Safer Baby Bundle Masterclass

Smoking Cessation

Fetal Growth Restriction (FGR)

Decreased Fetal Movement (DFM)

Side Sleeping

Timing of Birth

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Before we get started

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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.

Impact of Stillbirth [1-3]

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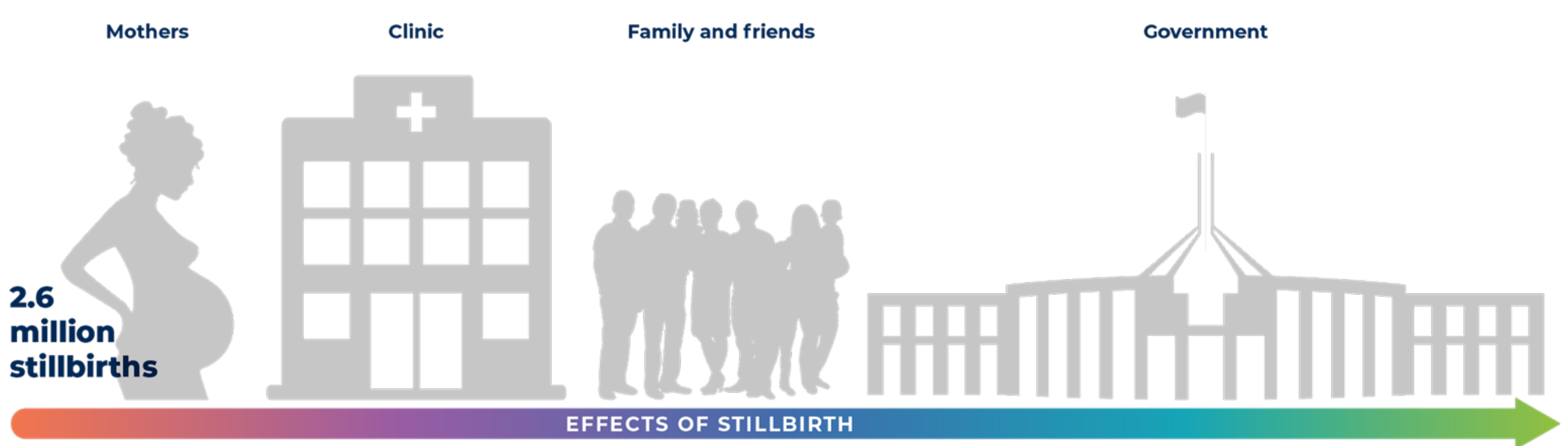

- Psychological and emotional distress, and isolation
- Increased healthcare costs
- Negative effect of staff
- Increased risk of family breakdown
- Stigma, abandonment and abuse
- Reduced earnings from employment, maternity and paternity leave, and healthcare expenses

Australian Stillbirth rates

By gestation 1994 to 2018 [4,5]

In 2018 the stillbirth rate in Australia was 6.7 per 1000 births. This equals almost 2,200 babies per year (AIHW 2018)

20-23 WEEKS
24-27 WEEKS
28-36 WEEKS
37-41 WEEKS
OVERALL

Prospective risk of stillbirth (per1000 FAR(a))

8
7
6
5
4
3
2
1

1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018

YEAR OF BIRTH

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Australian Stillbirth rates 5

- Stillbirth disproportionately affects Aboriginal and/ or Torres Strait Islander women [6]
- In 2016 the stillbirth rate for Aboriginal and Torres Strait Islander women was **10.6 per 1000** births [7]
  - Vs the rate for non indigenous women of **6.7 per 1000**
- Migrant and refugee populations, rural and remote communities and socio-economically disadvantaged women also face significantly increased risks [6]

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Causes of Stillbirth in Australia

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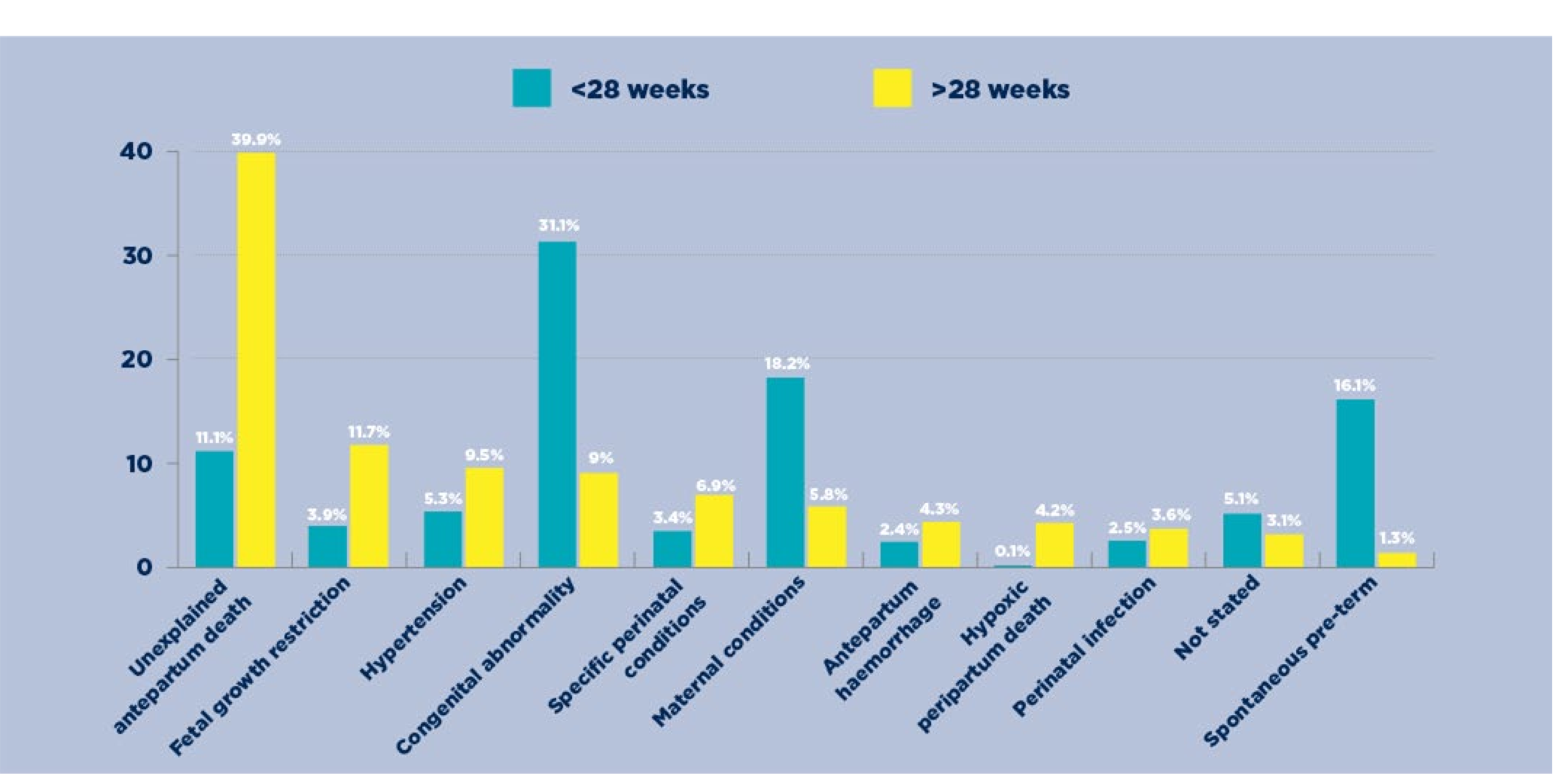
Stillbirth cause of death by early and late gestions



What are the stillbirth risk factors?

Maternal [9-16]

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What are stillbirth risk factors?

Pregnancy and medical [9-16]

Risk factor	aOr	PAR (%) Prevalence of the risk factor in the general population
Small for gestational age (SGA)	3.9	23.3%
Previous stillbirth	3.4	1%
Pre-existing diabetes	2.9	2-3%
Pre-existing hypertension	2.6	5-10%
Rhesus disease	2.6	0.6%
Eclampsia	2.2	0.1%
Pre-eclampsia	1.6	3.1%
Post-term pregnancy (≥42 weeks)	1.3	0.3%

We know that 'bundles of care' can save lives [17-20]

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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.

