Induction of Labour Policy

1. Background

According to the World Health Organization (WHO), induction of labour (IOL) should be considered when the risk–benefit analysis indicates that interrupting the pregnancy is a safer option for the baby, the mother or both, rather than continuing in the absence of other clear indications for elective caesarean section or contraindications to vaginal birth.

In recent times the IOL and caesarean section rates have doubled without any proportionate improvement in maternal or neonatal outcomes[1]. There is unexplained variation in induction of labour rates across WACHS from 8 to 37 percent; this is even more significant for selected low risk primi-gravidas with a range of 11 – 43 percent (Womens Health Care Australia 2017/18 report). Whilst small variation is expected, unwarranted wide variation cannot be explained by women's preferences or needs and is more likely explained by clinician preference.

The unexplained rise in IOL rates has significant implications for safe and appropriate resourcing of services. IOL usually consumes more healthcare resources than a spontaneous labour with requirement for continuous intrapartum fetal surveillance, increased epidural rates, management of oxytocin infusions and longer periods of 'observed' labour all adding to the midwifery workload

This policy aims to support evidence based decision making involving sound clinical judgement that aligns with the wishes of the woman. It is hoped that this would reduce unwarranted variation in clinical practice whilst continuing to provide high standards of care

Where induction of labour is planned, the risk profile of the woman and her unborn child/ fetus and the appropriate induction method must be within the defined scope of practice for that maternity unit.

Women with uncomplicated pregnancies must be given every chance to go into spontaneous labour.

1.1 Shared decision making

A shared decision making approach must be used to inform the consent discussion with the woman. The RANZCOG consumer information brochure must be provided to the woman (https://ranzcog.edu.au/womens-health/patient-information-resources/induction-of-labour) and consent documented on the WA Health MR30A - Patient consent to treatment or investigation - Adult or Mature Minor.

[1] Glantz, J. C. (2012), Obstetric Variation, Intervention, and Outcomes: Doing More but Accomplishing Less. Birth, 39: 286-290. doi:10.1111/birt.12002

Shared decision-making is 'an approach where clinicians and patients share the best available evidence when faced with the task of making decisions, and where patients are supported to consider options, to achieve informed preferences'[2]
A recent systematic review found that decisional conflict, limited information and less involvement in decision-making predicted patient regret about medical decisions[3]

Discussing the chance of a complication with women:

- Clinicians must use the **absolute risk or chance** (i.e.1:1000 chance), as opposed to **relative risk** (i.e.1.3 times more likely **or** 30% increase **or** double the chance), to ensure the actual chance is well understood by the woman
- Remember every individual has a different perspective of what is an acceptable risk
- Studies have shown that a woman will generally accept a risk that is 100 times higher for themselves than that for their baby

1.2 Importance of accurate gestation

The impetus to avoid iatrogenic 'early term' births before 40 weeks (without evidence based clinical indication) includes:

- Fetal brain and organ development is a continuum to 40 weeks making the brain vulnerable to any disruptions prior to this time[4]
- It is associated with long term adverse cognitive effects including increased risk of cerebral palsy, ADHD and poorer school performance [5]
- There is increased risk of neonatal respiratory distress syndrome and NICU admission directly related to later prematurity which further increases long-term neurodevelopment [6],[7]

- **Accurate pregnancy dating in first trimester reduces the need for IOL at post-term by 40%[8]**

[2] Elwyn G, et a; (2010) Implementing shared decision making in the NHS. BMJ.;341:c5146. doi: 10.1136/bmj.c5146
[3] Perez MMB, et al (2016) Extent and predictors of decision regret about health care decisions. A systematic review. Medical Decision Making fc :14
[4] White, S. W., & Newnham, J. P. (2018, October). Is it possible to safely prevent late preterm and early term births?. In Seminars in Fetal and Neonatal Medicine. WB Saunders. ; Bentley, J., et al. (2017). Born a bit too early: A study of early planned birth and child development at school age. International Journal for Population Data Science, 1(1).
[5] Ibid n4; Murray SR, et al (2017). Long term cognitive outcomes of early term (37-38 weeks) and late preterm (34-36 weeks) births: A systematic review. Wellcome Open Res 2:101.
[6] Ibid n.4 Cluver, C., et al (2017). Planned early delivery versus expectant management for hypertensive disorders from 34 weeks gestation to term. *The Cochrane Library*.
[7] Ibid n.4 Middleton, P et al (2017). Planned early birth versus expectant management (waiting) for prelabour rupture of membranes at term (37 weeks or more). The Cochrane Library.
[8] Whitworth M, Bricker L, Mullan C. Ultrasound for fetal assessment in early pregnancy. Cochrane Database Syst Rev 2015; :CD007058

