GIPPSLAND HEALTH SERVICES CONSORTIUM

INDUCTION AND ASSESSMENT OF LABOUR LEARNING PACKAGE

GRCE Points 7.5

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Acknowledgement to contributions made from members of the Gippsland Health Services Consortium

Original developed 2005 Revised 2010
Revised 2018 by Kylie Osborne
Revised 2020 Maria Harrison & Linda Fiddelaers

PACKAGE OUTLINE

This package comprises two separate modules:

Module 1

- **Vaginal Examination**
- **Insertion of Prostaglandin E2 (dinoprostone)**

Module 2

- **Artificial Rupture of Membranes**
- **Application of Fetal Scalp Electrode**
- **Speculum Examination**

It is anticipated that participants will complete both modules, however separate Gippsland Region Continuing Education Points have been allocated for each module

Module 1 – 3 points

Module 2- 4.5 points

Total 7.5 points

RATIONALE FOR LEARNING PACKAGE

Midwives are the main care provider in labour. It is essential that midwives are skilled in assessing maternal and fetal wellbeing during pregnancy, labour and postpartum.

Learning Package Instructions

Aim

Midwives must possess skills which enable them to practice along the continuum of care throughout pregnancy, labour and postpartum.

An ability to perform many skills in this learning package ensures that midwives are able manage intrapartum care, including consultation and referral to obstetric medical staff as required.

Objectives

Demonstrate competency in each of the 5 modules. This is evidenced by:

- Completion of theory for each module
- Completion of Assessment Activities
- Completion of Competency Clinical Skills Assessment (signed by Senior midwife or Medical Officer)

Target audience

Registered Midwives and Diploma and Bachelor of Midwifery Students

Suggested Readings

The list of readings is not exhaustive.
Participants should not rely solely on the information in this package but use it as a basic introduction into these skills.
The websites listed are useful resources for many of the competencies we are required to achieve to practise safely as midwives.

Books:

Johnson, R & Taylor, W (2016) *Skills for Midwifery Practise* 4th Edition. Edinburgh: Churchill Livingstone

Marshall, J & Raynor, M (2014) *Myles textbook for Midwives.* 16th Edition. Edinburgh: Churchill Livingstone

Pairman, S et al (2015) Midwifery: Preparation for Practice. 3rd Edition. Chatswood, NSW, Elsevier Australia

Stables, D & Rankin, J (2010) *Physiology in childbearing: with anatomy and related biosciences*. 3rd Edition Edinburgh: New York: Bailliere Tindall

GUIDELINES

Australian College of Midwives Guidelines for Consultation and Referral 3rd Edition, Issue 2, December 2014

https://www.midwives.org.au/resources/national-midwifery-guidelines-consultation-and-referral-3rd-edition-issue-2

Maternity e-handbook Induction of Labour guidelines

https://www.bettersafercare.vic.gov.au/clinical-guidance/maternity/induction-of-labour

RANZCOG Intrapartum Fetal Surveillance Clinical Guidelines 4th edition 2019

https://ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical-Obstetrics/IFS-Guideline-4thEdition-2019.pdf?ext=.pdf

Australian College of Midwives

https://www.midwives.org.au/

The Royal College of Midwives, Clinical Practice Guidelines

https://www.rcm.org.uk/clinical-practice-and-guidelines

INSTRUCTIONS TO PARTICIPANTS

Module 1 has two parts and module 2 has three parts.
Each part has a

- Theory component
- An assessment component consisting of short answer questions
- A competency based skills assessment.

The completed learning package should be returned to the Midwifery Educator at your Health Service.

The competency based skills assessment can be completed by a midwifery educator, or a senior midwife who has completed the learning package and been accredited or by a member of obstetric medical staff.

INDUCTION AND ASSESSMENT OF LABOUR

DEFINITIONS:

Amniotomy – Artificial Rupture of Membranes (ARM).

Augmentation of Labour – Intervention to correct slow progress of labour.

Induction of labour (IOL) – The stimulation of uterine contractions prior to the onset of spontaneous labour.

Modified Bishop Score: Rating system to assess suitability of cervix for induction of labour.

Speculum (Vaginal) – An instrument used to open the vagina so the cervix can be visualised.

INDUCTION OF LABOUR – Maternity e-handbook background statement

"Induction of labour (IOL) is a common procedure undertaken by maternity service providers.

As with all clinical interventions, IOL should be clinically justified, weighing the risks of the induction against the risks of continuing the pregnancy.

"IOL usually consumes more healthcare resources than spontaneous labour. Continuous intrapartum fetal surveillance, management of oxytocin infusions and longer periods of 'observed' labour all add to the workload. When planning an induction of labour, hospitals should take into account the need for additional resources and plan staffing numbers and skill mix accordingly." (Safer Care Victoria 2020)

Please refer to the Maternity e-handbook Induction of Labour Guideline @

https://www.bettersafercare.vic.gov.au/clinical-guidance/maternity/induction-of-labour

MODULE 1

PART ONE
VAGINAL EXAMINATION

PART TWO
INSERTION OF PROSTAGLANDIN E2 (DINOPROSTONE)

PART ONE: VAGINAL EXAMINATION

Background

Current models of midwifery care encourage midwives to provide for the care of uncomplicated pregnancies from pregnancy through to the post-natal period.

Vaginal examinations are an essential midwifery skill. It is a well-established method of measuring progress in labour.

"Vaginal examinations are only one method of assessing progress in labour. These examinations should be carried out only after discussion with the woman, when the practitioner can justify that they believe the findings will add important information to the decision-making process" (NICE 2008).

This skill empowers midwives to provide continuity of care to women.

To offer such continuity of care, midwives must be adept at assessing the progress of labour by vaginal examinations.

Vaginal examinations are also required when inserting Prostaglandin, when performing artificial rupture of membranes (ARM) and when applying a fetal scalp electrode.

FURTHER READING

Johnson, R & Taylor, W (2016) *Skills for Midwifery Practise* 4th Edition. Edinburgh: Churchill Livingstone

Marshall, J & Raynor, M (2014) *Myles textbook for Midwives.* 16th Edition. Edinburgh: Churchill Livingstone

Pairman, S et al (2015) *Midwifery: Preparation for Practice.* 3rd Edition. Chatswood, NSW, Elsevier Australia

Rankin, J. (2017). Physiology in childbearing with anatomy and related biosciences. (4th ED).

Edinburgh: Elsevier.

