Royal Hospital for Women (RHW)
BUSINESS RULE
COVER SHEET

Health
South Eastern Sydney
Local Health District

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FORMER REFERENCE(S)	RHW LOP Artificial Rupture of Membranes RHW LOP Induction of Labour guideline for women with postdates low risk pregnancy RHW LOP Oxytocin for Induction or Augmentation of labour RHW LOP Prostaglandin administration for cervical preparation RHW LOP Sweeping membrane to encourage labour RHW LOP Postdates management of pregnancy beyond 41 weeks gestation
EXECUTIVE SPONSOR	Maternity Services Clinical co-directors
AUTHOR	Samantha Arbidans, CMC, Clinical Practice Development Dr Wendy Hawke, Director of Obstetrics
SUMMARY	Local pathway process to align with NSW Health PD regarding augmentation and induction of labour methods
Key Words	Augmentation, induction, cervical ripening, artificial rupture of membranes, oxytocin, catheter, prostaglandin analogues

Labour- cervical ripening, augmentation and induction

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Within this document we will use the term woman, this is not to exclude those who give birth and do not identify as female. It is crucial to use the preferred language and terminology as described and guided by each individual person when providing care.

1 BACKGROUND

The aim of this CBR is to provide comprehensive, clear, and concise guidance and processes to support the pregnant woman and her care providers throughout the induction/augmentation of labour process at RHW. This document is intended to be implemented in conjunction with the NSW Health PD2025_034 Induction of Labour (IOL), ensuring consistency in practice, safety, and quality of care across all settings.

2 RESPONSIBILITIES

2.1 Medical/Midwifery

- Engage in informed decision-making with woman, providing clear information about the indications, methods, and potential benefits and risks of induction/augmentation
- Document all assessments, discussions, recommendations, consent and interventions accurately and contemporaneously in the woman's health record
- Escalate any deviations or concerns regarding maternal or fetal wellbeing in accordance with escalation pathways

2.2 Medical

- Prescribe medications required for augmentation/IOL
- Ensure obstetric registrar has documented approval in writing for prescribing prostaglandin agents. (NOTE: SRMOs cannot prescribe)

2.3 Midwifery

- Ensure readings, education, and competency assessments relevant to IOL procedures are complete:
  - Ultrasound (bedside): Demonstrate competency in performing and interpreting presentation
  - Speculum examination: Demonstrate competency in conducting a speculum examination at term
  - Mechanical cervical ripening: Demonstrate competency in the insertion and management of mechanical methods for cervical ripening

3 PROCEDURE

3.1 Maternal and fetal assessment

- Conduct a full comprehensive assessment of the woman and her pregnancy prior to discussion around augmentation/induction of labour
- Discuss with woman and support person/s indications for IOL – see Table 1.

