Preterm Birth Prevention

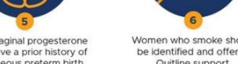
No pregnancy to be ended until at least 39 weeks unless there is obstetric or medical justification.

Measurement of the length of the cervix at all mid-pregnancy scans.

Use of natural vaginal progesterone (200mg each evening) if the length of cervix is less than 25mm.

If the length of the cervix continues to shorten despite progesterone treatment, consider surgical cerclage.

Use of vaginal progesterone if you have a prior history of spontaneous preterm birth.



Women who smoke should be identified and offered Quitline support.

To access continuity of care from a known midwife during pregnancy where possible.

We would like to acknowledge this land that we meet on today is the traditional lands of the Boandik people and that we respect their spiritual relationship with their country.

We also acknowledge the Boandik people as the custodians of the greater Mount Gambier region and that their cultural and heritage beliefs are still as important to the living Boandik people today.

Declarations - My different hats!

Medical lead of the SA Preterm Birth Prevention project

- *Funded through Federal Government, WIRF and SAHMRI*

Consultant Obstetrician & Gynaecologist

- *Women's and Children's Hospital*

Obstetrician & Gynaecologist

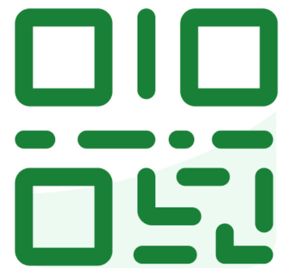
- *Belong O&G*

My most demanding hat…

Pro: both born >37 weeks

Con: less than 39 weeks…

slido



Join at slido.com
#1323154

slido

What is the overall Preterm Birth rate in Australia?

ⓘ Start presenting to display the poll results on this slide.

First Nations 14.1%

Non-Indigenous

Not stated

Total 8.2%

0 10 20 30 40 50 60 70 80 90 100

Per cent

Pre-term Term

Source: AIHW analysis of National Perinatal Data Collection https://www.aihw.gov.au/

slido

What are the risk factors for Preterm Birth?

ⓘ Start presenting to display the poll results on this slide.

OFFICIAL

- Age (<20, >35)
- Ethnicity (Aboriginal, Indian, Indo-Caribbean)
- Hx Cervical surgery
- Congenital Uterine Anomalies/Uterine Surgery
- BMI (<18, >30)
- Medical Comorbidities (Hypertension, DM, SLE, APLS, Scleroderma)
- Nutrition deficiencies
- Smoking and/or substance misuse
- Hx Preterm Birth, PPROM, short cervix, cerclage
- Hx Mid-trimester loss
- Previous fully dilated CS, Mid-trimester STOP or GTOP
- Short cervix in current pregnancy
- Short interpregnancy interval
- ART/IVF, Multiple pregnancy
- Urogenital infections
- Low Socio economic status, Domestic and Family Violence

slido

What is a normal cervical length when performed transabdominally?

ⓘ Start presenting to display the poll results on this slide.

slido

What is a normal cervical length when performed transvaginally?

ⓘ Start presenting to display the poll results on this slide.

Trans-abdominal length (with a full bladder) of 35mm or more is acceptable if the cervix can be imaged clearly and there is no prior history.

All others require trans-vaginal scan (cut-off 25 mm)

Local LCLHN data

PTB rate: 5.4% (18/331)

Risk factors:

Multiple pregnancy (3/18)

Previous PTB (2/18)

Smokers (4/18)

Other risk factors included extremes of BMI and age

NO women had a cervical length measured or recorded as part of their mid-pregnancy ultrasound

Preterm birth: **what you need to know**

Up to **10%** of births in Australia are preterm.

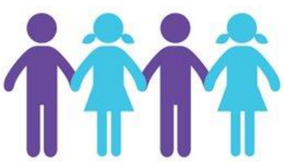
This figure is significantly higher in developing countries.

The rate of preterm birth for Aboriginal mothers is almost **DOUBLE** that of non-Aboriginal mothers.

The annual cost of preterm birth to Australia is

$1.4 billion

More than $350 million is spent each year on those needing education assistance due to their early birth.



Preterm birth is the **leading cause of death and disability** in children up to five years of age in the developed world.

Worldwide **13.4 million babies** are born preterm each year.

More than **26,000** Australian babies are born preterm each year.

In 2020, preterm birth was responsible for nearly **1 million deaths worldwide**

– World Health Organization.

Preterm birth is defined as birth before 37 and after 20 completed weeks of pregnancy.

TRIMESTER I | TRIMESTER II | TRIMESTER III | BIRTH

Preterm Birth Risk Factors

Preterm Labour & Birth

Prevention, Diagnosis & Management

Table 1: Risk Factors for Preterm Birth and Recommended Actions – Quick Reference

Risk Factors		Action
Maternal		
Age	<20 >35	Continuity of Carer Postnatal LARC Consider aspirin (Appendix 1)
Ethnicity	ATSI Indian, African, Indo-Caribbean	Refer to AFBP Continuity of Carer
Cervical Surgery	Especially >10mm, repeated LLETZ or Cone Biopsy	Cervical length at morphology
Congenital Uterine Anomalies		Cervical length at morphology
BMI	<18 and >30	Optimise BMI pre-pregnancy Consider aspirin (Appendix 1)
Medical Comorbidities	Hypertension, DM, Renal Disease, SLE, APLS, Scleroderma	Optimise pre-pregnancy Consider aspirin (Appendix 1) Multi-disciplinary Team Care
Nutrition	Vegetarian/Non-Fish Diet Malabsorption/Inflammatory Bowel Disease/Gastric Banding Previous PTB/At risk woman	Omega 3 & Zinc Supplements Screen for Vitamin D deficiency
Smoking		Screen at booking & every third visit as per SAPR Refer to Quitline

Omega 3

- Now part of SAMSAS panel of bloods for women having cFTS
  - Recommended to screen for levels <20 weeks
  - Initial research phase for ongoing funding
- Cochrane review:
  - 11% reduction in PTB
  - 42% reduction in early preterm births
- ORIP RCT – Omega-3 to Reduce the Incidence of Preterm Birth
- Avoid supplementation in women on clexane (safe for use with aspirin)

Omega-3 status test results: how to advise women

Omega-3 status[4,5]	Guidance to incorporate into pregnancy care plan
Less than 3.7% (low status)	**Take omega-3 fatty acid supplements** until 37 weeks, to reduce the risk of early preterm birth. Suggested dose: 800 mg DHA and 100 mg EPA per day. Typical suitable supplements include Infantem (Pharmamark)* and Omega Brain (Blackmores).
Between 3.7 and 4.3% (moderate status)	**No action required.** If already taking omega-3 fatty acids as part of a multivitamin and mineral supplement or a standalone supplement, this may continue.
Above 4.3% (sufficient status)	**Omega-3 supplements are not required** and provide no benefit to risk of early preterm birth. If women are already taking omega-3 fatty acids as part of a multivitamin and mineral supplement and wish to continue, the dose of DHA+EPA should not exceed 250 mg per day.

*Vegan algal oil supplement of DHA and EPA.

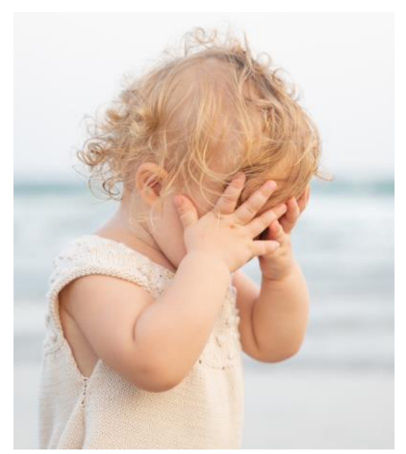
Preterm Birth Risk Factors

Preterm Labour & Birth
Prevention, Diagnosis & Management

Table 1: Risk Factors for Preterm Birth and Recommended Actions – Quick Reference

Obstetric History		
Previous preterm birth/PPROM/ cerclage/shortened cervix		Refer to Obstetrician/MFM
Previous fully dilated CS, STOP, GTOP		Cervical length at morphology
Pregnancy Features		
Shortened Cervix	<25mm on TVUS, especially <10mm or funnelling	Urgent referral to Obstetrician/ MFM
Short Interpregnancy Interval	Especially <6 but up to 18 months	Continuity of Carer Optimise nutrition & medical comorbidities Postnatal LARC
ART/IVF		Single Embryo Transfer Consider aspirin (Appendix 1)
Urogenital Infections	All Women Symptomatic Women History of infection associated losses and PTB e.g. chorioamnionitis	Screen, culture & treat UTI Culture & treat urogenital infections Refer to Obstetrician/MFM
Multiple pregnancy		Refer to Obstetrician. Refer to MFM if MCDA, DCDA complexity or higher multiple Consider aspirin (Appendix 1)
Social Factors		
Low SES/Intimate Partner Violence		Continuity of Carer Any available enhanced antenatal care programs Refer to Social Work if indicated
ATSI		Refer to AFBP
Substance abuse		Continuity of Carer Refer to Quitline/DASSA

Preterm Birth – The Problems



National Preterm Birth Prevention Collaborative

- Grew from the WA Preterm Birth initiative which commenced in 2014
- Became National in June 2018 - "The Whole Nine Months"
- The world's first national PTB prevention program
- 50+ maternity hospitals Australia wide participating
- NHMRC Partnership grant – supported by the Commonwealth Government
- Led by the Australian Preterm Prevention Alliance, in partnership with Women's Healthcare Australasia, the Institute of Healthcare Improvement (IHI) and Safer Care Victoria
- Aimed to strategically reduce the rate of preterm and early term births across Australia

National Preterm Birth Prevention Collaborative

Aim to reduce the rate of preterm and early term birth (37+0 to 38+6) by 20% by March 2024

How can we reduce PTB…? The Seven Strategies

The key strategies to prevent preterm birth

More than 26,000 Australian babies are born too soon each year.