VAGINAL EXAMINATION

By its very nature a vaginal examination is a very personal procedure which requires sensitivity and empathy for the woman. It is important to consider the woman's cultural, ethnic and personal background in the context of a vaginal examination. For some woman a vaginal examination is culturally impossible or they would only be able to have a vaginal examination performed by a female. For other woman a vaginal examination may awaken memories of previous unpleasant experiences or abuse.

Informed Consent MUST be obtained prior to vaginal examination

INDICATIONS

- Induction of labour
- Assess progress or delay in labour.
- Make a positive identification of presentation
- Prior to ARM
- To attach a scalp electrode
- To confirm onset of labour – e.g. Spurious labour
- To confirm full dilatation of the cervix
- Maternal request

CONTRA-INDICATIONS:

- Placenta praevia / APH
- Premature labour with or without ruptured membranes
- Maternal refusal
- Caution with prolonged ruptured membranes at term

TIMING

- In conjunction with an abdominal palpation
- 4 hourly or more frequently if indicated, e.g. Induction of labour

INDICATION OF PROGRESS

- Cervix moves from posterior to anterior position
- Cervix ripens or softens
- Cervix dilates +/- effaces
- Fetal head rotates, flexes and moulds
- Fetal head descends

MODIFIED BISHOPS SCORE

Before induction takes place, assessment of the cervix to determine readiness for labour is essential. Modified Bishops score (as per table) is ascertained by assigning points to the parameters of cervical readiness (ripeness) for labour.

Table 41.3 Modified Bishop scoring system (RCOG 2001)

Assessment features	0	1	2	3
Dilatation of the cervix (cm)	0	1–2	3–4	5–6
Consistency of the cervix	Firm	Medium	Soft	–
Length of cervical canal (cm)	>2	1–2	0.5–1	<0.5
Position of cervix	Posterior	Mid	Anterior	–
Station of presenting part related to ischial spines	−3	−2	−1	+1, +2

The V.E. should be preceded by an abdominal palpation. The presence of moulding or caput on VE, can result in presenting part appearing lower than it is. Abdominal palpation is the only reliable method of monitoring descent of the fetal head through the pelvis.

VAGINAL EXAMINATION FINDINGS

External Genitalia

- Varicosities
- Oedema
- Genital warts
- Scarring or perineal trauma
- Female genital mutilation
- Discharge – colour, consistency, amount, odour, bleeding, amniotic fluid

Vagina

- Should be warm and moist
- Hot or dry vagina can indicate dehydration, infection, or obstructed labour
- Tense vagina can indicate fear or previous scarring
- Varicosities

Cervix

Position and consistency

- Prior to labour - posterior or central, firm, non-effaced and os closed
- End of pregnancy / early labour – the structure and position alters. The cervix becomes less rigid and moves forward - ripening.
- A ripe cervix is soft, and able to be stretched by the examiners fingers.

Effacement

- Effacement is the length of the cervix and the degree it protrudes into the vagina.
- With effacement the cervix thins, shortens and lower segment is taken up
- Effacement occurs before dilatation for a primigravida, and simultaneously for the multigravida.
- A non-effaced cervix is long and tubular, the external os closed or partly dilated
- A fully effaced cervix has no protrusion into the vagina

Application of presenting part to cervix

- The presenting part is well (closely) applied to the cervix
- Loosely applied presenting part - finger will go between the presenting part and the cervix.

Dilatation

- Primigravida – the cervix is closed until labour begins
- Multigravida – the cervix can be dilated 1 to 2 cm prior to labour
- Dilatation of the cervix in labour is assessed by the examiner inserting two fingers through the external os and parting fingers to stretch the cervix across the presenting part to assess the cervix diameter.
- Full dilatation has occurred when the cervix is no longer present in front of the presenting part.
- Dilatation should occur progressively

Membranes

- Membranes can be felt as a slick surface over the presenting part.
- They can be difficult to feel particularly in early labour,
    - If there is minimal fore-waters and the
    - Membranes are tightly applied the presenting part.
- Bulging membranes can lead to early rupture of membranes.
- If liquor is leaking and membranes are felt to be intact, then a hind water leak is likely.

Presentation

Cephalic – the head is felt to be smooth, round and firm. Sutures lines or a fontanelle may be felt and there may be moulding present.

Breech - soft and irregular. The sacrum is felt as hard bone and the anus may grip a finger. Fresh meconium is likely to be present.

Face – If a face presentation is suspected, irregular, orbital ridges may be felt. If a finger enters the baby's mouth, it will be sucked. No scalp electrode should be used.

Umbilical Cord – The cord can be felt in the vagina in front of the presenting part on vaginal examination.

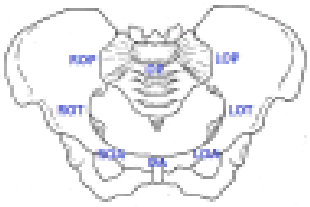
Station

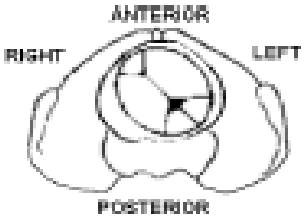
- The leading point of the fetal head at or below the level of the maternal ischial spines is measured in centimetres. Positive numbers indicate that it is below the ischial spines.
- Points are given from 0 to a maximum of 3 points positive or negative e.g. Spines = 0 station, Above = -1 to -3, Below = +1 to +3
- Spines can be difficult to feel and this can be a subjective measurement. Ensure that the measurement is from the fetal head and that it is not caput that is felt.

Position

- Identify the suture lines and fontanelles to confirm position. Refer to diagrams below.
- Sagittal suture - long and straight suture.
- Posterior fontanelle – small triangular area with 3 sutures running from it.
- Anterior fontanelle – large diamond shape with 4 sutures running from it.

Flexion Positions of the Fetal Head





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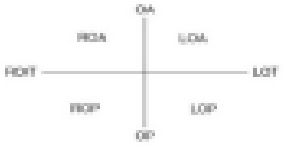

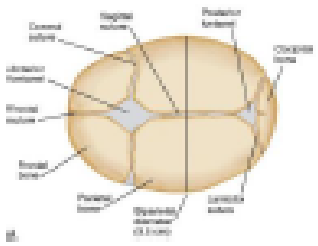

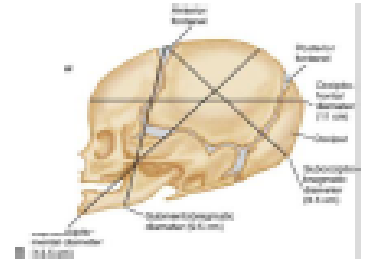

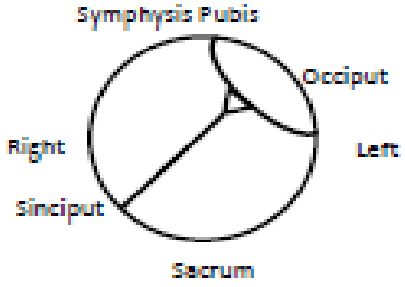

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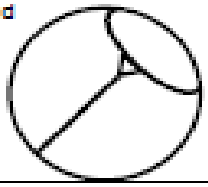