Table.1. Indications for IOL at The Royal Hospital for Women

Indications for IOL	Contributing factors	Guideline
Advanced Maternal Age (AMA) ≥40yo		Recommend birth by 40 weeks following discussion and reference to educational notes in RHW Advance maternal age (AMA) and outcomes
Cholestasis		Individualised timing of birth according to the highest Bile Acids (BA), liver function tests (LFTs) and woman's symptoms. Recommend birth by: • Mild ICP (TSBA < 40micromol/L) – planned birth ≥ 39+0 weeks • Severe ICP (peak serum TSBA ≥ 40 – 99micromol/L) - planned birth ≥ 38+0 weeks • Very severe ICP (peak serum TSBA ≥100micromol/L) - planned birth at or after 36+0 weeks
Diabetes		Pre-existing diabetes (individualised care plan with consultant) • Well controlled – recommend birth around 38 weeks • Poorly controlled – birth prior to 38 weeks may be recommended Gestational diabetes • Diet and well controlled – usual postdates if no other risk factors • Pharmacotherapy, well controlled, no other obstetric risks factors on low dose insulin (<0.5 units/kg current weight) and/or oral hypoglycaemic medication - recommend birth by 40-41 weeks • Pharmacotherapy, high dose insulin (≥0.5units/kg current weight), sub-optimal control OR any other obstetric, medical risk factors - recommend birth by 40 weeks • Sub-optimal engagement with diabetes care – recommend birth by 40 weeks
Ethnicity		Do NOT offer IOL
Hx of precipitous birth		Do NOT offer IOL
Intrauterine growth restricted fetus (IUGR) & SGA		Refer to: RHW- CBR- Fetal Growth Restriction and Small for gestational age-screening and management for singleton pregnancies See section 7 in NSW Health GL2025_018 Fetal Growth Restriction
IVF pregnancy	Nil other risk factors	Do NOT offer IOL
Maternal request		Supported >39 weeks following counselling of benefits and risks
Multiple pregnancy		Individualised timing of birth, dependant on fetal wellbeing. • Uncomplicated dichorionic twin pregnancy, recommend birth between 37-38 weeks • Uncomplicated monochorionic twin pregnancy, recommend birth between 36-37 weeks • MFM care plans
Previous Caesarean Birth	Nil other risk factors	Planned VBAC, manage as usual postdates
Prolonged Preterm rupture of membranes (PPROM)	<37 weeks	• Well, with no other obstetric indications – recommend expectant management until 37 weeks • Signs of infection or fetal compromise - recommend plan for birth (IOL or caesarean)
Pre-labour rupture of membranes at term	≥ 37 weeks	No other risk factors. Maternal choice: • Immediate IOL • Await spontaneous labour as outpatient OR inpatient admission with plan for IOL by 36 hours GBS positive, suspected maternal sepsis, Meconium-stained liquor (MSL) or abnormal FHR not requiring immediate birth:

		• Recommend immediate IOL
Prolonged pregnancy		Offer IOL beyond 41+1 weeks gestation, with recommendation to birth by 42 weeks
Raised BMI		• Timing of birth will be influenced by presence of co-morbidities such as diabetes, hypertension/pre-eclampsia and/or gestational weight gain • Booking BMI 35-39.9, offer IOL at 40 weeks and recommend if other obstetric risk factors • Booking BMI ≥ 40, recommend IOL at 40 weeks
Suspected large for gestational age	• Without diabetes • With diabetes dx	• Do not offer IOL as improved outcomes have not been demonstrated • Plan as per diabetes clinic/consultant

- Attend an A-I assessment including:
  - abdominal palpation including fundal height measurement
  - bedside ultrasound confirming presentation immediately prior
  - cervical assessment and Modified Bishop Score (see below)

Cervical feature	0	1	2	3	Score
Dilatation (cm)	<1	1-2	3-4	>4	
Length of cervix (cm)	≥3	2	1	<1	
Station (relative to ischial spines)	-3	-2	-1 / 0	+1 / +2	
Consistency	firm	medium	soft	-	
Position	posterior	middle	anterior	-	
Total					

- Discuss options of methods of IOL appropriate to woman's indication for IOL, other significant medical/obstetric history, and after cervical assessment
  - MBS ≤ 6, recommend cervical ripening options
  - MBS ≥ 7, recommend artificial rupture of membranes
- Provide woman and support person/s time to consider recommendations and options, as safety allows
- Provide written information to support discussion

3.2 Consent

- Establish woman's understanding of process, expectations, risks, benefits and obtain consent for IOL
- Complete written consent for IOL using the Consent to Medical Procedure/Treatment (adult and mature minors) SMR020.001 and place at the front of paper medical/antenatal record. Note: midwives can consent for the following ONLY:
  - postdates ≥ 41+1 weeks
  - advanced maternal age ≥ 40 years of age
  - raised BMI ≥ 35
  - term spontaneous rupture of membranes (SROM)