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GOAL

Reduce stillbirth from 28 weeks' gestation by **at least** 20% by 2023.

Smoking Cessation

Evidence summary

Stillbirth CRE position statement ‘Smoking – one of the most important things to prevent in pregnancy and beyond’ [21]

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The evidence [22-26]

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

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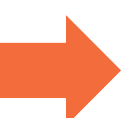
'Ask, Advise, Help' model of care

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 [26,27]

ASK ADVISE HELP

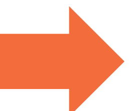
The 3 step 'Ask, Advise, Help' model of care

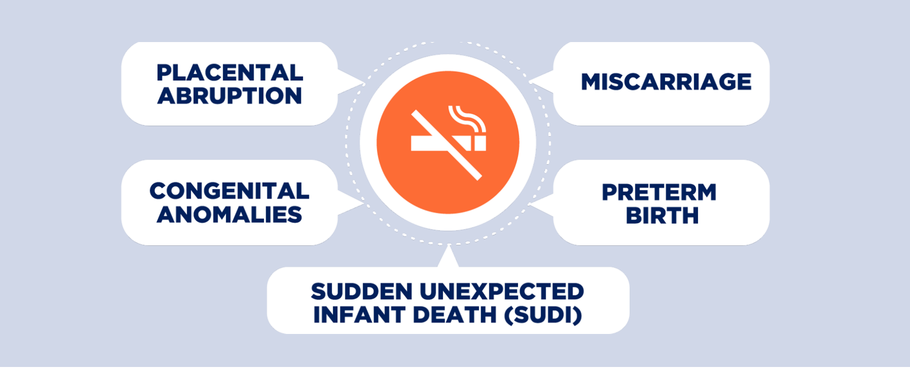
At first antenatal visit

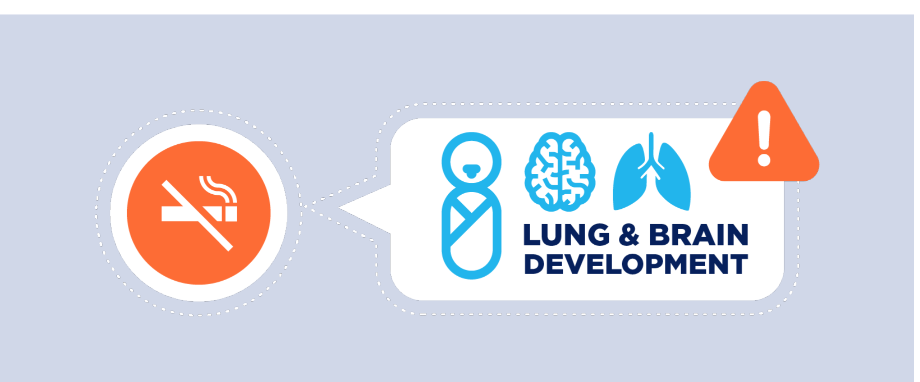
- For women who are smokers or recent quitters, advise them of the benefits of quitting
- Explain the importance of smoking cessation

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







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

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At first antenatal visit

Offer to help:

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

At each subsequent antenatal visit

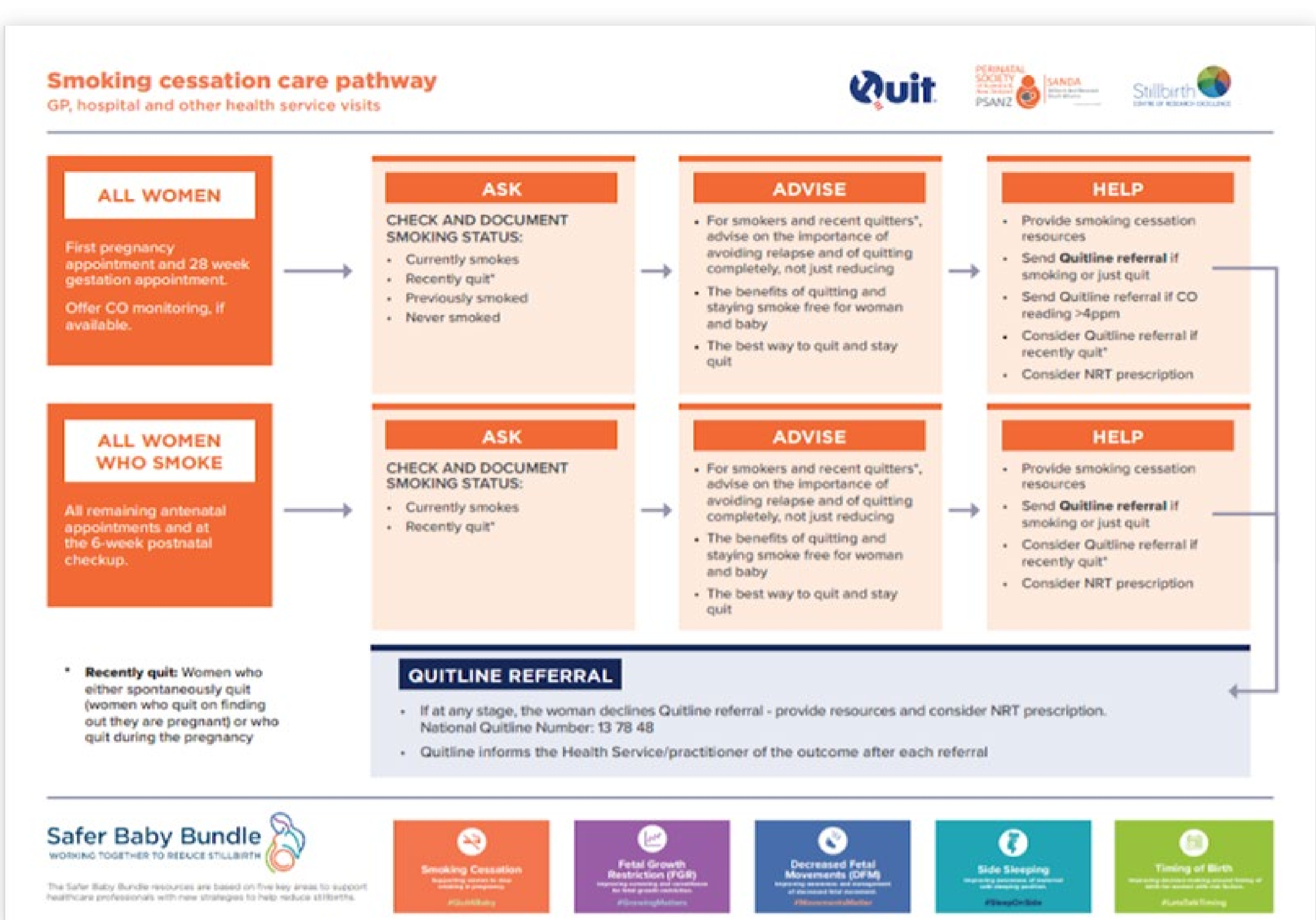
- Consider offering nicotine replacement therapy [26]

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?

Resources



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Quit smoking for baby

What can help you quit smoking in pregnancy?

Your midwife, GP or obstetrician can help if you are thinking about quitting. They will suggest:

- Counselling services to help address your triggers
- For some women, quit smoking products may be needed

The most common counselling service for pregnant women is Quitline, which is staffed by specially-trained counsellors who will support you in trying to quit - not make you feel guilty. Contact your local Quitline for free on 13 7848 or download the 'Quit for you - quit for two' app designed for pregnant women.

Quitting early is best, but stopping at any time in your pregnancy will benefit 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. Quitting at any time during pregnancy reduces the harm to you and your baby.

How about I just cut down?

Cutting down doesn't reduce the risks to your baby or you.

Smoking relaxes me when I'm stressed - isn't that better for my baby?

Smoking actually speeds up your heart rate, increases your blood pressure and affects your baby's heart rate. Finding another way to relax is much better and safer for you both.