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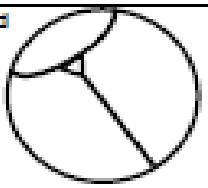

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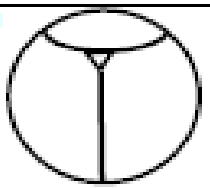

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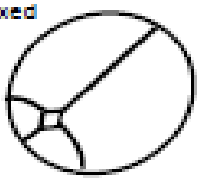

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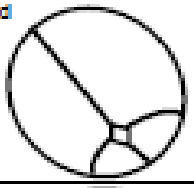

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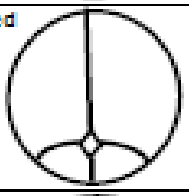

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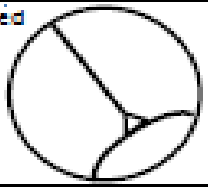

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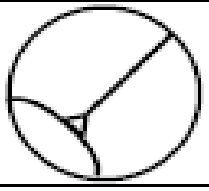

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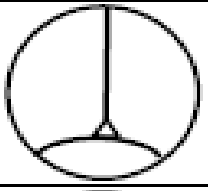

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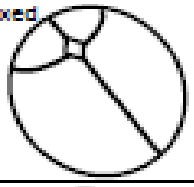

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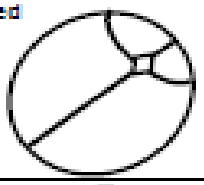

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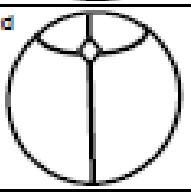

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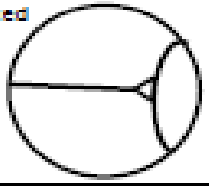

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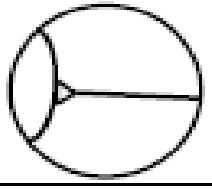

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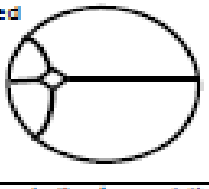

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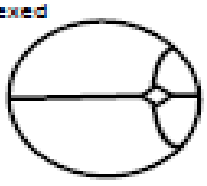

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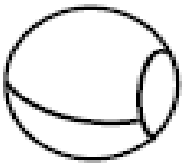


Vaginal Examination documentation

- Always performed after abdominal palpation.
- External genitalia and vaginal wall
- Cervix, position, consistancy,effacement
- Dilatation, application to presenting part
- Presentation if cephalic,descent, position,
- Caput/moulding
- Membranes intact/bulging if ROM
- Colour and amount
- FH following VE

TECHNIQUE

A vaginal examination is a personal and invasive procedure that will be individually managed with sensitivity.

1. Explain to the woman the indication for the vaginal exanimation and obtain consent.
2. Ensure privacy is maintained.
3. If possible, the same person performs each examination, for the benefit of the woman and consistency of results.
4. Encourage the woman to empty the bladder prior to vaginal examination or if required, gain consent to pass a urinary catheter.
5. Elevate the bed to a comfortable height.
6. Perform abdominal palpation and document findings.
7. Position the woman supine with her head elevated and ankles together and knees wide apart
8. Wash hands and don sterile gloves
9. Maintain aseptic technique according to Hospital Guidelines
10. Apply sterile lubricant e.g. KY Jelly or obstetric cream to the tips of the index and middle finger of the dominant hand
11. Inform the woman you are about to commence the examination and gain consent to proceed
12. Gently insert the fingers into the vagina and locate the cervix.
13. It is important that the vaginal examination ascertains as much information as possible, the midwife takes her time and is thorough but gentle.
14. Be aware of contractions and time your examination accordingly. Manage any discomfort according to the woman's needs.
15. After the vaginal examination has been completed, listen to the fetal heart and record rate. Help the woman to return to a position of comfort.
16. Discuss your findings with the woman.
17. Document your findings including the indication.

NAME_____ **DATE**_____

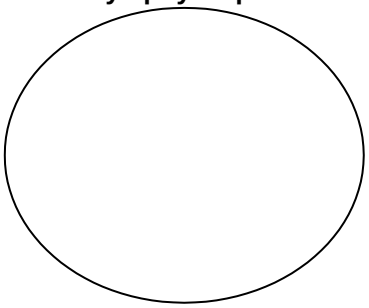
Vaginal Examination Assessment Activities

1. Why is it important for midwives to be able to do an accurate vaginal examination?

2. List as many indications as you can to perform a vaginal examination.

3. What are the contra-indications to performing a vaginal examination?

PRACTICE VAGINAL EXAMINATIONS: DOCUMENT VAGINAL EXAMINATIONS PERFORMED AND RELATE TO MODIFIED BISHOPS SCORE

Date: VE No.	Findings
Introitus **(E.g. Varicosities, lesions, oedema)**	
Cervical Dilation **(also position of cervix)**	
Cervical Consistency **(E.g. Effacement, thickness)**	
Membranes **(E.g. Intact, bulging, ruptured)**	
Vaginal Loss **(E.g. Show, clear liquid)**	
Fetal Presentation	
Fetal Position	
Station	
Identified Landmarks **Make a rough diagram of your findings** **(E.g. Sagittal suture. Fontanelles)** **Also include position and dilation of cervix and additional features such as caput, moulding etc.**	**Symphysis pubis**  **Sacrum**
Pelvic Outlet Assessment	

MODIFIED BISHOPS SCORE

Table 41.3 Modified Bishop scoring system (RCOG 2001)

Assessment features	0	1	2	3
Dilatation of the cervix (cm)	0	1–2	3–4	5–6
Consistency of the cervix	Firm	Medium	Soft	–
Length of cervical canal (cm)	>2	1–2	0.5–1	<0.5
Position of cervix	Posterior	Mid	Anterior	–
Station of presenting part related to ischial spines	−3	−2	−1	+1, +2

Bishop Score =

CLINICAL SKILLS

NAME:_____ **DATE**:_____

DEMONSTRATES: The ability to safely and accurately perform a vaginal examination.	**CRITERIA** **C** = Competent **S** = Requires supervision **D** = Requires development

