Induction of Labour

County Durham and Darlington

NHS Foundation Trust

CDDFT Guideline

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Approval

Signature of Chairman of Approving Body: [Signature]
Name / job title of Chairman of approving Body: Diane Murphy Acting Director of Nursing
Signed paper copy held at (location): Library Services Darlington Memorial Hospital

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Document Control Information

Version control table

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Table of revisions

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| December 2009 | Full    | Review to ensure guideline reflects:  
- Current evidence based practice  
- Service provisions  
- NHSLA requirements: Standard 2 Criterion 5  
- N.I.C.E. Guidance | Joanne Woodward |
| April 2010   | Full    | Format updated following CNST assessment and changes to times for IOL UHND | Jean Hatton |
| December 2011 | Partial | Reviewed and amended in line with CDDFT policy for the development and management of policy and guidance documents  
Now Includes process for maternal request for IOL (page 4) NHSLA requirement documentation of maternal observations (page | Jean Hatton |
## Induction of Labour

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<tr>
<td><strong>14) NHSLA requirement</strong></td>
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<tr>
<td><strong>Revised times for IOL – DMH (pages 10-12)</strong></td>
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</table>

**April 2012**

**Full**

- Reviewed and amended in line with NHSLA recommendations – for all induction of labour
- Included induction with specific pregnancy complications:
  - Diabetes
  - IUD
  - Preterm Prelabour Rupture of membranes
  - Previous Caesarean Section
  - Pre labour rupture of membranes at term
  - Fetal growth restriction

**Key performance indicators amended**

Joanne Woodward
Induction of Labour

1. Introduction

Induction of labour (IOL) is the term used to describe the artificial onset of labour.

This guideline is for Induction of Labour and should be used in conjunction with individual appendices (where appropriate)

- **Post dates, low risk women.** Women with uncomplicated pregnancies should be offered induction beyond 41 weeks, Department of Health (2001).
- **Preterm prelabour rupture of membranes** - see Appendix 3 – from CDDFT – Premature Prelabour Rupture of Membranes.
- **Prelabour rupture of membranes at term** – see Appendix 4 – from CDDFT – SROM before labour at term.
- **Previous caesarean section** – See Appendix 5 – from CDDFT Vaginal birth after Caesarean section.
- **Fetal growth restriction** – Appendix 8 - See CDDFT Investigation and Management of small for gestational age fetus. Once decision to deliver has been made follow induction of labour policy. In cases of severe growth restriction with confirmed fetal compromise induction of labour is not recommended – (NICE 2008).
- **Maternal diabetes** – see Appendix 6 plus flow chart – from CDDFT Diabetes and Pregnancy.
- **Intrauterine death** - see Appendix 7 from CDDFT Intra Uterine Death and Termination for Fetal Abnormality guideline.
- **Maternal request** – These women should be referred to Antenatal Clinic and discussed on an individual basis, plan of care to be documented in hand held notes.

2. Purpose:
The following guidelines have been developed to assist staff in;

- Management of women requiring induction of labour.
- To facilitate labour and delivery and promote the well-being of mother and baby.

3. Duties
This guideline defines the roles and responsibilities of all midwives and obstetricians involved in the care of women booked for induction of labour.

4. Management

**Induction of Labour - Timing**

- Prior to Induction confirm expected date of delivery. This should be agreed at the time of the anomaly scan at the latest and by the earliest dating scan. (CRL at 8 -12 weeks gestation. If not available use HC on anomaly scan at 18-20 weeks). Document agreed date in hospital case notes, hand held notes and computer system and sign.
- Induction should only be considered when vaginal delivery is felt to be the most appropriate mode of delivery
**Induction of Labour**

**Flow chart for timing of induction**

**Pregnancy Complications**

- **No**
  - Review at 40+ weeks

- **Yes**
  - Consideration of woman’s clinical condition – See Consultant
  - **Offer**
    - Membrane sweep
    - Induction at T + 12-14 days
    - Document indication for induction in notes