New research discoveries have led to the development of key strategies to safely lower the rate of preterm birth and are continuing to make pregnancies safer for women and their babies.

No pregnancy to be ended until at least 39 weeks unless there is obstetric or medical justification.

Measurement of the length of the cervix at all mid-pregnancy scans.

Use of natural vaginal progesterone (200mg each evening) if the length of cervix is less than 25mm.

If the length of the cervix continues to shorten despite progesterone treatment, consider surgical cerclage.

Use of vaginal progesterone if you have a prior history of spontaneous preterm birth.

Women who smoke should be identified and offered Quitline support.

To access continuity of care from a known midwife during pregnancy where possible.

These strategies have been approved and endorsed by the Australian Preterm Birth Prevention Alliance.

- Aim for ‘PPG indicated’ inductions
- Change in standard elective CS booking timeframes
- Educate women regarding ‘Every Week Counts’

EVERY WEEK COUNTS TOWARDS THE END OF PREGNANCY

Through research we're discovering that every week your baby continues to grow inside you makes a difference to their short and long term health outcomes.

WEEKS' GESTATION

BABY'S BRAIN

A baby's brain at 35 weeks weighs only two-thirds of what it will weigh at 39–40 weeks

BABY'S RISK AT BIRTH

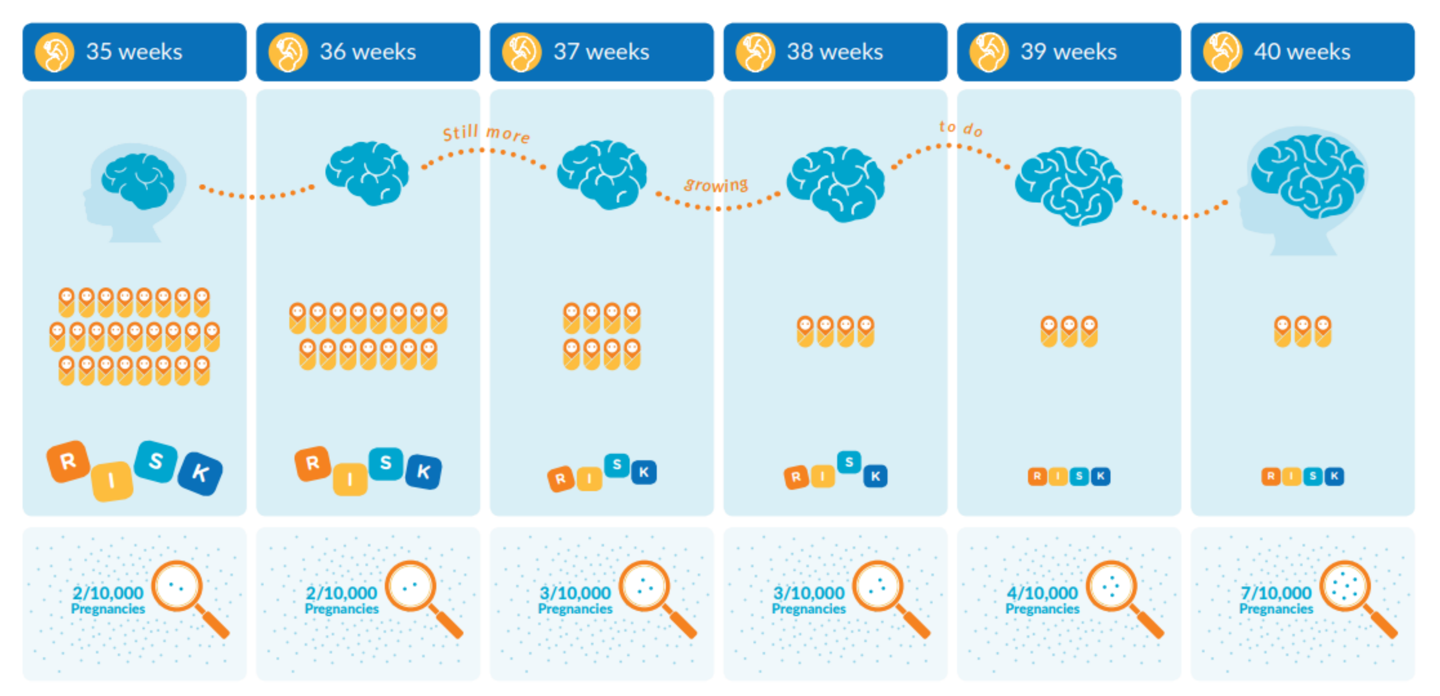
Number of babies spending time in a special care baby unit

LEARNING DIFFICULTIES AT SCHOOL ENTRY

STILLBIRTH

Per 10,000 ongoing single baby pregnancies*

*NSW Perinatal Data



Brain development is responsible for learning, movement and coordination

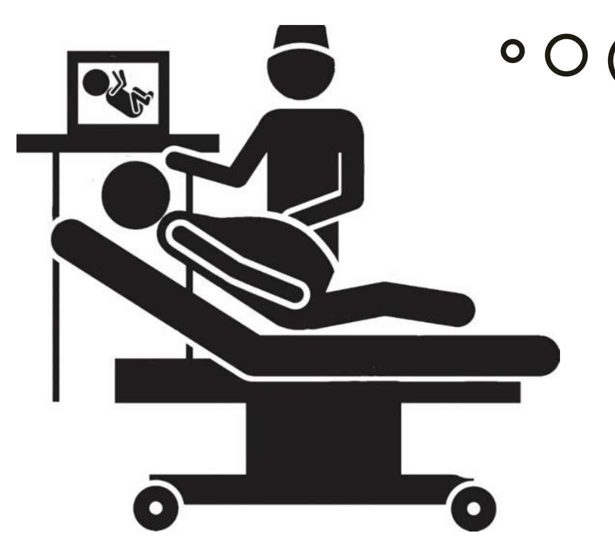
Babies are less likely to need specialised care for breathing and feeding difficulties when born closer to their due date

There is less risk of learning difficulties at school entry for babies born closer to their due date

The rate of stillbirth increases slightly towards 40 weeks, but remains very low

Every pregnancy is unique. The decision about the timing of your birth should be based on balancing health benefits to your baby with any risks specific to your pregnancy.

Early term birth: the clinical question



37 weeks…
should I deliver today or
should I wait until 39 weeks?

Imagine…

all the children from this
obstetrician go to one school

…in 8 years time

what would the school look like?

In a school of 500 children following a policy of electively ending all pregnancies at 37 weeks' gestation compared with 39 weeks

SCHOOL

In a school of 500 children
following a policy of electively ending all pregnancies at 37 weeks' gestation

1 in 2 chance
of one extra child

SCHOOL

There is a 1 in 2 chance there may be one extra child in the school (prevented a stillbirth) (NNT about 1350 births)

In a school of 500 children
following a policy of electively ending all pregnancies at 37 weeks' gestation

Behavioural disorder

1 in 2 chance of one extra child

SCHOOL

Each class of 30 will have two extra children with an externalising behavioural disorder

In a school of 500 children
following a policy of electively ending all pregnancies at 37 weeks' gestation

1 in 2 chance
of one extra child

Behavioural disorder

Special education

SCHOOL

Across every two classes will be 1 extra child with need for special educational assistance

In a school of 500 children following a policy of electively ending all pregnancies at 37 weeks' gestation

1 in 2 chance of one extra child

Behavioural disorder

Special education

Numeracy problem

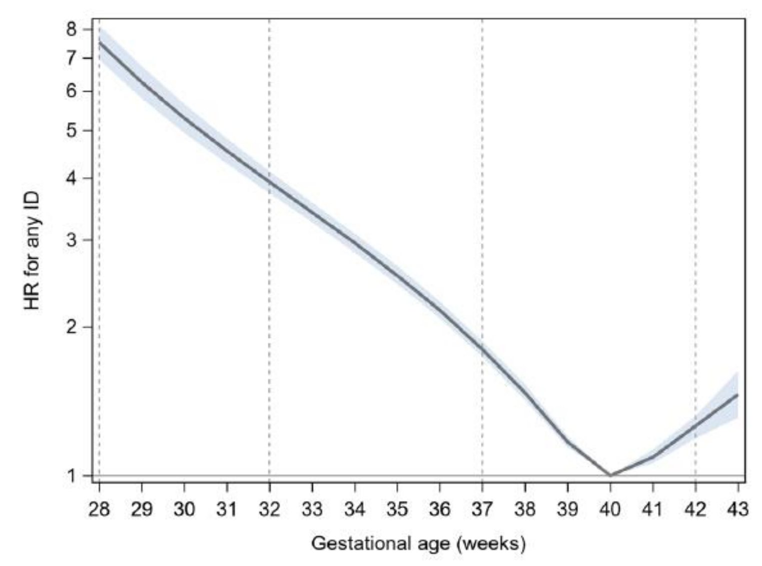
SCHOOL

Across every three classes there will be 2 extra children with a basic numeracy problem

Gestational age and risk of intellectual disability: a population-based cohort study

Weiyao Yin [1,2] Nora Döring,[1] Monica S M Persson,[1] Martina Persson,[3]
Kristina Tedroff,[4] Ulrika Ådén,[3] Sven Sandin [1,5]

- Swedish population study 1974-2017
- N = 3.5 million
- Risk of ID increased weekly before and after week 40
- Held for mild, moderate and severe, but strongest for severe
- Remained robust after adjustment for confounders



Yin W, *et al. Arch Dis Child* 2022;**0**:1–7. doi:10.1136/archdischild-2021-323308

Previous Caesarean Section?

