Oxytocin Infusion for Induction of Labour or Augmentation	
Type: Protocol	**HDSS Certification Standard**
Issued by: Maternity PPG Group	**Version:** 2.0
Applicable to: Maternity	**Contact person:** Midwife Educator
Lead DHB: HVDHB	**Level:**

Hutt Maternity Policies provide guidance for the midwives and medical staff working in Hutt Maternity Services. Please discuss policies relevant to your care with your lead Maternity Carer.

Purpose:

The purpose of this protocol is to;

- Establish a local approach to care, that is evidence based and consistent
- Inform good decision making
- Provide safe and effective care for birthing people and their babies requiring the administration of synthetic oxytocin.

Scope:

For the purposes of this document, staff will refer to:

All staff within Hutt Valley DHB. This includes staff not working in direct contact with patients/consumers. Staff are taken to include anyone engaged in working to the Hutt Valley DHB. This may include but is not limited to:

- Employees irrespective of their length of service
- Agency workers
- Self-employed workers
- Consultants
- Third party service providers, and any other individual or suppliers working in Hutt Maternity, including Lead Maternity Carers, personnel affiliated with third parties, contractors, temporary workers and volunteers
- Students

Definitions:

- Augmentation of labour – A medical and/or surgical intervention intended to increase the progress of established labour when this has been identified as delayed
- CEFM – Continuous Electronic Fetal Monitoring
- CTG – Cardiotocography
- Induction of labour – A medical and/or surgical intervention intended to stimulate the onset of regular effective uterine contractions.
- PPH – Postpartum haemorrhage.

Roles and Responsibilities:

- Oxytocin is prescribed by the obstetric team on the National Medication Chart.
- The prescribing obstetric team member will liaise with the birthing suite charge midwife/ ACMM to ensure that the birthing suite can safely accommodate an oxytocin infusion.
- The LMC midwife, or DHB midwife assigned to the care of the birthing person will administer and manage the oxytocin infusion and seek further consultation per the recommendations in this guideline.

Oxytocin Regimen for Induction or Augmentation of Labour

Indications

Induction of labour (see MATY035 Induction of Labour Guideline)Augmentation of established labour may be indicated after more conservative measures such as IV fluids, bladder and bowel care, mobilization, artificial rupture of membranes and adequate analgesia, have been taken without success

The decision to induce or augment labour involves a three-way discussion between the pregnant or birthing person, their LMC/labour care provider and the obstetric team ***(as per Section 88 of the New Zealand Primary Maternity Services Notice 2007; Guidelines for Consultation with Obstetric and Related Medical Services)***. There is considerable variation in the progress of normal labour, and in birthing people who are coping well, with vital signs and fetal heartrate within normal parameters, there is no absolute indication for augmentation of labour.

Precaution

For the following criteria an **in-person review by the obstetric team (and consultation with on-call SMO)** is required prior to commencement of oxytocin infusion and **a maximum dose documented in the plan and prescription**:

- Previous uterine scar/lower segment caesarean section
- High parity (greater than 4)
- Second stage of labour
- Cardiac disease and severe pre-eclampsia
- Severe renal impairment

Contraindications

- Refusal of the proposed intervention by the pregnant/birthing person
- Known hypersensitivity to oxytocin
- When delay in delivery would compromise mother or baby
- Classical Caesarean Section or myomectomy with entry to endometrial cavity
- Obstructed labour
- Fetal distress
- Inability to proceed to Caesarean section should complications arise

Risks

- Failure to progress due to subclinical oxytocin augmentation
- Uterine hyperstimulation
- Uterine rupture
- Fluid overload and congestive heart failure
- Fetal distress
- Prolonged infusion with oxytocin may predispose the birthing person to a postpartum haemorrhage

Oxytocin Augmentation Management

The following considerations should also be taken **prior to commencement**:

- It is recommended that membranes are artificially ruptured prior to use of oxytocin unless artificial rupture of membranes is contraindicated (i.e. HIV)
- Labour strategies are advised to prevent to prevent pregnant people from experiencing restricted movement once augmentation has commenced.
- Oxytocin augmentation may increase the need for epidural anaesthesia for pain management plan during labour.