3.3 Booking IOL/Augmentation

- Book IOL from an outpatient setting by contacting:
  - Clinical MUM1 BU 0700-1530 hours normal workdays Monday-Friday 0499 846 402
  - MIC/Triage midwife BU outside of these working hours: 93826100 or 0439 869 035
- You will need to provide:
  - **MRN** and name of woman
  - **Indication** for IOL. (see Table.1.)
  - **Model** of care
  - **Obstetric** consultant allocated to woman's care/approving IOL
  - **Cervical** Bishop Score
  - **Method** of IOL
  - **Significant** medical/obstetric history
  - **Contact** telephone number for woman
  - **Confirmation** of signed consent form
- Advise woman any IOL booking is a tentative booking only depending on birth unit activity and staffing. Time and date of procedure could be moved if it is unsafe to proceed on booked date.
- Advise woman contact details and location for IOL
- Advise woman who will be admitted to BU from home, to call Birthing Unit at 0600hrs on the day of their induction to discuss/arrange their time of admission.

3.4 Membrane Sweeping

- Discuss option of membrane sweeping in outpatient setting as per PD2025_034 Induction of Labour

3.5 Assessment/admission for cervical ripening

- Establish woman's understanding of process and expectations prior to commencement
- Conduct a full comprehensive assessment of the woman and her pregnancy
- Attend an A-I assessment including:
  - abdominal palpation including fundal height measurement
  - bedside ultrasound to assess presentation. (If non-cephalic presentation escalate to obstetric team for review)
  - cervical assessment and Modified Bishop Score
- Assess fetal wellbeing as outline in NSW Health GL2025_004 Fetal Heart Rate Monitoring
- Perform hand hygiene and don correct personal protective equipment for procedure
- Perform following procedures as per Induction of Labour NSWHealthPD2025_034:
- Membrane sweeping **(page 13/55)** (as per step 3.4)

3.6 Mechanical cervical ripening **(page 23/55)**

Outpatient Management

- Consider outpatient management for the woman without contraindications: (see Table.2)

Table.2. Contraindications/precautions for cervical ripening - outpatient management

Contraindications for outpatient management	Precautions for outpatient management
Use of Prostaglandin analogue IOL	Multiple pregnancy - well grown, >37 weeks + 1st twin cephalic presentation
< 37 weeks gestation	Previous precipitous birth
Oligohydramnios WITH other features of placental dysfunction	SGA with normal welfare parameters
Hypertension - medicated or pre-eclampsia	CALD women
IUGR	Vaginal Birth After Caesarean (VBAC)
Malpresentation	Polyhydramnios
Pre-existing diabetes	Decreased fetal movements

- Educate woman on when to contact/present to Birth Unit:
  - Cervical catheter dislodged and no longer in situ
  - Abnormal bleeding
  - Pain
  - Fetal movement pattern concerns
  - Any other concerns
  - Difficulty/inability to pass urine
  - SROM
  - Regular, painful uterine activity
- Educate woman around timing of regular retaping and ongoing traction of catheter
- Confirm time and place for woman to represent in the event the catheter remains in situ

Inpatient Management

- Admit to antenatal ward
- Re-tension catheter every 2-4 hours until it dislodges OR maximum 24hours
- Collaborate with BU team capacity for commencement of IOL and transfer
- Assess cervix:
  - and confirm 'favourable' for transfer to Birth Unit
  - when catheter dislodges, perform Artificial Rupture of Membrane (ARM) as soon as clinically and practically safe to do so
- Assess fetal wellbeing according to clinical scenario
- Organise medical review if catheter still in situ at morning handover

3.7 Prostaglandin analogues for cervical ripening (page 17/55)

NOTE: includes dinoprostone and misoprostol

- Admit woman to antenatal ward and assess as outlined above in 3.5
- Ensure medication is prescribed prior to administration (NOTE: prostaglandin analogues ONLY by approved obstetric registrar or consultant)
- Care for woman as outlined in NSW Health Prostaglandin analogues for cervical ripening (page 17/55)
  - Review the woman and consider removal of Cervidil once contracting 3:10 regular, painful contractions
  - If not contracting, review at approximately 0600hrs/18 hours post insertion with consideration of remaining in for full 24 hours if cervix is deemed not favourable
- Administer oral prostaglandin analogue
  - Misoprostol 25micrograms (mcg) every 2 hours, up to a maximum dose of 200 mcg (8 doses)

