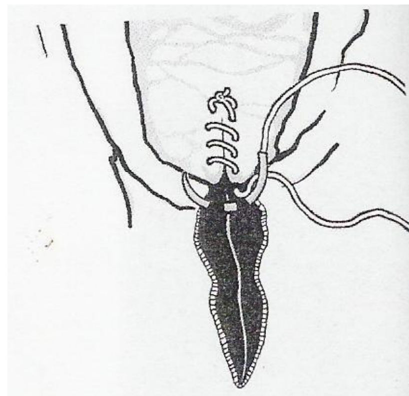
PERINEAL REPAIR



NAME____

HEALTH SERVICE / DEPARTMENT__________________________

Points GRCE 6

ACKNOWLEDGEMENTS
Originally compiled by the Grampians Maternity Network
Reviewed by Angela Kellock, Clinical Midwife Consultant, April 2013
Approved by the Gippsland Region Midwifery Educators Group, April 2013
Reviewed by Rochelle McGrath, Emma O' Neill & Maria Harrison 2023

Table of Contents

Introduction 3

The Program 4

- Program Overview 4
- Approved assessors 4
- Competency Objectives 4
- Maintaining the competency 4
- *Assessment of Perineal Trauma* 5
- *Anatomy of the pelvic floor and genital structures* 6
- The Female External Genitalia 6

The Pelvic Floor 7

- The superficial muscle layer of the pelvic floor 7
- The deep muscle layer of the pelvic floor 8
- The Perineal Body 8

Perineal Trauma 9

- Classification of spontaneous perineal trauma 9
- Labial Tears 9
- Episiotomy 10
- First and second-degree tears – When to suture 10
- Third- and fourth-degree tears 10

Suturing Procedure 11

- Anaesthesia 11
- Suturing Materials 12
- Suturing Techniques 13
- Knot Tying 13
- Procedure 14
- Wound Healing 19

Perineal care and education 20

References 21

Appendix 1 23

Appendix 2 25

Appendix 3 29

Learning Contract and Assessments 31

Introduction

According to Australian perinatal statistics 4 out of 5 women who give birth vaginally will sustain a perineal laceration and/or an episiotomy (Australian Institute of Health and Wellness [AIHW](2022) . Around 1 in 4 (23%) women have an episiotomy (AIHW, 2022). It is essential that midwives and medical staff have the knowledge and skills required to assess perineal tears, which can occur during childbirth, and appropriately refer the woman to a senior medical practitioner when required. This ensures midwives and junior medical staff are working within their professional scope of practice and the women receive a high standard of care.

The way in which perineal suturing is conducted can have negative consequences for women, both physically and psychologically, in the short and long term (Hammond et al., 2022). Many women have reported that the suturing of their perineum was the most physically and psychologically traumatic part of their birth (Hammond et al., 2022). When health professionals are being trained in suturing, the emphasis is on the technical skill of the process, rather than on providing respectful and relational care to women (Hammond et al., 2022). Women have reported feeling vulnerable and exposed throughout the procedure, and 'like a piece of meat' (Hammond et al., 2022). Practitioner's communication, behaviour and manner have such significance to the quality of this care (Hammond et al., 2022). Negative communication reported included: practitioners talking to each other, and not to the woman during the suturing, giving a short description of what the suturing or recovery entails, without inviting the woman to ask questions or gain the clarity she needs, and using formal language or medical jargon that the woman does not fully understand (Hammond et al., 2022). Women positively reflected on care providers who were kind and respectful, who communicated in a conversational manner, and explained what they were doing well (Hammond et al., 2022).

Unfortunately, the training of healthcare professionals in perineal repair is widely diverse, and this can lead to inadequate understanding of anatomy, assessment, and repair, which results in tears being misclassified and inadequately repaired (Hammond et al., 2022). The short- and long-term physical impacts women suffer from perineal trauma include dyspareunia, urinary, flatus or faecal incontinence, and an increased risk of pelvic organ prolapse and vesicovaginal fistulas (Hammond et al., 2022). Psychological impacts can include detriment to the woman's relationship with her partner and loved ones, the attachment she forms with her baby, and her body image and self-acceptance (Hammond et al., 2022).

It is important that clinicians who have developed an expertise in perineal repair continue to maintain the competency to ensure a high standard of skill founded on evidence-based literature and current information. Regular review of evidence-based literature is recommended beyond the scope of the program.

The Program

Program Overview

This learning package is designed to complement a perineal repair training program offered by your health service. This training program requires the support of your manager and the lead obstetrician/ GP obstetrician where you intend to complete the competency.

The competency program expectations include:
Attendance at a 'Perineal Repair Workshop' delivered by an Obstetrician or Midwife with expertise in perineal repair

- Completion of the learning package
- Ongoing practice knot tying and suturing using foam and/or meat
- Observation of a minimum of 3 repairs
- Completion of a minimum of 5 repairs under supervision
- Satisfactory completion of a final assessment using the competency assessment tool
- Completion the program within 12 months

Approved assessors

Assessors must be aware of the requirements of the training program. Appropriate assessors may include Obstetricians, GP Obstetricians, Obstetric Registrars or a midwife with expertise in the competency.

Competency Objectives

On completion of the learning program the midwife will be able to:

- Identify the anatomical structures of the perineum
- Assess and classify the degree of perineal trauma
- Discuss and demonstrate suturing methods and knot tying
- Demonstrate the procedure for perineal repair
- Deliver appropriate information and education to the woman following repair

Maintaining the competency

It is the responsibility of the clinician to maintain the clinical competency. Skill maintenance should include regularly performing the procedure in addition to regular review of the literature to continue best practice. It is recommended that the clinician keep a record of each procedure performed as evidence of skill maintenance. It is also recommended that a minimum of 5 repairs are performed per year. Alternatively, individuals may seek supervised reassessment on a yearly basis if exposure or opportunity for repair is limited. The competency assessment tool may be used for this purpose

Assessment of Perineal Trauma

At the completion of the third stage of labour it is important that the clinician performs a thorough and systematic assessment of the perineum. It is important to explain the purpose of the examination and position the woman in the unsupported lithotomy position with an adequate light source. The examination may be uncomfortable for the woman and nitrous oxide may be required.

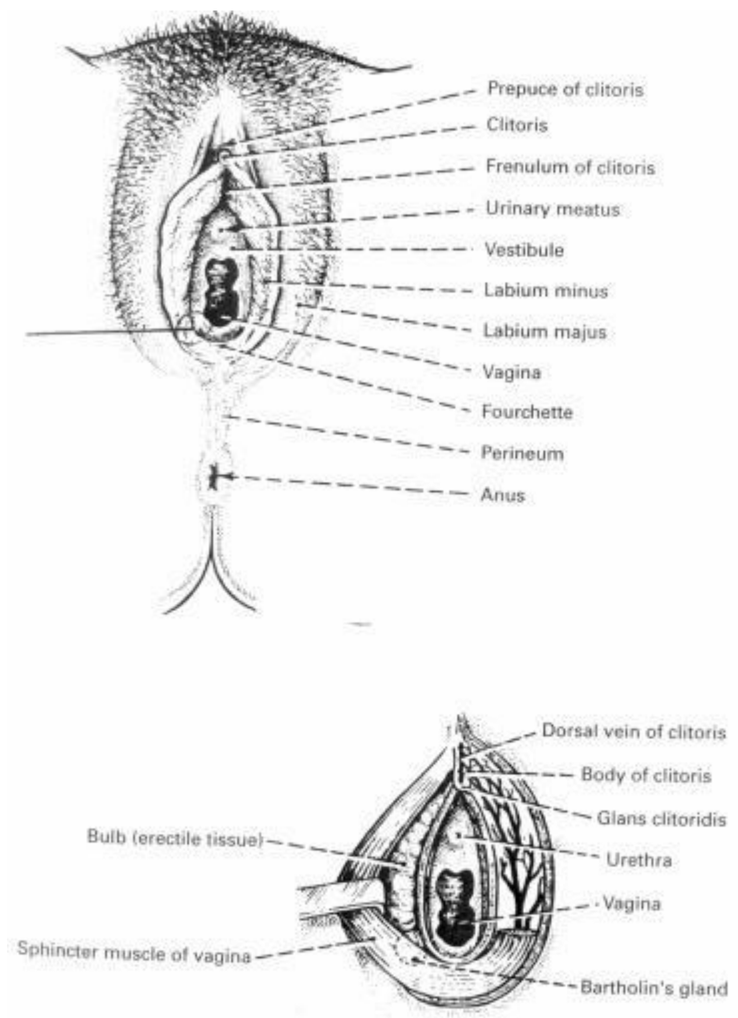
The external genitalia should be cleaned and inspected for lacerations. A warm wet combine should be used to part and inspect the labia, the vagina and then the perineum. If a tear is seen it is important to visualise the apex of the tear and to identify anatomical landmarks including the hymenal remnants.

A rectal examination should be performed to determine the degree of the tear. This will enable the examiner to determine if the repair to be performed is within the scope of practice of the clinician. The assessment findings and the recommendation for repair should be explained to the woman. Verbal consent should be obtained before all perineal repairs and included in the documentation.

It is more difficult to identify the anatomical structures when viewing the real anatomy. Ask your supervisor to assist you with this each time you perform a repair and it will become easier.

Anatomy of the pelvic floor and genital structures

The Female External Genitalia



McCance & Huether (1990)

The external parts of the female genital tract are collectively known as the vulva.

- The mons pubis is a pad of fat lying over the symphysis pubis and is covered in pubic hair.
- The labia majora are the two folds of fat and areolar tissue, covered with skin and pubic hair on the outer surface. The labia majora extends from the mons pubis anteriorly and merges with the perineum behind. The Bartholin's gland lies deep to the posterior part of each labium and opens into the vaginal canal.
- The labia minora are two thin folds of skin lying between the labia majora. Anteriorly they divide to encircle the clitoris forming an upper fold called the prepuce and a lower fold called the frenulum. Between the labia minora is an area called the vestibule in which are situated the openings of the urethra and the vagina.
- Posteriorly the labia minora form a fold of skin called the fourchette.

