Fetal Growth Restriction

Summary This Guideline reflects best clinical practice for the prevention, screening, management, and escalation of fetal growth restriction (FGR) during pregnancy. This Guideline aims to reduce the incidence of adverse perinatal outcomes for mothers and babies in NSW.

Document type Guideline

Document number GL2025_018

Publication date 24 October 2025

Author branch Clinical Excellence Commission

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Replaces GL2023_004

Review date 24 October 2030

Policy manual Patient Matters Manual for Public Health Organisations

File number D25/8690

Status Active

Functional group Clinical/Patient Services - Maternity, Medical Treatment, Nursing and Midwifery
Corporate Administration - Governance

Applies to Local Health Districts, Specialty Network Governed Statutory Health Corporations, Government Medical Officers, Public Hospitals

Distributed to Ministry of Health, Public Health System, Divisions of General Practice, Government Medical Officers, NSW Ambulance Service, Private Hospitals and Day Procedure Centres, Health Associations Unions, Tertiary Education Institutes

Audience All Clinical Staff in NSW Health Maternity Services

NSW Health

Guideline

Fetal Growth Restriction

Guideline Summary

Fetal growth restriction (FGR) is a common complication in pregnancy that is associated with adverse perinatal and neurodevelopmental outcomes including, stillbirth, neonatal mortality and short- and long-term morbidity.

This Guideline provides evidence-based guidance to support maternity services in the care planning for pregnant women, and in the identification of FGR whilst ensuring women and their families are fully informed of risks, potential outcomes and their options of care.

This Guideline applies to all NSW Health maternity services.

Key Principles

This Guideline reflects best clinical practice for the prevention, screening, management, and escalation of fetal growth restriction (FGR) during pregnancy.

There are currently no proven treatments for FGR. Maternity care must focus on risk assessment, preventative strategies, and early identification of modifiable risk factors. Behaviours such as smoking, vaping, alcohol and substance use, and poor nutrition can negatively affect placental function and fetal development. Identifying and addressing these early, through intervention and referral to appropriate support services, is essential to improving outcomes and reducing the risk of complications.

Throughout all pregnancy and perinatal care, women and their families must be fully informed of risks, potential outcomes and their options of care. Women and their support people are to always be included in care planning and decision making, and valid consent for healthcare treatment must be established.

Throughout the antenatal period, all women must be assessed for risk factors associated with FGR in line with the *NSW Health Fetal Growth Restriction Care Pathway* and have an appropriate care plan developed in collaboration with the woman.

The care of women who have risk factors for FGR must be undertaken within a maternity service with the appropriate service capability in line with the NSW Health Guideline *Maternity and Neonatal Service Capability* [GL2022_002] and the NSW Health Manual *Guide to the Role Delineation of Clinical Services*.

Women at high risk of early-onset FGR are recommended to commence low dose aspirin (LDA) prior to 16 weeks gestation and continuing until 36^{+0} weeks gestation.

Serial plotting of symphysis fundal height (SFH) measurements on the *NSW Health International Symphysis-Fundal Height Standards* chart are to be conducted as part of routine antenatal care starting from 24 weeks gestation, to monitor for potential FGR.

Women who are unsuitable for SFH measurements or have FGR risk factors as per the *NSW Health Fetal Growth Restriction Care Pathway* will require growth ultrasound assessments.

When FGR is suspected, timely consultation and referral to specialist obstetric care must be arranged. Confirmed cases of FGR require a multidisciplinary collaborative care plan.

In the presence of FGR, recommendations around timing of birth must be guided by a comprehensive assessment, evaluating the risks of intervention against continuing the pregnancy.

Optimal care planning includes ensuring the availability of multidisciplinary team members, including the neonatal team, to support stabilisation and potential admission of the baby to a neonatal unit.

All women should be offered the opportunity to debrief with clinicians about their pregnancy and birth experience, with appropriate follow-up support made available. This should include access to wellbeing support for all women, and psychosocial support where clinically indicated.

For future pregnancies, women with a history of FGR require, as a minimum, multidisciplinary collaborative care planning.

Revision History

Version	Approved By	Amendment Notes
GL2025_018 October-2025	Deputy Secretary, System Sustainability and Performance	Revision of the *NSW Health Fetal Growth Restriction Care Pathway* and updates to the Guideline to align with the revised care pathway.
GL2023_004 February-2023	Deputy Secretary, Health System Strategy and Planning	New Guideline.

Contents

1. Background

Fetal growth restriction (FGR) is a common complication in pregnancy associated with adverse perinatal and neurodevelopmental outcomes including stillbirth, neonatal mortality, and short- and long-term morbidity [1-3,8,10,17].

