INDUCTION OF LABOUR GUIDELINES

Reference No:		**Version No:**	4a	**Previous Trust / LHB No:**	

Documents to read alongs this Policy , Procedure etc (delete as necessary)	Included in this guideline: Stretch and sweep guideline Induction of labour Oxytocin regime

Classification of document: *Clinical*

Area for Circulation: ***Maternity***
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Group Consulted Via/ Committee: Labour Ward Forum

Ratified by: Maternity Business Meeting

Date 1st Published: February 2007

Version Number	Date of Review	Reviewer Name	Date Approve	New Review Date
UHB 1	August 2009	Abi Kaye Band 7 Midwife/ Seconded Consultant Midwife	August 2009	August 2012
2	August 2012	Pina Amin	August 2012	August 2015
3	Feb 2014	P Amin. A Holmes	March 14	March 17
4	Jan 2016	A Holmes	Jan 2016	Jan 2019
4a	June 2019	Maternity Professional Forum	7/6/19	Due now

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1. Induction of Labour Guideline

Evidence
Information in this guideline originates from the NICE Clinical Guidance 70, Induction of Labour (IOL) (July 2008).

Guideline Summary

There are many obstetric indications for induction of labour, but the most common are postdates pregnancy and prolonged rupture of membranes at term.

Prolonged pregnancy occurs in between 5% and 10% of all pregnancies

At 40 weeks all women should be offered information relating to membrane sweeping, expected gestation for IOL and options for expectant management.

Membrane sweeping should be offered from 41 weeks. If a pregnancy is not thought to progress past 40 weeks membrane sweeping can be offered from 38 weeks.

IOL should be offered from 41+6 weeks

Please refer to Appendix for IOL regimen in case of intrauterine death.

<u>Guidance</u>

This is guidance for induction of labour. For some Consultant led women there will be a clinical need for induction prior to 41+6 weeks. This decision must be an Obstetric Consultant decision and be evidence based practice.

- Women requiring induction of labour will be admitted to first floor maternity north ward.
- If induction is required on delivery suite, this will be a Obstetric Consultant decision.
- All cases of IOL should be discussed with a Consultant Obstetrician except for post dates in MLC women.
- If bed capacity on first floor or neonatal unit is causing delay in commencement of IOL, an individualised risk assessment must be made by the most senior obstetrician available with clear documentation in the case notes.
- All on-going IOL's on first floor must be recorded on the 'IOL board' on the delivery suite, the board must be updated on regular basis and be part of the delivery suite morning handover. The band 7 midwife from first floor should aim to attend handover
- In healthy women with uncomplicated pregnancies a light diet may be eaten during the IOL process. All women should be able to eat until

artificial rupture of membranes (ARM), and then diet should be individualised.

- Routine Post Date women (previously MLU care)
  - If not already prescribed, **the notes and medication chart** will need to be presented to a Doctor for medication prescribing. The midwives on the ward area can proceed with the IOL – they do not need any medical clerking.
- Women who are having an IOL for either fetal or maternal conditions (CLU care) –
  - **These women should be prescribed their IOL medications including analgesia such as co-codamol in the antenatal clinic when they are booked for their IOL**. A clear plan must be documented in the notes. These women also **do not** need to be clerked when they are admitted to first floor maternity ward as a decision has already been agreed for their IOL. If these women have **not** been written up for medication please take both the **notes and medication** for review by the Obstetrician on delivery suite so that Propess/Prostin can be prescribed.

  - **If medical clerking is required on admission to first floor north, it must be clearly documented on the management plan within the case notes.**

Women with a previous C/S should not be prescribed more than recommended dosage of Prostaglandins as per NICE/local guideline

Women with a previous caesarean section should be offered induction of labour with either

- **ARM and /or oxyctocin**
- **Propess followed by ARM (the rate of hyperstimulation is similar with Propess to other prostaglandin preparations approximately 4%) Propess has the advantage of being easy to remove by a retrieval tape, reversing this complication with minutes (half life 1-3 minutes). The administration of propess is not dependant on bishop score, if it is not possible to perform an ARM (cervix <2cm dilated). For women who opt for IOL following caesarean section a documented discussion should include:**
- **An offer of membrane sweeping**
- **Increased risk of uterine rupture is triple with use of prostaglandin and oxytocin when compared with spontaneous labour (UKOSS 2012)**
- **Increased risk of emergency LSCS**

If the Cervix is not suitable for an ARM following the recommended dosage of prostaglandin, a senior review by SSpR/consultant should take place.