Table one: Accurate calculation of estimated due date

Certain last normal menstrual period and regular menstruation	
Ultrasound (USS) between 6 and 13 weeks	If the two dates differ by 5 days or less, use the last normal menstrual period (LNMP) estimated due date (EDD) If the EDD differs by more than 5 days, use USS EDD.
USS between 13 and 24 weeks	If the two dates differ by 10 days or less, use the LNMP EDD If the dates differ by more than 10 days, use the USS EDD
No USS between 6 and 24 weeks	Use the LNMP EDD
If the LNMP was not certain, or menstruation irregular	Use an EDD estimate from the first USS performed between six and 24 weeks

1.3 Discussing and documenting IOL with the woman

Must include:

- confirmation and agreement of the most accurate expected due date
- factual, non-biased presentation of the evidence without use of fear
- the evidence for benefit from induction
- the absolute risks of not inducing
- the absolute risks of the induction process and each different method
- the alternatives to induction including absolute risks and benefits
- when, where and how the induction would be done
- time for the woman, and her significant others, to process the induction information and her individual risks (24-48 hours where safe to do so)
- potential for postponement of planned induction if another woman has a time-critical need and how her baby's wellbeing will be assessed (CTG +/- USS) if her induction is postponed
- provision of written evidence based information tailored to the needs of the individual woman (Refer to RANZCOG https://ranzcog.edu.au/womens-health/patient-information-resources/induction-of-labour)
- consideration of the woman's individual health literacy needs.

1.4 Efficacy of membrane sweeping (stretch and sweep)

- Prior to booking IOL, women must be offered a vaginal examination for membrane sweeping[9]:
  - Nulliparous at 40 and 41 weeks
  - Multiparous at 41 weeks
- Advise women of potential discomfort and potential for PV spotting when offering membrane sweeping
- No large trials have specifically addressed the safety of membrane sweeping in known carriers of Group B Streptococcus

2. Policy Statement

2.1 Induction of labour

- WACHS staff will follow the KEMH Clinical Practice Guideline Induction of Labour for:
  - Consent.
  - **Contraindications** – placenta or vasa praevia, malpresentation, proven cephalopelvic disproportion, acute fetal compromise, maternal refusal, cord presentation or prolapse, active genital herpes, maternal HIV.
  - Pre-IOL assessment.
  - Assessment of cervix.
  - Methods.
  - Failed induction management.
  - Delayed induction management.
  - Transcervical catheter.
  - Prostaglandins.
  - Artificial rupture of membranes (ARM).
  - Oxytocin.
- Women who decline IOL must have their decision documented, by the Obstetric doctor, using the WACHS non-standard management sticker after informed discussion of the risks, benefits and alternatives.
- After 41 weeks women must be offered increased surveillance as per KEMH Clinical Practice Guideline Prolonged pregnancy: Care beyond 40 weeks gestation.

2.1.1 Process for IOL Requests and Booking

The accepted clinical indications for induction of labour are listed in Appendix 1.

2.1.1.a Medical information required to request an IOL

The requesting doctor must provide to the maternity ward:

- All evidence of the clinical indication for IOL (serial USS, bloods etc.)
- Faxed copy of the written consent the WA Health MR30A - Patient consent to treatment or investigation - Adult or Mature Minor. If the consent is not sent, the booking will not be taken (**no consent = no booking**).