Women with suspected or confirmed FGR may require a higher-level of care. A multidisciplinary approach is required to optimise outcomes for women and their babies. Women and their families are to be provided with information and resources to guide informed decision making. Where possible, provision of continuity of maternity care is recommended.

Maternity care is coordinated across NSW and the ACT through formalised arrangements of Tiered Perinatal Networks (TPNs), local endorsed operational plans and escalation pathways in line with the NSW Health Policy Directive *Tiered Networking Arrangements for Perinatal Care in NSW* [PD2023_035] and the NSW Health Guideline *Maternity and Neonatal Service Capability* [GL2022_002]. These elements ensure safe care is provided at a facility with designated service capability for the woman's gestation and clinical complexity, as close as possible to her home and her support network.

1.1. About this document

This Guideline applies to all NSW Health maternity services for the prevention, screening, management, and escalation of FGR during pregnancy.

There are currently no proven treatments for FGR. Maternity care must focus on risk assessment, preventative care strategies, and the early identification of modifiable risk factors. The care of women with specific pregnancy risk factors (for example, concerns about fetal movements, hypertensive disease, diabetes mellitus) identified during care may require additional monitoring and care planning.

Informing women about their treatment options, and the risks and benefits must be part of informed decision making (see Section 2.1).

Women with confirmed FGR require as a minimum, a multidisciplinary collaborative care plan involving midwifery and medical consultation in line with the TPN and the NSW Health Guideline *Maternity and Neonatal Service Capability* [GL2022_002].

To further support maternal and fetal wellbeing, care is to include an A-G assessment and a documented comprehensive care plan in line with the NSW Health Policy Directive *Health Care Records - Documentation and Management* [PD2025_035]. This care plan is to include an appropriate response to any identified deterioration of the woman or fetus in line with the NSW Health Policy Directive *Recognition and management of patients who are deteriorating* [PD2025_014].

1.2. Key definitions

Abdominal Circumference (AC)	A measurement taken during a pregnancy ultrasound to gauge the circumference of the fetal abdomen. The AC gives an indication of whether the fetus is growing normally inside the uterus in relation to size and weight.
Estimated Fetal Weight (EFW)	An estimate of the weight of a fetus based on ultrasonographic measurement and the use of standard reference tables incorporating fetal growth parameters, including biparietal diameter, circumference of the head, femur length and circumference of the abdomen.
Fetal growth restriction (FGR)	Describes when a fetus does not reach its full growth potential in-utero. Historically known as intrauterine growth restriction (IUGR). For the diagnostic definition of FGR by the International Society of Ultrasound in Obstetrics and Gynaecology (ISUOG), see Section 3.
Multidisciplinary care	Comprised of at least one patient and multiple health professionals from several different disciplines and/or organisations. These health professionals work together to deliver comprehensive patient care through collaboration, communication and team care planning.
NSW Newborn and Paediatric Emergency Transport Service (NETS)	A statewide emergency service for clinical advice and/or retrieval of critically ill neonates, infants and children. NETS is a single point of access for public and private hospitals in NSW and the ACT.
Small for gestational age (SGA)	A baby with antenatal ultrasound biometry less than the 10th percentile for gestational age according to National birthweight percentiles. Note: Growth restricted babies are frequently, but not always, SGA.
Symphysial fundal height (SFH)	The distance (in centimetres) on the longitudinal axis of the abdomen from the top of the fundus to the superior margin of the symphysis pubis.
Stillbirth	A fetal death prior to birth of a baby of 20 or more completed weeks of gestation or of 400 grams or more birthweight.

Tiered Perinatal Network (TPN)	A formalised arrangement of maternity and neonatal services within and across local health districts (districts) in NSW and the ACT (Australian Capital Territory) that are linked with a tertiary (Level 6) service to provide support where higher-level care is required. The Tiered Perinatal Network recognises the capability, capacity, responsibilities, and expertise of each facility in the network.
Trauma-informed care	An approach in which organisations and clinicians understand and respond to the effects of trauma. It promotes safety, trust, choice, collaboration, and empowerment in all aspects of care, while seeking to avoid re-traumatisation.
Umbilical artery Doppler	A non-invasive ultrasound test used to assess blood flow in the umbilical artery during pregnancy. It is particularly important for monitoring fetal wellbeing in high-risk situations, as abnormal results can indicate placental insufficiency and potential complications such as FGR.
Umbilical artery pulsatility index (UA-PI)	A parameter used in umbilical arterial (UA) Doppler assessment. It is calculated by subtracting the end-diastolic velocity (EDV) from the peak systolic velocity (PSV) and then dividing by the time-averaged (mean) velocity (TAV).