Equipment

- 10iu and 5iu oxytocin ampoules
- 2ml syringe and blunt fill needle
- 250ml Normal Saline
- 1000ml Normal Saline or Compound Sodium Lactate
- Two IV giving sets
- One Y Extension Set/Luer Lock with backcheck valves
- Two IV pumps on pole, or one multi-channel pump

Procedure

1. Oxytocin is prescribed by the obstetric team for induction of labour, or augmentation of labour following consultation by a midwife for labour slow progress in established labour. The oxytocin protocol in inductions of labour is used in conjunction with MATY035 Induction of Labour Guideline.
2. The oxytocin IV infusion will be set up in the drug room and attached to the pump. The infusion must be double-checked by two midwives using the medication chart.
3. 15iu of oxytocin is drawn up and added to the 250ml Normal Saline and a “Medicine Added” sticker is placed on the bag.
4. The oxytocin infusion line will be labelled with a “Medicine Added” sticker, placed around the oxytocin line as close as possible to the IV cannula, and immediately prior to where the line enters the IV pump.Normal saline or Compound sodium lactate will be set up through a second pump, or the second channel of a multi-channel pump, at 125ml/h. The rate may be increased at the discretion of the attending clinician where indicated, but should be discussed with obstetric staff where the labouring person is at increased risk of fluid overload (e.g., pre-eclampsia, reduced urine output.)

5. The two tubes are connected to a Y Extension Set/Luer Lock with backcheck valves.
6. The oxytocin infusion is primed to the midpoint of the Y Extension Set first, and normal saline is primed second, **ensuring that the common tube of the Y Extension set is primed with Normal Saline, NOT oxytocin**.
7. In the birthing room two clinicians will check that they have the right person, right rate, and that the tubing is primed and connected correctly via the Y Extension Set to the correct peripheral IV cannula, before commencing both infusions through pumps.
8. Commence oxytocin infusion at 2.0 mIU/min per regimen below.

Oxytocin regimen: 15 international units Oxytocin in 250mls of Normal Saline (60IU/L)

Minutes After Starting	Volumetric Pump Setting	Milli-IU/min
0	2.0 ml/hr	2.0 mIU/min
≥30	4.0 ml/hr	4.0 mIU/min
≥60	6.0 ml/hr	6.0 mIU/min
≥90	8.0 ml/hr	8.0 mIU/min
≥120	12.0 ml/hr	12.0 mIU/min
≥150	16.0 ml/hr	16.0 mIU/min
≥180	20.0 ml/hr	20.0 mIU/min
≥210	24.0 ml/hr	24.0 mIU/min
≥240	28.0 ml/hr	28.0 mIU/min
≥270	32.0 ml/hr	32.0 mIU/min

Clinical management during oxytocin infusions

- Provide one-to-one midwifery care
- Use continuous EFM once oxytocin infusion commenced (see MATY022 Fetal heart rate monitoring in the antenatal and intrapartum period)
- Commence partogram once oxytocin infusion is commenced
- Titrate dose according to dosage table every **30 minutes** to achieve 3-4 strong regular contractions (lasting 45-60 seconds) in 10 minutes, to a maximum dose of 32ml/hr (32 milliunits/min)
- Assess maternal observations and FHR prior to any increase in the infusion rate

- Monitor;
    - Frequency and strength of contractions **by palpation every 30 minutes**
    - Temperature: **2 hourly**
    - Blood pressure: **hourly**
    - Pulse: **hourly**
    - Vaginal loss: **hourly**
    - Progress in labour by vaginal assessment: *generally* **four hours after commencement of oxytocin and every 2-4 hours thereafter**

- Maintain fluid balance, as water intoxication may result from prolonged infusion (rare with the use of isotonic solutions)
- Document every change in dose in written notes AND on CTG trace; clinicians may choose to use the form in Appendix 1 to keep track of oxytocin increases and decreases at a glance, but must formally document dose changes.
- Assess pain relief requirements

Reduce the infusion in the presence of;

- Uterine hypertonic contractions or tachysystole
- Abnormal non-hypoxic CTG reading

Stop the infusion in the presence of;

- Uterine hyperstimulation (uterine hypertonic contractions or tachysystole with associated fetal heart rate abnormalities)
- Persistent abnormal CTG trace after reduction in oxytocin infusion rate
- Prolonged decelerations
- Fetal bradycardia
- Complicated variable decelerations
- Sinusoidal pattern
- Antepartum haemorrhage
- Suspected uterine rupture
- Abnormal fetal scalp lactate