Call Quitline on 13 7848 or visit quitline.org.au

A5 Flyer for Women

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 (eg 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?

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Fetal Growth Restriction (FGR)

Evidence summary

Position Statement: Detection and management of women with Fetal Growth Restriction in singleton pregnancies [28]

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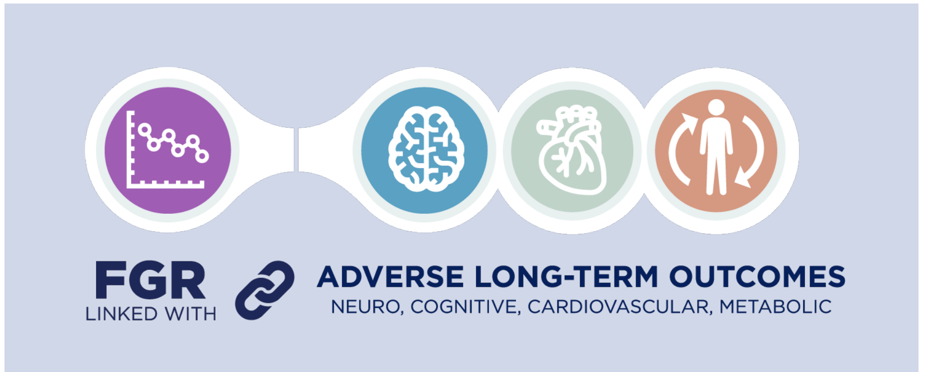
The evidence

- Improving the detection and management of FGR/ SGA is an important strategy to reduce stillbirth [29,30]
- If FGR is present, but it is NOT detected, the fetus is eight times more likely to be stillborn [32,32]
- Less than 1/3 of growth restricted/small for gestational age fetuses are detected antenatally [33]
- Educational programs for maternity care providers have been shown to improve the detection of SGA/FGR and reduce stillbirth rates [34]



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Steps to assessing and managing risk factors [31,33-36]

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 (100-150 mg nocte) for women at increased risk of FGR

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 the number of 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

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Fetal Growth Restriction (FGR) Care Pathway

for singleton pregnancies

PSANZ · SANDA · Stillbirth Centre of Research Excellence

RISK ASSESSMENT IN AUSTRALIA FOR FGR AT BOOKING AND AT EACH ANTENATAL VISIT

LEVEL 1

No FGR risk factors identified

More than 50% of FGR cases occur in women with NO identifiable risk factors[1]

Standardised serial SFH measurement

Standardised serial SFH measurement at each antenatal visit from 24-28 weeks gestation, plotted on a growth chart.

LEVEL 2

Risk factors for FGR identified

- Age >35 years
- Nulliparity
- IVF singleton pregnancy
- Indigenous ethnicity
- Substance use: smoking, drugs
- BMI >30
- Previous late (>32 weeks) FGR/SGA
- Papp A <0.4 MoM

Antenatal complications

- Suspected FGR/SGA by SFH or USS (eg. slow growth, static growth, <10th centile)
- Pre-eclampsia
- Antepartum haemorrhage
- Congenital infection

Unsuitable for SFH measurements

- BMI >40
- Large uterine fibroids

Establishing the frequency and timing of ultrasound

- Review existing or newly arising risk factors
- Where facilities and expertise exist, consider Uterine Artery Doppler at 20-24 weeks
- Consider low dose aspirin (100-150mg nocte) to commence prior to 16 weeks gestation
- Level A/B ACM* consultation and referral guidelines
- Frequency of ultrasound surveillance based on number of FGR risk factors, prior history and service capability (consider ultrasound of fetal size and wellbeing at 28-30 and 34-36 weeks gestation)

LEVEL 3

High risk of early FGR

- Previous early (<32 weeks) FGR/SGA and/or preeclampsia
- Previous stillbirth with FGR/SGA
- Maternal medical conditions, eg
  - antiphospholipid antibody syndrome
  - renal impairment
  - chronic hypertension
  - diabetes with vascular disease

Serial USS 2-4 weekly from 24 weeks until birth

- Where facilities and expertise exist, consider Uterine Artery Doppler at 20-24 weeks
- Consider low dose aspirin (100-150mg nocte) to commence prior to 16 weeks gestation
- Level B/C ACM* consultation and referral guidelines

Safer Baby Bundle

WORKING TOGETHER TO REDUCE STILLBIRTH

The Safer Baby Bundle resources are based on five key areas to support healthcare professionals with new strategies to help reduce stillbirths.

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A5 Flyer for Women and A3 Waiting room Poster

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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?

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' gestation [38]

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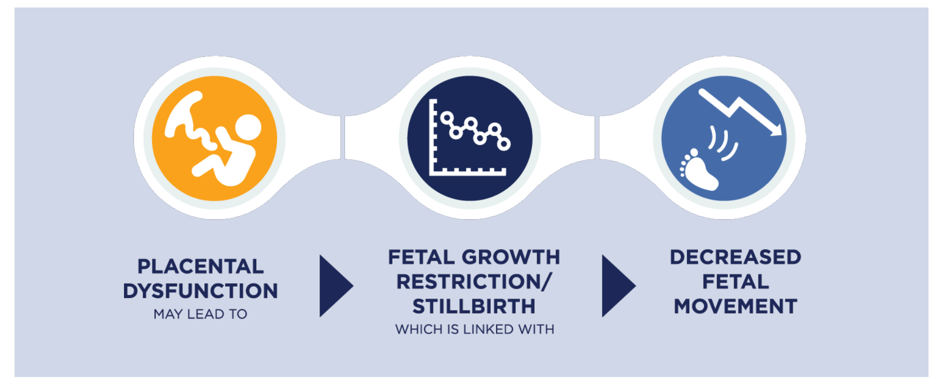
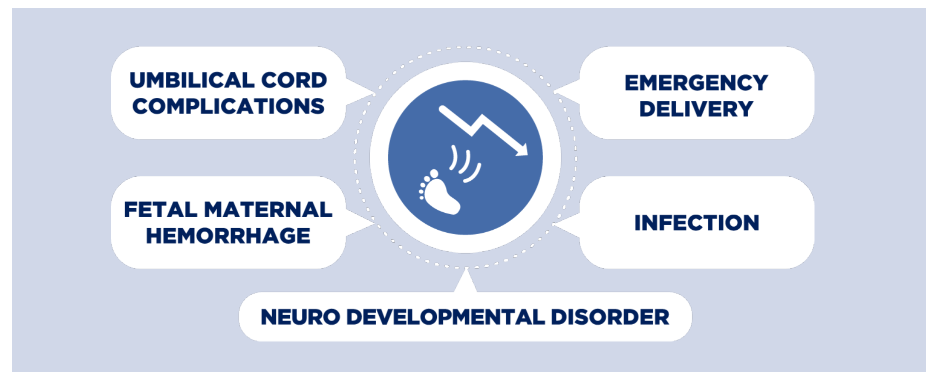
- Although DFM is a common concern among women, they often delay talking to their health care provider about it [39]
- Antenatal education about fetal movement has been shown to reduce the time from maternal perception of DFM to health care - seeking behaviour [40-43]
- 'Kick counting' has not shown to be effective [44,45]
- Implementation of uniform practice guidelines and raised awareness of DFM has been shown to highlight babies at risk of stillbirth





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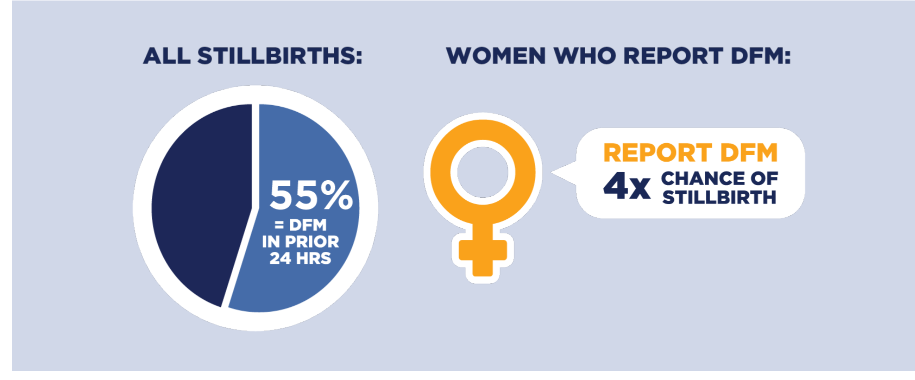
- The UK AFFIRM study demonstrated no statistically significant reduction in the stillbirth rate after implementation of their care bundle [45]
- An increase in IOL, caesarean section and neonatal admission to special care was seen
- There was a reduction SGA babies born after 40 weeks suggesting the interventions did identify a population of high-risk babies
- More investigation into DFM and potential unintended consequences is needed



