# Induction of Labour (IOL) Guideline

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# Policy on a Page: Key Messages

## Aim:

To provide support for clinical decision making in the context of inpatient induction of labour.

## Summary of key changes (for revised documents only)

- Alignment with the Outpatient Induction of Labour Guideline (ABUHB, 2026b).
- Inclusion of induction of labour with Misoprostol 25 mcg PO (Angusta®) for PROM/ SROM in the absence of contraindications. Please refer to the local Induction of Labour with Misoprostol SOP.
- Amalgamation of guideline with the Guideline for the Management of term pre-labour rupture of membranes (ABUHB, 2024).
- Inclusion of information regarding missing Propess.

## Key Requirements:

- IOL must be clinically indicated and refer to RAG ratings.
- CTG:
  - Green/Amber: 12-hourly
  - Red: 6-hourly if prostaglandins; continuous in labour/oxytocin
- Absolute contraindications: placenta/vasa praevia, malpresentation, classical CS, severe maternal/fetal compromise
- Booking: consultant discussion required; max 4 IOL/day (≤2 RED)
- First-line method: cervical ripening balloon wherever possible
- Delays/declines: document, escalate, reprioritise via MDT

## Target Audience:

Obstetric and Maternity teams working in ABUHB.

## Training:

Training needs will be identified through appraisal and clinical/ educational supervision.

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## 1. Introduction/Overview

This guideline has been developed to provide a standardised, evidence-based approach to the induction of labour within Aneurin Bevan University Health Board (ABUHB). It aims to support clinicians in delivering safe, consistent, and high-quality care across all maternity settings, ensuring that women are fully informed and involved in decision-making wherever possible.

## 2. Scope

This guideline applies to all clinicians working within maternity services.

For information pertaining to induction of labour following pregnancy loss, please refer to the Integrated Care Pathway for Pregnancy Loss over 20 Weeks (ABUHB, 2026a).

## 3. Statement/Background

Induction of labour (IOL) is the process of artificially stimulating/ ripening the uterus/cervix to start labour, with the aim of achieving a vaginal birth. This can be achieved through pharmacological or mechanical methods. The primary goal is to ensure the safety and well-being of both mother and baby when continuing the pregnancy poses a greater risk than induction.

If you have difficulty understanding any part of this guideline- including due to learning, sensory, or communication needs- please speak with your Line Manager or contact the authors of this guideline for support or clarification.

The term “woman/ women” will be used throughout this document however, it is recognised that this refers to all pregnant, birthing and postnatal people regardless of gender identification.

## 4. Aim

This guideline aims to standardise the approach to IOL, ensuring evidence-based and consistent care by outlining the indications, methods, and management of IOL to ensure safe and effective care for pregnant individuals.

The purpose of this guideline is to provide a standardised approach to the induction of labour within Aneurin Bevan Health Board (ABHUB). It aims to:

- Ensure the safety and well-being of both mother and baby.
- Promote evidence-based practices in the management of IOL.
- Reduce variability in clinical practice and improve outcomes.
- Provide clear protocols for healthcare professionals to follow.

This guideline should be read in conjunction with the following;

- Outpatient Induction of Labour Guideline
- Booking of IOL SOP
- Labour Ward Guidelines
- Management of spontaneous preterm pre-labour rupture of membranes <34 weeks gestation (PPROM)
- ICP for Pregnancy Loss over 20 Weeks
- All Wales Midwifery-Led Care Guideline 6th Edition
- Induction of Labour with Misoprostol SOP

## 5. Abbreviations

**Angusta®:** The trade name for the drug Misoprostol 25 mcg oral tablets

**ARM:** Artificial Rupture of Membranes

**BMI:** Body Mass Index

**BP:** Blood Pressure

**BS:** Bishop Score

**cCTG:** Computerised Cardiotocography

**CS:** Caesarean Section

**EFM:** Electronic Fetal Monitoring

**EFW:** Estimated fetal weight based on ultrasound scan

**FHR:** Fetal Heart Rate

**GA:** Gestational Age

**GDM:** Gestational Diabetes Mellitus

**ICP**: Intra-hepatic cholestasis of pregnancy (previously called OC obstetric cholestasis)

**IOL:** Induction of Labour

**IUGR:** Intrauterine Growth Restriction

**IV:** Intravenous

**IVF:** Invitro Fertilisation

**LGA:** Large for Gestational Age based on estimated fetal weight on ultrasound scan (>90$^{th}$ percentile on customised growth chart)

**NICU:** Neonatal Intensive Care Unit

**PET:** Pre-eclampsia

**PGE2:** Prostaglandin E2.

**Propess®:** The trade name for the drug dinoprostone 10 mgs, used for the initiation of cervical ripening

**Prostin®:** The trade name for the drug dinoprostone 1, 2 and 3mg vaginal gel/tablets

**PIH:** Pregnancy-Induced Hypertension

**ROM:** Rupture of Membranes

**SGA:** Small for Gestational Age based on estimated (<10th percentile on customised growth chart)

**SVD:** Spontaneous Vaginal Delivery

**US:** Ultrasound

**VE:** Vaginal examination

## 6. Main Body

**Indications for IOL**

| Clinical Condition | Recommended Gestation for IOL | RAG Rating | Related Guidelines |
|---|---|---|---|
| **IVF**<br>Not a reason for IOL alone. | ≥40 | G | |
| **Mental illness/ severe anxiety** (unmedicated) | Individualised consultant plan | G | |
| **Pelvic girdle pain** | ≥39 | G | |
| **Postdates** | ≥41+5 | G | All Wales Midwifery-Led Care Guideline 6th Edition |
| Previous traumatic birth | Individualised consultant plan | G | |
| **GDM (low risk)**<br>• Diet/ Metformin controlled<br>• Stable blood glucose | 40- 40+4 | A | All Wales - Strategy for Screening and Management of Gestational Diabetes |

| | | | |
|---|---|---|---|
| • Normal AFI and normal growth | | | |
| **Maternal age** >40 years at conception | 39- 40 | A | |
| **Macrosomia** | ≥39 | A | Management of Pregnancy with Large for Dates Fetus Guideline |
| **Mental illness/ severe anxiety** (medicated) | Individualised consultant plan | A | |
| **Mild intrahepatic cholestasis or pregnancy** Peak bile acids 19-39 | 39- 40 | A | Management of Intrahepatic Cholestasis of pregnancy Guideline Issue 4 |
| **Moderate Intrahepatic cholestasis in pregnancy** Peak bile acids 40-99 | 38- 39 | A | Management of Intrahepatic Cholestasis of pregnancy Guideline Issue 4 |
| **Proteinuria** (PCR ≥30) | ≥40 | A | Hypertension in Pregnancy Guideline Issue 4 (003) |
| **Term pre-labour rupture of membranes** | ≥37 (Offer IOL at diagnosis or delay up to 24 hours) | A | Guideline for the Management of term pre-labour |

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| | | | rupture of membranes |
| **Abnormal dopplers** | Individualised consultant plan | R | |
| **GDM (complicated)**<br>• Fetal macrosomia<br>• Insulin<br>• Poorly controlled blood sugars<br>• IUGR | 38- 39 | R | All Wales - Strategy for Screening and Management of Gestational Diabetes |
| **IUGR/ SGA** | Consider ≥37 | R | Guideline for the Management of the Small For Gestational Age Fetus (SGA) |
| **Multiple pregnancy**<br>• DCDA<br>• MCDA (NO TTTS)<br>• MCDA (TTTS) | <br>• ≥37<br>• ≥36<br>• Individualised consultant plan | R | Multiple Pregnancies Management Guideline |
| **Oligohydramnios** | Individualised consultant plan | R | |
| **PIH**<br>Mild to moderate | 38- 39 | R | Hypertension in Pregnancy Guideline |

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| **PIH**<br>Severe | ≥37 | R | Hypertension in Pregnancy Guideline |
| **PPROM** | 37<br>(Consider from 34 if known GBS) | R | PPROM guideline |
| **Pre-existing diabetes**<br>Type 1 or 2 | 37- 38+6 | R | Management of pregnancy in women with pre-existing Type 1 and 2 Diabetes |
| **Pre-eclampsia** | Aim ≥37<br>If <37 weeks, decision by a consultant obstetrician | R | Hypertension in Pregnancy Guideline Issue 4 (003) |
| **Reduced fetal movements at term** | ≥39 | R | All Wales - Altered Fetal Movements Guideline |
| **Static growth**<br>Over 3 weeks | ≥34 | R | Guideline for the Management of the Small For Gestational Age Fetus (SGA) |
| **Severe intrahepatic cholestasis of pregnancy**<br>Bile acids 100 or more at any time | 35- 36 | R | Guideline for Intrahepatic Cholestasis (ICP) in Pregnancy |

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|---|---|---|---|
| **Tailing growth** | Individualised consultant plan | R | Guideline for the Management of the Small For Gestational Age Fetus (SGA) |
| **VBAC** (Not an indication for IOL alone) | 41+5 | R | Labour Ward Guideline Management of women with previous Caesarean Section |
| **Intrauterine fetal demise** | Refer to IUD pathway | | ICP for Pregnancy Loss over 20 Weeks |

The goal of this rating system is to create consistency in bookings to allow for timely IOL for the right women and babies at the right time, with the appropriate management, to achieve the best possible outcomes for our service users. It also aims to balance the workload for clinicians, ensuring they can provide safe care.

GREEN category: Women should be offered outpatient IOL if they meet all other requirements outlined in the AWNLP. They will need 12-hourly CTG monitoring as per usual management unless otherwise indicated.

AMBER category: Women should be offered IOL on GUH B/3 and will require 12-hourly CTG monitoring unless otherwise indicated.

RED category: Women should be offered IOL on GUH B/3, with mechanical forms of induction considered first-line. If prostaglandins are used, this group will require 6-hourly CTG monitoring unless otherwise indicated.

## Contraindications

### Absolute contraindications

- **Placenta praevia**: Risk of severe haemorrhage.
- **Vasa praevia**: Risk of fetal haemorrhage.
- **Transverse or oblique lie**: Malpresentation that requires caesarean delivery.
- **Umbilical cord prolapse**: Emergency requiring immediate delivery.
- **Genital herpes primary infection in third trimester**: Risk of neonatal herpes infection. (Please note primary herpes infection 1st/2nd trimester OR recurrent herpes are not contra-indications to vaginal delivery/IOL)
- **Previous classical caesarean section or major uterine surgery**: Increased risk of uterine rupture.
- **Severe maternal cardiac disease** (individualized care per maternal medicine/tertiary cardiac ANC)
- **Severe fetal compromise:** Abnormal CTG/ Evidence of chronic hypoxia

### Relative Contraindications

- **Multiple gestation**: Requires careful consideration and monitoring.
- **Polyhydramnios**: Increased risk of cord prolapse.

## Booking of IOL

- If considering IOL, please discuss with a consultant before final decision unless inducing for otherwise uncomplicated postdates or SROM.
- All women at point of booking should be offered attendance to the virtual ABUHB IOL workshop.

- Check IOL booking on Badgernet tab to find appropriate date- no more than 4 pre-planned IOL's to be booked per day and only 2 RED cases where possible. Please refer to the following Process for Booking IOL on Badgernet (Appendix 1).
- Make sure current location of care is changed to Grange University Hospital on pregnancy summary page.
- Open booking form and complete- B3 must be selected as the ward location of IOL.
- Provide as much information as possible on booking form. In the instance that there is no capacity to admit patients there should be enough information for the Triage Consultant to appropriately make clinical decisions and prioritise cases.