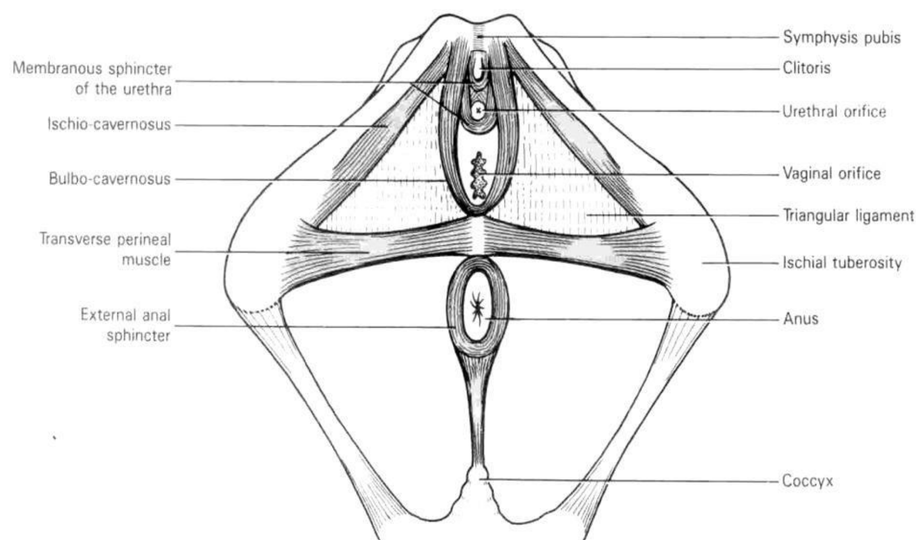
The Pelvic Floor

The pelvic floor is formed by soft tissues. The most important of these is the muscular diaphragm which forms the support base for the pelvic organs as they pass through it. The urethra, vaginal and anal canal pass through the pelvic floor.

The pelvic floor consists of two main muscle layers which are supported by fascia and connective tissue:

- The superficial layer
- The deep layer

The superficial muscle layer of the pelvic floor

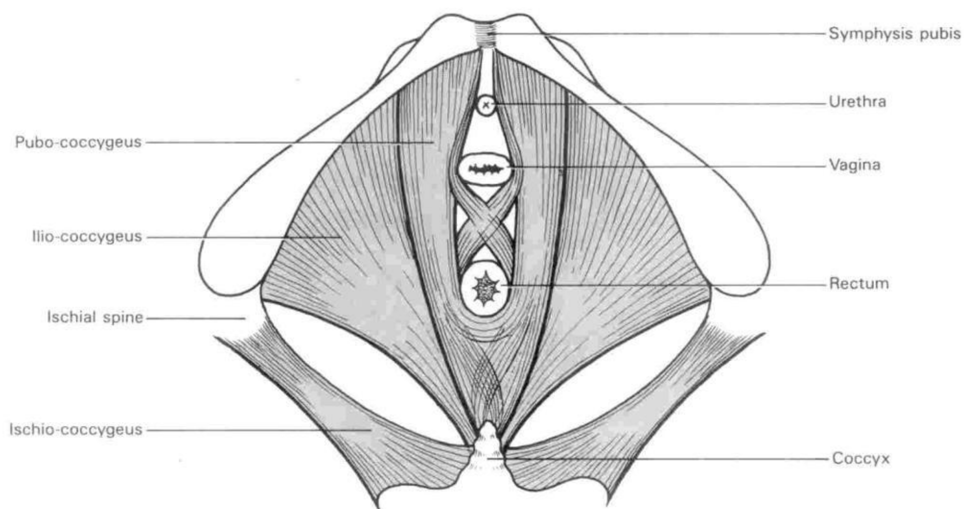


Bennett & Brown (1999)

The muscles which form the superficial layer include the:

- Transverse perineal muscle which passes from the ischial tuberosity to the perineal body
- External anal sphincter which is divided into superficial and deep components
- Bulbocavernosus muscle which runs from the perineal body up to the base of the clitoris within the labia majora
- Ischio-cavernosus muscle which pass from the ischial tuberosities and extend to the corpus cavernosus of the clitoris

The deep muscle layer of the pelvic floor

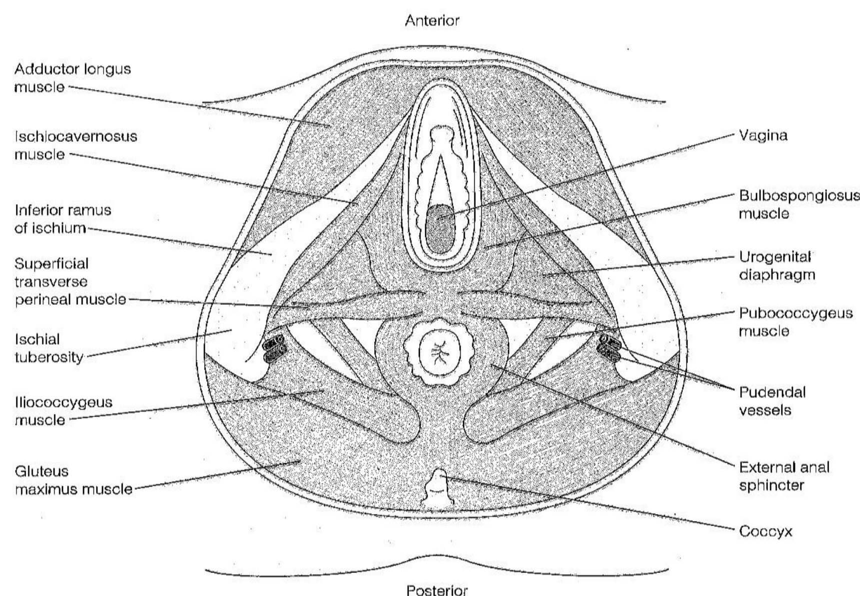


Bennett & Brown (1999)

The muscles which form the deep layer which lies like a sling called the levator ani muscles include three main pairs of muscles including the:

- Pubococcygeus muscles which pass from the pubis to the coccyx with fibres joining the deeper part of the perineal body
- Ischiococcygeus muscles which pass from the ischial spine to the coccyx in front of the sacrospinous ligament
- Iliococcygeus muscle which passes from the white line of the pelvic fascia on the iliac bone to the coccyx

The Perineal Body



Olds, London & Ladewig (1996)

The perineal body is a pyramidal shaped joining of muscles and fibrous tissue which lies just below the pelvic floor. It is situated between the vagina and the rectum. In side view it is triangular shaped and forms a space between the anal canal and the vagina. Muscles which meet in the perineal body include the transverse perineal, pubococcygeus bulbocavernosus anteriorly and the superficial external anal sphincter posteriorly.

Perineal Trauma

Perineal trauma is any damage to the genitalia which may occur during childbirth. It may occur spontaneously or be intentional by episiotomy. Anterior perineal trauma is injury to the labia, anterior vagina, urethra, or clitoris and is usually associated with little morbidity (Wilson, 2017. Posterior perineal trauma is an injury to the posterior vaginal wall, perineal muscles or anal sphincter and may be associated with increased morbidity (Wilson, 2017).

Classification of spontaneous perineal trauma

Degree	Tear
First degree	Spontaneous injury to the skin only (includes fourchette, hymen, labia, vaginal epithelium)
Second degree	Spontaneous injury that may involve the posterior vaginal wall, subcutaneous fat, perineal skin layer, superficial muscles (bulbocavernosus and superficial transverse perinea) and deep muscles (pubococcygeus)
Third degree	Spontaneous injury involving the above muscles but also the anal sphincter complex (EAS and IAS) 3a. Less than 50% of the EAS thickness torn 3b. More than 50% of the EAS thickness torn 3c. IAS torn
Fourth degree	Spontaneous injury that involves complete disruption of external and internal anal sphincter complex and the anal epithelium.

Labial Tears

The labia minora area is a very sensitive and vascular area. Tears tend to heal well without suturing and may respond well to some gentle pressure for 1-2 minutes. If the tear is deep or continues to bleed sutures may be required. If there are bilateral labial tears or grazes there is the risk that the labia may heal together and fuse. The woman should be instructed to gently part the labia once a day in the bath or shower (whether or not it is sutured) to minimize the risk of fusion. Alternatively, one or both of the two labial tears can be sutured to minimize the risk of fusion (Arias & Bick, 2016; Reale, 2019).

Episiotomy

An episiotomy is a surgical procedure where an incision is made into the perineum to enlarge the vaginal opening to improve fetal and maternal outcomes. Episcissors-60 are surgical scissors used for episiotomy, and are designed to achieve a mediolateral cut at 60 degrees to the perineal midline to minimise the risk of obstetric anal sphincter injuries. When an episiotomy is performed the tissue layers involved are similar to that of a second-degree tear. Loss of pelvic floor integrity and dyspareunia may result from damage to the levator ani muscle with a mediolateral episiotomy.

First and second-degree tears – When to suture

Most first-degree tears will heal well spontaneously and suturing is not needed (Arias & Bick, 2016; Reale, 2019). More extensive first-degree tears can be sutured using continuous running stitches (Reale, 2019). In some situations, a single interrupted stitch or two may accomplish closure (Reale, 2019).

In a second-degree tear, the muscle should be sutured to assist with healing (National Institute for Health and Care Excellence [NICE], 2014). If the skin is well opposed once the muscle has been sutured, then there is no need to suture it (NICE, 2014).

Third- and fourth-degree tears

It is important to carefully assess perineal trauma to exclude a third- or fourth-degree tear as failure to diagnose these tears can result in poor long-term outcomes for the woman. Repair of third- and fourth-degree tears are outside the scope of practice of the midwife and junior medical staff and must only be repaired by a senior clinician in theatre with appropriate anaesthesia.

