Oxytocin for Induction/Augmentation of Labour
Guideline

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Brief Summary of Document:	To provide guidance in the administration of Oxytocin infusion as part of induction of labour or augmentation of labour. The objective is to ensure a consistent and safe standard of care in the administration of Oxytocin infusion thereby reducing maternal and fetal morbidity and mortality.
Scope	All women who require oxytocin infusion as part of induction of labour or augmentation in labour in obstetric maternity units in the Health Board. 'The term "woman/women" in the context of this document is used as a biologically based term and is not intended to exclude trans and non-binary people who do not identify as women.'

To be read in conjunction with:	NICE CG 70 Induction of Labour NICE CG190: Intrapartum Care for Healthy Mother's and Babies 667 Induction of Labour for Postmaturity (low risk pregnancies) Guideline 655 Operative Vaginal Delivery Guideline 813 Intrapartum Continuous Electronic Fetal Monitoring Guideline
Patient Information:	

Owning group	Obstetric Guideline and Audit Group

Reviews and updates		
Version no:	Summary of Amendments:	Date Approved:
1	Updated Guideline	14.9.2017
2	Full review	21.8.2019

Glossary of terms

Term	Definition
ARM	Artificial rupture of membranes
CLC	Consultant-led care
CTG	Cardiotocograph
IUGR	Intrauterine growth restriction
LSCS	Lower segment caesarean section
MLC	Midwife-led care
SROM	Spontaneous rupture of membranes
Toco	Tocograph

Keywords	Induction of labour, augmentation of labour, Oxytocin, delay in labour, hyperstimulation, tachysystole,

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1. Aim of Guideline

This guideline provides guidance in the administration of Oxytocin infusion as part of induction of labour or augmentation of labour.

2. Objectives

The aim of this guideline will be achieved by the following objective

- to ensure a consistent and safe standard of care in the administration of Oxytocin infusion thereby reducing maternal and fetal morbidity and mortality.

3. Scope

All women who require the administration of oxytocin infusion to induce, or augment uterine activity during labour once the membranes holding liquor around the fetus have ruptured.

4. Introduction

- Oxytocin is the drug prescribed to induce, or augment uterine activity, once the membranes holding liquor around the fetus have ruptured.
- It is administered intravenously, with the dose being titrated against the frequency and duration of uterine activity, and with the fetal heart rate being monitored continuously with electronic monitoring devices.

- **Induction of labour** is defined as an intervention designed to artificially initiate contractions leading to progressive dilatation and effacement of the cervix and birth of the baby.
- **Augmentation** is an intervention initiated when progress of labour is delayed following spontaneous onset of labour.

5. Management

5.1. Risk Assessment Prior to the Administration of Oxytocin

- Risks of use of Oxytocin in labour:
  - increase level of pain
  - uterine hyperstimulation
  - fetal distress
  - uterine rupture.
- Prior to commencing Oxytocin the Midwife and Obstetrician must consider the following:

- Parity
- Multiple pregnancy
- The presence of uterine contractions
- Fetal gestation, presentation, station, position on abdominal palpation and vaginal examination
- Fetal wellbeing should be ascertained by confirming a normal 30 minute CTG tracing prior to commencement of infusion
- Membranes should be ruptured
- The mother's emotional wellbeing and pain management. An epidural may be recommended.
- Maternal consent should be obtained and risks explained. This should be recorded in the mothers' notes.

5.1.1. Caution

Oxytocin infusion can be used with caution and **only** following discussion with the Consultant Obstetrician in women who have any of the following:

- Previous LSCS
- Breech presentation
- Multiple pregnancy
- Grand multiparity
- Meconium stained liquor
- I.U.G.R.

5.2. The Use of Oxytocin for Induction of Labour

- Oxytocin infusion can be commenced **6 hours AFTER** administration of vaginal prostaglandin tablet
- Oxytocin infusion can be commenced **30 mins AFTER** removal of Propess vaginal pessary

5.3 Oxytocin Infusion for Delay in the Progress of Labour (Augmentation)

- Diagnosis of delay in first stage of labour needs to take into consideration all aspects of progress in labour and should include:
- Cervical dilation of <2cms in 4 hours for first labours
- Cervical dilation of <2cms in 4 hours or slowing in the progress of labour for second or subsequent labours
- Descent of the fetal head
- Changes in the strength, duration and frequency of uterine contractions

- Oxytocin administration for slow progress in the **2nd stage** has been shown not to effect the outcome.

Oxytocin should not be prescribed to a mother with a uterine scar in labour without discussion with the on call Consultant Obstetrician

5.4. Initiating Oxytocin Infusion

- Oxytocin infusion must be prescribed by and signed for by a member of the Obstetric team on p.11 of the In-Patient Medication Administration Record
- Commence infusion following artificial rupture of the membranes (ARM), or after spontaneous rupture of the membranes (SROM) and confirmation of a normal CTG.
- Continuous CTG monitoring must be commenced using the Intrapartum CTG Classification sticker
- The partogram must be commenced in the Labour and Delivery Record
- Oxytocin may only be added by those members of staff certified as competent to mix intravenous solutions or a member of staff undergoing training and watched by a certified member of staff.
- The infusion should be administered via a B/Braun infusion pump with a non-return valve.
- The following regime must be used:

OXYTOCIN REGIME
Dilute 10iu Oxytocin in 500mls of NaCl 0.9%.

