

OPIOID USE IN LABOUR

BACKGROUND

The Medicines Amendment Act (2013) and Misuse of Drugs Regulation Amendments (2014) allow midwives who have completed the required education to prescribe the controlled drugs morphine and fentanyl, in addition to pethidine for intrapartum (labour, birth and immediate postpartum period) use only.

If a woman requires opioid analgesia for other indications, an obstetrician and/or anaesthetist should be consulted.

Note: The term opioid is used in this CDHB guideline. The term opiate is used in many documents as a synonym for opioid but this is not strictly correct. Opiate refers only to natural compounds, eg. morphine, while opioid refers to both natural and synthetic (eg. pethidine and fentanyl) compounds.

SCOPE OF GUIDELINE

Midwifery Council NZ has determined that, effective from 1 April 2017, all midwives are able to prescribe all Controlled Drugs as listed in Schedule 1C of the Misuse of Drugs Regulations. This is provided that they have completed the required education in order to obtain their APC. An exclusion to this is midwives who have prescribing restrictions on their APC. A self-learning package on prescribing these opioids is available from education.mat@cdhb.health.nz or from the Midwifery Council at www.midwiferycouncil.health.nz. This can be completed as continued education for recertification.

MIDWIFERY COUNCIL STATEMENT ON THE SCOPE OF PRACTICE OF THE MIDWIFE WITH REGARD TO PRESCRIPTION OF CONTROLLED DRUGS

Midwives should:

- Prescribe opiates only after they have undertaken a comprehensive assessment of the woman and baby, have an understanding of the woman's history and her needs and are satisfied that prescribing these medications are in the woman and her baby's best interests
- Ensure maternal and fetal wellbeing after administration of an intrapartum opiate
- Ensure they have a thorough understanding of the opiate, including contraindications, appropriate dose, route of administration, side effects, interactions, adverse reactions
- Ensure that the woman is informed and consents to the treatment being proposed
- Consider consultation with the obstetric team if a woman requires more than one intrapartum adult dose of a specific opiate administered either by intravenous (IV) increments or intramuscular (IM) administration or, if after administration, her pain is not controlled
- Prescribe only one of the opiates named above for an individual woman

- ***Practise within their local hospital or maternity unit protocols and guidelines* for prescription and administration of controlled drugs***

- Prescribe in accordance with accepted best practice guidelines
- Ensure they have all they require to be able to manage any adverse reaction following prescription and administration of an opiate
- Ensure documentation for the woman and for the her baby after birth is accurate and complete

*This **CDHB guideline** gives recommendations on the prescription and administration of intramuscular morphine and pethidine by midwives. Intravenous morphine and intravenous fentanyl can be administered by a midwife but only after prescription by an obstetrician and/or anaesthetist. Use of intravenous pethidine and intramuscular fentanyl is not recommended.

Some evidence suggests that, in the intrapartum setting, morphine and fentanyl have advantages when compared to pethidine, however evidence is conflicting. All opioids share similar side effect profiles and the CDHB does not specify any one opioid in these guidelines.

CONSIDERATIONS BEFORE PRESCRIPTION OF OPIOID ANALGESICS

- Opioid analgesia should be used judiciously and with caution. There are many non-pharmacological methods of pain relief for use in normal labour and the routine use of opioids in labour is not supported (New Zealand College of Midwives, 2014).
- Opioid analgesia is not recommended in a homebirth setting.
- IM morphine or IM pethidine may be used in a Primary Birthing Unit as a single dose only but consideration should also be given to transfer to a tertiary unit.
- IV fentanyl and IV morphine may only be used in a secondary or tertiary hospital setting with medical backup available.
- Consult an obstetrician and/or anaesthetist if:
 - More than one intramuscular intrapartum dose is required. Repeated doses may lead to accumulation of opioid in the baby during a long labour.
 - Intravenous administration is required. An anaesthetist may choose to prescribe Patient Controlled Analgesia (PCA). This is a very safe and effective way of delivering intravenous fentanyl.
 - The woman is in premature labour.
 - There are signs of obstructed labour.
 - The woman has possible medical contraindications to opioid use, eg. severe asthma.

PRESCRIPTION AND ADMINISTRATION

- Ensure that the woman is fully informed and consent is documented in the clinical record.
- Prescribe only one type of opioid to each individual woman.
- Document prescription on the woman's drug chart (QMR0004) or MedChart.
- Check baseline observations (see below).
- Monitor maternal and fetal wellbeing after administration (see below).
- Ensure naloxone is immediately available to treat maternal or neonatal respiratory depression.
- Prescribe and administer anti-emetic medication, eg. metoclopramide or prochlorperazine, if required.

MONITORING

All opioids may cause sedation and respiratory depression in both the mother and baby. Time to peak effect is variable (eg. 15-30 minutes after an IM dose of morphine) and the opioid can accumulate in the baby during a long labour particularly with repeated doses.

There is little evidence around the optimum frequency of monitoring. CDHB recommends the following baseline observations, in addition to routine intrapartum recordings, but the type and frequency of monitoring will depend on individual factors, eg. obstetric and/or medical complications. Observations should be recorded on the partogram and/or MEOWS chart.