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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

↓

CARDIOTOCOGRAPHY (CTG)

↓

FURTHER INVESTIGATION

↓

BIRTH PLANNING

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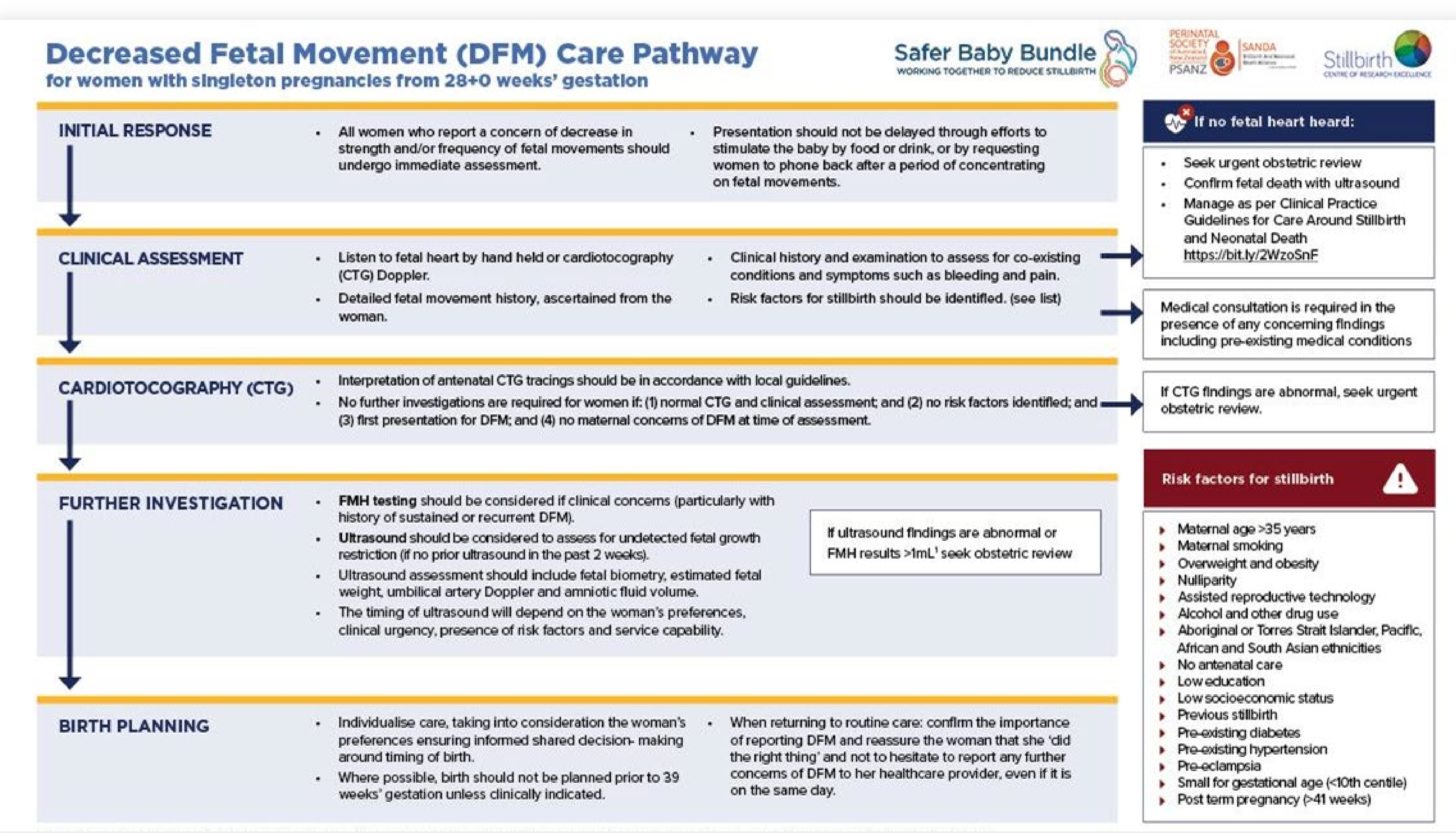
Decreased Fetal Movement (DFM) Care Pathway
for women with singleton pregnancies from 28+0 weeks' gestation

Safer Baby Bundle
WORKING TOGETHER TO REDUCE STILLBIRTH

INITIAL RESPONSE
- All women who report a concern of decrease in strength and/or frequency of fetal movements should undergo immediate assessment.
- Presentation should not be delayed through efforts to stimulate the baby by food or drink, or by requesting women to phone back after a period of concentrating on fetal movements.

CLINICAL ASSESSMENT
- Listen to fetal heart by hand held or cardiotocography (CTG) Doppler.
- Detailed fetal movement history, ascertained from the woman.
- Clinical history and examination to assess for co-existing conditions and symptoms such as bleeding and pain.
- Risk factors for stillbirth should be identified. (see list)

CARDIOTOCOGRAPHY (CTG)
- Interpretation of antenatal CTG tracings should be in accordance with local guidelines.
- No further investigations are required for women if: (1) normal CTG and clinical assessment; and (2) no risk factors identified; and (3) first presentation for DFM; and (4) no maternal concerns of DFM at time of assessment.

FURTHER INVESTIGATION
- **FMH testing** should be considered if clinical concerns (particularly with history of sustained or recurrent DFM).
- **Ultrasound** should be considered to assess for undetected fetal growth restriction (if no prior ultrasound in the past 2 weeks).
- Ultrasound assessment should include fetal biometry, estimated fetal weight, umbilical artery Doppler and amniotic fluid volume.
- The timing of ultrasound will depend on the woman's preferences, clinical urgency, presence of risk factors and service capability.

If ultrasound findings are abnormal or FMH results >1mL[1] seek obstetric review

BIRTH PLANNING
- Individualise care, taking into consideration the woman's preferences ensuring informed shared decision- making around timing of birth.
- Where possible, birth should not be planned prior to 39 weeks' gestation unless clinically indicated.
- When returning to routine care: confirm the importance of reporting DFM and reassure the woman that she 'did the right thing' and not to hesitate to report any further concerns of DFM to her healthcare provider, even if it is on the same day.

If no fetal heart heard:
- Seek urgent obstetric review
- Confirm fetal death with ultrasound
- Manage as per Clinical Practice Guidelines for Care Around Stillbirth and Neonatal Death https://bit.ly/2WzoSnF

Medical consultation is required in the presence of any concerning findings including pre-existing medical conditions

If CTG findings are abnormal, seek urgent obstetric review.