Increase at intervals of 30 minutes	
Time After Starting (mins)	**Oxytocin Infusion Regime mls/hr**
0	3
30mins	6
60mins	12
90mins	24
120mins	36
150mins	48
180mls	60
	Review needed: 72
	84
	96

5.4.1 Aim of the Regime

- The regime is applicable to primigravia and multigravida women.
- The minimum dose possible of Oxytocin should be used and this should be titrated against uterine contractions aiming for a maximum of 4 - 5 contractions in a 10 minute period.
- Rates above 60 ml/hr require Registrar, Staff Grade or Consultant approval.
- **In exceptional circumstances the use of *higher or varied* doses is a Consultant decision only**.

5.4.2 Monitoring

- The dose of Oxytocin being administered should be recorded on the partogram reflecting increases/decreases in the dose.
- All adjustments to the dose should be recorded on the CTG tracing
- Maternal pulse should be recorded hourly and blood pressure four hourly unless otherwise requested or obstetric conditions indicate more frequent recordings.
- All recordings should be written on to the partogram.
- The fetus should be continuously monitored according to the CTG guidelines for first and second stages of labour
  - Palpate contractions for frequency, strength, duration and resting tone every half hour and record on the partogram. **Do not rely on CTG to assess strength of contractions**.
  - **If monitoring contractions is not possible:**
  - Change maternal position
  - Consider using the extra-large straps for women with increased BMI
  - Palpate contraction and place toco on abdomen where contraction palpated at strongest
  - Escalate to senior midwife

  - **In order for the CTG to be assessed accurately the recording of the contractions is a vital element. Every effort should be made to record on the CTG the presence of contractions.**
  - If the toco is not picking them up the midwife may use another method to ensure this is done, e.g. press the toco lightly during contraction, or mark the CTG.
  - Any difficulties in monitoring the contractions should be evidenced within the maternal records including actions taken

5.4.3. Assessment of Progress following Commencement of Oxytocin

- **Induction of Labour:**

When Oxytocin is used during induction of labour the progress should be assessed four hours

after the onset of regular contractions. If there is <2cm progress an obstetric review is required. If there is 2cms or more progress, vaginal examinations should be advised 4-hourly.

- **Augmentation of Labour:**

Progress in labour should be assessed up to four hours after commencing Oxytocin for augmentation of labour.

5.5. Tachysystole

- This is the presence of 5 or more labour contractions within 10 minutes with normal fetal heart pattern.
- In the absence of fetal compromise. If ≥5 contractions are palpated in 10 minutes and lasting up to 60 seconds there may be tachysystole.
- If this continues in the next 10 minutes reduce the infusion immediately to the last incremental dose.
- If the rate of contractions does not decrease to < 5 contractions in 10 minutes, **STOP** the Oxytocin infusion

5.6. Hyperstimulation

- **This is the presence of 5 or more labour contractions within 10 minutes with an abnormal fetal heart pattern**
- If the contractions are equal to or greater than 5 in every 10 minutes together with signs of fetal compromise **TURN OFF** the Oxytocin and inform the midwife in charge and thesenior obstetrician.
- Consider using tocolytics.
- **Administer Terbutaline 0.25 mg by subcutaneous injection to relax the uterus**

Remember to assess uterine resting tone. Contractions that are less than 5:10 but lasting more than 60 seconds may mean that there is little resting tone between contractions and therefore these could lead to fetal compromise and should prompt you to reduce the Oxytocin infusion

5.7. Reasons to Stop Oxytocin Infusion

The Oxytocin infusion should be stopped in the following situations and an obstetric review requested urgently	
• FHR trace is classified as pathological	• Suspicion of uterine rupture
• Contractions ≥5:10 with signs of fetal compromise	• Signs of obstructed labour
• Intrapartum haemorrhage	• Cord prolapse
• Maternal collapse	• Abnormal presentation diagnosed – breech, arm presentation

6. Discontinuing Oxytocin Infusion Following Vaginal Delivery

- For mothers who have singleton delivery the Oxytocin infusion should be weaned down at quarter hourly intervals and uterine contraction and blood loss monitored.
- If the bleeding is heavier than expected, ask senior midwifery and obstetric review.

7. Auditable Standards

- Duration from commencement of oxytocin regime for induction of labour to start of onset of regular contractions
- Mode of delivery following commencement of oxytocin regime for induction of labour
- Mode of delivery following commencement of oxytocin regime for slow progress in labour
- Maternal measured blood loss
- Neonatal outcomes confirmed by APGAR Scoring and cord blood gas analysis in the event of operative birth.

8. References

- http://www.rcog.org.uk/resources/publicpdf/rcog induction of labour
- National Institute for Health and Clinical Excellence. (2014). Updated 2017 *Intrapartum care: Care of healthy women and their babies during childbirth*. London: NICE. Available at: www.nice.org.uk