

Safer Baby Bundle Masterclass



Smoking Cessation



Fetal Growth Restriction (FGR)



Decreased Fetal Movement (DFM)



Side Sleeping



Timing of Birth

Contents

Stillbirth in Australia, trends, causes and risk factors	4
Bundles of care – a global picture	10
The Safer Baby Bundle overview	11
 Smoking Cessation	12
 Fetal Growth Restriction (FGR)	21
 Decreased Fetal Movement (DFM)	28
 Side Sleeping	36
 Timing of Birth	43
Conclusion	50



Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

Before we get started

The **Safer Baby Bundle** is based on the best available evidence at the time of its preparation.

- It is being led by the Stillbirth Centre of Research Excellence (Stillbirth CRE).
- The Stillbirth CRE work in partnership with health departments, parent organisations, professional colleges, researchers, clinicians and women.



Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

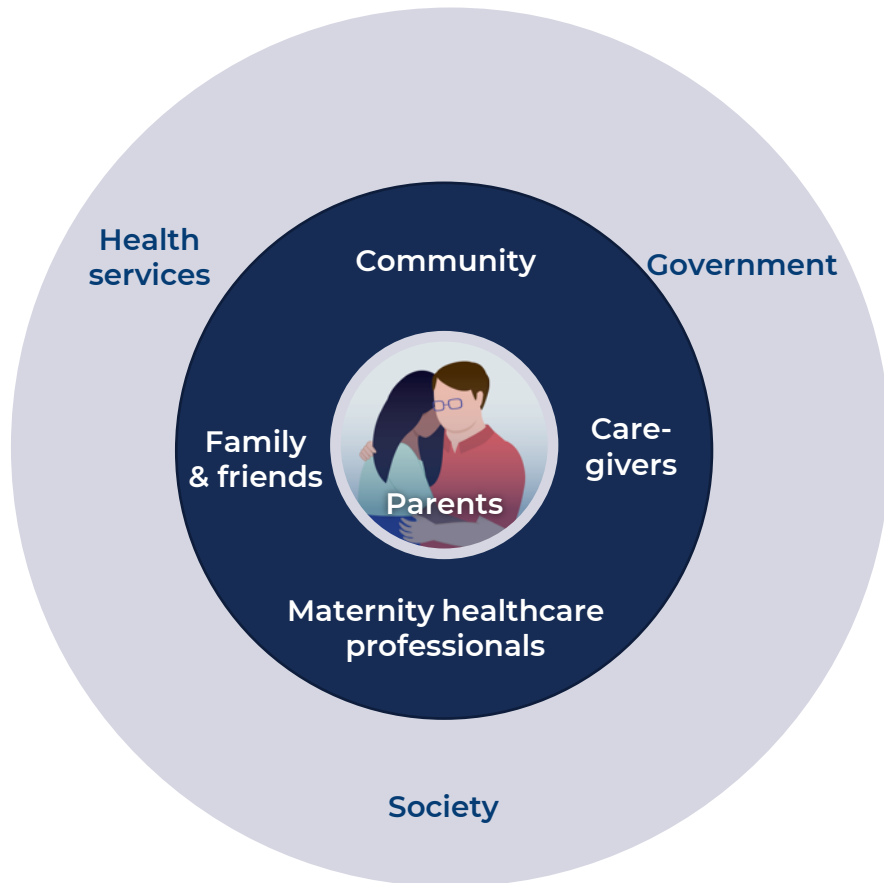
Timing
of Birth

Translated
Resources

Conclusion

National Impact of Stillbirth^{1-4, 67-68}

Annually, 2270 stillbirths ≥ 20 weeks gestation occur
(710 stillbirths ≥ 28 weeks)



1. Parents

- Family and friends, care-givers, maternity healthcare professionals, community

2. Health services, society, government

- Increased risk of family breakdown
- Stigma, abandonment and abuse
- Negative effect on staff

3. Health services, society, government

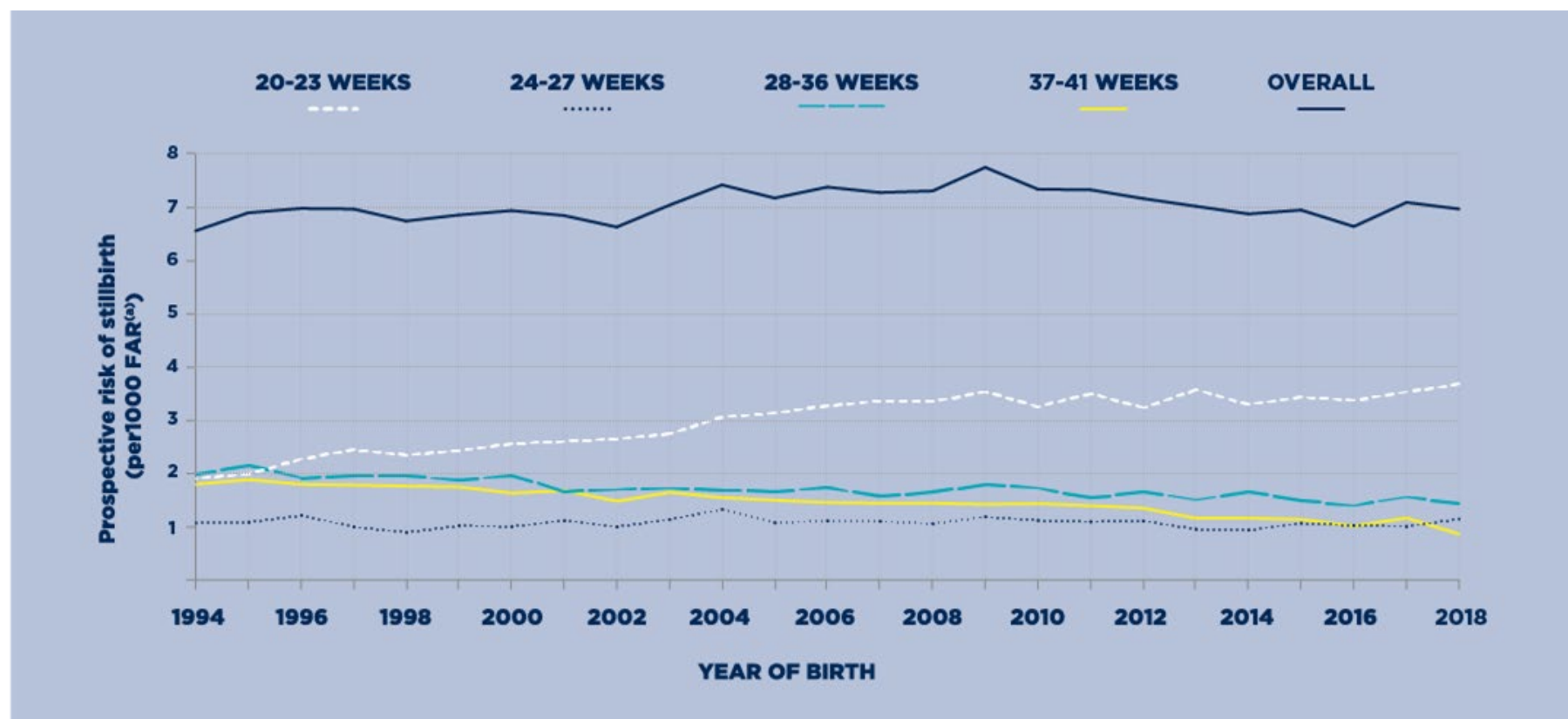
- Increased healthcare costs
- Reduced earning from employment, maternity and paternity leave, and healthcare expenses

Smoking
CessationFetal
Growth
RestrictionDecreased
Fetal
MovementSide
SleepingTiming
of BirthTranslated
Resources

Conclusion

Australian Stillbirth rates

By gestation 1994 to 2018 ^{5,6}



Australian Stillbirth rates⁶

- Stillbirth disproportionately affects Aboriginal and/ or Torres Strait Islander women⁷
- In 2020 the stillbirth rate for Aboriginal and Torres Strait Islander women was **11.9 per 1000** births⁸
- Vs the rate for non-Indigenous women of **7.4 per 1000**⁸
- Migrant and refugee populations, rural and remote communities and socio-economically disadvantaged women also face significantly increased risks⁷



Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

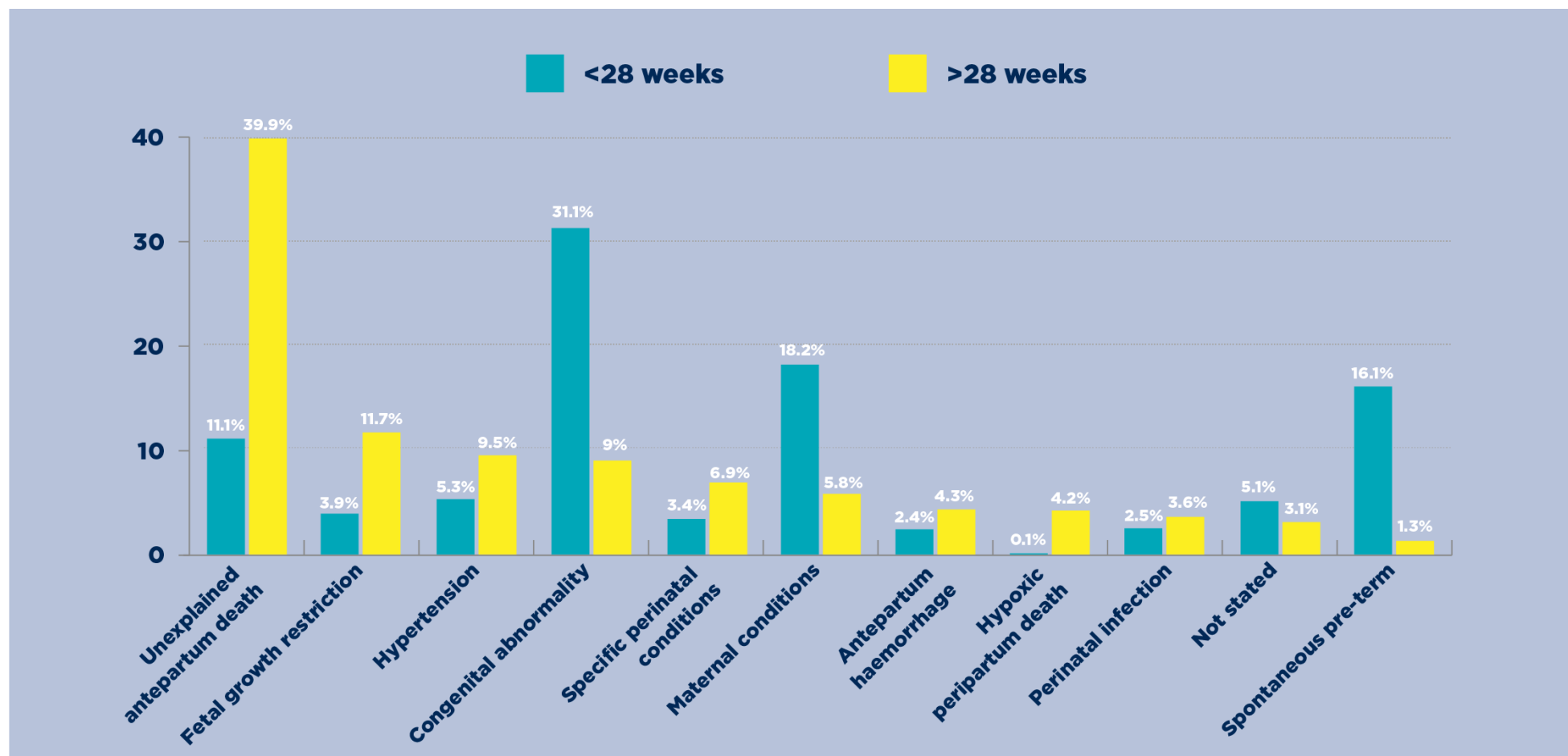
Timing
of Birth

Translated
Resources

Conclusion

Causes of Stillbirth in Australia⁹

Stillbirth cause of death by early and late gestations



Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

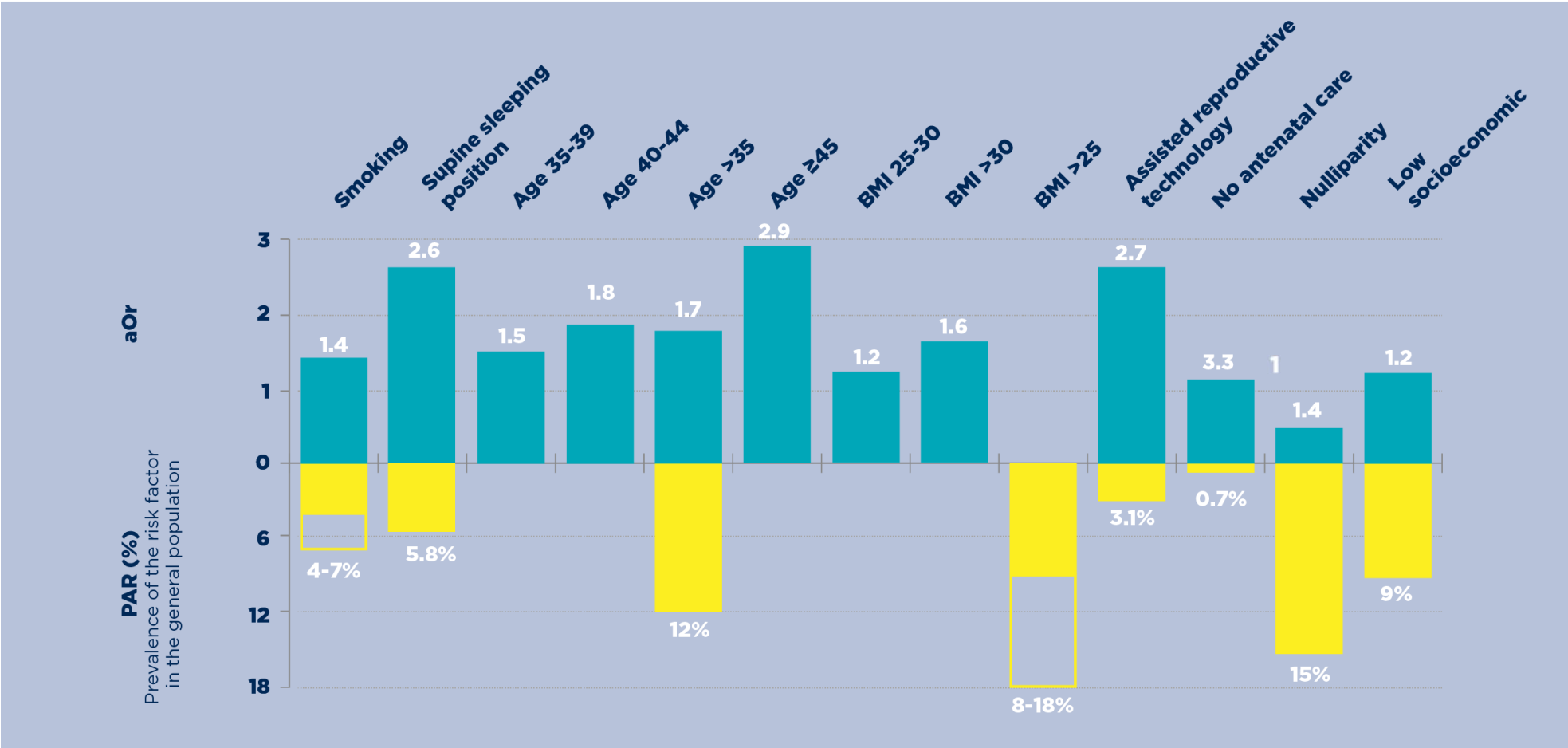
Timing
of Birth

Translated
Resources

Conclusion

What are the stillbirth risk factors?

Maternal¹⁰⁻¹⁷



What are stillbirth risk factors?