**Offer of induction declined at 42 weeks**

- Review by Consultant – development of individual management plan
- Initiate serial monitoring at 42 weeks
- Measurement of single deepest pool of liquor
- Twice weekly CTG
- Review by Consultant at 43 weeks
- Propose induction of labour if monitoring abnormal
Induction of Labour

Once decision to induce has been made:-

(Antenatal clinic, Antenatal ward or Pregnancy or Day Assessment unit (PAU/DAU), Community)

- Abdomen must be palpated, cephalic presentation confirmed and descent of head recorded.
- Vaginal examination and membrane sweep offered.
  - The cervix must be assessed using the modified Bishops Score. Arrange membrane sweep with consent at T+7 and T+10 for low risk women, or timing as directed by Consultant for high risk women.
  - One of the four protocols (A, B, C or D) should be followed, dependent upon the Bishop Score and parity (see attached).
- Inform patients that 'priming-to-delivery' may take 24 - 48 hours. Give 'Induction of Labour' leaflet to woman.
- Inductions should be 'booked' with the Delivery Suite/antenatal ward from antenatal clinics, antenatal wards or pregnancy assessment unit (PAU) dependant on Bishop score. (T+12-14 for low risk women and as directed by consultant for all other women).
  - 3 inductions per day only (including women needing augmentation)
  - Only low risk patients to be induced at weekends

Process for Induction of Labour

- Protocol A, B and C - Admit to Antenatal Ward at 15:00 (UHND) 10:00 (DMH) the day prior to planned induction
- Protocol D - Admit to Delivery Suite (08:00) on day of planned induction (ask patient to ring Delivery Suite at 07:00 to confirm admission time)
- On admission record maternal observations pulse, BP and temperature
- Abdominal Palpation

CTG must be performed prior to induction. This should be for at least 30 minutes prior to vaginal examination and must be shown to be a normal reassuring pattern. The CTG must be continued for at least 30 minutes post prostin and be normal prior to being discontinued. If there are fetal heart abnormalities following insertion of prostin summon medical assistance.

Method of Induction

i) "Unfavourable" (Bishop Score <5): induction should include adequate priming – see Protocol A

ii) "Moderately favourable" (Bishop Score 5-8): prime with prostin vaginal tablets prior to undertaking ARM +/- syntocinon - see protocols B & C.

iii) "Very favourable" (Bishop score 9-13): induction by ARM +/- syntocinon - see Protocol D.

Prostaglandin preparations should be placed high in the posterior fornix.

Prostcin should be withheld in the presence of regular contractions – reassess cervix 6 hours later and review the need for further prostaglandin.
### Modified Bishops Score

<table>
<thead>
<tr>
<th>Cervical Feature</th>
<th>Pelvic Score</th>
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<td>Dilatation (cm)</td>
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<tr>
<td>&lt;1</td>
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<tr>
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</tr>
<tr>
<td>2-4</td>
<td>2</td>
</tr>
<tr>
<td>&gt;4</td>
<td>3</td>
</tr>
<tr>
<td>Length of cervix (cm)</td>
<td></td>
</tr>
<tr>
<td>&gt;4</td>
<td>0</td>
</tr>
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<td>2-4</td>
<td>1</td>
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<tr>
<td>1-2</td>
<td>2</td>
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<tr>
<td>&lt;1</td>
<td>3</td>
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<tr>
<td>Station (relative to ischial spines)</td>
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<tr>
<td>-3</td>
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<td>+1/+2</td>
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</table>
PROTOCOL A – INDUCTION WITH ‘UNFAVOURABLE’ Cx (Bishop Score 1-4)

16.00 - 3 milligram PGE2 inserted into posterior fornix of vagina

22.00 Reassess Cervix

- Bishop Score 9 -13
  - ARM: 7.00 the following morning

- Bishop Score <9
  - 3 milligram PGE2 inserted into posterior fornix of vagina
    - 07.00 Reassess Cervix
      - Bishop Score <5:
        - Discuss with Consultant re further management: CTG
          ? Further prostin (16.00 and/or 22.00) or LSCS
      - Bishop score > 5:
        - ARM by midwife or Registrar
PROTOCOL B – INDUCTION WITH ‘MODERATELY FAVOURABLE’ Cx
(Bishop Score 5 – 8 with cervix less than 2cm dilated)