- Please refer to the Outpatient Induction of Labour Guideline (ABUHB, 2026b) for suitability and management of outpatient (OP) IOL.

**Declined offers of IOL/ cancelled bookings**

If the offer of IOL is declined and there are still concerns about fetal or maternal wellbeing, refer the patient to triage for assessment and review by a senior obstetrician. This should include a clear follow-up plan in antenatal clinic (ANC), triage, or for scans as needed.

If bookings are cancelled, please ensure they are cancelled formally on Badgernet.

**Delay in IOL due to acuity**

Please ensure full documentation in the Badgernet IOL booking form.

If the ward is unable to accommodate a patient booked for IOL due to acuity:

- Ensure all options including feasibility of admission on antenatal (AN) bay on B3 have been explored. Consider transfer to alternative unit as per acuity and clinical need.

- Multi-disciplinary team (MDT) discussion, including the Lead Ward Midwife and Triage/WR consultant to prioritise patients booked for IOL based on clinical details in the IOL form.
- Please contact patient to apologise if unable to accommodate IOL on date booked. Offer CTG in closest peripheral hospital or GUH triage per clinical indication and consider stretch and sweep per patient wishes.
- Re-arrange IOL for following day or next available per clinical indications.

**Membrane sweeping**

Membrane sweeping is performed during a vaginal examination. It involves a healthcare provider inserting a finger into the cervix and making a sweeping motion to separate the membranes of the amniotic sac from the cervix. This action releases hormones called prostaglandins, which can help initiate labour.

**When is it recommended?**

- Membrane sweeping is typically offered to women who are close to or past their due date (usually after 40 weeks) or in the week prior to booked IOL. It is used to reduce the need for medical IOL.
- It is recommended if there are no complications with the pregnancy.

**Important steps**

- Ensure the procedure is fully explained and obtain consent specifically for stretch and sweep.
- Inform the woman that she may experience some of the following:
  - Some discomfort or cramping
  - Small amount of bleeding or a mucous discharge known as a "show."
  - Labour may start within 48 hours, but it can take longer or may not start at all.

**Risks and considerations**

Membrane sweeps are generally safe with no significant risks if performed by a trained professional.

Membrane sweeps are not recommended if:

- The placenta is low-lying.
- The baby is not in a head-down position.
- There is a vaginal infection.
- The waters have already broken.

**Aftercare**

- Auscultate the fetal heart rate.
- Monitor for signs of labour, such as regular contractions or water breaking.
- Contact the healthcare provider if there is heavy bleeding, severe pain, or any concerns.

**Alternatives**

- Waiting for labour to start spontaneously.
- Medical induction if there are concerns for the mother or baby.

**Pre-IOL Assessment**

- **Comprehensive maternal and fetal assessment:**
    - Review of maternal medical history,
    - Full set of maternal observations (heart rate, BP, RR, temperature, oxygen saturations) plotted on Badgernet and MEWS score calculated. Escalate concerns per MEWS chart if needed,
    - Relevant bloods to be taken,
    - Ultrasound to confirm fetal position if unsure on palpation or malposition suspected.
- **Confirmation of gestational age:**
    - Based on dating scan

- **Evaluation of cervical status using the Bishop's score:**
    - A score of 7 or more indicates a favourable cervix.

| **SCORE** | **0** | **1** | **2** | **3** |
|---|---|---|---|---|
| **Position of Cervix** | Posterior | Mid | Anterior | - |
| **Consistency** | Firm | Medium | Soft | - |
| **Length** | >4 cm | 2 - 4 cm | 1 - 2 cm | <1 cm |
| **Dilatation** | <1 cm | 1 - 2 cm | 3 - 4 cm | >4 cm |
| **Station** | - 3 | - 2 | - 1 / 0 | + 1 |

*Table 1 Bishop Score*

- **Informed consent:**
    - Discuss risks, benefits, and alternatives with the patient using the BRAIN acronym (Appendix 2).

**Methods of IOL**

For women with a Bishop score of 6 or less, consider a mechanical method to induce labour (for example, DILAPAN-S® or Intracervical Balloon Catheter/ Cervical Ripening Balloon) if:

- Patient has had a previous LSCS,
- Baby is SGA <10$^{th}$%ile,
- Baby has abnormal umbilical artery dopplers (irrespective of EFW),
- Mechanical methods should be considered first line for woman in the RED category in the presence of appropriately trained clinician (pharmacological methods can be used),
- Patient chooses to use a mechanical method.

**Cervical ripening balloon (CRB) should be the first line method of induction of labour wherever possible.**

**Pharmacological methods**

**Prostaglandins**

- Dinoprostone (PGE2) gel or pessary,
- Misoprostol 25 mcg oral tablets.

Please refer to the Integrated Care Pathway for Pregnancy Loss over 20 Weeks (ABUHB, 2026a) for information pertaining to induction of labour after pregnancy loss.

**Oxytocin infusion**

- Administered intravenously, starting at a low dose and titrated according to uterine response.

**Mechanical methods**

- DILAPAN-S®
    - Hygroscopic dilators inserted into the cervix to absorb moisture and expand, gradually dilating the cervix.
- Intracervical Balloon Catheter/ Cervical Ripening Balloon,
- Membrane sweeping.
    - Performed during a vaginal examination to release prostaglandins.

| Method | Cautions | Contraindications | Side Effects | Administration | Post administration | Removal |
|---|---|---|---|---|---|---|
| **Dinoprostone (PROPESS®)** | Effect of oxytocin enhanced.<br><br>History of asthma, epilepsy, glaucoma / raised intra-ocular pressure, hypertension, risk factors for dissemin | Active cardiac disease.<br><br>Active pulmonary disease.<br><br>Abnormal CTG, suspected chronic hypoxia.<br><br>Fetal malpresentation. | Uterine tachysystole/ hyperstimulation, nausea, vomiting, diarrhoea. | Inserted into the posterior fornix of the vagina.<br><br>The retrieval tape should be placed just inside the vagina to reduce the risk of the Propess becoming dislodged or accidentally removed. The retrieval tape should **NOT** be wrapped around the pessary or placed into the posterior fornix. | CTG performed for 30-minutes or until fetal wellbeing is confirmed using Dawes-Redman analysis if there is no uterine activity. If uterine activity is present, use the CTG without Dawes-Redman analysis.<br><br>The woman should be advised to inform the midwife if she has any of the following:<br>• Contractions.<br>• Vaginal bleeding. | Remove after 24-hours unless otherwise indicated. |

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| | ated intravascular coagulation, uterine rupture and uterine scarring. | Grand multiparas.<br><br>Placenta praevia or unexplained vaginal bleeding during pregnancy. | | | Reduced fetal movements.<br>• If the Propess falls out or drops in vagina.<br>• If membranes rupture.<br>• If there are any other concerns.<br><br>Woman should have repeat CTG's every-12 hours.<br><br>Maternal observations should be performed at every presentation. | |
| **Dinoprostone (PROSTI** | See PROPESS® | See PROPESS® | See PROPESS® | Inserted into the posterior fornix of the vagina. | See PROPESS® | The PROSTIN® will dissolve |

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| **N® 1mg, 2mg, 3mg)** | Not advised for use with VBAC and SGA.<br><br>Max 2 doses 6-hours apart.<br><br>Obstetric review is required for further prescription. | | | See Section 6 **'PROM/ SROM ≥37 weeks (pre-labour)'** for further information. | Red category women should have continuous CTG on Labour Ward once regular contractions are established or ROM/PROM is reported. | and does not require removal. |

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| **Misoprostol (Angusta®) Please refer to Induction of Labour with Angusta® SOP (ABUHB, 2026d)** | Angusta® may cause excessive uterine activity.<br><br>Oxytocin must not be administered concurrently. A minimum 4-hour interval is required after the final dose | Known hypersensitivity or allergy.<br><br>Established labour.<br><br>Suspected or confirmed fetal compromise.<br><br>Abnormal fetal heart rate monitoring.<br><br>Meconium-stained liquor. | • Gastrointestinal disorders (nausea, vomiting, diarrhoea) (common),<br>• Uterine hypersti mulation (with or without fetal | The standard regimen involved oral administration of 25 mcg every 2 hours, up to a maximum of 8 doses (maximum total dose 200 mcg in 24 hours). This represents 1 full cycle.<br><br>The decision to proceed with induction with Angusta® should be Consultant-led.<br><br>Following 1 cycle of Angusta®, the expectation would be | CTG performed for 30-minutes or until fetal wellbeing is confirmed using Dawes-Redman analysis if there is no uterine activity. If uterine activity is present, use the CTG without Dawes-Redman analysis.<br><br>The woman should be advised to inform the midwife if she has any of the following:<br>• Contractions.<br>• Vaginal bleeding.<br>• Reduced fetal movements. | N/A |

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| | before commencing oxytocin.<br><br>Limited evidence exists for use in multiple pregnancy, grand multiparity, gestation under 37 weeks, or where the Bishop score is | Known or suspected uterine scarring.<br><br>Structural uterine abnormalities where vaginal birth is contraindicated.<br><br>Placenta praevia, or unexplained vaginal bleeding | heart rate abnormalities),<br>• Postpartum haemorrhage (very common),<br>• Low Apgar score (uncommon). | for ongoing induction of labour with oxytocin on the Labour Ward.<br><br>A minimum 4-hour interval is required after the final dose before commencing oxytocin. | • Changes in liquor colour.<br>• If there are any other concerns.<br><br>All women should have repeat CTG's every 6-hours, unless otherwise indicated (onset of regular uterine contractions). | |

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| | greater than 7; senior obstetric review is required.<br><br>Use with caution in the following circumstances-<br>• Renal/ hepatic impairment, | after 24/40 in the current pregnancy.<br><br>Fetal malpresentation where vaginal birth is contraindicated.<br><br>Severe renal impairment (eGFR <15ml/min/1.73 m²). | | | | |

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| | • Pre-eclampsia,<br>• HELLP syndrome,<br>• Other maternal end-organ involvement.<br>• Cardiovascular disease, | | | | | |

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| | • Cerebrovascular disease,<br>• Conditions which predispose to diarrhoea (inflammatory bowel syndrome). | | | | | |

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| | There must be an 8-hour interval between Dinoprostone 10 mg per vagina (PV) and Misoprostol in the absence of clinical concern. The decision to proceed with Misoprostol administration for | | | | | |

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| | induction of labour following Dinoprostone must be a consultant decision. The counselling discussion with the patient must be documented in full. | | | | | |
| **Intracervical Balloon Catheter** | Not to be used with SROM/PROM due | Patient receiving prostaglandins. | Maternal discomfort during/ post | Insert speculum to visualise cervix and clean. | CTG performed for 30-minutes or until fetal wellbeing is confirmed using Dawes-Redman | Recommended for removal |

