Induction of labour

Clinical Guideline Presentation

45 minutes

Towards CPD Hours

References:

The Queensland Clinical Guideline *Induction of labour* is the primary reference for this package.

Recommended citation:

Queensland Clinical Guidelines. *Induction of labour* clinical guideline education presentation E17.22-1-V6-R22 Queensland Health. 2017.

Disclaimer:

This presentation is an implementation tool and should be used in conjunction with the published guideline. This information does not supersede or replace the guideline. Consult the guideline for further information and references.

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Learning objectives

- Identify the clinical pathway and factors that influence recommendations regarding the method of IOL
- Recognise clinical circumstances that require escalation of care during IOL

Induction of labour (IOL)

When should IOL be recommended?

When the maternal and fetal risks of continuing the pregnancy outweigh the risks of IOL and birth

The most common reason is to prevent prolonged pregnancy

A woman's individual circumstances and preferences influence the timing and method of IOL

When is IOL contraindicated?

Whenever vaginal birth is contraindicated

In Queensland

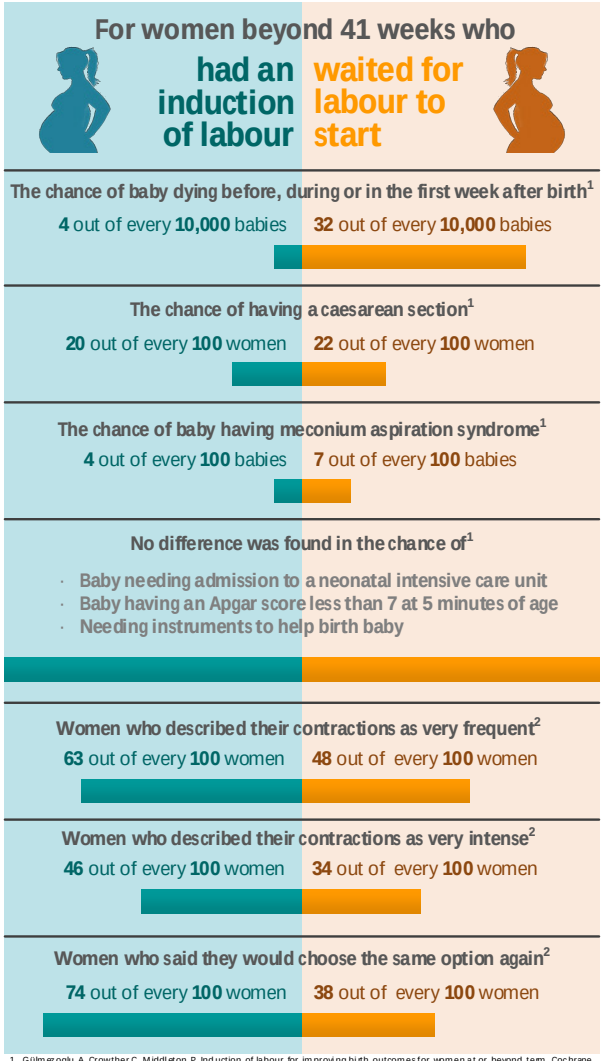
About 25% of labours were induced in Queensland in 2014

Talking about IOL with women

What should be discussed?

- The reasons why induction is being recommended
- Which method of IOL is recommended and why
- The risks and benefits of induction and the risks and benefits of waiting for spontaneous onset of labour
- What will happen if the induction is unsuccessful
- Options for pain relief
- Options if IOL is declined

There is a parent information sheet about IOL at www.health.qld.gov.au/qcg



1. Gülmezoglu A, Crowther C, Middleton P. Induction of labour for improving birth outcomes for women at or beyond term. Cochrane Database of Systematic Reviews. 2012;Issue 4. Art. No.: CD004945. DOI: 10.1002/14651858.CD004945.pub2.

2. Heimstad R, Romundstad P, Hyett J, Mattsson L, Salvesen K. Women's experiences and attitudes towards expectant management and induction of labor for post-term pregnancy. Acta Obstetricia et Gynecologica Scandinavica 2007;86(8):950-6.

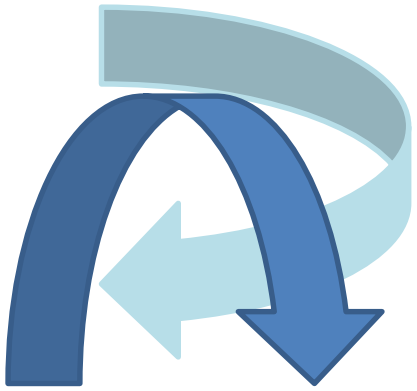
If IOL is declined or postponed

What are your responsibilities?

