Document No: **978951**

TITLE: INDUCTION OF LABOUR

Statement/Purpose

To provide optimal care throughout the antenatal, intrapartum and postnatal period for the woman and her baby, during the Induction of Labour process. This guideline aims to prevent inappropriate induction of labour and provide a standard care pathway for those induced.

Scope

All Lakes District Health Board Midwives, Obstetricians, Registrars and Lead Maternity Carers.

Definitions

ARM Artificial Rupture of Membranes
CTG Cardio Toco Graph
DHB District Health Board
IOL Induction of Labour
LMC Lead Maternity Carer
LSCS Lower Segment Caesarean Section
O&G Obstetrics and Gynaecology

Standards To Be Met

- Labour is induced when it is considered that the health of a woman and/or baby might be adversely affected if the pregnancy continues. It is important to remember that IOL is an intervention, which has risks and those risks as well as the perceived benefits of the procedure, and the likelihood of adverse outcomes should be discussed with the woman to make an informed choice regarding whether or not labour is induced.

- The LMC will refer all inductions for consultation to the Obstetric Team at Antenatal Clinic or discuss with the duty O&G Consultant if there is an acute/urgent obstetric indication. This is a three-way conversation as per Section 88, Consultation.

- If an IOL is agreed upon, the roles of care providers and LMC status during the induction should be agreed upon by the woman, her LMC and O&G Consultant and clearly documented in the clinical records (utilising the Responsibility for Care sticker).

- All communications including information given to women should be documented accordingly in clinical notes by the clinician gaining the woman's verbal consent to proceed with the induction. Inclusion of expected timeframes, failure rate and increased rate of interventions, increased risk for LSCS and pain relief options should also be discussed and documented.

- A clear management plan is to be documented in consultation with the woman and her LMC. The LMC is required to be present in the Birthing Unit for the initiation of the induction and provide handover to the DHB Midwife.

- The O&G Consultant may recommend that the clinical responsibility be handed over to secondary care following a three-way conversation and with consent from the woman. This is a 'stamped-over' procedure to add clarity to the roles of responsibilities and a "Secondary Care" sticker is placed in the clinical notes. Hand-back will occur when clinically indicated and the LMC must be advised and can resume clinical responsibility.

- The DHB Midwife will contact the LMC as required, and will ensure the LMC is kept up to date with the woman's progress, which is documented, in the clinical notes.

- It is the responsibility of the LMC to cancel, at the earliest opportunity, a booked IOL, which is no longer, required. Women must be prepared that clinical safety is Birthing Unit's priority, which may mean their induction may be delayed. Highest clinical priority takes precedence.

- Rural midwives are not obliged to stay with a woman transferred in labour from a primary unit to a secondary facility for obstetric consult and augmentation unless they choose to; it can be a complete secondary hand over. Staffing issues are a Lakes DHB matter and should be taken up by the Clinical Midwife Manager or Flexi Midwife in consult with Duty Manager. However, if a rural IOL is booked for Rotorua and the rural LMC has agreed to be present for labour and birth, or her pre-arranged backup, please assess cervical dilation to prevent unnecessary travel. A mutually agreed three way discussion should have occurred if an arranged rural IOL is to be commenced and managed completely by DHB Midwives. This should be clearly documented in the clinical notes.

Indications for Induction of Labour

1. Prolonged Pregnancy

- Has traditionally been defined as pregnancy, which lasts ≥ 294 days (42 weeks). Prolonged pregnancy is associated with increased risks for the mother, including increased duration of labour, increased caesarean section for failure to progress and for fetal distress, increased operative vaginal delivery, increased PPH and increased large for gestational age babies. The risk of stillbirth significantly increases in pregnancies, which proceed beyond 42 weeks, and some studies have shown increased risk between 41-42 weeks. The majority of pregnancies, which go beyond 42 weeks, however, are associated with good outcome for mother and baby.

  Note: Women who are obese (BMI>30) have a higher rate of prolonged pregnancy

- Women with uncomplicated pregnancies should be offered serial membrane sweeps from term and then IOL at 41+5 to 42 weeks should be offered after review of the dates. These women should be referred to clinic at 41+1 with ultrasound assessment of growth and liquor having been done near 41 weeks. After this twice weekly assessment of liquor and either BPP or CTG should occur until delivery.

- Women who decline IOL at 42 weeks should be offered increased antenatal monitoring from 42 weeks, in the form of twice weekly CTG and Ultrasound scan (USS) estimation of amniotic fluid volume in Day Assessment Unit (DAU). Data however, supporting this monitoring as a method of preventing sudden stillbirth is limited and this should be discussed with the woman. These women should be discussed with the appropriate O&G Consultant from their team.

2. Maternal Age

- Women aged 35 or older have perinatal mortality rate 50% higher than women ≤34 years old
- The perinatal mortality rate at 40 weeks in women ≥35 years is the same as at 42 weeks in younger women
- In older women the risk of stillbirth further increases beyond term
- The absolute risk for the individual older woman is however, very small (2/1000 at 40 weeks and 4/1000 at 42 weeks)
- Induction of labour in the 41st or 42nd week for women of all ages is associated with reduced perinatal mortality and reduced incidence of meconium liquor without increasing the caesarean section, operative vaginal or epidural rates

- For IOL review please refer women .35 years to clinic at 38 to 40 weeks depending on age and other risk factors
- Indications for delivery are:
  - ↓Fetal movements
  - ↑BP
  - Non reassuring CTG
  - Abnormal liquor volume
  - Abnormal Biophysical Profile (BPP)

  Note: In about 2/3 of stillbirths that occur in older women the baby is not small for Gestational Age (SGA)