What is the likelihood of spontaneous labour before 39 weeks?

Roberts *et al. BMC Pregnancy and Childbirth* 2014, **14**:125
http://www.biomedcentral.com/1471-2393/14/125

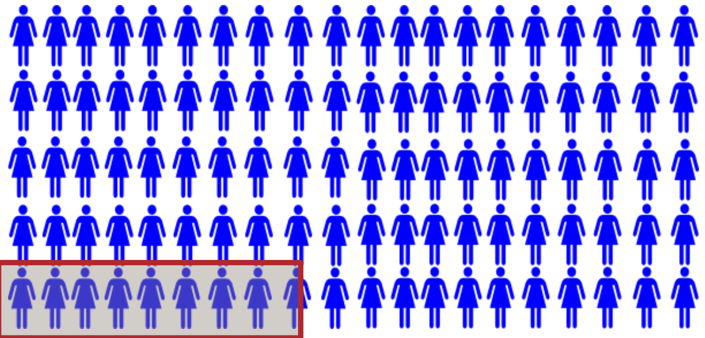
RESEARCH ARTICLE Open Access

Rate of spontaneous onset of labour before planned repeat caesarean section at term

Christine L Roberts[1,2*], Michael C Nicholl[3], Charles S Algert[1], Jane B Ford[1], Jonathan M Morris[1,2] and Jian Sheng Chen[1]

What is the likelihood of spontaneous labour before 39 weeks?

Overall, there is an 8.5% risk (1 in 12) of intrapartum caesarean before 39 weeks for women having an Elective Repeat Caesarean Section

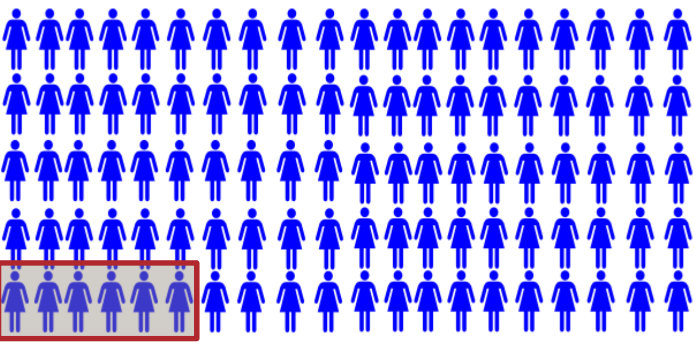


SA Health

LOW-RISK WOMEN

(No history of preterm birth and/or prior spontaneous labour in a previous pregnancy)

Risk = 6%
(1 in 17)

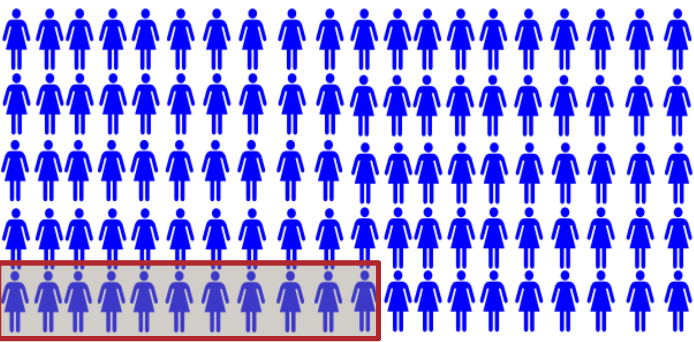


SA Health

Individualising likelihood of labour before planned caesarean at 39 weeks

Women with a history of TERM spontaneous labour or ROM prior to 39 weeks

Risk = 11%
(1 in 9)

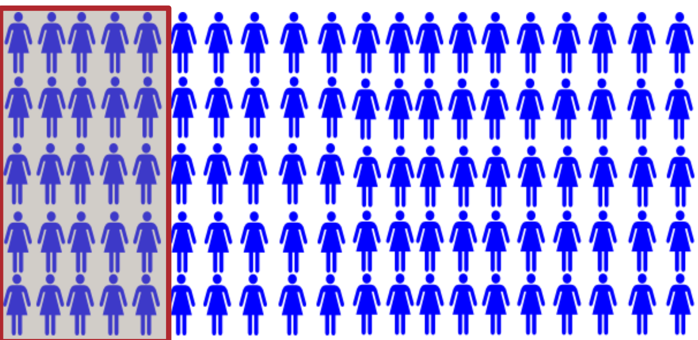


SA Health

HIGH-RISK WOMEN

(History of spontaneous preterm birth in any previous pregnancy)

Risk = 25%
(1 in 4)



SA Health

Is going into labour before an El. LSCS necessarily a bad thing…RISK vs. BENEFITS

Neonatal Benefits:

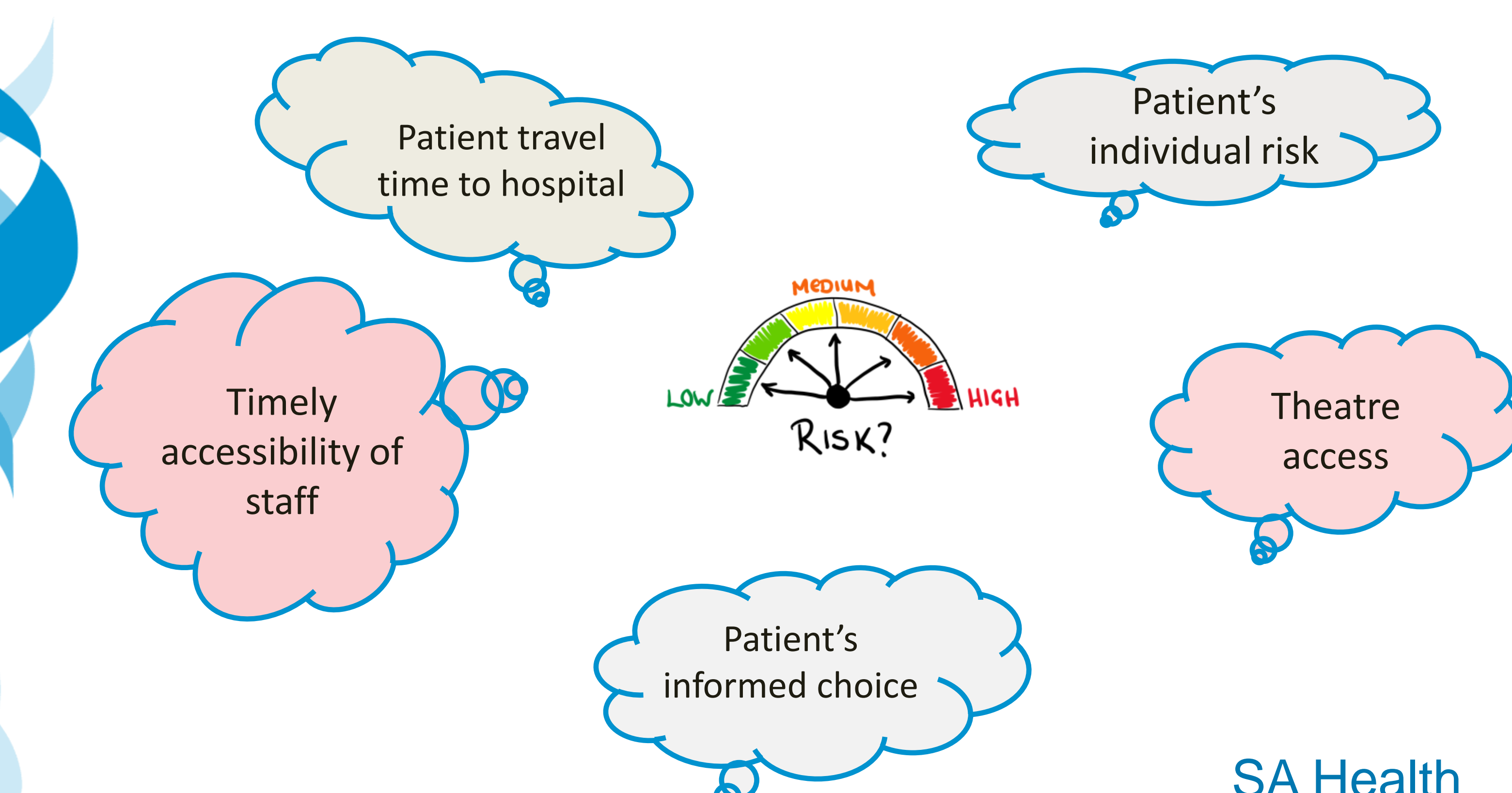
Reduced incidence of respiratory morbidity in neonates delivered after the onset of labour compared with those delivered before labour (11.2% vs. 30%)

