Care Pathway for Women Concerned About Fetal Movements

Summary The Guideline will improve and standardize clinical care and management of concerns about fetal movements, reduce maternal anxiety and adverse pregnancy outcomes.

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Audience General Practitioners (GPs);Hospital Clinicians - Obstetricians;All Maternity Clinicians;All Staff in Maternity Services and Emergency Departments

NSW Health

Guideline

Care Pathway for Women Concerned About Fetal Movements

Guideline Summary

The Guideline will assist clinicians and women to understand the importance of responding to the woman's concerns about fetal movements in a singleton pregnancy. It aims to improve clinical care and standardise management of concerns about fetal movements, to optimise pregnancy outcomes and reduce maternal anxiety.

Key Principles

This Guideline outlines the clinical principles and key actions that will support evidence-informed practices and improvement in maternity services.

Fetal movements are a reliable indicator of fetal wellbeing. Maternal perception of decreased fetal movements is associated with adverse pregnancy outcomes.

The woman's concerns about fetal movements override any definition of DFM. These concerns may include decreased frequency of movements, changed quality of movements or absent movements.

This Guideline aligns the Perinatal Society of Australia and New Zealand (PSANZ) *Clinical practice guideline for the care of women with decreased fetal movements for women with a singleton pregnancy from 28 weeks' gestation* (2019), with additional clarification for the NSW context.

The care of a woman concerned about fetal movements from 25 weeks to 28 weeks gestation should use the same care pathway as for a gestation greater than 28 weeks.

Care planning for the fetus less than 25 weeks gestation should be in consultation with a specialist obstetrician or a maternal fetal medicine specialist.

Use of the Guideline

The Chief Executives of local health districts are responsible to ensure maternity services have processes in place to:

- Routinely provide verbal and written information to pregnant women about normal fetal movements at each point of contact during the antenatal period. This will include actions to take in the event of concerns about fetal movements.
- Guide management, escalation and transfer of care if necessary, for women reporting concerns about fetal movements, in line with the relevant Policies and Guidelines.

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Implement the Perinatal Society of Australia and New Zealand *Clinical practice guideline for the care of women with decreased fetal movements for women with a singleton pregnancy from 28 weeks' gestation* (2019) in the NSW context (see Appendix 1).

Revision History

Version	Approved By	Amendment Notes
GL2021_019 December-2021	Deputy Secretary, Health System Strategy and Planning	Revised to include additional guidance for care of women with singleton pregnancies less than 28 weeks gestation who are concerned about fetal movements.
GL2020_017 July-2020	Deputy Secretary, Health System Strategy and Planning	Endorses PSANZ *Clinical Practice Guideline for the care of women with decreased fetal movements (2019) for women with a singleton pregnancy from 28 weeks' gestation* in the NSW context.
GL2011_012 October-2011	Deputy Director-General, Population Health	New Guideline.

Contents

1. Background

Fetal movements are a reliable indicator of fetal well-being. Maternal perception of decreased fetal movements (DFM) is associated with adverse pregnancy outcomes. This includes stillbirth, infection, neurodevelopmental disability, fetal to maternal haemorrhage, emergency birth, umbilical cord complications, small for gestational age and fetal growth restriction.[1-3]

Analysis of adverse perinatal events in NSW has identified large variations in both clinical practice and information provided to women regarding DFM. The literature indicates that a reduction in stillbirth rates may be achieved by increasing maternal awareness and improving consistency in the clinical management of women with concerns about fetal movements.[6]

In NSW, the perinatal mortality rate (PMR) has fallen over the last few decades from around 10 to approximately 8 perinatal deaths per 1000 births.[4] This improvement is attributed to the advances in neonatal care. However, the NSW stillbirth rate of 6 per 1000 births has remained unchanged for over a decade.[4]

Babies born to Aboriginal and Torres Strait Islander families and those babies born to mothers of Melanesia, Micronesia and Polynesia; Middle Eastern and African countries, Eastern Europe and Russia; central and southern Asia have higher rates of stillbirth than the remainder of NSW.[5]

1.1. Scope

This Guideline applies to all NSW Health maternity services and refers to the care and management of pregnant women with a singleton pregnancy who are concerned about fetal movements.

The management of women with specific pregnancy risk factors (for example: fetal growth restriction, hypertensive disease, diabetes etc) identified during care may require additional surveillance and care planning.