- Vaginal examination is NOT required prior to next dose unless contractions are 3:10
- Once contracting >3:10 contractions, reassess (including MBS) and consult obstetric team before administering any further doses

- Escalate as needed as per CERS

Management of tachysystole

- Continue or recommence CEFM
- Administer analgesia if required
- Consider vaginal examination and activate a Clinical Review
- Cease CTG if tachysystole settles and CTG is normal

Management of hyperstimulation/hypertonus

- Continue or recommence CEFM
- Insert IVC, take FBC, G&H (+/- additional investigations) and commence IV fluids as required
- Notify obstetric registrar or request a Clinical Emergency Response system (CERS)
- Perform a vaginal examination with consent and remove the prostaglandin pessary if insitu
- Administer terbutaline 250mcg subcutaneously and continue case management as per clinical scenario

3.8 Combination cervical ripening (page 24/55)

- Admit woman to antenatal ward and assess as outlined above in 3.5
- Ensure medication is prescribed by approved obstetric registrar or consultant
- Insert mechanical cervical catheter as outlined in 3.6 inpatient management
- Administer oral prostaglandin analogue (misoprostol) as described in 3.7
- Re-tension catheter every 2-4 hours
- Assess cervix when catheter dislodges and perform Artificial Rupture of Membranes (ARM) as soon as clinically and practically safe to do so
- Assess fetal wellbeing as per clinical scenario
- Notify and transfer to Birth Unit when bed available
- Organise medical review if catheter still in situ and maximal dose of misoprostol achieved at morning handover

3.9 Assessment/admission for IOL

- Establish woman's understanding of process and expectations prior to commencement
- Conduct a full comprehensive assessment of the woman and her pregnancy:
  - Attend an A-I assessment including:
  - abdominal palpation including fundal height measurement
  - bedside ultrasound confirming presentation

3.10 Artificial rupture of membranes (page 29/55)

3.11 Oxytocin pathway (page 36/55)

- Educate woman on oxytocin infusion process, risks and benefits
- Titrate infusion as below

Oxytocin dosing regimen		
Time after starting (minutes)	**Dose (milliunit per minute)***	**mL per hour**
0	1	1
30	2	2
60	4	4
90	8	8
120	12	12
150	16	16
180	20	20
Before exceeding 20 milliunit per minute: An obstetrician needs to complete a comprehensive assessment, including discussion with the woman. **Doses above 20 milliunit per minute are considered 'off-label'**		
210	24	24
240	28	28
270	32	32

*Note: 1 milliunit per minute is equal to 1 mL per hour

4 DOCUMENTATION

- Antenatal health record card
- Electronic medical record (eMR)
- Guardian/K2

5 EDUCATION NOTES

Fetal heart rate monitoring

- Refer to NSW Health GL2025_004 Fetal Heart rate monitoring
- Women being induced with NO maternal or fetal indications (e.g. maternal request, postdates <42 weeks gestation) who labour from prostaglandin analogues and/or ARM do not require CEFM. The fetus can be monitored by IA

Membrane Sweeping

- Sweeping of the membranes results in the release of endogenous prostaglandins, softening the cervix and augmenting oxytocin-induced uterine contractions. Plasma prostaglandin concentrations after sweeping are 10% of those achieved in labour, thus improving labour outcomes[3] and reducing the need for formal induction of labour[1]
- Women felt the benefits of membrane sweeping outweighed the harm and most would recommend to other women[1]
- 51% of women considered membrane sweeping to be somewhat painful, while 17% considered it to be very painful[2]
- Overall, women were positive about membrane sweeping, 88% reporting they would choose membrane sweeping again[1]

Mechanical cervical ripening method

- Cervical catheters work by physically dilating the cervix, disrupting collagen and causing localised inflammation, thereby increasing prostaglandin and/or oxytocin secretion[2]