- On a daily basis a senior Obstetrician should review all the women on first floor maternity ward who have ongoing Inductions. This is expected to occur between 11am and 1pm.

- Written information should be provided to women on IOL prior to the procedure so that they may be fully informed. If required an interpreter should be used to provide information.

Indications for Induction of Labour

Prolonged Pregnancy

Women with uncomplicated pregnancies at 41+6 days should be offered IOL. The risk of stillbirth increases from 1 in 3000 at 37 weeks to 3 in 3000 at 42 weeks and 6 in 3000 at 43 weeks. Routine IOL at 42 weeks decreases the perinatal mortality rate without increasing the caesarean section rate. Women who decline IOL after 42 weeks should be referred to Consultant midwife Abi Holmes or Julia Sanders and offered increased fetal surveillance by twice weekly cardiotocograph (CTG) and liquor volume assessment.

Diabetes in Pregnancy

Women with pregnancies complicated by diabetes should be offered IOL prior to the estimated date of delivery.

Premature Rupture of Membranes after 37 weeks

This occurs in 6-19% pregnancies and 60% will go into labour spontaneously within 24 hours. As the time between SROM and the onset of labour increases the risk of infection increases. IOL reduces this risk and women should be offered IOL with SROM after 37 weeks. Women should be booked for IOL after 24 hours.

Women undergoing IOL should only be given 1 induction agent. All women with a bishops score <7 should receive Prostin Gel 2mg. Syntocinon should be commenced 6 hours later. Vaginal examinations should be kept to the minimum and delays in IOL reduced as much as possible. SROM must be confirmed prior to booking IOL.

Women with SROM should not be given Propess due to the time span of this process (propess remaining in situ for 24 hours) increasing the risk of maternal / fetal infection.

Macrosomia

There is no conclusive evidence to support IOL for suspected fetal macrosomia in women who are not diabetic. There are therefore no grounds for induction before 41+6 in these circumstances.

Twin Pregnancies

Please see multiple pregnancy guideline. IOL for multiple pregnancy should be at the discretion of name Consultant Obstetrician.

Maternal Request

IOL for maternal request should be avoided. There is no conclusive evidence to support such a policy and IOL for this reason has resource implications.

Precipitate Labour

There is no conclusive evidence supporting IOL for women with a history of precipitate labour.

Previous Caesarean Section

Evidence suggests that the risk of uterine rupture is higher in women undergoing IOL. The clinician should facilitate informed consent with the women at the time of booking of IOL in ANC, and document a clear plan in the notes. There is no evidence to support induction of labour prior to 41+6 will reduce associated risks with IOL for this group of women.

METHODS OF INDUCTION OF LABOUR

Stretch and sweep should be offered to all women without SROM 24 – 48 hours prior to IOL. The Bishop Score of the cervix should be documented.

Bishop Score

Score	**0**	**1**	**2**	**3**
Dilatation	0	1-2cm	3-4cm	5-6cm
Effacement (%)	0-30	40-60	60-70	80+
Station	-3	-2	-1/0	+1/+2
Consistency	Firm	Medium	Soft	-
Position	Posterior	Central	Anterior	-

All women should have a CTG prior to IOL, for at least 30 minutes to assess fetal wellbeing.

Vaginal prostaglandins are the preferred method of induction of labour, unless there are specific clinical reasons for not using it.

NICE 2007 recommend:

- One cycle of Propess over 24 hours

  Or

- One cycle of Prostin: one dose followed by a second does after 6 hours if labour is not established (up to a maximum of two doses)

Propess

Propess is 10mg of PGE_2 in a hydrogel polymer pessary within a knitted polyester retrieval system. It is available mainly for use in primigravida with unfavourable cervix (Bishop Score ≤4). Propess will release 0.3mg/hr of active agent over 24 hours. Half life is 1-3 minutes. Propess is stored in the freezer and should be removed immediately prior to use.