16.00 - 3 milligram PGE2 inserted into posterior fornix of vagina

22.00 - Reassess Cervix

Bishop Score 9 - 13

ARM: 7.00 the following morning

Bishop Score< 9

3 milligram PGE2 inserted into posterior fornix of vagina

ARM: 7.00 the following morning
PROTOCOL C – INDUCTION WITH MODERATELY FAVOURABLE’ Cx
(Bishop Score 5 – 8 with cervix 2cm or more dilated)

22.00 - 3 milligram PGE2 inserted into posterior fornix of vagina

07.00 - ARM

Syntocinon in 2 hours if not contracting

PROTOCOL D – INDUCTION WITH FAVOURABLE’ Cx (Bishop Score 9 – 12)

08.00 ARM

Syntocinon in 2 hours if not contracting
PROTOCOL A – INDUCTION WITH ‘UNFAVOURABLE’ Cx (Bishop Score 1- 4)

10.00 - 3 milligram PGE2 inserted into posterior fornix of vagina

16.30 Reassess Cervix

Bishop Score 9 - 13
- ARM: 7.00 the following morning

Bishop Score <9
- 3 milligram PGE2 inserted into posterior fornix of vagina
- 07.00 Reassess Cervix
- Bishop Score <5:
  - Discuss with Consultant re further management: CTG
  - ? Further prostin / ? LSCS – on an individual basis

Bishop score > 5:
- ARM by midwife or Registrar
PROTOCOL B – INDUCTION WITH ‘MODERATELY FAVOURABLE’ Cx (Bishop Score 5 – 8 with cervix less than 2cm dilated)

10.00 - 3 milligram PGE2 inserted into posterior fornix of vagina

16.30 Reassess Cervix

Bishop Score 9 - 13

ARM: 7.00 the following morning

Bishop Score < 9

3 milligram PGE2 inserted into posterior fornix of vagina

ARM: 7.00 the following morning
**PROTOCOL C – INDUCTION WITH MODERATELY FAVOURABLE’ Cx** (Bishop Score 5 – 8 with cervix *2cm or more* dilated)

10.00 - 3 milligram PGE2 inserted into posterior fornix of vagina

07.00 - ARM

Wait up to 4 hours before commencing syntocinon (dependant on women’s choice)

**PROTOCOL D – INDUCTION WITH FAVOURABLE’ Cx (Bishop Score 9 – 12)**

07.00 ARM

Wait up to 4 hours before commencing syntocinon (dependant on parity and women’s choice)
Artificial Rupture of Membranes (ARM)

- When favourable transfer to labour ward
- Obtain and record maternal observations Temperature, Blood Pressure & Pulse
- Perform CTG for 30 minutes
- Prior to ARM palpate to ensure engagement of the fetal head
- Vaginal Examination - palpate for cord prior to ARM
- **DO NOT** perform ARM if high head – liaise with obstetric staff.
- Inform obstetric staff of findings and colour of liquor
- Continue CTG for 30 min if clear liquor to ensure fetal well being, otherwise continuous CTG.
- Document findings in intrapartum pathway.

Syntocinon

- Syntocinon not to be started within 6 hours of prostin administration
- Primigravida: It is recommended that unless the woman is tightening from Prostin then syntocinon is started straightaway after ARM. Discuss with patient.
- Multiparous patients: Syntocinon may be delayed for up to 4 hours if the woman wishes. Commence syntocinon infusion if not then contracting regularly (3 contractions in 10 minutes) NB If syntocinon not required intermittent auscultation acceptable in low risk women (providing > 6hrs since prostin).
- If syntocinon is to be started cannulate and obtain blood for FBC, Group & Save Serum.
- Syntocinon regime to be followed increased every 30 min until contracting 4 in 10 min
- Fetal Wellbeing - Continuous CTG once syntocinon is commenced as per Guideline Intrapartum Fetal Surveillance.
- Maternal observations – as indicated in Care of Women in Labour (Guid/Mat/1400).
- Document all findings and care given in intrapartum pathway.