Risk factors for stillbirth
- Maternal age >35 years
- Maternal smoking
- Overweight and obesity
- Nulliparity
- Assisted reproductive technology
- Alcohol and other drug use
- Aboriginal or Torres Strait Islander, Pacific, African and South Asian ethnicities
- No antenatal care
- Low education
- Low socioeconomic status
- Previous stillbirth
- Pre-existing diabetes
- Pre-existing hypertension
- Pre-eclampsia
- Small for gestational age (<10th centile)
- Post term pregnancy (>41 weeks)

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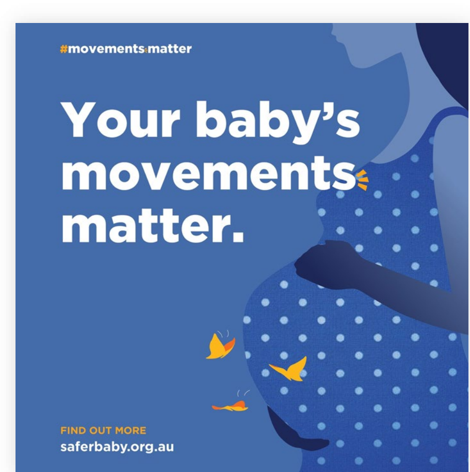
A3 Waiting Room Poster

A5 Flyer for women
(Available in 18 language translations)

Resources



Social media tiles

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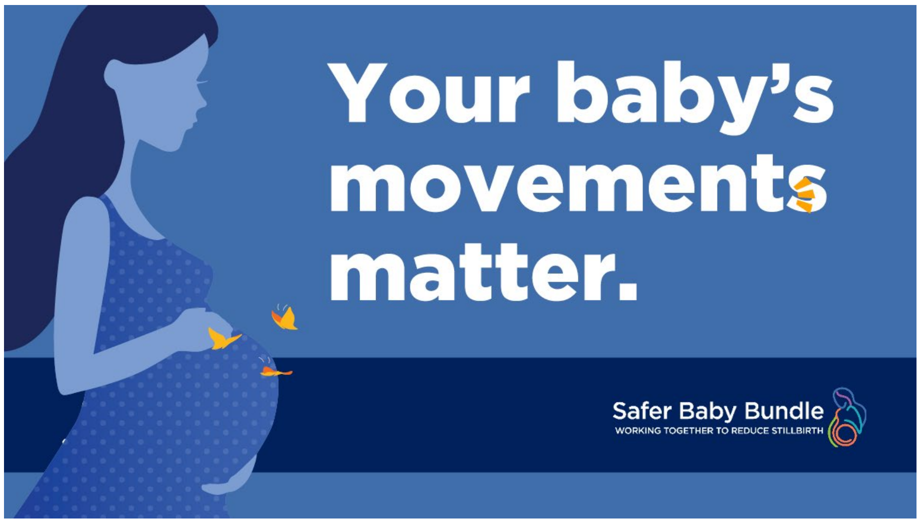
Questions for discussion:

- 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?



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Side Sleeping

Evidence summary

Position Statement: Mothers' going -to -sleep position in late pregnancy [49]

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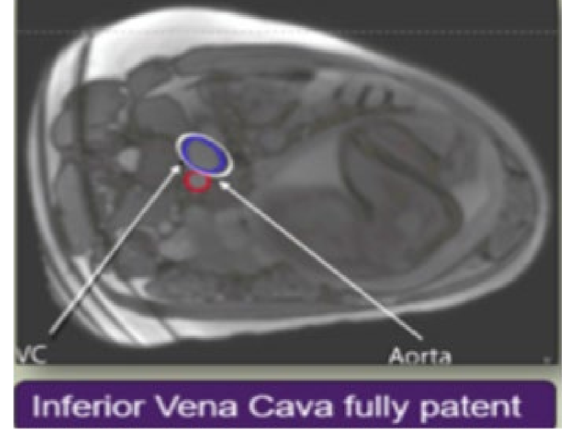
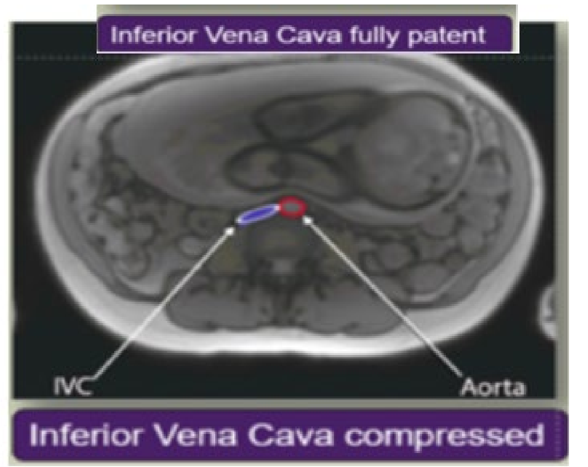
The evidence

- Accumulating evidence has shown an association between maternal supine going -to - sleep position and stillbirth after 28 weeks in pregnancy. [9,50,51]
- In Australia and NZ the population attributable risk is 10%. This indicates 1:10 stillbirths could be avoided if women fall to sleep on their side. [52]
- Research in New Zealand used MRI technology to assess haemodynamic effects that can compromise fetal wellbeing [53]





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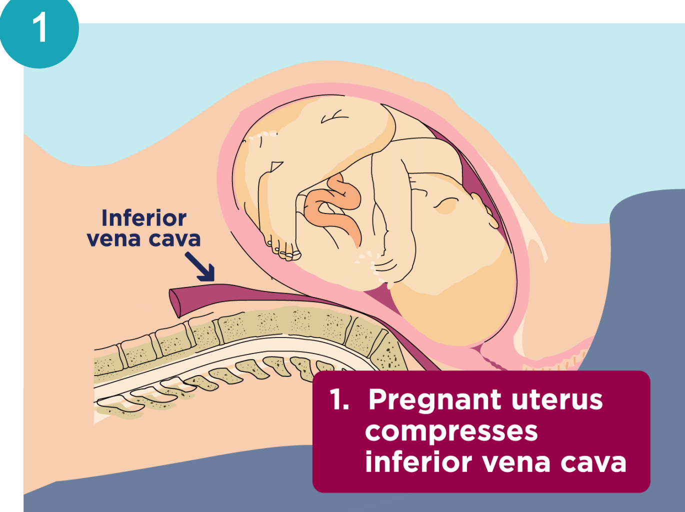