3. Diabetes

- The perinatal mortality rate in increased 4-5 fold in pregnancies of women with diabetes compared to the general population
- In practice, women with pregnancies complicated by either pre-existing diabetes or gestational diabetes are managed within the diabetic service
- The Diabetic team will plan the IOL

4. Multiple Pregnancies

- There is evidence in twin pregnancy (but no evidence in higher order multiple pregnancies) that perinatal mortality rises after 36-37 weeks, based on retrospective studies, compares to singletons
- A multicenter trial is in progress to determine if delivery at 37 weeks improves outcome
- Decision for IOL in multiple pregnancies should be made at Consultant level
- If Prostaglandin gel (PG) is warranted the initial dose **should not** exceed 1mg

5. Prelabour Rupture of Membranes (PROM)

See guideline for 'Rupture of Membranes in Pregnancy'.

6. Suspected Fetal Macrosomia without Diabetes

- Currently the evidence is inconclusive that a policy for IOL for suspected fetal macrosomia in non-diabetic women can reduce maternal and fetal morbidity. **IOL for suspected fetal macrosomia is not recommended – Maternal Request for IOL**
- There is insufficient evidence to allow comment on the risks associated with IOL for maternal request. IOL should not be considered an option unless there is compelling psychological or social reasons, the woman has a favourable cervix and she is fully aware of the potential risks involved

IOL for suspected fetal macrosomia is not recommended

7. Pelvic Arthropathy

- Pelvic Arthropathy of pregnancy or Symphysis Pubis Dysfunction is a condition described in terms of symptoms and signs. These occur due to the physiological pelvic ligament relaxation and increased joint mobility seen in pregnancy:
  - The severity of symptoms varies from mild discomfort to severely debilitating pain. There appears to be no correlation between the degree or relaxation of the symphysis pubis and the level of pain and disability
  - Treatment is generally conservative and delivery is curative in the majority by 6 months post-partum
  - Patients need to be counseled that there is a significant delay between delivery and resolution of pain
  - Induction of labour as a process increases the risk of a pregnancy resulting in either an operative delivery or caesarean section. The patient who has pelvic arthropathy and a caesarean section has therefore to recover from two independent processes and are often significantly compromised in the postnatal period

Pelvic Arthropathy is not an acceptable indication for induction of labour.

8. Booking an Induction of labour

Booking appointments should be made through contacting the Birthing Unit 07 3497900. These are to be written in the birthing unit diary and should include the woman's details, gestation, LMC, reason for the IOL and O&G Consultant consulted. For safety reasons there should only be two inductions scheduled per day. Any other inductions should be discussed with the consultant on call for that day and the Clinical Midwife Manager and/or birthing unit staff midwives to assess availability.

9. Preparation and Assessment

- The indication for the induction of labour should be clearly written in the woman's notes. A three-way conversation should have occurred between the woman, her LMC and O&G specialist and a plan documented. Ideally the woman should be asked what her perception of the process is and any areas requiring more information completed.

- Induction of labour front sheet completed by person responsible for IOL including on going management plan and assessments of both woman and foetus.
  - Ascertain roles and responsibilities of the team and/or LMC during IOL (complete sticker)
  - Confirm that indication for IOL is documented
  - Review history and confirm estimated date of birth, dating USS most accurate
  - Baseline maternal observations (T, P, BP, RR), these are on going throughout the process; 4-6 hourly

- Full abdominal assessment and palpation completed
- Pre-Induction CTG - document outcome on IOL front sheet
- The bishop score should be assessed and recorded using the bishop score sticker

IV access to be sited at the commencement of any induction of labour. Group and hold to be taken and sent to lab for processing as IOL is a risk factor for post partum haemorrhage.

10. Fetal Monitoring – Cardiotocograph (CTG)

- Pre-induction CTG; of at least 30 minutes, regardless of the induction method chosen. If the CTG is non-reassuring consult with the O&G Consultant on call.
- Complete CTG for a minimum for 30 minutes after the insertion of prostaglandin E_2/Cervidil to rule out any adverse reactions or hyper stimulation.
- CTG monitoring 4-6 hourly during the induction process. Increase frequency if there is concerns and ensure documented in the clinical notes using the CTG assessment sticker (green).
- After administration of vaginal PGE_2/Cervidil when contractions begin, fetal wellbeing should be assessed with continuous CTG. Once CTG confirmed as normal, intermittent auscultation should be used unless there are clear indications for continuous CTG monitoring as outlined in Care plan.
- Continuous CTG monitoring if syntocinon used.

11. Methods of Induction of Labour

- Membrane sweeping
- Prostaglandin, either E_2 vaginal gel or Cervidil
- Trans cervical (balloon) catheter
- Artificial Rupture of Membranes (ARM)
- Oxytocin (with or without amniotomy) – a three way conversation required
- The method chosen for induction will be influenced by several factors:
  - The period of gestation
  - The indication for induction
  - Any underlying medical or obstetric problems/circumstances
  - The favorability of the cervix
- Prostaglandins should be used in preference to oxytocin when induction of labour is undertaken in either nulliparous or multiparous women with intact membranes when the cervix is unfavorable.
- Either prostaglandins or oxytocin may be used when induction of labour is undertaken in nulliparous or multiparous women with intact membranes when the cervix is favourable, however, artificial rupture of membranes is recommended as soon as there is regular uterine activity if Syntocinon is used.

- Either prostaglandins or oxytocin may be used when induction of labour is undertaken in nulliparous or multiparous women who have ruptured membranes, regardless of cervical status, as they are equally effective.