**Document when and why syntocinon is stopped or interrupted i.e. in the following situations**

- If the FHR trace is classified as pathological, oxytocin should be stopped and a full assessment of the fetal condition undertaken by an obstetrician before oxytocin is recommenced.
- Hyperstimulation (see below)
- Setting up of epidural
Hyperstimulation

Definition:
- Frequent uterine contractions (5 or more contractions in 10 minutes)
- Prolonged uterine contractions (2 or more contractions lasting for > 2 minutes)
- Failure of uterine relaxation between contractions

Complications
- CTG abnormalities and fetal compromise
- Abdominal pain and uterine rupture

Management
The aim is to decrease uterine activity in order to improve uteroplacental blood flow and fetal oxygenation.
- Turn patient onto left side to aid uteroplacental blood flow
- Discontinue or decrease syntocinon dependant on CTG anomaly or remove prostin from the vagina
- Inform 2nd on call Doctor
- Continuous CTG monitoring
- **Tocolytics: Terbutaline** – In the presence of abnormal FHR patterns and uterine hypercontractility (not secondary to oxytocin infusion) tocolytics should be considered. Consider a subcutaneous injection of Terbutaline 0.25mg. Decision to be made only by the second on call doctor.
- Expedite delivery if CTG abnormalities persist / confirmed fetal compromise after use of tocolytics, dependant on stage of labour.
- Prepare theatre for emergency Caesarean section while the above procedures are being undertaken. Ensure staff available.
- Following the resolution of hyperstimulation and the CTG abnormalities, wait a further 20 minutes before recommencing syntocinon.
- Recomence syntocinon at the starting rate and continue as per protocol

Post Delivery
Prolonged labour and use of syntocinon is associated with an increase in PPH. If syntocinon was used reduce gradually, leave IV cannula in until bleeding settled.
5. Key Performance Indicators

<table>
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<th>Monitoring Criterion</th>
<th>Response</th>
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<td>Who will perform the monitoring?</td>
<td>Maternity Services</td>
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</table>
| What are you monitoring? | a. Membrane sweep is offered.  
b. When Induction of Labour should take place.  
c. Maternal observations prior to the establishment of labour recorded.  
d. Fetal observations carried out during induction prior to the establishment of labour recorded.  
e. Written evidence of the development of an individual management plan when induction of labour fails.  
f. Written evidence that discussion had taken place regarding maternal requests for induction of labour.  
g. Written evidence of the development of an individual management plan when induction of labour is declined.  
h. Continuous CTG following commencement of Syntocinon.  
i. Syntocinon regimen followed and documented on partogram.  
j. Process for Induction of Labour for:-  prolonged Pregnancy  preterm prelabour rupture of membranes  prelabour rupture of membranes at term  previous caesarean section  fetal growth restriction  maternal diabetes  intrauterine death |
| When will the monitoring be performed | Annually |
| How are you going to monitor? | Audit maternity hand held notes/intrapartum care pathway  Safeguard Reporting of any incidents. |
| What will happen if any shortfalls are identified? | Audit results shared with Obs & Gynae operational Group  Action plan formulated |
| Where will the results of the monitoring be reported? | Quarterly Clinical Audit meeting |
| How will the resulting action plan be progressed and monitored? | Obs & Gynae Group – Quarterly Clinical audit Meeting |
Induction of Labour

| How will learning take place? | Mandatory days, team meetings, Staff bulletins |

6. References

Hospital Episodes Statistics. ‘Maternity Data in HES’. *HES Online Database*. NHS Information Centre for Health and Social Care. Available at: [www.hesonline.nhs.uk](http://www.hesonline.nhs.uk)