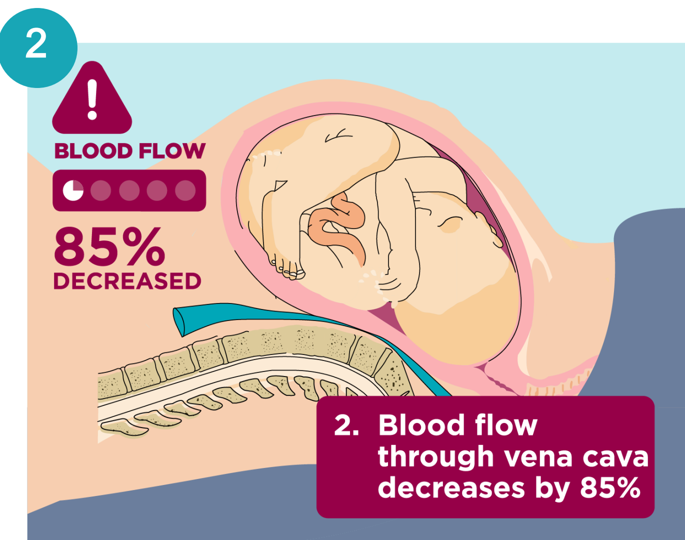

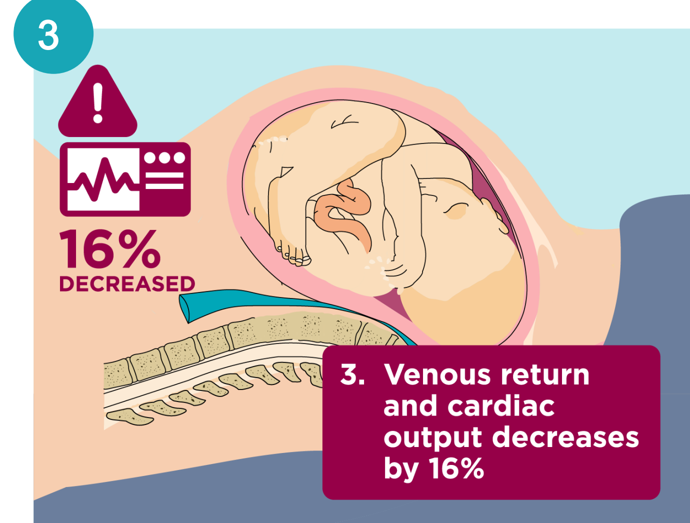

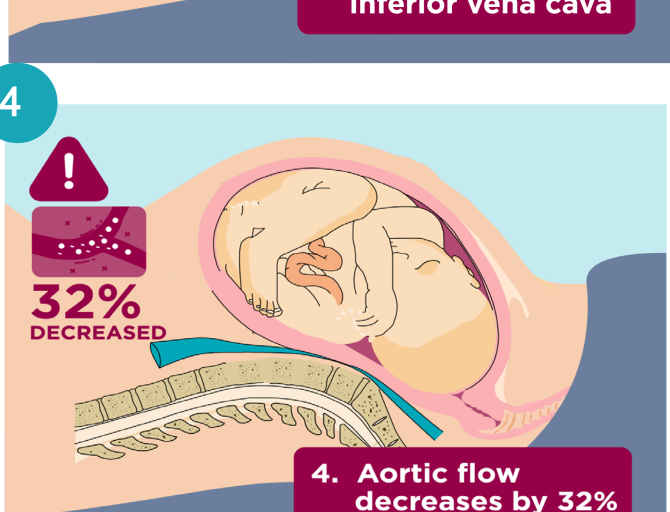

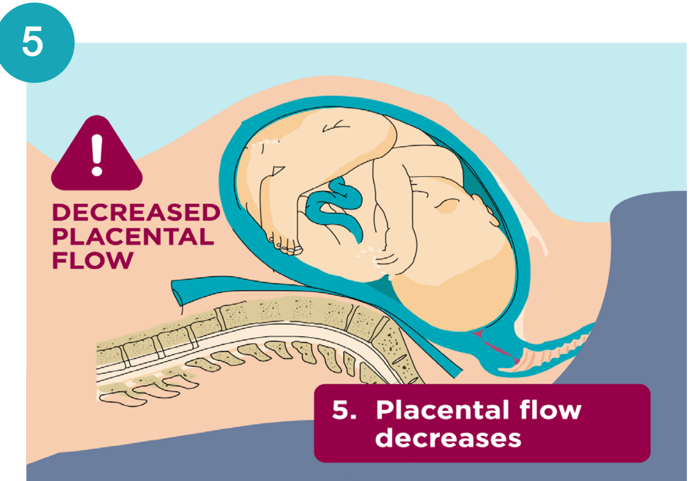

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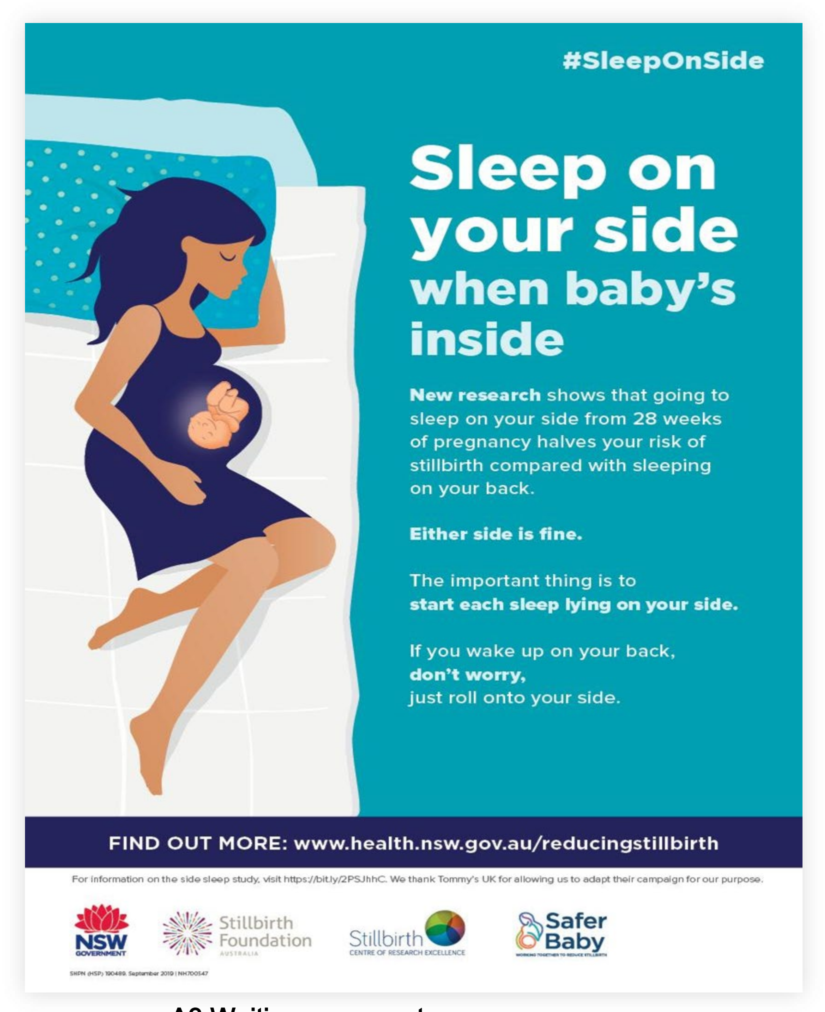
- Provide all pregnant women with verbal and written information about stillbirth risk reduction practices.
- Emphasise that supine (on your back) sleeping position is a risk factor for late stillbirth
- Reassure women that it's normal to change position during sleep - the important thing is to start each sleep on their side
- Current evidence shows that both the left and right side going-to-sleep positions are equally safe [9]



A3 Waiting room poster

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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.

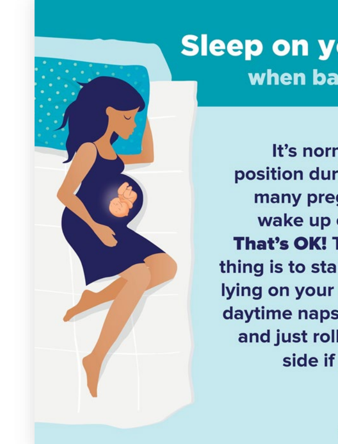
For more information please contact your midwife, nurse or doctor.

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.

www.health.nsw.gov.au/reducingstillbirth

A5 flyer for women (translated language versions available)

Resources



Social media tiles

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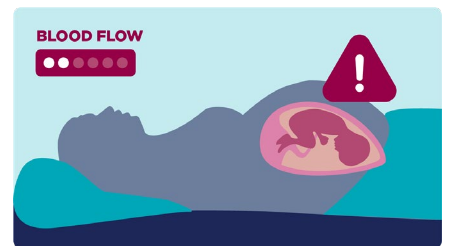
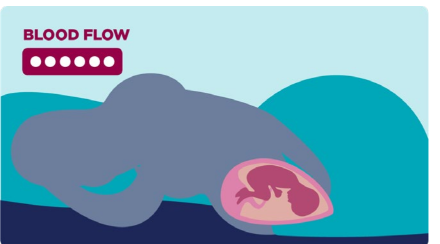
Questions for discussion:

- 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?





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Timing of Birth

Evidence summary

Position Statement: Improving decision -making about the timing of birth for women with risk factors for stillbirth [54]

READ MORE

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The evidence

- There is clear evidence that some maternal and pregnancy factors increase a woman's risk of stillbirth [3]
- Early recognition of a woman's risk of stillbirth and provision of appropriate individualised care throughout pregnancy is a key stillbirth prevention strategy [55,56]
- For some women with risk factors **planned birth** can prevent stillbirth [57,58]
- The benefits of planned birth need to be carefully weighed against the risks of intervention

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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

