Standard Operational Procedure for Induction of Labour of Low and High Risk Pregnancies

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1. Purpose/Background:

Induction of labour (IOL) is indicated if the baby or woman will benefit from a higher probability of a healthy outcome than if the birth is delayed. Induced labour has an impact on the birth experience of women. It may be less efficient and is usually more painful than spontaneous labour and epidural analgesia and assisted delivery are more likely

This document provides evidence based guidance for supporting women who are undergoing induction of labour.

2. Scope:

This Standard Operating Procedure (SOP) applies to all obstetricians and midwives and to all women receiving care from the Maternity Services at the Isle of Wight NHS Trust.

3. Responsibilities

It is the responsibility of all Midwifery Nursing and medical staff to:

- Access read understand and apply this SOP
- Attend any mandatory training pertaining to the SOP

It is the responsibility of the department to:

- Ensure the SOP is reviewed as required in line with trust and national recommendations
- Ensure the SOP is accessible to all relevant staff

4. Procedure:

4.1 Induction of Labour in a Low Risk Pregnancy

- In an uncomplicated pregnancy each woman should be reviewed at 40 and 41 weeks gestation to include palpation, fundal height measurement, blood pressure and urinalysis. This can be performed by a midwife or doctor either at home or in the antenatal clinic.
- A membrane sweep should be offered to primiparous women at 40 and 41 weeks and to multiparous women at 41 weeks. Women should be informed that membrane sweeping is not associated with an increase in maternal or neonatal infection and that discomfort and vaginal bleeding are possible from the procedure. The sweep should be clearly documented on the induction

page in the antenatal notes and Bishop Score should be recorded. Women should be informed that membrane sweeping is not a method of induction of labour but can make spontaneous labour more likely. Membrane sweeps can be repeated at three day intervals at the woman's request. Membrane sweeping should not be carried out if there is a possibility that membranes have ruptured.

- Women should be offered induction of labour at term +12 to avoid the risk of prolonged pregnancy. The midwife should book postmaturity IOL by phoning the ward.
- It is recommended that no more than 2 women per day should be booked for induction of labour. The woman should be given the IOL patient information leaflet and IOL should be clearly documented in the antenatal notes including date of IOL and date of decision for IOL.

4.2 Induction of Labour for the SGA and Growth Restricted Baby

4.2.1 Babies < 3rd Centile

- All management decisions should be agreed with the mother in the cases of foetuses <3rd centile and with no other concerning features, initiation of labour and/or delivery should occur at 37+0 weeks and no later than 37+6 weeks gestation.
- Delivery <37+0 weeks *can be* considered if there are additional concerning features, but these risks must be balanced against the risks of a preterm delivery.

4.2.2 Babies between 3rd – 10th centile

- These babies will often be constitutionally small and therefore not at increased risk of stillbirth. Care of such babies should be individualised and the risk assessment should include Doppler investigations, the presence of any other high risk features for example, recurrent reduced fetal movements, and the mother's wishes.
- In the absence of any high risk features, delivery or the initiation of induction of labour should be offered at 39+0 weeks.

4.3 Induction of Labour in Special Circumstances

4.3.1 Pre labour rupture of membranes at term (PROM)

- *See SOP for pre-labour rupture of membranes at term for further details*
- If labour does not start spontaneously within 24 hours of PROM, IOL should be offered, and started when labour ward activity allows. Women should be assessed for signs of clinical chorioaminioitis every 24 hours following membrane rupture if they choose expectant management. Oxytocin should be used as the method of IOL, but if the cervix is unfavorable, a single dose of Prostin may be used.

4.3.2 Reduced Fetal Movement (RFM)

- A recommendation for delivery needs to be individualised and based upon evidence of fetal compromise (for example, abnormal cardiotocography-CTG, EFW <10th centile or oligohydramnios) or other concerns (for example, concomitant maternal medical disease, such as hypertension or diabetes, or associated symptoms such as antepartum haemorrhage).
- At 39 weeks gestation and beyond, induction of labour is not associated with an increase in caesarean section, instrumental vaginal delivery, fetal morbidity or admission to the neonatal intensive care unit. Induction of labour therefore, could be discussed (risks, benefits and mother's wishes) with women presenting with a single episode of RFM after 38+6 weeks gestation. It is important that women presenting with recurrent RFM are additionally informed of the association with an increased risk of stillbirth and given the option of delivery for RFM alone after 38+6 weeks.