Maternal Risks:

- Increased chance of bleeding
- Increased chance of General anaesthesia
- Increased chance of blood transfusion

THINGS TO CONSIDER

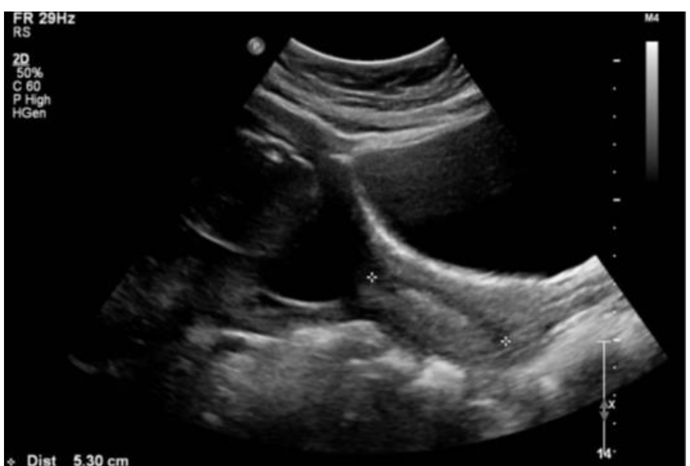
Capacity for risk

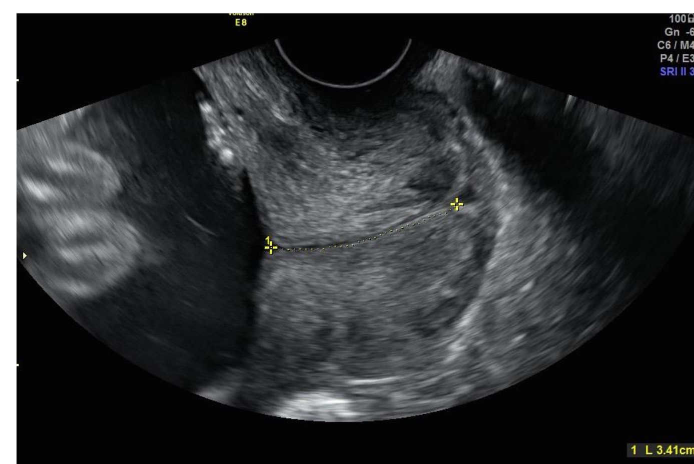


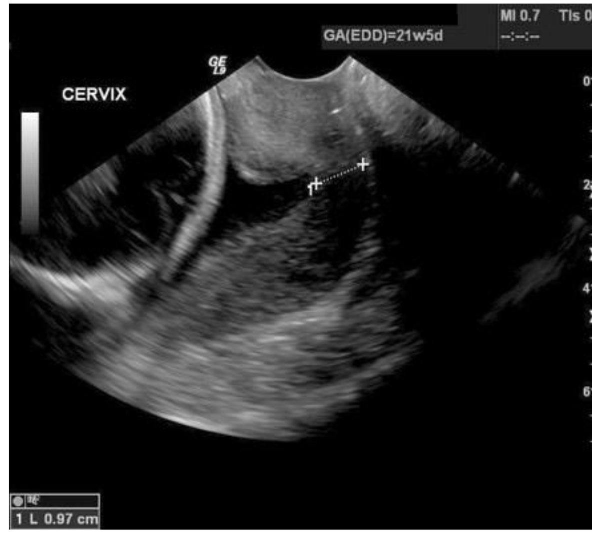
Trans-abdominal length (with a full bladder) of 35mm or more is acceptable if the cervix can be imaged clearly and there is no prior history.

All others require trans-vaginal scan (cut-off 25 mm)

A TV cervical length <25mm in mid-trimester is associated with a 2.8x increased risk of delivering less than 34 weeks gestation


FR 29Hz
RS
2D
50%
C 60
P High
HGen
M4
Dist 5.30 cm


E8
100
Gn -6
C6 / M4
P4 / E3
SRI II 3
1 L 3.41cm


MI 0.7
GA(EDD)=21w5d
CERVIX
1 L 0.97 cm

OFFICIAL

Ultrasound assessment of the cervix

- Practice statement first endorsed November 2008
- Recommendations November 2021
  - RANZCOG currently supports the use of initial TA screening of low risk women with singleton pregnancies at the mid-trimester scan, with additional transvaginal assessment for those with a short cervical length (TA CL <35mm)

CATEGORY: BEST PRACTICE STATEMENT

Measurement of cervical length for prediction of preterm birth

This statement has been developed and reviewed by the Women's Health Committee and approved by the RANZCOG Board and Council.
A list of Women's Health Committee Members can be found in Appendix A.
Disclosure statements have been received from all members of this committee.

Disclaimer This information is intended to provide general advice to practitioners. This information should not be relied on as a substitute for proper assessment with respect to the particular circumstances of each case and the needs of any patient. This document reflects emerging clinical and scientific advances as of the date issued and is subject to change. The document has been prepared having regard to general circumstances.

First endorsed by RANZCOG: November 2008
Current: November 2021
Review due: November 2026

Values: The evidence was reviewed by the Women's Health Committee (RANZCOG), and applied to local factors relating to Australia and New Zealand.
Background: This statement was first developed by Women's Health Committee in November 2006 and most recently reviewed in November 2021.
Funding: The development and review of this statement was funded by RANZCOG.

Measurement of cervical length for prediction of preterm birth (C-Obs 27) Page 1 of 15

Use of natural vaginal progesterone (200mg each evening) if the length of cervix is less than 25mm.

If the length of the cervix continues to shorten despite progesterone treatment, consider surgical cerclage.

Use of vaginal progesterone if you have a prior history of spontaneous preterm birth.

South Australian Perinatal Practice Guidelines

Preterm Labour & Birth

Prevention, Diagnosis & Management

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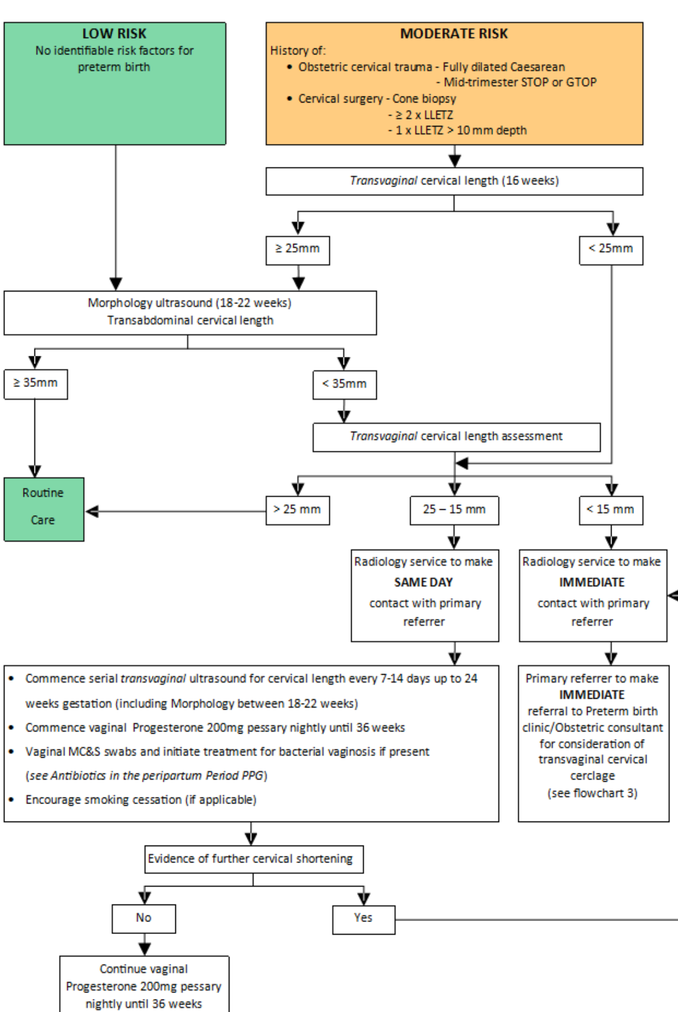
Vaginal progesterone is *recommended* for women with a shortened cervix of <25mm at mid-trimester transvaginal ultrasound screening

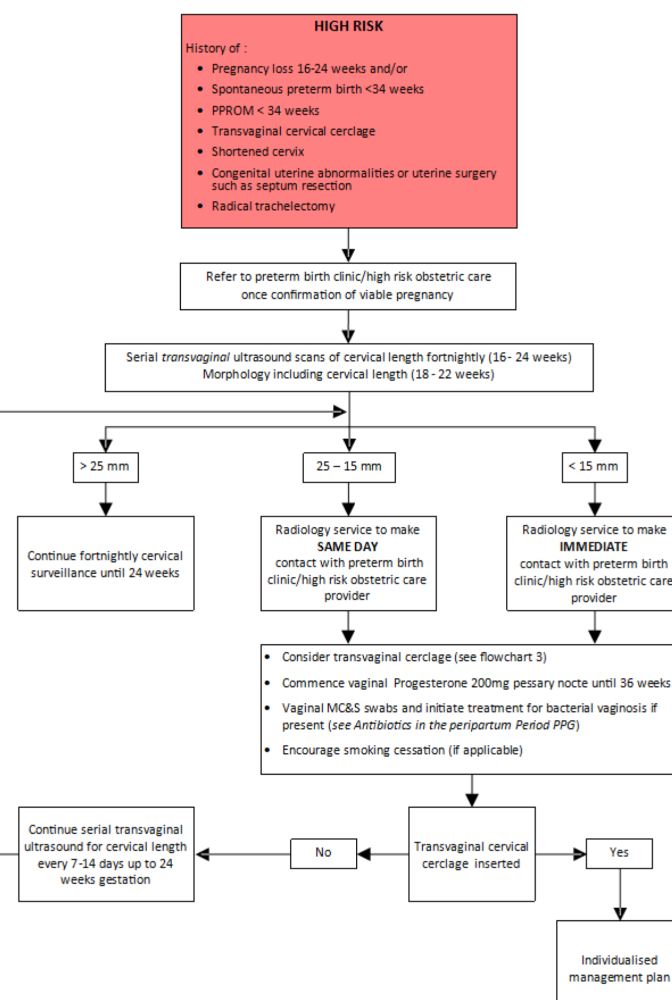
Vaginal progesterone from 16 to 36 weeks can be *considered* for women with a singleton pregnancy and a history of preterm birth.