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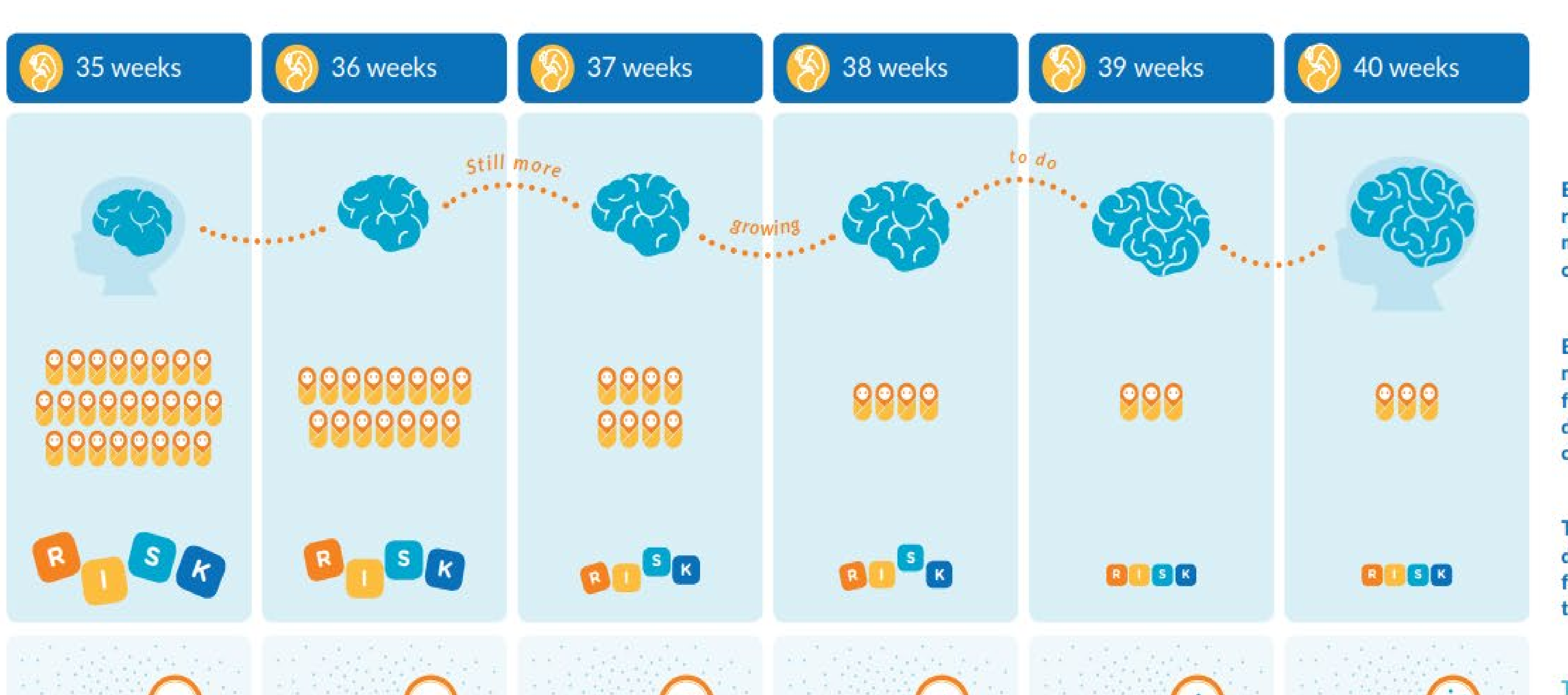
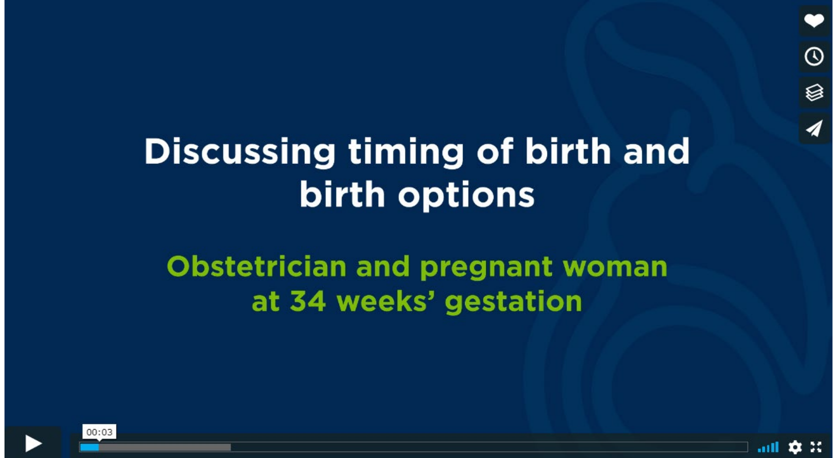
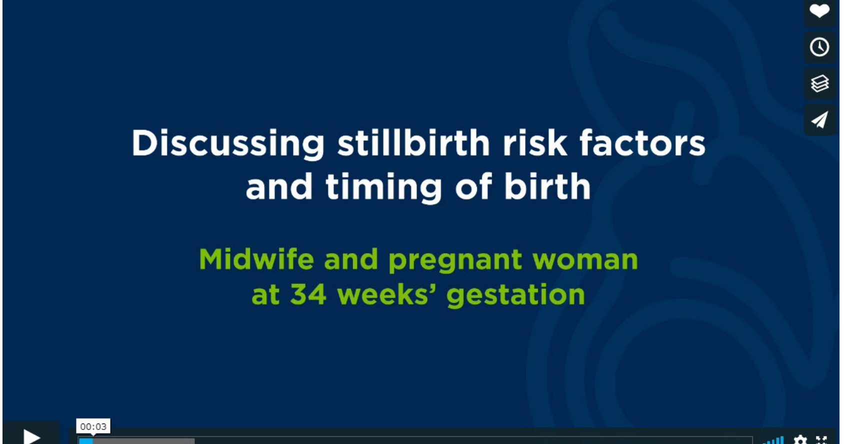


Resources

Videos modelling conversations about timing of birth.





Raising awareness of the risk of stillbirth in a sensitive manner

Obstetrician and pregnant woman at 34 weeks' gestation

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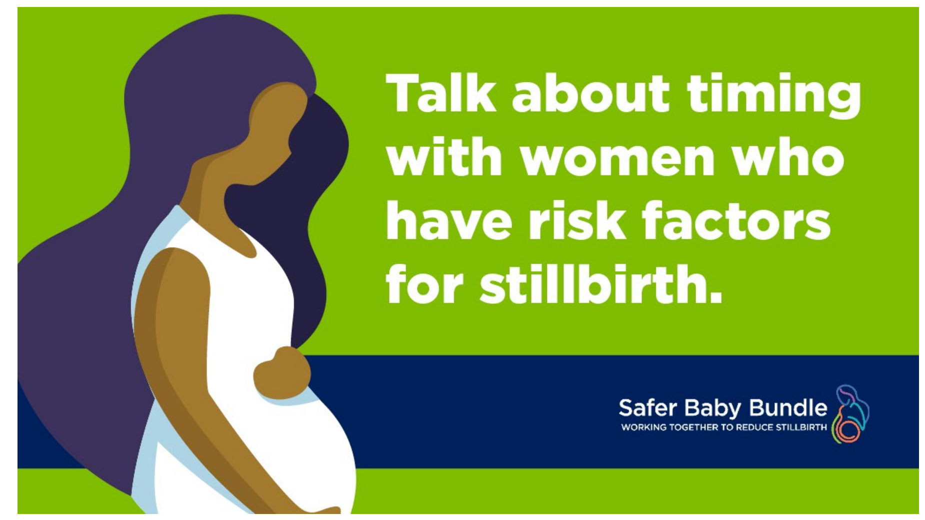
Questions for discussion:

- 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.