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| **/ Cervical Ripening Balloon (CRB)** | to risk of cord entanglement with uterine balloon.<br><br>Not to be used with prostaglandins. | SROM/ PROM.<br><br>Abnormal CTG, suspected chronic hypoxia.<br><br>Fetal malpresentation.<br><br>Grand multiparas.<br><br>Placenta praevia or unexplained | application.<br><br>Device expulsion.<br><br>Spotting caused by cervical irritation. | Advance the catheter with stylet into the cervical opening.<br><br>Once the uterine balloon has entered the cervix remove the stylet before advancing further.<br><br>Advance CRB until both balloons are through the cervical canal.<br><br>Inflate the uterine balloon with 40 mls of sterile saline using a standard 20 ml luer-lock syringe through | analysis if there is no uterine activity. If uterine activity is present, use the CTG without Dawes-Redman analysis.<br><br>The woman should be advised to inform the midwife if she has any of the following:<br>• Contractions.<br>• Vaginal bleeding.<br>• Reduced fetal movements.<br>• If it falls out or drops in vagina.<br>• If membranes rupture. | between 12-24-hours.<br><br>Must be removed at 24-hours.<br><br>If the CRB has not self-expelled, deflate balloons through the corresponding valves marked **"V"** and **"U"** in 20ml increments. |

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| | | vaginal bleeding during pregnancy.<br><br>Previous classical uterine incision or major uterine scar (Not inclusive of classical uterine incision and any other incision outside of routine caesarean | | the **red** Check-Flo valve marked **"U".**<br><br>Once inflated, gently pull the device back until the uterine balloon sits against the internal os.<br><br>The vaginal balloon, now visible, should be inflated with 20 mls of sterile saline through the **green** Check-Flo valve marked **"V".**<br><br>Once the balloons are fixed in place remove speculum. | • If there are any other concerns.<br><br>All women should have repeat CTG's every 12-hours, unless otherwise indicated.<br><br>Maternal observations should be performed at every presentation.<br><br>In the event that the intracervical ripening balloon/ CRB is expelled, please perform a vaginal examination to determine Bishop Score and suitability for | Remove device in case of SROM to facilitate active labour management. |

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| | | lower segment).<br><br>Active genital herpes.<br><br>Any contraindications to labour induction.<br><br>Presenting part above pelvic inlet.<br><br>Polyhydramnios. | | Add more fluid to each balloon in turn, in 20ml increments up to a maximum of 80 mls per balloon.<br><br>See reference images as per the appendices (Appendix 3 and 4).<br><br>**DO NOT OVERINFLATE BALLOONS.** | artificial rupture of membranes. | |
| **DILAPAN-S®** | Careful placement of the | Current clinically | Patient discomfort or bleeding | Moisten the DILAPAN-S® rods with sterile | Minimum of 30-minute CTG with | Remove 15-24 hours. All rods must be |

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| | device is essential to avoid traumatic injury to the cervix or uterus, and to avoid migration of the device either upward into the uterus or downward into the vagina. | apparent vaginal tract infections. | during and/or after insertion.<br><br>SROM. | saline/water to lubricate pre application.<br><br>Insert speculum and clean the vagina and cervix. Visualize the cervix and straighten the cervical canal.<br><br>Use sponge forceps to grasp the handle of the DILAPAN-S® rod and insert through the external cervical os gradually and without undue force. **It is important that** | confirmation of fetal wellbeing<br><br>The woman should be advised to inform the midwife if she has any of the following:<br>• Contractions.<br>• Vaginal bleeding.<br>• Reduced fetal movements.<br>• If it falls out or drops in vagina.<br>• If membranes rupture.<br>• If there are any other concerns.<br><br>All women should have repeat CTG's every 12 | removed after 24 hours.<br><br>Grasp the handle or marker string of the rod(s) and carefully remove. **Do not twist or grasp the collar**.<br>Ensure all inserted rods are removed.<br>If the cervix remains unfavourable, a second |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Any cervical manipulation may cause a vaso-vagal reaction. Patients should be monitored for evidence of any unusual pallor, nausea, vertigo or weakness. | | | **the rod traverses the internal os.**<br><br>Do not insert DILAPAN-S® rod past the handle.<br>The border of the collar should rest at the external os. See schematic.<br><br>More than one DILAPAN-S® rod may be inserted. The number of rods will depend on clinical judgement (typically 3-5 rods). Note the number of rods placed and write | hours, unless otherwise indicated.<br><br>Maternal observations will vary dependent on reason for admission.<br><br>Red category women will have continuous CTG on MDU once regular contractions are established after onset of labour or ROM/PROM is reported. | series of rods can be inserted to continue cervical ripening for up to an additional 24 hours. |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | on green band and proforma. | | |
| **Syntocinon Transfusion (OXYTOCIN)** | Cannot be commenced within 30 minutes of PROPESS® removal<br><br>Cannot be commenced within 4 hours of the final | Previous classical uterine incision or major uterine scar.<br><br>Abnormal CTG, suspected chronic hypoxia<br><br>Severe cardiac disease<br><br>Severe PET | Arrhythmias; headaches; nausea; vomiting; uterine Hyperstimulation. | Intravenous administration via infusion pump.<br><br>See below *'Syntocinon Induction/ Augmentation'* section for preparation and dose increments table | Continuous CTG monitoring.<br><br>Oxytocin has antidiuretic properties; therefore, accurate fluid balance monitoring is essential. Blood sampling for U+E should be obtained prior to commencing Oxytocin (ABUHB, 2026c).<br><br>Women should be made aware that oxytocin may increase pain and should be aware of | Discontinue if there are signs of fetal compromise, other clinical indications, or upon maternal request.<br><br>If adequate contractions have not been achieved at 20 mls/hr discuss with |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Angusta ® dose.<br><br>Avoid large infusion in women with existing cardiac disease.<br><br>Use cautiously with VBAC or history of uterine surgery. | | | | analgesic options available. | a Senior Obstetrician. Syntocinon should not be titrated above 20mls/hr without senior obstetric review and plan. |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Suspected chorioamnionitis (consultant decision).<br><br>Meconium (Consultant decision). | | | | | |

*Table 2 Methods of IOL*

**DILAPAN-S®**

DILAPAN-S® is an osmotic dilator, produced from a patented hydrogel, which absorbs fluid from the cervical canal and therefore increases in volume. This changes the cervical consistency allowing it to soften, open and get ready for labour gently and naturally.

The thin 4 mm dilator can expand up to 15 mm over 12 hours. This allows it to dilate and soften the cervix gradually. Usually, a set of 4–5 dilators are used to ripen the cervix sufficiently (Dilapan 2019).

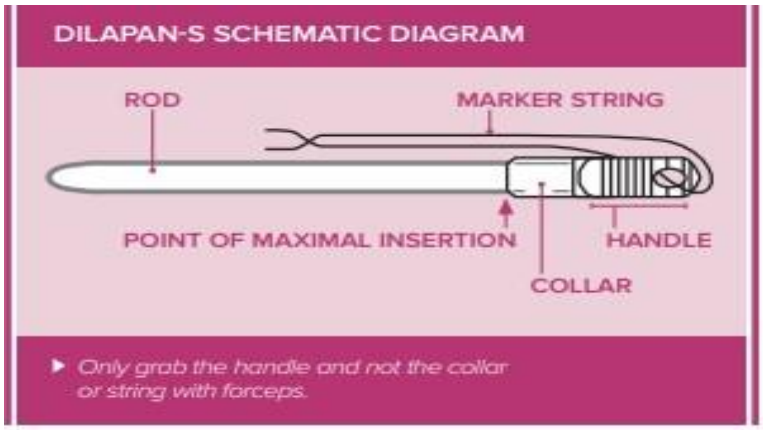



*Figure 1 DILAPAN-S Schematic Diagram*

DILAPAN-S® can be used on a large majority of our service users. Any woman who has a clinically apparent genital tract infection should not be offered DILAPAN-S®; this does not include GBS.

Please refer to Appendix 5 for DILAPAN-S® induction process/ decision tree and Appendix 6 for required equipment and insertion pictorial images.

| | Expected Dilation (in mm) | |
|---|---|---|
| Time in situ (hours) | One DILAPAN-S (3 mm) | One DILAPAN-S (4 mm) |
| 2 | 7.2 - 8.3 | 7.8 - 10.0 |
| 4 | 8.4 - 9.5 | 10.0 - 11.2 |
| 6 | 9.0 - 10.0 | 10.1 - 12.5 |
| 24 | 9.6 - 11.3 | 12.7 - 14.6 |



**Artificial Rupture of Membranes (ARM)**

- Performed on Labour Ward.
- Amniotomy should be performed before oxytocin is commenced.
- CTG should be performed for a minimum of 30 minutes before ARM, or until fetal wellbeing established, during ARM and for a further minimum of 30 minutes following or until fetal wellbeing is established.
- In the absence of clinical concern, ARM can proceed prior to obstetric review.
- A plan for use of oxytocin must be documented in the maternity records.
- Consider options of oxytocin commencement immediately following ARM or mobilisation (up to 2 hours of mobilisation in primiparous women and 4 hours of mobilisation in multiparous women) providing there are no maternal or fetal concerns and a normal CTG throughout ARM. This is an individual patient centred decision. If there are any concerns continuous CTG monitoring should continue.

**Process of Induction of Labour**

- Admit to ward (B/3).
- Initiate the Induction of Labour workflow via Badgernet, ensuring all necessary risk assessments are completed before starting any procedure.
- Document the IOL plan clearly via Badgernet and prescribe prostaglandins correctly. If the clinical situation has changed since the IOL plan was made, seek an obstetric review. **Do not accept verbal orders**.
- Perform and document an antenatal assessment, including risk assessment, MEWS, urinalysis, and abdominal palpation.
- Conduct a CTG for 30 minutes or until fetal wellbeing is confirmed using Dawes-Redman analysis if there is NO uterine activity. If uterine activity is present, use the CTG without the Dawes-Redman analysis setting.

- If initial assessments and CTG are satisfactory, and after obtaining consent, perform a vaginal examination. Document a modified Bishop's score.
- A green band should be attached to the woman following PROPESS®/ DILAPAN-S® and intracervical ripening balloon insertion, and only removed when the prior has been removed or visualised i.e., in the case that it has fallen out.
- Refer to a senior obstetrician if there is uncertainty regarding presentation by abdominal palpation, SROM, abnormal CTG, or concerns about the fetal heart.
- If the woman experiences coordinated uterine activity, perform a CTG to assess fetal wellbeing without Dawes-Redman analysis.
- A senior obstetric review should occur every 24 hours, with a clear plan for continued care.
- If the woman has not gone into labour/it is not possible to perform an artificial rupture of membranes after completing her planned regime, she will require a senior obstetric review (please ensure fetus is cephalic).
- A full mechanical regime comprises 1 cervical ripening balloon for up to 24 hours OR 3-5 DILAPAN-S® rods for up to 24 hours. Consider further mechanical methods or pharmacological methods individualized to patient situation and risk factors (refer to IOL in specific circumstances below).
- A full pharmacological regime comprises 1 PROPESS® for up to 24 hours OR 25 mcg Angusta® every 2 hours, up to a maximum of 8 doses (maximum total dose 200 mcg in 24 hours).
- Induction of labour with cervical ripening balloon for up to 24 hours should be the first line method for induction of labour wherever possible.
- If the woman is found to be unsuitable for cervical ripening balloon, Propess should be administered as the first line method. After 24 hours, and in the absence of contraindications, the woman's suitability for induction of labour with cervical ripening balloon should be reassessed.

- Any delays during the IOL procedure (from start to birth) should be clearly documented via Badgernet and escalated to the appropriate clinician for guidance. Complete a DATIX report as per the locally agreed DATIX trigger list.
- If delays are necessary due to workload, an obstetric review will take place to revise the care plan, considering the clinical situation and risk factors.

