

# South Australian Perinatal Practice Guideline

# Cervical Length and Cerclage

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## Note:

This guideline provides advice of a general nature. This statewide guideline has been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach. The guideline is based on a review of published evidence and expert opinion.

Information in this statewide guideline is current at the time of publication.

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Health practitioners in the South Australian public health sector are expected to review specific details of each patient and professionally assess the applicability of the relevant guideline to that clinical situation.

If for good clinical reasons, a decision is made to depart from the guideline, the responsible clinician must document in the patient's medical record, the decision made, by whom, and detailed reasons for the departure from the guideline.

This statewide guideline does not address all the elements of clinical practice and assumes that the individual clinicians are responsible for discussing care with consumers in an environment that is culturally appropriate, and which enables respectful confidential discussion.

This includes:

- The use of interpreter services where necessary,
- Advising consumers of their choice and ensuring informed consent is obtained,
- Providing care within scope of practice, meeting all legislative requirements and maintaining standards of professional conduct, and
- Documenting all care in accordance with mandatory and local requirements

*Note: The words woman/women/mother/she/her have been used throughout this guideline as most pregnant and birthing people identify with their birth sex. However, for the purpose of this guideline, these terms include people who do not identify as women or mothers, including those with a non-binary identity. All clinicians should ask the pregnant person what their preferred term is and ensure this is communicated to the healthcare team.*

## Explanation of the Aboriginal artwork:

The Aboriginal artwork used symbolises the connection to country and the circle shape shows the strong relationships amongst families and the Aboriginal culture. The horseshoe shape design shown in front of the generic statement symbolises a woman and those enclosing a smaller horseshoe shape depicts a pregnant woman. The smaller horseshoe shape in this instance represents the unborn child. The artwork shown before the specific statements within the document symbolises a footprint and demonstrates the need to move forward together in unison.



***Australian Aboriginal Culture is the oldest living culture in the world, yet Aboriginal people continue to experience the poorest health outcomes when compared to non-Aboriginal Australians. In South Australia, Aboriginal women are 2-5 times more likely to die in childbirth and their babies are 2-3 times more likely to be of low birth weight. The accumulative effects of stress, low socio-economic status, exposure to violence, historical trauma, culturally unsafe and discriminatory health services, and health systems are all major contributors to the disparities in Aboriginal maternal and birthing outcomes. Despite these unacceptable statistics, the birth of an Aboriginal baby is a celebration of life and an important cultural event bringing family together in celebration, obligation, and responsibility. The diversity between Aboriginal cultures, language and practices differ greatly and so it is imperative that perinatal services prepare to respectfully manage Aboriginal protocol and provide a culturally positive health care experience for Aboriginal people to ensure the best maternal, neonatal and child health outcomes.***

## Purpose and Scope of PPG

The purpose of this guideline is to provide information on the indications for cervical length surveillance, diagnosis of short cervical length and the appropriate use of cervical cerclage for prevention of preterm birth in singleton pregnancies. It includes management and referral pathways for women found to have a shortened cervical length.

For further information on the diagnosis and management of preterm labour and birth, see the *Preterm Labour and Birth* PPG in the A-to-Z index available at [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal).