Baseline observations
for all routes and doses
of opioids

All of the following observation criteria must be achieved prior to administration:

- Respiratory rate above 12 breaths per minute
- Sedation score of 0 or 1 (between contractions)
- Oxygen saturations above 94%
- Systolic BP above 90 mmHg
- Pulse rate above 50 bpm
- Fetal heart rate between 110-160 bpm

Intramuscular opioid

Maternal observations (as above):

- Every 60 minutes for 4 hours
- At any time if clinical concerns

Fetal heart auscultation is undertaken according to the clinical situation, as per the CDHB maternity guideline [Fetal Heart Monitoring \(GLM0010\)](#).

Incremental intravenous opioids

The midwife must be physically present with the woman for 30 minutes after each incremental dose.

Maternal observations (as above) after each dose:

- Every 5 minutes for 30 minutes
- At any time if clinical concerns

Fetal observations:

- Continuous CTG

PCA (fentanyl only)

Maternal observations (as above):

- Observations recorded on Adult PCA treatment sheet (C160012)
- Every 5 minutes for 30 minutes after PCA started
- Every 30 minutes for duration of PCA use
- Every 5 minutes for 30 minutes if an additional **bolus** dose is administered by a clinician
- Continuous pulse oximetry
- At any time if clinical concerns

Fetal observations:

- Continuous CTG

Note: If remifentanyl PCA used, see separate CDHB guideline.

Post birth observations All mothers and babies must receive **active and ongoing assessment** for a **minimum of one hour** post birth, regardless of any additional risk factors such as opioid administration. During this time, **the mother and baby should not be left alone – even for a short time.** (MoH 2012).

Record postnatal maternal observations on MEOWS and newborn observations on NEWS. If there are any clinical concerns then additional observations and/or consultation may be warranted.

Contact an anaesthetist and obstetrician for emergency assistance if:

- Respiratory rate is less than 10
- Woman is not easily rousable (ie. sedation score 3)
- SpO2 is 94% or less

SEDATION SCORE	
0	Wide awake
1	Easy to rouse (1a = asleep but easy to rouse)
2	Constantly drowsy, easy to rouse but unable to stay awake (eg. falls asleep during conversation)
3	Severe sedation, somnolent, difficult to rouse

DOSING

The following table gives dosing guidelines based on the weight of the mother. The exact dose prescribed also needs to take into account the following factors:

- Maternal renal or liver disease. This can lead to accumulation of the drug or its metabolites, especially with repeated doses.
- Prematurity. There may be increased sedation and respiratory depression in babies born at a lower gestational age.
- Extremes of weight: < 40 kg and > 120 kg
- Use of other sedating medications, eg. antihistamines or benzodiazepines.
- Chronic opioid use, eg. for chronic pain or the methadone programme.

Site of intramuscular injection: Consider deltoid injection (up to 1 mL) rather than lateral thigh or gluteal in women with high BMI.

Opioid	Route of administration	Time to peak effect (mins)	Dose (based on mother's weight)	
Morphine	IM	30-60	< 50 kg	5-7 mg
			50-70 kg	6-8 mg
			70-90 kg	8-10 mg
			> 90 kg	10 mg
	IV	15	Requires prescription by obstetrician and/or anaesthetist	
Pethidine	IM	30-60	< 50 kg	50-70 mg
			50-70 kg	60-80 mg
			70-90 kg	80-100 mg
			> 90 kg	100 mg
	IV	15	Not recommended	
Fentanyl	IM	20	Not recommended	
	IV	5	Requires prescription by obstetrician and/or anaesthetist	

RESOURCES

[Medsafe datasheet on Morphine](#)

[Medsafe datasheet on Pethidine](#)

[Medsafe datasheet on Fentanyl](#)

[New Zealand College of Midwives \(Inc\)](#)

[Consensus Statement: Prescribing and administration of opioid analgesia in labour](#)

(This statement was ratified at the NZCOM AGM on 28/08/14)

[Midwifery Council Statement on scope of practice of the midwife with regard to prescription of controlled drugs](#)

(July 2014)

Ministry of Health (2012) Observation of mother and baby in the immediate postnatal period: consensus statements guiding practice

(<http://www.health.govt.nz/publication/observation-mother-and-baby-immediate-postnatal-period-consensus-statements-guiding-practice>)

REFERENCES

1. Text CDHB maternity guidelines – FHM [GLM0010](#) (Fetal heart monitoring) and Remifentanyl [GLM0042](#) (*Remifentanyl patient controlled analgesia for labour*)
2. CDHB fluid and meds management ([Volume 12](#)) [Opioids](#) (*Refer to CDHB Fluid and Medication management 'Adult IV Incremental Morphine/Fentanyl'*)
3. Anderson, D. (2011). A Review of Systemic Opioids Commonly Used for Labour Pain Relief. *J. of Midwifery and Women's Health* 2011; 56:222-239
4. Goodson, C. & Martis, R. (2014). Pethidine: to prescribe or not to prescribe? A discussion surrounding the use of pethidine's place in midwifery practice and New Zealand prescribing legislation. *NZCOM*, (49), P 21-25.

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Written/Authorised by: Maternity Guidelines Group

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Christchurch Women's Hospital

Christchurch New Zealand