Pregnancy and medical¹⁰⁻¹⁷



Smoking Cessation

Fetal Growth Restriction

Decreased Fetal Movement

Side Sleeping

Timing of Birth

Translated Resources

Conclusion

We know that 'bundles of care' can save lives¹⁸⁻²¹

Saving Babies Lives Care Bundle (SBLCB) UK



Saving Babies' Lives
A care bundle for reducing stillbirth

20%
REDUCTION
IN STILLBIRTHS

Scottish Patient Safety Program (SPSP) Scotland

SPSP Maternity and Children

End of phase report
August 2016



22.5%
REDUCTION
IN STILLBIRTHS

Smoking Cessation

Fetal Growth Restriction

Decreased Fetal Movement

Side Sleeping

Timing of Birth

Translated Resources

Conclusion

What is the Australian Safer Baby Bundle?

The Safer Baby Bundle is a national initiative with five evidence-based elements to address key areas where improved practice can reduce the number of stillborn babies.



Smoking Cessation



Fetal Growth Restriction (FGR)



Decreased Fetal Movement (DFM)



Side Sleeping



Timing of Birth

GOAL

Reduce stillbirth from 28 weeks' gestation by at least 20% by 2025.

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

Smoking Cessation

Evidence summary

Stillbirth CRE position statement
'Smoking – one of the most important things to prevent in pregnancy and beyond'²²

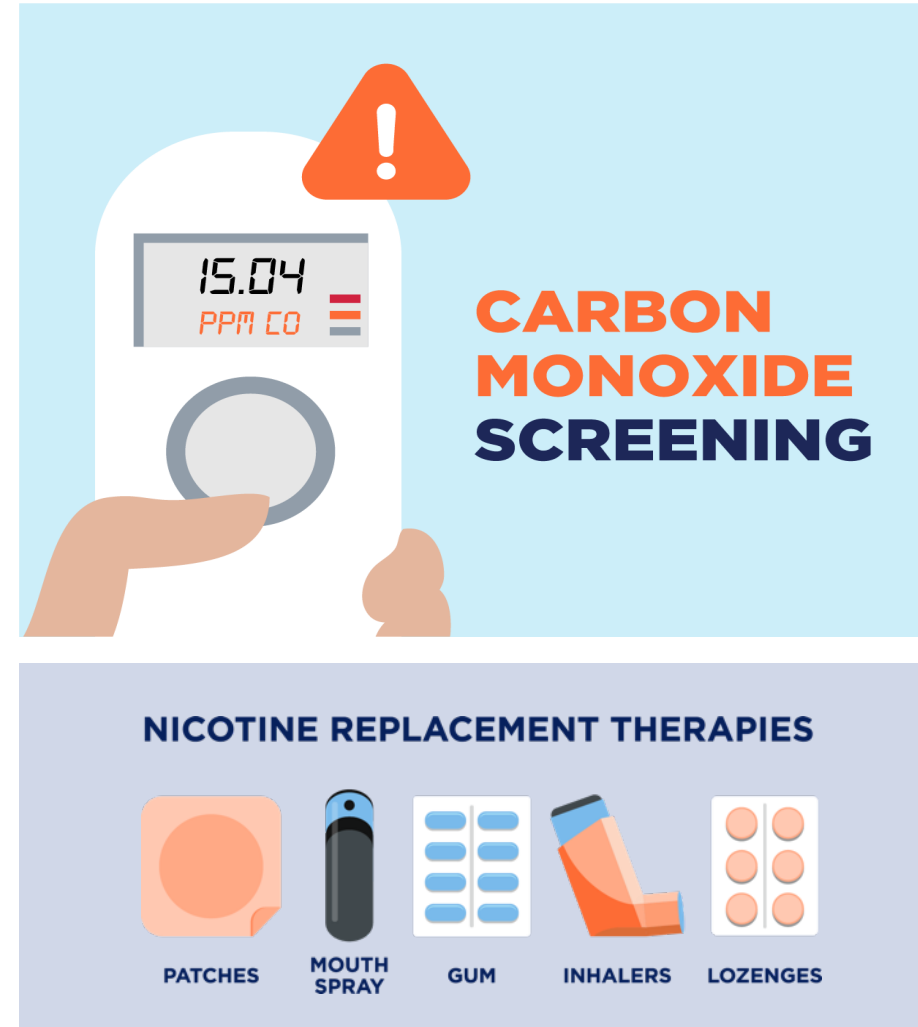
[READ MORE](#)



The evidence ²³⁻²⁷

A combined approach to smoking cessation has shown to be most effective. This includes:

- **Behavioural intervention** – ‘Ask, Advise, Help’ model
- **Carbon monoxide monitoring** - at the first antenatal visit for all women
- **Consideration of nicotine replacement therapy (NRT)** - after careful discussion around risk and benefits
- Detailed information on NRT available through Quit Victoria website
- Use of e-cigarettes (vaping) is not recommended in pregnancy



The recommendations

Steps to assessing and managing risk factors

'Ask, Advise, Help' model of care



At first antenatal visit

- Screen and document tobacco use on the antenatal record
- Where available, record the exhaled breath carbon monoxide (CO) reading for all women (and their partners where possible)



At each subsequent antenatal visit

- Reassess smoking status
- At the 28 week visit, re-assess smoking status **and** exposure to passive smoking
- If CO monitor is available, record exhaled breath carbon monoxide (CO) reading

Ask all women about their smoking status using the following multiple-choice format:

Can I ask you about your smoking status? Which statement best applies to you?

- I smoke more since pregnant
- I smoke less since pregnant
- I am smoking the same
- I used to smoke but quit
- I have never smoked

The recommendations^{27,28}

The 3 step 'Ask, Advise, Help' model of care

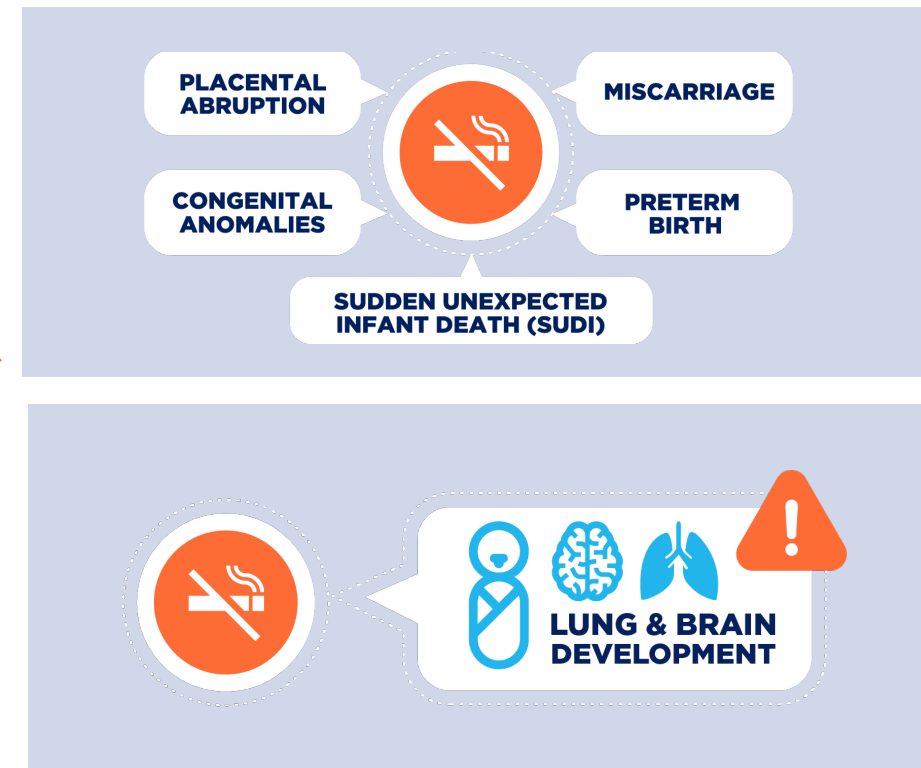


At first antenatal visit

- For women who are smokers or recent quitters, advise them of the benefits of quitting
- Explain the importance of smoking cessation

At each subsequent antenatal visit

- Offer personalised advice on how to stop smoking
- Reinforce the benefits of quitting and remaining smoke free at any state in pregnancy



The recommendations

The 3 step 'Ask, Advise, Help' model of care



At first antenatal visit

Offer to help:

- Refer to Quitline
- Consider offering nicotine replacement therapy (NRT)

At each subsequent antenatal visit

- Consider offering nicotine replacement therapy²⁷



It's part of routine care for us to refer all pregnant women who smoke to Quitline.

They've helped a lot of pregnant women quit. It's a free, confidential service. I can make that referral now, and they'll give you a call in a few days.

How does that sound?

Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

Resources

Pathway

Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion



Resources

Poster and Flyer

#Quit4Baby

Quit smoking for baby.



pretermalliance.com.au saferbaby.org.au



What are the benefits of quitting smoking when pregnant?

- Safer for your baby and better health for you
- Your baby will grow better
- Fewer chemicals in your bloodstream

Your maternity healthcare professional can help you to quit smoking and avoid second hand smoke.

Counselling and support is available – call **Quitline on 13 7848** or visit **quit.org.au**

E-cigarettes (vaping) are not recommended in pregnancy

Smoking in pregnancy increases the chance your baby may be stillborn or born too early.

FIND OUT MORE:
saferbaby.org.au and **pretermalliance.com.au**
or speak to your maternity healthcare professional if you have questions about quitting smoking.



The list of organisations who have contributed to development of, and endorsed this resource, can be accessed via [saferbaby.org.au](#)

Version 3.0 August 2023

#Quit4Baby

Quit smoking for baby.



pretermalliance.com.au saferbaby.org.au



What are the risks of smoking when pregnant?

- Miscarriage or stillbirth
- Your baby may be born too early (before 37 weeks' gestation)
- Low birthweight and breathing problems
- Sudden Unexplained Death of an Infant (SUDI or cot death)

What are the benefits of quitting smoking when pregnant?

- Safer for your baby and better health for you
- Your baby will grow better
- Fewer chemicals in your bloodstream

Smoking in pregnancy increases the chance your baby may be stillborn or born too early.



Call Quitline on 13 7848 or visit [quit.org.au](#)




The list of organisations who have contributed to development of, and endorsed this resource, can be accessed via [saferbaby.org.au](#)

#Quit4Baby

Quit smoking for baby.



pretermalliance.com.au saferbaby.org.au



Quitting smoking in pregnancy

Your midwife, GP or obstetrician can help if you are thinking about quitting. Things to know:

- A smoke free environment is best during pregnancy.
- Counselling and support is available. The most common counselling service is Quitline. They can support you and your family members with quitting, and can be contacted on 13 7848.
- Approved quit smoking medicines, such as nicotine replacement therapy (NRT), may help.
- E-cigarettes (vaping) are not recommended in pregnancy.


Stopping smoking is the most important thing you can do for you and your baby

Myths and facts about smoking in pregnancy



I'm already three months pregnant. What's the point of stopping now?
It is never too late to quit. Stopping smoking will help protect your baby from being stillborn or born too early.

How about I just cut down?
Quitting is the best way to protect yourself and your baby.

Smoking relaxes me when I'm stressed - isn't that better for my baby?
No, smoking speeds up your heart rate, increases your blood pressure and means less oxygen goes to your baby. Finding another way to relax is much better and safer for you both. Quitline or other smoking cessation services can help you manage stress and cravings when quitting.



Call Quitline on 13 7848
or scan the QR code to visit **quit.org.au**



Version 2.2 August 2023

saferbaby.org.au

Introduction

Smoking Cessation

Fetal Growth Restriction

Decreased Fetal Movement

Side Sleeping

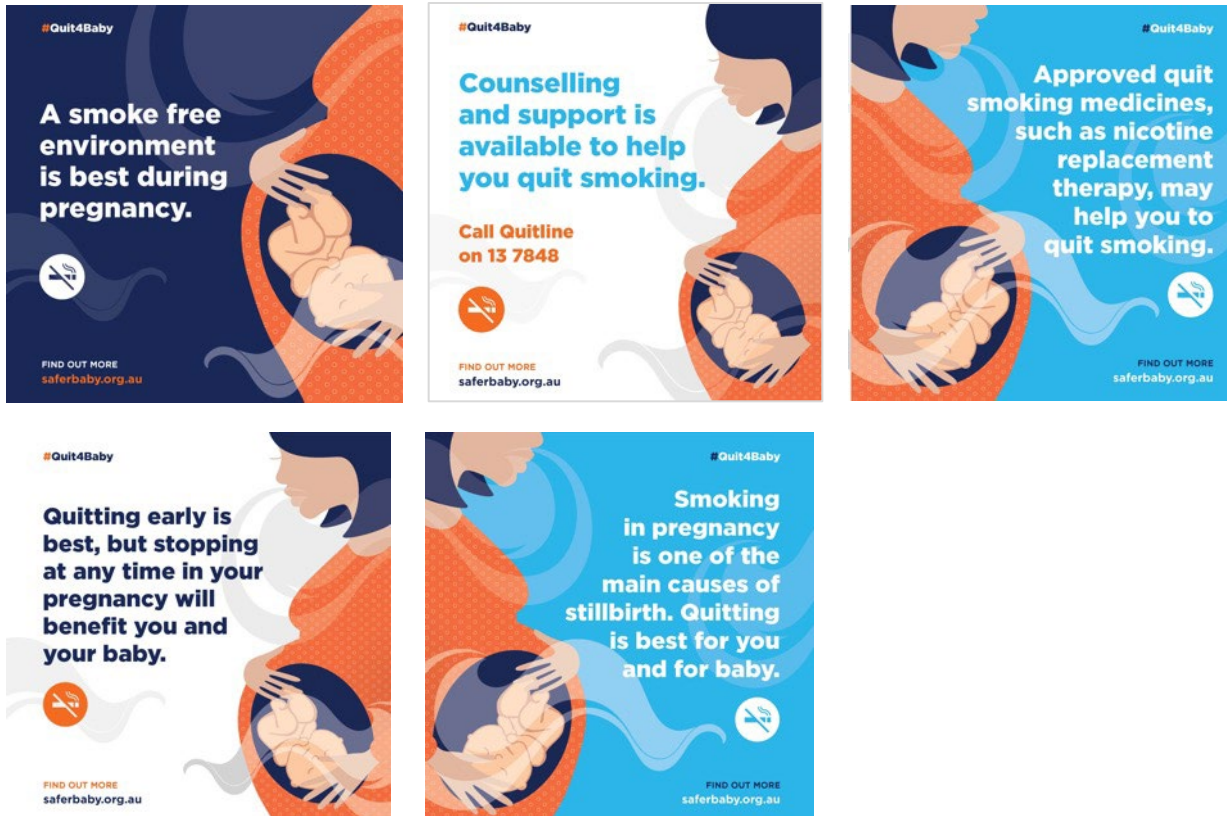
Timing of Birth

Translated Resources

Conclusion

Resources

Social media tiles



Introduction

Smoking Cessation

Fetal Growth Restriction

Decreased Fetal Movement

Side Sleeping

Timing of Birth

Translated Resources

Conclusion

Resources

Videos modelling conversations about quitting smoking with pregnant women using 'Ask, Advice, Help' model of care.

Talking with women
about smoking cessation

Step 1: ASK

<https://vimeo.com/363969790>

Discussing the benefits of
smoking cessation

Step 2: ADVISE

For women keen to quit

<https://vimeo.com/364923189>

Discussing the benefits of
smoking cessation

Step 2: ADVISE

For women reluctant to quit

<https://vimeo.com/363974014>

Providing help for women
on smoking cessation

Step 3: HELP

<https://vimeo.com/363978721>

Implementation

Questions for discussion:

- What is the process of referring a woman to Quitline in your service?
- What resources (e.g. smokerlyzer and SBB resources) or equipment limitations do you have? How can these be overcome?
- How will you monitor women's engagement with smoking cessation services?



Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

Fetal Growth Restriction (FGR)

Evidence summary

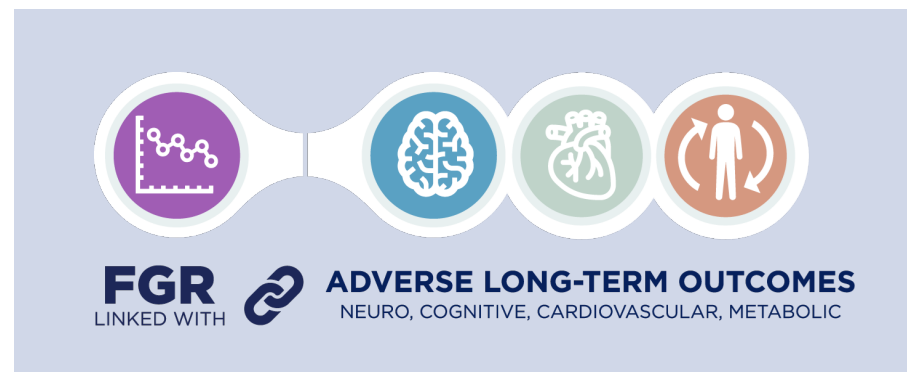
Position Statement: Detection and management of women with Fetal Growth Restriction in singleton pregnancies²⁹

[READ MORE](#)



The evidence

- Improving the detection and management of FGR/ SGA is an important strategy to reduce stillbirth^{30,31}
- If FGR is present, but it is NOT detected, the fetus is eight times more likely to be stillborn^{32,33}
- Less than 1/3 of growth restricted/small for gestational age fetuses are detected antenatally³⁴
- Educational programs for maternity care providers have been shown to improve the detection of SGA/FGR and reduce stillbirth rates³⁵



The recommendations

Steps to assessing and managing risk factors^{32,34-37}

↓
Assess all women for risk factors at booking and at each antenatal visit and provided with information about FGR

↓
Standardise SFH measurement for all maternity healthcare professionals

↓
Consider low dose aspirin (150 mg) for women at increased risk of preterm preeclampsia⁶⁹

↓
Discuss with women the recommended plan for monitoring fetal growth in pregnancy based on risk factor assessment

↓
Frequency of ultrasound surveillance should be based on FGR risks, prior history and service capability

↓
Where modifiable risk factors exist, **provide advice and support to women** (e.g. smoking and substance abuse cessation)

Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

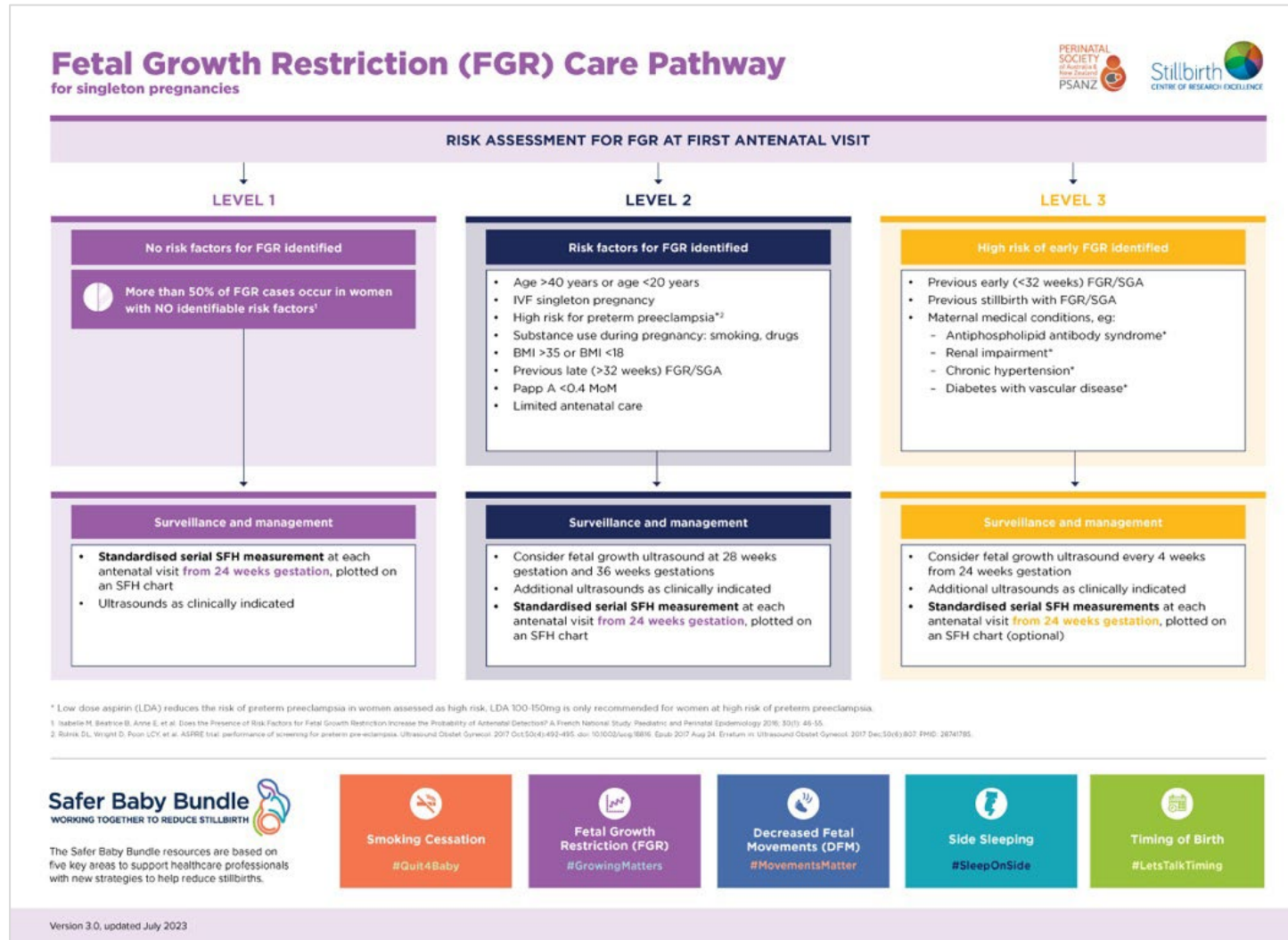
Timing
of Birth

Translated
Resources

Conclusion

Resources

Care pathway³⁸



Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

Resources

Poster and Flyer

#GrowingMatters saferbaby.org.au



Your baby's growth matters.



Even though all pregnancies are different, a healthy rate of growth for your baby is important.

- **Assess:** Early in pregnancy your risk for fetal growth restriction (FGR) will be assessed. For women at a higher risk of FGR it may be necessary to monitor the growth of your baby with regular ultrasound.
- **Measure:** At each antenatal visit from 24 weeks onwards, your baby's growth will be measured and plotted on a growth chart.
- **Monitor:** If your baby is growing slower than expected, increased monitoring may be required and any concerns will be discussed with you.

The Safer Baby program recommends you attend all your antenatal appointments to assess, measure and monitor your baby's growth to reduce your risk of stillbirth.

FIND OUT MORE: visit saferbaby.org.au or speak to your maternity healthcare professional if you have questions about your baby's growth.

Safer Baby WORKING TOGETHER TO REDUCE STILLBIRTH
PERINATAL SOCIETY of Australia & New Zealand PSANZ
Stillbirth CENTRE OF RESEARCH EXCELLENCE

Version 2.0 updated March 2023 The list of organisations who have contributed to development of, and endorsed this resource, can be accessed via: saferbaby.org.au

#GrowingMatters saferbaby.org.au



Your baby's growth matters.



Even though all pregnancies are different, a healthy rate of growth for your baby is important.

- **Assess:** Early in pregnancy your risk for fetal growth restriction (FGR) will be assessed. For women at a higher risk of FGR it may be necessary to monitor the growth of your baby with regular ultrasound.
- **Measure:** At each antenatal visit from 24 weeks onwards, your baby's growth will be measured and plotted on a growth chart.
- **Monitor:** If your baby is growing slower than expected, increased monitoring may be required and any concerns will be discussed with you.

The Safer Baby program recommends you attend all your antenatal appointments to assess, measure and monitor your baby's growth to reduce your risk of stillbirth.

Safer Baby WORKING TOGETHER TO REDUCE STILLBIRTH
PERINATAL SOCIETY of Australia & New Zealand PSANZ
Stillbirth CENTRE OF RESEARCH EXCELLENCE

The list of organisations who have contributed to development of, and endorsed this resource, can be accessed via: saferbaby.org.au

#GrowingMatters



Big or small.

Your baby's growth matters.

- **What is fetal growth restriction?**
Fetal Growth Restriction (FGR) is when a baby is growing slower than expected and indicates that the baby is not reaching its growth potential.
- **When and how will I be assessed?**
All women should be assessed for their risk of FGR in early pregnancy. Starting from 24 weeks, the growth of your baby will be measured. Your maternity healthcare professional will use a measuring tape to measure the size of your abdomen. This is called the symphyseal fundal height (SFH) measurement. This measurement should be plotted on a growth chart and will be noted in your pregnancy record. For some women it may be necessary to monitor the growth of your baby by ultrasound.
- **Why is my baby growing at a slower rate - what is causing this?**
If a baby is growing slower than expected your maternity healthcare professional should investigate the cause. Often this is related to how the placenta is working but it is important to note that sometimes a cause cannot be found.
- **My baby bump looks smaller than other women who are due at the same time as me - should I be worried?**
Every woman is different and every pregnancy is unique. Your maternity healthcare professional will be tracking your baby's growth at every antenatal visit and will talk with you about next steps if there are signs that your baby's growth has slowed.
- **What can I do to monitor my baby's health?**
It's important to come to each antenatal visit to have your baby's growth checked. Additionally, feeling regular baby movements is a sign that your baby is well. If your baby's movements stop or slow down contact your maternity healthcare professional without delay.

If you have questions about your baby's growth you should discuss this with your maternity healthcare professional.

Version 2.0 December 2022 saferbaby.org.au

Introduction

Smoking Cessation

Fetal Growth Restriction

Decreased Fetal Movement

Side Sleeping

Timing of Birth

Translated Resources

Conclusion

Resources

Social media tiles



Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

Implementation

Questions for discussion:

- Do you have a checklist for assessing FGR risk factors at every visit?
- Do you have timely and affordable access to ultrasound scanning for women with suspected/confirmed FGR?



Introduction

Smoking
Cessation

**Fetal
Growth
Restriction**

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

Decreased Fetal Movement (DFM)

Evidence summary

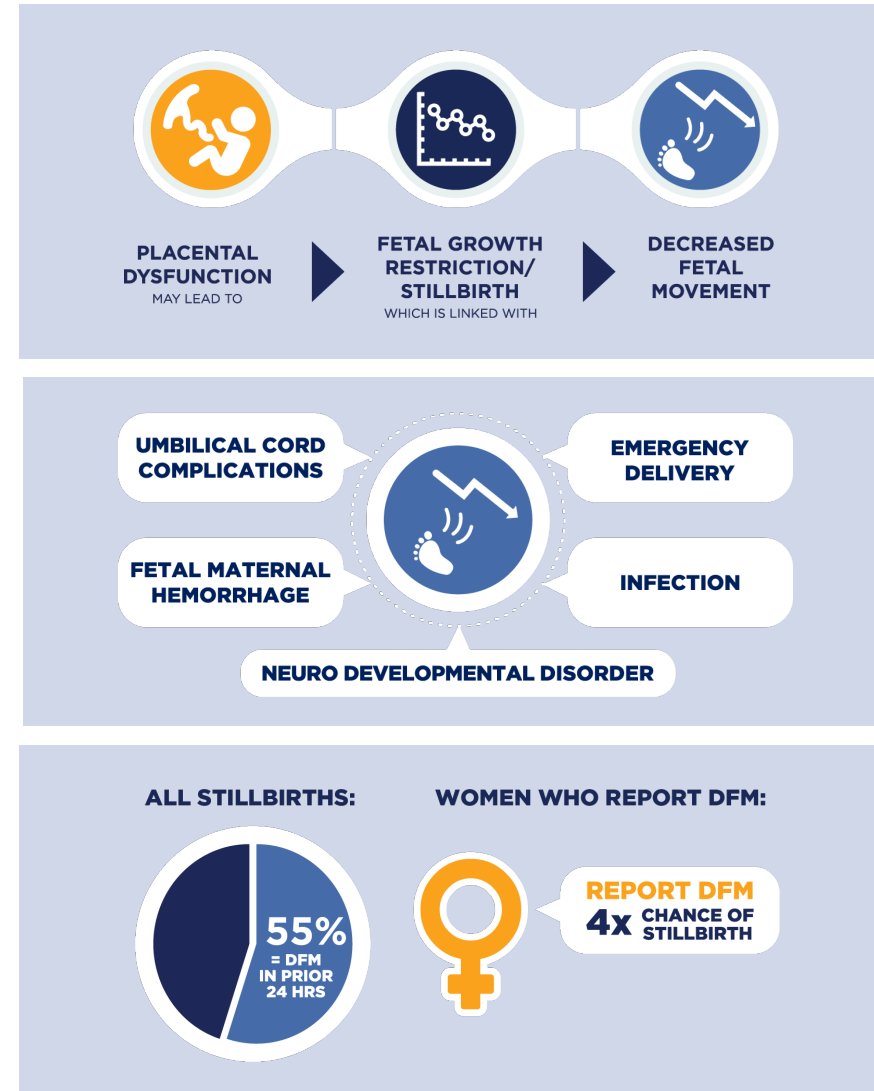
Clinical practice guideline for the care of women with decreased fetal movements for women with a singleton pregnancy from 28 weeks' gestation³⁹

[READ MORE](#)



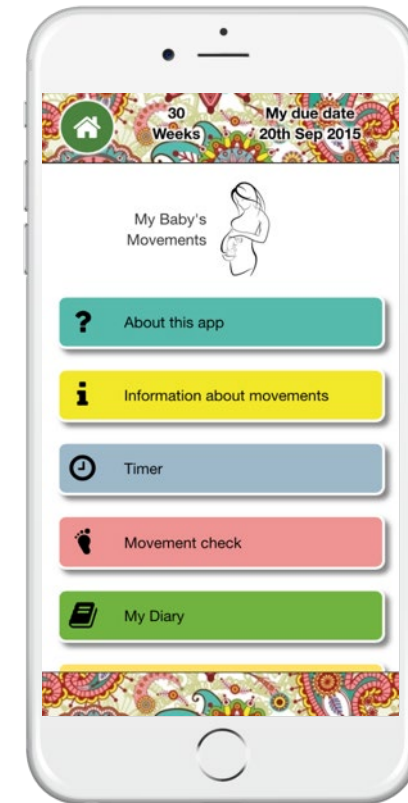
The evidence: fetal movements⁴⁰⁻⁵²

- Maternal perception of fetal movement has long been an indicator of fetal well-being.
- No definition of DFM has been shown to perform better than a woman's perception.
- Concerns about a reduction in strength and/or frequency is associated with up to a 4-fold increase in stillbirth.
- The mechanism is thought to be placental insufficiency leading to the fetus conserving energy.
- DFM is associated with slow fetal growth and other adverse outcomes.
- Many women who experience stillbirth report being concerned about DFM in the day's prior.
- All pregnant women should be given information about what to expect in regard to fetal movements, including that strength and frequency normally stay the same or increase as pregnancy advances and that healthy fetuses are most active in the evening.⁴²



The evidence: education to improve outcomes for women with DFM⁴⁰⁻⁵²

- A 2015 Cochrane Review concluded that there was no benefit for kick counting.
- Observational studies of education for women and their health care provider about detection and management of DFM suggests benefit.
- Two subsequent large scale cluster randomised trials of similar interventions have not shown a reduction in stillbirths. However, all existing trials have had limitations and the evidence remains unclear.
- Need for high level evidence to inform the optimal management protocol.
- The large UK AFFIRM trial⁵⁰ also showed a reduction SGA babies born after 40 weeks associated with an increase in IOL, caesarean section and neonatal admission to special care.
- The MBM trial (Australia and New Zealand) also showed no reduction in stillbirth rates but less intervention than AFFIRM and recommended to continue the MBM approach.
- Safer Baby Bundle resources are based on those used in the MBM trial.