Cervical Length (Short) and Cerclage SA PPG

- Draft updated flowcharts
- Currently out for final consultation
- Categorises women as low, moderate, high risk for PTB to guide antenatal management



DRAFT



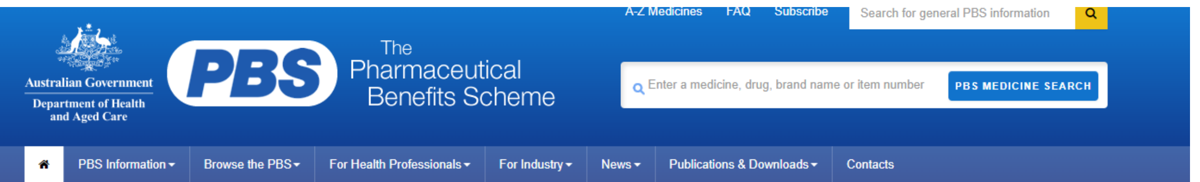
DRAFT

SA Health

Vaginal Progesterone

- The exact mechanism of action of progesterone in preventing PTB is unknown
- Two main mechanisms;
  - Anti-inflammatory effect
  - Local increase in progesterone in gestational tissues
- Good safety profile

Vaginal Progesterone



PROGESTERONE

Source General Schedule

Body System GENITO URINARY SYSTEM AND SEX HORMONES > SEX HORMONES AND MODULATORS OF THE GENITAL SYSTEM > PROGESTOGENS

Note

Authority Required (STREAMLINED)

11673

Prevention of preterm birth

Clinical criteria:

- Patient must have a singleton pregnancy,

AND

- Patient must have at least one of: (i) short cervix (mid-trimester sonographic cervix no greater than 25 mm), (ii) a history of spontaneous preterm birth,

AND

- The treatment must be administered no earlier than at 16 weeks gestation.

Code & Prescriber	Medicinal Product Pack (Name, form & strength and pack size)	Max qty packs	Max qty units	No. of repeats	DPMQ	Max Safety Net	General Patient Charge
12465C MP MW NP	PROGESTERONE progesterone 200 mg pessary, 15 (PI, CMI)	3	45	3	$127.89	$30.00	$30.00
	Available brands						
	Oripro						

OFFICIAL

- EPPPIC Study – Lancet 2021
- Systematic review of RCT comparing vaginal progesterone, IM 17-hydroxyprogesterone caproate, oral progesterone vs control or with each other in asymptomatic women at risk of PTB
- Primary outcomes – gestation at delivery, neonatal (composite of serious neonatal outcomes), maternal outcomes (HTN, PET, GDM, infection)
- >11, 000 participants

Vaginal progesterone reduced risk of PTB <34 weeks in singleton pregnancy compared with control

- RR 0.78, CI 0.68-0.90
- If baseline risk of 20%, RR of 0.78 equates to an absolute risk reduction of 4.4%

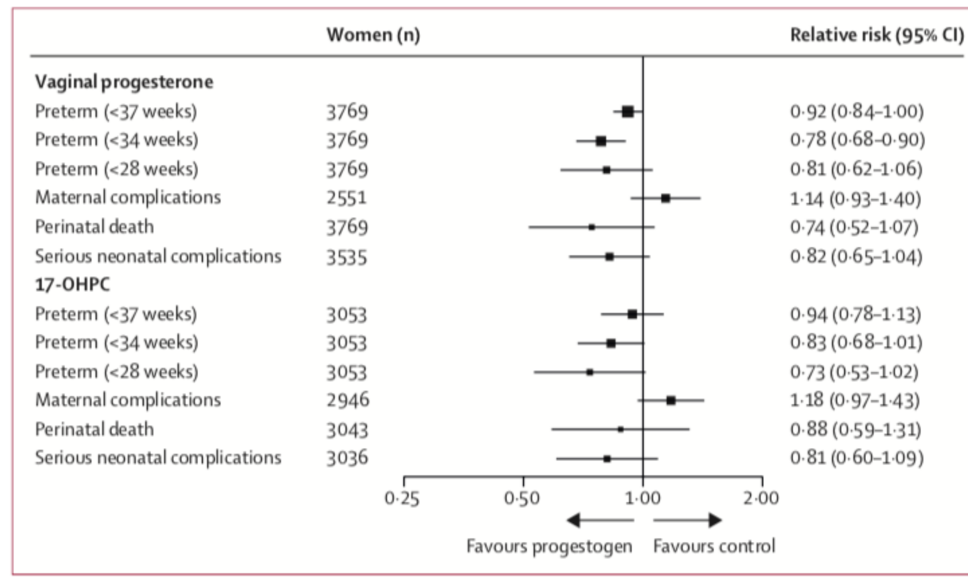


Figure 2: **Main outcomes in singleton pregnancies for vaginal progesterone and 17-OHPC trials**
17-OHPC=17-hydroxyprogesterone caproate. For vaginal progesterone: preterm birth <37 weeks number of events (n)=661, control n=705; preterm birth <34 weeks n=276, control n=343; preterm birth <28 weeks n=92, control n=111; maternal complications n=186, control n=171; perinatal death n=49, control n=64; serious neonatal complications n=119, control n=140. For 17-OHPC: preterm birth <37 weeks n=510, control n=330; preterm birth <34 weeks n=206, control n=158; preterm birth <28 weeks n=77, control n= 66; maternal complications n=285, control n=178; perinatal death n=57, control n=40; serious neonatal complications n=95, control n=75.

Short cervix (<=30mm)

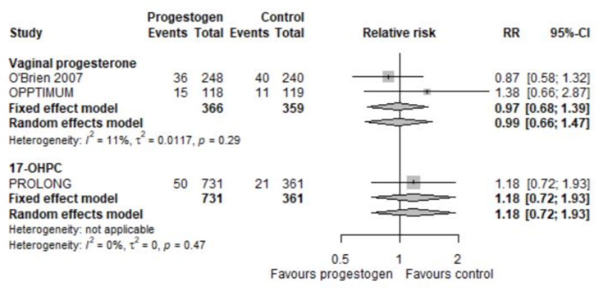
Non-short cervix (>30mm)

With PPTB

Short cervix (<=30mm), with PPTB

Study	Progestogen Events	Progestogen Total	Control Events	Control Total	RR	95%-CI
Vaginal progesterone						
Fonseca 2007	4	15	12	23	0.51	[0.20; 1.29]
O'Brien 2007	10	57	17	58	0.60	[0.30; 1.19]
OPPTIMUM	23	142	33	140	0.69	[0.43; 1.11]
PREGNANT	10	48	11	45	0.85	[0.40; 1.81]
Fixed effect model		**262**		**266**	**0.67**	**[0.48; 0.93]**
Random effects model					**0.67**	**[0.48; 0.93]**
Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0.84$						
17-OHPC						
PHENIX Singleton	3	27	9	29	0.36	[0.11; 1.19]
PROLONG	9	87	10	51	0.53	[0.23; 1.21]
Fixed effect model		**114**		**80**	**0.47**	**[0.23; 0.92]**
Random effects model					**0.47**	**[0.23; 0.92]**
Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0.60$						
Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0.85$						