**Induction of Labour in Specific Clinical Situations**

**VBAC**

- The woman's obstetrician will decide on the timing of induction (consider IOL at 41+5 weeks' gestation) and regime for IOL.
- The woman will be fully informed of the risks associated with induction, including scar dehiscence and rupture, and ensure that this is documented via Badgernet.
- Consider DILAPAN-S®/ cervical ripening balloon as first line management in the event of a VBAC.
- Consider PROPESS® with informed consent as second line management, following counselling to include the increased risk of scar rupture.
- **Angusta® is contraindicated in anyone with previous or suspected uterine scarring (including myomectomy).**
- With the onset of regular uterine contractions, continuous fetal monitoring should be commenced and transfer to the Labour Ward initiated.

**PROM/ SROM ≥37 weeks (pre-labour)**

**Initial Assessment**

- Initial assessment should involve the taking of a detailed history via telephone and document this via Badgernet. If the woman is contracting, refer her for labour assessment in the appropriate clinical environment, as per appropriate risk stratification (MLU or maternity triage).

- If any of the following risk factors are present or the woman requests immediate IOL, advise prompt assessment in Maternity Triage (GUH).

| **Risk factors for prompt review in Triage** |
|---|
| Meconium-stained liquor |
| Vaginal bleeding |
| Offensive liquor/ vaginal discharge |
| Reduced fetal movements |
| Maternal pyrexia/ patient feeling unwell |
| Group B streptococcus (can be seen on the MLU if suitable for MLC) |
| Multiple pregnancy |
| Non-cephalic presentation |
| Known placenta praevia/ low lying placenta |
| Known SGA <10$^{th}$ percentile |
| Previous caesarean(s) |

*Table 3 Risk factors for prompt review in Maternity Triage*

- If there are no risk factors and a good history of SROM, the woman can be reviewed in an appropriate clinical site, as per appropriate risk stratification (MLU, maternity triage, DAU) at the earliest opportunity.
- Clinical assessment should include the following-
    - Take a full history,
    - Observe and document the type, colour and odour of the PV loss,
    - Undertake a full antenatal check (including maternal observations, urinalysis, abdominal palpation, assessment of fetal movements),
    - Auscultate the fetal heart and perform a CTG if indicated. Dawes-Redman can be used in the absence of uterine contractions.
- Offer all women with confirmed pre-labour SROM induction of labour at diagnosis or delay up to 24-hours (expectant management), dependent upon the clinical presentation and any risk factors (Table 3) present.
- Limit unnecessary vaginal examinations where possible to prevent further risk of infection. Do not perform a digital VE routinely, only if active labour is suspected. Do not carry out a speculum examination if SROM diagnosis is certain. If diagnosis is uncertain, perform a speculum

examination +/- ROM Plus test, if diagnosis remains unclear during speculum examination.

- Discuss the risks and benefits of ongoing management, including:
  - Risk of serious neonatal infection is 1% rather than 0.5% in pregnancies with intact membranes, and this risk may increase over time.
  - However, there does not appear to be an increased risk of neonatal infection with 24 hours of expectant management.
  - Evidence suggests possible reduced risk of chorioamnionitis or maternal temperature in patients who opt for immediate IOL.
  - 60% of women with prelabour SROM will go into labour within 24 hours.

**ROM Plus**

ROM Plus is a vaginal swab point of care test that detects the presence of alpha-fetoprotein and insulin-like growth factor binding protein 1, which are found in amniotic fluid. It can be used at any gestation.

ROM Plus has a very good sensitivity (91.7%- 100%) and specificity (90.7%- 98.8%). It can be used in the presence of semen/ infection/ lubricant and small amounts of blood (<10% concentration). Significant amounts of bloody discharge can cause an erroneous result and is not recommended.

To undertake a ROM Plus, you should complete the following-

- Prepare buffer.
- Collect sample- sterile swab 5-7 cm into the vaginal for a minimum of 15 seconds, ideally at the time of sterile speculum examination.
- Place the swab tip into the vial and mix the swab with the buffer for 15 seconds. Discard the swab following this.
- Dip the testing strip into the buffer solution and leave the rest in the solution until the liquid is seen in the test area.
- For accurate results, read at 5-10 minutes.

- Positive: Represented by 2 lines in the test area.
- Negative: Represented by 1 line in the test area.
- Invalid: Test line only or no lines. Repeat the test if clinically indicated.

**GBS**

Any women confirmed as a GBS carrier in the current pregnancy, any previous pregnancy without a negative swab in the current pregnancy or previously affected neonate should be offered immediate intrapartum antibiotics. If the woman is not actively labouring, she should be offered induction of labour on the Labour Ward with oxytocin as soon as reasonably possible.

**Meconium**

Any patient presenting with pre-labour SROM with any type of meconium-stained liquor should be assessed by a senior obstetrician on the Labour Ward. This should include a full antenatal review, which is to include-

- An assessment to exclude chorioamnionitis,
- Continuous electronic fetal monitoring,
- And discussion on appropriate ongoing management based upon the clinical assessment. This may include induction of labour on the Labour Ward with oxytocin, if appropriate.

**Expectant Management**

Providing there are no adverse features or risk factors as listed in Table 3 and no clinical concerns on assessment (Table 4), the woman can choose to have expectant management or IOL as soon as possible. Expectant management is recommended as no longer than 24-hours. The woman can go home with contact details for Maternity Triage or the MLU, and tempadots with information on how to use these effectively to monitor temperature on a 4-hourly basis.

| Pre-requisites for expectant management for 24 hours in term SROM |
|---|
| No signs of active labour |
| Systematically well with no signs and symptoms of infection |
| The liquor is clear/ pink and not offensive |
| There is no evidence of vaginal bleeding |
| Singleton, cephalic presentation |
| Normal auscultation of the fetal heart/ CTG (Dawes Redman in the absence of uterine contractions) |

*Table 4 Pre-requisites for expectant management for 24 hours in term SROM*

Women should be informed of the following-

- We can offer immediate IOL or expectant management of up to 24 hours if there is no active labour. Arrange IOL if expectant management is accepted. Discussed the process of IOL and direct to Badgernet reading list for additional information.
- Recommend monitoring and recording of temperature on a 4-hourly basis during waking hours. If the woman feels unwell or becomes pyrexial (temperature >37.5°C), advise them to contact Maternity Triage.
- Change sanitary pads regularly and observe the loss. If the liquor changes in colour or smell (specifically any signs of meconium or bleeding), advise them to contact Maternity Triage.
- Inform the woman of the latent phase of labour and signs of active labour.
- Do not offer a low vaginal swab (LVS) or blood sampling for C-Reactive Protein (CRP) for 24-hours expectant management.
- Avoid sexual intercourse.
- Can continue to bath/ shower.
- We would recommend they deliver in the consultant-led Labour Ward if SROM ≥24 hours ago, unless in active established labour (please request a senior obstetric review if any concerns).

If a woman declines IOL after 24-hours of expectant management, please inform them of the increased risk of infection and organise a review by a Senior Obstetrician or Consultant/ Senior Midwife. Please refer to Appendix 9 for a discussion checklist for women declining IOL after 24-hours of expectant management.

**Previous Caesarean**

Any woman presenting with previous caesarean section and SROM will require review by a Senior Obstetrician, and discussion with individualised management planning. If the woman is aiming for VBAC and has no other contra-indications or risks as per Table 3, counsel for patient choice for expectant management or immediate induction of labour.

**Induction of Labour**

- Women with a Bishop's score <7 should be offered a cycle of Misoprostol (Angusta®). The standard regimen involves oral administration of 25 mcg every 2 hours, up to a maximum of 8 doses (maximum total dose 200 mcg in 24-hours). This represents a complete cycle of treatment (please refer to the Induction of Labour with Misoprostol SOP).
- The decision to proceed with induction of labour with Misoprostol should be Consultant-led.
- In the event of PROM/ SROM and known/ suspected uterine scarring (including myomectomy), aim for oxytocin as the primary agent for IOL. If required, 12-hours of Propess may be considered, though only after robust counselling of the increased risk of uterine rupture.
- CTG monitoring should be performed 6-hourly during IOL with Misoprostol
- Following completion of the Misoprostol cycle/ in the event of a Bishop's Score ≥7, continued induction will be with oxytocin on the Labour Ward.

- There must be an 8-hour interval between Dinoprostone 10 mg per vagina (PV) and Misoprostol in the absence of clinical concern. The decision to proceed with Misoprostol administration for induction of labour following Dinoprostone must be a consultant decision. The counselling discussion with the patient must be documented in full.
- **A minimum 4-hour interval is required after the final dose of Misoprostol before commencing oxytocin.**
- In the event of PROM/ SROM with Group B Streptococcus (GBS), commence immediate intrapartum antibiotics and IOL on the Labour Ward with oxytocin as soon as reasonably possible.
- In the event of PROM/ SROM with meconium-stained liquor, the woman should receive a senior obstetric review and plan on the Labour Ward with continuous electronic fetal monitoring.

**PPROM IOL**

- Consider Magnesium Sulphate if <34 weeks' gestation in preterm labour (please refer to the Labour Ward Guideline for administration and regime).
- Inform SCBU if <37 weeks' gestation.
- After discussion with a consultant, consider IOL at 37 weeks (or from 34 weeks' gestation if known GBS colonisation).
- Consider Angusta® unless previous/ suspected uterine scarring. Aim for oxytocin as the primary agent for IOL. If required, 12-hours of Propess may be considered, though only after robust counselling of the increased risk of uterine rupture.
- Give prophylactic antibiotics in labour.
- Avoid ventouse assisted birth before 34 weeks' gestation.

## Monitoring and Management

### Maternal Monitoring

- **Vital signs:** Regular assessment of blood pressure, pulse, temperature, respiratory rate (please refer to Physiological Observations in Maternity Services Guideline) and fluid balance (please refer to Fluid Management and Hyponatraemia in Peripartum Period).
- **Uterine activity:** Monitor for frequency, duration, and intensity of contractions. Watch for signs of tachysystole/ hyperstimulation (more than 5 contracting in 10-minutes).
- **Signs of complications:** Be vigilant for symptoms of uterine rupture, such as severe abdominal pain, abnormal fetal heart rate patterns, PV bleeding and loss of uterine tone.

### Fetal Monitoring

- GREEN category: 12-hourly CTG monitoring as per usual management unless otherwise indicated.
- AMBER category: Women should be offered IOL on GUH B/3 and will require 12-hourly CTG monitoring unless otherwise indicated.
- RED category: If prostaglandins are used, women will require 6-hourly CTG monitoring unless otherwise indicated.

## Complications and Management

### Tachysystole/ Hyperstimulation/ Hypertonus

- CTG monitoring should be performed until fetal wellbeing is confirmed and continue until the above conditions are resolved.
- Remove/ ask the woman to remove the PROPESS® if applicable. If this is removed by the woman, this must be visualised as removed by the clinician prior to the green arm band being removed.
- Administer tocolytics if necessary (e.g., Terbutaline).

- Monitor for improvement, which should be seen within 10- 15 minutes of intervention.
- Escalate further if there is no improvement with intervention.
- Consider expediting birth if there is no improvement or there are significant CTG concerns.
- In the event that there is intrapartum hyperstimulation without the use of oxytocin or in the absence of any other obvious causes, consider whether Propess could still be in situ.