Introduction

Smoking
Cessation

Fetal
Growth
Restriction

**Decreased
Fetal
Movement**

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

The recommendations

Steps to assessing and managing risk factors

All women should be counselled about the importance of fetal movement **before 28 weeks**

INITIAL RESPONSE – Don't delay seeking help, do not stimulate with food or fluid!

CLINICAL ASSESSMENT – Take a detailed clinical history, identify risk factors, listen to FHR

CARDIOTOCOGRAPHY (CTG) – Interpret antenatal CTG according to local guidelines

FURTHER INVESTIGATION – Consider fetomaternal haemorrhage testing if clinically indicated

BIRTH PLANNING – After further investigations it may be necessary to discuss a planned birth

Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

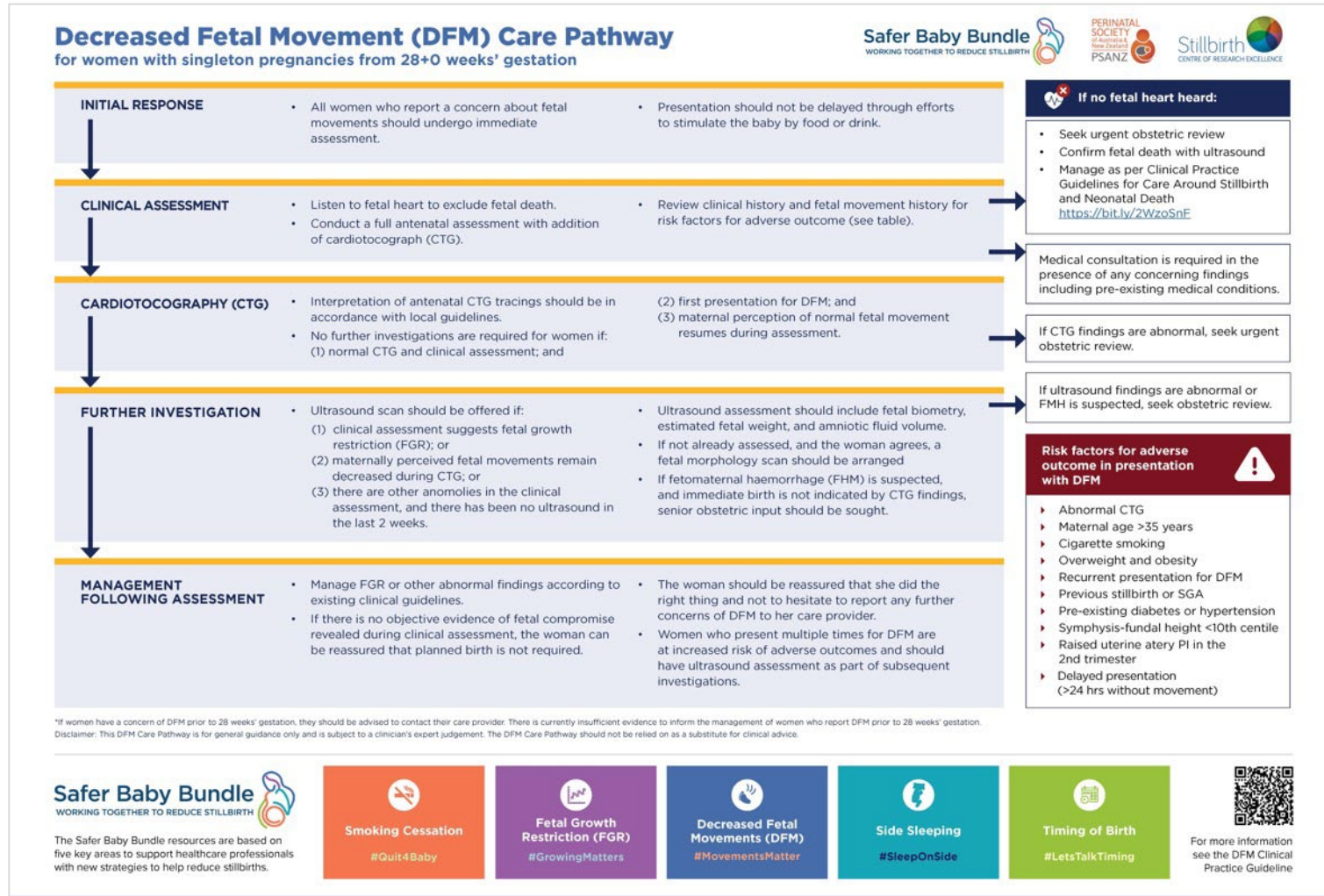
Timing
of Birth

Translated
Resources

Conclusion

Resources

Care Pathway⁵³



Introduction

Smoking Cessation

Fetal Growth Restriction

Decreased Fetal Movement

Side Sleeping

Timing of Birth

Translated Resources

Conclusion

Resources

Poster and Flyer

#MovementsMatter

saferbaby.org.au

Your baby's movements matter.

You will start to feel baby movements between 16 and 24 weeks of pregnancy. The movements are small at first but you will feel them more and more as baby grows. **From 28 weeks onwards, you should feel regular baby movements every day, regardless of where your placenta lies.**

It is easier to feel your baby's movements when sitting quietly or laying on your side, especially in the evening.

Babies continue to move every day, right up until their birth.

Feeling regular baby movements is a sign that your baby is well.

If you baby's movements stop or slow down, contact your maternity healthcare professional without delay. **DO NOT WAIT** until your next appointment, or the next day.

FIND OUT MORE: saferbaby.org.au or speak to your healthcare professional.

We thank Tommy's UK for allowing us to adapt their campaign for our purposes.

The list of organisations who have contributed to development of, and endorsed the resources, can be accessed via saferbaby.org.au

Version 2.0 updated March 2022

#MovementsMatter

saferbaby.org.au

Your baby's movements matter.

Feeling regular baby movements is a sign that your baby is well. If your baby's movements stop or slow down, contact your maternity healthcare professional without delay.

How often should my baby move?

You will start to feel baby movements between 16 and 24 weeks of pregnancy. The movements are small at first but you will feel them more and more as baby grows. **From 28 weeks onwards, you should feel regular baby movements every day, regardless of where your placenta lies.**

It is easier to feel your baby's movements when sitting quietly or laying on your side, especially in the evening.

At the end of pregnancy, healthy babies begin to have longer rests between their active times. However, babies continue to move every day right up until their birth.

What should I do if my baby's movements stop or slow down?

If you notice your baby is moving less and less, or the movements are not as strong, contact your maternity healthcare professional without delay.

It is important for your maternity healthcare professional to know if you are concerned about your baby's movements. **You are not wasting their time. Do not wait until the next day or your next appointment.**

#MovementsMatter

Your baby's movements matter.

What happens when I contact my maternity healthcare professional about my baby's movements?

Your maternity healthcare professional should ask you to come in for a check-up (staff are available 24 hours, 7 days a week).

Investigations may include:

- Checking your baby's heartbeat
- Measuring your baby's growth
- Ultrasound scan
- Blood test

Common questions about baby movements

Can I make my baby move?

No, having something to eat or drink to stimulate your baby **DOES NOT WORK.**

Can I use a home Doppler to check on baby's heartbeat?

No, do not use home Dopplers or phone apps to listen to your baby's heartbeat. These are not reliable and can give you false reassurance. Special training is needed to listen to a baby's heartbeat and check if they are well. If you are concerned that your baby's movements have stopped or slowed down, contact your maternity healthcare professional without delay.

Do babies move less towards the end of pregnancy?

No, healthy babies continue to move every day right up until their birth.

If you have questions about your baby's movements, you should discuss this with your maternity healthcare professional without delay.

We thank Tommy's UK for allowing us to adapt their campaign for our purposes.

The list of organisations who have contributed to development of, and endorsed the resources, can be accessed via saferbaby.org.au

Version 2.0 December 2022

saferbaby.org.au

Introduction

Smoking Cessation

Fetal Growth Restriction

Decreased Fetal Movement

Side Sleeping

Timing of Birth

Translated Resources

Conclusion

SAFER BABY BUNDLE MASTERCLASS

34

Resources

Social media tiles



Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

Implementation

Questions for discussion

- Are there any challenges to implementing the DFM care pathway in the context of your local site?
- Are there limitations with access to equipment or resources?
- Does your facility have a local practice guideline?



Introduction

Smoking
Cessation

Fetal
Growth
Restriction

**Decreased
Fetal
Movement**

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

Side Sleeping

Evidence summary

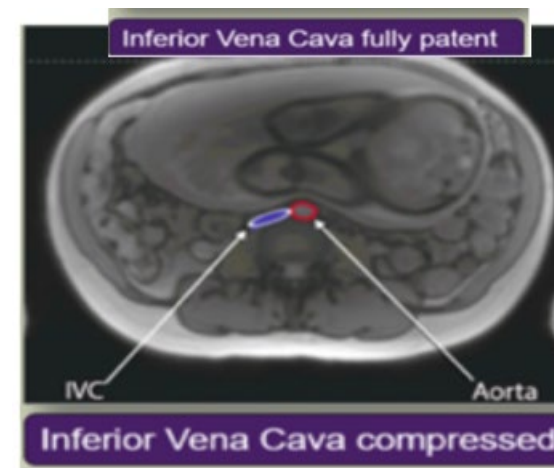
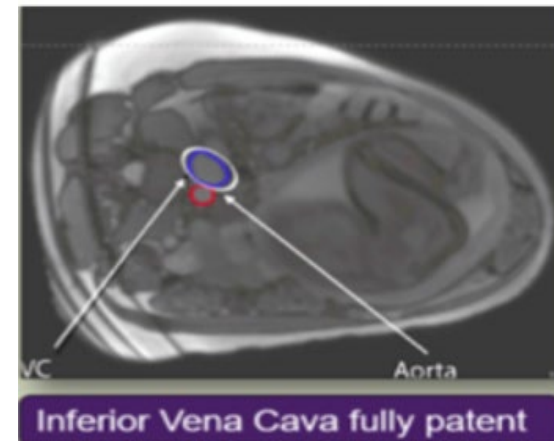
Position Statement:
Mothers' going-to-sleep
position in late pregnancy⁵⁴

[READ MORE](#)



The evidence

- Accumulating evidence has shown an association between maternal supine going-to-sleep position and stillbirth after 28 weeks in pregnancy.^{10,55,56}
- In an international meta-analysis the population attributable risk is 5.8%. This indicates 1:17 stillbirths could be avoided if women go to sleep on their side from 28 weeks of pregnancy.¹⁰
- Research in New Zealand used MRI technology to assess haemodynamic effects that can compromise fetal wellbeing.⁵⁸



Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

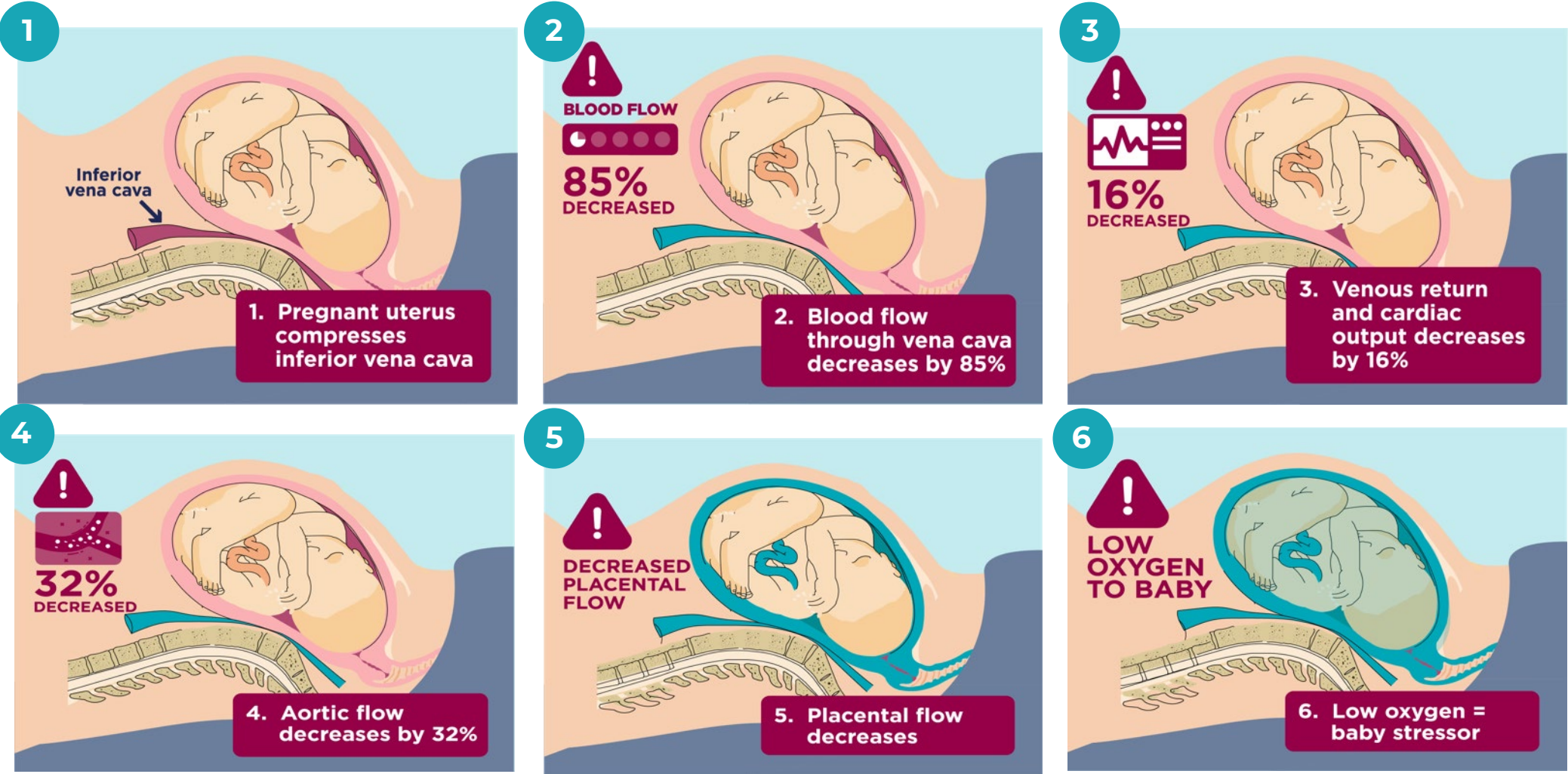
**Side
Sleeping**

Timing
of Birth

Translated
Resources

Conclusion

The evidence



Introduction

Smoking Cessation

Fetal Growth Restriction

Decreased Fetal Movement

Side Sleeping

Timing of Birth

Translated Resources

Conclusion

The recommendations

Steps to assessing and managing risk factors

- Provide all pregnant women with verbal and written information about stillbirth risk reduction practices.
- Emphasise that going-to-sleep in the supine (on your back) position is a risk factor for late stillbirth.
- Reassure women that it's normal to change position during sleep - the important thing is to start each sleep on their side.
- Current evidence shows that both the left and right side going-to-sleep positions are equally safe.¹⁰

Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

**Side
Sleeping**

Timing
of Birth

Translated
Resources

Conclusion

Resources

Poster and Flyer

SleepOnSide saferbaby.org.au



Sleep on your side when baby's inside.

Research shows that going to sleep on your side from 28 weeks of pregnancy halves your risk of stillbirth compared with sleeping on your back.

Either side is fine.

The important thing is to **start each sleep lying on your side.**

If you wake up on your back, **don't worry,** just roll onto your side.