1.2. About this document

This Guideline endorses the clinical practice guideline published by the Perinatal Society of Australia and New Zealand (PSANZ) *Clinical practice guideline for the care of women with decreased fetal movements for women with a singleton pregnancy from 28 weeks' gestation* (2019)[7] with clarifications for the NSW context (Section 2).

The care of women who are concerned about fetal movements in pregnancies less than 28 weeks is described in Section 3.

1.3. Key definitions

Decreased fetal movements (DFM)	Women's concerns about fetal movements override any traditional definition of decreased fetal movement. The woman's concern may include decreased frequency of movements; changed quality of movements or absent movements

Fetal growth restriction (FGR) also known as intrauterine growth restriction (IUGR)	FGR refers to babies that have failed to reach their growth potential during pregnancy. FGR is defined antenatally by an estimated fetal weight or serial antenatal ultrasound evidence of growth arrest or growth restriction below the 10th percentile using National birthweight percentiles.
Live birth	The complete expulsion or extraction from the mother of a fetus of 20 or more completed weeks of gestation, or of 400 grams or more of birthweight (where the gestational age is not known) who, after being born, breathes or shows any evidence of life such as a heartbeat.
Neonatal death	The death of a live-born infant within 28 days of birth.
Perinatal death	A stillbirth or neonatal death.
Perinatal mortality rate (PMR)	The number of perinatal deaths (stillbirths and neonatal deaths) per 1000 births in a year (live births and stillbirths combined).
Small for gestational age (SGA)	A baby/fetus with antenatal ultrasound biometry less than 10th percentile for gestational age according to National birthweight percentiles. Note: growth restricted babies are frequently but not always SGA.
Stillbirth	The complete expulsion or extraction from the mother of a fetus of 20 or more completed weeks of gestation, or of 400 grams or more birthweight who did not, at any time after birth, breathe or show any evidence of life such as a heartbeat.

1.4 Relevant NSW Health Policies and Guidelines

This Guideline should be read in conjunction with the following documents.

Table 1. Related NSW Health Policies and Guidelines

NSW Health Policy documents	
GL2022_002	*Maternity and Neonatal Service Capability*
GL2023_004	*Care of women with suspected or confirmed Fetal Growth Restriction*
PD2012_069	*Health Care Records - Documentation and Management*
PD2017_044	*Interpreters - Standard Procedures for Working with Health Care Interpreters*
PD2020_008	*Maternity - National Midwifery Guidelines for Consultation and Referral*
PD2020_018	*Recognition and management of patients who are deteriorating*
PD2020_047	*Incident Management*

NSW Health Policy documents	
PD2023_031	*Maternity - Safety and Quality Essentials*
PD2023_034	*Open Disclosure*
PD2023_035	*Tiered Networking Arrangements for Perinatal Care in NSW*

2. Perinatal Society of Australia and New Zealand Clinical Practice Guideline

This Guideline endorses the Perinatal Society of Australia and New Zealand (PSANZ) *Clinical practice guideline for the care of women with decreased fetal movements for women with a singleton pregnancy from 28 weeks' gestation* (2019) for use in NSW maternity services.

For the NSW context, additional considerations pertaining to PSANZ recommendations 4 and 6 are outlined below in Table 2. The summary of clinical practice recommendations adapted from the PSANZ Guidelines are listed in Appendix 1.

Table 2: Additional considerations pertaining to the PSANZ clinical practice recommendations 4 and 6 for NSW

PSANZ Recommendation	**NSW Context**: Additional Considerations
Recommendation 4	
a. When a woman reports DFM, a medical history and clinical examination should be undertaken to assess for coexisting symptoms such as bleeding and pain and other conditions (e.g. hypertension, small for gestational age baby) and presence of risk factors for stillbirth and/or fetal growth restriction.	a. (i) When the woman: • is concerned about absent fetal movement, an assessment of the woman and her fetus should be undertaken as soon as possible and preferably within 2 hours • has other concerns about fetal movements, an assessment of the woman and her fetus should be undertaken as soon as possible and preferably within 12 hours. (ii) Women with DFM in combination with other risk factors should be managed as a high-risk pregnancy.
b. This assessment should include a review with the woman of her history of fetal movements, including frequency, strength and any changes in the pattern of movements.	b. (i) Clinical assessment of a woman with DFM should also include review of symphysis-fundal height measurements.
c. Medical consultation is needed in the presence of any concerning findings.	No change.

