms can be obtained by contacting Tel 028 950 48734.

7.0 EVIDENCE BASE/REFERENCES

1. Brownridge P, The nature and consequences of childbirth pain. European Journal of Obstetrics and Gynaecology and Reproductive Biology 1995; 59 Suppl. S9-15.

2. The Prescription Only Medicine (Human Use) amendment Order 2004 Nursing and Midwifery Council, London, October 2004

3. Reynolds, F. Labour analgesia and the baby: good news is no news. International Journal of Obstetric Anesthesia 2010; 20: 38-50.

4. Tomson G, Garle RIM, Thalme B, Nisellu H, Nylund L, Rane A. British Journal of Pharmacology 1982; 13: 653 - 9.

5. National Institute for Health and Clinical Excellence (NICE), 2014. Clinical Guideline: Intrapartum care for healthy women and babies. RCOG Press, London www.nice.org.uk.

6. Royal College of Midwives, 2012. Evidence based guidelines for midwifery-led care in labour, RCM London.

7. Walsh, D (2007) Evidence based care for normal labour and birth: A guide for midwives. Routledge Oxen.

8. TOXBASE Opioid analgesics – management of unconscious patients. www.toxbase.org.

9. National Institute for Health and Clinical Excellence (NICE), 2011. Clinical Guideline for Caesarean Section. RCOG Press, London. www.nice.org.uk.

10. E. O'Shea, R. Jee, M. Wee. A 10 year retrospective audit of monitoring following intrathecal and epidural opioids. International Journal of Obstetric Anesthesia 2010; 19: 345.

8.0 APPENDICES

Nil attached

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 of intramuscular morphine** 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.

10.0 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 ☒

11.0 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 ☐

12.0 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

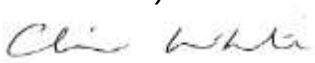
13.0 REASONABLE ADJUSTMENT ASSESSMENT

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.

SIGNATORIES

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



01/12/2021

_____ **Date:** _____

Policy Author

_____ **Date: 01/12/2021**

Clinical Director

04/02/2022

_____ **Date:** _____

Director