- The Bishop score is a group of measurements made by doing a vaginal examination, and is based on the station, dilation, effacement (or length), position and consistency of the cervix.
  A score of eight or more generally indicates that the cervix is ripe, or 'favourable' – when there is a high chance of spontaneous labour, or response to interventions made to induce labour.

12. Membrane Sweeping

- This should be offered for all women prior to induction of labour; particularly these women who are experiencing a pregnancy beyond their estimated due date.

- Research has demonstrated that serial sweeping of the membranes from term onwards increases the likelihood of spontaneous labour and reduces the IOL rate significantly; particularly in nulliparous women.

- Women should be reassured that this procedure does not cause maternal or neonatal infection but may cause some discomfort and possible vaginal bleeding.

- To perform a membrane sweep, obtain verbal consent from the woman. A VE is performed, and a finger is passed through the cervix to rotate against the wall of the uterus and to separate the chorionic membrane and the decidua. If the cervix will not admit a finger, massaging around the cervix in the vaginal fornices may achieve a similar effect. During this process a modified Bishops score should be calculated and documented in the maternal notes. At both 40 and 41 weeks gestation women should be offered membrane sweeping. Additional membrane sweeping may be offered if labour does not commence spontaneously.

Cervidil®

The decision to use Cervidil will depend on the state of the cervix. It is important to score the cervix using the Bishop score. (See tables over the guidelines on Cervidil use).

1. Procedure

- Verbal consent obtained from the woman
- Palpation
- Baseline maternal recordings (P, T, RR, BP)
- Pre assessment CTG of at least 30 minutes (this must be reassuring)
- Ensure Cervidil® is prescribed on the Medications chart
- VE to assess the Bishops score (document in clinical notes using the “Bishops Score Label”)
- Women must remain semi recumbent post insertion of Cervidil® during which time a post Cervidil® insertion CTG should ne performed for a minimum of 30 minutes to assess fetal wellbeing and uterine activity
- After administration of vaginal Cervidil® when contractions begin, fetal wellbeing should be assessed with continuous electronic fetal monitoring. Once the CTG is confirmed as normal, intermittent auscultation should be used unless there are clear indications for continuous electronic fetal monitoring as outlines in Care plan
- Use with caution if uterine activity is present
- Use directly from the freezer (within 20 minutes)
- Position transverse high in the posterior fornix
- Use only a small amount of water-soluble lubricant
- Cervidil® induction must be carried out in hospital and the woman should remain in hospital while Cervidil® is in situ
- Cervidil® can be reinserted if it falls out, ensure cleanliness
- If hyper stimulation occurs see section on the “Management of Hyper stimulation”

2. Ongoing Management

- Maternal Assessment – T, P, RR, BP, PV loss and palpation every 4-6 hourly
- Fetal Assessment – fetal movements and CTG monitoring 4-6 hourly during the induction process. Increase frequency if there are concerns
- After 24 hours post insertion, Cervidil® should be removed and the IOL process re-evaluated. Repeat CTG, Maternal observations, palpation and VE. Finding all clearly documented in the maternal notes

3. Indications for Removal

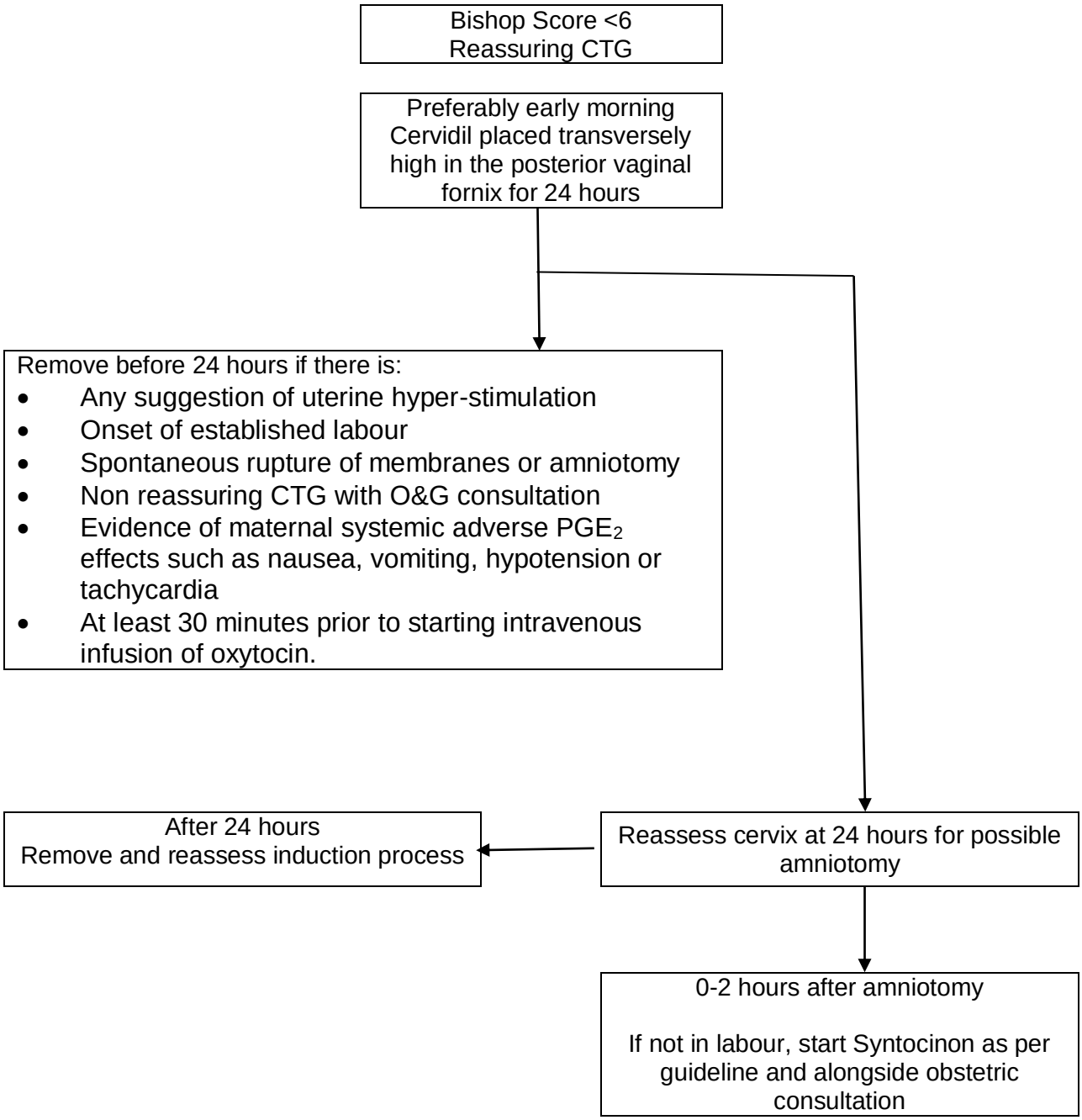
- Regular painful contractions (3-4:10 or more)
- When there is evidence of hyper stimulation (refer “Management of Hyper Stimulation”)
- Concerns about the fetal heart/CTG in consultation with O&G Consultant.
- Vaginal bleeding
- There is evidence to suggest maternal systemic adverse effect (e.g. severe vomiting)