[9] Boulvain M, Stan CM, Irion O. Membrane sweeping for induction of labour. Cochrane Database of Systematic Reviews 2005, Issue 1. Art. No.: CD000451. DOI: 10.1002/14651858.CD000451.pub2

- Confirmation of the current bishop score and required induction method (a **bishop score of less than 8 will require cervical ripening).**
- If the woman's bishop score changes prior to planned induction then the doctor must notify maternity

2.1.1.b Prior to a doctor booking a woman for IOL

- The doctor and the CMM/CMS (or senior midwife out of hours) must agree that the clinical indication for IOL is appropriate.
- It is not appropriate for this doctor /maternity manager discussion to occur in front of the woman when prioritisation of work load or resourcing may be discussed.
- Each maternity manager may choose to receive all induction requests via fax/e-mail/phone call (**other than URGENT** – see Appendix 1) and then prioritise daily against all IOL requests before confirming a date/time back to the requesting doctor and /or woman.
- If the indication for IOL is not in the **URGENT CATEGORY** the woman must be advised by the doctor that her IOL may need to be postponed if another woman has a more **URGENT** clinical need. This will ensure there are the appropriate midwifery resources available for the provision of one to one care during the induction process.
- The woman is to be advised to phone ahead prior to attending the maternity unit to confirm her induction is proceeding i.e. sufficient midwifery staffing and bed availability to do so.

2.1.1.c Maternity delegation to approve IOL request

- **During business hours:** all IOL requests (except **URGENT**) must be made via the Clinical Midwifery Manager (CMM) or Clinical Midwifery Specialist (CMS) or senior midwife (only where the maternity manager is not a midwife).
- **After hours:** only IOL for **URGENT** clinical indications will be accepted via the most senior midwife on duty.

2.1.1.d Medical handover of the induction booking

- If the requesting doctor will not be the obstetrician supervising the induction, he/she is to discuss this with the on-call Obstetric doctor for the planned induction day and prior to the patient's admission.

2.1.1.e Site capacity for IOL

- Each maternity unit is to determine how many inductions can be safely booked each day (including weekends) considering the available midwifery resources and other planned activity i.e. ELUSCS / External Cephalic Versions etc.
- If the maximum number of inductions are already booked then the request must be escalated by CMM to the Obstetrician on call.

2.1.2 Admission for IOL

- If unexpected high risk factors are identified during admission, the IOL needs to be re-considered in relation to the WACHS Maternity and Neonatal Consultation and Referral Guideline for Clinical Service Levels.
- If there is no consensus between the midwife and managing obstetrician as to the care management plan at any point during care then WACHS Maternity Care Clinical Conflict Escalation Pathway must be followed.

2.2 IOL Requiring Postponement (additional to KEMH)

- Prior to the decision to postpone, the women must have a normal CTG and normal maternal physiological assessment
- **If IOL is deferred until later the same day:**
  - the shift coordinator is to notify the admitting doctor ASAP
  - the management plan must be documented in the woman's medical record
- **If the IOL is deferred to the following day and there is any concern regarding the wellbeing of mother or fetus:**
  - the situation must be discussed with a consultant obstetrician / senior obstetric medical officer
  - consideration be given to an USS biophysical profile
  - if deemed unsafe to delay IOL and additional midwifery resourcing is not possible then expeditious transfer to an appropriately resourced maternity unit.
- Where there are competing demands /activities for IOL then a clinical priority decision must be reached between the specialist obstetrician/senior obstetric medical officer and Midwifery Manager (see Appendix 1 as a guide).

2.3 Induction of Labour Process

The following KEMH clinical practice guidelines must be read in conjunction with this policy:

- Induction of Labour
- Spontaneous Rupture of Membranes (pre-viable, pre-term, term).

2.3.1 Transcervical Catheter

- Transcervical catheter is the recommended first line cervical ripening method except where specific individual advantages are identified for a woman by use of Prostaglandins (PGE2gel or Cervidil).
- Following discussion with the senior obstetric medical officer, prostaglandins may be considered where a transcervical catheter has been unsuccessful and when, on the balance of risks, continuing with the IOL attempt is merited.

