Brighton and Sussex University Hospitals NHS Trust

Induction of Labour

Maternity Protocol: MP033

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Guideline Reviewer:	David Utting
Manager responsible:	Jo Sinclair
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Approval Committee:	Women's Safety and Quality Committee
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Cross reference:	**MP001** Provision and Schedule of Antenatal Care **MP018** Diabetes **MP032** Rupture of Membranes (Term and Pre-term) **MP034** Vaginal birth after Caesarean Section (VBAC) **MP037** Fetal Heart monitoring **MP041** Delay in labour and use of Oxytocin **MP046** Breech & ECV **MP073** Management of Pregnancy losses above 14 weeks

Contents

Key Principles

A protocol is a set of measurable, objective standards to determine a course of action. Professional judgement may be used in the application of a protocol.

Scope

This protocol applies to:

- All pregnant women

Responsibilites

Midwives & Obstetricians:

- To access, read, understand and follow this guidance
- To use their professional judgement in application of this protocol

Management

- To ensure the protocol is reviewed as required in line with Trust and National recommendations
- To ensure the protocol is accessible to all relevant staff
- To ensure the protocol is available to service users on request

1 Information and decision-making

Women should be informed that most women will go into labour spontaneously by 42 weeks. At the 38 week antenatal visit, all women should be offered information about the risks associated with pregnancies that last longer than 42 weeks, and their options.

Healthcare professionals should always check that there are no signs of a low-lying placental site before membrane sweeping and before induction of labour.

The information should cover:

1.1 Membrane sweeping:

1.1.1 That membrane sweeping makes spontaneous labour more likely, and so reduces the need for formal induction of labour to prevent prolonged pregnancy

1.1.2 What a membrane sweep is

1.1.3 That discomfort and vaginal bleeding are possible from the procedure

1.1.4 Induction of labour between 41+0 and 42+0 weeks

1.1.5 Expectant management

1.2 Healthcare professionals should explain the following points to women being offered induction of labour:

1.2.1 The reasons for induction being offered

1.2.2 When, where and how induction could be carried out

1.2.3 The arrangements for support and pain relief (recognising that women are likely to find induced labour more painful than spontaneous labour)

1.2.4 The alternative options if the woman chooses not to have induction of labour

1.2.5 The risks and benefits of induction of labour in specific circumstances and the proposed induction methods

1.2.6 That induction may not be successful and what the woman's options would be.

1.3 Healthcare professionals offering induction of labour should:

1.3.1 Allow the woman time to discuss the information with her partner before coming to a decision

1.3.2 Encourage the woman to look at a variety of sources of information

1.3.3 Invite the woman to ask questions, and encourage her to think about her options

1.3.4 Support the woman in whatever decision she makes

2 Induction of labour in specific circumstances

2.1 Prevention of prolonged pregnancy

2.1.1 Women with uncomplicated pregnancies should be given every opportunity to go into spontaneous labour.

2.1.2 Women with uncomplicated pregnancies should usually be offered induction of labour between 41+0 and 42+0 weeks to avoid the risks of prolonged pregnancy. The exact timing should take into account the woman's preferences and local circumstances.

2.1.3 If a woman chooses not to have induction of labour, her decision should be respected. Healthcare professionals should discuss the woman's care with her from then on.

2.1.4 From 42 weeks, women who decline induction of labour should be offered increased antenatal monitoring consisting of at least twice-weekly cardiotocography and ultrasound estimation of maximum amniotic pool depth.

2.2 Preterm pre-labour rupture of membranes

2.2.1 If a woman has preterm pre-labour rupture of membranes, induction of labour should not be carried out before 34 weeks unless there are additional obstetric indications (for example, infection or fetal compromise).