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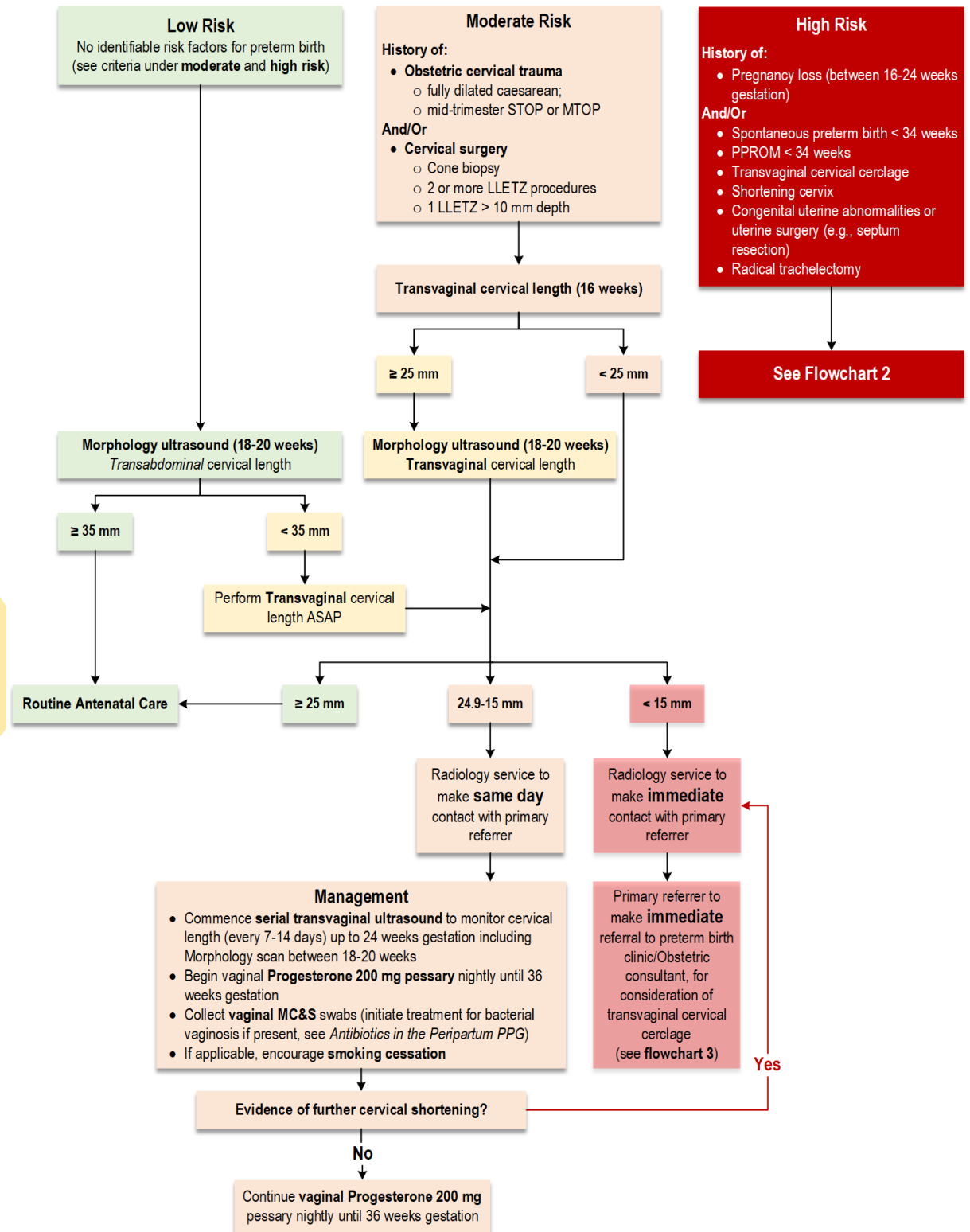
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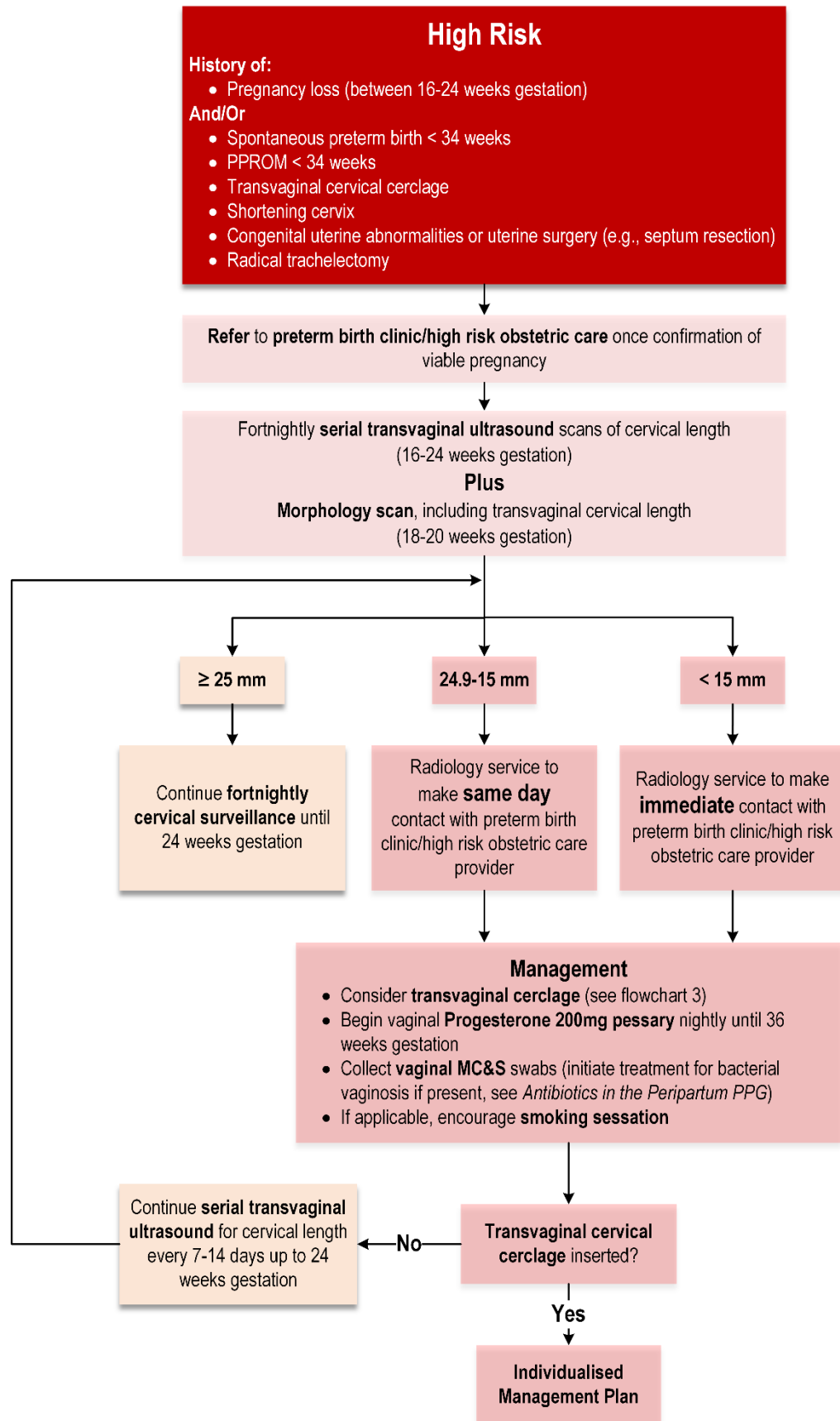
# Cervical Length and Cerclage