2.3.2 Outpatient intracervical catheter IOL for low risk women

- Available evidence suggests that outpatient cervical balloon ripening catheters may be a safe and acceptable option for women[10]:
- Criteria for outpatient cervical balloon ripening include:
  - more than 39 weeks and deemed low risk
  - Woman is happy to go home and lives within 30mins of the hospital
  - Woman has reliable transport to return to the hospital
  - More than one hour has elapsed after catheter insertion.

[10] Gidaszewski, B., Khajehei, M., & McGee, T. (2018). Outpatient cervical ripening: discomfort/pain during speculum and Foley catheter insertion. Midwifery, 67, 57-63.; Dideren, M et all (2018) Safety of the balloon catheter for cervical ripening in outpatient care. BJOG. 2018 Aug;125(9):1086-1095. doi: 10.1111/1471-0528.15047. Epub 2018 Jan 10. Kelly AJ, Alfirevic Z, Ghosh A. Outpatient versus inpatient induction of labour for improving birth outcomes. Cochrane Database of Systematic Reviews 2013, Issue 11. Art. No.: CD007372. DOI: 10.1002/14651858.CD007372.pub3.Henry, A et all (2013). Outpatient Foley catheter versus inpatient prostaglandin E2 gel for induction of labour: a randomised trial. BMC Pregnancy and Childbirth https://doi.org/10.1186/1471-2393-13-25. Catarine, P et al (2017). Outpatient versus inpatient cervix priming with Foley catheter: a randomised trial. European Journal of O & G and Reproductive Biology https://doi.org/10.1016/j.ejogrb.2016.11.026

- Maternal observations are within normal limits
- The post-insertion CTG is normal
- Woman has had explained, agreed to and been provided with written consumer information on outpatient cervical balloon ripening **(see Appendix 2**).

2.3.3 Prostaglandins (PGE2 or Cervidil)

- Vaginal prostaglandins must only be prescribed:
  - by doctors credentialed for obstetrics
  - in maternity units with access to emergency LUSCS.
- If prostaglandin IOL is unsuccessful and the IOL attempt is to be postponed, the woman may be discharged six hours after insertion of PGE2 gel or six hours after removal of Cervidil.
- The timing of prostaglandin IOL is to be decided by each WACHS maternity site taking into consideration:
  - staffing availability (midwifery and theatre)
  - the peak timing for risk of hyperstimulation occurs at 4-5 hours post insertion.
- Cervidil or first dose of PGE2 may be administered by the midwife if it has been prescribed by the Obstetric doctor.
- Prior to second dose PGE2, the woman's clinical situation must be considered by the maternity shift coordinator.
- The second dose of PGE2 may be administered by a midwife if there are no regular contractions and after discussion with the Obstetric doctor.

2.3.4 Ideal Contraction Pattern during Induction / Augmentation

The ideal contraction pattern when inducing labour should mimic that of a spontaneous labour aiming for:

- three (3) to four (4) **strong** contractions in a 10 minute window
- contractions lasting for 60 seconds (maximum 90 secs) each
- with a minimum of 60 seconds rest between each contraction.

A continuous CTG must be applied once regular contractions are occurring

2.3.5 Artificial Rupture of Membranes (ARM) - additional to KEMH

Circumstances where ARM **must only be performed by a consultant obstetrician or** senior obstetric doctor **and** with immediate access to emergency LUSCS:

- High presenting fetal part (head 4/5 or above abdominally, or vaginal station minus 3 or more).
- Low lying placenta.
- Polyhydramnios.

If the woman and clinicians decide to await spontaneous onset of regular contractions after an ARM then a management plan for use of oxytocin infusion must be documented so that:

- Women with risk factors aim to have birth timed for daylight hours (when resources are more readily accessible)
- The time by which if labour has not commenced that oxytocin infusion must commence.

2.3.6 Oxytocin Infusion - additional to KEMH

2.3.6.a Relative contraindications

- Women with a **previous uterine scar and / or high parity (greater than 5)** must not have oxytocin commenced without:
  - discussion with the consultant obstetrician or regional consultant obstetrician
  - onsite access to caesarean section
  - Written confirmation that the previous uterine incision is lower segment transverse (prior to induction /augmentation).