- Perform a maternal and fetal assessment
- Arrange on-going monitoring and follow-up
- From 42^{+0} weeks offer twice weekly CTG and USS for fetal wellbeing
- Provide information about fetal movements
- Advise the woman to contact a health care provider if concerned ((e.g. decreased fetal movements, bleeding, labour contractions)

Document in the health record

- The clinical assessment
- The content of discussions
- The woman's informed decision
- The plan for ongoing care
- Sign and date the entry



Modified Bishop score (MBS)

Why is the MBS important?

- The state of the cervix is one of the most important predictors of successful IOL
- The MBS is commonly used to assess the cervix
- Each of five features of the cervix is scored and then summed
- The cervix is said to be unfavourable if the MBS is 6 or less
- The cervix is said to be favourable if the MBS is 7 or more

Modified Bishop Score (MBS)				
	0	**1**	**2**	**3**
Cervical dilatation (cm)	< 1	1–2	3–4	> 4
Cervical length (cm)	> 3	2	1	< 1
Station (ischial spines)	– 3	– 2	– 1/0	+ 1 /+ 2
Cervical consistency	Firm	Medium	Soft	-
Cervical position	Posterior	Mid	Anterior	-

Membrane sweep

What about membrane sweeping?

- May reduce the need for formal IOL by encouraging spontaneous labour
- Discuss the risks/benefits of membrane sweeping in the antenatal period
- Offer prior to formal IOL
- If the cervix is closed and membrane sweeping is not possible, cervical massage in the vaginal fornices may achieve similar effect

Risk and benefit

- Optimal gestation at which to commence unknown
- Optimal frequency unknown
- When performed 2nd daily, reduced the number of pregnancies reaching 42 weeks (NNT=6)
- No evidence of increased risk of maternal infection
- May cause discomfort, bleeding and irregular contractions

Assessment

Clinical assessment includes:

- Review of maternal history
- Confirmation of gestation
- Baseline maternal observations–temperature, pulse, respiratory rate, BP
- Abdominal palpation–presentation, attitude, lie, position, engagement
- Vaginal examination
- Assessment of membrane status
- Fetal heart rate, confirm normal CTG
- Identify contraindications
- Consider urgency for IOL

Methods of IOL

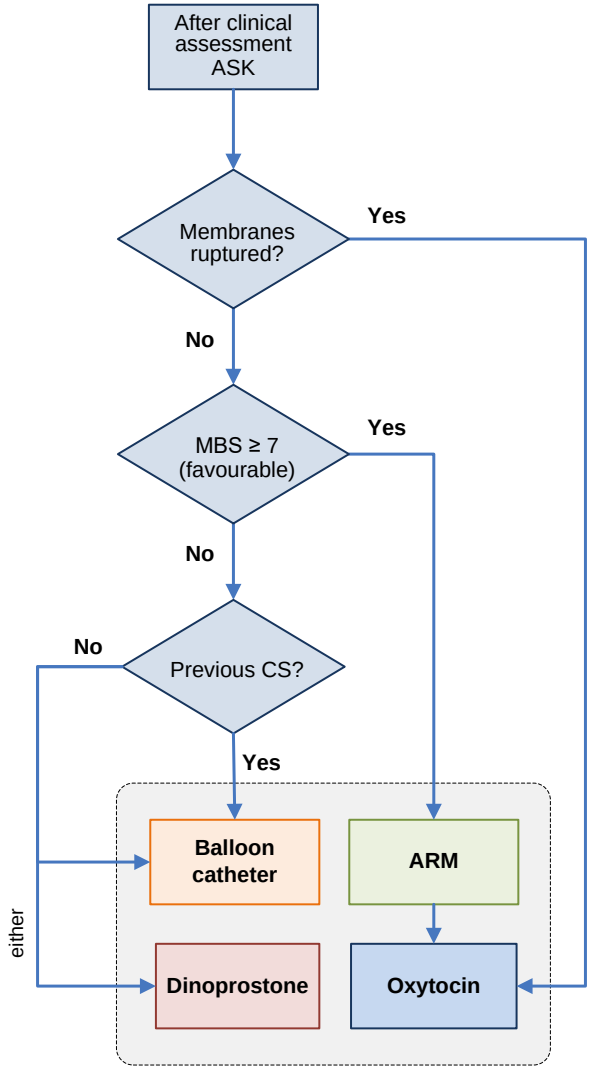
What method(s) to recommend?