7. Associated Documents

- CCDFT Normal labour guidelines
- CDDFT VBAC guideline
- CDDFT Multiple pregnancy guideline
- CDDFT Pre labour rupture of membranes guideline
- CDDFT Fetal surveillance guideline
- CDDFT Diabetes and Pregnancy
- CDDFT IUD Guideline
- CDDFT Preterm pre labour rupture of membranes guideline
- CDDFT Chorioamnionitis Policy
- CDDFT Small for Gestational Age Guideline
- CDDFT Trust Sepsis Bundle
- CCDFT Policy for the Development and Management of Policy and Guidance Documents

8. Equality Analysis / Impact Assessment

Full Assessment Form v2/2011

Division/Department: Care Closer to Home – Maternity Services

Title of policy, procedure, decision, project, function or service: Induction of Labour

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Lead person responsible: Evidence Base Practice Group - chair

People involved with completing this: Jackie Hendy

Type of policy, procedure, decision, project, function or service:

- Existing: Yes
- New/proposed
- Changed

Step 1 – Scoping your analysis

What is the aim of your policy, procedure, project, decision, function or service and how does it relate to equality?

To ensure women have the safest care that can be given

Who is the policy, procedure, project, decision, function or service going to benefit and how?

Women undergoing induction of labour

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What outcomes do you want to achieve?

No incidents – good outcome – good experience for women and their families

What barriers are there to achieving these outcomes?

Not adhering to guidelines and policies – non attendance at training and education

How will you put your policy, procedure, project, decision, function or service into practice?

Monitoring incidents and ensuring lessons are learned

Does this policy link, align or conflict with any other policy, procedure, project, decision, function or service?

None

Step 2 – Collecting your information

What existing information / data do you have?

Incident data

Who have you consulted with?

Clinical colleagues
What are the gaps and how do you plan to collect what is missing?

N/A

Step 3 – What is the impact?

Using the information from Step 2 explain if there is an impact or potential for impact on staff or people in the community with characteristics protected under the Equality Act 2010?

Ethnicity or Race

No

Sex/Gender

No

Age

No

Disability

No

Religion or Belief
Induction of Labour

No

Sexual Orientation

No

Marriage and Civil Partnership

No

Pregnancy and Maternity

No

Gender Reassignment

No

Other socially excluded groups or communities e.g. rural community, socially excluded, carers, areas of deprivation, low literacy skills

No

Step 4 – What are the differences?
Induction of Labour

Are any groups affected in a different way to others as a result of the policy, procedure, project, decision, function or service?

No

Does your policy, procedure, project, decision, function or service discriminate against anyone with characteristics protected under the Equality Act?

No

If yes, explain the justification for this. If it cannot be justified, how are you going to change it to remove or mitigate the affect?

N/A

Step 5 – Make a decision based on steps 2 - 4

If you are in a position to introduce the policy, procedure, project, decision, function or service? Clearly show how this has been decided.

Agreed at Obstetrics and Gynaecology Operational Group and approved at the Quality & Health Care Governance Committee

If you are in a position to introduce the policy, procedure, project, decision, function or service, but still have information to collect, changes to make or actions to complete to ensure all people affected have been covered please list:

N/A

How are you going to monitor this policy, procedure, project or service, how often and who will be responsible?
Audit of maternity records using Maternity audit toolkit annually

Step 6 – Completion and central collation

Once completed this Equality Analysis form must be attached to any documentation to which it relates and must be forwarded to Jillian Wilkins, Equality and Diversity Lead. jillian.wilkins@cddft.nhs.uk
**SYNTOCINON REGIME**

Oxytocin should not be started within 6 hours following administration of vaginal PGE2.

Caution is required for the use of Oxytocin for Multiparous women or with VBAC; in these circumstances Oxytocin should be used at the discretion of the Consultant Obstetrician.

10 UNITS OXYTOCIN ADDED TO NORMAL SALINE SOLUTION 500mls

Using the regimen set out below increase the infusion rate until contractions are:

a) 4-5:10 minutes

b) 3-4: 10 minutes for VBAC

NB If epidural is to be sited only stop the oxytocin infusion if requested by the anaesthetist or if the woman is too uncomfortable to be fully co-operative. Resume the syntocinon at half the finishing rate and then continue rate changes from then.