Recommendation 6	
a. Ultrasound scan assessment including fetal biometry, estimated fetal weight, umbilical artery Doppler and amniotic fluid volume for undetected FGR should be considered for all women if not performed in the last two weeks. b. The timeframe to perform this investigation will depend on the woman's preferences, clinical urgency, presence of risk factors and service capability. Where ultrasound findings are abnormal, discuss with a senior obstetrician.	a. (i) Ultrasound scan assessment should also include an evaluation of fetal morphology if this has not already been performed. b. (i) Where an ultrasound is indicated and able to be performed it should be as soon as practicable and ideally within 24 hours. No change.

Women reporting concerns about fetal movements from 28 weeks' gestation should be cared for in line with the Safer Baby Bundle Decreased Fetal Movement (DFM) care pathway.

PSANZ Guidelines are not a substitute for clinical judgement, knowledge and expertise, or medical advice. The PSANZ Guidelines provide guidance only. Variation from the Guidelines on account of individual circumstances may be appropriate. The reasons for variation should be clearly documented in the woman's medical record, in accordance with mandatory and local requirements.

3. Care of Women Concerned about Fetal Movements Less Than 28 Weeks Gestation

Accurate interpretation of FHR features in early gestations is problematic due to the immaturity of the fetal autonomic nervous system (see the NSW Health Guideline *Maternity – Fetal Heart Rate Monitoring* [GL2018_025].

The care of a woman concerned about fetal movements at:

- 25 weeks to 28 weeks gestation should use the same care pathway as for a gestation greater than 28 weeks
- less than 25 weeks gestation should be planned in consultation with a specialist obstetrician or maternal fetal medicine (MFM) specialist.

4. Communication

All pregnant women should be routinely provided with verbal and written information about fetal movements by 28 weeks gestation.

Written information in English and translated information is available on the Stillbirth Centre of Research Excellence clinician resources webpage.

At every clinical encounter from 28 weeks gestation, clinicians should emphasise the importance of maternal awareness of fetal movements. Wherever possible appropriate written information should also be provided. Antenatal education about fetal movements reduces the time from maternal perception to health seeking behaviour and has been shown to be associated with a reduction in rates of stillbirth.[8] Additional information is available on the Stillbirth Centre of Research Excellence clinician resources webpage.

Effective communication about fetal movements is especially important for women at increased risk of stillbirth. When providing care:

- for women and families where English is not their first language an interpreter should be used. Additional services should be considered such as Multicultural Liaison Officers to support and inform families.
- staff should develop strong relationships and work in partnership with Aboriginal and Torres Strait Islander women and their families to support them to engage with services and share their concerns.[8]

5. Escalation of Care

Care should be provided in line with the maternity service level established by the Local Health District and in the NSW Health Guideline *Maternity and Neonatal Service Capability* [GL2022_002].

Care pathways should be established to ensure that where care is required that is outside the scope of the maternity service, consultation and escalation of care should occur in line with NSW Health Policy Directive *Tiered Networking Arrangements for Perinatal Care in NSW* [PD2023_035] and NSW Health Policy Directive *Recognition and management of patients who are deteriorating* [PD2020_018].

When an Aboriginal woman needs be transferred to another facility for assessment and or care, she may require additional support. Consider referral to Aboriginal health professionals such as Aboriginal liaison officers, Aboriginal health workers or other professionals (if not already provided) who can provide culturally safe care.

6. References

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3. Warrander LK, Batra G, Bernatavicius G, Greenwood SL, Dutton P, Jones RL, Sibley CP, Heazel AE. (2012). Maternal Perception of reduced fetal movements is associated with altered placental structure and function. *PloS one*, 7(4):e34851.
4. NSW Government Health Stats (2019) NSW http://www.healthstats.nsw.gov.au/Indicator/mum_peridth/mum_peridthHealth Stats NSW (2017) Retrieved from Perinatal mortality by maternal country of birth group: http://www.healthstats.nsw.gov.au/Indicator/mum_peridth/mum_peridth_cob_snap
5. Gardener G, Daly L, Bowring V, Burton G, Chadha Y, Ellwood D, Frøen F, Gordon A, Heazell A, MacDonald S, Mahomed K, Norman JE, Oats J, Flenady V. (August 2017). *Clinical Practice Guidelines for the care of women with decreased fetal movements.* Brisbane, Australia: Centre of Research Excellence in Stillbirth.
6. PSANZ Clinical practice guideline for the care of women with decreased fetal movements for women with a singleton pregnancy from 28 weeks' gestation (2019) .
7. Australian Government Department of Health. (2018). *Pregnancy Care Guidelines*. Retrieved from National Health and Medical Research Council: https://www.health.gov.au/resources/pregnancy-care-guidelines

7. Appendix List

1. Summary of Clinical Practice Recommendations

7.1. Summary of Clinical Practice Recommendations

The summary of clinical practice recommendations are adapted from Perinatal Society of Australia and New Zealand (PSANZ) *Clinical practice guideline for the care of women with decreased fetal movements for women with a singleton pregnancy from 28 weeks' gestation* (2019) for the NSW context.