Find out more: health.nsw.gov.au/reducingstillbirth or saferbaby.org.au

For information on the side sleep study, visit <https://bit.ly/2PSJhHC>. We thank Tommy's UK for allowing us to adapt their campaign for our purpose. The list of organisations who have contributed to development of, and endorsed this resource, can be accessed via: saferbaby.org.au

Version 2.0 December 2022

Logos: Safer Baby, Stillbirth Centre of Research Excellence, Stillbirth Foundation Australia, Perinatal Society of Australia & New Zealand (PSANZ), NSW Government

SleepOnSide saferbaby.org.au



Sleep on your side when baby's inside.

Research shows that going to sleep on your side from 28 weeks of pregnancy halves your risk of stillbirth compared with sleeping on your back.


Turn over to find out more

The list of organisations who have contributed to development of, and endorsed this resource, can be accessed via: saferbaby.org.au

Logos: Safer Baby, Stillbirth Centre of Research Excellence, Stillbirth Foundation Australia, Perinatal Society of Australia & New Zealand (PSANZ), NSW Government

SleepOnSide

Sleep on your side when baby's inside.



Why should I sleep on my side?
After 28 weeks of pregnancy, lying on your back presses on major blood vessels which can reduce blood flow to your womb and oxygen supply to your baby.

What is the risk of stillbirth if I go to sleep on my back?
Stillbirth after 28 weeks of pregnancy affects about one in every 500 babies. However, research has confirmed that going to sleep on your side halves your risk of stillbirth compared with sleeping on your back.

Is it best to go to sleep on my left or right side?
You can go to sleep on either the left or the right side – either side is fine.

What if I feel more comfortable going to sleep on my back?
Even if you prefer it, going to sleep on your back is not best for baby after 28 weeks of pregnancy.

What if I wake up on my back?
It's normal to change position during sleep and many pregnant women wake up on their back. That's OK! The important thing is to start every sleep lying on your side (both for daytime naps and at night). If you wake up on your back, just roll over on your side.

For more information please contact your maternity healthcare professional.

For information on the side sleep study, visit <https://bit.ly/2PSJhHC>. We thank Tommy's UK for allowing us to adapt their campaign for our purpose.

Find out more:
health.nsw.gov.au/reducingstillbirth
or saferbaby.org.au

Version 2.0 December 2022

HPN (HSP) R0489, December 2022 | NH700546

Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

Resources

Social media tiles



Introduction

Smoking Cessation

Fetal Growth Restriction

Decreased Fetal Movement

Side Sleeping

Timing of Birth

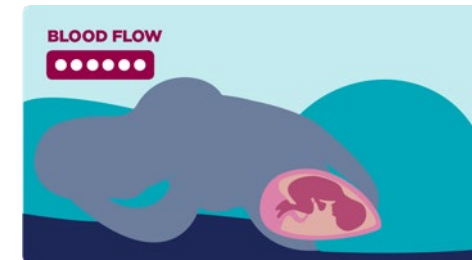
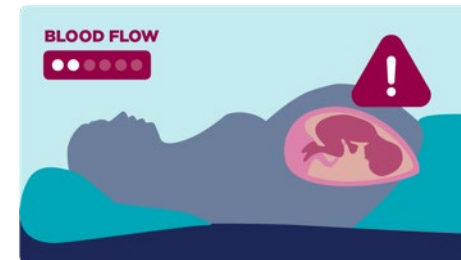
Translated Resources

Conclusion

Implementation

Questions for discussion:

- Are there any challenges or concerns you expect to face from women when advising them about side sleeping?
- What questions might be asked by women about safe sleeping? How would you respond?



Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

Timing of Birth

Evidence summary

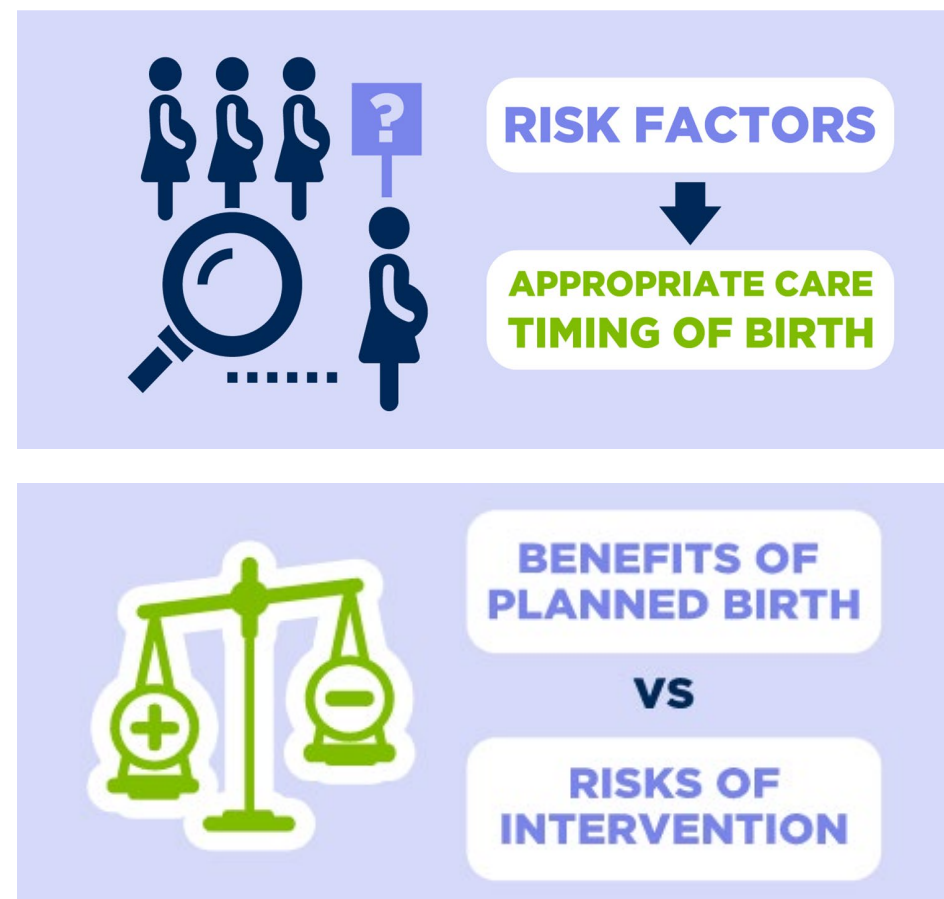
Position Statement: Improving decision-making about the timing of birth for women with risk factors for stillbirth.⁵⁹

[READ MORE](#)



The evidence

- There is clear evidence that some maternal and pregnancy factors increase a woman's risk of stillbirth⁴
- Early recognition of a woman's risk of stillbirth and provision of appropriate individualised care throughout pregnancy is a key stillbirth prevention strategy^{60,61}
- For some women with risk factors **planned birth** can prevent stillbirth^{62,63}
- The benefits of planned birth need to be carefully weighed against the risks of intervention



Recommendations

Steps to assessing and managing risk factors

S	Stillbirth risk assessment in early pregnancy
T	Tests and further investigations as indicated
E	Evaluate and re-assess risk at 34 to 36+6 weeks
P	Plan for increased surveillance where indicated
S	Support informed, shared decision-making on timing of birth

Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

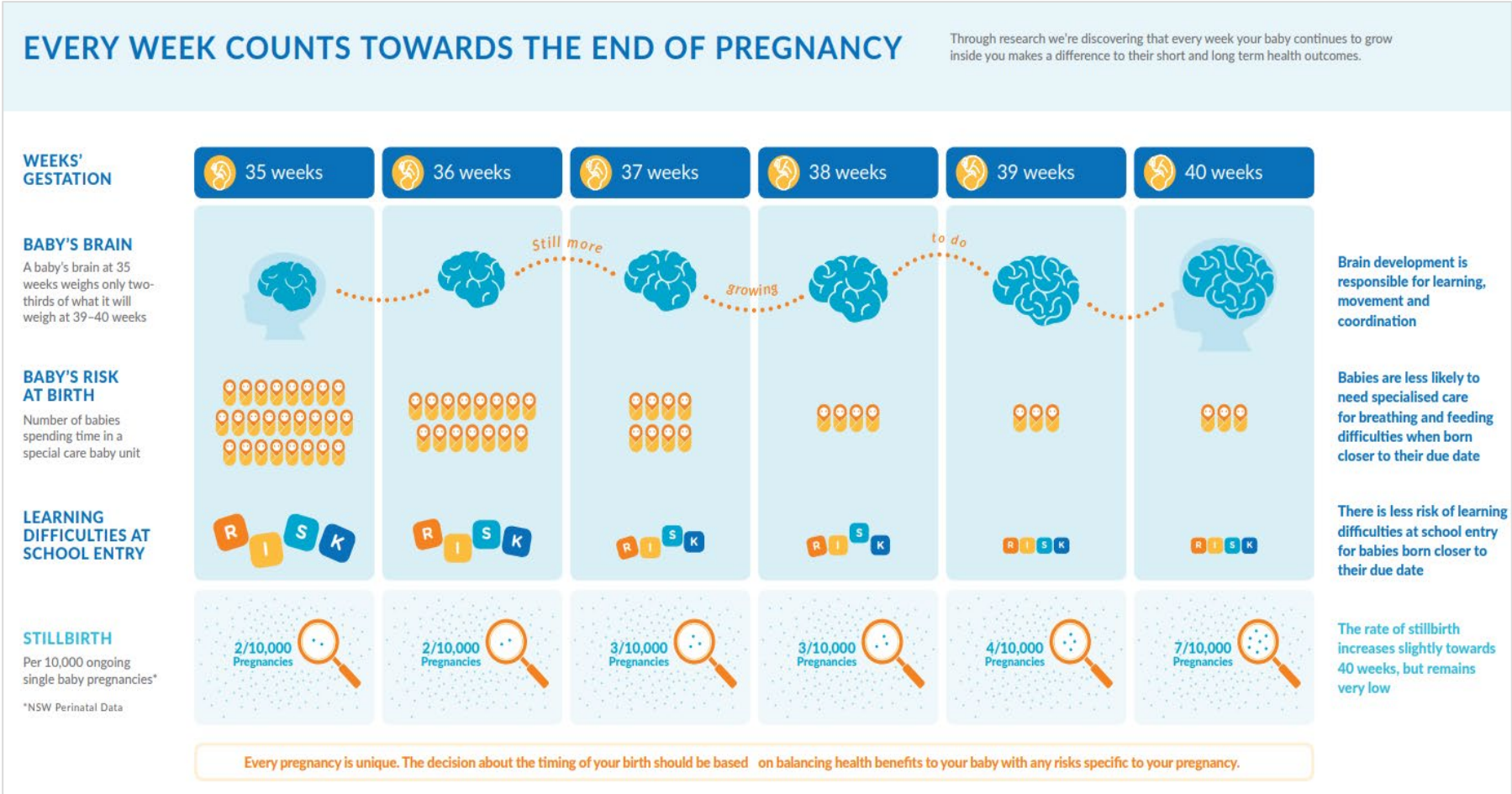
**Timing
of Birth**

Translated
Resources

Conclusion

Resources

Every Week Counts⁷⁰



Introduction

Smoking Cessation

Fetal Growth Restriction

Decreased Fetal Movement

Side Sleeping

Timing of Birth

Translated Resources

Conclusion

Resources

Timing of Birth video



Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

**Timing
of Birth**

Translated
Resources

Conclusion

Resources

Poster

#LetsTalkTiming

saferbaby.org.au



Let's Talk
Timing
of Birth.



Most women go into labour on their own between 37 and 42 weeks. Having your baby as close to your due date as possible is generally best for your baby's development.

In some pregnancies, planned (early) birth might be considered to reduce the risk of stillbirth and/or for your own health.

Talk with your maternity healthcare professional about having a safe and healthy pregnancy, and **decide together the right timing of birth for you and your baby.**



FIND OUT MORE: saferbaby.org.au or speak to your healthcare professional.



Version 1.0 February 2023

Resources

Brochure

#LetsTalkTiming

Let's Talk Timing of Birth



Information to help you talk with your midwife or doctor about the best timing for your baby's birth.

Scan here to watch a video summarising the information in this brochure.



Safer Baby
www.saferbaby.gov.au

Stillbirth
Centre of Research Excellence

Australian Government
Department of Health and Aged Care

Australian Perinatal Research Alliance

 **Congratulations on your pregnancy!**

This brochure contains information to help you have a safe and healthy pregnancy, and to help you understand the best time for your baby's birth.



Scan this QR code to take a closer look at the benefits of a longer pregnancy for babies.

When will my baby be born?

Your baby's estimated date of birth or due date is usually 40 weeks after the first day of your last period. However, it is sometimes calculated based on your earliest ultrasound. Most women (around 90%) have their baby between 37 and 42 weeks and this is called full term. Before 37 weeks is called preterm, from 37-39 weeks is referred to as early term, and from 42 weeks on is called post term. In many pregnancies the timing of birth is decided when your labour starts on its own. Giving birth close to your due date is generally best for your baby's development. However, sometimes babies need to be born at an earlier time and this is called **planned birth**.

What is a planned birth?

A planned birth is when a woman has her baby at a specific time instead of waiting to go into labour for her baby to be born. This is usually done by an induction of labour or, if necessary, a caesarean section. However, if a planned birth is decided, it is very important to pick the right time.

Every Week Counts

Your baby still has growing to do, is still developing and is becoming stronger right up to 40 weeks. Every week that a baby is born early can impact their health. Sometimes you might reasonably ask 'why wait until term?' especially if there are any concerns. The facts are that being born preterm (even close to 37 weeks), and in the early term period (37-39 weeks) can lead to a higher chance of some outcomes for children, such as learning difficulties at school and/or behavioural problems. Getting the balance right between benefits and risks is really important when deciding on timing of birth.

When might a planned birth be considered?

The main reason women have a planned birth is to reduce the chance of problems for them or their baby, including stillbirth. Stillbirth is when a baby dies before birth and while this is a tragedy, it is a very rare event. The chance of stillbirth is slightly higher later in pregnancy and is higher post-term.

For women with a medical condition (eg. diabetes or high blood pressure), or if there are pregnancy complications (eg. concerns about baby's growth), a planned birth may be recommended. Other factors that increase a woman's risk of stillbirth include being older, being overweight (having a high body mass index or BMI), having your first baby, conceiving using IVF, and continuing to smoke, use drugs or drink alcohol throughout pregnancy.

Women from some cultural groups or ethnicities, including Aboriginal and Torres Strait Islander women, and women born in Sub-Saharan Africa or South Asia have a slightly higher chance of stillbirth. However, this is thought to be caused by factors other than culture or ethnicity.



If any of these apply to you, it does NOT mean you will have a stillbirth. Your midwife or doctor will explain your chance of stillbirth and discuss with you options for the timing of your baby's birth, and if you or your baby need closer monitoring. If the chance of stillbirth is very low, your midwife or doctor will usually recommend that you simply wait for your baby to come when your labour starts.

#LetsTalkTiming

Introduction

Smoking Cessation

Fetal Growth Restriction

Decreased Fetal Movement

Side Sleeping

Timing of Birth

Conclusion

Resources

Shared Decision-Making – Poster and Flyer

#LetsTalkTiming
saferbaby.org.au



Let's Talk Shared Decision-Making

Shared decision-making is an ongoing conversation between you and your maternity healthcare providers to ensure your care meets your needs, preferences, values, beliefs, and taking into account your health and your baby's health. It acknowledges the two experts in the room, which includes **you**.

Shared decision-making is a partnership between you and your maternity healthcare providers.

It's never too early to start asking your maternity healthcare provider questions. Asking questions can help you to get the information you need to decide what is the right care for you and your baby:

- What are the options available to me?
- What are the benefits?
- What are the risks?
- Can you give me some written information so I can review this at home?



Talk with your maternity healthcare professional about having a safe and healthy pregnancy.

FIND OUT MORE: saferbaby.org.au or speak to your maternity healthcare professional.