Regimen to be prescribed and signed by senior medical staff on Medicine Kardex.

10 iu syntocinon in 500 mls Normal Saline via volumetric pump

N.B. Regime is the same irrespective of parity.

<table>
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<tr>
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<th>Volume infused mls per hour</th>
<th>Oxytocin Dose (mU/min)</th>
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<tr>
<td><strong>270</strong></td>
<td><strong>96</strong></td>
<td><strong>32</strong></td>
</tr>
</tbody>
</table>

N.B. Should not progress beyond 60 mls per hour without discussion with Senior Medical Staff
Appendix 2

MEMBRANE SWEEPING

Aim
To induce labour at term without the need for surgical intervention
The theory behind sweeping the membranes is that it stimulates prostaglandin and the synergistic
uterotonic action of oxytocin to induce labour (Foong et al 2000). There is no evidence that sweeping
the membranes increases the risk of maternal or neonatal infection, or of premature rupture of the
membranes. (Boulvain et al 2001, 2002).
The National Institute for Clinical Excellence (NICE) recommends that membrane sweeping be offered to
women prior to the formal induction of labour (NICE 2001).

- The procedure should be offered to women that have uncomplicated pregnancies from 41
  completed weeks as a means of inducing labour for post maturity.

**Ideally performed at T+7 and T+10**

- Check ultrasound report to confirm position of placenta - exclude placenta praevia.
- Confirm dates.
- Give full explanation – ensure informed consent prior.
- Encourage bladder emptying prior to procedure.
- Abdominal palpation prior to ensure engagement of fetal head.
- If any concerns with high presenting part/ unstable lie/ malpresentation refer to Consultant for
  management plan.
- Auscultate fetal heart before procedure
- Perform vaginal examination and assess Bishops Score – perform membrane sweep by digitally
  separating 2-3cm of the membranes from the lower uterine segment, rotating the finger at least
twice through 360 degrees. If the cervix is close, it should be massaged.
- Auscultate fetal heart following procedure.
- Complete documentation in hand held notes/ care pathway.
- Ensure woman has contact numbers, advise may experience some bleeding but if excessive to
call labour ward
- Plan for future care if the woman does not go into labour, depending upon Bishops score arrange
IOL as necessary. (arrange admission for prostin or direct admission to labour ward).
- Give woman information leaflet.
- If induction declined after a fully informed discussion refer to consultant to develop individual
  management plan.

Ensure those women booked for MLU know to still attend there if in spontaneous labour – can
remain low risk until the moment of induction.
Appendix 3

Pre term pre labour rupture of membranes (PPROM)

- Clear plan to be put in place regarding timing of delivery
- Conservative management is clearly of benefit up to 34 weeks. There is little evidence that intentional delivery after 34 weeks adversely affects neonatal outcome. There is a suggestion that expectant management beyond 34 weeks is associated with an increased risk of Chorioamnionitis. Women should be counselled about the increased risk of chorioamnionitis and its consequences versus the decreased risk of serious respiratory problems in the neonate, admission to NNU and Caesarean section
- If PPROM occurs between 34-36+6 weeks gestation allow up to 24 hours for labour to commence spontaneously unless GBS positive or signs of infection present.
- Consultant to discuss timing of delivery with woman
- Induction of labour – prostin may be used if cervix unfavourable – follow Induction of labour guideline
Management for women at Increased Risk following Ruptured Membranes at Term

Women at increased risk to remain/admitted in hospital for review by Registrar and management to be discussed with Consultant. Increased risk includes:

- Antepartum haemorrhage

- Meconium – immediate augmentation if fresh or thick meconium stained liquor. If thin meconium liquor and normal CTG, consider review on Ward round

- Identified Group B Streptococcus in current pregnancy – give antibiotics then augment labour immediately

- Suspected IUGR

- Any signs infection (general malaise, pyrexia, maternal tachycardia, abdominal pain, uterine tenderness)

- Pre-existing diabetes (type 1 and type2) or gestational diabetes

- Hypertension

- Previous Caesarean section

Augmentation of Labour in women in who labour does not start spontaneously

- On return to Delivery Suite vaginal examination by Midwife and commence CTG: Observations as per IOL policy.

