SESLHDMG/124

Medicine Guideline for the Safe Use of

Subcutaneous Morphine for Women in Labour at Royal Hospital for Women

Health
South Eastern Sydney
Local Health District

Morphine IS A HIGH RISK MEDICINE **USE WITH CAUTION AND ENSURE THE DIRECTIONS WITHIN THIS PROTOCOL ARE FOLLOWED CAREFULLY**	
Areas where Protocol/Guideline applicable	Royal Hospital for Women
Authorised Prescribers:	Medical Officers

Important Safety Considerations	• Opioid use during labour is associated with maternal side effects including nausea, vomiting, pruritis, sedation and respiratory depression[1]
	• Morphine binds to many opioid-receptors in the central nervous system, altering the perception of pain and the emotional response to pain. Alterations in mood can include euphoria, dysphoria, drowsiness, and mental clouding
	• Morphine is rapidly transferred across the placenta, which may lead to reduced fetal heart rate variability, reduced baseline, neonatal respiratory depression, lower Apgar scores, neurobehavioural alterations and decreased early breastfeeding
	• Following subcutaneous administration, the onset of morphine is on average 20 minutes with peak analgesic effect observed after about 70 minutes. The duration of analgesia is usually two to four hours. The mean elimination half-life for morphine is two to three hours, but effects may extend up to 24 hours
	• The use of opioid analgesia must never be a substitute for:
	  ○ midwifery support and care
	  ○ comprehensive maternal and fetal assessment (medical and midwifery)

Indication for use	Pain relief for pregnant women during labour
Adjunctive Therapy	• Offer Antiemetic concurrently • Ensure Opioid Antagonist (Naloxone Hydrochloride) is available.
Contraindications	• Hypersensitivity or allergy to morphine • Liver Disease/dysfunction • Hepatobiliary Conditions • Respiratory Compromise • Raised Intra-cranial or cerebrospinal pressure. E.g. head injury • Severe central nervous system (CNS) depression • Cardiac arrhythmias • Gastrointestinal obstruction • Status epilepticus • Severe renal disease • Monoamine Oxidase Inhibitors (MAOIs) such as phenelzine (Nardil®) and tranylcypromine (Parnate®) concurrent or taken within the previous 14 days • Less than 16 years of age

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Precautions	• Increase risk of falls • Water immersion for 2-4 hours post-administration (do not leave the woman unattended). • Observe Neonate for 4 hours postpartum DO NOT discharge patient home in early labour unless: Contractions have ceased AND further comprehensive maternal and fetal assessment (medical and midwifery) has been undertaken.
Adverse Effects	**Common:** nausea and vomiting, sedation, dizziness, respiratory depression, constipation, dysphoria and euphoric mood. **Less Common:** pruritis, rash, flushing, hypotension, hypertension, palpitations, bradycardia, tachycardia, urinary retention, hyperglycaemia, hyponatraemia, chills, injection site pain, local tissue irritation and induration following subcutaneous injection
Important Drug Interactions	• **Monoamine Oxidase Inhibitors (MAOIs)** intensify effects of morphine which can cause anxiety, confusion and significant respiratory depression. Morphine should NOT be given within 14 days of stopping MAOIs. • **CNS depressants and muscle relaxants** including opioids, analgesics, antipsychotics and sedatives increase risk of respiratory depression. • **Antihypertensives:** concurrent administration may increase hypotensive effects of antihypertensive agents.
Dosage	Morphine 7.5 mg subcutaneously for women in early labour **Consider dose adjusting to 5 mg subcutaneously for women with pre-pregnancy weight < 50 kg.** May be administered 2-4 hourly. **Maximum 2 doses in 24 hours**
Prescribing Instructions	Prescribe on eMEDS
Administration Instructions	Prior to administration: • Discuss alternative pain relief options, anticipated benefits, associated risks AND obtain verbal consent for administration • Assess for progress of labour if woman is contracting, prior to administration of initial or subsequent dose Administer prescribed dose **subcutaneously**.

<table>
<tr>
<td>Monitoring requirements</td>
<td>Perform maternal and fetal observations as indicated:
<table>
<tr><td>Antenatal</td><td>• The minimum observations required are: pain score, sedation score, respiratory rate, maternal heart rate and fetal heart rate
• Observations should be documented prior to administration and at 30 and 60 minutes following each dose. Observations should be in conjunction with regular maternal and fetal observations for the antenatal admission and/or latent phase of labour where applicable.</td></tr>
<tr><td>Intrapartum</td><td>• Refer to First Stage of Labour- Latent, Active, Recognition and management of delay CBR for detailed observation requirements.
• The minimum observations required are: pain score, sedation score, respiratory rate, maternal heart rate and fetal heart rate
• Observations should be documented prior to administration and 30 minutes following each dose and should be undertaken in conjunction with routine maternal and fetal observations for active labour</td></tr>
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*Be aware excessive sedation is more accurate sign of overdose than a reduced respiratory rate.
Where morphine administration is < 4-hours prior to birth:
• A paediatric RMO must attend the birth
• Clinicians must attend neonatal observations following birth every 15 minutes for the first hour, then at intervals determined by the condition of the newborn for at least 4 hours after birth followed by routine neonatal observations including respiratory rate, heart rate, temperature and oxygen saturation (see Recognition and management of neonate who is clinically deteriorating outside Newborn Care Centre CBR).</td>
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Management of Complications