Safer Baby
Women's Hospital to Reduce Stillbirths

Stillbirth
CENTRE OF RESEARCH EXCELLENCE

Australian Government
Department of Health and Aged Care

Australian Perinatal Birth Prevention Alliance

Version 1.0 June 2023

INFORMATION FOR HEALTHCARE PROFESSIONALS

#LetsTalkTiming

Let's Talk Shared Decision-Making



Shared decision-making is a process of communication and collaboration by a woman and healthcare provider. It acknowledges the two experts in the room and ensures that healthcare decisions are based on both clinical expertise and the woman's needs, preferences, values and beliefs.

To support shared decision-making in your practice:




- 1 Treat every encounter as an opportunity to build trust, strengthen relationships, and create a culture of partnership and collaboration.**
- 2 Make it clear when a decision point is reached and explain that decisions are made as a team.**
"This means there is a decision to make together about the best time for your baby to be born."
- 3 Ask about and respect consumer preferences for how to be involved.**
"Is it ok if we talk about this today?"
Is there anything you'd like me to consider about you, your family or cultural needs?
Is there anyone else you'd prefer to have present for this conversation?"
- 4 Clearly explain the available options and the benefits and harms of each, including the option of doing nothing.**
"This means we have two main options. The first option is to wait for labour to start on its own. The second option is to have an induction of labour before your due date, at 39 weeks. There are pros and cons of each option."

Safer Baby Bundle
Women's Hospital to Reduce Stillbirths

Stillbirth
CENTRE OF RESEARCH EXCELLENCE

Australian Government
Department of Health and Aged Care

Australian Perinatal Birth Prevention Alliance

- 5 Use teach-back to check clarity and understanding.**
"So I know that I've explained this well, if someone in your family asked you what options we discussed today, what would you say?"
- 6 Explore what the woman likes and dislikes about each option before seeking to identify the right option.**
"Now that we've talked about what it can be like to have an induction of labour, I want to hear what you think about that option. What do you like and dislike about it?"
- 7 Delay offering a recommendation and individualise all recommendations.**
"I'm happy to share what I think but any advice I provide needs to consider what matters most to you, so would it be ok for us to talk a little more first?"
Because you said that reducing the chance of stillbirth is very important to you, and other things are not quite as important, then it might be that planning to have your baby once you reach 39 weeks is the right way forward. What do you think?"
- 8 If a decision can't be made right away, make a plan for what will happen next and document it.**
"Do you feel ready for us to make a decision about this now?"
- 9 Ensure the woman's preferences and values are integrated when the decision is made.**
"Based on everything we've discussed, is there an option that feels like it might be the right one for you?"
"It seems from everything we've discussed that waiting for labour to start on its own might be the right option for you. What do you think?"

Scan here to view the SaferBaby website
- 10 Reflect on how it went and what you might do differently next time.**
As a prompt for your reflection, consider how the woman might answer these three questions:
"How much effort was made to understand your health issues?"
How much effort was made to listen to the things that matter most to you about your health issues?
How much effort was made to include what matters most to you in choosing what to do next?"

Scan here to view the Every Week Counts website

Scan here to view the Learn.stillbirthCRE website

Version 3.0 Updated June 2023

Safer Baby Bundle
Women's Hospital to Reduce Stillbirths

Stillbirth
CENTRE OF RESEARCH EXCELLENCE

Australian Government
Department of Health and Aged Care

Australian Perinatal Birth Prevention Alliance

Introduction

Smoking Cessation

Fetal Growth Restriction

Decreased Fetal Movement

Side Sleeping

Timing of Birth

Translated Resources

Conclusion

Resources

Social media tiles



Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

Resources

Videos modelling conversations about timing of birth



Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

Implementation

Questions for discussion:

- How will you implement the '5 STEPS' process contextualised within your local site?
- Are there any practical limitations?
- What policies or guidelines are there to identify stillbirth risk factors at your institution.



Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

**Timing
of Birth**

Translated
Resources

Conclusion

Translated resources

Safer Baby resources are available in over 20 languages



English master booklet available for clinicians

Introduction

Smoking Cessation

Fetal Growth Restriction

Decreased Fetal Movement

Side Sleeping

Timing of Birth

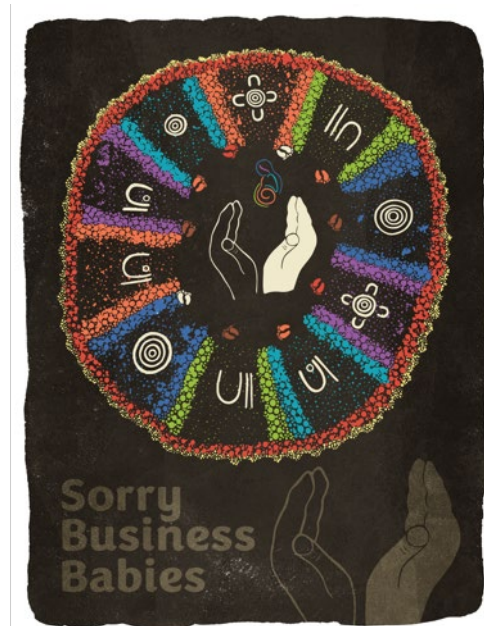
Translated Resources

Conclusion

Adapted resources

There are culturally adapted resources being co-designed and developed, which will be available soon, for:

- Aboriginal and Torres Strait Islander communities
- Arabic, Dari, Dinka and Karen language-speaking communities



Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

Conclusion



Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

Risk Communication

- Communication about stillbirth and risk factors for stillbirth is often insufficient
- Across **all elements of the bundle**, sensitive evidence-based communication is key
- Discussion around risk factors for stillbirth should be part of standard pregnancy care
- Women have expressed that they want **clear** and **easy to understand** information from their health professional about how they can reduce their risk of stillbirth



Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

What new mothers say

***"The word stillbirth is incredibly important to include.** Plenty of information is out there telling you to sleep on your side but none explain why.... no one expects their baby to die but we need a warning!"*



***"I think it is important to mention stillbirth as the risk** because otherwise many women may not take the message as seriously as they should."*

*"We know it happens, we just think it won't happen to us. **But we need to know what we can do to prevent it.**"*



*"Please just **give pregnant women all the information there is about preventing stillbirth.**"*

Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

Continuity of Care

Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

Statement from the Stillbirth Centre of Research Excellence:

The advantages of continuity of carer

Stillbirth is a serious public health problem with far reaching psychosocial and financial burden for families and society¹.

Every day, six families in Australia will suffer the loss of a baby after 20 weeks of pregnancy, with little improvement in rates for more than two decades². Some of those stillbirths are preventable³.

Models of maternity care which provide for greater continuity, and therefore reduce the risk of fragmentation, should be provided and, as far as possible, women should see the same maternity care provider throughout pregnancy. There are a range of models of care which optimise continuity including midwifery, private and public obstetrician care and GP obstetric care, especially in rural areas.

Midwifery continuity of carer offers women care provided by a known midwife or a small group of known midwives to women during pregnancy, birth and the early postnatal period. This care is provided in collaboration with other healthcare providers, including obstetricians, social support workers and Aboriginal Health Practitioners/Workers. The WHO Pregnancy Care Guidelines recommends all women have access to midwifery continuity of care throughout the childbirth continuum⁴. There is high quality evidence that demonstrates reductions in overall fetal/neonatal loss when women receive continuity of care from a known midwife during pregnancy⁵. Further research is needed regarding the impact specifically on late-gestation stillbirth.

Midwifery continuity of carer is known to be of additional benefit for women at higher risk of stillbirth, such as young mothers⁶, Aboriginal women⁷, and women from disadvantaged groups⁸. Where possible, women from these groups should be prioritised into being offered midwifery continuity of care models. Midwifery continuity of carer also improves the quality of care received by families whose baby is stillborn and is highly valued by families⁹.

There are many ways for health services to provide continuity of care. Not all health services may be able to provide continuity of care all the time and there are challenges involved in redesigning services to provide this to all women.¹⁰ Other approaches which provide continuity should be supported. This includes addressing the principles of continuity of care and carer, effective information-sharing and care coordination and ensuring a woman-centred approach to decision-making.

The Stillbirth CRE's Safer Baby Bundle aims to **reduce the number of stillbirths after 28 weeks' gestation by 20% by 2023**.

To complement and strengthen the five elements contained in the Safer Baby Bundle, the Stillbirth Centre of Research Excellence (Stillbirth CRE) recommends that maternity services increase the availability of continuity of care to all women and, in particular, for women with known risk factors for stillbirth. Continuity of care and carer should be an important strategy to help reduce stillbirth in Australia.

References

1. Heazell AEP, Siassakos D, Blencowe H, et al. Stillbirths: economic and psychosocial consequences. *Lancet* 2016; 387(10018): 604-16.
2. Flenady V, Wojcieszek AM, Middleton P, et al. Stillbirths: recall to action in high-income countries. *Lancet* 2016; 387(10019): 691-702.
3. Flenady V, Middleton P, Smith GC, et al. Stillbirths: The way forward in high-income countries. *Lancet* 2011; 377(9778): 1703-17.
4. World Health Organization (WHO). WHO recommendations on antenatal care for a positive pregnancy experience. Geneva: World Health Organization, 2016.
5. Sandall J, Soltani H, Gates S, Shenman A, Devane D. Midwife-led continuity models versus other models of care for childbearing women. *Cochrane Database of Systematic Reviews* 2016; (4).
6. Allen J, Gibbons K, Beckmann M, Tracy M, Stapleton H, Kildea S. Does model of maternity care make a difference to birth outcomes for young women? A retrospective cohort study. *International journal of nursing studies* 2015; 52(8): 1332.
7. Kildea S, Gao Y, Hickey S, et al. Reducing preterm birth amongst Aboriginal and Torres Strait Islander babies: A prospective cohort study. *Brisbane, Australia. EClinicalMedicine* 2019; 12: 43-51.
8. Homer CS, Leap N, Edwards N, Sandall J. Midwifery continuity of carer in an area of high socio-economic disadvantage in London: A retrospective analysis of Albany Midwifery Practice outcomes using routine data (1997-2009). *Midwifery* 2017; 48: 1.
9. Ellis A, Chebsey C, Storey C, et al. Systematic review to understand and improve care after stillbirth: a review of parents' and healthcare professionals' experiences. *BMC pregnancy and childbirth* 2016; 16(1): 16.
10. Homer C, Leap N, Brodie P, Sandall J, editors. *Midwifery Continuity of Care: A Practical Guide*, 2nd Edition. Chatswood, Australia: Elsevier, 2019.



For more information about the Safer Baby Bundle program and to access the elearning resources for health care professionals go to learn.stillbirthcre.org.au

Version 1.0 developed 2021

Version 1.0 developed 2021

Safer Baby Bundle
WORKING TOGETHER TO REDUCE STILLBIRTH



Stillbirth
CENTRE OF RESEARCH EXCELLENCE



- In addition to the five Bundle elements, we emphasise the need for maternity services to address the other important aspects of best practice care to reduce stillbirth rates
- The Stillbirth CRE have developed a position statement in support of this
- This includes the recommendation that maternity services increase the availability of **continuity of care models** to all women (reducing the risk of fragmentation of care), and **in particular, for women at increased risk of stillbirth**

Perinatal Mortality Audit

- Perinatal mortality audits in the Netherlands, the UK and New Zealand show substandard care factors are present in 20-30% of cases^{64,65}
- Audit, when combined with feedback to care providers, can change practice and improve health outcomes⁶⁶
- Particularly useful when combined with an action plan and clear measurable targets
- IMPROVE eLearning covers key skills and knowledge



Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping


Timing
of Birth

Translated
Resources


Conclusion

COVID-19 and the Safer Baby Bundle


- During the COVID-19 pandemic the Safer Baby Bundle messaging remains largely the same and as important as ever
- For pregnant women concerns around being exposed to COVID-19 may lead them to avoid seeking care to reduce their risk of contracting the infection
- We have developed resources for both clinicians and women to highlight changes in practice during COVID-19




Important messages about stillbirth prevention from healthcare providers during the COVID-19 pandemic.

**#Quit4Baby**


- Smoking can make COVID-19 infection worse. Stopping smoking in pregnancy is important for both you and your baby, especially during the COVID-19 pandemic.
- Help is available to stop smoking in pregnancy, for both you and your partner. Talk to your midwife or doctor and seek additional help from Quitline.

**#GrowingMatters**


- Monitoring baby's movements is an important indicator of fetal growth and wellbeing.
- If you feel like your baby is not growing appropriately, please contact your healthcare provider.

**#MovementsMatter**


- Even during the COVID-19 pandemic, monitoring your baby's movements is important.
- You should be able to feel your baby move every day from 28 weeks of pregnancy. Please call your healthcare provider if your baby's movements have stopped or slowed down and come in to be assessed.
- Using at-home Doppler machines or phone apps to listen to your baby's heartbeat is not a reliable way to check on your baby's health and is not recommended.

**#SleepOnSide**

- Going to sleep on your side from 28 weeks' gestation is safest for your baby. If you wake up on your back, do not worry, just roll over and settle to sleep on your side again.
- During the COVID-19 pandemic, this is an important step that women can take to reduce the risk of stillbirth.


**#Let'sTalkTiming**

- The risk of having a stillborn baby is small for most women and there are ways to reduce the risk even further.
- Your healthcare provider will talk with you about your own risk for having a stillborn baby and discuss with you steps you can take to reduce the risks such as quitting smoking and sleeping on your side.
- For some women, particularly those with risk factors for stillbirth, closer monitoring or planning to have the baby earlier than the due date might be best.
- COVID-19 infection is considered a risk factor for stillbirth, and may be a reason for planned early birth in some cases.
- Avoiding planned early birth, unless there is a clear medical need, will minimise the chance that baby needs to stay in hospital after being born.



For more information about the Safer Baby program and reducing the risk of stillbirth, contact your maternity healthcare professional or go to saferbaby.org.au.

Version 8.0 December 2022



Fact Sheet for Women

Introduction

Smoking Cessation

Fetal Growth Restriction

Decreased Fetal Movement

Side Sleeping

Timing of Birth

Translated Resources

Conclusion

Safer Baby resources available for parents

- Safer Baby resources are available for clinicians to share with pregnant women. These are designed using easy to understand language to educate women about the risks of stillbirth and the five elements of care to reduce stillbirth risks.
- Resources available include waiting room poster, flyer for women and website www.saferbaby.org.au



Waiting room poster and flyer for women

Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

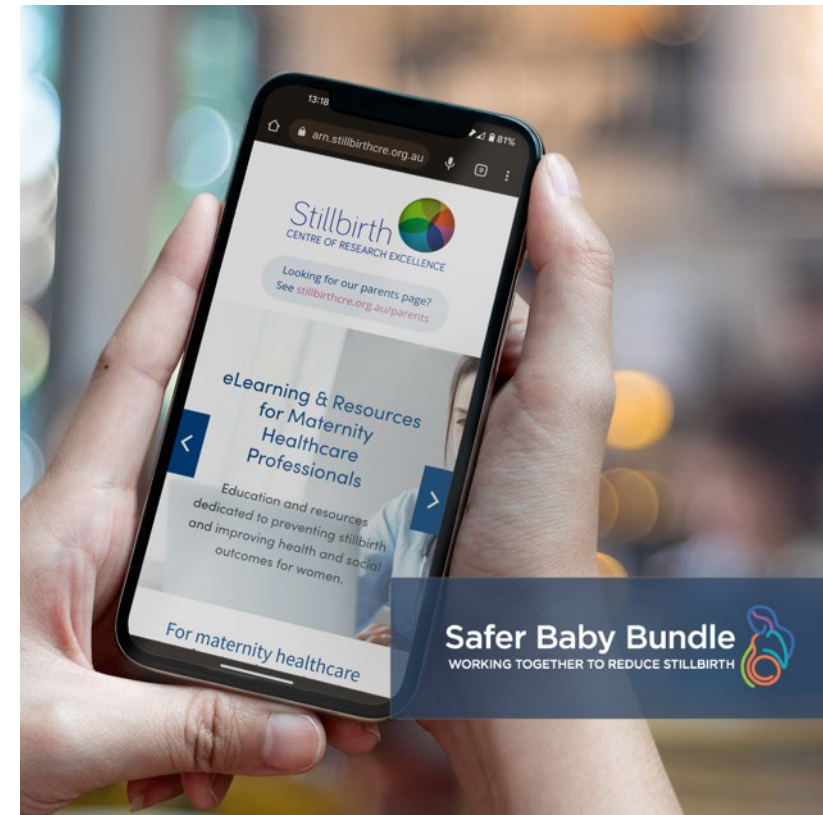
Safer Baby Bundle eLearning Module



For further detail and evidence base behind the Safer Baby Bundle, all downloadable resources and care pathways visit learn.stillbirthcre.org.au

- FREE educational training
- Accredited CPD points
- Six 20-minute chapters, accessible on all devices
- Interactive learning including videos, quiz style questions and case studies
- Downloadable resources

Register now



Introduction

Smoking Cessation

Fetal Growth Restriction

Decreased Fetal Movement

Side Sleeping

Timing of Birth

Translated Resources

Conclusion

Thank you

The Safer Baby Bundle was developed by the Stillbirth CRE in partnership with professional colleges and organisations and parent advocacy organisations.