**Unsuccessful Induction**

- Reassess and consider alternative methods or expediting birth.

**CTG Concerns**

- Continuous monitoring in the appropriate area and with the appropriate interventions (e.g., intrauterine resuscitation, expedited birth etc.).

**Maternal Complications**

- Monitor and manage any arising maternal health issue as per the presenting clinical situation (e.g., infection, haemorrhage etc.).
- Escalate appropriately to a senior obstetrician.

**Syntocinon Induction/ Augmentation**

Please refer to the local Labour Ward Guideline (ABUHB, 2021) for details on the preparation and administration of Syntocinon for induction/ augmentation.

**Missing Propess Management Actions**

In the event that the Propess is noted as missing during the induction of labour period, every effort should be made to exclude retained Propess. It should not be assumed that the Propess has fallen out.

At the beginning of the induction of labour process, women should be advised that, in the event that the Propess falls out/ is removed, this is escalated to a clinician prior to the Propess being discarded.

If there is any doubt as to whether the Propess remains in situ or not, a sterile speculum examination should be performed to observe for the Propess.

If the Propess is not visualised on speculum examination, a vaginal examination should be performed to confirm the absence of retained Propess.

Ensure there is clear documentation of the Propess having fallen out/ been removed via Badgernet. In the event that a speculum examination or vaginal examination is performed for the purpose of ruling out a retained Propess, this should also be clearly documented via Badgernet.

If the Propess is confirmed as having fallen out prior to the completed 24-hours, a second Propess can be inserted. Propess will only delivery a maximum dose of 0.3 mg/hour therefore, if the Propess is removed after 24 completed hours, only 7.2 mg will have been absorbed regardless of the number of pessaries used.

Therefore, the 24-hours is up when Propess has been in situ for 24-hours, as opposed to 24-hours from the first insertion.

## 7. Roles and Responsibilities

Obstetric and Maternity teams have roles and/ or responsibilities in ensuring this policy is applied within clinical practice for the purpose of safe and effective care.

## 8. Consultation

All new or significantly revised policies will be subject to consultation within the division via the Clinical Effectiveness Forum (CEF) and with relevant professional groups and/ or individuals present.

Individuals with expertise in obstetrics, gynaecology and midwifery have been consulted with in the development of this policy.

## 9. Equality Impact Assessment

An equality impact assessment has been carried out and approved as this guideline prioritises care based on standardised assessment and clinical need.

## 10. Training Requirements

**DILAPAN-S®**

- All clinicians who will be performing DILAPAN-S® insertions must attend a 30 minute training session and pass a competency assessment. It is important to also train community midwives and antenatal educators to allow them to pass on information to women antenatally.
- This training will incorporate inclusion criteria, insertion training and removal training. It will also include how to counsel women for the use of DILAPAN-S® to induce labour.
- Training is provided by Advanced Global Health (UK DILAPAN-S® distributor). Virtual training webinars are held every 2 months – staff can register to attend here. It is recommended that staff attend additional sessions on an annual basis to maintain their skills and knowledge.

- Alternatively, a dedicated training session can be arranged by contacting AGHealth at info@aghealth.co.uk.
- Training resources including posters, instructional guide, and video will be provided.

**Cervical Ripening Balloon/ Intracervical Balloon Catheter**

- All clinicians who will be performing cervical ripening balloon/ intracervical balloon catheter insertion must watch the training video produced by SCW Medicath Ltd.
- All clinicians who will be performing cervical ripening balloon/ intracervical balloon catheter insertion will also be required to attend a practical training session in the clinical area with a competent practitioner.

Staff are expected to access appropriate training where provided. Training needs will be identified through appraisal and clinical/ educational supervision.

## 11. Audit and Review

This policy will be reviewed on a 3-yearly basis, unless significant changes to clinical practice/ national policy arise.

Induction of labour rates and maternal/ neonatal outcomes will be monitored via the local maternity dashboard. Adverse maternal/ neonatal outcomes will be reviewed on an individual basis via local governance arrangements. Patient experience will be gauged through CIVICA and Putting Things Right procedures.

Delays in induction of labour will continue to audited via the Clinical Supervision for Midwives Team.

## 12. References


Aneurin Bevan University Health Board (2021). *Labour Ward Guidelines* [Online]. Available at: https://nhswales365.sharepoint.com/sites/ABB_Pulse_Policies/Families%20%20Therapies/Forms/All%20Staff%20Documents.aspx?FilterField1=Area&FilterValue1=Maternity&FilterType1=Choice&FilterDisplay1=Maternity&id=%2Fsites%2FABB%5FPulse%5FPolicies%2FFamilies%20%20Therapies%2FLabour%20Ward%20Guidelines%20%2Epdf&viewid=af44078f%2Dfc02%2D45b6%2Db0d6%2D4e0b2f5aa4b7&parent=%2Fsites%2FABB%5FPulse%5FPolicies%2FFamilies%20%20Therapies (Accessed 21/04/2026).

Aneurin Bevan University Health Board (2024a). *Process for BOOKING AN INDUCTION OF LABOUR on Badgernet v2 Oct 2024* [Online]. Available at: https://nhswales365.sharepoint.com/sites/ABB_Maternity_Team/Shared%20Documents/Forms/AllItems.aspx?id=%2Fsites%2FABB%5FMaternity%5FTeam%2FShared%20Documents%2FBadgerNet%2FCompleted%20SOP%2FBooking%20an%20induction%20of%20labour%20on%20BadgerNet%20V2%20oct%202024%2Epdf&parent=%2Fsites%2FABB%5FMaternity%5FTeam%2FShared%20Documents%2FBadgerNet%2FCompleted%20SOP (Accessed 21/04/2026).

Aneurin Bevan University Health Board (2024b). *Management if spontaneous preterm pre-labour rupture of membranes <34 weeks gestation (PPROM)* [Online]. Available at: https://nhswales365.sharepoint.com/sites/ABB_Pulse_Policies/Families%20%20Therapies/Forms/All%20Staff%20Documents.aspx?FilterField1=Area&FilterValue1=Maternity&FilterType1=Choice&FilterDisplay1=Maternity&id=%2Fsites%2FABB%5FPulse%5FPolicies%2FFamilies%20%20Therapies%2FPPROM%20guideline%2Epdf&viewid=af44078f%2Dfc02%2D45b6%2

Db0d6%2D4e0b2f5aa4b7&parent=%2Fsites%2FABB%5FPulse%5FPolicies%2FFamilies%20%20Therapies (Accessed 21/04/2026).

Aneurin Bevan University Health Board (2024c). *Guideline for the Management of term pre-labour rupture of membranes* [Online]. Available at: https://nhswales365.sharepoint.com/sites/abb_familyandtherapies_DivisionalManagement/Obs_Risk/Forms/AllItems.aspx?id=%2Fsites%2Fabb%5Ffamilyandtherapies%5FDivisionalManagement%2FObs%5FRisk%2FMATERNITY%2FMATERNITY%20GUIDLINES%2FMaternity%20Guideline%20Group%20%20CEF%2FRatified%20GL%2FArchived%20GL%2F2025%2FSROM%2FGuideline%20for%20the%20Management%20of%20term%20pre%2Dlabour%20rupture%20of%20membranes%20%281%29%2Epdf&parent=%2Fsites%2Fabb%5Ffamilyandtherapies%5FDivisionalManagement%2FObs%5FRisk%2FMATERNITY%2FMATERNITY%20GUIDLINES%2FMaternity%20Guideline%20Group%20%20CEF%2FRatified%20GL%2FArchived%20GL%2F2025%2FSROM (Accessed 21/04/2026).

Aneurin Bevan University Health Board (2026a). *Integrated Care Pathway for Pregnancy Loss over 20 Weeks* [Online]. Available at: https://nhswales365.sharepoint.com/sites/ABB_Pulse_Policies/Families%20%20Therapies/Forms/All%20Staff%20Documents.aspx?id=%2Fsites%2FABB%5FPulse%5FPolicies%2FFamilies%20%20Therapies%2FICP%20for%20Pregnancy%20Loss%20over%2020%20Weeks%2Epdf&parent=%2Fsites%2FABB%5FPulse%5FPolicies%2FFamilies%20%20Therapies (Accessed 20/04/2026).

Aneurin Bevan University Health Board (2026b). *Outpatient Induction of Labour Guideline* [Online]. Available at: https://nhswales365.sharepoint.com/sites/ABB_Pulse_Policies/Families%20%20Therapies/Forms/All%20Staff%20Documents.aspx?id=%2Fsites%2

FABB%5FPulse%5FPolicies%2FFamilies%20%20Therapies%2FOutpatient%20Induction%20of%20Labour%20Guideline%2Epdf&parent=%2Fsites%2FABB%5FPulse%5FPolicies%2FFamilies%20%20Therapies (Accessed 20/04/2026).

Aneurin Bevan University Health Board (2026c). *Fluid Management and Hyponatraemia in Peripartum Period* [Online]. Available at: https://nhswales365.sharepoint.com/sites/ABB_Pulse_Policies/Families%20%20Therapies/Forms/All%20Staff%20Documents.aspx?id=%2Fsites%2FABB%5FPulse%5FPolicies%2FFamilies%20%20Therapies%2FFluid%20Management%20and%20Hyponatraemia%20in%20the%20Peripartum%20period%2Epdf&parent=%2Fsites%2FABB%5FPulse%5FPolicies%2FFamilies%20%20Therapies (Accessed 22/04/2026).

Aneurin Bevan University Health Board (2026d). *Induction of Labour with Angusta®* [Online]. Available at: https://nhswales365.sharepoint.com/sites/ABB_Pulse_Policies/Families%20%20Therapies/Forms/All%20Staff%20Documents.aspx?id=%2Fsites%2FABB%5FPulse%5FPolicies%2FFamilies%20%20Therapies%2FInduction%20of%20Labour%20with%20Angusta%20SOP%2Epdf&parent=%2Fsites%2FABB%5FPulse%5FPolicies%2FFamilies%20%20Therapies (Accessed 30/04/2026).

Cook Medical (2021). *Cook cervical ripening balloon with stylet [PDF] Available at: T_J-CCRBS_REV3.PDF. Accessed: 01/05/2025*

Crosby, D.: A prospective pilot study of Dilapan-S compared with Propess for induction of labour at 41+ weeks in nulliparous pregnancy. Irish Journal of Med Sci. 2017. https://www.ncbi.nlm.nih.gov/pubmed/29270855

Dilapan (2019) Dilapan –S Documents. Available at: https://www.dilapan.com/hcp/induction-oflabor/

Drunecky, T. et al: Experimental comparison of properties of natural and synthetic osmotic dilators. Arch Gynecol. Obst., Published online: 25 Jan 2015.

Gupta, J.: Synthetic osmotic dilator prior to induction of labour: outcome's from international observational e-registry. Oral presentation, EBCOG 2017, Turkey

Gupta, J.: Synthetic osmotic dilators in the induction of labour – An international multicentre observational study. European Journal of Obs & Gyne. 2018. https://www.ncbi.nlm.nih.gov/pubmed/30107363

*Induction of labour in nulliparous women with an unfavourable cervix: a randomised controlled trial comparing double and single balloon catheters and PGE2 gel.* CE Pennell et al. BJOG 2009, 116,11:1443-1452

Joint Formulary Committee. (2024). Oxytocin. In *British national formulary* (88th ed.). BMJ Publishing and the Royal Pharmaceutical Society.