4. Contraindications

Cervidil® should NOT be used in women:

- Where there is known hypersensitivity to prostaglandin or any other constituent of the Cervidil® pessary.
- When labour has commenced.
- When oxytocic drugs are being given.
- When string, prolonged uterine contradictions would be inappropriate such as in women:
  - Who have had previous major uterine surgery e.g. Caesarean section, myomectomy
  - With known cephalopelvic disproportion
  - With fetal malpresentation
  - With suspicion or evidence of fetal distress
  - Who have had more than three full term deliveries
  - Previous surgery or rupture of the cervix.
- When there is current pelvic inflammatory disease, unless adequate treatment has been instituted.
- When there is placenta previa or unexplained vaginal bleeding during the current pregnancy.

Flowchart - Cervidil®



Prostaglandin E_2 Gel (PGE 2) ®

1. Procedure

PGE2® may be used as 1st line for cervical ripening for women with parity 4 and 5 needing prostaglandin induction (following consultation with the O&G Consultant on call). It may also be used as a 2nd line agent if Cervidil ® has failed in women with parity 0-3 where amniotomy is not possible. PGE2 are administered according to the Bishop Score finding (see tables over for guidelines on prostin use).

- Verbal consent obtained from the woman.
- Abdominal palpation.
- Baseline maternal recordings (P, T, RR, BP).
- Pre assessment CTG of at least 30 minutes (this must be reassuring).
- Ensure prostaglandin is prescribed on the Medications chart.
- VE to assess the Bishops score (document in clinical notes using the “Bishops Score label”).
- Women must remain semi recumbent post insertion of prostaglandin, during which time a post prostaglandin insertion CTG should be performed for a minimum of 30 minutes to assess fetal wellbeing and uterine activity.
- After administration of vaginal prostaglandin when contractions begin, fetal wellbeing should be assessed with continuous electronic fetal monitoring. Once the CTG is confirmed as normal, intermittent auscultation should be used unless there are clear indications for continuous electronic fetal monitoring as outlined in Care Plan.
- Ensure prostaglandin is prescribed on the Medications chart.
- Use with caution if uterine activity is already present.
- Use directly from the fridge where it is stored.
- Prostin gel must be inserted into posterior vaginal fornix, not endocervical as this increases the risk of hyper-stimulation.
- Complete the Bishops score label with PGE2 and dosage in the clinical notes.
- Women may mobilize following the post CTG if maternal and fetal observations are within normal limits.
- If repeated administration is necessary and is prescribed by O&G Consultant, allow at least 6 hours between doses.
- Unless uterine activity starts spontaneously, or spontaneous rupture of membranes occurs, the condition of the cervix should be assessed after 6 hours.
- Prostaglandin induction should be carried out in the hospital and the woman should remain in hospital but encouraged to mobilize as freely as possible.
- If hyper stimulation occurs see section on the “Management of Hyper Stimulation”.

2. Ongoing Management

- No more than 4mg of prostaglandin gel is to be administered to a nulliparous woman and 3mg to a multiparous woman in a 24 hour period without obstetric specialist review.
- Prostaglandins are to be administered six hourly regardless of time of day i.e. evening inductions should continue and not be left until the morning.
- Unless contraindicated, the IOL process should not be interrupted until the maximum dose of prostaglandin has been administered for that day.
- The CTG must be repeated prior to repeat administration of prostaglandin in all cases.
- Where cervical ripening is not achieved by 24 hours after the commencement of induction, the obstetric specialist is informed and is to assess the woman, document findings and a management plan.
- If the cervix is favorable artificial rupture of the membranes (ARM) may be performed provided the criteria for performing ARM are met.
- When ARM is performed and there is no liquor or meconium stained liquor is present, continuous FHR monitoring.
- Update LMC of progress.