Relative risk: 0.2 0.5 1 2 5 — Favours progestogen / Favours control

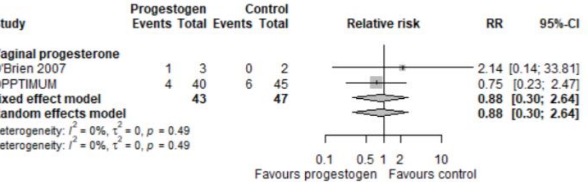


No PPTB

Short cervix (<=30mm), no PPTB

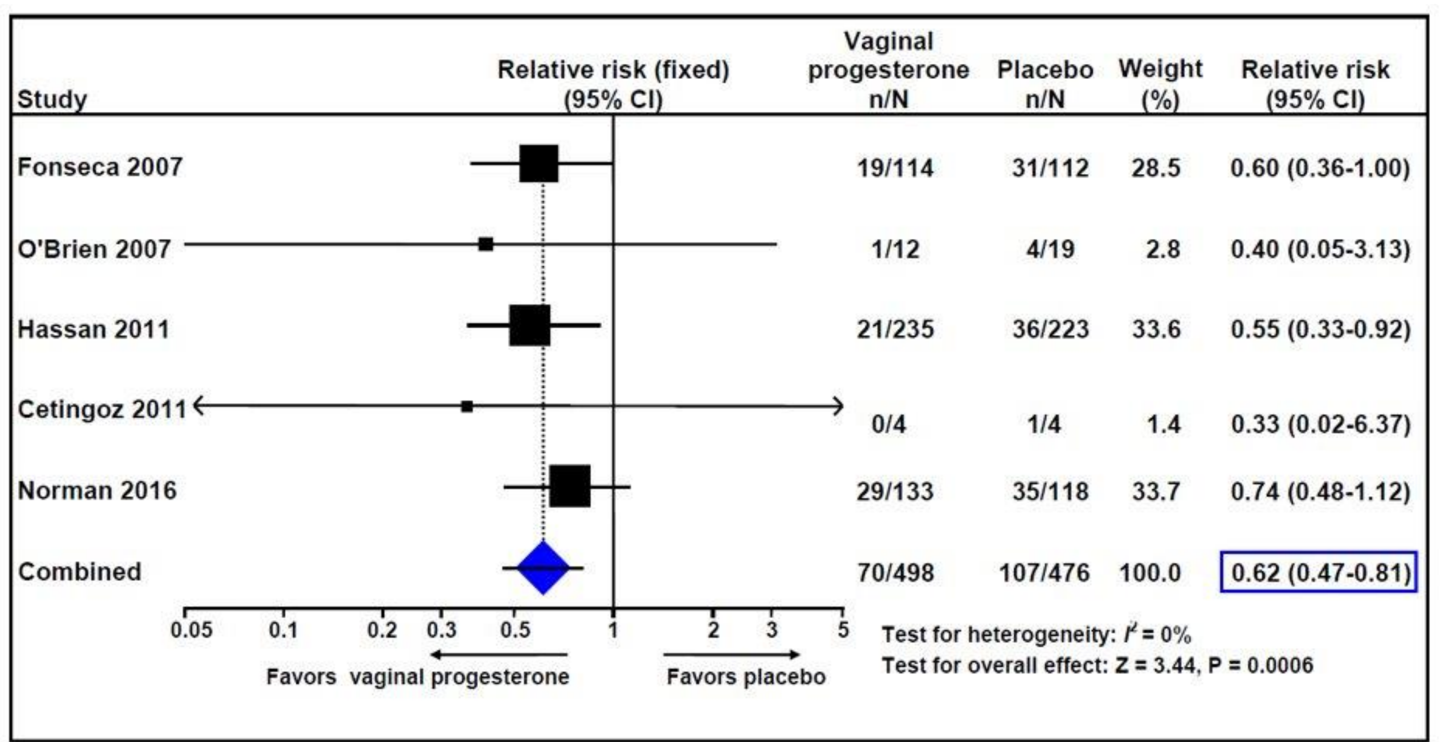
Study	Progestogen Events	Progestogen Total	Control Events	Control Total	RR	95%-CI
Vaginal progesterone						
Fonseca 2007	18	99	26	89	0.62	[0.37; 1.06]
O'Brien 2007	1	1	0	0		
OPPTIMUM	16	51	17	42	0.78	[0.45; 1.34]
PREGNANT	1	74	8	68	0.11	[0.01; 0.89]
TRIPLE P	4	30	5	25	0.67	[0.20; 2.22]
Fixed effect model		**255**		**224**	**0.65**	**[0.46; 0.93]**
Random effects model					**0.65**	**[0.45; 0.95]**
Heterogeneity: $I^2 = 5\%$, $\tau^2 = 0.0090$, $p = 0.37$						
17-OHPC						
PHENIX Singleton	8	22	6	23	1.39	[0.58; 3.37]
SCAN	41	327	48	330	0.86	[0.58; 1.27]
Fixed effect model		**349**		**353**	**0.93**	**[0.65; 1.33]**
Random effects model					**0.93**	**[0.65; 1.33]**
Heterogeneity: $I^2 = 0\%$, $\tau^2 = 0$, $p = 0.33$						
Heterogeneity: $I^2 = 17\%$, $\tau^2 = 0.0237$, $p = 0.30$						

Relative risk: 0.1 0.5 1 2 10 — Favours progestogen / Favours control



Appendix Figure 10: Analysis of subpopulations of participants defined according to categorised cervical length and presence of a previous PTB. These plots are based on considerably fewer data than the main analysis owing to unmeasured/unknown values for cervical length meaning that 6 trials (4 for VP, 2 for 17-OHPC) cannot be included. Different trials contribute to different subpopulation analyses and there may be differences between trials other than the factors by which they are grouped.

Vaginal Progesterone for a short cervix



Vaginal Progesterone for a short cervix

Hassan et al, Ultrasound Obstetrics and Gynaecology, 2011

- RCT, double blinded, placebo controlled study which looked at vaginal progesterone to reduce the rate of preterm birth in women with a sonographic short cervix
- Women with a short cervix treated with progesterone
  - 95% delivered > 28 weeks
  - 85% delivered > 35 weeks
  - 70% delivered > 37 weeks

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Cervical cerclage

Indications

- History
  - 3 or more spontaneous PTB or mid-trimester pregnancy losses
  - Usually placed between 12-14 weeks (but can be inserted up to 24/40)
- Ultrasound indication
  - Previous PTB (<34 weeks) and CVL <25mm OR
  - No previous PTB and CVL <10-15mm
- Physical examination findings
  - Open cervix on examination
  - No evidence of active chorioamnionitis or active labour
  - Gestation <24 weeks

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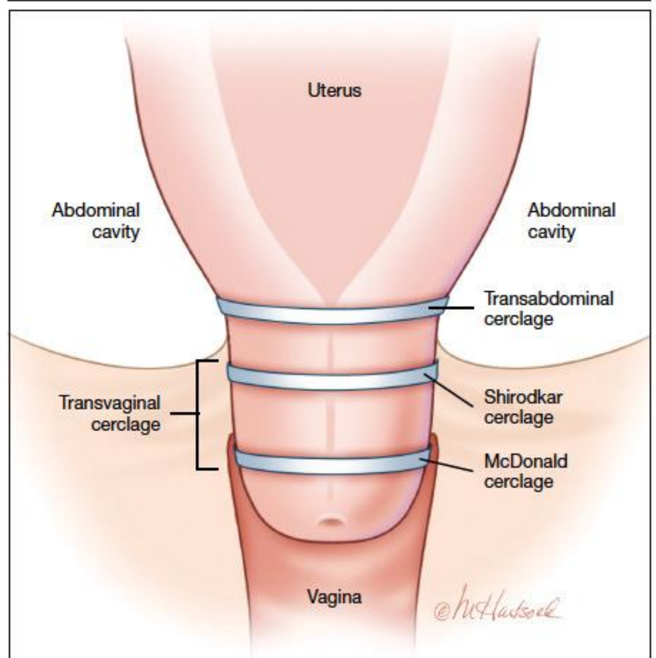
Cervical cerclage

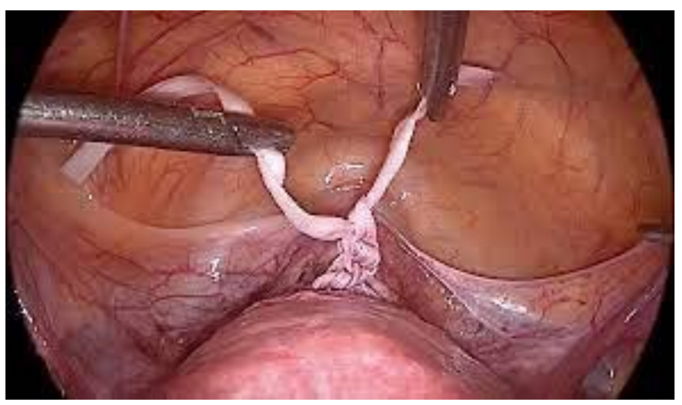
- Inserted usually between 14-24 weeks
- Removed at 36-37 weeks (or earlier if labour / ROM)
- Spinal anaesthetic
- Usually admitted for 1-2 nights
- Indomethacin and cephazolin for 24-48 hours
- McDonald or Shirodkar technique
- Suture materials include mersiline tape, prolene, nylon and silk



Cervical cerclage

Consider transabdominal cerclage if;

- Previous cervical surgery where there is no intravaginal cervix to suture
- History of failed cervical cerclage
- Placed pre-pregnancy or in early pregnancy
- Now offered laparoscopically (few clinicians only)
- Woman requires CS for delivery (suture not removed)



iSISTAQUIT@scu.edu.au

- Identify women who smoke at booking visit
- Ask about vaping / e-cigarettes
- Offer Quitline Referral
  - Consider Environmental smoke exposure
  - Offer Quitline Referral to Partner
- Utilise culturally appropriate resources and cessation tools
  - Aboriginal Quitline (Aboriginal Counsellors)
  - iSISTAQUIT partnership (Online training, Hardcopy resources, smokerlyser)
- Provide appropriate consumer resources
- Offer Nicotine Replacement Therapy (NRT) options