PERFORMANCE CRITERIA	**C**	**S**	**D**
1. Identifies indication for examination			
2. Explains procedure and obtains patient verbal consent			
3. Checks guidelines for VE in health service			
4. Provides privacy and any comfort measures required			
5. Positions woman correctly			
6. Washes hands and dons sterile gloves			
7. Applies lubricant			
8. Performs vaginal examination • Identifies position, effacement and dilatation of cervix • Determines position of presenting part • Demonstrates awareness of contractions and times examination accordingly			
9. Listens to fetal heart beat post procedure			
10. Cleans, replaces and disposes equipment appropriately			
11. Ensures that woman is left comfortable			
12. Documents findings correctly on: • CTG • Progress notes • Partogram (if applicable)			
13. Discusses findings with the woman appropriately			

COMMENTS_____

_____

_____

_____

COMPETENT **YES**

NOT YET – REQUIRES FURTHER SUPERVISION

NOT YET – REQUIRES FURTHER DEVELOPMENT I.E. RE READING THE PACKAGE

Midwife_____

Assessor_____

PART 2: INDUCTION OF LABOUR: INSERTION OF PROSTAGLANDIN E2 (PGE2) (DINOPROSTONE) & BALLOON CATHETER

Prostaglandin E2 and balloon catheters can be used to promote cervical ripening. The effect being

- Cervical softening
- Cervical effacement
- Stimulation of contractions

IOL: Insertion of Prostaglandin E2

- Prostaglandin E2 (dinoprostone): vaginal gel administration (prostin)
- Prostaglandin E2 (dinoprostone): continuous release vaginal pessary (cervidil®)

Contra indications of the use of prostaglandins E2 (Dinoprostone)

- Known hypersensitivity
- Ruptured membranes
- Grand Multiparty
- Presenting part above the pelvic inlet
- Multiple pregnancy
- Abnormal uterine bleeding
- Known placenta praevia
- Fetal compromise suspected i.e. non reassuring CTG
- Previous uterine rupture
- Active Genital Herpes
- Vaginal bleeding
- Mal presentation
- Severe IUGR
- When risk benefit ratio leans in favour of LUSCS
- Women who have had a previous uterine surgery including LUSCS.
- Previous cervical surgery or rupture.
- Suspected uterine hyper stimulation or hypertonic uterine contractions
- When labour has started
- When oxytocic drugs have been given or are to be given intravenously within 30 minutes.

Precautions for the use of prostaglandins E2 (Dinoprostone)

Uterine hyper tonus or hyper contractility could be undesired effects. Midwives should be aware of the Tocolytic Guideline for their Hospital.
In the event of hyper tonus, tachysystole or hyerstimulation

- Cervidil® pessary should be removed using the retrieval tape
- Perform continuous CTG monitoring
- Assess maternal vital signs
- Escalate care according to local escalation guideline
- Consider use of an antitocolytic e.g. Terbutaline 0.25 mg SC or IV (diluted)
- Document events and management strategies.

PROSTOGLANDIN E2 (DINOPROSTONE): VAGINAL GEL ADMINISTRATION (PROSTIN)

Further information can be obtained from:

Maternity e-handbook Induction of Labour guidelines
https://www.bettersafercare.vic.gov.au/clinical-guidance/maternity/induction-of-labour

Prostaglandin E_2 (PGE_2) Vaginal Gel (Prostin®) is used to promote cervical ripening (softening and effacement) and to stimulate myometrial contractions. The use of PGE_2 for IOL on an unfavourable cervix (Modified Bishop score <6) decreases the likelihood of failed induction and prolonged labour and increases the chance of spontaneous vaginal birth.

Dosage

	Nulliparous	Multiparous
1st dose	1 mg	
2nd dose	1 mg or 2 mg	1 mg
3rd dose	1 mg or 2 mg	1 mg
Maximum dose 24 hour period	5 mg	4 mg
Note: These dosages may be altered at the request of the prescribing medical practitioner, depending on the Bishop score.		

Precautions

- Bishop score must be < 6 at the time of insertion.
- PGE_2 Vaginal Gel (Prostin®) must not be inserted into the cervical canal.
- To reduce the risk of uterine hyper stimulation:
  - oxytocin (Syntocinon®) should not be commenced within six hours of PGE_2 Vaginal Gel (Prostin®) being inserted
  - ARM should not be performed within 4 hours of PGE_2 Vaginal Gel (Prostin®) being inserted.
- Physiological management of third stage is contraindicated when labour is induced.

Insertion

- Ensure the woman has an empty bladder.
- Ask the woman to lie flat with her feet on the bed in a modified lithotomy position.
- Insert the PGE_2 Vaginal Gel (Prostin®) into the posterior fornix of the vagina, avoiding the cervical canal.
- The woman should remain in a lateral position for at least 30 minutes after insertion.

PROSTOGLANDIN E2 (Dinoprostone): CONTINUOUS RELEASE VAGINAL PESSARY (Cervidil®)

Further information can be obtained from:

Maternity e-handbook Induction of Labour guidelines
https://www.bettersafercare.vic.gov.au/clinical-guidance/maternity/induction-of-labour

Dinoprostone (PGE_2) continuous release vaginal pessary (Cervidil®) is used to promote cervical ripening (softening and effacement) and stimulate myometrial contractions. The use of PGE_2 for IOL on an unfavourable cervix (Bishop score <6) decreases the likelihood of failed induction and prolonged labour and increases the chance of spontaneous vaginal birth.

Dosage

Each continuous pessary contains 10 mg of dinoprostone PGE_2 and releases a mean dose of approximately 4 mg over 12 hours (0.3 mg/hr).
Maximum dose: 10 mg over 24 hrs (single dose in 24hr period)

Precautions

- Bishop score must be < 6 at the time of insertion.
- Dinoprostone (PGE_2) continuous release vaginal pessary must not be inserted into the cervical canal.
- To reduce the risk of uterine hyper stimulation:
    - oxytocin (Syntocinon®) should not be commenced with Dinoprostone (PGE_2) continuous release vaginal pessary (Cervidil®) in situ or within 30 minutes of removal
    - ARM should not be performed with Dinoprostone (PGE_2) continuous release vaginal pessary in situ.
- Physiological management of third stage is contraindicated when labour is induced.

Insertion

- Ensure the woman has an empty bladder.
- Ask the woman to lie flat with her feet on the bed in a modified lithotomy position.
- Remove the continuous release vaginal pessary from the foil packaging. Tear the foil top and gently pull the product out of the sachet. Do not use sharp instruments that may damage the product.
- Insert the pessary high into posterior vaginal fornix, using only a small amount of water-soluble lubricant and avoiding the cervical canal.
- Once inserted, a length of retrieval tape may be cut with scissors, always ensuring there is sufficient tape visible outside the vagina to allow removal. Do not tuck tape ends into the vagina.
- The woman should remain in a lateral position for at least 30 minutes after insertion.