Propess is inserted high into the posterior vaginal fornix (see Appendix). Women should be advised to lie down for 30 minutes following insertion. The CTG should continue for 60 minutes after insertion. The retrieval tape should be placed inside the vagina to reduce the risk of the propess becoming dislodged or accidentally removed.

Propess can be removed by gentle traction on the retrieval tape. It should be removed either:

- 24 completed hours insitu
- At onset of labour, confirmed by vaginal examination
- Prior to Syntocinon infusion (Syntocinon can be commenced 30 minutes after removal)
- On evidence on uterine hyperstimulation (>5 contractions in 10 minutes for at least 20 minutes) **with** evidence of fetal distress. The decision to remove Propess should be taken by SSHO/SpR.

Propess should not be used more than once and if the cervix is not suitable for ARM after removal of Propess then the opinion of a senior obstetrician should be sought.

If Propess is removed early or falls out

If propess is removed before 24hours, place it in a universal container so that it can be reinserted if required. Remember the 24hours is up when the propess has been in situ for 24hours. Not 24hours from first insertion.

If the propess falls out a second propess can be inserted. Propess will only deliver a maximum dose of 0.3mg /per hour therefore if the propess is removed after 24 completed hours only 7.2mg will have been absorbed regardless of the number of pressaries used.

Prostin Gel

Prostin gel contains 2mg PGE_2 in gel form. It is for use where the Bishop Score is between 4 –7. Prostin is stored in the fridge and should be removed immediately prior to use.

Prostin is inserted high into the posterior vaginal fornix. Women should be advised to lie down for 30 minutes following insertion. The CTG should continue for 60 minutes after insertion.

Prostin Gel 2 mg can be repeated 6 hours after first insertion if bishops score remains between 4-7. A vaginal examination should be performed 6 hours after the second dose to assess Bishop Score and suitability for ARM. If the cervix at this stage is unfavourable for ARM then the opinion of a senior obstetrician should be sought.

Maternity and fetal monitoring

Prior to commencing the induction of labour process a full antenatal examination must be performed including:

- **Blood pressure**
- **Pulse**
- **Temperature**
- **Respiration rate**
- **Urine**
- **Abdominal palpation**
- **Auscultate the fetal heart rate with a pinnard or sonic aid**
- **CTG**
- **Discussion surrounding fetal movements**

All maternal observations should be recorded on the MEOWS chart.

Following the administration of vaginal prostaglandins the CTG should continue for at least 60 minutes. The CTG may then be removed if it is classified as normal.

Medical review should be requested immediately if there are non-reassuring features on the CTG.

A full assessment of maternal and fetal well being should be completed at least every 4 hours during the IOL process. More frequent assessment may be required following the onset of uterine activity.

NB If a woman is sleeping, indicating no uterine activity assessment may be delayed until she wakes.

A full assessment of both maternal and fetal wellbeing must be performed before the administration of analgesia.

Prior to vaginal assessment, both preparations of vaginal prostaglandins should be taken to the bedside. The appropriate agent following assessment of Bishop score should be administered at this time and the unused medication returned to the appropriate storage.

Women who establish in labour after vaginal prostaglandins

After administration of vaginal prostaglandins, 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 as described in 'Intrapartum care' guideline 190.

IOL Indicated for Post Dates in MLC Woman

CMW to offer S & S at 41 weeks. IOL Leaflet should be given to woman.

Further S & S offered at 41+2 and 41+4weeks

At 41+6, Community Midwife to book woman into consultant led unit (CLU) IOL Diary.

If woman refuses IOL an appointment should be made for her to see The Consultant Midwife in Normality and for twice weekly CTG and liquor volume assessment.