- Commence Syntocinon as per regime. NICE does not recommend Prostin following ruptured membranes.

- Observe for signs of Chorioamnionitis – maternal pyrexia (>37.8°C), offensive vaginal discharge and fetal tachycardia >160bpm indicate clinical chorioamnionitis and delivery should be expedited. (See CDDFT chorioamnionitis policy)
Appendix 5

Induction of Labour in cases previous Caesarean Section

A decision to induce labour in a woman with a previous caesarean section should be made by a Consultant only.

The rate of unsuccessful VBAC with prostaglandin induction of labour is 40-50% (i.e. emergency caesarean section of 40-50%).

<table>
<thead>
<tr>
<th>Mode of Induction</th>
<th>Successful Vaginal Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARM +/- Syntocinon only</td>
<td>90.9%</td>
</tr>
<tr>
<td>1 prostin +/- syntocinon</td>
<td>66.7%</td>
</tr>
<tr>
<td>&gt;1 prostin +/- syntocinon</td>
<td>60%</td>
</tr>
</tbody>
</table>

Therefore:

- Induction of labour should only be undertaken for valid obstetric indications
- Offer membrane sweep at 41 weeks
- The preferred method of induction is by forewater amniotomy (ARM) with judicious oxytocin augmentation (see below)
- PG priming should be kept to a minimum – an experienced obstetrician should assess the need for PG. If PG is necessary, ONE 3mg PG intravaginal tablet only should be used and must be administered on the delivery suite or high dependency area. Further doses of PG should only be used after discussion with Consultant.
- Oxytocin infusion should not be started for 6 hours following PG administration
- High infusion rates of oxytocin may increase the risk of uterine rupture further and as such the rate should not be increased beyond 20milliunits/minute (60mls/hr)
- Note: Prostaglandin is not licensed for use in previous caesarean section.
- At ANC the above should be discussed with the patient and documented in the notes
- A cervical assessment should be performed by either the consultant or Registrar.
1. **Induction of Labour** (Flowchart overleaf)

- The reasons for labour to be induced will be discussed by the obstetric team with individual patients.

- A clear individualised plan of obstetric and diabetic intrapartum care and instructions for care immediately following delivery should be documented in the case notes.

- When the decision is made the patient will be admitted to the ward the day prior to being induced.

- Plasma glucose levels will be monitored every four hours from admission.

- On admission the obstetric / midwifery staff will perform a vaginal examination to assess the cervix.

- If the cervix is favourable plan artificial rupture of membranes for morning.

- If the cervix is found to be unfavourable then prostin will be required. Multiparous patients must only have 6am prostin (must not have prostin at 22:00 hrs.)

- All diabetic women to be on delivery suite for prostin administration

- As soon as the cervix is favourable for ARM these patients will be required to be nil by mouth and a Glucose/ Potassium/ Insulin infusion will commence. Prior to this woman to have normal insulin and diet (can have breakfast with usual insulin)

- The care pathway for “Spontaneous Labour” needs to be followed at this point.
Induction of Labour

Management of Insulin or Metformin Treated Diabetic Women

Induction of Labour

Aim:

During induction, labour, delivery and immediate postnatal period blood glucose levels will be 4 - 7 mmol/l.

Patient requires induction of labour

Patient admitted the day prior to induction
Plasma glucose monitoring to be recorded 4 hrly

On admission: VE for cervical assessment

Cervix favourable:
Plan ARM planned at 8am
Omit breakfast but patient can have fluids
GKI to be commenced

Cervix unfavourable:
Prostin required - to be administered on delivery suite (multiparous patients to have at prostin at 6am)

When cervix favourable for ARM - patient to be nil by mouth and GKI to be commenced

Follow pathway for Spontaneous labour
Induction of Labour

Induction of Labour for Intrauterine Fetal Death

- **Initial management** – Mifepristone 200mg orally straightaway if woman chooses (at a later agreed time if preferred).