Women with third- and fourth-degree tears should receive appropriate antibiotic therapy, ongoing education regarding bowel care, wound care and bladder care following repair and a frank discussion regarding birth options in subsequent pregnancies. Appropriate follow up includes referral to a continence clinician, physiotherapist and communication with the General Practitioner to ensure ongoing care and assessment.

When examining the perineal structures observe for the absence of 'puckering' around the anterior aspect of the anus. When performing a digital rectal examination, the woman should be asked to squeeze the anus. If the external anal sphincter is damaged the separated ends can be seen to retract backwards. If the woman has epidural analgesia this may be difficult to assess. The muscle should be palpated between the finger and the thumb.

Suturing Procedure

It is important to have a good knowledge of the perineal anatomy and the suturing procedure before starting to perform repairs. Long-term physical, psychological and social problems may occur as a result of a traumatic experience for the woman when having the repair procedure. In addition, poor technique, inadequate approximation of the wound and structures, and failure to adequately assess /recognise third- and fourth-degree tears can have long term effects on the woman's bowel and bladder function.

Anaesthesia

It is useful to combine the use of nitrous oxide and oxygen gas with the administration of local anaesthetic to reduce the discomfort of the procedure.

A regional anaesthetic such as epidural analgesia may provide adequate anaesthesia for suturing. The degree of anaesthesia should be assessed and a local infiltration may also be required.

The perineum is infiltrated with 1% Lignocaine up to 20mls (including prior infiltration for episiotomy).

Using an aseptic technique, the Lignocaine is infiltrated into the four aspects of the trauma. The needle is inserted from the fourchette along the under surface of the vaginal mucosa to the apex of the area to be repaired. The syringe is then withdrawn slightly to ensure the needle is not placed in a blood vessel. The Lignocaine is injected as the needle is withdrawn along the vaginal mucosa without withdrawing the needle completely at the fourchette. The needle is turned downwards and inserted along the full length of the perineal muscle to the distal end of the area to be repaired. Check that the needle is not in a blood vessel and then inject the solution as the needle is withdrawn. Repeat the procedure on the opposite side.

Allow adequate time for the anaesthesia to work before commencing the procedure and if the woman reports inadequate anaesthesia at any time during the procedure this should be immediately addressed.

Suturing Materials

Clinicians tend to differ on the type of suture material they prefer to use. This is generally based on what they are used to using, what is available and personal opinion. The current accepted choice for suture material when repairing first and second-degree tears is Vicryl and Vicryl Rapide which are absorbable synthetic sutures.

In general, the evidence suggests that Vicryl Rapide has been associated with a significant reduction in pain 'when walking' at 10-14 days postpartum and a significant reduction in the need for suture removal up to three months postpartum when compared with the standard Vicryl (RCOG, 2004). The current preference is to use Vicryl Rapide for perineal repair however some clinicians prefer Vicryl for repair of deep muscle layer of perineal wound/ episiotomy and use Vicryl Rapide for the skin layers. Vicryl provides longer wound support than Vicryl Rapide and may be a better choice for muscle layers which require 2-3wks tensile strength in order to provide appropriate mechanical support to the tissue plane.

You may wish to discuss the choice of suture material with your supervisor before commencing the competency to avoid confusion during the repair procedure.

The rate of absorption of Vicryl Rapide is much faster than Vicryl and it is important to inform women of the absorption time and when symptoms may improve or problems may occur.

	Vicryl	**Vicryl Rapide**
Material	Polyglactin 910	Polyglactin 910
Strength Retention Profile	75% at 2 weeks 50% at 3 weeks 25% at 4 weeks	50% at 5 days 0% at 10-14 days
Absorption Profile	56-70 days (63 days average)	42 days

(Please refer to Appendix 1 for comparison table including other suture materials)

It is important to use the appropriate size suture material for perineal repair. Generally, your labour ward will stock 2/0 (00) and 3/0 (000). The more zeros in the size the smaller the width of the thread, therefore 3/0 is smaller than 2/0. Generally, 2/0 is preferred for repair of first- and second-degree tears and 3/0 may be used for repair to the labia minora.

Suturing Techniques

Remember:
Use a curved needle
The wrist action combined with entry into tissue with point of the needle is important.
The needle must follow the directional path – so as the needle enters the tissue, rotate your wrist and hand approximately 180 degrees.

- Continue to follow the curve of the needle on exiting as well.

Continuous	**Interrupted**
▪ Continuous Blanket (continuous locked) ▪ Continuous unlocked ▪ Continuous subcuticular	▪ Interrupted ▪ Crown stitch used occasionally to repair bulbo cavernosus muscle
Comparison ▪ takes less time ▪ even distribution of tension, ▪ leaves less foreign material in wound (loss knots) ▪ if it breaks, the whole line is disrupted	Comparison ▪ time consuming ▪ if one breaks the remaining sutures still hold wound ▪ together ▪ easier to learn for beginners

Refer to Appendix 2 for instructions for each technique

Knot Tying

Consider the following principles:

- The knot, when complete, must be firmly tied so it cannot slip. Check the position and lock of the knot with your finger.
- Generally, the first knot may use "two throws" and the second knot "one throw".
- The simplest type of knot is preferred.
- Extra knots do not add to the strength but simply add bulk.
- The knot must be as small as possible to prevent tissue reaction.
- Cut the ends of the knot as short as possible.
- When tying the knot avoid sawing the two strands as this can weaken the suture.
- Be careful not to damage the suture when handling it. Avoid unnecessary clamping of it with needle holders or forceps.
- Sutures for approximation rather that haemostasis should not be pulled too tightly. This could lead to tissue damage and breakage of suture material.
- It is important to gain confidence with knot tying and suturing techniques with the instruments on numerous occasions before starting to perform the repair procedure

Refer to Appendix 3 for instructions for knot tying

Procedure

Many clinicians have different techniques they use for perineal repair. This package describes the general accepted technique for repair in the midwifery literature. This technique may be varied according to the extent of the repair. In general, it is ideal to have the minimal number of knots and ensure haemostasis is achieved.

Discuss with your supervisor the technique for repair you are going to use before starting the procedure

Regardless of the technique the principles remain the same:

Check the extent of the trauma by thoroughly examining the vagina and perineum to establish the extent of the trauma.

Use x-ray detectable swabs for the procedure. Cotton wool balls must not be used but swab sticks are acceptable.

2. A rectal examination should be performed as part of the assessment.

Suture as soon as possible after delivery as it is less painful and reduces the risk of infection.

Good lighting is essential for the repair to visualise and identify the structures involved.

5. Ask for assistance if in doubt to the extent of the trauma or structures involved.

6. Ensure good anatomical restoration and alignment to facilitate healing.

7. Close all dead space to ensure haemostasis and prevent infection.

Use the minimal amount of suture material, and do not over tighten sutures or knots as this may impede healing.

Following the repair, a rectal examination should be performed to ensure no suture material has been inserted through the rectal mucosa.

10. Ensure adequate documentation.

11. Ensure the woman is educated regarding perineal hygiene and pelvic floor exercises.

Step 1 Suturing the vagina

1. Repair any lacerations first or any that are bleeding. One or two interrupted sutures may be required.

2. Identify the apex of the wound. If there is more than one apex, they may each need repairing before the final repair of the vaginal wall.

3. Insert the anchoring suture 0.5 cm above the apex. This will assist with haemostasis of small vessels as well as form the anchor stitch.

4. Leave the cut end 5 cm long so that it can be identified during inspection at completion.

5. Repair the vaginal wall with a continuous non-locking stitch with approximately 0.5cm between each stitch. Enter the opposing edge of the laceration in a similar position and exit approx. 0.5 cm from the wound edge. This may be done with two bites.

6. Continue with repair placing sutures 0.5 – 0.75 cm apart. Match up wound edges. Use enough tension to maintain haemostasis and oppose the wound. Continue to suture until the hymenal remnants are reached, ensuring sutures are not placed in the hymenal remnants.

7. Place the needle behind the hymenal remnants and emerge in the centre of the perineal muscle.

OR

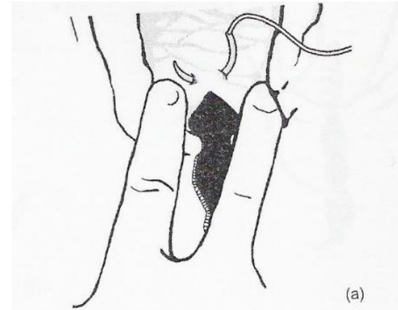
Once the fourchette is reached, tie off just inside the introitus

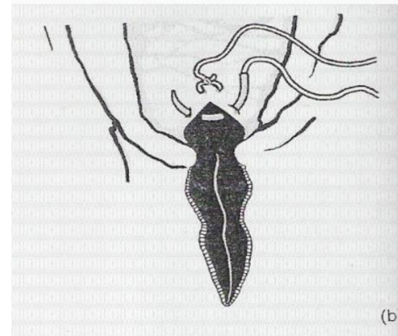
8. Inspect the wound for haemostasis and satisfactory apposition.

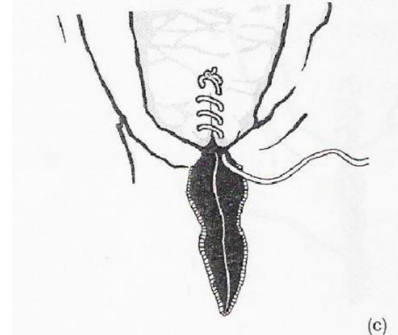
Note

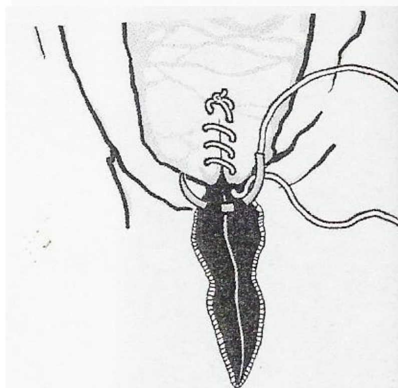
Heals in approx. 10 – 14 days

- *NB sutures placed too deeply may penetrate the rectal mucosa resulting in a rectovaginal fistula if the suture is left insitu*









Grampians Maternity Network (2011)

Step 2 Suturing the perineal muscle

1. Check the depth of the trauma.

2. Repair the perineal muscles in one or two layers with the same continuous stitch.

OR

Use interrupted sutures.