Flowchart 1| Cervical Length Surveillance and Management: Low/Moderate Risk of Preterm Birth



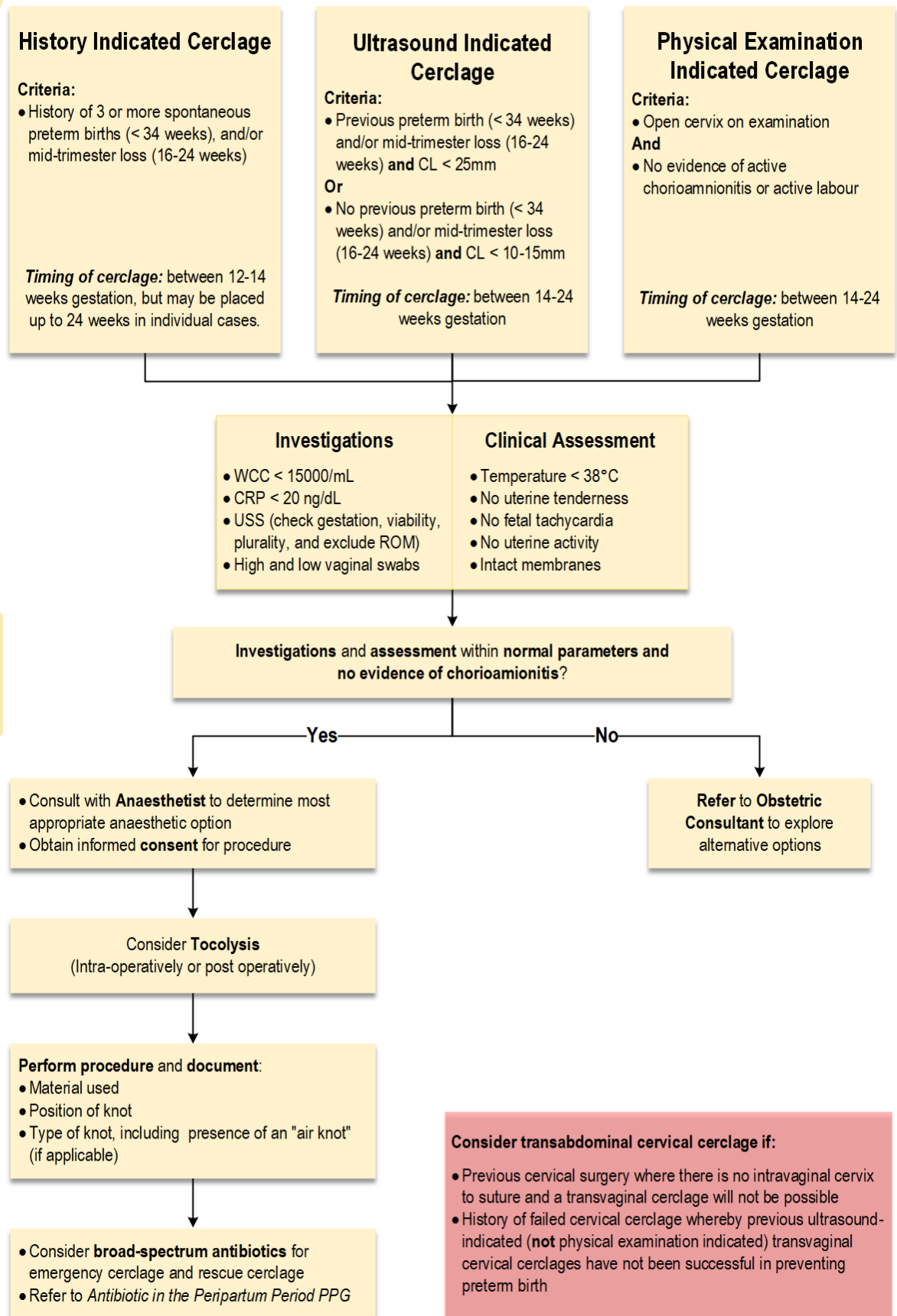
# Cervical Length and Cerclage

Flowchart 2| Cervical Length Surveillance and Management: High Risk of Preterm Birth



# Cervical Length and Cerclage

Flowchart 3| Decision for Cerclage Algorithm



# Cervical Length and Cerclage

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# Cervical Length and Cerclage

## Summary of Practice Recommendations

All women should have a cervical length performed at the mid-trimester morphology scan, by either transabdominal or transvaginal ultrasound, for the identification of short cervical length and increased risk of spontaneous preterm birth.