4.3.3 Preterm pre labour rupture of the membranes

- *See SOP for preterm prelabour rupture of membrane for further details*
- If a woman has preterm prelabour rupture of membranes, IOL should not be carried out before 37 weeks unless there are additional obstetric indications for example, infection of fetal compromise.

4.3.4 Group B Strep

- *See SOP for Prevention of Early Onset Neonatal Group B Streptococcal Disease*
- Method of induction should not vary according to GBS carrier status.

- Women who are known GBS carriers with confirmed rupture of membranes at >37 weeks of gestation, should be offered immediate IAP and induction of labour as soon as reasonably possible.

4.3.5 Intrauterine death

- *See SOP for management of late pregnancy loss for further details*
- For women with an unscarred uterus a combination of mifepristone and misoprostol should be used to induce labour. In women with a previous caesarean section, the mode and method of delivery should be decided by the woman's consultant.

4.3.5 Maternal diabetes

- *See SOP for the management of pre-existing and gestational diabetes in pregnancy for further details*

4.3.6 Maternal request

- IOL should not be offered routinely for maternal request except when there are exceptional circumstances.
- If a woman requests an IOL without any medical or obstetric indication, she should initially be counselled by the Community Midwife-CMW about the risks of IOL (prolonged, more painful labour, higher risk of obstetric intervention) and advised against IOL. If despite this she still requests IOL she should be referred to the consultant led antenatal clinic for a further discussion.
- If the woman is still requesting IOL and her consultant does not agree, an appointment with another consultant for a second opinion should be offered. If the consultant accepts her request for IOL, it should be booked in the normal way and it should be recorded in the notes that the indication is maternal request and that all risks have been explained

4.3.7 Breech presentation

- IOL not recommended however if External Cephalic Version-ECV is declined, unsuccessful or contraindicated and the woman declines to have Lower Segment Cesarean Section-LSCS then IOL can be offered, and the woman must be informed of the risks of IOL with breech presentation.

4.4 Methods of Induction of Labour

4.4.1 Prostaglandin tablet 3mg (PGE2)

If IOL is required for a woman who has had a previous caesarean section, Prostin pessaries/gel should only be used if prescribed by the woman's consultant. This is due to the risk of uterine rupture. (See Cook cervical ripening balloon).

Action prior to administration of Prostin tablet

- Confirm with the ward coordinator that labour ward activity allows IOL to be started.
- Check indication and method of IOL is recorded on the IOL section of the antenatal notes and highlight risk factors
- Ensure the woman understands the reason for IOL and the process of IOL.
- Ensure the woman understands the risks of hyperstimulation and that tocolytics will be administered if there is hyperstimulation with abnormal CTG features.
- Confirm the EDD.
- Perform baseline maternal observations to include the following pulse, blood pressure and temperature.
- Perform abdominal palpation and confirm presentation as cephalic.
- Perform at least 20 minute CTG and note any uterine activity.
- Ask obstetric registrar to review before giving Prostin if any doubts or concerns are raised from initial assessment.

Administration of Prostin

- Do not give Prostin if the woman is contracting >3:10.
- Assess Bishop Score.
- Administer into the posterior fornix.

Action following administration of Prostin tablet

- Advise the woman to remain lying down for 30 minutes to allow Prostin to be absorbed.
- Continue the CTG for 30 minutes.
- Record maternal observations at least every 4 hours and document on the MEOWS chart

- In the absence of uterine activity the fetal heart should be auscultated at least every 4 hours. Regular assessments of uterine activity and the woman's wellbeing should be undertaken during this time
- When labour is established commence continuous CTG.
- Offer and support pain relief choices as in normal labour guidance, including use of the birth pool, if Risk assessed as appropriate.

Repeat dose of Prostin tablet

- Reassess after six hours. Commence CTG for 20 minutes and then re-assess Bishop Score.
- If ARM is not possible (Bishop Score <7) and in the absence of effective uterine activity, a further 3mg Prostin tablet can be administered.
- In the presence of uterine activity the Obstetric Registrar must perform the reassessment and decide on further management.

4.4.2 Prostaglandin Gel

- If Prostin tablets are not available, Prostaglandin Gel (PGE2) should be used. The indication and contraindications to its use are the same as for Prostin tablets.
- No more than 1 dose should be used if the membranes are not intact. Gel is inserted into the posterior vaginal fornix.

