



NEONATAL

MORPHINE SULPHATE

This document should be read in conjunction with this [DISCLAIMER](#)

Restricted: Requires Neonatologist review within 24 hours of initiation

⚠ HIGH RISK Medication
1mg = 1000micrograms

Presentation	Syringe: 1000microgam/mL Oral Solution: 1000microgram/mL
Classification	Opioid Analgesic
Indication	Opioid Analgesic Sedative to assist ventilation Management of opioid dependent infants with Neonatal Abstinence Syndrome
Dose	Dose must be ordered in <u>micrograms</u> <u>Analgesia/sedation</u> <u>Oral / IV:</u> Intermittent Dose 100-200 microgram/kg/dose every four to six hourly Oral Doses recommended to be rounded to the nearest 50 micrograms <u>IV Infusion:</u> 10-40 micrograms/kg/hour <i>See preparation section for dose calculation and rate</i> <u>Neonatal Abstinence Syndrome (NAS)</u> Oral management : Refer to NAS guideline
Guidelines & Resources	Neonatal Abstinence Syndrome (NAS) Pharmacological Management of NAS

Compatible Fluids	<p>Glucose 5%. Glucose 10% Sodium Chloride 0.45%, Sodium Chloride 0.9%</p> <p><u>Compatibility with Heparin</u></p> <table border="1"> <thead> <tr> <th></th> <th>Sodium Chloride 0.9% with Heparin</th> <th>Glucose 5% with Heparin</th> <th>Glucose 10% with Heparin</th> </tr> </thead> <tbody> <tr> <td>Morphine</td> <td>Stable for 24 hours at room temperature</td> <td>No Information</td> <td>No Information</td> </tr> </tbody> </table>		Sodium Chloride 0.9% with Heparin	Glucose 5% with Heparin	Glucose 10% with Heparin	Morphine	Stable for 24 hours at room temperature	No Information	No Information
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Preparation	<p><u>IV:</u></p> <p>See <i>Appendix 1</i> for an example on how to prescribe morphine on the Variable Infusion Chart</p> <p>Use IV Infusion Prepared by CIVAS Pharmacy where available</p> <p>Infusion Calculation:</p> <p>Dilute 500microgram (0.5mL) per kilogram of baby's weight and make to a final volume of 50mL with a compatible fluid</p> <p>Concentration = 10 microgram/kg/hour = 1mL/hour</p> <p>E.g To prepare an infusion for a 780g infant</p> <p>Weight = 0.78kg</p> <p>Dose in Infusion = 500 microgram x 0.78 = 390 microgram</p> <p>Dilute 390 microgram to 50mL with compatible fluid.</p> <p><u>Oral:</u></p> <p>For intermittent doses less than 100 micrograms the following dilution should be used:</p> <p>Take 1mL (1000micrograms) of oral morphine mixture and dilute to 10mL with water of irrigation</p> <p>Concentration = 1000micrograms/10mL = <u>100microgram/mL</u></p>								
Administration	<p>IV Injection: give slowly over 3 to 5 minutes</p> <p>IV Infusion: infuse at the prescribed rate using a controlled infusion pump</p> <p>Oral: may be given at any time with regards to feeds</p>								

Monitoring	Respiratory and cardiac status. Urine output
Adverse Effects	Hypotension, bradycardia, delayed gastric emptying, urinary retention.
Storage	Store at room temperature – below 25°C
Interactions	Combination use with other CNS depressants can increase the opioid effect – increasing risk of respiratory depression and sedation Refer to IV Compatibility Chart in Neonates for compatibility information or refer to the Pharmacy Department
Notes	Naloxone is used as the reversal agent for morphine
References	<p>Takemoto CK, Hodding JH, Kraus DM. Pediatric & neonatal dosage handbook with international trade names index : a universal resource for clinicians treating pediatric and neonatal patients. 24th ed. Hudson (Ohio): Lexicomp; 2018.</p> <p>Truven Health Analytics. Morphine. In: NeoFax [Internet]. Greenwood Village (CO): Truven Health Analytics; 2019 [cited 2019 June 14]. Available from: https://neofax.micromedexsolutions.com/</p> <p>Society of Hospital Pharmacists of Australia. Morphine. In: Australian Injectable Drugs Handbook [Internet]. [St Leonards, New South Wales]: Health Communication Network; 2019 [cited 2019 June 14]. Available from: http://aidh.hcn.com.au</p>



Appendix 1: Morphine Infusion Example

Order

Women and Newborn Health Service Neonatology Directorate NEONATAL VARIABLE RATE INFUSION CHART Year: 20__		ALLERGIES & ADVERSE DRUG REACTIONS <input type="checkbox"/> Nil Known <input type="checkbox"/> Unknown <input type="checkbox"/> Yes – refer to NIMC (Tick appropriate box)		Med Rec. No: Surname: UMRN Sticker Forename: Gender: D.O.B.	
Patient Name: Baby A		Date: 21/05/2019			
Gest Age 27 +1		CGA 27+6			
BW 1220g		Working Wt 1220g			
MEDICATION ORDER		RATE CHANGE			
Date: 21/05/2019	Medication: Morphine	Date: 21/05/19			
Route: IV		Time: 0915			
Dose in Infusion: 610 microg	Dose/kg/time (at 1mL/hr): 10 microg/kg/hour	Rate (mL/hr): 0.5mL/hr			
Diluent: Glucose 10%	Dose Calculation: 500 microg x 1.22kg	Doctor: A.Dr			
Final Volume: 50mL	Doctor name: A.DR Signature:	Nurse: AN BN			
Date: 21/05/2019	Medication: Morphine with 25 units Heparin	Date: 21/05/19			
Route: IV		Time: 1050	Check Compatibility with Heparin and fluids		
Dose in Infusion: 610 microg	Dose/kg/time (at 1mL/hr): 10 microg/kg/hour	Rate (mL/hr): 1mL/hr			
Diluent: Glucose 5%	Dose Calculation: 500 microgram x 1.22kg	Doctor: A.Dr			
Final Volume: 50mL	Doctor name: A. DR Signature:	Nurse: AN BN			
Date: 21/05/2019	Medication: QUADRUPLE STRENGTH Morphine	Date: 21/05/19			
Route: IV		Time: 1425	Dose/kg/time will change if the concentration is adjusted. Indicate the steps taken to calculate the dose in the infusion		
Dose in Infusion: 2440 microg	Dose/kg/time (at 1mL/hr): 40 microgram/kg/hr	Rate (mL/hr): 0.5mL/hr			
Diluent: Glucose 10%	Dose Calculation: 500micrig x 1.22kg x 4	Doctor: A.DR			
Final Volume: 50mL	Doctor name: A. DR Signature:	Nurse: AN BN			
		Volume Discarded:			

AFFIX LABEL HERE



Document owner:	Head of Department - Neonatology		
Author / Reviewer:	KEMH & PCH Pharmacy / Neonatology Directorate		
Date first issued:	November 2013	Version:	3.6
Last reviewed:	April 2021	Next review date:	July 2021
Endorsed by:	Neonatal Directorate Management Group	Date:	July 2019
Standards Applicable:	NSQHS Standards: 1 Governance 3 Infection Control 4 Medication Safety;		
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