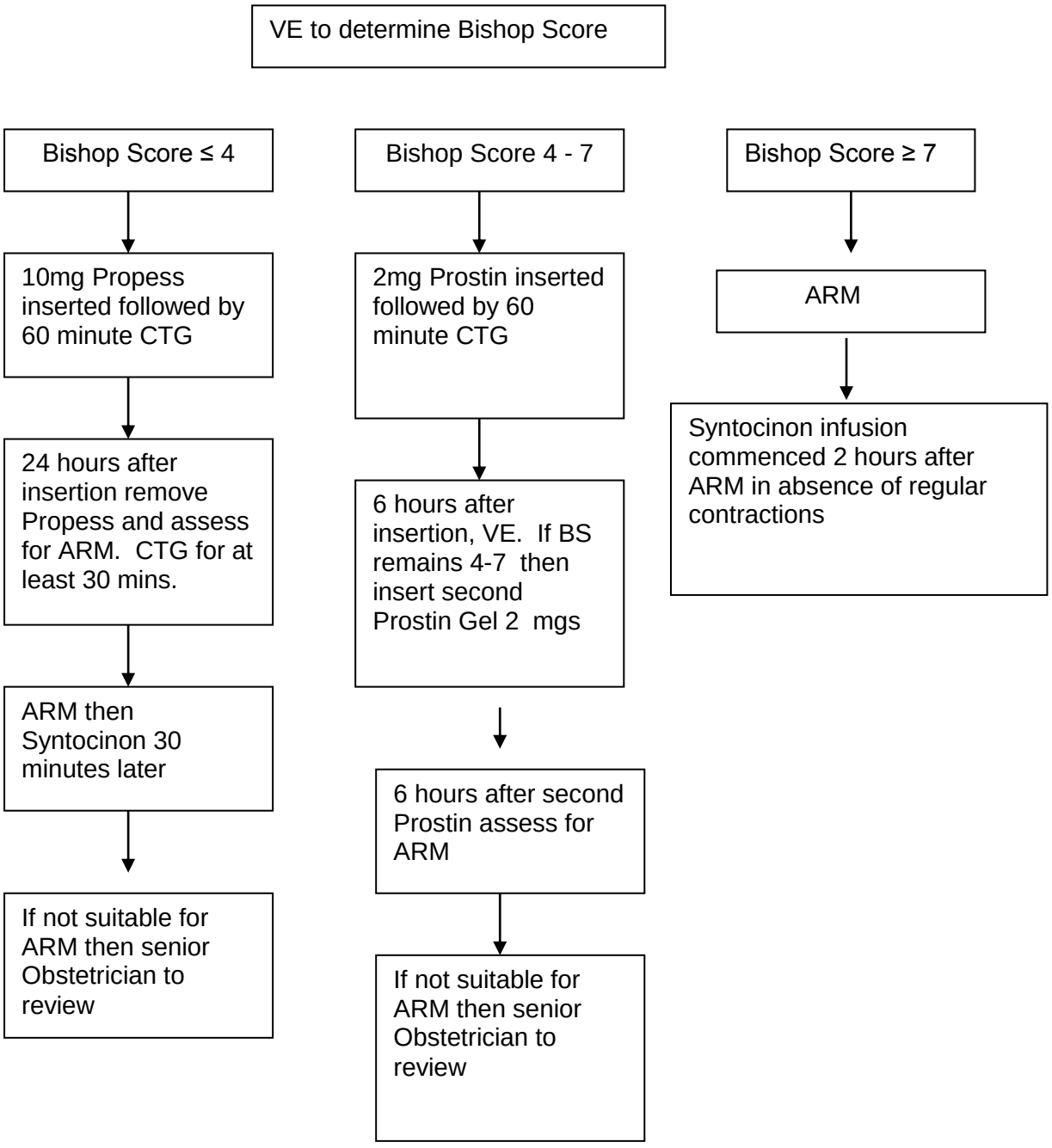
Appendix 1

IOL regimen in case of Intrauterine death

- Refer to Stillbirth Guideline

IOL is indicated. Woman should be counselled by Consultant Obstetrician, information on IOL is given and
S& S performed 24-48 prior to admission. Clear plan for IOL is documented in notes

On arrival on Delivery Suite/Maternity ward, full antenatal check including urinalysis and admission bloods as appropriate. CTG performed for at least 30 minutes. Exclude low lying placenta.