Perform a clinical assessment

Follow decision flowchart according to:

- Membrane status
- MBS
- If the woman had a previous CS

Discuss usual recommendation(s) with the woman



Case study

Lucia, a 27 year old caucasian woman, is 40^{+5} weeks with her first baby. She has been well and has no significant history. She asks you if she needs an induction. Her mother told her the baby should have been born by now.

Should you recommend immediate IOL to Lucia?

No. If Lucia and her baby are otherwise well there is no indication for IOL

The aim of IOL in these circumstances is to prevent pregnancy duration beyond 42 weeks gestation

Discuss with Lucia the possibility of IOL if labour does not start naturally before 41+0 weeks.

Exact timing of IOL depends on both service and individual circumstances and preferences

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Should you offer a membrane sweep?

Discuss membrane sweeping with Lucia

It has been reported to reduce the need for formal IOL.

The evidence is limited about when to commence and the optimal frequency

If IOL is indicated, offer membrane sweep prior to formal IOL

Method of induction

Lucia is now 41^{+4} weeks gestation and remains well. She requests a membrane sweep which you perform during a VE. Her modified Bishop score is 3, membranes are intact, and all observations are normal. After discussions with Lucia, IOL is decided upon.

What method(s) of IOL can be recommended for Lucia?

Using the decision flowchart you determine:

- Membranes are intact so oxytocin is not recommended
- Cervix is unfavourable so ARM is not recommended
- No previous CS so either

balloon catheter or dinoprostone can be recommended to Lucia

What about misoprostol?

Misoprostol is not currently recommended for IOL where a live birth is expected.

It is associated with increased likelihood of uterine hyperstimulation with FHR changes

What about other methods of starting labour?

There is insufficient evidence about the safety and effectiveness to support safe use of Laminaria tents, acupuncture, homeopathy, herbal preparations, castor oil

Transcervical balloon catheter

Lucia says she would prefer a balloon catheter because it seems more ‘natural’ than using drugs. Later that day you insert a balloon catheter.

What care is indicated post catheter insertion?

Maternal observations immediately following insertion and at 30 minutes post insertion

Ongoing monitoring as for latent first stage while:

- Observations normal
- No contractions
- Not otherwise indicated

Is CTG monitoring required?

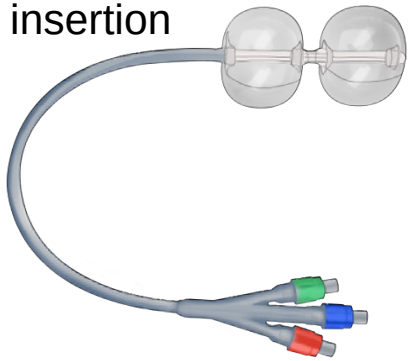
Not unless there are other indications

How long should the catheter stay in?

Schedule an assessment for 12 hours after catheter insertion with a plan to perform an ARM

What if the assessment at 12 hours is delayed?

Remove the balloon catheter no later than 18 hours after insertion



Transcervical balloon catheter

After a few hours, Lucia states she is getting a fair bit of discomfort. She is walking around, has no contractions and the balloon catheter is still insitu

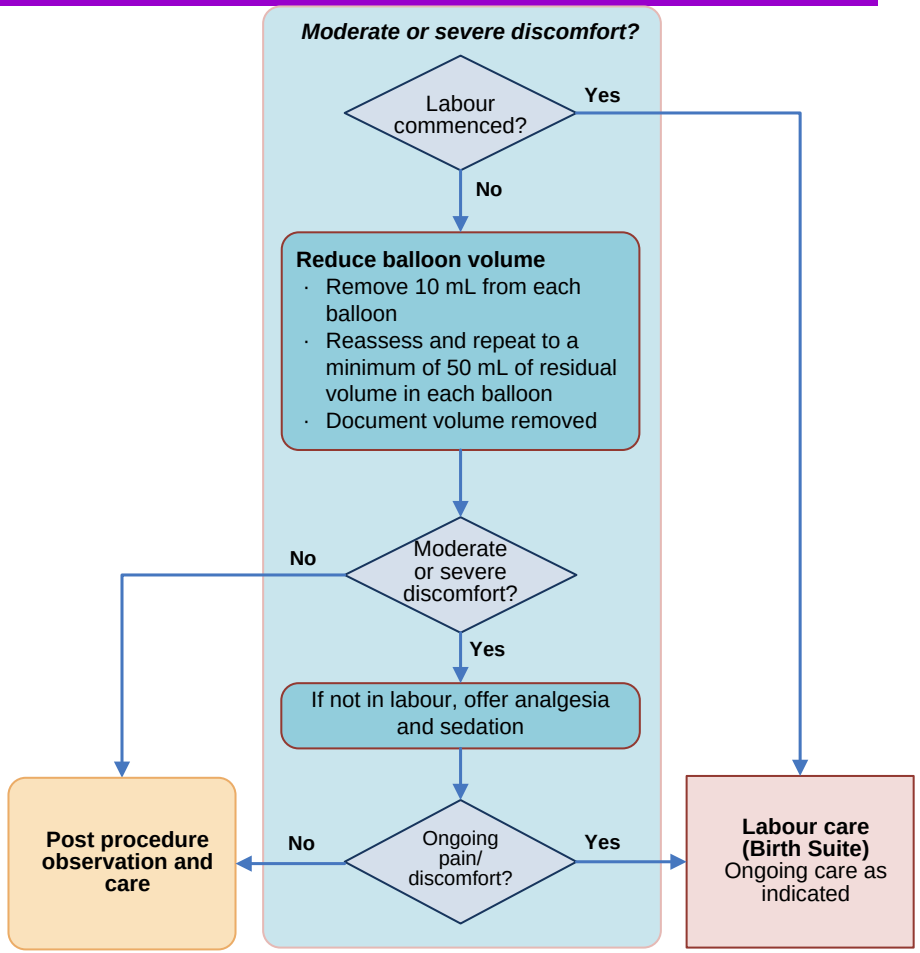
What can you do to help Lucia with the discomfort?