2.3.6.b Oxytocin regime difference - augmentation or induction

- To better align with oxytocin manufacturer recommendations, the half-life of oxytocin and reduced on-site theatre staff in WACHS sites:
  - Oxytocin infusion incremental increases must be timed at 15 or 30 minutely intervals as clinically determined by the primary midwife based on:
    - manual palpation of less than ideal contraction pattern, and
    - a normal fetal heart rate pattern.
  - 15 minutely increases may be more appropriate when:
    - contractions have not commenced
    - contractions are irregular or weak.
- Once active labour is reached (4cm dilation or more) the primary midwife must consider reducing the oxytocin rate while maintaining the ideal contraction pattern. Particular attention must be paid to multigravidas.
- The primary midwife must be careful to maintain the ideal contraction pattern (by abdominal contraction assessment) with care taken to avoid hyperstimulation (more than four strong contractions in 10 minutes or less than 60 seconds rest period between contractions).
- Once the **maximum oxytocin dose (20 mU per minute = 60ml per hour)** has been running for 30 minutes and without the ideal contraction pattern being achieved, the situation must be discussed with the **most senior available on call obstetrician** prior to higher doses being administered. The overall **maximum dose of oxytocin must not exceed 36 mU per minute** (108 mls per hour).

2.3.6.c Care of women receiving oxytocin

- Oxytocin IOL must be commenced in the early morning (0600 – 0800) to:
  - allow for effective use and appropriate time to establish then progress in labour
  - minimise the risk of after-hours intervention (including transfer or NELUSCS).
- One-on-one midwifery care must be maintained once an oxytocin infusion is commenced.
- Where contractions cannot be adequately assessed by external monitoring or manual palpation, the further use of oxytocin to stimulate labour must be reassessed by a consultant obstetrician / senior obstetric medical officer. The use of an intrauterine pressure transducer may be considered if available.

3. Definitions

Active phase labour	• Once cervix is 4cm dilated until birth • **Primigravidas** must also be 100% effaced • Active phase of labour **is not** the onset of labour
ARM	Artificial rupture of Membranes
Augmentation of labour	Use of oxytocin to increase the strength, frequency or duration of contractions when there has been delay in cervical dilatation **during active phase** of labour
CTG	Cardiotocography
First stage of labour	Includes both the latent and active phases of labour
Hyperstimulation	Oxytocin related tachysystole **or** hypertonus associated with abnormal fetal heart rate pattern
Hypertonus	Contractions either lasting more than 90 seconds or occurring with less than a 60 second rest period between
Labour	Includes both the latent and active phases of labour Labour commences from the onset of the latent phase
Latent phase labour	From 0 – 4cm dilatation
Onset of labour	From the commencement of first stage of labour (includes the latent phase of labour) **For primigravida:** • painful contractions at frequency of less than 10 minutes, **AND** • 100% full cervical effacement (regardless of cervical dilation or not) **Multigravida:** • painful contractions at frequency of less than 10 minutes, **AND** • any cervical dilatation or effacement (more than multi os)
Tachystystole	Contractions occurring more frequently than 4 in 10 minutes **(differs to the RANZCOG definition for frequency to ensure the minimum 60 second rest period between contractions is achievable in a 10 minute window)**
USS	Ultrasound scan

4. Roles and Responsibilities

All Staff are required to work within policies and guidelines to make sure that WACHS is a safe, equitable and positive place to be.

5. Compliance

Failure to comply with this policy may constitute a breach of the WA Health Code of Conduct (Code). The Code is part of the Integrity Policy Framework issued pursuant to section 26 of the *Health Services Act 2016* (WA) and is binding on all WACHS staff which for this purpose includes trainees, students, volunteers, researchers, contractors for service (including all visiting health professionals and agency staff) and persons delivering training or education within WACHS.

WACHS staff are reminded that compliance with all policies is mandatory.

6. Records Management

All WACHS clinical records must be managed in accordance with Health Record Management Policy.