2.2.2 If a woman has preterm pre-labour rupture of membranes after 34 weeks, the maternity team should discuss the following factors with her before a decision is made about whether to induce labour, using vaginal PGE2

2.2.3 Risks to the woman (for example, sepsis, possible need for caesarean section)

2.2.4 Risks to the baby (for example, sepsis, problems relating to preterm birth)

2.2.5 Local availability of neonatal intensive care facilities.

2.3 Pre-labour rupture of membranes at term

2.3.1 Women with pre-labour rupture of membranes at term (at or over 37 weeks) should be offered a choice of induction of labour with vaginal PGE2 or expectant management.

2.3.2 Induction of labour is appropriate approximately 24 hours after pre-labour rupture of the membranes at term.

Please see Maternity Protocol MP032: Rupture of Membranes (Term and Pre-term)

Summary of products characteristics says Prostin is contraindicated with ruptured membranes, however a single dose of Prostin followed by Oxytocin is appropriate. The prescriber should follow

relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Good practice in prescribing and managing medicines and devices for further information

Document findings on Appendix B - IOL Proforma

3 Previous caesarean section

If for VBAC induction of labour with Amniotomy. See protocol MP034 Vaginal Birth after Caesarean Section

4 Maternal request

Induction of labour should not routinely be offered on maternal request alone. However, under exceptional circumstances (for example, if the woman's partner is soon to be posted abroad with the armed forces), induction may be considered at or after 40 weeks.

5 Breech presentation

Induction of labour is not generally recommended if a woman's baby is in the breech presentation. If external cephalic version is unsuccessful, declined or contraindicated, and the woman chooses not to have an elective caesarean section, induction of labour should be offered, if delivery is indicated, after discussing the associated risks with the woman.

6 Fetal growth restriction

If there is severe fetal growth restriction with confirmed fetal compromise, induction of labour is not recommended.

7 History of precipitate labour

Induction of labour to avoid a birth unattended by healthcare professionals should not be routinely offered to women with a history of precipitate labour.

8 Intrauterine fetal death

In the event of an intrauterine fetal death, healthcare professionals should offer support to help women and their partners and/or family cope with the emotional and physical consequences of the death. This should include offering information about specialist support.

In the event of an intrauterine fetal death, if the woman appears to be physically well, her membranes are intact and there is no evidence of infection or bleeding, she should be offered a choice of immediate induction of labour or expectant management.

In the event of an intrauterine fetal death, if there is evidence of ruptured membranes, infection or bleeding, immediate induction of labour is the preferred management option.

If a woman who has had an intrauterine fetal death chooses to proceed with induction of labour, oral mifepristone, followed by vaginal PGE2 or vaginal misoprostol, should be offered. The choice and dose of vaginal prostaglandin should take into account the clinical circumstances, availability of preparations and local protocol.

For women who have intrauterine fetal death and who have had a previous caesarean section, the risk of uterine rupture is increased. The dose of vaginal prostaglandin should be reduced accordingly, particularly in the third trimester.
See MP073 Pregnancy Loss

9 Suspected fetal macrosomia

In the absence of any other indications, induction of labour should not be carried out simply because a healthcare professional suspects a baby is large for gestational age (macrosomic).

10 Diabetes

Please see Maternity Protocol MP018

11 Hypertension

Please see Maternity Protocol MP019

12 Membrane sweeping

Recommended methods for induction of labour

Membrane sweeping involves the examining finger passing through the cervix to rotate against the wall of the uterus, to separate the chorionic membrane from the decidua. If the cervix will not admit a finger, massaging around the cervix in the vaginal fornices may achieve a similar effect. For the purpose of this guideline, membrane sweeping is regarded as an adjunct to induction of labour rather than an actual method of induction.

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.

12.1 Prior to formal induction of labour, women should be offered a vaginal examination for membrane sweeping.

12.2 At the 40 and 41 week antenatal visits, nulliparous women should be offered a vaginal examination for membrane sweeping.

12.3 At the 41 week antenatal visit, parous women should be offered a vaginal examination for membrane sweeping.

12.4 When a vaginal examination is carried out to assess the cervix, the opportunity should be taken to offer the woman a membrane sweep.