- The chance of hyperstimulation with mechanical ripening is reported to be <1%, compared to a 4-5% chance of hyperstimulation when using prostaglandin analogues[3,4]
- Cervical catheters do not increase risk of uterine rupture in women with previous caesarean[5]
- Outpatient balloon cervical ripening in low-risk women is associated with a decreased amount of time from admission to labour and birth. Outpatient balloon cervical ripening is a safe alternative for low-risk women and has the potential for significant benefits to women[6]
- Balloon cervical ripening does not achieve cervical effacement compared to prostaglandin analogues and therefore women will usually require longer duration of oxytocin administration before establishing the active phase of labour, though outcomes are similar[9]
- Outpatient management following insertion of a cervical balloon catheter may be appropriate for selected women[6]

Prostaglandin cervical ripening method

- Prostaglandin gel or pessary (dinoprostone) must be administered/supervised by a staff member competent in performing vaginal examination. They must have been educated in the care and management of an adverse event following insertion of prostaglandin
- Prostaglandin gel or pessary may be prescribed by a consultant obstetrician or an approved obstetric registrar who has written permission to do so from the Director of Obstetrics
- Prostaglandin gel or pessary may be given to woman with grand multiparity, antepartum haemorrhage (APH) or ruptured membrane after review by senior obstetric registrar or obstetric consultant
- Cervidil® pessary contains 10mg of dinoprostone which is released at the rate of 0.3mg per hour for a period of 24 hours. Release rate is dependent on vaginal pH and is equivalent to prostaglandin gel of 2mg every 6 hours
- Hyperstimulation/hypertonus occurs in 4-5% of women[4]

Artificial rupture of membranes

- Research has shown that there is an increase in abnormal fetal heart rate patterns following ARM, however, ARM alone, in the absence of other risk factors, is not an indication for CEFM[8]
- There is little evidence surrounding the efficacy of the use of amnihook versus amnicot and thus, should be used at the discretion of the clinician[8]

Oxytocin pathway

- Induced labour has an impact on the birth experience of women. It may be perceived as more painful than spontaneous labour, and epidural analgesia and assisted delivery are more likely to be required
- High doses of oxytocin or prolonged periods of infusion of oxytocin in electrolyte-free fluids may interfere with vasopressin receptors leading to water intoxication. It is a rare but recognised complication. Care must be exercised with the solution, the concentration, and the total volume given
- Evidence to support NSW Health PD2025_034 can be obtained at NSW Government – Agency for Clinical Innovation - Induction of labour- evidence checks

6 RELATED POLICIES/PROCEDURES

- NSW Health PD2025_034 Induction of Labour: Methods and approaches
- NSW Government Critical Intelligence Unit- Evidence check- Cervical Ripening 2025
- NSW Health GL2025_018 Fetal growth restriction
- RHW CBR First stage of labour- latent, active, recognition and management of delay
- NSW Health GL2025_004 Fetal Heart rate monitoring

7 REFERENCES

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8 ABORIGINAL HEALTH IMPACT STATEMENT DOCUMENTATION

- Considerations for culturally safe and appropriate care provision have been made in the development of this Business Rule and will be accounted for in its implementation.
- When clinical risks are identified for an Aboriginal and/or Torres Strait Islander woman or family, they may require additional supports. This may include Aboriginal health professionals such as Aboriginal Liaison Officers, health workers or other culturally specific services

9 CULTURAL SUPPORT

- For a Culturally and Linguistically Diverse CALD woman, notify the nominated cross-cultural health worker during Monday to Friday business hours
- If the woman is from a non-English speaking background, call the interpreter service: NSW Ministry of Health Policy Directive PD2017 044-Interpreters Standard Procedures for Working with Health Care Interpreters.

10 NATIONAL STANDARDS

- Standard 1- Clinical Governance
- Standard 2- Partnering with consumers
- Standard 4- Medication safety
- Standard 5- Comprehensive care

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12 REVISION AND APPROVAL HISTORY

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Jan 2026		Out for comments- RHW staff
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