7. Evaluation

The site Maternity Manager and Obstetric lead are to:

- monitor, investigate and escalate any maternal or newborn adverse outcomes / incidents where the oxytocin was identified as a contributing factor i.e. maternal PPH, newborn requiring any resuscitation, NELUSCS for fetal compromise
- monitor, benchmark, investigate and escalate IOL for non-medical indications
- monitor IOL rates, trends and outcomes every six months via the perinatal reportof clinical outcomes

The OLG is to monitor and investigate IOL rates six monthly via the Obstetric dashboard

8. Standards

National Safety and Quality Healthcare Standards
Clinical Governance Standard: 1.1b/c, 1.7a,1.27a
Comprehensive Care Standard: 5.5
Communicating for Safety Standard: 6.1,6,11

9. Legislation

Health Services Act 2016 (WA)

10. References

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11. Related Forms

MR30A - Patient consent to treatment or investigation - Adult or Mature Minor
MR70A WACHS Antenatal Inpatient Care Plan
MR71 WACHS Labour and Birth Summary
MR72 WACHS Partogram

12. Related Policy Documents

KEMH Induction of Labour
KEMH Preterm pre-labour rupture of membranes (PPROM)
KEMH Pre-labour Rupture of Membranes at Term
KEMH Prolonged pregnancy: Care beyond 40 weeks gestation
WACHS Electronic Fetal Heart Rate Monitoring Policy
WACHS Maternity and Neonatal Consultation and Referral Guidelines for Clinical Service Levels
WACHS Maternity Care Clinical Conflict Escalation Pathway
WACHS Credentialing requirements for Non-Specialist Obstetricians Guideline

13. Related WA Health System Policies

OD 0657/16 Consent to Treatment Policy

14. Policy Framework

Clinical Governance, Safety and Quality

15. Appendices

Appendix 1: Accepted clinical indications for induction of labour
Appendix 2: Consumer info sheet – outpatient cervical ripening

This document can be made available in alternative formats on request for a person with a disability

Contact:	Coordinator of Midwifery		
Directorate:	Nursing and Midwifery Services	**TRIM Record #**	ED-CO-14-24719
Version:	2.00	**Date Published:**	29 April 2021

Appendix 1: Accepted clinical indications for induction

Urgent indications – booking can occur out of hours via most senior midwife

- Severe preeclampsia (uncontrolled BP) / HELLP.
- Chorioamnionitis.
- Confirmed fetal compromise:
  - abnormal CTG/ fetal biophysical profile at term
  - fetal growth restriction with abnormal dopplers or CTG or biophysical profile.
- Prolonged ruptured membranes (24 hours) - after 37 weeks.

Priority indication – book in business hours via CMM /CMS only

- Confirmed fetal growth restriction / oligohydramnios
- Diabetes requiring insulin – after discussion with consultant obstetrician.
- More than 41 weeks.
- Fetal demise.
- Gestational hypertension / mild pre-eclampsia with worsening bloods on anti-hypertensives - after 37 weeks.
- Rhesus isoimmunisation.
- Cholestasis with serum bile levels of >50 umol or more.

Non-urgent indication AND only after 39 /40 weeks – book business hours via CMM/CMS

- Confirmed macrosomia – estimated fetal weight greater than 90th centile on serial growth scans.
- Uncomplicated twins (controversial) – MCDA is 36-37 weeks and DCDA 37-38 weeks.

Non-evidence based – do not routinely offer

- Diet-controlled gestational diabetes without other complications before 40 weeks.
- To avoid stillbirth / previous stillbirth without other indication.
- To avoid BBA or history of rapid labour.
- Psychological factors.
- Maternal request / partner fly-in-out.
- Term with favourable cervix.
- Maternal age over 40 without other indication (controversial).
- BMI 35 – 45.
- Maternal smoking.
- Decreased fetal movements without further investigation (i.e. CTG or ultrasound) before 39 weeks.
- To avoid caesarean section in low risk pregnancy (very controversial).
- Ethnicity (controversial).
- Antepartum haemorrhage without evidence of maternal / fetal compromise before 39 weeks.