Women with moderate risk factors for spontaneous preterm birth, should undergo an additional transvaginal cervical length measurement at 16 weeks.

Women at high risk of spontaneous preterm birth should have serial transvaginal cervical length monitoring from 16–24 weeks under supervision of a preterm birth clinic or high-risk obstetric care service.

Women with multiple pregnancies are at increased risk of preterm birth and should have appropriate referral and individualized care by experienced specialists.

There has been no proven benefit for transvaginal ultrasound cervical length measurement at less than 14 weeks and is not recommended.

Transvaginal cervical cerclage reduces preterm birth in women with a previous spontaneous preterm birth less than 34 weeks gestation and/or mid-trimester loss, and a cervical length less than 25 mm.

When performing a transvaginal cervical cerclage, perioperative tocolytics, corticosteroids and antibiotics should be considered, with caution.

Transvaginal cervical cerclage is associated with maternal and fetal risks and should be undertaken in a setting where there is ability to provide ongoing surveillance for sepsis or early preterm labour and need for urgent birth.

Transabdominal cervical cerclage, while beneficial in a small group of women who have had a failed transvaginal cerclage, is associated with increased morbidity and requires specialist, experienced consideration and evaluation.

## Abbreviations

>	Greater than
≥	Greater than or equal to
<	Less than
≤	Less than or equal to
mL	Millilitre(s)
CRP	C-reactive Protein
CTG	Cardiotocography
CL	Cervical length
et al.	And others
FBE	Full blood examination
g	Gram(s)
LLETZ	Large loop excision of the transformation zone of the cervix
mg	Milligram(s)
mL	Millilitre(s)
MTOP	Medical termination of pregnancy
ng/dL	NanoGram per decilitre
PPROM	Preterm prelabour rupture of membranes
RANZCOG	Royal Australian New Zealand College of Obstetricians and Gynaecologists
RCOG	Royal College of Obstetricians and Gynaecologists
ROM	Rupture of membranes
STOP	Surgical termination of pregnancy
USS	Ultrasound scan
WBC	White blood cell (Leucocyte)



# Cervical Length and Cerclage

## Definitions

<b>Cervical cerclage</b>	A variety of surgical procedures in which sutures or synthetic tape are used to mechanically increase the tensile strength of the cervix, thereby reducing the occurrence of preterm birth. <sup>1</sup>
<b>Cervical insufficiency</b>	A structural or functional weakness of the cervix causing painless dilatation and shortening of the cervix in the absence of contractions and is associated with premature and sometimes pre-viable birth.
<b>Shortened cervix</b>	A cervical length that measures < 25 mm on a transvaginal ultrasound scan at 20–24 <sup>+0</sup> weeks gestation. <sup>2</sup>
<b>Cervical funnelling</b>	The separation of the internal os from the two sidewalls of the upper end of the cervical canal.

## Literature Review

Preterm birth complicates approximately 1 in 10 pregnancies.<sup>3</sup> In women at high risk of spontaneous preterm birth, cervical shortening and effacement start earlier from 16–24 weeks gestation compared to 32 weeks among low risk women.<sup>4</sup>

The use of vaginal Progesterone is associated with improved neonatal outcomes and a reduction in preterm birth rates in women at increased risk either due to a history of preterm birth or identification of a short cervix on ultrasound.<sup>5, 6</sup> RANZCOG recommends asymptomatic women found to have a short cervix on transvaginal cervical length assessment in the mid-trimester to commence vaginal Progesterone.<sup>7</sup>

A transvaginal cervical length of < 25 mm in the mid-trimester is associated with a 2.8 times increased risk of delivering < 34 weeks gestation.

Cervical cerclage is an intervention that can prevent pre-term birth and mid-trimester fetal losses when offered to the right women.<sup>2</sup> Among women with a previous spontaneous preterm birth or mid-trimester loss and a cervical length < 25 mm, insertion of a transvaginal cerclage significantly reduces preterm birth (RR 0.70) and composite perinatal mortality and morbidity (RR 0.64).<sup>8</sup> The benefits of transvaginal cervical cerclage among women with no previous spontaneous preterm birth and a short cervical length is less clear<sup>9</sup>, however it may be beneficial when the cervical length is very short (less than 10 mm) or open with fetal membranes exposed.<sup>2, 10</sup>

There is no evidence to guide recommendations for management among women with a short cervical length in the mid-trimester and other risk factors for preterm birth (Mullerian abnormality, previous cone or LLETZ procedure, twins or higher order multiples).<sup>2</sup> Management of these women should be individualised and carried out by experienced specialists.