When an oxytocin infusion is stopped for any of the above reasons;

- Place labouring person in left lateral
- Arrange urgent obstetric review
- Consider fetal scalp lactate where appropriate (see MATY093 Fetal Blood Sampling Policy)
- Consider need for increased rate of fluid administration
- Consider need for terbutaline for tocolysis (see MATY071 Uterine Hyperstimulation Policy)
- Ensure an obstetric plan is documented for time of recommencement and recommended dose of oxytocin

Indications for further consultation with an obstetric SMO include;

- >5 hours of oxytocin infusion without regular established pattern of contractions
- Poor ongoing progress over four hours despite optimal oxytocin administration
- Completion of first oxytocin infusion (250ml) without imminent birth

Following Oxytocin administration for induction or augmentation

Active management of the third stage is warranted for all people who have had oxytocin prescribed for induction or augmentation of labour. Discontinue the oxytocin infusion at birth and administer an oxytocin bolus by IV or IM injection per MATY001 Active Management of Third Stage.

Informed Consent:

The right of a consumer to make an informed choice and give informed consent, including the right to refuse medical treatment, is enshrined in law and in the Code of Health and Disability Consumers' Rights in New Zealand. This means that a woman can choose to decline treatment, referral to another practitioner, or transfer of clinical responsibility. If this occurs follow the process map on page 18 of the Referral Guidelines (Ministry of Health, 2012).

Tangata Whenua Statement:

The Women's Health Service recognises the rights and responsibilities of Māori as tangata whenua and Treaty Partners. This allows and acknowledges the importance of cultural diversity in all aspects of our care and practice in Aotearoa New Zealand.

As stated in Te Pae Amorangi (Hutt Valley DHB Māori Health Strategy) 2018-2027, Hutt DHB as a Crown agency is committed to our role in maintaining active relationships with iwi, under Te Tiriti o Waitangi. This strategy recognises the established principles of Partnership, Participation and Protection and recognises steps towards the reviewed interpretation of Te Tiriti principles to date (from the Wai 2575 claim into health). These are tino rangatiratanga, equity, active protection, partnership and options.

Attention in particular is drawn to:

- **Article one – Kāwanatanga**: actively engaging and working alongside with local iwi through the Hutt Valley Māori Health Unit
- **Article two – Tino Rangatiratanga**: Self-autonomy, self-determination; the responsibility to enable Māori to exercise their authority over their own health, determinants and definition of health
- **Article three – Ōritetanga**: equal health outcomes of peoples; ensuring that policy, guidelines or programmes do not further perpetuate any inequity
- **Article four (the 'oral clause') – Wairuatanga**: spirituality; thriving as Māori and the importance of health providers understanding health in te ao Māori (the Māori world), acknowledging the interconnectedness and inter-relationship of all living and non-living things.

References:

Auckland District Health Board (ADHB). (2019). *Oxytocin for Induction and Augmentation of Labour*. NMP200/SSM/014. Auckland: Auckland District Health Board.

Canterbury District Health Board (CDHB). (2017). *Induction of Labour.* Ref GLM0035. Christchurch: Canterbury District Health Board.

Capital and Coast District Health Board (CCDHB). (2014). *Labour Dystocia* OB IP-11 Vn 4. Wellington: Capital and Coast District Health Board.

Capital and Coast District Health Board (CCDHB). (2017). *Management of Oxytocin Infusion.* 1.8249. Wellington: Capital and Coast District Health Board.

National Institute for Health and Care Excellence (NICE). (2014). *Intrapartum care for healthy women and babies.* CG190. https://www.nice.org.uk/guidance/cg190

Related Documents:

- MATY001 Active Management of Third Stage
- MATY022 Fetal heart rate monitoring in the antenatal and intrapartum period
- MATY059 Prolonged pregnancy in low risk women policy
- MATY071 Uterine Hyperstimulation Policy
- MATY093 Fetal Blood Sampling and Cord Blood Lactate Test

Keywords for searching:

1. Oxytocin

2. Induction

3. Augmentation

4. Syntocinon