Complication	Management
MATERNAL	
Inadequate analgesia	Review dose, consider alternative, or add another pain medication
Respiratory Depression	**If Respiratory Rate (RR) 6-10 bpm and/or SpO^2 < 90%** • Cease administration of all opioids • Activate a Clinical Emergency Response System (CERS) • Give oxygen via mask and support airway if necessary • Assess sedation level and if possible, encourage woman to breathe deeply **If Respiratory Rate ≤ 5** • Cease administration of all opioids including patient-controlled analgesia (PCA) • Activate a CERS response • Give oxygen at 10L/min via Hudson mask and support airway if necessary • Give naloxone as prescribed OR as outlined in Naloxone for treatment of opioid induced over-sedation and respiratory depression Medicines Guideline
Increased Sedation	**Sedation Score 2 (Constantly drowsy)** • Cease administration of all opioids • Give oxygen • Check respiratory rate frequently • Activate the appropriate CERS **Sedation Score 3 (Difficult to rouse)** • Cease administration of all opioids • Activate the appropriate CERS • Give oxygen • Check respiratory rate • Give naloxone as prescribed OR as outlined in Naloxone for treatment of opioid induced over-sedation and respiratory depression Medicines Guideline **Sedation Score 3 (Unresponsive)** • Cease administration of all opioids • Activate the appropriate CERS • Give oxygen • Check respiratory rate • Give naloxone as prescribed OR as outlined in Naloxone for treatment of opioid induced over-sedation and respiratory depression Medicines Guideline
Nausea	• Ensure antiemetic has been prescribed and offer as frequently as the PRN order permits • If one antiemetic does not work, proceed to alternative, or contact medical officer for advice • Antiemetic medication should be ordered and recorded on eMEDS • Any woman requiring more than 2 doses of antiemetic will need a regular dose ordered on eMEDS
Pruritus (itch)	• DO NOT use sedative antihistamines – consider low dose naloxone for itch. If persistent, contact anaesthetist.
Urinary Retention	May require the insertion of an indwelling catheter (IDC) during labour and further assessment by primary care team
Constipation	Prophylactic aperient therapy is beneficial. Contact primary care team

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Management of Complications (cont.)	**FETAL**	
	Abnormal fetal monitoring and cardiotocograph (CTG)	Manage as outlined in *Maternity-Fetal heart rate monitoring – MoH GL2018_025*
	NEONATAL	
	Respiratory Depression	Manage as outlined in *Recognition and management of neonate who is clinically deteriorating outside of Newborn Care Centre* CBR.
Storage requirements	Store in locked Accountable Drug Cupboard	
Additional Resources	• First stage of labour care of the low-risk pregnancy • Maternity-Fetal heart rate monitoring – MoH GL2018_025 • Naloxone for treatment of opioid induced over-sedation and respiratory depression Medicines Guideline SESLHD • Recognition and Management of neonate who is clinically deteriorating outside the Newborn Care Centre • ANZCOR Neonatal Resuscitation • Management of the Deteriorating Neonatal Inpatient SESLHDPR/340 • Management of the Deteriorating Maternity woman SESLHDPR/705 • Clinical Emergency Response System (CERS) – management of the deteriorating patient • Medication Handling in PD2022_032 • Falls prevention and management for people admitted to acute and sub-acute care SESLHDPR/380	
Basis of Protocol/Guideline:	1. Australian Medicines Handbook 2024 2. Morphine Sulfate Medsurge PI, eMIMS accessed January 2025. 3. The Royal Women's Hospital. Morphine: In pregnancy and breastfeeding Medicines Guide. Parkville, Victoria. 2018 4. National Institute for Health and Care Excellence (NICE). Intrapartum care for healthy women and babies. Clinical Guideline 190. 2017 5. The Royal Australian and New Zealand College of Obstetricians and Gynecologists. Pain relief in labour and childbirth. 2016 6. Zuarez-Easton, S. Erez, O. Zafran, N. Carmeli, J. Garmi, G. Salim, R. Pharmacologic and nonpharmacologic options for pain relief during labor: an expert review. AJOG. 228, 5, 1246-1259. 2023. https://doi.org/10.1016/j.ajog.2023.03.003 7. Ranatunga, M. Doctor, TN. Dose-delivery time interval of Morphine in labour and its impact on the likelihood of adverse Neonatal outcomes. International Journal of Pediatric Research. 7, 2. https:doi.org/10.23937/2467-5769/1510084	
Groups consulted in development of this guideline	Birth Unit Educators RHW Maternity Clinical Business Rule Committee Medical Clinical Co-Director, Newborn Services RHW Team Leader Pharmacist	

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