There is limited high-quality evidence to inform what suture material to use for transvaginal cerclage, how to perform the procedure, or the use of tocolysis, corticosteroids and antibiotics at the time of insertion.<sup>8</sup>

Women undergoing a transvaginal cerclage, particularly a physical examination-indicated transvaginal cerclage, remain at an increased risk of spontaneous preterm birth and sepsis, necessitating close ongoing surveillance.<sup>2</sup>

After placement of a transvaginal cerclage, further serial cervical length measurements are not recommended.<sup>9</sup>

## Mid-Trimester Cervical Length for Predicting Preterm Birth

- All women should have an appropriately performed cervical length at the mid-trimester morphology scan, at 18–20 weeks gestation.<sup>4, 11</sup> This can be performed transabdominally or transvaginally. Transabdominal cervical length assessment requires a partially filled bladder (an over-full bladder falsely elongates the cervical length) and is performed in a midline sagittal plane.<sup>3, 11, 12</sup>



# Cervical Length and Cerclage

- If the cervical length is < 35 mm on transabdominal ultrasound, or is unable to be well visualised, a transvaginal ultrasound should be performed.<sup>4, 11</sup>
- Transvaginal cervical length assessment should be performed with an empty bladder,<sup>12</sup> and multiple images taken over a period of 5 minutes, as the cervical length can be dynamic.<sup>11-13</sup>
- The cervical length should be measured as a linear distance, between the internal and external cervical os, and the shortest measurement reported.<sup>12, 13</sup> The presence of any funnelling should also be reported.
- See [appendix 1](#) for cervical length ultrasound consumer factsheet.

## Management of Short Cervical Length in the Mid-Trimester



Perinatal service providers need cultural sensitivity within a non-judgemental environment when planning care for Aboriginal women. Aboriginal women should be referred to or offered support from an Aboriginal Health Professional to support their care.

### Women at Low and Moderate Risk of Preterm Birth

- Women at low risk for spontaneous preterm birth have a singleton pregnancy with no history of:
  - spontaneous preterm birth < 34 weeks
  - PPROM < 34 weeks
  - mid-trimester pregnancy loss (16–24 weeks)
  - transvaginal cervical cerclage
  - shortened cervix.
- As with all women, a transabdominal cervical length measurement should be taken at their mid-trimester morphology ultrasound between 18–20 weeks gestation.<sup>11</sup>
- Approximately 15% of low-risk women with singleton pregnancies with a mid-trimester cervical length measurement of 26 to 29 mm will experience cervical shortening to ≤ 25 mm before 24 weeks gestation and repeat ultrasound transvaginal cervical length in two weeks may be reasonable.<sup>14</sup>
- There is no evidence for benefit of vaginal progesterone to reduce the risk of preterm birth with transvaginal ultrasound cervical length greater than 25 mm.
- A transabdominal cervical length of ≥ 35 mm is considered normal and routine care can ensue, however if < 35 mm, a transvaginal cervical assessment will need to be undertaken.<sup>4, 11</sup>
- Women with a transvaginal cervical measurement ≥ 25 mm can progress to routine care, however if shortened (< 25 mm), urgent contact with the primary referrer is required with initiation of:
  - Progesterone 200 mg pessary nightly until 36 weeks (see *Preterm Labour and Birth. Prevention, diagnosis and management PPG* in the A-to-Z index at [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal))
  - vaginal MC&S swabs for bacterial vaginosis screening (see *Antibiotics in the Peripartum Period* in the A-to-Z index at [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal))
  - encouragement of smoking cessation (if applicable) (see *Preterm Labour and Birth. Prevention, Diagnosis and Management PPG* in the A-to-Z index [www.sahealth.sa.gov.au/perinatal](http://www.sahealth.sa.gov.au/perinatal))
  - commencement of serial transvaginal cervical length surveillance measurements every 7–14 days.<sup>12</sup>
- Evidence of further cervical shortening, or a transvaginal cervical length of < 15 mm at any mid-trimester ultrasound, requires immediate contact with the primary provider and discussion with a preterm birth clinic or obstetric consultant for further assessment and consideration of transvaginal cervical cerclage.





# Cervical Length and Cerclage

- Women at moderately increased risk for spontaneous preterm birth have a singleton pregnancy with a history of:
  - obstetric cervical trauma:
    - fully dilated Caesarean
    - mid-trimester STOP or MTOP
  - cervical surgery:
    - cone biopsy
    - two or more LLETZ procedures
    - one LLETZ > 10 mm depth.<sup>4, 10</sup>
- There are no standard recommendations for cervical length screening for these women with RCOG supporting transvaginal cervical length measurement no later than morphology at a minimum.<sup>10</sup> Expert consensus in South Australia recommends surveillance at 16 weeks in addition to morphology, to enable early detection of potential cervical shortening and implementation of preterm birth prevention initiatives.
- Among women without a history of preterm birth or mid-trimester loss, and a transvaginal cervical length < 25 mm, there is limited high-quality evidence to guide practice. It is possible that any benefit of transvaginal cervical cerclage in this population would be when the cervical length is very short (< 10 mm) or open. A randomised trial compared transvaginal cervical cerclage with expectant management, among predominantly low risk women with a cervical length < 15 mm, did not find a significant difference in rate of preterm birth.<sup>15</sup> Further trials are ongoing. For recommended cerclage management decision see [flowchart 3](#).