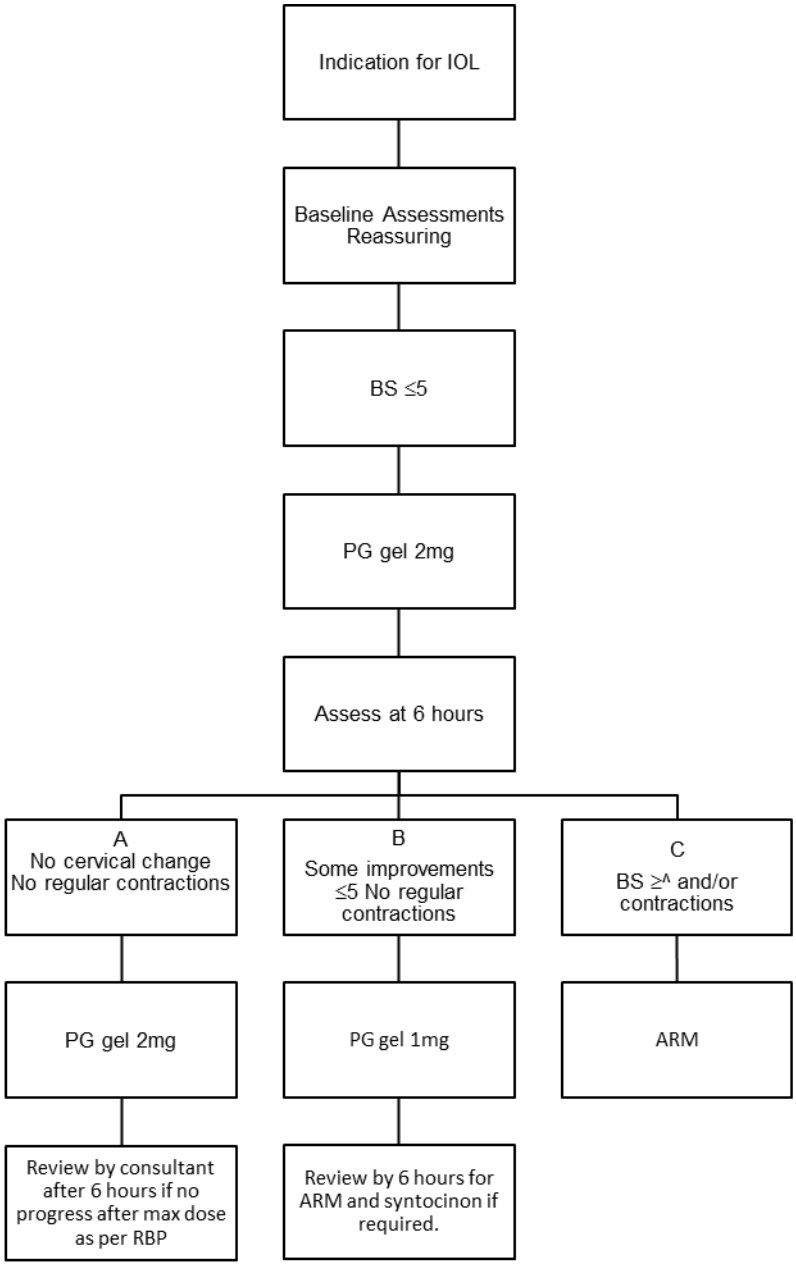
3. Contraindications

PGE 2® is NOT recommended in the following circumstances:

- Where there is known hypersensitivity to prostaglandin or any other constituent of the PGE 2® gel.
- When labour has commenced.
- When oxytocic drugs are being given.
- When strong, prolonged uterine contractions would be inappropriate such as in women:
  - Who have had previous major uterine surgery e.g. Caesarean section, myomectomy
  - With known cephalopelvic disproportion
  - With fetal malpresentation
  - With suspicion or evidence of fetal distress
  - Grandmultiparity (6 or more term pregnancies)
  - Previous surgery or rupture of the cervix
- When there is current pelvic inflammatory disease, unless adequate treatment has been instituted.
- When there is placenta previa or unexplained vaginal bleeding during the current pregnancy.
- Active cardiac, pulmonary, renal or hepatic disease.