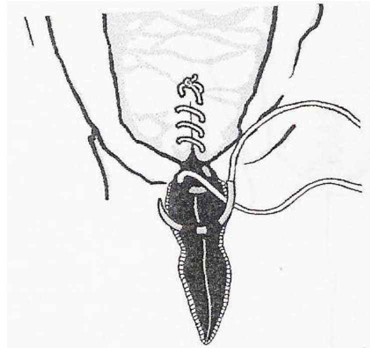
3. Ensure the muscle edges are apposed carefully leaving no dead space and check approximation every 2-3 sutures.

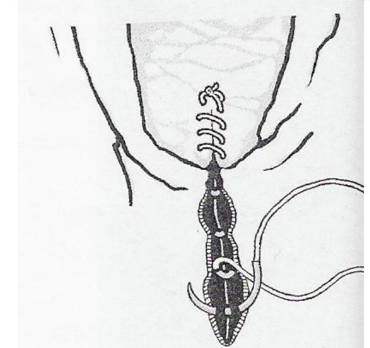
4. Visualize the needle between sides to prevent stitches being inserted into the rectal mucosa.

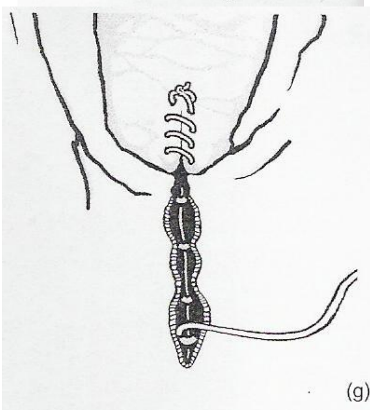
5. On completion of the muscle layer, the skin edges should align so that they can be brought together without tension.

Note

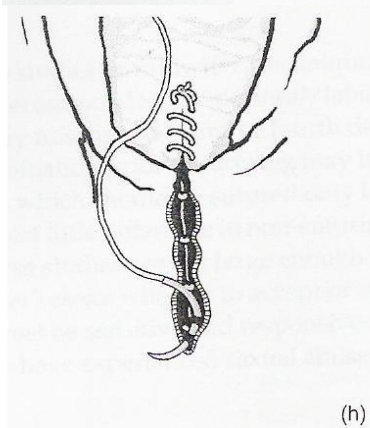
- *Heals in approx 7 – 14 days*







(g)



(h)

Grampians Maternity Network (2011)

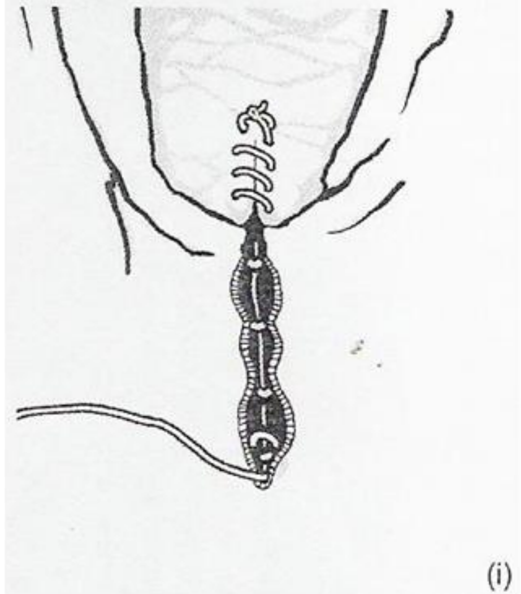
Step 3 Suturing the skin

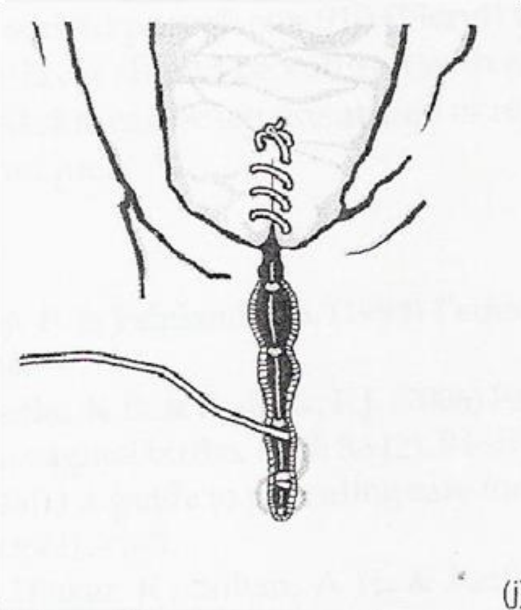
<table>
<tr>
<td>

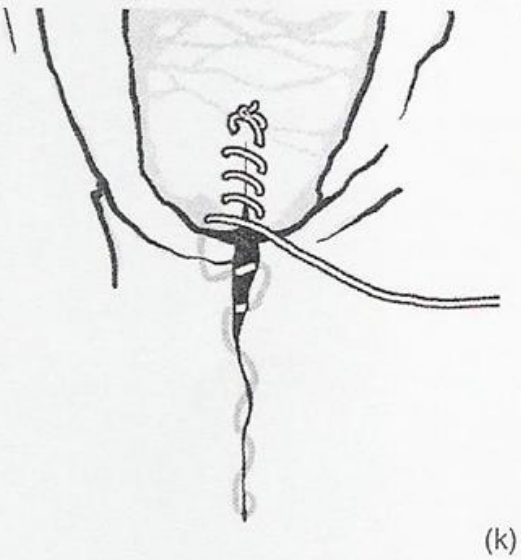
1. Close the skin with either with either an interrupted technique or continuous subcuticular suture technique
    - If a first-degree tear – insert one or two interrupted sutures.
    - For other repairs, subcuticular are ideal and often more comfortable for women.
    - If ragged edges or if only 2 sutures required, use interrupted.
2. For the subcuticular technique, reposition the needle and at the inferior end of the wound commence suturing the skin from the apex of the wound.
3. Stiches are placed below the surface of the skin: the point of the needle should be repositioned between each side, so that it faces the skin edge being sutured.
4. Continue taking bites of tissue from each side until a superior wound edge is reached.
5. Sweep the needle behind the fourchette back into the vagina. Pick up a small amount of vaginal tissue to tie off the stitch and cut (the knot is tucked into the vagina to minimise discomfort).
6. Alternatively, the repair may be completed using the “Aberdeen” Knot. The “Aberdeen Knot” is a method that ensures the knot is completely inverted in the mucosa with minimal knot bulk at the surface.

Note
Heals in appr 5-7 days

</td>
<td>





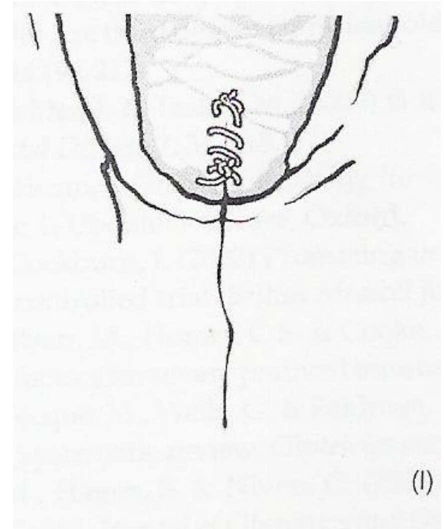


Grampians Maternity Network (2011)

</td>
</tr>
</table>

Step 4 Completion/Assessment

1. Cut end of the suture 0.5 to 1cm.
2. Inspect the repair to ensure that haemostasis has been achieved.
3. Inspect vagina and remove any packs.
4. Trim end of apex suture if necessary.
5. Perform a rectal examination to detect any suture material which may have been accidentally inserted through the rectal mucosa (explain prior).
6. Diclofenac 100mg suppository may be administered.
7. Perform a needle and pack count and dispose of sharps safely and immediately. Document on perineal repair form.
8. Leave the woman in a comfortable position.
9. Offer ice pack to be applied intermittently for 30 minutes with 30-minute resting interval and avoid direct contact with skin to reduce risk of ice burn.
10. Offer analgesia document administration.



Grampians Maternity Network (2011)

Step 5 Documentation

1. Document in the woman's progress notes / perineal repair chart:
   - Date and person performing repair (and supervisor if applicable).
   - That the procedure was explained and verbal consent obtained.
   - Type of wound repaired.
   - Diagram/description of repair procedure (e.g. wound inspected, apex ID, type of analgesia/volume, type of suturing material, suture techniques).
2. Note any difficulties (e.g. excessive bleeding, friable tissue, bruising).
3. Postpartum care recommended for the woman including hygiene, pain relief and bowel care.

Wound Healing

It is important that the woman has a basic understanding of wound healing in order to identify any problems which may occur or the risk factors for wound breakdown.

The stages of wound healing:

- The same stages of wound healing occur regardless of whether the wound is a surgical cut (episiotomy) or tear.
- Initially, there is acute inflammation and vasodilatation with localised oedema and cellular migration to the area.
- This process facilitates destruction of bacteria, foreign bodies and necrotic tissue.
- Repair of tissue begins with migration of epithelial cells to the region.
- Fibroblasts migrate into the sub-epithelial tissue to produce collagen for wound strength (4 – 5 days).
- Active capillary proliferation results in the appearance of granulation tissue.
- The fibroblasts work to contract the wound and reduce the size of the defect by filling in granulation tissue. This occurs around day 5 after the injury.
- The last stage is scar maturation with the strengthening and organisation of collagen within the scar and reabsorption of the capillaries resulting in a strong avascular scar.