## Women at High Risk of Preterm Birth

- High risk factors for spontaneous preterm birth are a history of:
  - spontaneous preterm birth < 34 weeks and/or
  - PPRM < 34 weeks
  - mid-trimester pregnancy loss (16–24 weeks)
  - transvaginal cervical cerclage
  - shortened cervix
  - radical trachelectomy
  - congenital uterine abnormalities
  - uterine surgery (e.g., septum resection).<sup>4, 10, 12</sup>
- Referral should be made to a preterm birth clinic or high-risk obstetric care once viability of pregnancy is confirmed.
- This cohort of women should undergo serial fortnightly transvaginal cervical length monitoring from 16–24 weeks with identification of a shortened cervix (< 25 mm) prompting immediate contact with the primary referrer and preterm birth clinic/obstetric consultant for consideration of transvaginal cervical cerclage.<sup>2, 10</sup>
- Among women with a history of a previous preterm birth or mid-trimester loss, and a transvaginal cervical length < 25 mm, there is evidence from a systematic review and meta-analysis that a transvaginal cervical cerclage reduces the risk of recurrent preterm birth (RR 0.70).<sup>16</sup>
- The decision to perform cervical cerclage is based on obstetric history and ultrasound and clinical assessment of the cervix during pregnancy. Women should be counselled by a practitioner experienced in performing the procedure. Consider use of perioperative antibiotics and tocolytics with caution.



# Cervical Length and Cerclage

## Considerations Prior to Transvaginal Cervical Cerclage

Prior to performing a transvaginal cervical cerclage, the following investigations should be undertaken.

### Investigations:

- full blood examination (leukocyte count  $\leq$  15,000/mL)
- C-reactive protein ( $<$  20 ng/dL)
- high and low vaginal swabs
- ultrasound to exclude fetal anomalies, preterm pre-labour rupture of the membranes, confirm gestational age.

### Observations:

- exclude regular uterine activity
- exclude preterm rupture of the membranes
- maternal temperature  $<$  38°C
- no uterine tenderness
- no fetal tachycardia
- ensure informed consent is signed.

## Indications for Transvaginal Cervical Cerclage

### History Indicated

**Consider a transvaginal cervical cerclage for women with a history of:**

- three or more spontaneous preterm births ( $<$  34 weeks) and/or mid-trimester pregnancy losses (16–24 weeks).<sup>2, 10</sup>

### Timing of cerclage placement:

- between 12–14 weeks but may be placed up to 24 weeks gestation in individual cases.

### Ultrasound-Indicated

**Consider cervical cerclage for women:**

- with a cervical length  $<$  25 mm and a history of preterm birth ( $<$  34 weeks) and/or mid-trimester loss (16–24 weeks).
- with a cervical length  $<$  10 mm and no history of preterm birth ( $<$  34 weeks) and/or mid-trimester loss (16–24 weeks).

### Timing of cerclage placement:

- between 14–24 weeks gestation.

### Examination-Indicated

- **Do not** offer a transvaginal cerclage if there are signs of infection, bleeding, or uterine activity.<sup>8</sup>
- Consider cervical cerclage for women with a combination of:
  - open cervix on examination and
  - no evidence of active chorioamnionitis or active labour.

### Timing of cerclage placement:

- May be performed between 14–24 weeks gestation.



# Cervical Length and Cerclage

## Transvaginal Cervical Cerclage Technique

- The two main techniques are:
  - McDonald transvaginal cervical cerclage: Insertion of a transvaginal cervical cerclage with no dissection of the vaginal skin.
  - Shirodkar transvaginal cervical cerclage: Insertion of a transvaginal cervical cerclage where dissection of the vaginal skin occurs, to facilitate reflection of the bladder, and a higher cerclage placement.
- Suture materials used include mersilene tape, prolene, nylon and silk.
- There is no evidence to recommend a particular technique or suture material over another.
- The suture is knotted - knots placed anteriorly are the easiest to see and remove.
- Some surgeons insert an “air knot” to facilitate easier identification and removal of the suture.
- The position and type of knot used needs to be accurately documented.

## Complications

Cervical cerclage is associated with increased risk of sepsis in particularly when a physical examination indicated cerclage is inserted.<sup>17, 18</sup> Women who have a transvaginal cervical cerclage inserted remain at an increased risk of preterm birth and sepsis, and require education about when to present, and ongoing close surveillance.

Complications include:

- chorioamnionitis
- prelabour preterm rupture of membranes
- preterm labour
- cervical dystocia
- cervix may not dilate due to scarring, therefore requiring a caesarean section
- cervical laceration.