Action Plan for Hyperstimulation following Propess

- **Definitions:**

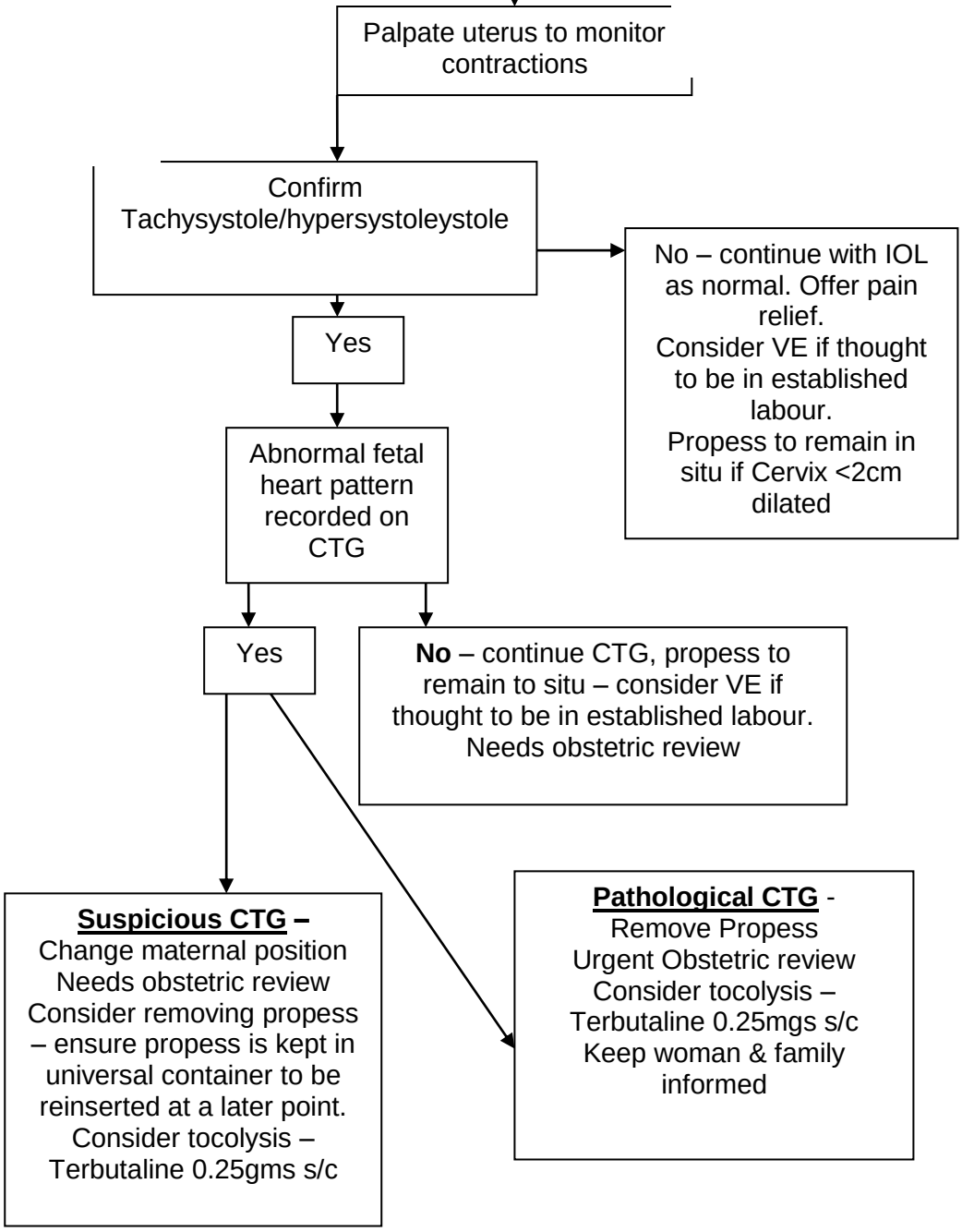
Tachysystole > 5 contractions per 10mins for at least 20mins

Hypersystole A contraction lasting for at least 2mins.

Hypestimulation: Tachysystole or Hypersystole with abnormal CTG (suspicious/pathological)

Suspected hyperstimulation

In the presence of Hyperstimulation of the uterus, tocolysis should be considered Terbutaline 0.25mgs s/c if the excessive uterine activity continues following removal of Propess



Guideline for Stretch and Sweep (S&S) by Community Midwives in community setting

The procedure should be planned at a previous visit so that the woman has an opportunity to read the information leaflet. The procedure can be carried at the woman's request if she informs the midwife that she is aware of the procedure either because she has read the leaflet or she has had the procedure performed previously.