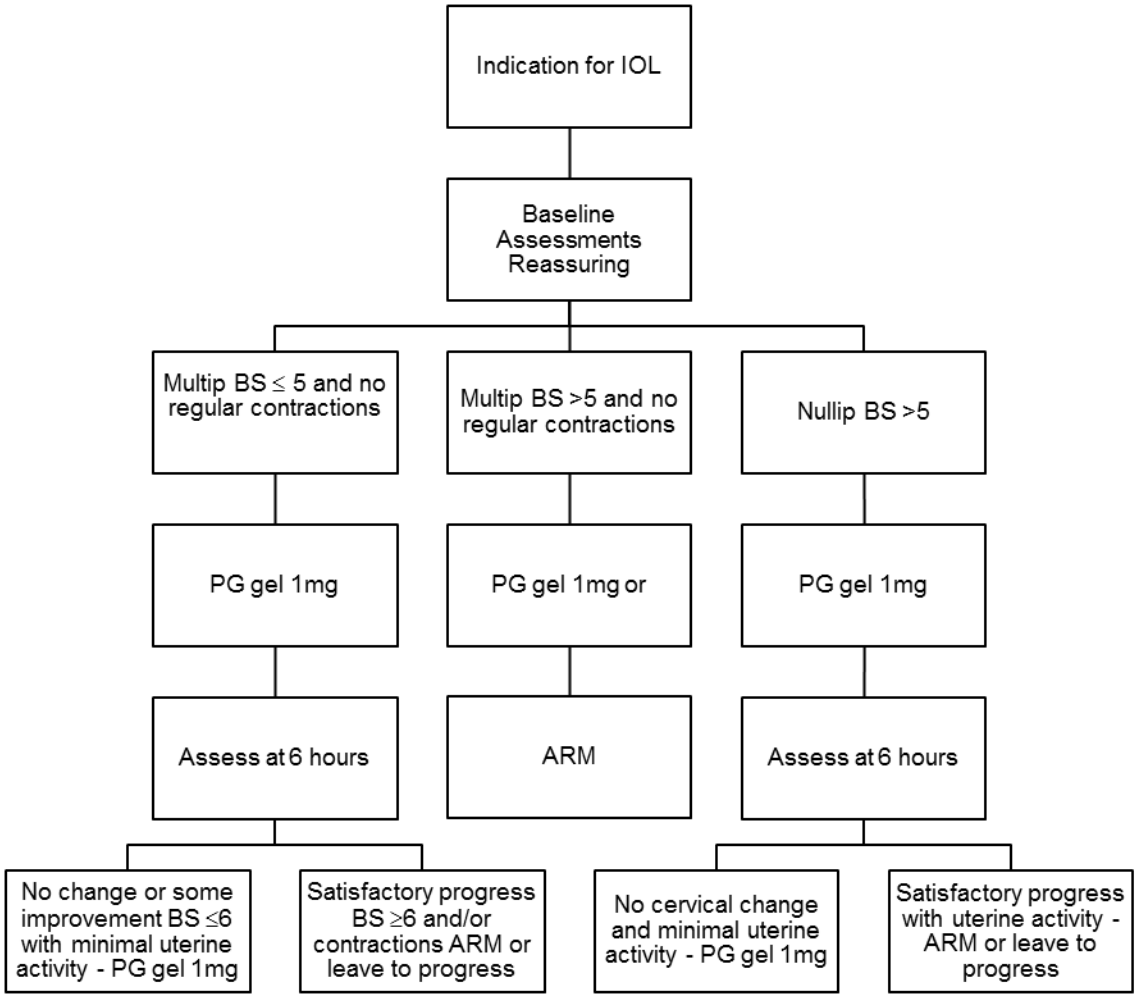
Flowchart: Administration of Prostaglandin Nullipara Bishop Score ≤5

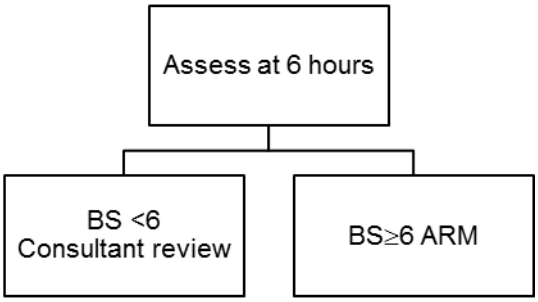
SCORE	0	1	2
POS'N	Post	Mid	Ant
CONS	Firm	Int	Soft
LENGTH	3	1-2	<1
DIL'N	0	1-2	3
STAT'N	-3	-2-1	0



In special circumstances an O&G Consultant may authorise 2mg PG in a multiparous woman.

Flowchart: Administration of Prostaglandin Nullipara Bishop Score >5





SCORE	0	1	2
POS'N	Post	Mid	Ant
CONS	Firm	Int	Soft
LENGTH	3	1-2	<1
DIL'N	0	1-2	3
STAT'N	-3	-2-1	0

Cervical Ripening Balloon

1. General

- The use of this Balloon offers a mechanical method for women with previous CS where the cervix is unfavorable or with an SGA/pregnancy; it gradually dilates the cervix and facilitates labour induction.
- Commence the IOP process in the morning.
- Perform initial assessments for IOL. Always check for a low lying placenta and fetal presentation.
- Obstetric specialist to perform insertion of the balloon catheter on the Birthing Unit.

2. Equipment

- Dressing pack.
- Chlorhex wash.
- Sterile gloves.
- 2 sponge forceps.
- 30ml syringe.
- 30ml sterile water.
- Foley catheter with 30ml balloon capacity (??16F)
- Vaginal Speculum.
- Catheter spigot.
- KY jelly.
- Light source.

3. Procedure

- Verbal consent obtained from the woman.
- Advise woman to empty her bladder.
- Abdominal palpation.
- Baseline maternal recordings (P, T, RR, BP) documented in clinical notes.
- Pre assessment CTG of at least 30 minutes (this must be reassuring).
- Position the woman in lithotomy position.
- VE to assess the Bishops score (document in clinical notes using the “Bishops Score label”) and to decide for insertion with speculum or blind.
- Insert a large vaginal speculum (if using).
- Wash with chlorhex solution.
- Put the sponge forceps on the anterior lip of the cervix for traction.
- Place the second sponge forceps onto the catheter, on first click only (behind balloon) to aid insertion.
- Advance the catheter through the cervix until the balloon sits completely in the cervical canal.

- Fill balloon with 30ml sterile water.
- Remove sponge forceps and check the balloon position with a gentle VE.
- Spigot catheter end and secure to woman's thigh.
- Ensure the CTG is reassuring post insertion.
- Women may mobilise following the post CTG if maternal and fetal observations are within normal limits.

4. Ongoing Management

- Review after 12-24 hours or if balloon falls out (if it does fall out then the woman will need to have a VE to assess if ARM able or needs reinsertion).
- After 24-hour post insertion, balloon catheter should be removed and the IOL process re-evaluated. Repeat CTG, Maternal observations, palpation and VE. Findings all clearly documented in the maternal notes.
- Consider using gentle traction BEFORE deflating balloon, however if significant resistance deflate balloon first.