## Removal of Transvaginal Cervical Cerclage

The cerclage can be removed electively at 36<sup>+0</sup>–37<sup>+0</sup> weeks gestation.<sup>2</sup> Usually, it is easiest for the obstetrician who inserted the cerclage to remove it prior to birth. It is important that the obstetric doctor removing the suture refers to the original operation records prior to removal to ensure that the suture/s are removed entirely. Removal can be performed, in most cases, without anaesthesia.

A CTG should be performed post suture removal, and close observation of vaginal loss and uterine activity. If the CTG is normal and no other clinical concerns one hour post procedure, the woman may be discharged with a documented plan for follow up, and instructions for the woman to contact the hospital if she has any concerns, feels unwell, experiences any vaginal loss or decreased fetal movements.<sup>19</sup>

Women who go into labour with the suture insitu should have the suture removed as early as possible. If this cannot be achieved, remove the suture after birth. The onset of preterm labour unresponsive to tocolysis and/or a strong suspicion of sepsis are indications for the removal of the cerclage as an emergency.



Aboriginal women should be consulted on any follow up plans and supported their nominated Aboriginal Health Professional.

## Transabdominal Cervico-isthmic Cerclage

There is evidence that for women at very high risk of preterm birth, transabdominal cervical cerclage is associated with a reduction in preterm birth and mid-trimester loss.<sup>20</sup> Transabdominal cervical cerclage is more complicated than transvaginal cervical cerclage and is associated with greater morbidity (wound infection, bleeding).<sup>21</sup> Also, vaginal birth is not possible following this approach, so a caesarean section is necessary for the birth of the baby.



# Cervical Length and Cerclage

The indications for transabdominal cervico-isthmic cerclage are:

- cervical anatomy does not allow the placement of a cervical cerclage vaginally (e.g., post trachelectomy)
- after a failed transvaginal cerclage (birth at < 30 weeks gestation after a history- or ultrasound-indicated, but **not** physical examination-indicated, transvaginal cervical cerclage).<sup>10, 21</sup>

## Surgical Procedure

Transabdominal cervico-isthmic cerclage is generally an elective procedure that should only be undertaken by an Obstetrician/Gynaecologist with appropriate expertise. It can be performed via laparotomy or laparoscopy.<sup>22</sup>

Suture material may be mersilene tape or a number 2 Portex infant feeding tube threaded onto a number 4 taper point mayo needle.

Consider single dose perioperative prophylactic antibiotics.

## Timing of Procedure

A transabdominal cervico-isthmic cerclage can be inserted either between pregnancies, or in early pregnancy. There are risks and benefits to both procedures, and women who are identified as potentially being candidates for a transabdominal cervico-isthmic cerclage should be referred early to Maternal Fetal Medicine for consideration.

## Birth Following Transabdominal Suture

- Ideally around 36–37 weeks of gestation by caesarean section.
- There is a potential for uterine rupture if labour occurs spontaneously.<sup>23</sup>
- The suture may remain insitu for any future pregnancies.

## Resources

### SAPPGs Web-based App:

[Practice Guidelines \(sahealth.sa.gov.au\)](https://sahealth.sa.gov.au)

### Medicines Information: (sahealthlibrary.sa.gov.au)

<https://sahealthlibrary.sa.gov.au/friendly.php?s=SAPharmacy>

### SA Health Pregnancy:

[Pregnancy | SA Health](https://sahealth.sa.gov.au/SAHealth/Pregnancy)

### Australian Government Pregnancy, Birth and Baby: ([www.pregnancybirthbaby.org.au](http://www.pregnancybirthbaby.org.au))

[Pregnancy, Birth and Baby | Pregnancy Birth and Baby \(pregnancybirthbaby.org.au\)](https://www.pregnancybirthbaby.org.au)

### Pathology Tests Explained: (<https://pathologytestsexplained.org.au/>)

[Pathology Tests Explained](https://pathologytestsexplained.org.au/)



# Cervical Length and Cerclage

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# Cervical Length Ultrasound

This fact sheet has been developed to provide you with information about your second trimester ultrasound.

## Why is the length of your cervix checked during an ultrasound?

Ultrasound scans are performed by sonographers and doctors to check the size, development and wellbeing of your baby.

The scan also checks the length of your cervix (neck of the womb). Checking the length of your cervix during pregnancy is important, and can only be measured by an ultrasound. If the cervix is short (Picture 1), there is a higher chance of your baby being born early (preterm birth). All women should have their cervix measured at their mid-pregnancy ultrasound.

Preterm birth is when a baby is born before 37 weeks. If your cervix is short there are things that can be done to help lower the chance of your baby being born preterm.