Dosage

- Nulliparous women with Bishop score < 4: 2mg
- Nulliparous women with Bishop score > 4: 1mg
- Multiparous women: 1mg

Repeat dose of Prostin Gel

- Reassess after six hours. Commence CTG for 20 minutes and then re-assess Bishop Score.
- If ARM is not possible (Bishop Score <7) and in the absence of effective uterine activity, a further 1-2 mg Prostin can be administered. The maximum dose per cycle is 4 milligrammes for nulliparous and 3 milligrammes for all other women.
- In the presence of uterine activity the Obstetric Registrar must perform the reassessment and decide on further management.

Management if labour does not commence following maximum administration of Prostin.

Obstetric registrar should assess and examine the woman to see if artificial rupture of membranes (ARM) is possible. If ARM cannot be performed, the woman's care should be discussed with her consultant and an individualised management plan should be recorded in the woman's notes.

Options include:

- A further dose of Prostin
- Rest for 24 hours and begin IOL cycle again
- Start syntocinon
- Cook cervical ripening balloon
- Caesarean section

4.4.3 Cook cervical ripening balloon

Cook cervical ripening balloons can be used for women who have had a previous LSCS. Method of IOL should be documented on the IOL page of the antenatal notes and women should be given the appropriate patient information leaflet.

Instructions for the use of Cook cervical ripening balloon

- Place the woman in lithotomy and insert speculum.
- Clean the cervix with an appropriate cleaning solution to prepare for device insertion.
- Insert the device into the cervix and advance until both balloons have entered the cervical canal.
- Inflate the uterine balloon with 40ml of normal saline using a standard 20ml Luer-lock syringe through the red Check-Flo valve marked 'U'.
- Once the uterine balloon is inflated, the device is pulled back until the uterine balloon is against the internal cervical os.
- The vaginal balloon is now visible outside the external cervical os. Inflate the vaginal balloon with 20ml of normal saline using a standard 20ml Luer-lock syringe through the green Check-Flo valve marked 'V'.
- Once the balloons are situated on each side of the cervix and the device has

been fixed in place, remove the speculum.

- Add more fluid in turn to each balloon in 20ml increments until each balloon contains 80ml (maximum) of fluid. Do NOT overinflate the balloons.
- If desired the proximal end of the catheter may be taped to the woman's thigh.
- The balloon should not be left indwelling for a period greater than 24 hours.
- The woman can go home following balloon insertion. She should be advised to phone the unit if the balloon falls out or contractions commence. Otherwise she must return to the unit the following morning.
- If the balloon is still in place after 24 hours or if the membranes rupture spontaneously, it must be removed. Deflate both balloons through the corresponding valves marked 'U' and 'V' and remove vaginally
- If the membranes do not rupture spontaneously or if ARM is not possible following balloon removal, further management should be discussed with the woman's consultant.

4.4.4 Oxytocin

- If Bishop score ≥8, the woman should be transferred to labour ward for ARM and oxytocin infusion. CTG should be performed prior to ARM and for at least 20 minutes after ARM. Following ARM oxytocin should be started within 2 hours if contractions do not begin spontaneously. Following commencement of oxytocin, continuous electronic fetal monitoring should be used.
- See 'Use of Oxytocin guideline for further information on dosage and administration of syntocinon.

4.5 Uterine hypercontractility

Definition:

Hyper stimulation is defined as **either**:

- > 5 contractions in ten minutes over a 30 minute period

OR

- Contractions lasting more than 2 minutes in duration

OR

- Contractions of normal duration occurring within 60 seconds of each other.

If not corrected hyper stimulation, can lead to fetal hypoxia and even uterine rupture (in multips).

Management:

Table 1 – No previous Caesarean section

Hyperstimulation	General measures	Spontaneous - No drugs	Prostin	Syntocinon
1. Normal CTG	✓	Observe CTG	Observe CTG	Reduce synto to half rate
2. Suspicious CTG	✓	Give tocolysis	Give tocolysis	Stop synto
3. Pathological CTG	✓	Carefully assess clinical situation; give tocolysis or delivery	Give tocolysis	Stop synto; consider tocolysis

Table 2 – For Previous Caesarean

Hyperstimulation	General measures	Spontaneous - No drugs	Prostin	Syntocinon
1. Normal CTG	✓	Careful clinical assessment	Give tocolysis	Stop synto
2. Suspicious CTG	✓	Give tocolysis	, Give tocolysis	Stop synto, consider Give tocolysis
3. Pathological CTG	✓	give tocolysis consider delivery	Give tocolysis consider delivery	Stop synto, Give tocolysis

Tocolysis

- Terbutaline 250 mcg IV or SC OR Salbutamol 100 mg IV or as aerosol inhalation.

NB: The above drugs are not licensed for use for this indication. NICE recommends informed consent should be obtained and documented.