Removal

The pessary should be removed quickly by gentle traction on the retrieval tape when the following occurs: (please note: on removal the pessary may have increased in size)

- spontaneous rupture of membranes
- regular, painful 3 minutely contractions, irrespective of cervical change
- uterine hyper stimulation
- abnormal CTG
- maternal adverse effects such as nausea, vomiting, hypotension or tachycardia
- at least 30 minutes prior to commencing an intravenous oxytocic infusion
- insufficient cervical ripening in 24 hours

Assessment before commencement of induction

Maternal assessment

- Document baseline vital signs:
  - blood pressure
  - pulse rate
  - respiratory rate
  - temperature.
- Note any vaginal loss.
- Perform an abdominal palpation and note:
  - fetal lie
  - presentation
  - engagement of fetal head
  - uterine activity over a 10-minute period.
- Vaginal examination and Bishop score, to confirm method of induction.

Fetal surveillance

A CTG must be performed prior to commencement of IOL:

- a normal CTG should be demonstrated within 6 hours prior to insertion of prostaglandins PGE_1 or PGE_2, without change in the clinical situation
- a normal CTG should be recorded prior to the commencement of intravenous oxytocin infusion.

When IOL is indicated in the presence of CTG abnormalities, the lead obstetrician must be consulted prior to commencement of induction.

Assessment after commencement of induction

Maternal assessment (Cervical ripening)

- Remain with the woman for the first 10 minutes, observing the CTG and palpating uterine activity.
- If the first 10 minutes of CTG is reassuring, review the woman and the CTG intermittently; at LEAST every 10 minutes.
- 50 minutes after insertion, record:
  - vital signs:
    - blood pressure
    - pulse rate
    - respiratory rate
    - temperature
  - vaginal loss
  - palpated uterine activity over a 10-minute period
  - CTG report.
- The woman may ambulate as desired 30 minutes after Prostin® or Cervidil® insertion, if the CTG monitoring is normal.
- After the initial hour, record:
  - half-hourly vaginal loss
  - hourly uterine activity, palpated over a 10-minute period.
- After 3 hours, if there are no contractions detected and no fetal concerns, cease frequent observations.
- 6 hours after Prostin®, a vaginal examination can be performed to reassess the Modified Bishop score.
- 12 to 24 hours after Cervidil®, remove the pessary if still in situ and reassess the Modified Bishop score.

Fetal surveillance (Cervical ripening)

- Continuous CTG until a normal trace (as per RANZCOG criteria) is observed.
- After the initial hour, auscultate the fetal heart rate (FHR) half-hourly for three hours.
- Recommence CTG if:
    - FHR abnormalities are auscultated
    - the woman reports uterine activity (CTG may be subsequently discontinued if the CTG is normal and the woman is not in labour. If uterine activity persists but labour is not established, perform a CTG two-hourly)
    - labour is established
    - spontaneous rupture of membranes.

IOL: BALLOON CATHETHER

Balloon catheters can be used for mechanical cervical ripening (softening and effacement), applying pressure on the internal os of the cervix and increasing the release of endogenous prostaglandins. Balloon catheters for cervical ripening are associated with reduced rates of uterine hyper stimulation and tachysystole, reduced rates of instrumental birth due to fetal distress, and fewer neonatal intensive care admissions.

Double balloon catheters (DBCs): Cooks & Atad, for example, are available and licensed for use in labour induction. Current evidence does not point to DBCs having an advantage over single balloon catheters (SBCs) in relation to type of birth, length of labour or maternal/neonatal complications. DBCs, however, are more expensive.

Insertion instructions below relate to Foley catheters.

Insertion

- Ensure the woman has an empty bladder.
- Insert the Foley bulb into the internal cervical os - this can be done digitally or visually using a speculum and ring forceps.
- Fill the balloon with 30ml of sterile water.
- Tape the catheter to tension on the woman's medial thigh.

Removal

The Foley catheter can be removed by deflating the balloon and applying gentle traction:

- at 12-24 hours after insertion (no difference in outcome has been observed with a 24-hour ripening time compared to 12 hours)
- at spontaneous rupture of membranes
- at onset of labour
- when there is hyper stimulation or fetal distress.

The balloon may be expelled spontaneously due to cervical dilatation.

Please note there is a separate SDLP:

Insertion of Cook® Cervical Ripening Balloon for Induction of Labour

Please check your organisational requirements relevant to this procedure

ADVERSE OUTCOMES & COMPLICATIONS

Unsuccessful induction of labour

If induction does not result in labour, clinicians should discuss this with the woman and provide support. The woman's condition and fetal wellbeing should be reassessed. Subsequent management options include:

- a further attempt to induce labour - the timing should take into account the clinical situation and the woman's preferences

OR

- caesarean section.

Uterine hyper stimulation

See refer to local hospital guideline
RANZCOG Fetal Surveillance Guideline 4th Edition 2019

Cord prolapse

To reduce the likelihood of cord prolapse, which may occur at the time of amniotomy, the clinician should ensure that the following precautions are taken:

- Assess engagement of the presenting part by abdominal palpation and confirm by vaginal examination.
- Palpate for umbilical cord presentation during the preliminary vaginal examination and avoid dislodging the baby's head.
- Avoid amniotomy if the baby's head is high and mobile.

Other potential adverse outcomes/complications

- Uterine rupture
- Abnormal CTG
- Hypersensitivity reactions
- Vaginal irritation
- Placental abruption
- Gastrointestinal disturbances
- Amniotic fluid embolism
- Postpartum haemorrhage
- Genital Oedema

Name_____ **DATE**_____

Prostaglandin E2 (PGE2) **Assessment Activities**

1. a) What are the indications to use PGE2?

b) What are the recommended dosages?

Prostin

Cervidil

2. How do prostaglandins work?

3. List the contra-indications for the use of PGE2.

4. What is the maximum dosage of PGE2 allowed in a 24-hour period?

Prostin

Cervidil

5. State what and the frequency of maternal and fetal observations, the midwife needs to perform BEFORE, DURING and AFTER ADMINISTRATION of PGE2.