COMING SOON

South Australian Perinatal Practice Guideline

Smoking and Vaping in pregnancy

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ASK
ADVISE
ASSESS
ASSIST

SA Health

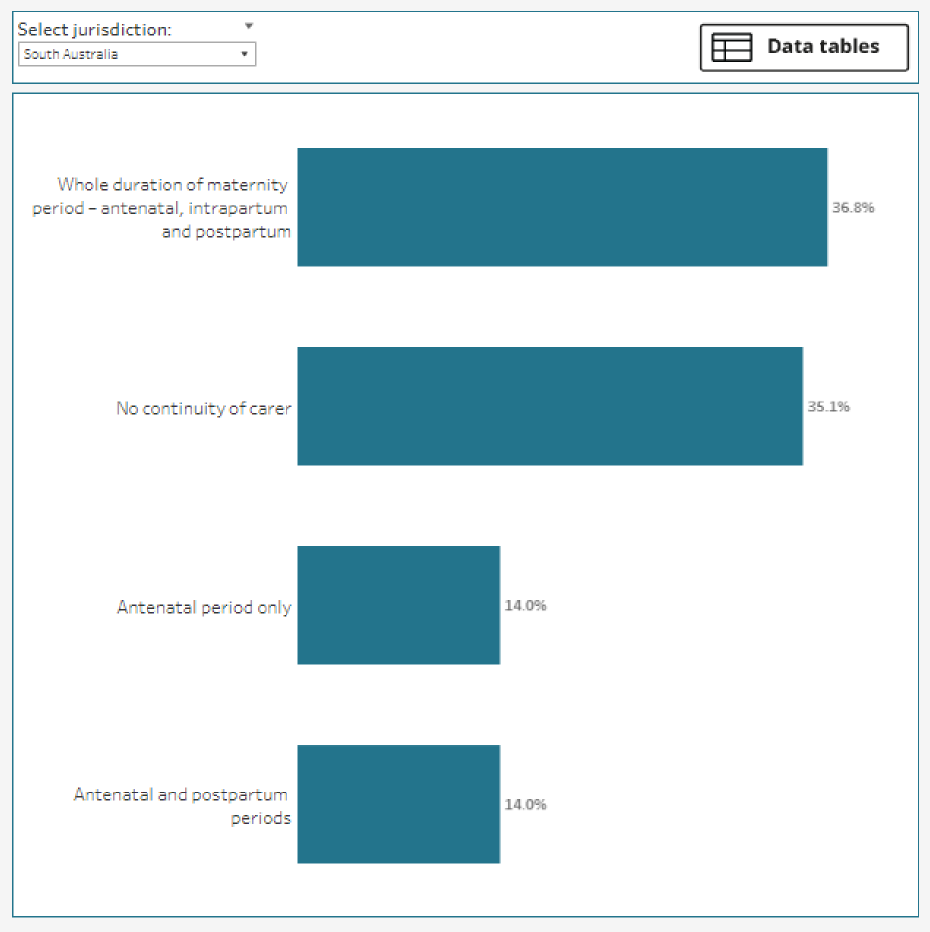
Midwife-led continuity models versus other models of care for childbearing women

Jane Sandall [1], Hora Soltani, Simon Gates, Andrew Shennan, Declan Devane

Affiliations + expand

PMID: 27121907 PMCID: PMC8663203 DOI: 10.1002/14651858.CD004667.pub5

Midwifery models of care show a **<u>24% reduction</u>** in the rate of preterm birth



Promotion of CoC models

- Aboriginal Family Birthing Programs
- Midwifery Group Practice
- Maternal Fetal Medicine
- Birth Centres
- Midwifery-led clinics
- Community midwifery clinics
- Private Practicing Midwives
- GP shared care
- MAPS model (Maternity Antenatal and Postnatal Service)

Preterm Birth Clinic - WCH

- Weekly clinic based in MFM unit at WCH
  - Staffed by Dr Rachel Earl, Dr Kate Andrewartha, (Dr Amanda Poprzeczny), Dr Peter Muller
- Referral based clinic
- Aimed to provide continuity of care for high risk women through the early part of pregnancy
- Fortnightly ultrasound of cervical length from 14/15 weeks
- Facilitate commencement of progesterone or cervical cerclage if required
- Collect data on interventions and outcomes in this population and in conjunction with other PTB Clinic networks
- Returned to usual model of care from 23/24 weeks

Referral Form – Maternal Fetal Medicine

Women's and Children's Health Network
72 King William Road, North Adelaide SA 5006
Tel: 08 8161 9263 Fax: 08 8161 9264

Government of South Australia
SA Health

Head of Unit: Dr Peter Muller | Professor Jodie Dodd
Dr Rachel Earl | Dr Mark Morton | Dr Amanda Poprezeczny | Dr Alice Robinson
Dr Victoria Snowball | Dr Chris Wilkinson | Dr Jane Woolcock

Dear (Dr's Name)__________

This referral has been discussed with (midwife/doctor) __________

PATIENT DETAIL

Name: __________
Address: __________
Date of Birth: __________ Phone: __________
Mobile: __________ Medicare Number: __________ Medicare Expiry: __________
Support person: __________ Phone: __________
Interpreter required: ☐ No ☐ Yes Language: __________
ATSI Status: ☐ No ☐ Yes, Aboriginal ☐ Yes, Torres Strait Islander ☐ Yes, Aboriginal & Torres Strait Islander

REFERRING PRACTITIONER DETAILS

Referring Doctor: __________
Provider Number: __________ Phone: __________
Address: __________
Signature: __________ Date: __________

The below information **MUST** be provided with this referral request.

CLINICAL INFORMATION/REASON FOR REFERRAL (Page 1 of 2)

Gravidity/Parity:	EDC:
☐ Fetal Anomaly	☐ Current/Previous Pregnancy Complications
☐ Complex Multiple Pregnancy	☐ ADACS Follow up
☐ Severe Maternal Medical Conditions	☐ Pre/Post-Pregnancy Counselling
☐ Early Pregnancy Care Coordination	☐ Abnormal Maternal Serum Screening
☐ Pre Term Birth	☐ Other – Please Specify
☐ **Copy of ALL Ultrasounds attached**	☐ **Copy of Antenatal bloods attached**

Additional Clinical information or reason for referral inc. Previous Obs Hx and previous surgery Hx

Last updated: 22/02/2022 Page 1 of 2

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Preterm birth clinic WCH

Referral criteria for PTB Clinic

- Previous spontaneous PTB <34 weeks gestation
- One or more spontaneous mid-trimester fetal loss (16-24 weeks)
- History of cervical / uterine surgery
  - Previous fully dilated caesarean section
  - 2 or more LLETZ
  - Cone biopsy
  - Radical trachelectomy
  - Resection of uterine septum or adhesions
- Uterine anomaly – bicornuate uterus, unicornuate uterus, uterus didelphys, septate uterus, fetal exposure to DES
- Incidental finding of short cervix on ultrasound
  - <15mm at dating scan (11-14 weeks)
  - <25mm before 24 weeks gestation including routine morphology ultrasound cervical length measurement
- Cervical cerclage in previous pregnancy
- Follow up of women who have had a cervical cerclage placed in current pregnancy
- Consultant obstetrician request

CLINICAL INFORMATION/REASON FOR REFERRAL (Page 2 of 2)

Further information required – Please X reason for referral below

FETAL ANOMALY (MFM1)
☐Second Opinion Ultrasound/Counselling
☐Fetal congenital malformation requiring surveillance +/- intervention
☐Inherited fetal endocrine anomalies requiring trans placental therapy
☐Fetal congenital malformations requiring multi-specialty input and birth at WCH
☐Fetal Palliative Care
☐Fetal cardiac arrhythmias
☐Fetal hydrops

CURRENT/PREVIOUS PREGANCY COMPLICATIONS (MFM2)
☐Severe early IUGR requiring extended fetal Doppler / cardiac function / biophysical assessment Anti-Ro and/or Anti-La antibodies
☐Rhesus and other blood group incompatibilities (titre ≥ 1:16 or previously affected fetus/neonate)
☐Platelet incompatibilities (previously affected fetus/neonate)
☐Primary infection or seroconversion with toxoplasmosis, cytomegalovirus, parvovirus, listeriosis
☐Previous ≥ 2 Perinatal deaths (IUFD, NND)

PRE TERM BIRTH (MFM PTB)
☐Previous spontaneous preterm birth ≤ 34 weeks
☐Previous mid-trimester fetal loss OR previous cervical cerclage OR previous fully dilated Caesarean Section
☐Previous Cervical surgery – 2 or more LLetz OR 1 Cone biopsy OR Radica trachelectomy
☐Mullerian developmental anomaly OR Uterine Surgery such as Septum resection
☐Ultrasound short cervix in current pregnancy - ≤ 15 mm at dating scan (11-14 weeks) or ≤25mm before 28 weeks

COMPLEX MULTIPLE PREGNANCY (MFM3)
☐ Monochorionic / Monoamniotic Twin Pregnancy
☐Monochorionic / Diamniotic (MC/DA) Twin Pregnancy with Twin-Twin Transfusion Syndrome (TTTS) or discordant growth/nuchal translucency
☐Triplet and Higher order multiple pregnancy
☐Delayed interval deliveries

ADACS FOLLOW UP (MFM4)
☐ Stillbirth
☐IUFD
☐Fetal anomaly

SEVERE MATERNAL MEDICAL CONDITIONS (MFM5)
☐ Antiphospholipid syndrome
☐Sickle Cell Anaemia or G6PD deficiency
☐Cardiac disease (New York Heart Association Classification Grade III or IV)
☐Maternal transplant
☐Renal failure with dialysis
☐Maternal current malignancy
☐HIV