Australian College of
Rural & Remote Medicine
WORLD LEADERS IN RURAL PRACTICE



Clinical Excellence
Queensland



Queensland
Government



International
Stillbirth Alliance



The Royal Australian
and New Zealand
College of Obstetricians
and Gynaecologists
Excellence in Women's Health



WOMEN'S
HEALTHCARE
AUSTRALASIA

Strongerbubbaborn.org.au

Growingahealthybaby.org.au

saferbaby.org.au

learn.stillbirthCRE.org.au

References

1. Callander EJ, Thomas J, Fox H, Ellwood D, Flenady V. What are the costs of stillbirth? Capturing the direct health care and macroeconomic costs in Australia. *Birth* 2019; 47(2): 183-90.
2. United Nations Inter-agency Group for Child Mortality Estimation (UN IGME), A Neglected Tragedy: The global burden of stillbirths. United Nations Children's Fund, New York, 2020.
3. Heazell AEP, Siassakos D, Blencowe H, et al. Stillbirths: economic and psychosocial consequences. *Lancet* 2016; 387(10018): 604-16.
4. Flenady V, Wojcieszek AM, Middleton P, et al. Stillbirths: recall to action in high-income countries. *Lancet* 2016; 387(10019): 691-702.
5. Flenady V, Middleton P, Wallace E, et al. Stillbirth in Australia 1: The road to now: two decades of stillbirth research and advocacy in Australia. *Women & Birth: Journal of the Australian College of Midwives* 2020.
6. Australian Institute of Health Welfare. Australia's mothers and babies 2018—in brief. Canberra: AIHW, 2020.
7. Rumbold AR, Yelland J, Stuart-Butler D, et al. Stillbirth in Australia 3: Addressing stillbirth inequities in Australia: Steps towards a better future. *Women Birth* 2020; 33(6): 520-5.
8. Australian Institute of Health and Welfare. Stillbirths and neonatal deaths in Australia 2015 and 2016. Canberra: AIHW, 2019.
9. AIHW: Hilder L, Li Z, Zeki R, Sullivan EA. Stillbirths in Australia, 1991-2009. Perinatal statistics series no. 29. Cat. No. PER 63. Canberra: AIHW National Perinatal Epidemiology and Statistics Unit, 2014.
10. Cronin RS, Li M, Thompson JMD, et al. An individual participant data meta-analysis of maternal going-to-sleep position, interactions with fetal vulnerability, and the risk of late stillbirth. *EClinicalMedicine* 2019; 10: 49-57.
11. Davies-Tuck ML, Davey MA, Wallace EM. Maternal region of birth and stillbirth in Victoria, Australia 2000-2011: A retrospective cohort study of Victorian perinatal data. *PLoS One* 2017; 12(6): e0178727.
12. Flenady V, Koopmans L, Middleton P, et al. Major risk factors for stillbirth in high-income countries: a systematic review and meta-analysis. *Lancet* 2011; 377(9774): 1331-40.
13. Lamont K, Scott NW, Jones GT, Bhattacharya S. Risk of recurrent stillbirth: systematic review and meta-analysis. 2015; 350: h3080.

References

14. Lawn JE, Blencowe H, Waiswa P, et al. Stillbirths: rates, risk factors, and acceleration towards 2030. *Lancet* 2016; 387(10018): 587-603.
15. McCowan LME, George-Haddad M, Stacey T, Thompson JMD. Fetal growth restriction and other risk factors for stillbirth in a New Zealand setting. *Aust N Z J Obstet Gynaecol* 2007; **47**(6): 450-6.
16. Mozooni M, Preen DB, Pennell CE. Stillbirth in Western Australia, 2005-2013: the influence of maternal migration and ethnic origin. *The Medical journal of Australia* 2018; **209**(9): 394-400.
17. Shah PS, Zao J, Al-Wassia H, Shah V. Pregnancy and neonatal outcomes of Aboriginal women: a systematic review and meta-analysis. *Women's Health Issues* 2011; **21**(1): 28-39.
18. Healthcare Improvement Scotland. Scottish Patient Safety Program Maternity and Children, End of phase report, August 2016. Scotland: HIS, 2016.
19. NHS England. Saving Babies' Lives Version Two: A care bundle for reducing perinatal mortality, 2019.
20. Widdows K, Reid HE, Roberts SA, Camacho EM, Heazell AEP. Saving babies' lives project impact and results evaluation (SPiRE): a mixed methodology study. *BMC pregnancy and childbirth* 2018; 18(1): 43.
21. Healthcare Improvement Scotland. Scottish Patient Safety Programme: Maternity and Children Quality Improvement Collaborative, Web Page. 2020. <https://ihub.scot/improvement-programmes/scottish-patient-safety-programme-spsp/maternity-and-children-quality-improvement-collaborative-mcqcic/maternity-care/stillbirth/>.
22. Perinatal Society of Australia and New Zealand and Centre of Research Excellence Stillbirth. Position statement: Smoking – one of the most important things to prevent in pregnancy and beyond. Brisbane, Australia: Centre of Research Excellence in Stillbirth, 2019.
23. Kotz D, Brown J, West R. Prospective cohort study of the effectiveness of smoking cessation treatments used in the "real world". *Mayo Clinic proceedings* 2014; 89(10): 1360-7.
24. West R, Raw M, McNeill A, et al. Health-care interventions to promote and assist tobacco cessation: a review of efficacy, effectiveness and affordability for use in national guideline development. *Addiction* (Abingdon, England) 2015; 110(9): 1388-403.

References

25. Bartsch AL, Harter M, Niedrich J, Brutt AL, Buchholz A. A systematic literature review of self-reported smoking cessation counseling by primary care physicians. PLoS One 2016; 11(12): e0168482.
26. Coleman T, Chamberlain C, Davey MA, Cooper SE, Leonardi-Bee J. Pharmacological interventions for promoting smoking cessation during pregnancy. Cochrane Database Syst Rev 2015; 12(9): CD010078.
27. The Royal Australian College of General Practitioners. Supporting smoking cessation: A guide for health professionals. . East Melbourne, Vic., 2019.
28. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists. Smoking and Pregnancy. Best Practice; 2020.
29. Perinatal Society of Australia and New Zealand and Centre of Research Excellence Stillbirth. Position statement: detection and management of fetal growth restriction in singleton pregnancies. Brisbane, Australia: Centre of Research Excellence in Stillbirth, 2023.
30. Lausman A, Kingdom J. Intrauterine Growth Restriction: Screening, Diagnosis, and Management. Journal of Obstetrics and Gynaecology Canada 2013; 35(8): 741-8.
31. Pay ASD, Wiik J, Backe B, Jacobsson B, Strandell A, Klovning A. Symphysis-fundus height measurement to predict small-for-gestational-age status at birth: a systematic review. BMC pregnancy and childbirth 2015; 15(1): 22.
32. Gordijn SJ, Beune IM, Thilaganathan B, et al. Consensus definition of fetal growth restriction: a Delphi procedure. Ultrasound in Obstetrics and Gynecology 2016; 48(3): 333-9.

Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

References

33. McCowan LM, Figueras F, Anderson NH. Evidence-based national guidelines for the management of suspected fetal growth restriction: comparison, consensus, and controversy. *American journal of obstetrics and gynecology* 2018; 218(2s): S855-s68.
34. Sharma D, Shastri S, Sharma P. Intrauterine Growth Restriction: Antenatal and Postnatal Aspects. *Clinical Medicine Insights Pediatrics* 2016; 10: 67-83.
35. Department of Health. Clinical Practice Guidelines: Pregnancy Care. Canberra: Australian Government Department of Health, 2018.
36. Gardosi J, Giddings S, Clifford S, Wood L, Francis A. Association between reduced stillbirth rates in England and regional uptake of accreditation training in customised fetal growth assessment. *BMJ* 2013; **3**(12): e003942.
37. Malacova E, Regan A, Nassar N, et al. Risk of stillbirth, preterm delivery, and fetal growth restriction following exposure in a previous birth: systematic review and meta-analysis. 2018; **125**(2): 183-92.
38. Perinatal Society of Australia and New Zealand, Stillbirth Centre of Research Excellence. Fetal Growth Restriction (FGR) Care Pathway for singleton pregnancies. 2023.
39. Perinatal Society of Australia and New Zealand and Centre of Research Excellence Stillbirth. Clinical practice guideline for the care of women with decreased fetal movements for women with a singleton pregnancy from 28 weeks' gestation. Brisbane, Australia: Centre of Research Excellence in Stillbirth, 2022.
40. Perinatal Society of Australia and New Zealand and Centre of Research Excellence Stillbirth. Clinical practice guideline for the care of women with decreased fetal movements for women with a singleton pregnancy from 28 weeks' gestation. Brisbane, Australia: Centre of Research Excellence in Stillbirth, 2022.
41. Goodlin RC. History of fetal monitoring. *American Journal of Obstetrics & Gynecology* 1979; **133**(3): 323-52.
42. Bradford BF, Cronin RS, McKinlay CJD, Thompson JM.D, Mitchell EA, Stone PR, McCowan LME. A Diurnal Fetal Movement Pattern: Findings from a Cross-sectional Study of Maternally Perceived Fetal Movements in the Third Trimester of Pregnancy. *PloS One* 2019; **14**(6).

Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

References

43. Flenady V, Gardener G, Ellwood D, Coory M, Weller M, Warrilow KA, Middleton PF, Wojcieszek AM, Groom KM, Boyle FM, East C, Lawford HSL, Callander E, Said JM, Walker SP, Mahomed K, Andrews C, Gordon A, Norman JE, Crowther C. My Baby's Movements: a stepped-wedge cluster-randomised controlled trial of a fetal movement awareness intervention to reduce stillbirths. *BJOG* 2021; **129**(1): 29-41.
44. Mangesi L, Hofmeyr GJ, Smith V, Smyth RM. Fetal movement counting for assessment of fetal wellbeing. *Cochrane Database Syst Rev* 2015; **10**:CD004909.
45. Frøen JF. A kick from within-fetal movement counting and the cancelled progress in antenatal care. *J Perinat Med* 2004; **32**(1): 13-24.
46. Tveit JVH, Saastad E, Stray-Pedersen B, et al. Reduction of late stillbirth with the introduction of fetal movement information and guidelines – a clinical quality improvement. *BMC pregnancy and childbirth* 2009; **9**: 32.
47. Dutton PJ, Warrander LK, Roberts SA, et al. Predictors of poor perinatal outcome following maternal perception of reduced fetal movements - a prospective cohort study. *PLoS One* 2012; **7**(7): e39784.
48. Frøen JF, Heazell AE, Tveit JV, Saastad E, Fretts RC, Flenady V. Fetal movement assessment. *Semin Perinatol* 2008; **32**(4): 243-6.
49. Saastad E, Tveit JV, Flenady V, et al. Implementation of uniform information on fetal movement in a Norwegian population reduces delayed reporting of decreased fetal movement and stillbirths in primiparous women - a clinical quality improvement. *BMC research notes* 2010; **3**(1): 2.
50. Norman JE, Heazell AE, Rodriguez A, et al. Awareness of fetal movements and care package to reduce fetal mortality (AFFIRM): a stepped wedge, cluster-randomised trial. *The Lancet* 2018; **392**(10158): 1629-38.
51. Efkarpidis S, Alexopoulos E, Kean L, Liu D, Fay T. Case-control study of factors associated with intrauterine fetal deaths. *MedGenMed : Medscape general medicine* 2004; **6**(2): 53.
52. Saastad E, Tveit JV, Flenady V, et al. Implementation of uniform information on fetal movement in a Norwegian population reduced delayed reporting of decreased fetal movement and stillbirths in primiparous women - a clinical quality improvement. *BMC research notes* 2010; **3**(1): 2.

References

53. Perinatal Society of Australia and New Zealand, Stillbirth Centre of Research Excellence. Decreased Fetal Movement (DFM) Care Pathway for women with singleton pregnancies from 28+0 weeks' gestation. 2023.
54. Perinatal Society of Australia and New Zealand and Centre of Research Excellence Stillbirth. Position statement: Mothers' going-to-sleep position in late pregnancy. Brisbane, Australia: Centre of Research Excellence in Stillbirth, 2023.
55. Abitbol MM. Aortic compression and uterine blood flow during pregnancy. *Obstet Gynecol* 1977; **50**(5): 562-70.
56. Jeffreys RM, Stepanchak W, Lopez B, Hardis J, Clapp JF, 3rd. Uterine blood flow during supine rest and exercise after 28 weeks of gestation. *BJOG* 2006; **113**(11): 1239-47.
57. Warland J, Dorrian J, Kember AJ, et al. Modifying maternal sleep position in late pregnancy through positional therapy: a feasibility study. *Journal of clinical sleep medicine (JCSM): official publication of the American Academy of Sleep Medicine* 2018; **14**(8): 1387-97.
58. Humphries A, Mirjalili SA, Tarr GP, Thompson JMD, Stone P. The effect of supine positioning on maternal hemodynamics during late pregnancy. *J Matern Fetal Neonatal Med* 2018: 1-8.
59. Perinatal Society of Australia and New Zealand and Centre of Research Excellence Stillbirth. Position statement: Improving decision-making about the timing of birth for low risk women at term. Brisbane, Australia: Centre of Research Excellence in Stillbirth, 2023.
60. Queensland Maternal and Perinatal Quality Council. Queensland Mothers and Babies 2014 and 2015: Report of the Queensland Maternal and Perinatal Quality Council 2017: Queensland Health, 2018.
61. The Consultative Council on Obstetric and Paediatric Mortality and Morbidity. Victoria's Mothers, Babies and Children 2016:55th survey of perinatal deaths in Victoria: Victorian Government, 2017.

Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

References

62. Muglu J, Rather H, Arroyo-Manzano D, et al. Risks of stillbirth and neonatal death with advancing gestation at term: a systematic review and meta-analysis of cohort studies of 15 million pregnancies. *PLOS Medicine* 2019; **16**(7): e1002838.
63. Middleton P, Shepherd E, Morris J, Crowther CA, Gomersall JC. Induction of labour at or beyond 37 weeks' gestation. *Cochrane Database of Systematic Reviews* 2020; (7).
64. Wolleswinkel-van den Bosch JH, Vredevoogd CB, Borkent-Polet M, et al. Substandard factors in perinatal care in The Netherlands: a regional audit of perinatal deaths. *Acta obstetrica et gynecologica Scandinavica* 2002; **81**(1): 17-24.
65. Draper E, Gallimore I, Kurinczuk J, et al. MBRRACE-UK Perinatal Mortality Surveillance Report, UK Perinatal Deaths for Births from January to December 2016. Leicester: The Infant Mortality and Morbidity Studies, Department of Health Sciences, University of Leicester. , 2018.
66. Jamtvedt G, Flottorp S, Ivers N. Audit and Feedback as a Quality Strategy. Improving healthcare quality in Europe: Characteristics, effectiveness and implementation of different strategies. Copenhagen (Denmark): European Observatory on Health Systems and Policies; 2019.

Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

References

1. Callander EJ, Thomas J, Fox H, Ellwood D, Flenady V. What are the costs of stillbirth? Capturing the direct health care and macroeconomic costs in Australia. *Birth* 2019; 47(2): 183-90.
2. United Nations Inter-agency Group for Child Mortality Estimation (UN IGME), A Neglected Tragedy: The global burden of stillbirths. United Nations Children's Fund, New York, 2020.
3. Heazell AEP, Siassakos D, Blencowe H, et al. Stillbirths: economic and psychosocial consequences. *Lancet* 2016; 387(10018): 604-16.
4. Flenady V, Wojcieszek AM, Middleton P, et al. Stillbirths: recall to action in high-income countries. *Lancet* 2016; 387(10019): 691-702.
5. Flenady V, Middleton P, Wallace E, et al. Stillbirth in Australia 1: The road to now: two decades of stillbirth research and advocacy in Australia. *Women & Birth: Journal of the Australian College of Midwives* 2020.
6. Australian Institute of Health Welfare. Australia's mothers and babies 2018—in brief. Canberra: AIHW, 2020.
7. Rumbold AR, Yelland J, Stuart-Butler D, et al. Stillbirth in Australia 3: Addressing stillbirth inequities in Australia: Steps towards a better future. *Women Birth* 2020; 33(6): 520-5.
8. Australian Institute of Health and Welfare. Australia's mothers and babies: Stillbirths and neonatal deaths [Internet]. Canberra: Australian Institute of Health and Welfare, 2022 [cited 2023 Aug. 8]. Available from: <https://www.aihw.gov.au/reports/mothers-babies/stillbirths-and-neonatal-deaths>
9. AIHW: Hilder L, Li Z, Zeki R, Sullivan EA. Stillbirths in Australia, 1991-2009. Perinatal statistics series no. 29. Cat. No. PER 63. Canberra: AIHW National Perinatal Epidemiology and Statistics Unit, 2014.
10. Cronin RS, Li M, Thompson JMD, et al. An individual participant data meta-analysis of maternal going-to-sleep position, interactions with fetal vulnerability, and the risk of late stillbirth. *EClinicalMedicine* 2019; 10: 49-57.
11. Davies-Tuck ML, Davey MA, Wallace EM. Maternal region of birth and stillbirth in Victoria, Australia 2000-2011: A retrospective cohort study of Victorian perinatal data. *PLoS One* 2017; 12(6): e0178727.
12. Flenady V, Koopmans L, Middleton P, et al. Major risk factors for stillbirth in high-income countries: a systematic review and meta-analysis. *Lancet* 2011; 377(9774): 1331-40.
13. Lamont K, Scott NW, Jones GT, Bhattacharya S. Risk of recurrent stillbirth: systematic review and meta-analysis. 2015; 350: h3080.

References

14. Lawn JE, Blencowe H, Waiswa P, et al. Stillbirths: rates, risk factors, and acceleration towards 2030. *Lancet* 2016; 387(10018): 587-603.
15. McCowan LME, George-Haddad M, Stacey T, Thompson JMD. Fetal growth restriction and other risk factors for stillbirth in a New Zealand setting. *Aust N Z J Obstet Gynaecol* 2007; **47**(6): 450-6.
16. Mozooni M, Preen DB, Pennell CE. Stillbirth in Western Australia, 2005-2013: the influence of maternal migration and ethnic origin. *The Medical journal of Australia* 2018; **209**(9): 394-400.
17. Shah PS, Zao J, Al-Wassia H, Shah V. Pregnancy and neonatal outcomes of Aboriginal women: a systematic review and meta-analysis. *Women's Health Issues* 2011; **21**(1): 28-39.
18. Healthcare Improvement Scotland. Scottish Patient Safety Program Maternity and Children, End of phase report, August 2016. Scotland: HIS, 2016.
19. NHS England. Saving Babies' Lives Version Two: A care bundle for reducing perinatal mortality, 2019.
20. Widdows K, Reid HE, Roberts SA, Camacho EM, Heazell AEP. Saving babies' lives project impact and results evaluation (SPiRE): a mixed methodology study. *BMC pregnancy and childbirth* 2018; 18(1): 43.
21. Healthcare Improvement Scotland. Scottish Patient Safety Programme: Maternity and Children Quality Improvement Collaborative, Web Page. 2020. <https://ihub.scot/improvement-programmes/scottish-patient-safety-programme-spsp/maternity-and-children-quality-improvement-collaborative-mcqc/maternity-care/stillbirth/>.
22. Perinatal Society of Australia and New Zealand and Centre of Research Excellence Stillbirth. Position statement: Smoking – one of the most important things to prevent in pregnancy and beyond. Brisbane, Australia: Centre of Research Excellence in Stillbirth, 2019.
23. Kotz D, Brown J, West R. Prospective cohort study of the effectiveness of smoking cessation treatments used in the "real world". *Mayo Clinic proceedings* 2014; 89(10): 1360-7.
24. West R, Raw M, McNeill A, et al. Health-care interventions to promote and assist tobacco cessation: a review of efficacy, effectiveness and affordability for use in national guideline development. *Addiction* (Abingdon, England) 2015; 110(9): 1388-403.

References

25. Bartsch AL, Harter M, Niedrich J, Brutt AL, Buchholz A. A systematic literature review of self-reported smoking cessation counseling by primary care physicians. PLoS One 2016; 11(12): e0168482.
26. Coleman T, Chamberlain C, Davey MA, Cooper SE, Leonardi-Bee J. Pharmacological interventions for promoting smoking cessation during pregnancy. Cochrane Database Syst Rev 2015; 12(9): CD010078.
27. The Royal Australian College of General Practitioners. Supporting smoking cessation: A guide for health professionals. . East Melbourne, Vic., 2019.
28. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists. Smoking and Pregnancy. Best Practice; 2020.
29. Perinatal Society of Australia and New Zealand and Centre of Research Excellence Stillbirth. Position statement: detection and management of fetal growth restriction in singleton pregnancies. Brisbane, Australia: Centre of Research Excellence in Stillbirth, 2023.
30. Lausman A, Kingdom J. Intrauterine Growth Restriction: Screening, Diagnosis, and Management. Journal of Obstetrics and Gynaecology Canada 2013; 35(8): 741-8.
31. Pay ASD, Wiik J, Backe B, Jacobsson B, Strandell A, Klovning A. Symphysis-fundus height measurement to predict small-for-gestational-age status at birth: a systematic review. BMC pregnancy and childbirth 2015; 15(1): 22.
32. Gordijn SJ, Beune IM, Thilaganathan B, et al. Consensus definition of fetal growth restriction: a Delphi procedure. Ultrasound in Obstetrics and Gynecology 2016; 48(3): 333-9.

Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

References

33. McCowan LM, Figueras F, Anderson NH. Evidence-based national guidelines for the management of suspected fetal growth restriction: comparison, consensus, and controversy. *American journal of obstetrics and gynecology* 2018; 218(2s): S855-s68.
34. Sharma D, Shastri S, Sharma P. Intrauterine Growth Restriction: Antenatal and Postnatal Aspects. *Clinical Medicine Insights Pediatrics* 2016; 10: 67-83.
35. Department of Health. Clinical Practice Guidelines: Pregnancy Care. Canberra: Australian Government Department of Health, 2018.
36. Gardosi J, Giddings S, Clifford S, Wood L, Francis A. Association between reduced stillbirth rates in England and regional uptake of accreditation training in customised fetal growth assessment. *BMJ* 2013; **3**(12): e003942.
37. Malacova E, Regan A, Nassar N, et al. Risk of stillbirth, preterm delivery, and fetal growth restriction following exposure in a previous birth: systematic review and meta-analysis. 2018; **125**(2): 183-92.
38. Perinatal Society of Australia and New Zealand, Stillbirth Centre of Research Excellence. Fetal Growth Restriction (FGR) Care Pathway for singleton pregnancies. 2023.
39. Perinatal Society of Australia and New Zealand and Centre of Research Excellence Stillbirth. Clinical practice guideline for the care of women with decreased fetal movements for women with a singleton pregnancy from 28 weeks' gestation. Brisbane, Australia: Centre of Research Excellence in Stillbirth, 2022.
40. Perinatal Society of Australia and New Zealand and Centre of Research Excellence Stillbirth. Clinical practice guideline for the care of women with decreased fetal movements for women with a singleton pregnancy from 28 weeks' gestation. Brisbane, Australia: Centre of Research Excellence in Stillbirth, 2022.
41. Goodlin RC. History of fetal monitoring. *American Journal of Obstetrics & Gynecology* 1979; **133**(3): 323-52.
42. Bradford BF, Cronin RS, McKinlay CJD, Thompson JM.D, Mitchell EA, Stone PR, McCowan LME. A Diurnal Fetal Movement Pattern: Findings from a Cross-sectional Study of Maternally Perceived Fetal Movements in the Third Trimester of Pregnancy. *PloS One* 2019; **14**(6).

Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion

References

43. Flenady V, Gardener G, Ellwood D, Coory M, Weller M, Warrilow KA, Middleton PF, Wojcieszek AM, Groom KM, Boyle FM, East C, Lawford HSL, Callander E, Said JM, Walker SP, Mahomed K, Andrews C, Gordon A, Norman JE, Crowther C. My Baby's Movements: a stepped-wedge cluster-randomised controlled trial of a fetal movement awareness intervention to reduce stillbirths. *BJOG* 2021; **129**(1): 29-41.
44. Mangesi L, Hofmeyr GJ, Smith V, Smyth RM. Fetal movement counting for assessment of fetal wellbeing. *Cochrane Database Syst Rev* 2015; **10**:CD004909.
45. Frøen JF. A kick from within-fetal movement counting and the cancelled progress in antenatal care. *J Perinat Med* 2004; **32**(1): 13-24.
46. Tveit JVH, Saastad E, Stray-Pedersen B, et al. Reduction of late stillbirth with the introduction of fetal movement information and guidelines – a clinical quality improvement. *BMC pregnancy and childbirth* 2009; **9**: 32.
47. Dutton PJ, Warrander LK, Roberts SA, et al. Predictors of poor perinatal outcome following maternal perception of reduced fetal movements - a prospective cohort study. *PLoS One* 2012; **7**(7): e39784.
48. Frøen JF, Heazell AE, Tveit JV, Saastad E, Fretts RC, Flenady V. Fetal movement assessment. *Semin Perinatol* 2008; **32**(4): 243-6.
49. Saastad E, Tveit JV, Flenady V, et al. Implementation of uniform information on fetal movement in a Norwegian population reduces delayed reporting of decreased fetal movement and stillbirths in primiparous women - a clinical quality improvement. *BMC research notes* 2010; **3**(1): 2.
50. Norman JE, Heazell AE, Rodriguez A, et al. Awareness of fetal movements and care package to reduce fetal mortality (AFFIRM): a stepped wedge, cluster-randomised trial. *The Lancet* 2018; **392**(10158): 1629-38.
51. Efkarpidis S, Alexopoulos E, Kean L, Liu D, Fay T. Case-control study of factors associated with intrauterine fetal deaths. *MedGenMed : Medscape general medicine* 2004; **6**(2): 53.
52. Saastad E, Tveit JV, Flenady V, et al. Implementation of uniform information on fetal movement in a Norwegian population reduced delayed reporting of decreased fetal movement and stillbirths in primiparous women - a clinical quality improvement. *BMC research notes* 2010; **3**(1): 2.

References

53. Perinatal Society of Australia and New Zealand, Stillbirth Centre of Research Excellence. Decreased Fetal Movement (DFM) Care Pathway for women with singleton pregnancies from 28+0 weeks' gestation. 2023.
54. Perinatal Society of Australia and New Zealand and Centre of Research Excellence Stillbirth. Position statement: Mothers' going-to-sleep position in late pregnancy. Brisbane, Australia: Centre of Research Excellence in Stillbirth, 2023.
55. Abitbol MM. Aortic compression and uterine blood flow during pregnancy. *Obstet Gynecol* 1977; **50**(5): 562-70.
56. Jeffreys RM, Stepanchak W, Lopez B, Hardis J, Clapp JF, 3rd. Uterine blood flow during supine rest and exercise after 28 weeks of gestation. *BJOG* 2006; **113**(11): 1239-47.
57. Warland J, Dorrian J, Kember AJ, et al. Modifying maternal sleep position in late pregnancy through positional therapy: a feasibility study. *Journal of clinical sleep medicine (JCSM): official publication of the American Academy of Sleep Medicine* 2018; **14**(8): 1387-97.
58. Humphries A, Mirjalili SA, Tarr GP, Thompson JMD, Stone P. The effect of supine positioning on maternal hemodynamics during late pregnancy. *J Matern Fetal Neonatal Med* 2018: 1-8.
59. Perinatal Society of Australia and New Zealand and Centre of Research Excellence Stillbirth. Position statement: Improving decision-making about the timing of birth for low risk women at term. Brisbane, Australia: Centre of Research Excellence in Stillbirth, 2023.
60. Queensland Maternal and Perinatal Quality Council. Queensland Mothers and Babies 2014 and 2015: Report of the Queensland Maternal and Perinatal Quality Council 2017: Queensland Health, 2018.
61. The Consultative Council on Obstetric and Paediatric Mortality and Morbidity. Victoria's Mothers, Babies and Children 2016:55th survey of perinatal deaths in Victoria: Victorian Government, 2017.

References

62. Muglu J, Rather H, Arroyo-Manzano D, et al. Risks of stillbirth and neonatal death with advancing gestation at term: a systematic review and meta-analysis of cohort studies of 15 million pregnancies. *PLOS Medicine* 2019; **16**(7): e1002838.
63. Middleton P, Shepherd E, Morris J, Crowther CA, Gomersall JC. Induction of labour at or beyond 37 weeks' gestation. *Cochrane Database of Systematic Reviews* 2020; (7).
64. Wolleswinkel-van den Bosch JH, Vredevoogd CB, Borkent-Polet M, et al. Substandard factors in perinatal care in The Netherlands: a regional audit of perinatal deaths. *Acta obstetrica et gynecologica Scandinavica* 2002; **81**(1): 17-24.
65. Draper E, Gallimore I, Kurinczuk J, et al. MBRRACE-UK Perinatal Mortality Surveillance Report, UK Perinatal Deaths for Births from January to December 2016. Leicester: The Infant Mortality and Morbidity Studies, Department of Health Sciences, University of Leicester. , 2018.
66. Jamtvedt G, Flottorp S, Ivers N. Audit and Feedback as a Quality Strategy. Improving healthcare quality in Europe: Characteristics, effectiveness and implementation of different strategies. Copenhagen (Denmark): European Observatory on Health Systems and Policies; 2019.
67. Australian Institute of Health and Welfare. Health of mothers and babies [Internet]. Canberra: Australian Institute of Health and Welfare, 2023 [cited 2023 Aug. 8]. Available from: <https://www.aihw.gov.au/reports/mothers-babies/health-of-mothers-and-babies>
68. AIHW. National Perinatal Data Collection annual update 2020 (released 21 June 2022); Table 3.5: Births, by gestational age and birth status, 2020 [Data table]. AIHW, National Perinatal Data Collection: Australia; 2022. [cited 8 Aug 2023]. Available from: <https://www.aihw.gov.au/reports/mothers-babies/australias-mothers-babies/archived-content> .
69. Rolnik DL, Wright D, Poon LCY, et al. ASPRE trial: performance of screening for preterm pre-eclampsia. *Ultrasound Obstet Gynecol.* 2017 Oct;50(4):492-495. doi: 10.1002/uog.18816. Epub 2017 Aug 24. Erratum in: *Ultrasound Obstet Gynecol.* 2017 Dec;50(6):807. PMID: 28741785.
70. The University of Sydney, Women and Babies Research Kolling Institute. Every Week Counts. 2019

Introduction

Smoking
Cessation

Fetal
Growth
Restriction

Decreased
Fetal
Movement

Side
Sleeping

Timing
of Birth

Translated
Resources

Conclusion