6. Where does the PGE2 need to be placed in the vagina?

7. List the conditions in which PGE2 should be used with caution.

8. State the main complication of PGE2 insertion and the management there of.

NAME:_____ **DATE:**_____

DEMONSTRATES: The ability to safely insert Prostaglandin gel	**CRITERIA** **C** = Competent **S** = Requires supervision **D** = Requires development

PERFORMANCE CRITERIA	**C**	**S**	**D**
1. Identifies indication & contraindications			
2. Verifies order and dosage on medication chart			
3. Checks Bishops score is documented to ensure appropriateness of procedure.			
4. Explains procedure and ensures that the women's verbal consent has been obtained			
5. Checks guidelines for IOL in health service			
6. Provides privacy and any comfort measures required			
7. Performs / checks pre procedure CTG			
8. Provides women with instructions re: • Need to remain recumbent following gel insertion • May experience uterine activity following gel insertion • Report any severe pain following insertion			
9. Removes gel from refrigerator at least ½ hour before insertion			
10. Removes Cervidil® just prior to insertion and checks that retrieval tape is in place			
11. Performs vaginal examination			
12. Inserts gel into posterior fornix of vagina			
13. Cleans, replaces and disposes equipment appropriately			
14. Ensures that the women is left comfortable			
15. Discusses findings with the woman			
16. Undertakes CTG monitoring for ½ - 1 hour according to hospital policy			
17. Documents gel/pessary insertion on: • CTG • Medication chart • Progress notes • Partogram (if applicable)			
18. Documents VE findings			
19. Outlines procedure for repeated doses of gel			

COMMENTS_____

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COMPETENT YES

NOT YET – REQUIRES FURTHER SUPERVISION

NOT YET – REQUIRES FURTHER DEVELOPMENT I.E. RE READING THE PACKAGE

Midwife_____

Assessor_____

MODULE 2

PART THREE
ARTIFICIAL RUPTURE OF MEMBRANES

PART FOUR
FETAL SCALP ELECTRODE APPLICATION

PART FIVE
SPECULUM EXAMINATION

Artificial Rupture of Membranes (ARM)

Fetal Scalp Electrode Application (FSE)

Speculum Examination

ARM, FSE application and Speculum Examination are all considered advanced practice skills for the midwife working in Victoria. To support the learning and acknowledge these skills, the following must be completed-

- Complete the relevant theory
- Attend a workshop or in-service or demonstration by senior midwife or Medical Officer
- Demonstrate competency in procedure as assessed by midwifery educator or a senior midwife.

On completion of each skill, a certificate of recognition of practice will be issued.

However, this does not necessarily qualify you to act independently with these skills, please refer to the Nurses Board of Victoria Guidelines for Scope of Practice.

PART 3: ARTIFICIAL RUPTURE OF MEMBRANES (ARM) / AMNIOTOMY

Midwives who have completed this learning package may perform ARM ONLY after being assessed as competent by a senior midwife or medical officer and ONLY if their health service has a written policy allowing midwives to perform ARM's

 Pre Requisite for part 3 is completion of Module 1

The process of artificial rupture of membranes during induction of labour (IOL) or augmentation of labour shall be managed following best practice guidelines. https://www.bettersafercare.vic.gov.au/clinical-guidance/maternity/induction-of-labour#goto-methods-of-induction

Please refer to your local guideline to guide your practice

ARM
Contraindications

- High mobile head
- Cord presentation
- Antepartum haemorrhage
- Placenta praevia
- Malpresentation
- Maternal refusal

Equipment

- Amnihook or Amnicot
- Water-based lubricant
- Sterile gloves

Assess / confirm suitability for IOL

Prior to commencing the IOL, the midwife / obstetric medical officer will document the following:

- Discussion with the woman the indication for IOL and risks associated with IOL
- Informed consent has been obtained prior to procedure
- Indication for IOL
- Any contraindications to IOL
- Confirm gestational age / due date
- Assessment of fetal lie / presentation / position – abdominal palpation
- Membrane status (intact / ruptured)
- Assessment of fetal wellbeing

Procedure

1. Explain procedure to the woman and ensure privacy and optimal comfort
2. Check fetal heart rate or perform an admission cardiotocograph (CTG) as per Hospital +/- RANZCOG Guidelines for fetal surveillance
3. Wash hands and don sterile gloves.
4. Perform clean vaginal examination:
5. Locate cervix
6. Pass two fingers through cervix to presenting part. If this is not possible the ARM cannot be performed. The presenting part should be fixed. **Don't try to dislodge the presenting part.**
7. Assess Bishop score
8. Define presenting part and station
9. Check for cord / vasa praevia

ARM using Amnihook and Amnicot

1. Amnihook is passed through the cervix (stabilised by fingers) and pressed against the fetal membranes.
2. The Amnihook is scored along the fetal membranes tearing the membranes.
3. If using amnicot – sheath middle finger with amnicot and use this to score the membranes
4. The liquor should be allowed to drain gradually.
5. Success of ARM is verified by drainage of liquor. Note colour and amount of liquor.
6. Return woman to position of comfort
7. Assess fetal heart rate.
8. Dispose, clean and replace equipment

Document Findings, including

- Time
- Date
- Operator's name and position
- Vaginal examination findings
- Method of ARM
- Liquor colour and amount
- Fetal heart rate
- Plan of management.

NAME_____ **DATE**_____

ARM Assessment activities

1. List the contraindications to performing an ARM

2. What signs indicate that the ARM has been successful?

3. What observations need to occur immediately post ARM?

4. State what you need to document on completion of the ARM

CLINICAL SKILLS

NAME:_____ **DATE**:_____

DEMONSTRATES: The ability to safely perform an Artificial Rupture of Membranes	**CRITERIA** **C** = Competent **S** = Requires supervision **D** = Requires development

PERFORMANCE CRITERIA	**C**	**S**	**D**
1. Identifies indication & contraindications			
2. Assesses fetal lie, presentation, position			
3. Check most recent ultrasound report for placenta praevia			
4. Explains procedure and obtains woman's verbal consent			
5. Checks guidelines for IOL / augmentation in health service			
6. Provides privacy and any comfort measures required			
7. Prepares equipment			
8. Washes hands and dons sterile gloves			
9. Performs vaginal examination			
10. Identifies Bishop score			
11. Locates cervix			
12. Defines presenting part and station			
13. Checks for cord			
14. Inserts amnihook or amnicot and ruptures membranes obtaining evidence of success			
15. Notes colour and amount of liquor			
16. Discusses findings with woman			
17. Leaves woman comfortable			
18. Assesses fetal heart rate			
19. Removes and disposes equipment correctly			
20. Documents in progress notes • Date and time • Name and designation • VE findings • Method of ARM • Liquor colour and amount • Fetal heart rate post procedure • Management plan			