1.3. 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	
Consent Manual	*Consent to Medical and Healthcare Treatment Manual*
IB2023_006	*Connecting, listening, and responding: A Blueprint for Action – Maternity Care in NSW*
IB2024_042	*Clinical Guidance for the Management of Substance Use in Pregnancy, Birth and the Postnatal Period*
GL2021_007	*NSW Emergency Surgery Guidelines and Principles for Improvement*
GL2022_002	*Maternity and Neonatal Service Capability*
GL2022_006	*Management of Threatened Preterm Labour*
GL2025_004	*Fetal Heart Rate Monitoring*
PD2025_035	*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_047	*Incident Management*
PD2022_050	*Reducing the effects of smoking and vaping on pregnancy and newborn outcomes*
PD2023_031	*Maternity - Safety and Quality Essentials*
PD2023_034	*Open Disclosure*
PD2023_035	*Tiered Networking Arrangements for Perinatal Care in NSW*
PD2025_014	*Recognition and management of patients who are deteriorating*

2. Communication

Effective communication between clinicians, and between women and clinicians has been demonstrated to reduce preventable adverse events in maternity care. Communication in care planning includes multidisciplinary engagement and systems for documentation. These ensure information relevant to the woman's care is available whenever and wherever the woman presents for care.

2.1. Informed decision making

Clear communication between a woman and her healthcare team is essential for safe, high-quality healthcare. To assist a woman in making informed decisions, all healthcare professionals need to allow adequate time to provide information about care options, including the benefits, potential risks, and any alternatives to any care recommendations. To enable all women to participate in decision making, information must be communicated in a way that is tailored to individual circumstances (including young women under 18 who fall under the scope of the Child Safe Standards). This includes considering health literacy, level of understanding and background. A woman's decisions about her care must reflect her self-determination, autonomy, values and preferences.

Valid consent must be obtained as per the NSW Health Policy and Procedure Manual *Consent to Medical and Healthcare Treatment Manual* (Consent Manual).

Contemporaneous documentation of conversations and the woman's decisions must be made in the health care record. This includes documentation on care planning if the woman chooses care outside of clinical recommendations.

2.2. Cultural considerations

Acknowledgement and understanding of culturally appropriate and safe care may assist clinicians when providing women and families with information.

When clinicians are caring for Aboriginal women, it is important that they consider the woman's individual needs. Clinicians must ask women and their family if there is anything they need to feel safe and whether discussion with an Aboriginal healthcare practitioner would be beneficial to them.

Interpreters must be offered for women from culturally and linguistically diverse backgrounds (CALD) in compliance with NSW Health Policy Directive *Interpreters – Standard Procedures for Working with Health Care Interpreters* [PD2017_044].

2.3. Family integrated care

NSW Health staff must offer all women the opportunity to discuss their pregnancy and birth experiences. This includes the opportunity to access a formal debrief and consideration of integrated trauma-informed care principles.

Inclusion of family members or support person(s) in these discussions and in the debriefing process must be offered. When caring for Aboriginal women, the importance of kinship is to be acknowledged and discussed with women to ensure careful consideration of the individual needs of women and their families.

It is important that all women and families are offered wellbeing and psychosocial support, for example social work referral, cultural and diversity supports.

When fetal risk is recognised, and higher-level care needs are identified, unplanned hospital transfer may occur. When this event occurs, taking women away from their local hospital and local support network can be particularly distressing for women and their families. Local processes in the transferring and receiving service must be in place to support and maintain contact between women and their families.

3. Identifying fetal growth restriction

Fetal growth restriction (FGR) is when a fetus does not reach its growth potential in-utero due to a pathological factor, most commonly placental insufficiency. It may be identified in the early or late antenatal period, or it can be revealed after birth [1-3,5,6,10].

FGR may be caused by fetal issues such as chromosomal anomalies, genetic syndromes, and fetal infection. It may also be caused by maternal disease; environmental toxins including smoking and vaping, alcohol and other drugs; and the most common cause, uteroplacental insufficiency [1-3,5-7,10].

All women must be assessed throughout the antenatal period for risk factors associated with FGR.

A clear plan is to be developed in consultation with women, which includes the identified risk factors, and the strategies to mitigate or monitor these risks described in the *NSW Health Fetal Growth Restriction Care Pathway*.

The care of women who have risk factors for FGR must be undertaken within a maternity service with the appropriate service capability in line with the NSW Health Guideline *Maternity and Neonatal Service Capability* [GL2022_002] and the NSW Health Manual *Guide to the Role Delineation of Clinical Services*.

For women with a fetus identified as small for gestational age (SGA), a clear plan must be developed to guide appropriate screening, assessment and follow-up throughout pregnancy.