12.5 Additional membrane sweeping may be offered if labour does not start spontaneously.

13 Pharmacological methods

Vaginal PGE2 is the preferred method of induction of labour, unless there are specific clinical reasons for not using it (in particular the risk of uterine hyper-stimulation). It should be administered as a gel, tablet or controlled release pessary.

The recommended regimens are:

- One cycle of vaginal PGE2 controlled-release pessary: one dose over 24 hours.
- One cycle of vaginal PGE2 tablets or gel: one dose, followed by a second dose after 6 hours if labour is not established (up to a maximum of two doses in 24 hours)

When offering PGE2 for induction of labour, healthcare professionals should inform women about the associated risks of uterine hyper-stimulation.

13.1 The Propess pessary is inserted as follows:

13.1.1 A vaginal examination will be performed, using only water based gel for lubrication. To prevent non intentional displacement at the time of insertion, it is advised to loop the tape at the pessary end.

13.1.2 Once the cervix is located and assessed, insert the Propess® pessary in-between fingers and slide pessary into the posterior fornix.

13.1.3 Turn pessary into transverse position in the posterior fornix, withdraw fingers carefully allowing pessary tape to run the length of the vagina and tuck the end of the tape into the vagina

13.1.4 Ask the woman to remain semi recumbent on the bed for 30 minutes following insertion. Advise her to take care when visiting the toilet not to pull on the tape, if at all concerned request the woman to inform a Midwife.

13.2 If SROM occurs *after* propess has been inserted but labour is not established **DO NOT** remove pessary, observe uterine activity and assess the fetal heart by intermittent auscultation. If there are any concerns undertake a CTG and full set of maternal observations.

13.3 Women should be advised that if SROM occurs whilst they are at home after Propess has been inserted that they should phone the maternity unit for advice. (see maternity protocol MP032: Term and Pre-term Rupture of Membranes)

14 If Propess Comes Out

14.1 If at any point the Propess pessary falls out or is inadvertently pulled out, or is removed in error before the woman is in established labour **then the same Propess can be reinserted** provided it has remained clean.

14.2 If the Propess pessary falls out and becomes contaminated, a new Propess pessary can be inserted (this will need to be re-prescribed by an Obstetrician).

14.3 If reinsertion is required, **total pessary time remains 24 hours from insertion of the first pessary**.

14.4 If women are at home when the propess pessary falls out then they should phone the maternity unit for advice. If between 8-5pm women should be advised to return to MAU/triage for assessment and reinsertion. If overnight women should be asked to come to MAU/triage at 8am for assessment and reinsertion.

15 Non-pharmacological methods

Healthcare professionals should inform women that the available evidence does not support the following methods for induction of labour:

- herbal supplements

- Acupuncture
- Homeopathy
- castor oil
- hot baths
- Enemas
- Sexual intercourse

16 Surgical methods

Amniotomy alone or with oxytocin, should not be used as a primary method of induction of labour unless there is specific clinical reasons for not using vaginal PGE2, in particular the risk of uterine hyperstimulation.

17 Mechanical methods

Mechanical procedures (balloon catheters and laminaria tents) should not be used routinely for induction of labour.

18 Setting and timing

18.1 In the outpatient setting, induction of labour should only be carried out if safety and support procedures are in place.

18.2 The practice of induction of labour in an outpatient setting should be audited continuously.

18.3 In the inpatient setting, induction of labour using vaginal PGE2 should be carried out at the earliest availability.

18.4 If the IOL is for a low risk woman with an uncomplicated pregnancy and the IOL is between 41+0 and 41+5 (prolonged pregnancy) the woman should be offered IOL using Propess as an outpatient. Women choosing to have IOL with propess and not go home should be supported in this choice.

19 Monitoring and pain relief

19.1 Monitoring

19.1.1 Wherever induction of labour is carried out, facilities should be available for continuous electronic fetal heart rate and uterine contraction monitoring.