COMMENTS_____

_____

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_____

COMPETENT **YES**

NOT YET – REQUIRES FURTHER SUPERVISION

NOT YET – REQUIRES FURTHER DEVELOPMENT I.E RE READING THE PACKAGE

Midwife_____

Assessor_____

PART 4: FETAL SCALP ELECTRODE APPLICATION

Midwives who have completed this learning package may perform Fetal Scalp Electrode (FSE) application, after being deemed competent by a senior midwife or medical officer and ONLY if their health service has a written policy allowing midwives to perform FSE applications


Pre Requisite for completing FSE application is completion of Module 1 and part 3 of Module 2 (ARM)

Please follow your local guideline

CTG interpretation

Where women are assessed as requiring continuous fetal heart rate monitoring according to RANZCOG Fetal Surveillance Guidelines 4th edition, Midwives have a responsibility to ensure that the fetal monitoring is maintained continuously. If there is difficulty auscultating the fetal heart OR obtaining an adequate fetal heart rate tracing at any time in labour, the fetal heart rate should be monitored using a scalp electrode.

BACKGROUND

- Models of midwifery care are being promoted to provide holistic care to women
- Midwives are responsible for monitoring the wellbeing of the mother and fetus throughout pregnancy, labour and postpartum. This is done collaboratively with medical staff as per
- Australian College of Midwives Guidelines for Consultation and Referral, 2014.
- To provide for continuity of care continuum, midwives need to be able to assess how, when and why it may be appropriate to continuously monitor a fetus and when to apply a FSE

INDICATIONS

- To monitor the fetal heart rate of presenting twin
- To safely monitor fetus when abdominal tracing is difficult
- To allow mother to move around without restriction of abdominal belt
- To ensure continuous fetal monitoring when frequent loss of contact is occurring

CONTRA-INDICATIONS

- Maternal infection such as Hepatitis, HIV and active genital herpes
- Malpresentation i.e. shoulder, face
- Placenta praevia
- Known or suspected fetal coagulation disorders e.g.: maternal thrombocytopenia
- Maternal refusal

Advantages

- More accurate monitoring of fetal heart rate during labour.
- Reduces the effect of maternal and fetal movement on tracing of fetal heart.
- Reduces error in recording fetal heart.

Disadvantages / Limitations

- Patient needs to have ruptured membranes prior to FSE application
- Midwives must be proficient in VEs before they can undertake this procedure
- Midwives must ensure they are certain of presenting part before undertaking this procedure
- Consent MUST be obtained prior to FSE application
- Invasive procedure

Role of the Midwife

The midwife needs to obtain as much information as possible from a VE regarding presenting part to ensure FSE is not applied to an area other than scalp

Application of Fetal Scalp Electrode Procedure;

1. Obtain informed maternal consent
2. Ensure privacy and comfort measures as per VE
3. Wash hands using aseptic technique and don gloves as per VE
4. Open FSE packaging
5. Straighten electrode wires
6. The guide tube may be bent to desired anatomical curvature.
7. Retract the spiral electrode until spiral tip is approximately 1 inch inside guide tube.
8. Position the patient as for VE
9. Perform VE and clearly identify the presenting part.
10. Hold drive tube firmly between fingers. Advance the drive tube and spiral electrode at appropriate angle until the electrode reaches presenting part
11. Maintain gentle pressure against presenting part and rotate drive tube clockwise until mild resistance is met.
12. Full attachment should occur within 1 full turn.
13. Attachment is confirmed by mild resistance to further rotation and recoil of the drive tube grip.
14. Release wires from retention notch and carefully slide the drive and guide tubes over the wires and connector end of spiral electrode.
15. Wipe clean the connector end of electrode. Insert connector end securely into DECG plate adaptor cable.
16. Document application of FSE in on the CTG recording, on the partogram and in the case notes

Removal of Fetal Scalp electrode

1. Pull connector end of spiral electrode from the DECG plate adaptor cable.
2. Remove the spiral electrodes by grasping the electrode wires as close to fetal presenting part as possible and twist ANTICLOCKWISE until free from presenting part.
3. **DO NOT PULL ELECTRODE FROM FETAL SKIN OR PULL WIRES APART** to facilitate removal
4. Inspect spiral tip to ensure it is still attached to hub. Remove it from presenting part using aseptic technique
5. Document removal in case notes.

NAME_____ **DATE**_____

Fetal Scalp Electrode Application Assessment Activities

1. List the indications for applying an FSE

_____
_____
_____

2. List the contraindications to applying an FSE

_____
_____
_____

3. When applying FSE in which direction do you rotate the drive tube

_____

4. How do you confirm that the FSE is attached?

_____
_____
_____

5. Describe the technique for removing a FSE

_____
_____
_____
_____

CLINICAL SKILLS

NAME:_____ **DATE**:_____

DEMONSTRATES: The ability to safely attach a fetal scalp electrode	**CRITERIA** **C** = Competent **S** = Requires supervision **D** = Requires development		
PERFORMANCE CRITERIA	**C**	**S**	**D**
1. Identifies indication & contraindications			
2. Verifies membranes have ruptured			
3. Explains procedure and obtains woman's informed verbal consent			
4. Checks guidelines for FSE application in health service			
5. Provides privacy and any comfort measures required			
6. Positions woman for a VE			
7. Washes hands and dons sterile gloves			
8. Opens FSE packing and checks and straightens electrode wires			
9. Performs VE and identifies presenting part.			
10. Correctly inserts and advances drive tube			
11. Correctly attaches FSE to fetal scalp			
12. Carefully removes drive and guide tube			
13. Cleans connectors end and correctly inserts into DECG plate adaptor cable			
14. Checks tracing on CTG Monitor			
15. Removes and disposes of equipment appropriately			
16. Ensures that the woman is left comfortable			
17. Documents FSE application on: • CTG • Progress notes • Partogram			
18. Describes correct procedure for removal of FSE			

COMMENTS_____

_____

COMPETENT **YES**

NOT YET – REQUIRES FURTHER SUPERVISION

NOT YET – REQUIRES FURTHER DEVELOPMENT I.E. RE READING THE PACKAGE

Midwife_____

Assessor_____

PART 5: SPECULUM EXAMINATION THEORY

Midwives who have completed this learning package may perform a speculum examination, after being deemed competent by a senior midwife or medical officer and ONLY if their health service has a written policy allowing midwives to perform speculum examinations

Staff should read the theory component, then attend a tutorial or ask experienced midwife/medical officer to demonstrate prior to attempting under supervision