Delay in wound healing may occur with the following:

- Infection (always use an aseptic technique and instruct the client on hygiene practices).
- Excess foreign material (knot size and number should be kept to a minimum, remove any blood clots or debris before closing the wound, women should not use talcum powder on their perineum whilst it is healing).
- Necrotic tissue (avoid tying sutures too tight as this will result in development of necrotic tissue. The tissue will become oedematous in the first few days and ice packs may be used to reduce the swelling. Too few sutures may result in tension on the existing suture).
- Excessive moisture (avoid long sitz baths).
- Diabetes (poor control).
- Dead space (occurs with separation of the tissues due to poor approximation. Blood or serum collects in the space and may lead to infection).
- Wound vascularity (poor circulation will inhibit healing. Pelvic floor exercises can improve circulation).
- Haematoma (ensure adequate haemostasis).
- Malnutrition (a diet rich on protein, zinc and vitamin C will aid healing).

Perineal care and education

Following the procedure, the woman should be informed of:

- The type of trauma and method of repair
- Suture absorption time
- Pain relief options
- Diet
- Hygiene
- Resumption of sexual intercourse
- Signs of would infection and breakdown

Tips may include:

- Try leaning forward on the toilet to pass urine or pass urine in the shower as it may be less painful.
- Discuss the use of ice in the first two days when swelling is present. Applying an icepack for 30-minute intervals can be beneficial. The ice pack must be covered to ensure the woman does not sustain an ice burn.
- If the sutures become tight or irritating in several days the woman should see her doctor as cutting the knot at the introitus may bring relief.
- Many women do not have their bowels open until day 3 postpartum. Explain that the sutures will not 'come undone'. Supporting the perineum with a pad while having the bowels open may feel more comfortable. Basic bowel care including 6-8 glasses of water a day and eating high fibre foods is recommended. Additional measures may include using a daily glass of pear juice or eating prunes to soften the stool may be helpful. Wiping front to back should also be encouraged.
- Shower or bath daily (do not stay in the bath for too long). Avoid soaps and talcum powder which may be irritating. Separate the labia with the fingers in the shower if there are bilateral grazes present to ensure they are not healing together.
- Educate regarding the importance of pelvic floor exercises and explain when and how they are performed.
- Educate the woman to report problems with her repair or urinary incontinence either to her midwife and/or GP to ensure early and appropriate referral.
- Sexual intercourse may be resumed when the woman feels ready. The woman should feel relaxed and lubricating jelly may be helpful.

<u>Women who decline suturing</u>

It is recommended that all second-degree tears and episiotomies are sutured. Women who decline suturing must be aware of the risks of not suturing including:

- Delayed wound healing
- Poor wound approximation
- Prolonged discomfort and pain

If a woman declines suturing after a full explanation of the risks and benefits a senior clinician must be notified and the outcome documented.
It is recommended that women who decline suturing should have:

- Extended postnatal visiting offered to monitor the wound.
- The wound must be assessed regularly in both the inpatient and outpatient setting.
- The woman's GP must be notified to ensure appropriate monitoring, follow-up and referral.
- A low threshold for referral if problems are identified.

References

Arias, T. & Bick, D. (2016). Assessment and Postnatal Management of Genital Tract Trauma. In: Ismail, K. (Eds.) *Perineal Trauma at Childbirth*. Springer, Cham. https://doi.org/10.1007/978-3-319-14860-1_6

Australian Institute of Health and Welfare [AIHW](2022). *Australia's mothers and babies.* https://www.aihw.gov.au/reports/mothers-babies/australias-mothers-babies/contents/labour-and-birth/perineal-status

Bennett, R. & Brown, I. (1999) *Myles Textbook for Midwives* (13th ed.). Churchill Livingston.
Elharmeel, S., Chaudhary, Y., Tan, S., Scheermeyer, E., Hanafy, A., & van Driel, M. (2011). Surgical repair of spontaneous perineal tears that occur during childbirth versus no intervention. *Cochrane Database of Systematic Reviews*, *8*(Art. No.: CD008534). DOI: 10.1002/14651858.CD008534.pub2.

Fleming, V., Hagen, S., & Niven, C. (2003). Does perineal suturing make a difference? The SUNS trial. *British Journal of Obstetrics and Gynaecology, 110*, pp. 684-689.

Gomella, L. & Haist, S. (2004). *Clinician's Pocket Reference*. Capistrano Press Ltd.

Grampians Maternity Network (2011). *Learning Package – Perineal Repair.*

Hammond, A., Priddis, H., Ormsby, S., & Dahlen, H. G. (2022). Improving women's experiences of perineal suturing: A pragmatic qualitative analysis of what is helpful and harmful. *Women and birth : journal of the Australian College of Midwives*, *35*(6), e598–e606. https://doi.org/10.1016/j.wombi.2022.02.008

Li, Z., Zeki, R., Hilder, L., & Sullivan, E. (2012). *Australia's mothers and babies 2010*,

Australian Institute of Health and Welfare and University of New South Wales.

Lundquist, M., Olsson, A., Nissen, E., & Norman, M. (2000). Is it necessary to suture all lacerations after a vaginal delivery? *Birth, 27*, pp 79-85.

McCance, K., & Huether, S. (1990). *Pathophysiology: The biologic basis for disease in adults and children*. St. Louis: Mosby.

Nisbett, M. & Rouse, B. (1992) Perineal Repair. Cynamid Australia, Pty Ltd.

NHS (2008). *Perineal repair after childbirth – A procedure and standards tool to support practice development*. www.nhshealthquality.org

National Institute for Clinical Excellence (2007). Intrapartum care: care of healthy women and their babies during childbirth. NICE clinical guideline 55; RCOG press. http://www.nice.org.uk/nicemedia/pdf/CG55FullGuideline.pdf

National Institute for Health and Care Excellence (2014). *Intrapartum care for healthy women and babies.* Clinical guideline [CG190]. Recommendations | Intrapartum care for healthy women and babies | Guidance | NICE

NSW Government (2021). *Perineal status, mothers giving birth vaginally by Perineal status for 2020.* https://www.healthstats.nsw.gov.au/#/indicator?name=-mab-peritear-vagbth pdc&location=NSW&view=BarHorizontal&measure=Percent&groups=Period,Perineal%20status&compare=Perineal%20status,Period&filter=Perineal%20status,Intact,3rd%20or%204th%20degree%20tear,2nd%20degree%20tear,1st%20degree%20tear%2Fgraze,Episiotomy,Combined%20tear%20and%20episiotomy,Other&filter=Period,202

Olds, S., London, M. & Ladewig, P. (1996) *Maternal Newborn Nursing, A family-centered approach*. (5th ed). Addison-wesley

Reale, B. (2019). Repair of genital tract lacerations and episiotomy. In: King, T., Brucker, M.,

Osbourne, K., & Jevitt, C. (Eds) *Varney's Midwifery* (6th ed.). Jones & Bartlett Learning.

Royal College of Obstetricians and Gynaecologists(RCOG) (2004). Guideline No23 Methods and materials used in perineal repair. http://www.rcog.org.uk/

The Royal College of Midwives (2012). Midwifery practice guideline – Suturing the perineum. http://www.rcm.org.uk/

The Royal Women's Hospital (2020). *Perineal trauma assessment, repair and safe practice – guideline.* Prompt document number: RWH0192697 v1.3

Wilson, A. (2017). The pelvic floor. In MacDonald, S. & Johnson, G. (Eds.) *Mayes' Midwifery* (15th ed., pp 664-691). Elsevier.

Appendix 1

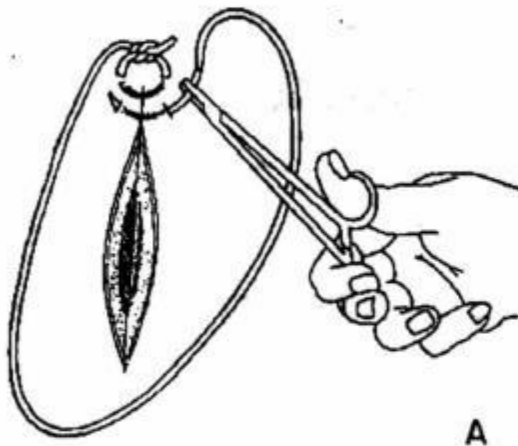
ETHICON PRODUCTS SUTURES	Material	Construction	Color	Strength Retention Profile	Absorption Profile
Coated VICRYL* Plus Antibacterial (polyglactin 910 Suture) [1]	Polyglactin 910	Braided / Monofilament	Violet / Undyed (Natural)	75% @ 2 weeks 50% @ 3 weeks 25% @ 4 weeks (5-0 & larger)	56 - 70 days (63-day avg.)
MONOCRYL* Plus Antibacterial (poliglecaprone 25) Suture [2]	Poliglecaprone 25 Irgacare MP	Monofilament	Undyed and Violet	Undyed and Dyed 50-60%60-70% @ 1 week 20-30%30-40% @ 2 weeks	91-119 days
PDS* Plus Antibacterial (polydioxanone) Suture [3]	Polydioxanone Polydioxanone and Irgacare MP	Monofilament	Violet / Undyed (Clear)	4/0 smaller 3/0 larger 60% 80% @ 2 weeks 40% 70% @ 4 weeks 35% 60% @ 6 weeks	183-238 days
VICRYL RAPIDE* (polyglactin 910) Suture [4]	Polyglactin 910	Braided	Undyed (Natural)	50% @ 5 days 0% @ 10-14 days	42 days