5. Contraindications

The use of a balloon catheter for cervical ripening is NOT recommended in the follow circumstances:

- Following the use of prostaglandin cervical ripening.
- Placenta pravia, vasa pravia, or placenta percreta.
- Non-cephalic presentation.
- Prior hysterectomy, classic uterine incision, myomectomy.
- Pelvic structural abnormality.
- Active genital herpes infection.
- Invasive cervical cancer.
- Abnormal fetal heart rate patterns.
- Polyhydramnios.
- Presenting part above the pelvic inlet.
- Rupture membranes.
- Any contra indication to labour induction.

Artificial Rupture of Membranes (ARM) Usage

1. Management

- Abdominal palpation will be performed to confirm presentation and engagement of the presenting part.
- The membranes are ruptured using an amnihook.
- Following ARM the fetal heart rate will be auscultated for more than 30 seconds.
- In a Primagravida woman, commence Syntocinon as soon as possible following ARM. Multiparous woman, it is reasonable to consider commencing Syntocinon if there is not uterine activity after 2 hours. The decision to perform ARM and await onset of contractions may be considered when there is a past history of rapid labour, grand multiparity, previous lower segment caesarean section or when the mother has expressed strong preference for giving some time to await spontaneous labour after ARM.

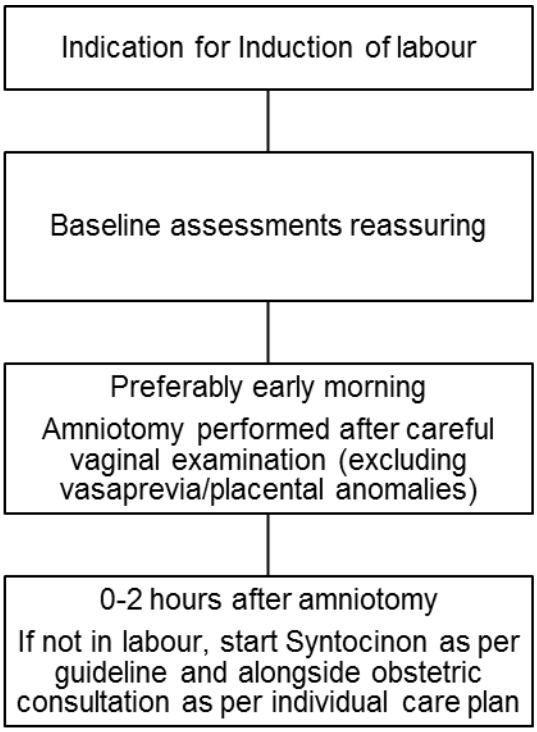
2. Contraindications

- Do not perform an ARM if the presenting part is high (> - 1 station) unless controlled rupture has been discussed with and recommended by the Obstetric team.
- An ARM should be considered if the Bishops score is >6 with the vertex fixed in the pelvis and well applied to cervix, as per flowchart.
- Caution should be used from ARM if history of herpes simplex virus, HIV, group B strep, Hepatitis A, B or C.

Flowchart: Artificial Rupture of Membranes (ARM) Usage

Cervix Favourable – does allow Artificial Rupture of Membranes (Prostaglandin not used)

This usually implies a Bishop score of >6 and an engaged presenting part



1. Syntocinon Usage

From the available research when oxytocin is used for induction of labour, with or without amniotomy, a slow incremental rise and a low maximum dose relative to effective contraction pattern is optimal.

- Specialist obstetric opinion/consultation required prior to commencing – document decision in clinical notes.
- Verbal consent obtained from the woman.
- Syntocinon induction should be carried out in a secondary hospital facility.
- 1:1 midwifery care while the infusion is running.
- Syntocinon infusion must not be started within 6 hours of administering PGE2 ®, or within 30 minutes of removing a Cervidil ® pessary.
- Continuous CTG monitoring required throughout the infusion as this is not a 'normal' labour.
- Use with caution if uterine activity is already present.
- Use directly from the fridge where it is stored.

2. Preparation

- Syntocinon ® 10iu in 500ml sodium choloride 0.9%
- Administer through an infusion pump via a sideline to a min infusion of sodium chloride 0.9%.
- 3ml/hr = 1 milliunit oxytocin per minute.

3. Procedure

- Assess fetal and maternal wellbeing prior to the commencement of infusion (baseline maternal recordings (P, T, RR, and BP).
- Abdominal palpation – to rule out malpresentation.
- Ensure syntocinon is prescribed on the Medications chart.
- VE to assess the Bishops score (document in clinical notes using the “Bishops Score” label).
- Increase the infusion rate according to the regime in the Symtocinon Guideline (EDMS). Aiming for a maximum of 3-4 moderate to strong contractions in 10 minutes.
- Palpate uterine contractions every 15-30 minutes.
- The minimum dose possible should be used.
- Unless uterine activity starts spontaneously, or spontaneous rupture of membranes occurs, the condition of the cervix should be assessed after 6 hours.
- If hyper stimulation occurs see section on the “Management of Hyper Stimulation”.