Joint Formulary Committee. (2024). Dinoprostone. In *British national formulary* (88th ed.). BMJ Publishing and the Royal Pharmaceutical Society.

Leathersich et al (2018) Acute tocolysis for uterine tachysystole for suspected fetal distress. **Cochrane database of systemic reviews**. July 2018

Maier, J.: Induction of labour in patients with an unfavourable cervix after a caesarean using an osmotic dilator versus vaginal prostaglandin. J. Perinat. Med. 2017 https://www.degruyter.com/view/j/jpme.2018.46.issue-3/jpm-2017-0029/jpm-2017-0029.xml

Medicem. (2020). *Dilapan-S insertion and removal guide*. https://www.dilapans.com/pdf/DilapanS%20Insertion%20and%20Removal%20Guide.pdf

National Institute for Health and Care Excellence. (2015). *Insertion of a double balloon catheter for induction of labour in pregnant women without previous caesarean section (NICE guideline IPG528).* Overview | Insertion of a double balloon catheter for induction of labour in pregnant women without previous caesarean section | Guidance | NICE

*Prolonged pregnancy: When Should We Intervene* - Doherty and Norwitz, Current Opinion in Obstetric Gynaecology 2008 20:519 – 527

Reinhard, J.: Pilot study Mechanical versus pharmacological term induction: a cohort group analysis of maternal and neonatal outcome – hygroscopic cervical dilator versus prostaglandin E2. Clin. Obstet. Gynae. Repod. Med. 2016 https://www.oatext.com/Pilot-study-Mechanical-versuspharmacological-term-induction-a-cohort-group-analysis-of-maternal-and-neonatal-outcomehygroscopic-cervical-dilator-versus-prostaglandin-E2.php

Roztocil A et al.: A comparison of three preinduction cervical priming methods: Prostaglandins E2 gel, Dilapan–S® rods and Estradiol gel.

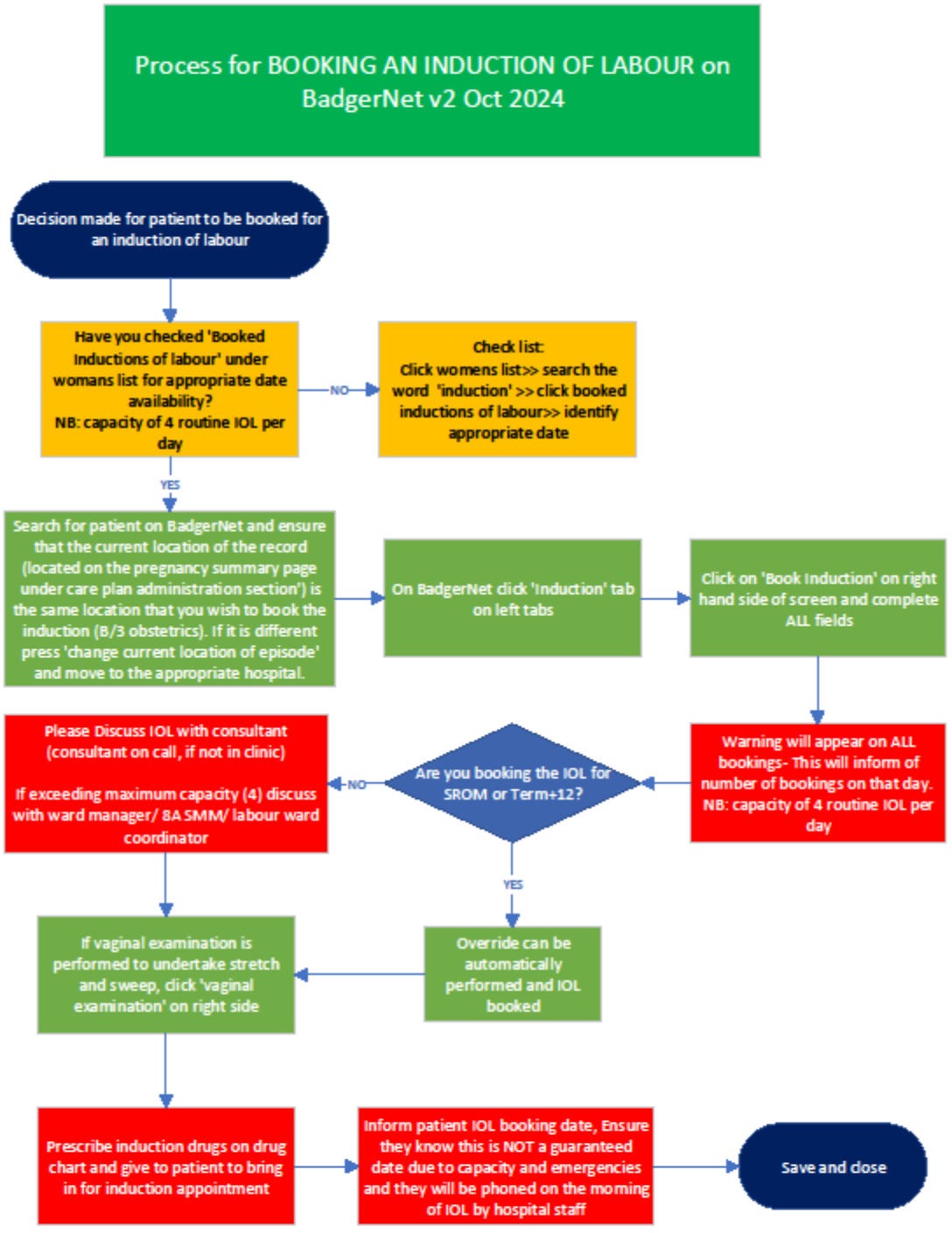
CZ Gynecol. 63, 1998, č. 1, str. 3–9 https://www.ncbi.nlm.nih.gov/pubmed/9650373

Saad A.F. et al. A randomised control trial of Dilapan-S vs Foley's balloon for pre-induction cervical ripening (DILAFOL trial) - Am J Obstet Gynecol. March 2019: 220(3): 275 e1-275 e9 https://doi.org/10.1016/j.ajog.2019.01.008

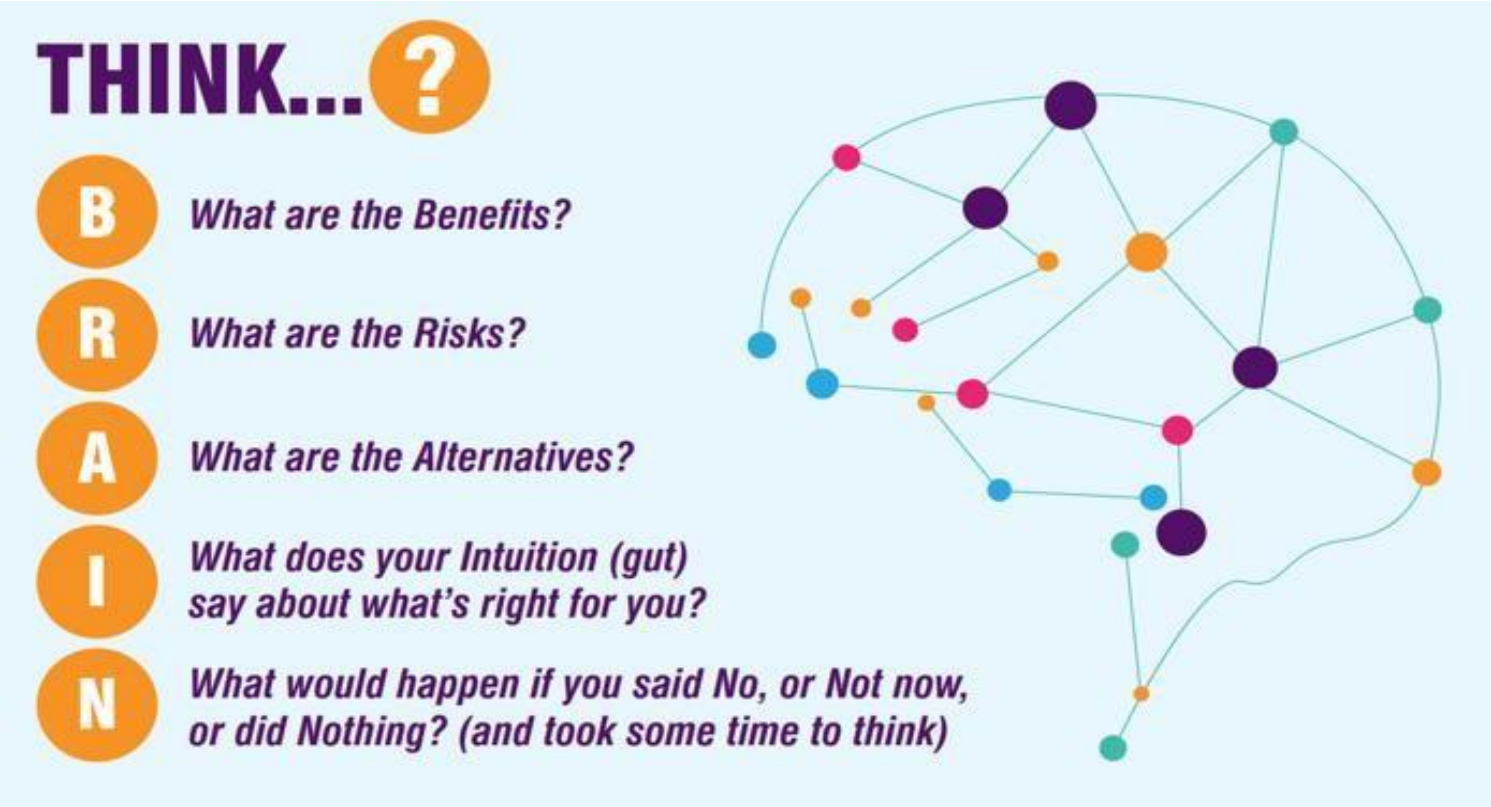
Wales Maternity and Neonatal Network (2022) All Wales Midwifery-Led Care Guideline (6th Edition). Published October 2022. Available at: https://wisdom.nhs.wales/all-wales-guidelines/all-wales-guidelines/all-wales-midwifery-led-care guideline-2022/ (Accessed: 26 February 2026)