Procedure of Stretch and Sweep

The midwife will re-explain the procedure before she starts and explain that it will take approximately ten minutes

• The woman will be encouraged to undertake relaxed breathing techniques if any discomfort is felt

• The woman will be asked to empty her bladder and remove her underwear

• The midwife will use a sheet or throw to cover the woman protecting her dignity

• The woman will be asked to lie on a couch or bed, with her hands at her side. A tilt may have to be placed under the mattress or cushions on the maternal left side to prevent supine hypertension

• The midwife will perform an abdominal palpation, listen to the fetal heart rate and document all findings. If there is any deviation from the normal, the midwife will refer the case to an obstetrician and the procedure will be abandoned (NMC, 2004)

• With washed gloved lubricated hand, the midwife will perform a vaginal examination and ascertain if the cervix is favourable for the procedure by assessing cervical effacement, consistency and dilation.

o If the cervix is unfavourable, such as uneffaced and high, the membrane sweep may have to be delayed or abandoned

o If the procedure is abandoned, the midwife will make arrangements for induction of labour as per local trust guidelines

o If the cervix is closed but soft, the cervix may be massaged until it allows insertion of a finger

o If the cervix is determined as favourable for labour stimulation, the midwife will begin to insert one finger into the cervix. The finger will be used to separate the amniotic sac from the uterine wall and cervix by making circular, sweeping movements.

• A sanitary pad will be given after the procedure

• The woman should be advised to have a warm bath and to take paracetamol for any discomfort or painful contractions

• The woman and her partner should be advised that if there is any fresh blood loss, spontaneous rupture of membranes or the woman is not coping with the pain that she should attend the maternity unit

• There is no available evidence to determine the frequency with which membrane

sweeps can be repeated, but a sensible suggestion is that they can be undertaken every three days

• The midwife can arrange for a repeat membrane sweep if labour has not started within the timeframe agreed

• If labour does not occur spontaneously then the midwife will offer a formal induction of labour as per health board's guidelines.

Contra-indication for S & S

- History of ruptured membranes
- Placenta Previa
- Antepartum haemorrhage
- Unknown location of placenta
- Woman unable or unhappy to consent
- Any contraindication for vaginal birth

Gestation for Stretch and Sweep

All low risk women should be offered S & S at 40+/40.

Women booked for Consultant Led Care, who are aiming for vaginal birth can be offered S & S from 38+/40. Examples of these women are – Diabetic women, Women with previous one Caesarean section, women with hypertensive disorders, women with cholestasis.

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OXYTOCIN REGIME

10 iu of Oxytocin in 500mls of normal saline. Shake and label.

1 unit= 1000 milliunits (MU)
Therefore 20 MU in 1ml

Primigravida		
Time after starting (minutes)	Dose Delivery mls/hr	Dose delivery mu/min
0	6mls/hour	2mu/min
30	12mls/hour	4mu/min
60	24mls/hour	8mu/min
90	36mls/hour	12mu/min
120	48mls/hour	16mu/min
150	72mls/hour	24mu/min

Trials have used up to 32MU per minute although the maximum licensed dose is 20 milliunits per minute

Multigravida		
Time after starting (minutes)	Dose Delivery mls/hr	Dose delivery mu/min
0	3mls/hour	1mu/min
30	6mls/hour	2mu/min
60	12mls/hour	4mu/min
90	24mls/hour	8mu/min

Augmentation is uncommon in a multiparous woman and should only be advised after review by an experienced obstetrician.

Women whose labour has been induced/augmented by oxytocin should have continuous electronic fetal monitoring. The monitoring can be intermittent in case of induction of labour at discretion of senior obstetrician.

- If Fetal Heart Rate (FHR) trace is normal, oxytocin can be continued until the woman is experiencing 4or 5 contractions per 10 minutes. Oxytocin should be reduced if contractions occur more frequently than 5 contractions in 10 minutes.
- If FHR trace is classified as suspicious, this should be reviewed by an obstetrician and the oxytocin dose should only continue to increase to achieve 4 or 5 contractions every 10 minutes.
- If the FHR trace is classified as pathological, oxytocin should be stopped and a full assessment of the fetal condition undertaken by an experienced obstetrician (Reg/SSpR) before oxytocin is recommended. Consideration for Fetal Blood sampling made if delivery is not imminent. Oxytocin is recommenced only after the CTG has returned to Normal or suspicious. Great clinical judgement is required in this situation and do not hesitate to discuss with consultant obstetrician.