19.1.2 Before induction of labour is carried out, Bishop Score should be assessed and recorded. A normal fetal heart rate pattern should be confirmed using electronic fetal monitoring.

19.1.3 After administration of vaginal PGE2, when contractions begin, fetal wellbeing should be assessed with continuous electronic fetal monitoring. Once the cardiotocogram is confirmed as normal, intermittent auscultation should be used unless there are clear indications for continuous electronic fetal monitoring.

19.1.4 If the fetal heart rate is abnormal after administration of vaginal PGE2, escalation and recommendations on management of fetal compromise should be followed.

19.1.5 Bishop score should be reassessed 6 hours after vaginal PGE2 tablet or 24 hours after vaginal PGE2 controlled-release pessary insertion, to monitor progress.

19.1.6 If a woman returns home after insertion of vaginal PGE2 she should be asked to contact Triage:

- When contractions begin
- SROM
- Any PV bleeding
- Or any Maternal or Fetal concerns

20 In-patient Management

20.1 **Obstetrician**

20.1.1 Review on admission including individualised care plan to be documented in maternal notes

20.1.2 Prostaglandin drug documented and prescribed

20.1.3 Documentation of frequency of fetal CTG monitoring if required

20.2 **Midwife**

20.2.1 Review 6 hourly including:

- Fetal Movements
- Fetal Heart Auscultation
- Uterine activity
- Analgesia requirements
- PV loss

20.3 Established Labour

Once in established maternal and fetal monitoring should be carried out per MP035 Care of women in labour protocol.

20.4 Pain relief

20.4.1 Women being offered induction of labour should be informed that induced labour is likely to be more painful than spontaneous labour.

20.4.2 Women should be informed of the availability of pain relief options in different settings.

20.4.3 During induction of labour, healthcare professionals should provide women with the pain relief appropriate for them and their pain. This can range from simple analgesics to epidural analgesia.

20.4.4 Birth attendants (carers and healthcare professionals) should offer women support and analgesia as required, and should encourage women to use their own coping strategies for pain relief.

20.4.5 The opportunity to labour in water is recommended for pain relief

21 Prevention and management of complications

21.1 **Uterine hyper-stimulation**

Tocolysis should be considered if uterine hyper-stimulation occurs during induction of labour inform Midwife in charge if any concerns arise:

21.1.1 Prolonged Bradycardia / Abnormal CTG
Remove Propess and give 250 mcg Terbutaline (subcutaneous) and transfer to labour ward for urgent Obstetric review

21.1.2 Non-reassuring CTG

21.1.2.1 If in established labour: remove Propess, continue CTG and for obstetric review

21.1.2.2 If not in established labour: For Obstetric review, Inform MW in charge and consider transfer to labour ward

21.2 **Failed induction**

- Failed induction is defined as labour not starting after one cycle of treatment.
- If induction fails, healthcare professionals should discuss this with the woman and provide support. The woman's condition and the pregnancy in general should be fully reassessed, and fetal wellbeing should be assessed using electronic fetal monitoring.
- If induction fails, decisions about further management should be made in accordance with the woman's wishes, and should take into account the clinical circumstances.

21.2.1 If induction fails, the subsequent management options include:

- A further attempt to induce labour (the timing should depend on the clinical situation and the woman's wishes)
- Caesarean section

21.3 **Cord prolapse MP047**

To reduce the likelihood of cord prolapse, which may occur at the time of amniotomy, the following precautions should be taken:

- Before induction, engagement of the presenting part should be assessed.
- Obstetricians and midwives should palpate for umbilical cord presentation during the preliminary vaginal examination and avoid dislodging the baby's head.
- Amniotomy should be avoided if the baby's head is high.

21.4 **Uterine rupture**

- If uterine rupture is suspected during induced labour, the baby should be delivered by emergency caesarean section.

22 References

1) National Institute for Health and Clinical Excellence. (2008). *Induction of labour*. London: NICE.