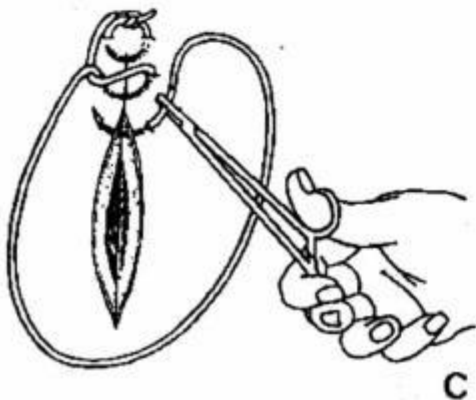
Coated VICRYL* (polyglactin 910) Suture [5]	Polyglactin 910	Braided / Monofilament	Violet / Undyed (Natural)	75% @ 2 weeks 50% @ 3 weeks 25% @ 4 weeks (60&larger)	56 - 70 days (63day avg.)
MONOCRYL* (poliglecaprone 25) Suture [6]	Poliglecaprone 25	Monofilament	Undyed and Violet	Undyed and Dyed 50-60%60-70% @ 1 week 20-30%30-40% @ 2 weeks	91-119 days
PDS* II (polydioxanone) Suture [7]	Polydioxanone Polydioxanone and Irgacare MP	Monofilament	Violet / Undyed (Clear)	4/0 smaller 3/0 larger 60% 80% @ 2 weeks 40% 70% @ 4 weeks 35% 60% @ 6 weeks	183-238 days
Surgical Gut Suture – Chromic [8]	Beef Serosa or Sheep Submucosa	Monofilament (Virtual)	Brown / Blue Dyed	21-28 days	90 days
Surgical Gut Suture – Plain [9]	Beef Serosa or Sheep Submucosa	Monofilament (Virtual)	Yellowish-tan	7-10 days	70 days

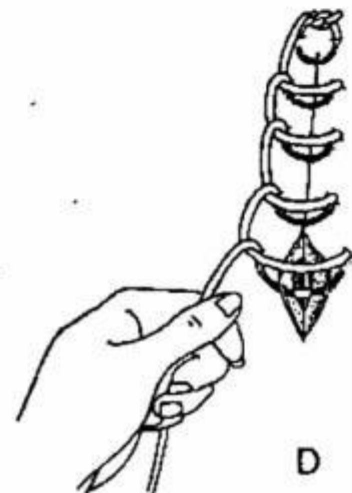
Appendix 2

Continuous Blanket (Continuous locked)

- Often used for repairing the vaginal mucosa and is a haemostatic stitch.
- Sew an anchoring stitch.
- Hold the suture down along the left side of the wound. Take a bite on the right side and continue to the left of the wound making sure the entry and exit points are opposite each other.
- Exit the wound with the suture to the left. This locks the stitch.
- Pull the suture material through and repeat.



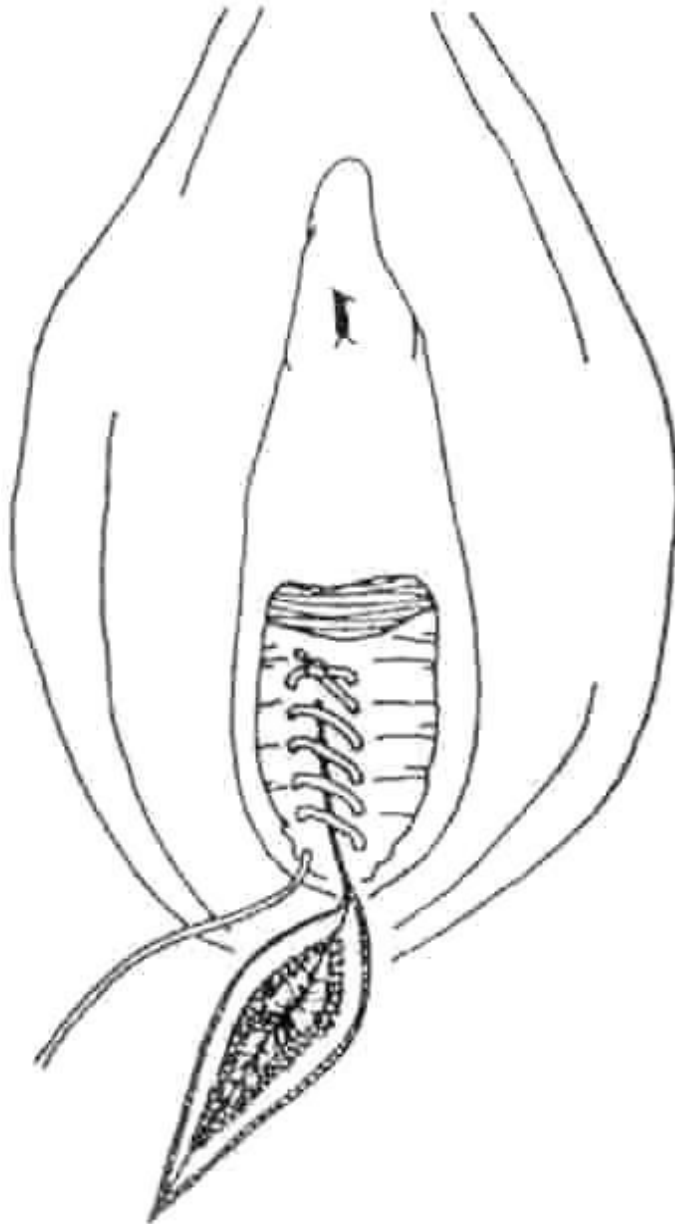




Nisbett & Rouse (1992)

Continuous Unlocked

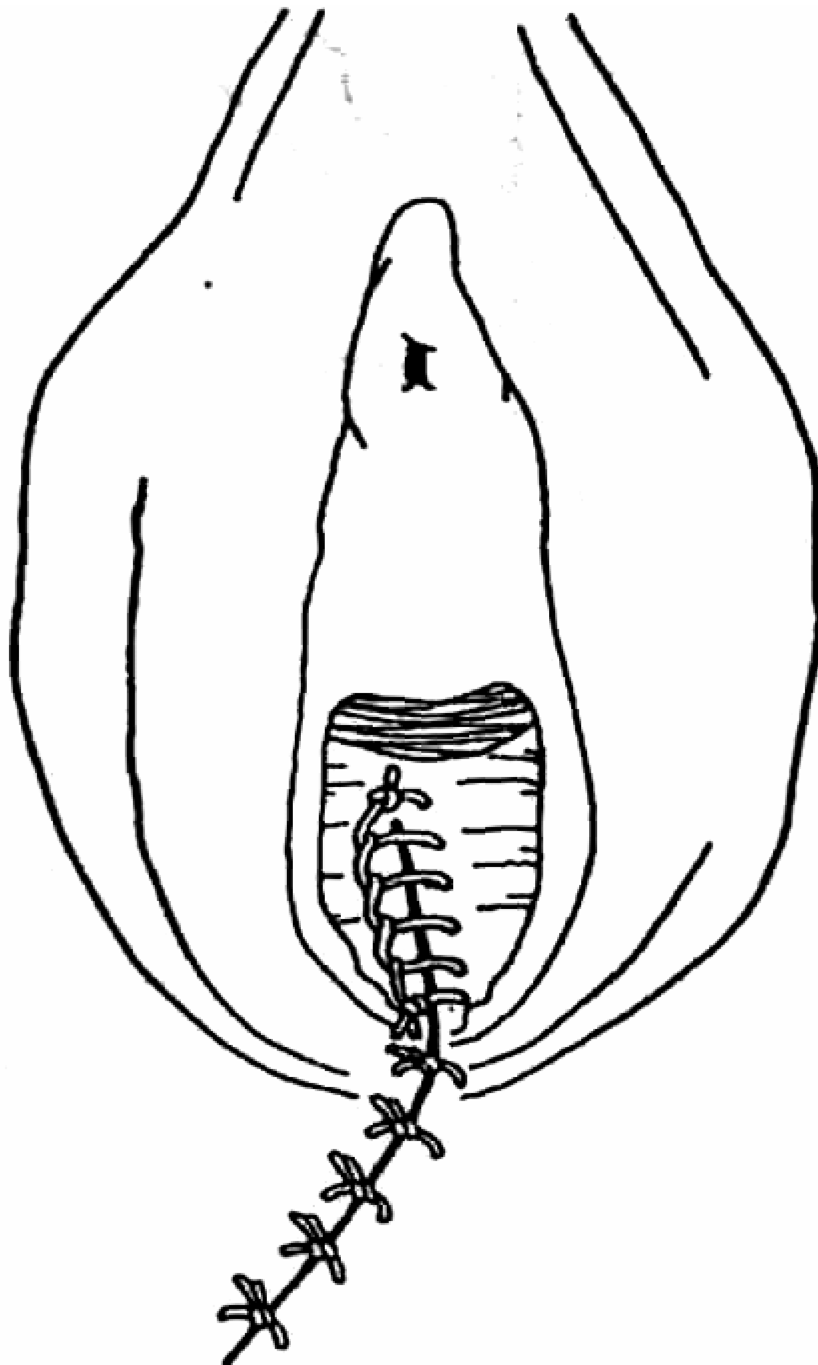
- This is similar to the blanket stitch but it is not locked.
- Instead of holding the suture down on the left side of the wound, hold it above where the stitch is being taken.
- This is used as an alternative method for the posterior vaginal wall and can also be used to repair the perineal muscles layer.