Improvement usually begins within 5 minutes.

Side effects are:

- transient maternal tachycardia,
- flushing of skin and
- headache

and are usually not reported by women.

4.6 Action when induction of labour is declined by the woman

- From 42 weeks, women who decline IOL should be referred to the next

available consultant antenatal clinic to discuss the risks of prolonged pregnancy or discussed with the on call consultant at the earliest opportunity.

- At the appointment, increased antenatal monitoring consisting of at least twice weekly cardiotocography and ultrasound estimation of maximum amniotic pool depth should be offered.
- If there is a medical or obstetric indication to perform an IOL and the woman declines it, the reasons why IOL is indicated and the risks of continuing with the pregnancy should be fully explained to the woman and documented in her notes.
- Further fetal assessment including ultrasound for fetal growth, liquor and umbilical artery Doppler and CTG should be offered according to the clinical situation.
- If the risk to the woman or baby of continuing the pregnancy is judged to be very high, a second opinion from another consultant should be sought and an emergency case conference with all interested parties should be arranged.

5 Implementation/training/awareness

- This is a review of a current document and it formalises current practice.
- Once ratified it will be available in all clinical areas within the Maternity Unit and on the intranet.
- All new, reviewed and ratified documents are notified to staff via the monthly maternity newsletter

6. Auditable Standards

What aspects of compliance with the document will be monitored	What will be reviewed to evidence this	How and how often will this be done	Detail sample size (if applicable)	Who will coordinate findings	Which group or report will receive findings
Cycle of Prostin was given in a timely manner	Maternal Notes	yearly	20 sets of notes	Audit midwife	MCSG

7. Related Documents

Guidelines:

- SOP - management of pre-labour rupture of membranes (PROM) at term
- SOP - Management of preterm prelabour rupture of membranes (PPROM)
- SOP- for the management of pre-existing and gestational diabetes in pregnancy
- SOP - Management of late pregnancy loss, late miscarriage and stillbirth
- SOP- termination for abnormality,
- Guidelines for vaginal birth after caesarean section (VBAC)
- SOP - Electronic fetal monitoring and fetal blood sampling
- SOP - labour and birth in water (2017)
- SOP for Prevention of Early Onset Neonatal Group B Streptococcal Disease

8. References:

- Nice (2008) Inducing labour. Clinical guideline (CG70) .Available from: https://www.nice.org.uk/guidance/cg70: https://www.nice.org.uk/guidance/cg70
- Nice (2015) Interventional procedures guidance (IPG528). Insertion of a double balloon catheter for induction of labour in pregnant women without previous caesarean section. Available from: https://www.nice.org.uk/guidance/ipg528
- Chodankar R, Sood A and Gupta J (2017) An overview of the past, current and future trends for cervical ripening in induction of labour *The Obstetrician and Gynaecologist* (19), p219-226
- National Collaborating Centre for Women's and Children's Health. *Intrapartum Care: Care of Healthy Women and Their Babies During Childbirth*. London: RCOG Press; 2007

9. DISCLAIMER

It is the responsibility of staff to check the Trust intranet to ensure that the most recent version/issue of this document is being referenced.

DOCUMENT HISTORY

Date of Issue	Version No.	Next Review Date	Date Approved	Director Responsible for Change	Nature of Change
2002	1	2005	2002		Labour ward guidelines
August 2006	2	August 2009	August 2006		New document
August 2009	3	August 2011	August 2009		Maternity CSG
April 2011	4.0	April 2014	April 2011		Maternity CSG
23 April 2012	5.0	23 April 2015	23 April 2012		Amendments made to monitoring box to reflect CNST recommendations. Approved at Maternity CSG
11 Dec 2012	6.0	11 Dec 2015	11 Dec 2012		Amended for new notes. Approved at Maternity CSG
4 March 2015	6.0	11 Dec 2015	4 March 2015		Updated with new NICE guidance
May 2016	7.0	3 May 2019	3 May 2016	Clinical director of SWCH	Approved at Maternity CSG
August 2017	8.0	15 August 2020	15 August 2017	Clinical director of SWCH	Approved at Maternity CSG
August 2018	8.1	Aug 2020		MCSG	Addition of the use of Prostin Gel
Nov 2019	8.2	Aug 2020	21st Nov 2019	MCSG	Use of Terbutaline guidance added
Sept 2020	SOP v1	24 Sept 2023	24 Sept 2020	MCSG	Reviewed, Converted to SOP- SBL recommendations included. Ratified