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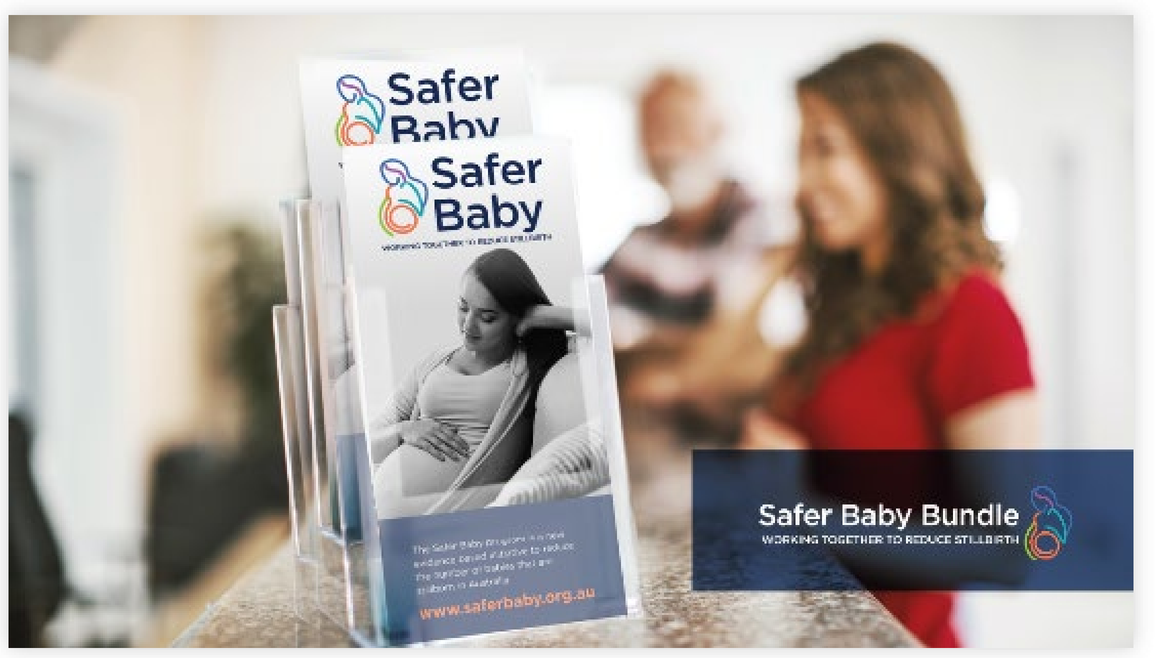
Risk Communication

- 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



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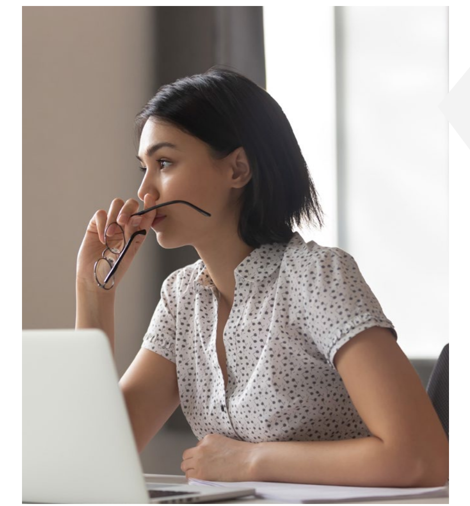
What new mothers say

"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."

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Continuity of Care

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 society[1].

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 decades[2]. Some of those stillbirths are preventable[3].

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 continuum[4]. There is high quality evidence that demonstrates reductions in overall fetal/neonatal loss when women receive continuity of care from a known midwife during pregnancy[5]. 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 mothers[6], Aboriginal women[7], and women from disadvantaged groups[8]. 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 families[9].

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.

Stillbirth
CENTRE OF RESEARCH EXCELLENCE

Safer Baby Bundle
WORKING TOGETHER TO REDUCE STILLBIRTH

- 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**

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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 [59,60]
- Audit, when combined with feedback to care providers, can change practice and improve health outcomes [61]
- Particularly useful when combined with an action plan and clear measurable targets
- IMPROVE eLearning covers key skills and knowledge

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

Safer Baby

WORKING TOGETHER TO REDUCE STILLBIRTH

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

#MovementsMatter

- Even during the COVID-19 pandemic, monitoring your baby's movements is important.
- Please call your healthcare provider immediately if concerned and come in to be assessed.
- The use of at-home Doppler ultrasound to listen to your baby's heart rate as a way of checking your baby's health is not based on good research and is not recommended. Your baby's movements are the most reliable way to know your baby is well

#Quit4Baby

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

#SleepOnSide

- Going to sleep on your side from 28 weeks' gestation is safest, do not worry if you wake up on your back, 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.

#GrowingMatters

- Monitoring baby's movements is an important indicator of fetal wellbeing.
- If something doesn't feel right, or if you feel like your baby is not growing appropriately, please contact your healthcare provider.

#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 being aware of your baby's movements and sleeping on your side.
- For some women, particularly those with risk factors for stillbirth, having the baby earlier than the due date might be best.
- Currently, maternal COVID-19 infection is not considered a risk factor for stillbirth or a reason for early planned birth unless there are immediate risks to the woman's health.
- Avoiding early planned birth unless clearly clinically indicated will minimise risk of neonatal complications.

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

Fact Sheet for Women

Safer Baby resources available for women

- 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

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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

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Thank you

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

stillbirthcre.org.au/safer-baby-bundle/

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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. Heazell AEP, Siassakos D, Blencowe H, et al. Stillbirths: economic and psychosocial consequences. Lancet 2016; 387(10018): 604-16.
3. Flenady V, Wojcieszek AM, Middleton P, et al. Stillbirths: recall to action in high-income countries. Lancet 2016; 387(10019): 691-702.
4. 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.
5. Australian Institute of Health Welfare. Australia's mothers and babies 2018—in brief. Canberra: AIHW, 2020.
6. 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.
7. Australian Institute of Health and Welfare. Stillbirths and neonatal deaths in Australia 2015 and 2016. Canberra: AIHW, 2019.
8. 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.
9. 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.
10. 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.
11. 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.
12. Lamont K, Scott NW, Jones GT, Bhattacharya S. Risk of recurrent stillbirth: systematic review and meta-analysis. 2015; 350: h3080.
13. Lawn JE, Blencowe H, Waiswa P, et al. Stillbirths: rates, risk factors, and acceleration towards 2030. Lancet 2016; 387(10018): 587-603.

References

14. 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.
15. 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.
16. 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.
17. Healthcare Improvement Scotland. Scottish Patient Safety Program Maternity and Children, End of phase report, August 2016. Scotland: HIS, 2016.
18. NHS England. Saving Babies' Lives Version Two: A care bundle for reducing perinatal mortality, 2019.
19. 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.
20. 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-mcqic/maternity-care/stillbirth/.
21. 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.
22. 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.
23. 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

24. 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.
25. 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.
26. The Royal Australian College of General Practitioners. Supporting smoking cessation: A guide for health professionals. . East Melbourne, Vic., 2019.
27. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists. Smoking and Pregnancy. Best Practice; 2020.
28. 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, 2019.
29. Lausman A, Kingdom J. Intrauterine Growth Restriction: Screening, Diagnosis, and Management. Journal of Obstetrics and Gynaecology Canada 2013; 35(8): 741-8.
30. 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.
31. 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.

References

32. 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.
33. Sharma D, Shastri S, Sharma P. Intrauterine Growth Restriction: Antenatal and Postnatal Aspects. Clinical Medicine Insights Pediatrics 2016; 10: 67-83.
34. Department of Health. Clinical Practice Guidelines: Pregnancy Care. Canberra: Australian Government Department of Health, 2018.
35. 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.
36. 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.
37. Perinatal Society of Australia and New Zealand, Stillbirth Centre of Research Excellence. Fetal Growth Restriction (FGR) Care Pathway for singleton pregnancies. 2019.
38. 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, 2019.
39. Goodlin RC. History of fetal monitoring. *American Journal of Obstetrics & Gynecology* 1979; **133**(3): 323-52.

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40. Frøen JF. A kick from within -fetal movement counting and the cancelled progress in antenatal care. *J Perinat Med* 2004; **32**(1): 13-24.
41. 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.
42. 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.
43. Frøen JF, Heazell AE, Tveit JV, Saastad E, Fretts RC, Flenady V. Fetal movement assessment. *Semin Perinatol* 2008; **32**(4): 243-6.
44. 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.
45. 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.
46. 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.
47. 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.
48. 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. 2009.

References

49. 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, 2019.
50. Abitbol MM. Aortic compression and uterine blood flow during pregnancy. *Obstet Gynecol* 1977; **50** (5): 562-70.
51. 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.
52. 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.
53. 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.
54. Perinatal Society of Australia and New Zealand and Centre of Research Excellence Stillbirth. Position statement: Improving decision-making about the timing of birth for women with risk factors for stillbirth. Brisbane, Australia: Centre of Research Excellence in Stillbirth, 2019.
55. 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.
56. 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

57. 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.
58. 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).
59. 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 obstetricia et gynecologica Scandinavica* 2002; **81**(1): 17-24.
60. 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.
61. 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.