Removing 10 mL of fluid from each balloon may reduce discomfort.

This can be repeated until a minimum of 50 mL **remains** in the balloon catheter

If this does not help and Lucia is not in labour, offer sedation and analgesia

If pain and discomfort persist, consider review by an obstetrician or transfer to birth suite for assessment



Transcervical balloon catheter

Lucia's pain settles. At 6 hours post catheter insertion, she reports the balloon catheter has fallen out. She has no contractions. Observations are normal.

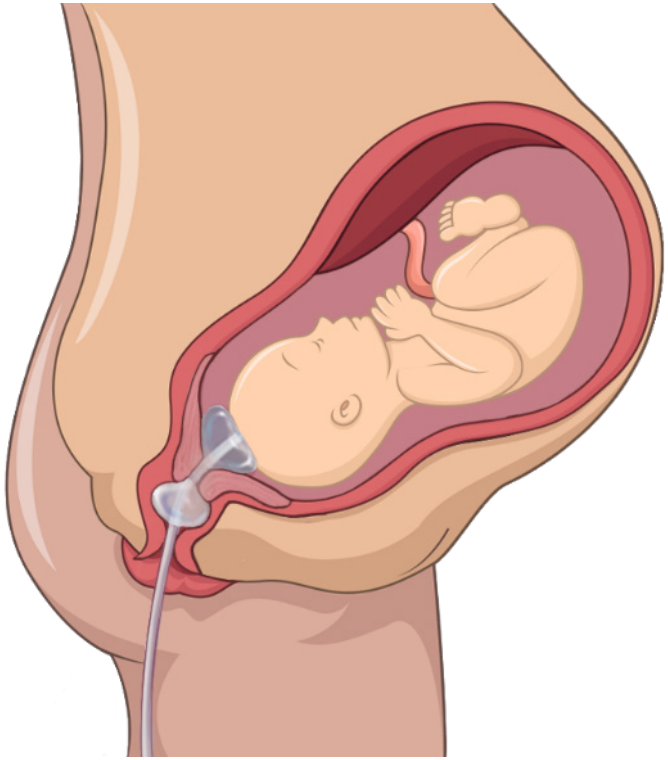
What do you recommend to Lucia?

Transfer to birth suite and then a VE with the intention of performing an ARM, followed by oxytocin infusion would be appropriate

Should a catheter ever be intentionally removed before 12 hours?

Yes, remove the catheter if :

- membranes rupture spontaneously,
- there is uterine hypercontractility with fetal compromise
- upon maternal request



Case study Lucia

An ARM is performed and oxytocin is commenced. Lucia later gives birth to a baby boy Joseph.

Dinoprostone

Maria, a 25 year old primip is booked for IOL at 41^{+5}. She has been well this pregnancy. Unfortunately the hospital has run out of balloon catheters! Maria's MBS is 3. All maternal and fetal observations are normal.

What are Maria's options?

Either dinoprostone gel or dinoprostone pessary can be recommended to Maria

What is the difference between gel and pessary?