- Offer prescription for pain relief and Night sedation.

- Arrange admission for Induction on Delivery Suite 36 – 48 hrs after Mifepristone.

- Warn woman there is possibility of labour starting in the 36-48 hrs after Mifepristone. Advise them to contact Delivery Suite if necessary. Ensure has phone number.

- Take blood for Kleihauer – Arrange appropriate administration of Anti D within 72 hrs of sensitising event.

**Women with unscarred uterus**

- **Under 27 weeks** -- Misoprostol - 100mcg orally – 6 hrly maximum 4 doses.

  If first dose does not lead to effective contractions **double** subsequent dose to 200mcg – **Max daily dosage 800mcg**.

- **After 27 weeks** - Misoprostol - 50mcg (first dose vaginally) – 4 hrly maximum 6 doses.

  If first dose does not lead to effective contractions **double** subsequent dose to 100mcg – **Max daily dosage not exceeding 600mcg**

- **Vaginal misoprostol can be as effective as oral and has less side effects**

If delivery not occurred after 24hrs

- Repeat regime

- Ensure evaluation for uterine activity if 2:10 do not repeat.

- Oxytocin if necessary 4hours following last dose of misoprostol.

- If cervix is ripe oxytocin can be used as per Induction of Labour regime.

**Women with scarred uterus or parity >5**

- **Under 27 weeks** – Misoprostol 50mcg - 6hrly maximum 4 doses

- **After 27 weeks** – Misoprostol - 50mcg - 6 hrly maximum 4 doses

- Safety and benefits of IOL should be discussed by a consultant. Mifepristone can be used alone within 72 hours. Induction of labour with prostaglandin is safe but not without risk.
Induction of Labour

- Women with more than two LSCS deliveries or atypical scars should be advised that the safety of induction of labour is unknown.

- Mechanical methods for induction of labour in women with an IUFD should be used only in the context of a clinical trial.

Retained Placenta
If bleeding remains minimal, observe up to 1 hour. The Registrar should examine the woman and arrange manual removal under anaesthesia if the placenta is still retained.
Induction of Labour

Induction of Labour for Intrauterine Fetal Death – unscarred uterus

Initial Management – 200mg Mifepristone

Arrange admission for 36-48 hrs later

<27 weeks

- Misoprostol 100mcg orally

Effective Contractions?

Yes

- Double next dose to 100mcg
  4 hourly – max 6 doses
  Maximum daily dose not exceeding 800mcg

No

- Double next dose 200mcg
  6 hourly – max 4 doses
  Maximum daily dose not exceeding 800mcg

>27 Weeks

- Misoprostol 50mcg

Effective Contractions?

Yes

- Double next dose to 100mcg
  4 hourly – max 6 doses
  Maximum daily dose not exceeding 600mcg

No

- If delivery not occurred after 24hours
  Continue with lower dose until delivery

Evaluate for uterine activity if < 2:10
Repeat regime

Oxytocin if necessary 4 hours following last dose of Misoprostol
Appendix 8

Small for Gestational Age

From 24 weeks Measure SF height at each visit

If SFH 3cm or more below expected or static growth:

Arrange ultrasound scan and refer PAU/DAU/Cons within 1 week

MLC – Scan reviewed on DAU/PAU

Consultant care – ANC appointment to review scan result

DAU/PAU same day for monitoring and to arrange medical review and ultrasound ASAP

- If normal refer back to original plan of management
- If SGA confirmed follow regional guideline for management (will need transfer to Consultant care if MLC)

DAU/PAU same day

- If SFH 5cm or more below expected
- If normal refer back to original plan of management

DAU/PAU same day

- If SFH 3cm larger than expected
- If polyhydramnios or abdominal circumference > 97th centile arrange Consultant review (will need transfer to Consultant care if MLC)

Arrange ultrasound within one week

See Regional Management plan in CDDFT – Small for Gestational Age Guideline