# 13. Appendices

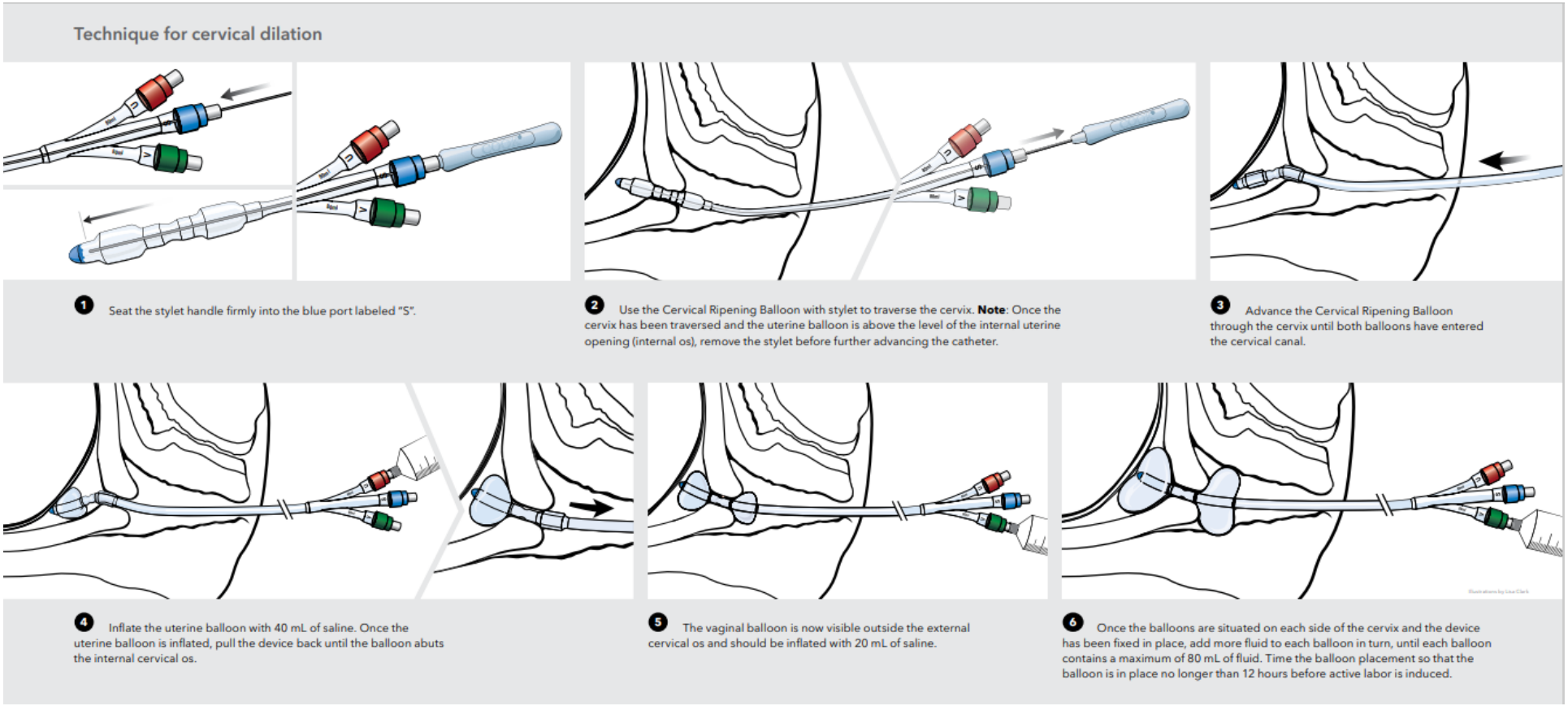
## Appendix 1: Booking an Induction of Labour on Badgernet



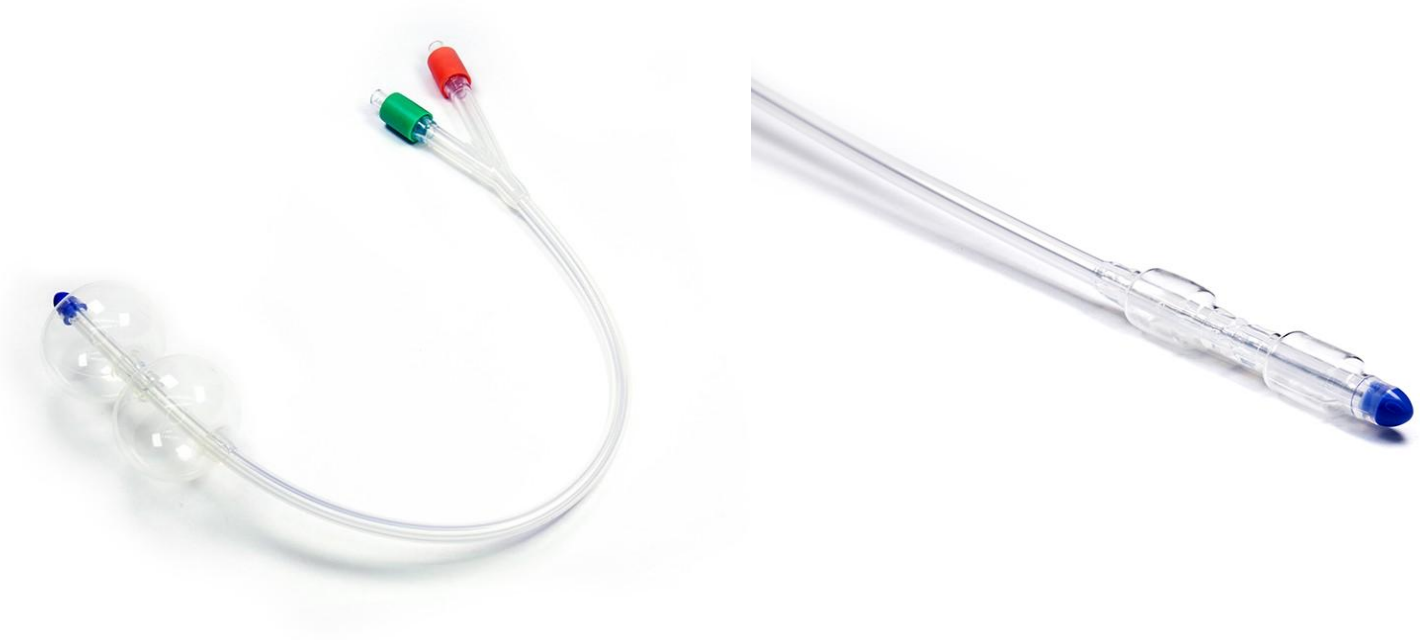
**Appendix 2: BRAIN Acronym**



## Appendix 3: Cooks Balloon Catheter



**Appendix 4: Kimal Balloon Catheter**

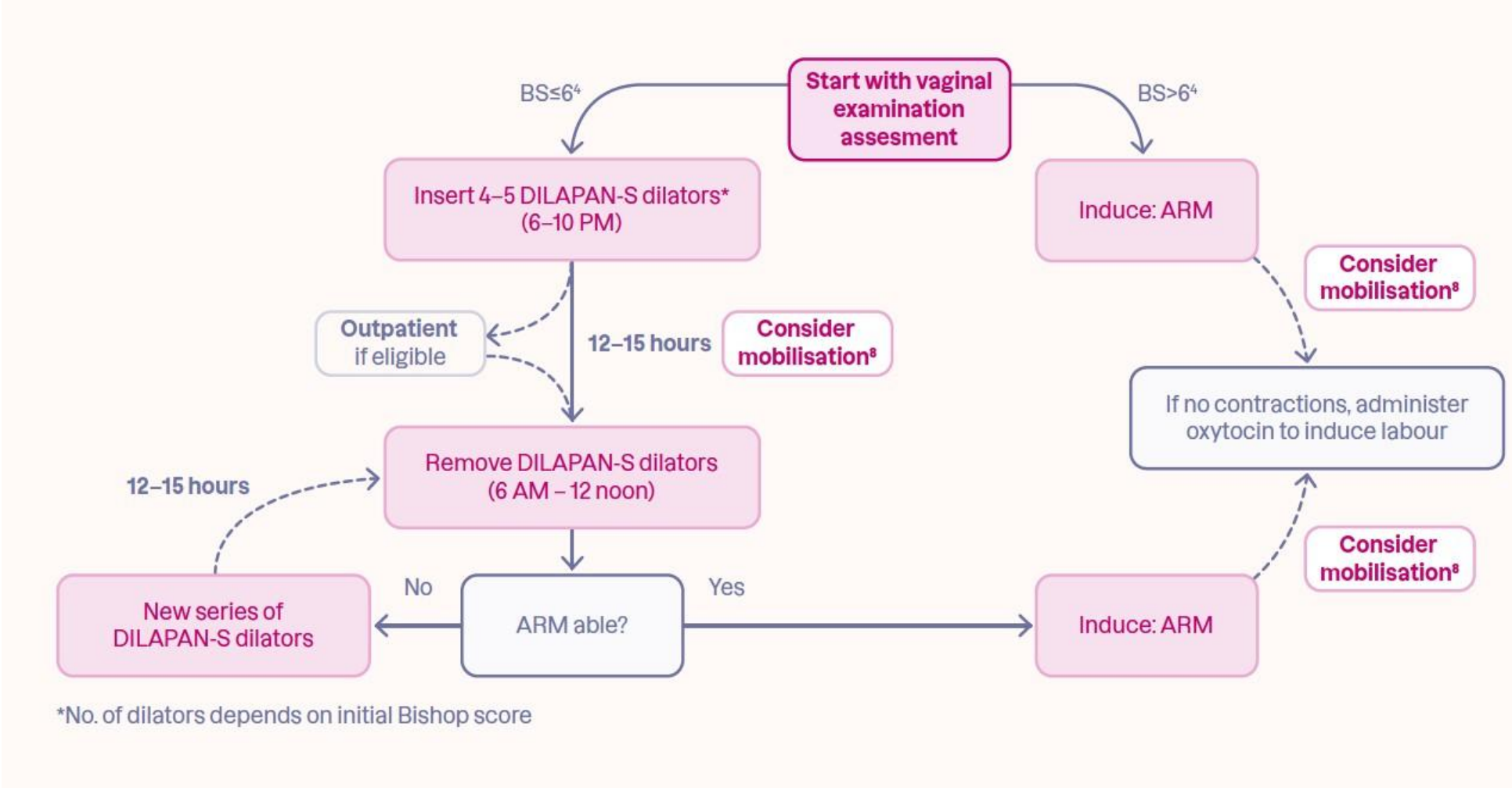


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For further information, please access the following hyperlink which provides application guidance;

[Induction With Balloon | How To Use Cervical Ripening Balloon | SCW Medicath]

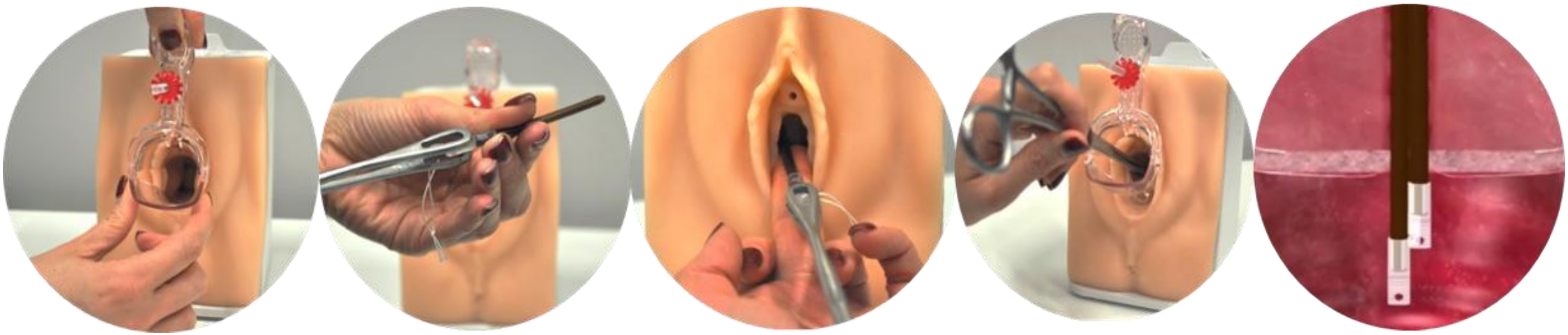
**Appendix 5: DILAPAN-S® Induction Process/ Decision Tree**