Recommendations for fetal movement monitoring
Recommendation 1
a. All pregnant women should be routinely provided with verbal and written information about fetal movements by 28 weeks. Women should be advised that it is normal to perceive increasingly strong movement, episodes of movements that are more vigorous than usual, occasional fetal hiccups, and a diurnal pattern involving strong fetal movement in the evening. b. Clinicians should remind women at each scheduled and unscheduled antenatal visit after 28 weeks' gestation of the importance of maternal awareness of fetal movements and to report concerns of a decrease in strength and/or frequency or a non-diurnal pattern of movements.
Recommendation 2
a. All women who contact their health care provider with a concern about fetal movements should be invited to the health service for immediate assessment. b. Presentation should not be delayed through efforts to stimulate the baby with food or drink or by requesting women to phone back after a period of concentrating on fetal movements.
Recommendation 3
a. Maternal concern of DFM overrides any definition of DFM based on numbers of fetal movements. b. The use of kick-charts is not currently recommended as part of routine antenatal care.
Recommendations for the investigation of decreased fetal movements
Recommendation 4
a. When a woman reports DFM, a medical history and clinical examination should be undertaken to assess for coexisting symptoms such as bleeding and pain and other conditions (e.g. hypertension, small for gestational age baby) and presence of risk factors for stillbirth and/or fetal growth restriction. (i) When the woman: • is concerned about absent fetal movement an assessment of the woman and her fetus should be undertaken as soon as possible and preferably within 2 hours • has other concerns about fetal movements an assessment of the woman and her fetus should be undertaken as soon as possible and preferably within 12 hours. (ii) Women with DFM in combination with other risk factors should be managed as a high-risk pregnancy. b. This assessment should include a review with the woman of her history of fetal movements, including frequency, strength and any changes in the pattern of movements. (i) Clinical assessment of a woman with DFM should also include review of symphysis-fundal height measurements c. Medical consultation is needed in the presence of any concerning findings.
Recommendation 5
a. Listening to the fetal heart rate by handheld Doppler or electronic fetal heart rate monitoring (EFM) via cardiotocography (CTG) should be performed to exclude fetal death.

Recommendations for fetal movement monitoring
b. CTG should be performed to exclude fetal compromise and an urgent medical review should be undertaken where findings are abnormal.
c. No further investigations are required for women if: (1) CTG and clinical assessment is normal; (2) no risk factors for stillbirth are identified; (3) it is the woman's first presentation for DFM and; (4) there are no maternal concerns of DFM at time of assessment.
Recommendation 6
a. Ultrasound scan assessment including fetal biometry, estimated fetal weight, umbilical artery Doppler and amniotic fluid volume for undetected FGR should be considered for all women if not performed in the last two weeks.
(i) Ultrasound scan assessment should also include an evaluation of fetal morphology if this has not already been performed
b. The timeframe to perform this investigation will depend on the woman's preferences, clinical urgency, presence of risk factors and service capability.
c. Where ultrasound findings are abnormal, discuss with a senior obstetrician.
Recommendation 7
Testing for fetal to maternal haemorrhage should be considered in the preliminary investigation of women with DFM where FMH is suspected, particularly if there is a history of sustained or recurrent DFM.
Recommendation 8
a. Informed decision-making on the benefits and risks of planned birth should be facilitated through the provision of written and verbal information for each woman's individual situation, based on her preferences, gestational age, findings of clinical investigations, and the presence or absence of stillbirth risk factors. Where possible, birth should not be planned prior to 39 weeks unless clinically indicated.
b. Women who report DFM should be reassured that they have done the right thing in presenting for assessment and that they are not a 'nuisance' or 'burden' to their care providers, even where no abnormal findings are found.
Recommendation 9
For women who represent with DFM on a second or subsequent occasion, manage as per initial presentation and individualise care.