Indication for performing a speculum

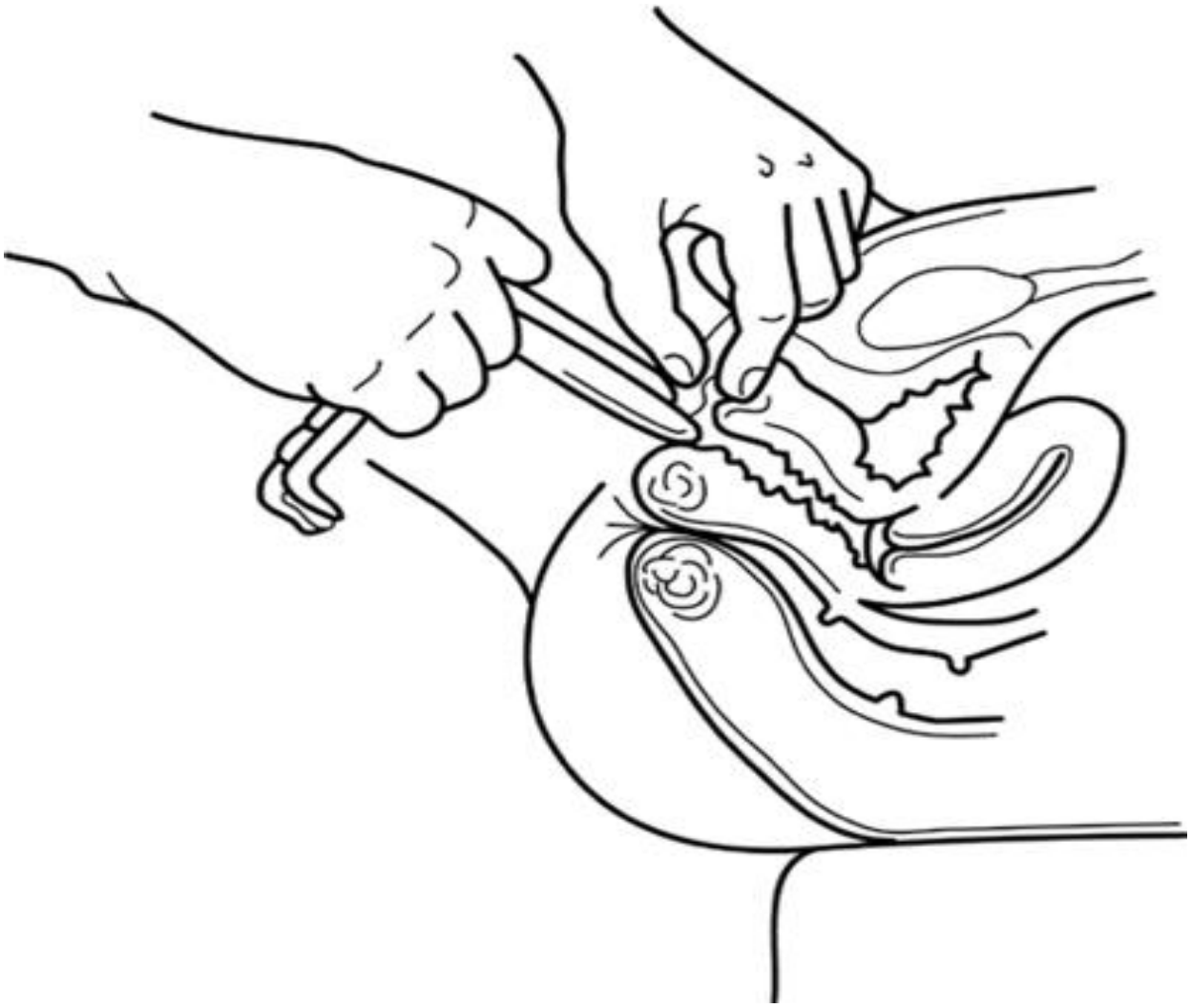
- Preterm labour to visualize cervix
- Inspection of vagina +/- cervix when premature rupture of membranes suspected
- Obtain high vaginal swab
- Obtain cervical smear

Comfort considerations for the woman

- Gain informed consent and provide privacy
- Encourage woman to empty bladder
- Use warm water to cleanse area
- Apply lubricant to speculum or warm with water Keep blades closed during insertion
- Appropriate size speculum

Procedure

1. Gather equipment
2. Wash hands
3. Sterile gloves not required for high vaginal swab or smear.
4. Ask woman to lie in most recumbent position +/- pillow under buttocks, knees apart ankles together. Note: it is no longer recommended to ask a woman to place their fists under buttocks.
5. Touch speculum on introitus and ask if the temperature is ok
6. Part the labia with **Non dominant hand** and insert the blades with **dominant hand** in anterior /posterior position.
7. Insert the **closed speculum at the anatomic angle of the vagina** (45° angle downward toward the small of the woman's back) while maintaining downward pressure until resistance is met and then pull back slightly.



8. Open the blades by unscrewing the handle and bringing them closer together.
9. Inspect vagina and cervix, using a good light source if required. The cervix is on the anterior wall at a variable distance from the vault.
10. To remove speculum close blades and withdraw speculum.
11. Document findings in woman's notes.

NAME_____ **DATE**_____

Speculum Examination Assessment Activities

1. List the indications for performing a speculum examination

_____
_____
_____

2. List the comfort considerations for performing a speculum examination

_____
_____
_____
_____

3. When performing a speculum examination what positions could the woman be in?

_____

4. Describe how the speculum is removed

_____
_____
_____
_____

CLINICAL SKILLS

NAME:_____ **DATE**:_____

DEMONSTRATES: The ability to safely and accurately perform a speculum examination	**CRITERIA** **C** = Competent **S** = Requires supervision **D** = Requires development		
PERFORMANCE CRITERIA	**C**	**S**	**D**
1. Identifies indication			
2. Explains procedure and obtains woman's verbal informed consent			
3. Ensures woman has an empty bladder			
4. Prepares equipment			
5. Provides privacy and any comfort measures required			
6. Washes hands and dons gloves			
7. Positions woman correctly			
8. Washes labial area with a warm solution			
9. Inserts speculum with blades closed in the correct manner			
10. Inserts gel into posterior fornix of vagina			
11. Open blades and inspect vagina and cervix			
12. Removes blades correctly			
13. Cleans, replaces and disposes equipment appropriately			
14. Ensures that patient is left comfortable			
15. Discusses findings with the woman and multidisciplinary team as required			
16. Documents findings in woman's notes			

COMMENTS_____

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_____

COMPETENT **YES**

NOT YET – REQUIRES FURTHER SUPERVISION

NOT YET – REQUIRES FURTHER DEVELOPMENT I.E. RE READING THE PACKAGE

Midwife_____

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