## Appendix 6- DILAPAN-S® Insertion

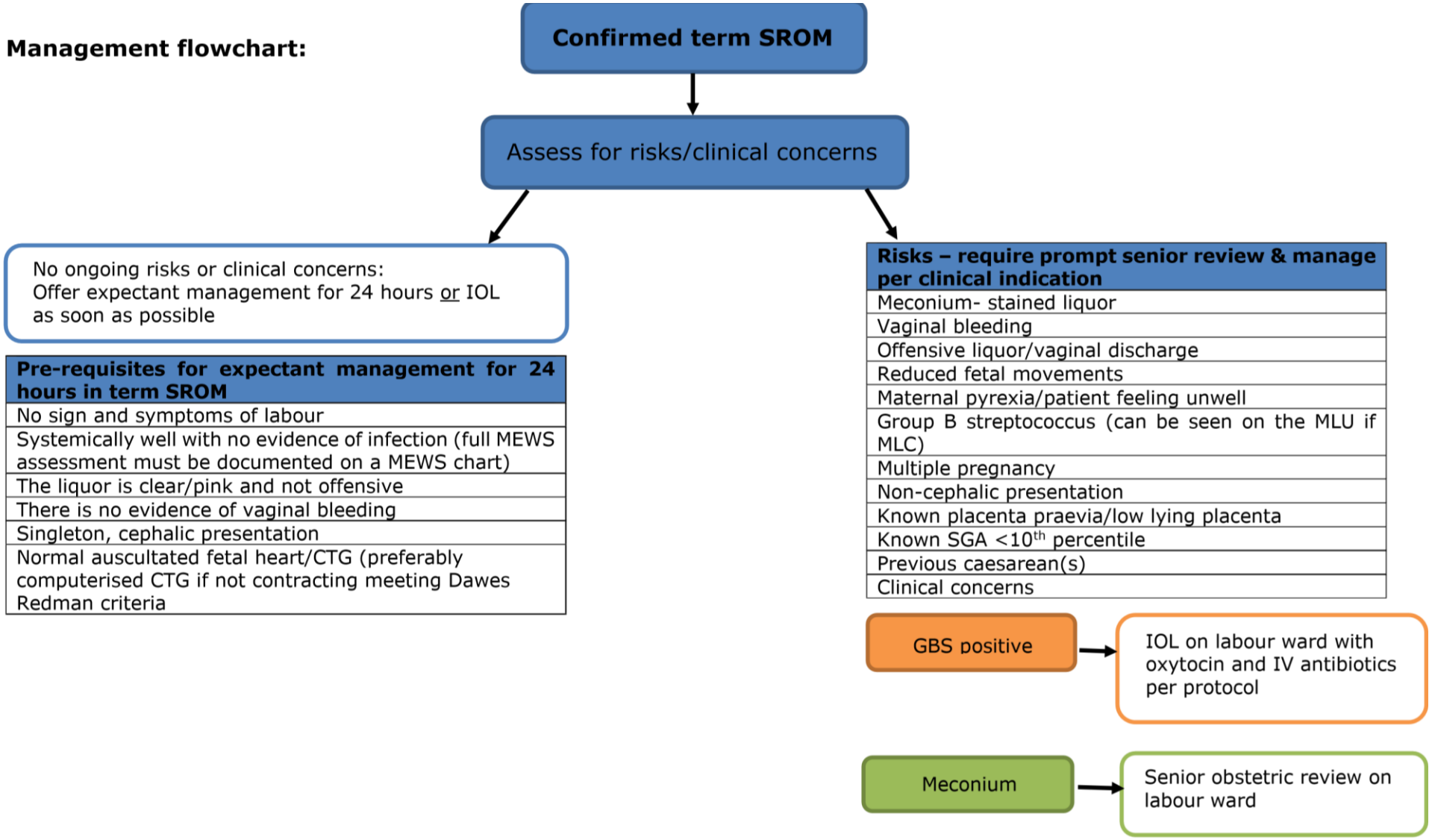
**Required Equipment for Dilapan Insertion**

- Two sponge holders o Speculum
- Sterile water/ saline o Sterile gloves o DILAPAN-S® rods

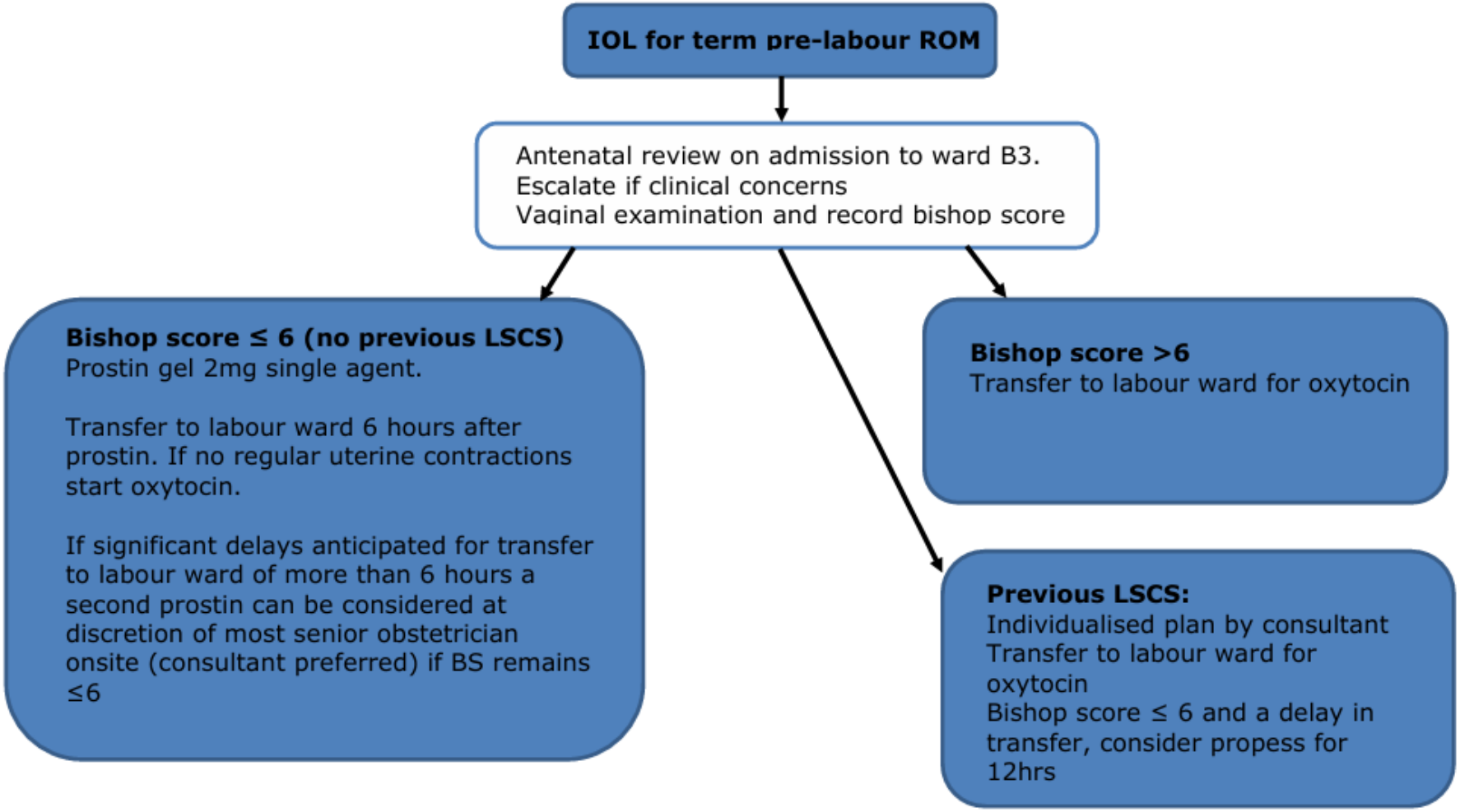


## Appendix 7- Confirm term SROM management flow chart

**Management flowchart:**



**Appendix 8- IOL for term prelabour ROM flow chart**



**Appendix 9- Checklist discussion with patients declining induction of labour after 24 hours expectant management**

| | |
|---|---|
| When the waters break on their own (spontaneous rupture of membranes), most women will go into labour naturally and give birth to a healthy baby. You will always be supported in the choices you make about your labour, birth, and place of birth. However, it is important that you have clear, up-to-date information about the benefits and risks of both waiting for labour to start naturally and having labour induced, particularly if your waters have been broken for more than 24 hours. | |
| The chance of a baby developing an infection is slightly higher if the waters have been broken for more than 24 hours. After this time, the risk is around twice as high compared to when the waters have been broken for less than 12 hours (about 1%). The risk continues to increase the longer the time between the waters breaking and labour starting. | |
| It is known that when the waters have broken, babies have a slightly higher risk of infection than when the waters are still intact. Because of this, we recommend that you have a review at least once every 24 hours. This allows us to check your observations and monitor your baby's heartbeat while you are waiting for labour to begin. | |
| Primarily due to the increased risk of infection, the national recommendation is that you labour and deliver in a unit with an on-site specialist neonatal unit, and that baby stays for observation for at least 12 hours after delivery to see for any signs of infection. This would mean labour and delivery in either the consultant led unit-Labour Ward (CLU) or Midwifery Led Unit (MLU) at the Grange University Hospital (GUH). Home birth in this situation is not recommended, but you would be supported with this choice should you wish to birth at home. | |

| | |
|---|---|
| The chance of infection for you and your baby increases the longer the time between your waters breaking and your baby being born. Monitoring your baby during labour gives us an extra way to check for early signs of infection.<br><br>For this reason, we recommend continuous monitoring of your baby's heartbeat during labour if your waters have been broken for more than 24 hours. This means that labour and birth would take place in the Consultant-Led Unit.<br><br>If you would prefer intermittent listening to your baby's heartbeat instead, this can be discussed. However, we would have a low threshold to recommend moving to continuous monitoring, particularly if your baby's heartbeat becomes faster than expected, as this can be an early sign of infection. | |
| Sometimes a baby may pass their first poo (called *meconium*) while still in the womb, which can make the waters look green or brown. This can be a sign that the baby is becoming stressed. If you notice any change in the colour of your waters, it is important to come in for a review so that both you and your baby can be checked.<br><br>Meconium in the waters can increase the risk of breathing difficulties for the baby at birth and also increases the risk of infection. If meconium is present, having labour induced can reduce these risks for your baby, no matter how long it has been since your waters broke. | |
| You may notice some vaginal bleeding after your waters have broken. This is important to take seriously, as bleeding can sometimes come from the placenta, which supplies your baby with blood and oxygen. If you notice any bleeding at all, you should come in for a review straight away so that you and your baby can be checked. | |

| | |
|---|---|
| If you start to feel unwell in any way, it is important to come in for a review so we can check both you and your baby. Feeling unwell can sometimes be a sign that an infection is developing.<br><br>Infections during pregnancy and labour can become serious, particularly if they are not treated quickly. If an infection is suspected, treatment would usually involve antibiotics given through a drip into a vein (intravenous or IV antibiotics).<br><br>There is no evidence that giving antibiotics in advance is helpful after the waters have broken at or beyond 37 weeks, so we do not recommend antibiotics unless there are signs of infection. | |