PRE/POST PREGNANCY COUNSELLING (MFM6)
☐ Pre-conception women with conditions listed in MFM5
☐Pre-conception women with previous fetal anomaly and possible recurrence
☐Postnatal Follow up

EARLY PREGNANCY CARE COORDINATION (MFM7)
☐ Women already known to MFM unit who require coordinated early / tertiary pregnancy care including focused morphology scanning

ABNORMAL MATERNAL SERUM SCREENING (MFM8)
☐ Counselling
☐NIPT
☐CVS
☐Amnio

TELEHEALTH CONSULTATION (MFM9)
☐ *1-8 MUST be completed to identify consultation requirements*

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SA Health

Last updated: 22/02/2022

Page **2** of **2**

LMH and FMC

Lyell McEwin

- Women at risk are identified through initial referral or triage visit
- First visit with Consultant/Reg in High Risk Pregnancy Clinic
- Any patient with short cervix sent to WAU → management arranged
- On-call registrar available for phone advice re patient

FMC

- Referral faxed through to 8204 5210
- Tuesday Preterm birth clinic – review at 14-16 weeks
- Cervical length U/s booked
- Short cervix on u/s → patient sent to WAS for review (8-9pm) or call on-call registrar

Overcoming Regional Barriers

Theatre days access

- Pooling of resources
- Assessing risk of requirement for surgery prior to scheduled date (IE labour prior to booked CS)

Escalation and referral pathways

- When do women need to be referred to a tertiary centre and at what time?
- Identify at risk women early

How do we keep women in their community where appropriate

- Use of telehealth services
- Referred for critical time of pregnancy then return to usual model of care

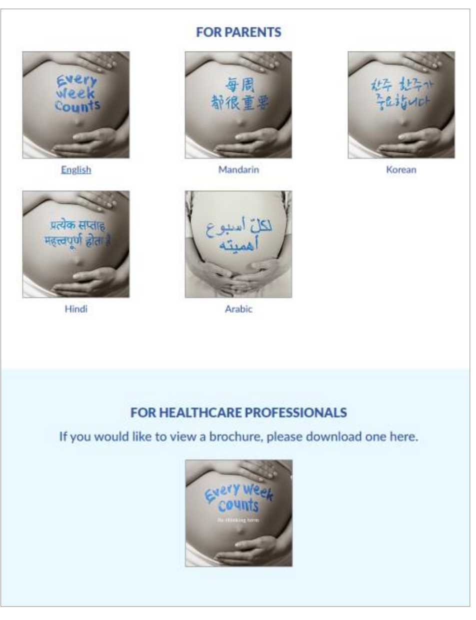
- Identify women at risk early for PTB
  - Refer to High Risk Obstetric Care/Preterm Birth Clinic where indicated
  - Commence serial Cx Length from 16 weeks where indicated
- Address modifiable risk factors
  - Preconception optimisation
- Add cervical length to ALL Morphology USS requests
  - Document Cx Length in SAPR + EMR
- Short Cervix → Arrange serial Cx length surveillance + commence progesterone, consider cerclage
- Support Smoking Cessation with follow up throughout pregnancy
- Prioritise women at risk of PTB to CoC models

- Aim to gain gestation with those who are pre-term
- Aim to reduce early term deliveries
  - Changing of standard elective CS booking timeframe
  - Consult PPGs / other resources about best time for IOL (aim for evidence based IOL planning)
  - Have gatekeepers involved in the planned birth booking process

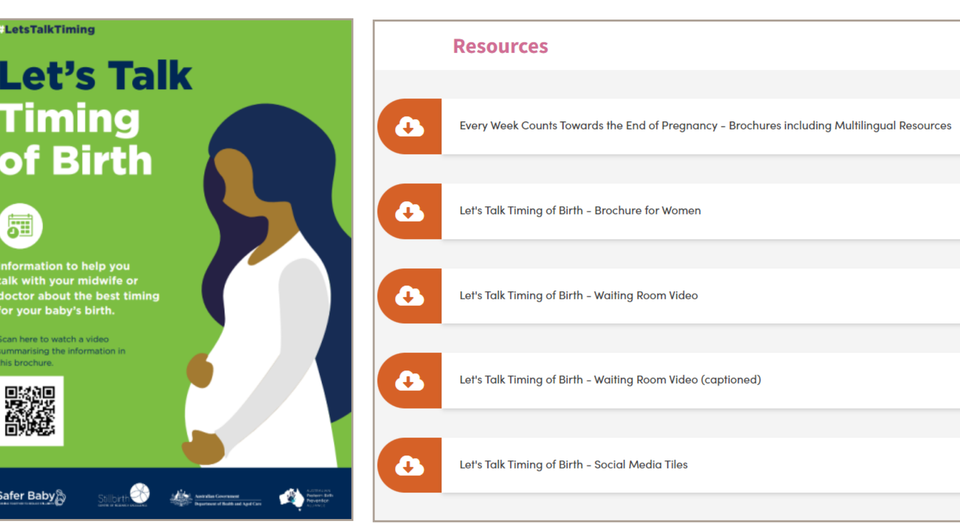
Our role in reducing preterm birth?

Discuss with patients the importance of the last few weeks of pregnancy –

Every Week Counts, Let's Talk Timing of Birth



https://everyweekcounts.com.au/

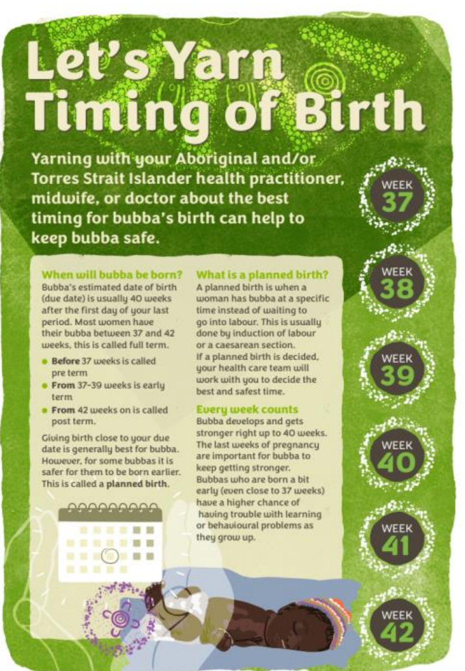


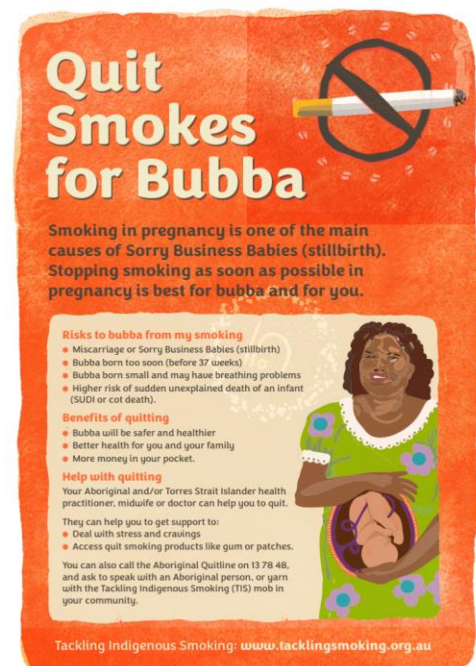
https://stillbirthcre.org.au/parents/safer-baby/timing-of-birth/

SA Health

Our role in reducing preterm birth?

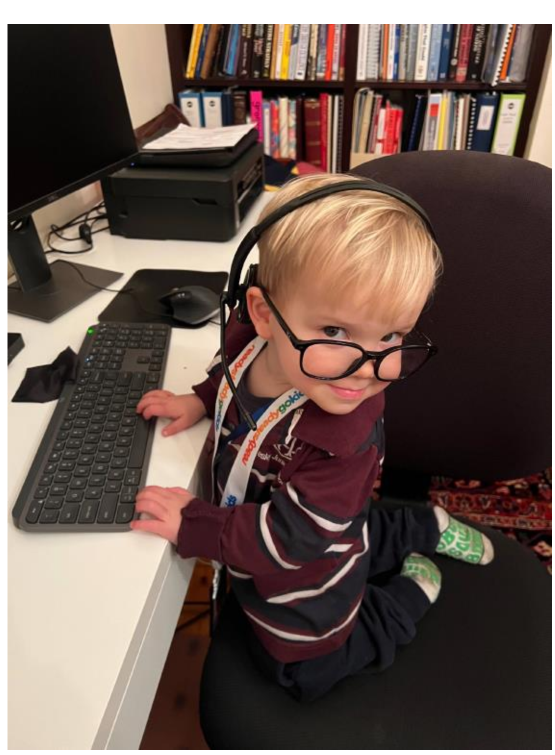
Utilise culturally appropriate resources





https://strongerbubbaborn.org.au/resources/

QUESTIONS?



Upcoming Webinars in the Preterm Birth Prevention Series:

Timing of Birth

Preterm Birth Prevention

Smoking and Vaping in Pregnancy:

A clinician's approach to supporting cessation

Screening and Management of Pre-eclampsia

Webinar invitations will be sent to all LHN's and flyers included in the Obstetric Shared Care Newsletters

SA Health