Nisbett & Rouse (1992)

Interrupted

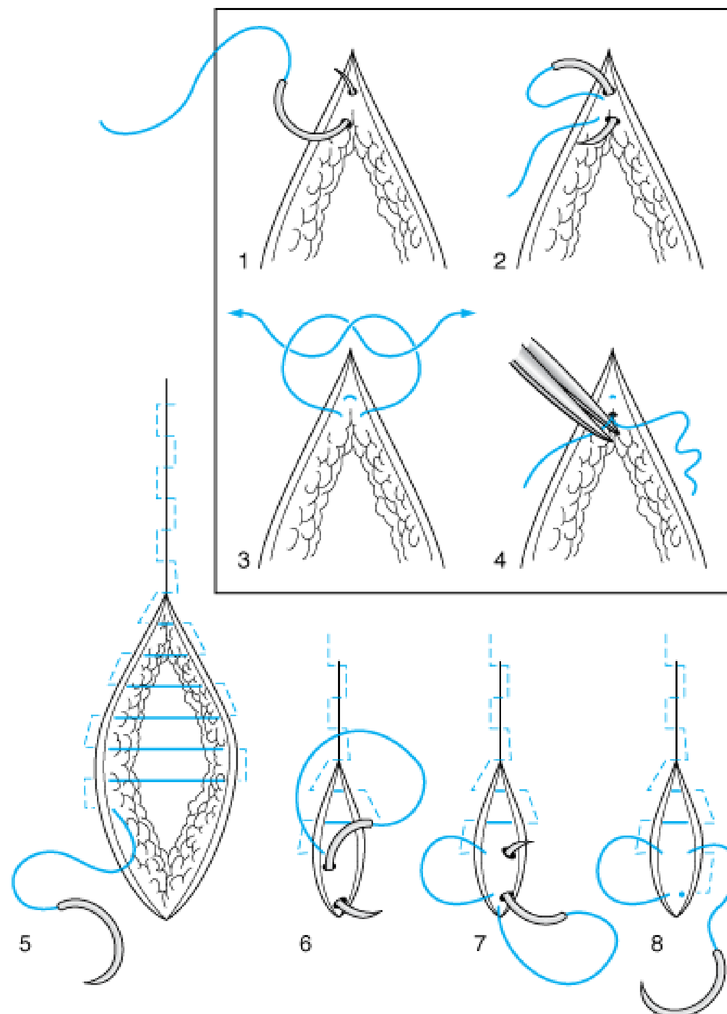
- A single stitch with a knot which is taken from right to left with entry and exit points opposite each other.
- Often used when suturing the perineal muscle layer or as an alternative to the subcuticular for skin closure.



Nisbett & Rouse (1992)

Continuous Subcuticular

- Used to close the skin.
- Place an anchoring knot inside the un-joined edges of the wound and trim off the short end of the suture material only.
- Take a shallow bite on the inner edge of the left-hand side of the wound inserting and exiting the tissue just beneath the skin layer, a perpendicular line on the same side of the wound.
- Pull the suture material through.
- Take a shallow bit on the right side directly opposite the exit point of the preceding stitch on the left side. The entire stitch is on the same side of the wound in a perpendicular line.
- Pull the needle and suture through and the edges of the wound will be drawn together.
- Repeat until skin layer closed.

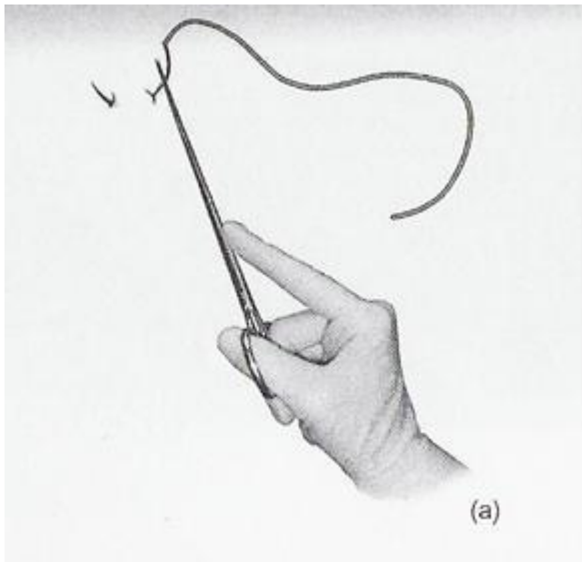


Gomella & Haist (2004)

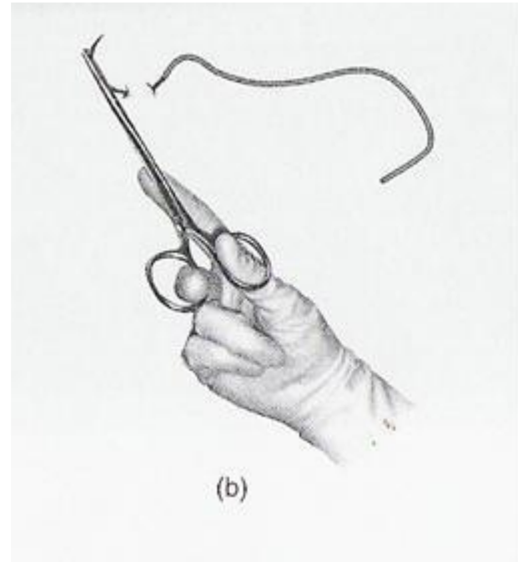
Appendix 3

<u>Knot Tying</u>

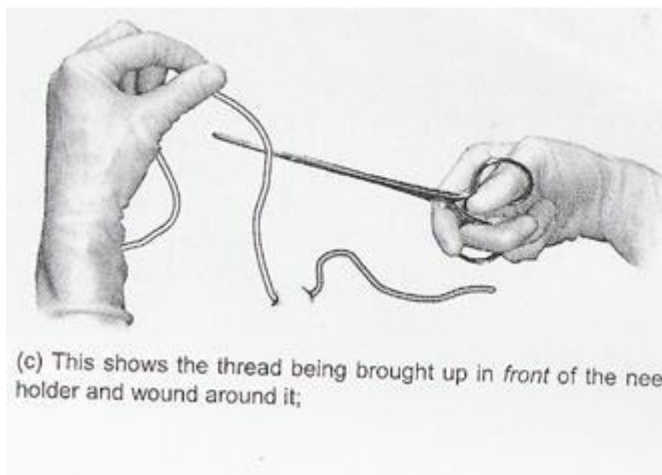
These diagrams are for the right hand dominant person. Photocopy these diagrams to reverse the picture if you are left handed.



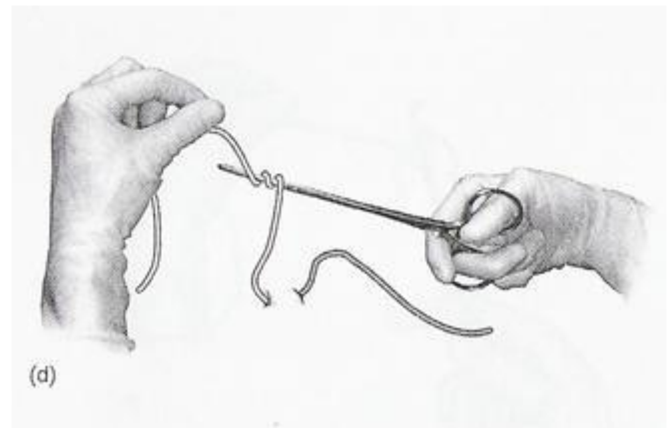
(a)



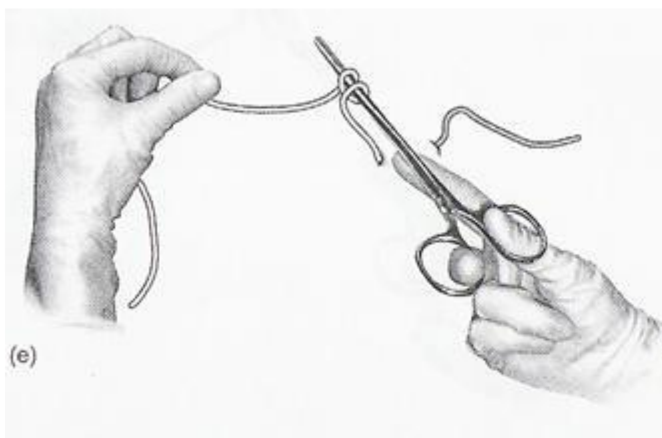
(b)



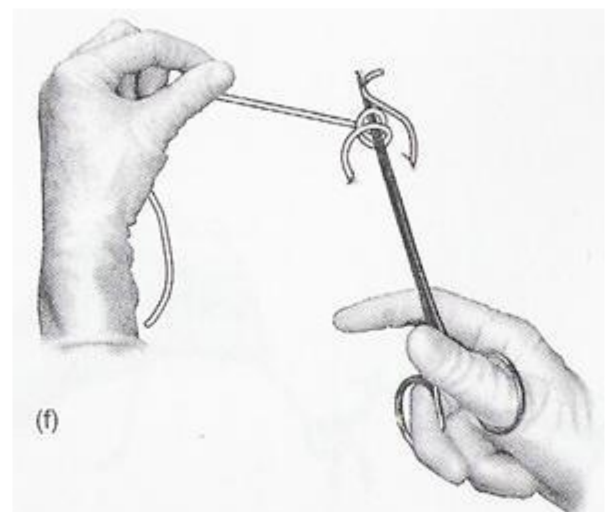
(c) This shows the thread being brought up in *front* of the nee
holder and wound around it;



(d)