Pessary

- May avoid repeat application of the gel
- Position transversely in posterior fornix
- Reassess after 12 hours
- No repeat dose

Gel

- May be more suitable if cervix favourable
- Position high in posterior fornix
- Reassess after 6 hours
- A further 3 doses can be given at least 6 hours apart

Dinoprostone

Maria agrees to have a dinoprostone pessary inserted. All observations and her CTG are normal.

What care is indicated post insertion?

Hourly for 4 hours -TPR, BP, FHR, uterine activity PV loss

CTG for minimum of 30 minutes

Ongoing monitoring as for latent first stage while:

- Observations normal
- No contractions
- Not otherwise indicated

After insertion, what advice do you give Maria?

Remain recumbent for 30 minutes

To tell her midwife or another staff member if:

- Her contractions start
- The pessary falls out

Dinoprostone

Maria asks you how long the pessary will take to work and when it can be removed.

What do you advise Maria?

- Advise Maria that the time it takes to work can vary
- The pessary will be left in for 12 hours unless there are indications for removal before then
- That another assessment will be performed in approximately12 hours

What are indications for pessary removal?

- At the onset of regular painful contractions occurring every 3 minutes, irrespective of any cervical change
- If membranes rupture or there are signs of maternal hyperstimulation or fetal distress
- At least 30 minutes prior to starting an oxytocin infusion
- If there is insufficient cervical ripening after 24 hours

Artificial rupture of membranes

12 hours after the dinoprostone was inserted, you remove the remaining pessary and perform an ARM. You recommend an oxytocin infusion to Maria.

What care is indicated prior to ARM?

Complete a pre IOL assessment

Encourage Maria to empty her bladder

During the VE identify:

- Stage of labour
- MBS
- Presentation and descent
- Membranes
- Assess for clinical concerns

What care will you provide post ARM?

- Confirm passage of fluid and check for meconium or blood
- Ensure good application of the presenting part before completing VE
- FHR immediately following procedure
- Document procedure and findings
- Encourage mobilisation to promote onset of contractions

What if there is liquor or FHR abnormalities after ARM?

- Perform a CTG
- Discuss refer or consult as indicated

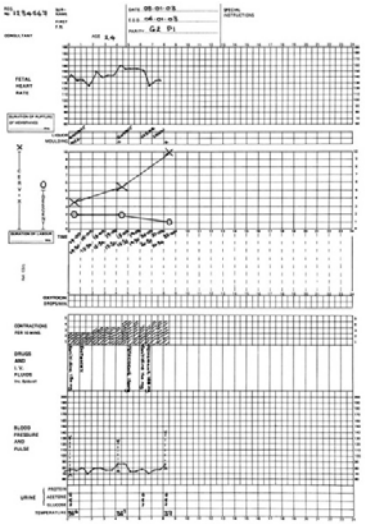
Oxytocin infusion

Maria says she would rather wait to see if labour starts by itself. She has heard that sometimes ARM is enough to get labour going.

What can you advise Maria?

ARM and immediate oxytocin compared to ARM and delayed oxytocin (commenced 4 hours post ARM) showed shorter ARM to birth interval

Compared to amniotomy alone, ARM and oxytocin resulted in fewer women having a caesarean section birth at 24 hours



What specific care is indicated for Maria if oxytocin infusion is commenced?

- One to one midwifery care
- Continuous CTG at the onset of contractions
- Commence the intrapartum record with the infusion
- Maternal pulse and FHR prior to any increase in infusion rate
- Monitor fluid balance as (rarely) water intoxication/hyponatraemia may result with prolonged infusion

Oxytocin regimen

After further discussion, Maria decides to have the oxytocin infusion. A student midwife asks you about the preparation of the infusion.

What do you tell the student midwife about safely preparing an oxytocin infusion?

In Queensland, a standard oxytocin regimen (30 IU in 500 mL) is recommended. This helps reduce medication errors, especially for staff moving between facilities

The same concentration is used if there is a PPH. This eliminates the need to prepare a second bag in an emergency

Always record the dose in mU/minute (not mL/hour)

Use a volumetric pump

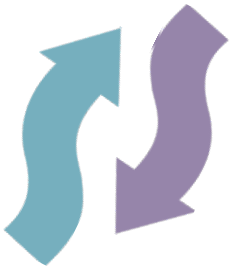
What do you tell the student midwife about how the dose is titrated?

Use the minimum dose required to establish and maintain active labour

The dose is increased at 30 minute or longer intervals

Changes are marked contemporaneously on the intrapartum record

Obstetrician review is required prior to exceeding 20 m/U



Case study

Over the next few hours Maria establishes in labour and later gives birth to a baby boy Marcus.