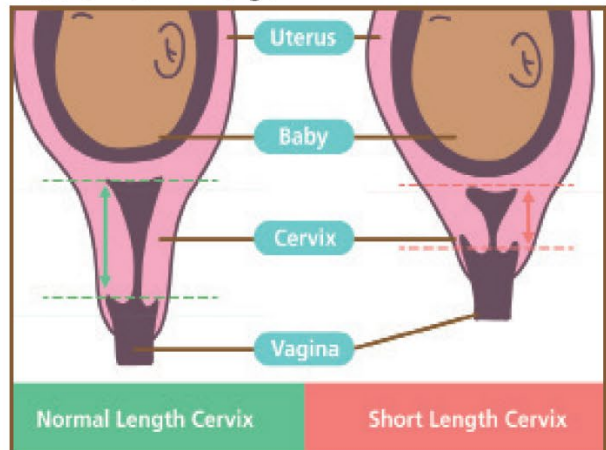
Babies born preterm usually need extra support in hospital and can have longer term health and behaviour problems.

## How is your cervix measured?

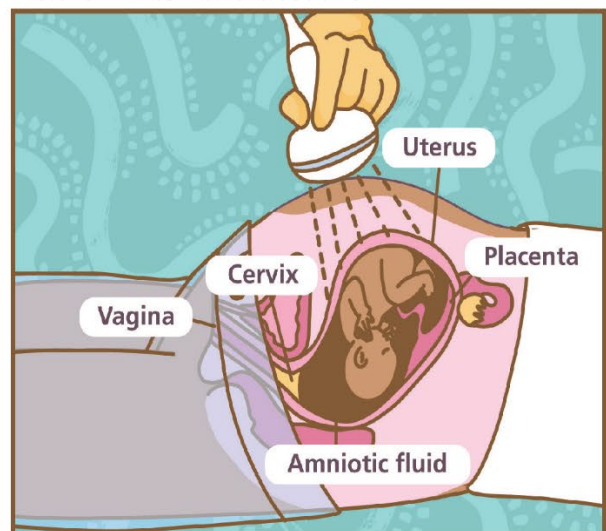
An ultrasound scanner moves gently across your abdomen to see your cervix from the outside (Picture 2).

Sometimes, it is recommended that you have an internal (vaginal) ultrasound. This helps to see the cervix more clearly. To do this, a smaller ultrasound scanner is inserted a small way into your vagina (Picture 3).

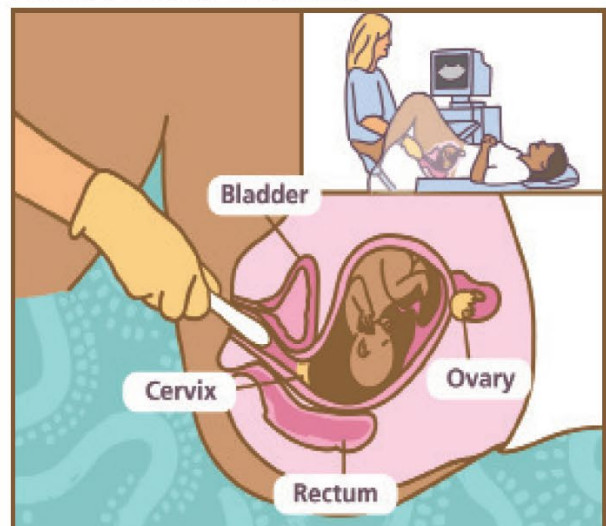
Picture 1 Cervix Length



Picture 2 External Ultrasound



Picture 3 Internal Ultrasound



# Cervical Length Ultrasound

This fact sheet has been developed to provide you with information about your second trimester ultrasound.

## Is it safe to have a vaginal ultrasound during pregnancy?

Yes. If you have any concerns, please talk about these with your doctor, midwife or sonographer.

## Will I need to pay for the ultrasound scans?

Medicare will cover all or part of the cost of your ultrasound. If you are not eligible for Medicare, you may be charged the full amount. If you have any questions, please contact your local radiology provider.

## How do I prepare?

If you need an internal (vaginal) scan, you will be asked to empty your bladder. You can have a support person with you. If you prefer to have a female sonographer do the ultrasound, please discuss your needs with your doctor, midwife and sonographer.

## What happens after the ultrasound?

Your results will go to your doctor or midwife and will be discussed with you at your next appointment.

## What if my cervix is short?

You will need to see your doctor or midwife soon after the scan. They might recommend that you start using vaginal progesterone pessaries to lower the chance of preterm birth.

You may need to have more vaginal scans to measure the cervix. This is to check if it is getting shorter. If the cervix is very short, you will need to see a specialist doctor. They might suggest putting a stitch (suture) in your cervix to stop it from getting shorter. This will also lower the chance of preterm birth.

For more information or if you have any concerns, please talk to your doctor, midwife or sonographer.

## For more information

For more information or if you have any concerns, please talk to your doctor, midwife or sonographer.

[www.sahealth.sa.gov.au](http://www.sahealth.sa.gov.au)

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# Cervical Length and Cerclage

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07/05/2024	V6	Domain Custodian, SA Health Clinical Governance, Safety & Quality	Formally reviewed to update recommendations for cervical length surveillance and escalation pathway.
28/02/2023	V5	Domain Custodian, SA Health Clinical Governance, Safety & Quality	Formally reviewed in line with 5-year review schedule.
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