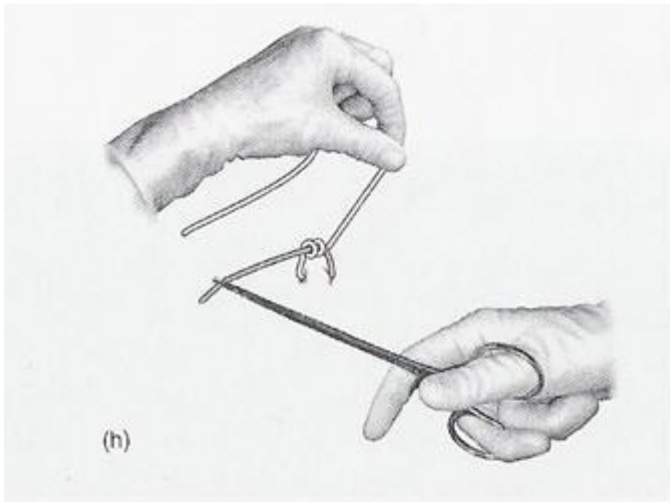


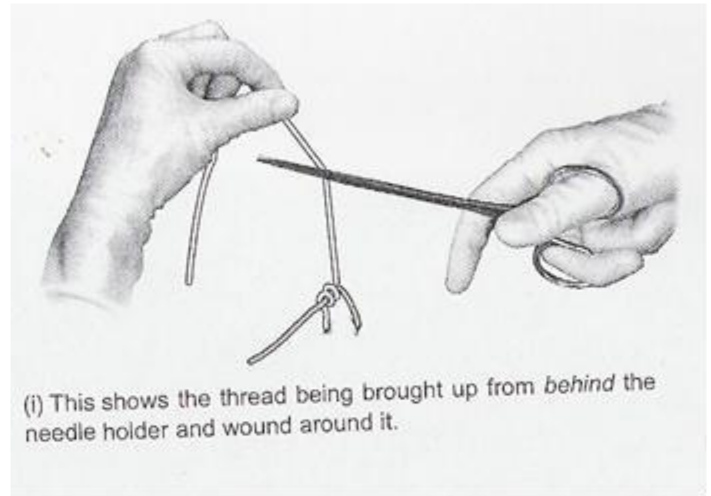
(e)

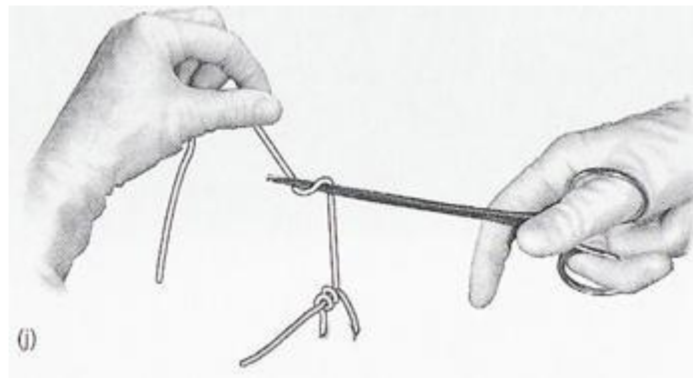


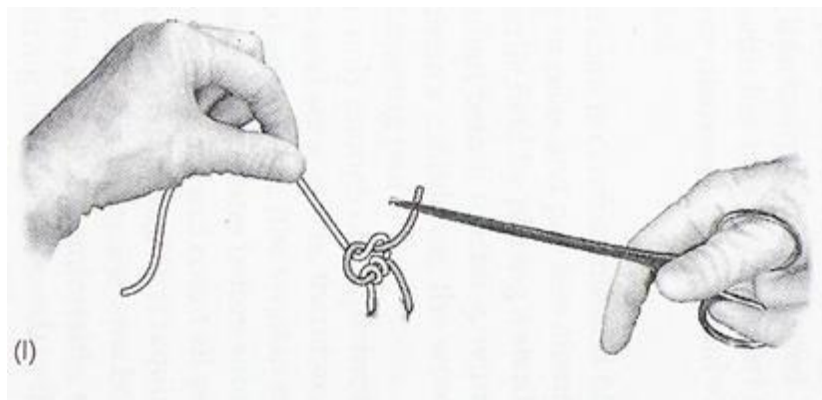
(f)

Nisbett & Rouse (1992)


(h)


(i) This shows the thread being brought up from *behind* the needle holder and wound around it.


(j)


(l)

Nisbett & Rouse (1992)

Learning Contract and Assessments

Learning Contract	
Clinical Skill	**PERINEAL REPAIR**
Name	
Health Service	
Clinical supervisor	
Aim	**The aim of this learning contract is to provide the clinician with the skills and knowledge to identify anatomical structures on the perineum, assess the degree of perineal tears and to competently suture first- and second-degree tears according to current best practice. The clinician will also be able to recognize complex perineal tear and refer the care to an appropriate medical practitioner. In addition the clinician will also provide the women with appropriate education and advice for perineal care following repair.**

Theoretical Competency

Perineal Suturing Workshop

Date attended ___________________________

Workshop conducted by _________________

Topics included an overview of the following:

1. Identification of the relevant anatomical structures related to perineal trauma and repair
2. Definition of the four classifications of perineal trauma
3. The principles of wound healing and methods of promoting wound healing
4. Preparation and assessment for perineal repair
5. The procedural steps involved for perineal repair
6. Review of suture materials used for repair
7. The common complications of perineal repair

Assessment

Demonstrate the ability to apply the above seven key concepts to each observed and supervised repair.

Workshop Attendance

Workshop Facilitator name & signature ___________________________________

Practical Component

1. Observation of a minimum of 3 perineal repairs.
2. Performing 5 perineal repairs under supervision of a suitably skilled clinician described below.
3. Review 5 women who have had perineal repair by the student prior to discharge to assess healing, pain/discomfort and provide further education.
4. A final competency assessment of one of the supervised repairs.
5. The training program to be completed in 12 months

Assessment

Approved assessors for observation and supervised components in the Gippsland Region

- All obstetricians/GP Obstetricians
- Obstetric registrars
- Senior midwife competent in perineal suturing

Post repair component may be conducted as a self-reflective activity with no supervision required.

Final competency assessment to be completed by

Ssupervisors Name & signature ______________________________ Date: ___

Observation of perineal tears

No	Date	Classification of wound	Suture type and method	Comments	Supervising clinician signature
1.					
2.					
3.					
4.					
5.					

Completed Date

Supervisors name & signature ____________________________ Date: ____________________

Perineal tears performed under supervision

No	Date	Classification of wound	Suture type and method	Comments	Supervising clinician signature
1.					
2.					
3.					
4.					
5.					

Completed Date

Supervisors name & signature ____ Date: ____________________________

Perineal repair review prior to discharge

No	Date	Classification of wound	Suture type and method	Comments	Supervising clinician signature
1.					
2.					
3.					
4.					
5.					

Completed Date

Supervisors name & signature ________________________ Date: ________________

Competency Assessment – Perineal Repair

Performance Criteria	Comments	Competent	Not Yet Competent	Assessor Signature
Policy and protocol • Clinician is familiar with local policy and protocols • performs within these guidelines				
Consent • Demonstrate positive patient identification • Explain the procedure to the woman and why suturing is recommended versus not suturing. • Obtain a verbal consent from the woman to undertake the repair				
Preparation • Demonstrate standard and transmission-based precautions (PPE) and appropriate hand hygiene • Obtain the appropriate equipment to perform the repair including sterile gloves, sterile suture pack, sterile drape, small sterile PV bowl, suture material (2.0 rapide/vicryl), local anaesthetic (1% lignocaine/20mls), 20 ml syringe, 19g drawing up needle and 23 g needle, abdo sponges (5 pkt), cleansing skin prep, easy count sharps tray, plastic apron and protective eye wear. • Position trolley and prepare sterile equipment using aseptic technique				
Positioning • Ensure the woman is comfortable • Ensure privacy • Ensure the clear visualization of the genital structures • Ensure good lighting and light source is well positioned				
Aseptic Technique • Correct handwashing technique observed • Maintained during preparation and donning gloves • During procedure and equipment handling • Skin preparation • Draping				
Assessment & Classification of Tear				

• Ensure adequate analgesia prior to commencing the procedure. • Visualize and locate anatomical structures • Classification of tear • Referral to senior clinician if outside of scope of practice (3rd and 4th degree tears) • Identification/assessment to exclude anal sphincter trauma				
Local anaesthetic administration • Administer local anaesthetic if required (e.g. Absent or inadequate regional anaesthesia) • 1% lignocaine no more than 20mls • Appropriate technique used • If woman reports inadequate pain relief during the procedure this is immediately addressed				
Suturing technique • Appropriate suture material used • Identify apex and correct anatomical alignment and landmarks • Appropriate knot technique • Continuous non-locking suture to posterior vaginal wall and pelvic floor • Subcuticular for skin • Achieve haemostasis and demonstrate removal of dead space • Perform a rectal examination with consent post repair to ensure no rectal mucosa perforation				
Sharp safety and pack count • Ensure pre needle and pack count • Ensure additional items included in count • Ensure post needle and pack count performed • Ensure sharps disposed of safely in the sharps bin on completion of the procedure				
Post repair care • Ensure women repositioned comfortably in bed • Apply pads and ice to perineum as required • Explain care to woman • Ensure adequate analgesia documented				

Documentation • Appropriate documentation using the perineal documentation form including medical record of consent, extent of the trauma, the procedure technique and post repair care • Ensure needle and pack count signed				

Assessment Result Competent ☐ Not Yet Competent ☐

Demonstration of Hand Hygiene ☐ Aseptic Technique ☐ Donning/Doffing PPE/Gloves ☐

Comments ____

____

____

____

____

____

____

Completion Date __________________

Supervisors Signature ____

Additional learning opportunities

No	Date	Description	Comments	Clinician signature
1.				
2.				
3.				
4.				
5.				

Completed Date

Supervisors name & signature ______________________________ Date: ____________________

Perineal Suturing

Date:_______________How long did this package take to complete? ______________ Please indicate your response to each of these statements by ticking the appropriate box and return to Nurse Educator

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Overall, I found this learning package worth while	❑	❑	❑	❑	❑
2. The way in which the learning package is presented made it easy to understand	❑	❑	❑	❑	❑
1. My knowledge of this topic was improved after completing this learning package	❑	❑	❑	❑	❑
2. My skills in this area have been enhanced since completing this learning package	❑	❑	❑	❑	❑
3. The resources provided were sufficient for me to answer the test adequately	❑	❑	❑	❑	❑
4. I would recommend this learning package to others	❑	❑	❑	❑	❑
5. I will be able to apply knowledge and skills acquired in my clinical practice	❑	❑	❑	❑	❑

Comments (Optional)

Thank you for completing this evaluation