4. Contraindications

- Known hypersensitivity to any constituents of the product
- Hypertonic uterine contractions
- Vaginal delivery contraindicated
- Fetal compromise or malpresentation
- Known cephalopelvic disproportion
- Placenta previa
- Vasa praevia
- Placental abruption
- Cord presentation or prolapse
- Not within 6 hours of PGE 2 ® gel
- Not within 30 minutes of removal of Cervidil ®

5. Cautions

- Presence of uterine scar
- High parity (>4)
- Avoid prolonged use and monitor fluid intake in women with severe PIH, or pre-eclampsia, severe cardiovascular disorders or oxytocin resistant uterine inertia due to oxytocin's slight anti-diuretic activity
- If caution applies then the decision to use should be made and documented by an O&G Consultant

Management of Hyper-stimulation

1. Definition

Abnormal uterine activity where one or more of the following occur:

- More than 4 contractions in 10 minutes or
- The uterus does not return to its basal tone between contractions or
- Contractions consistently last longer than 90 seconds

2. Risk Of

- Uterine rupture/antepartum haemorrhage
- Amniotic embolism
- Precipitate delivery
- Fetal hypoxia
- Postpartum haemorrhage

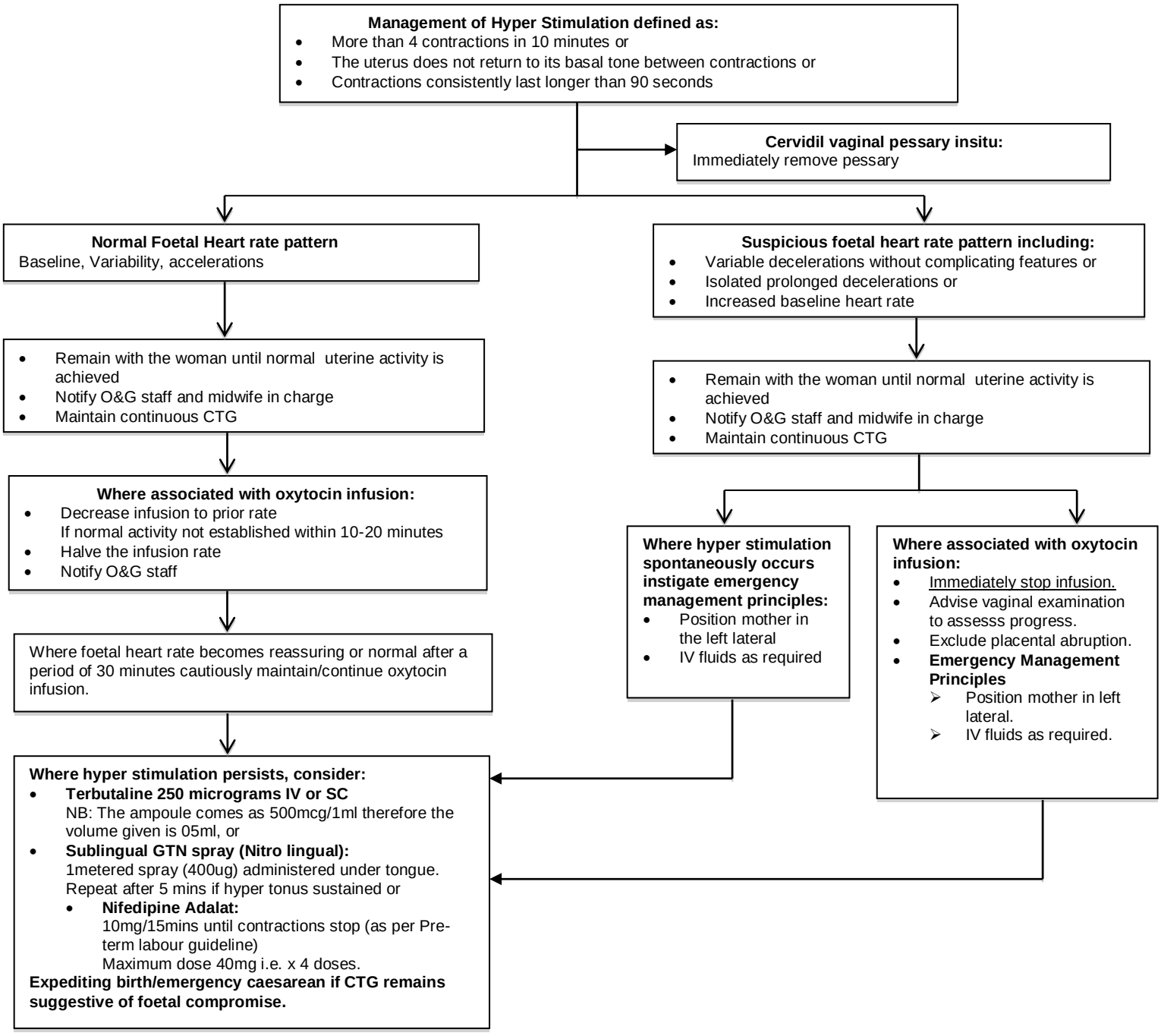
3. Contraindications

- Maternal cardiac disease
- Thyrotoxicosis

4. Points to Note

- Early recognition is essential as hyper stimulation of the uterus causes poor uterine placental perfusion leading to a decrease in fetal oxygenation and eventually fetal compromise.
- When assessing for hyper stimulation consideration should be given to both the duration and frequency of the contractions. The foetus needs 60-90 seconds between contractions to restore normal fetal oxygenation.
- Hyper stimulation is frequently associated with oxytocin infusions, therefore judicious use of oxytocin and CTG monitoring with 1:1 care is required.
- Remove Prostin/cervidil from vagina (for prostins use a gauze swab on a sponge forcep)

Flowchart: Management of Hyper Stimulation



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Maternity and Newborn Clinical Network (2010) Induction of Labour (IOL) Guideline
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http://www.health.vic.gov.au/clinicalnetworks/maternity.htm

Auckland District Health Board

Taranaki District Health Board

NZ College of Midwives

S88 Referral Guidelines

Authorised by: Simon Ewen
Head of Department and Obstetrician/Gynaecologist