23 Patient Information Leaflet is available at www.mypregnancymatters.org.uk

24 Appendix A - Research Evidence on Perinatal risks of prolonged pregnangyuwerghwegcy

NICE IOL guideline 2008:

Epidemiological evidence supports the view that a pregnancy which goes beyond 40 weeks of gestation is associated with increased perinatal risks.

UK data on perinatal deaths:
39 weeks: 5.3 / per 1000 births
40 weeks: 4.2 / per 1000 births
41 weeks: 3.7 / per 1000 births
42 weeks: 6.0 / per 1000 births
43 weeks: 5.8 / per 1000 births
(P26 table 4.2)

Compared with expectant management, induction of labour after 41 completed weeks is associated with fewer perinatal deaths (0/2986 versus 7/2953), excluding congenital abnormality.

The odds of increased perinatal mortality may be higher for south Asian women than for white or black women, and at term the odds increased fastest in south Asian women (P28)

25 Appendix B: Induction of Labour Proforma

See next page. Print pages 18-19.

Induction of Labour Proforma				
Name:		Assessment No.	Indication for IOL:	
Hospital ID:	DOB:	IOL procedure discussed? Yes / No Informed consent gained? Yes / No		
Method of IOL		Propess 10mg PV	Inpatient	Outpatient
Prostaglandin Prescribed? Yes / No		Prostin 3mg PV	Inpatient	

Clinical Picture			
Date:	Time:	Location:	
Gravida:	Parity:	Gestation by USS:	Placental Site:
Maternal / Fetal risk factors:			

Maternal observations	BP:	Pulse:	Temp:
	Urinalysis:	FMF:	
Abdominal palpation	SFH:	Presentation:	Engagement:
	Lie:	Position:	USS if BMI>35
Membranes	Intact / SROM:	Date / time of SROM:	Liquor Colour:

Vaginal Examination				
Consent Gained: □	Chaperone if required: □		Bishop Score:	
Bishop Score	**0**	**1**	**2**	**3**
Dilation	0	1-2	3-4	5-6
Consistency	Firm	Medium	Soft	
Length	>2	1 - 2	0.5 - 1	<0.5
Position	Posterior	Mid	Anterior	
Station	-3	-2	-1	0 / Spines

CTG review pre-prostaglandin

Antenatal CTG	Reassuring	Non-Reassuring
Baseline rate (bpm)	▪ 110-160	▪ <109 ▪ >160
Variability (bpm)	▪ ≥5	▪ <5 for 50 mins ▪ Sinusioidal pattern for >30 mins ▪ >25 for 25 mins
Accelerations	▪ Present	▪ None for 50 minutes
Decelerations	▪ None	▪ 1 or more unprovoked deceleration ▪ Decelerations related to uterine tightenings (not in labour)
Opinion	Normal (All 4 features are reassuring)	Abnormal (1 or more non-reassuring features)
Indication for CTG:		
Action: (An abnormal CTG requires prompt review by obstetrician/senior midwife)		

CTG review post prostaglandin

Antenatal CTG	Reassuring	Non-Reassuring
Baseline rate (bpm)	▪ 110-160	▪ <109 ▪ >160
Variability (bpm)	▪ ≥5	▪ <5 for 50 mins ▪ Sinusioidal pattern for >30 mins ▪ >25 for 25 mins
Accelerations	▪ Present	▪ None for 50 minutes
Decelerations	▪ None	▪ 1 or more unprovoked deceleration ▪ Decelerations related to uterine tightenings (not in labour)
Opinion	Normal (All 4 features are reassuring)	Abnormal (1 or more non-reassuring features)
Indication for CTG:		
Action: (An abnormal CTG requires prompt review by obstetrician/senior midwife)		

Prostaglandin given? **Y / N**	ARM? **Y / N**	Date:	Time:
Name:	Signature:		Role:

Date / time:	Management plan:	Signature
		Cont…

Date / time:	Management plan:	Signature

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