3.1.1. Early-onset fetal growth restriction

Early-onset FGR is identified prior to 32 weeks gestation, in the absence of congenital anomalies.

Diagnosis is based on the criteria described in Table 2 [1-3,10,12].

Table 2: Diagnostic criteria for early-onset FGR

Early-onset FGR criteria
• Abdominal circumference (AC) or estimated fetal weight (EFW) < 3rd centile **or** • Umbilical artery (UA) absent or reversed end-diastolic flow
OR
• AC or EFW < 10th centile **combined with** • Uterine artery pulsatility index (UtA-PI) > 95th centile **and/or** • Umbilical artery pulsatility index (UA-PI) > 95th centile

3.1.2. Late-onset fetal growth restriction

Late-onset FGR is identified at 32 weeks gestation or greater, in the absence of congenital anomalies.

Diagnosis is based on the criteria described in Table 3 [1-3,10,12].

Table 3: Diagnostic criteria for late-onset FGR

Late-onset FGR criteria
• AC or EFW < 3rd centile
OR AT LEAST TWO OUT OF THREEOF THE FOLLOWING
• AC or EFW < 10th centile • AC or EFW crossing centiles of > 2 quartiles (50%) on consecutive growth ultrasounds • Persistent cerebroplacental ratio < 5th centile or UA-PI > 95th centile

Note: These criteria reflect the diagnosis of FGR and are not indicators for monitoring, care, or imminent birth planning.

4. Risk assessment and prevention

There are currently no proven treatments for fetal growth restriction (FGR) that improve fetal growth. Maternity care must focus on risk assessment, preventative care strategies, and early identification of other modifiable risk factors [1-3,5,6,10].

4.1. Risk assessment

Risk assessment for FGR must be undertaken by clinicians in early pregnancy, and at each antenatal visit, including consideration of:

- maternal characteristics and medical history
- previous obstetric history
- risk factors that may arise during pregnancy.

Clinicians are to refer to the *NSW Health Fetal Growth Restriction Care Pathway*.

4.2. Preventative care strategies

4.2.1. Smoking cessation

The earlier smoking, vaping and nicotine cessation is achieved in pregnancy, the greater the potential to reduce the risk of FGR. Exposure to passive smoking must also be discussed with women. Clinicians are to refer to the national *Smoking cessation care pathway* and the NSW Health Policy Directive *Reducing the effects of smoking and vaping on pregnancy and newborn outcomes* [PD2022_050].

4.2.2. Aspirin use

Aspirin has not been shown to independently prevent FGR, however, it remains appropriate for targeted preeclampsia prevention. Given the strong association between preeclampsia and early-onset FGR, preventative strategies may overlap [5,6].

Clinicians should initiate low-dose aspirin (LDA) before 16 weeks gestation and continue it until 36^{+0} weeks for women at high risk of early-onset FGR, as recommended in the *NSW Health Fetal Growth Restriction Care Pathway* [3].

4.3. Other modifiable risk factors

Modifiable behaviours such as smoking and vaping, alcohol consumption, substance use, and poor nutrition can significantly impact placental function and fetal development. Early detection and intervention, along with tailored support and timely referral to appropriate services, are essential to optimise both maternal and fetal outcomes and reduce the risk of adverse events [2,3,6,7].

Clinicians are to be aware that women who use alcohol or other drugs may face significant stigma, which can lead to disengagement from antenatal care and essential pregnancy monitoring and support. A non-judgemental, empathetic, and person-centred approach is critical to ensuring women feel safe and supported in accessing care. All staff are

encouraged to refer to the NSW Health *Alcohol and Other Drugs (AOD) Care Charter*, which outlines principles for delivering safe, accessible, equitable, and non-judgemental care.

Supportive referral pathways should be provided for women using alcohol or other drugs. Treatment and support services are available through both public and private providers across NSW, including specialist programs for substance use in pregnancy and parenting. For example, Substance Use in Pregnancy and Parenting Service (SUPPS) and Get Health in Pregnancy (GHiP), SafeStart assessment and referral pathways.

5. Screening

The following screening approaches are guided by the *NSW Health Fetal Growth Restriction Care Pathway*.

5.1. Symphysial fundal height measurement

Symphysis fundal height (SFH) measurements are taken during the antenatal period primarily to assist in the detection of fetal growth restriction (FGR). Unless there is a plan for serial ultrasound, SFH measurement must be undertaken at each antenatal visit starting from 24 weeks gestation.

SFH measurement may not be reliable for all women, including those with a high body mass index (BMI) ≥ 40 kg/m^2, or who have large uterine fibroids > 10 cm, in which case ultrasound assessment of fetal size and growth is required.

Recommendations for SFH measurement include:

- where feasible, being performed by the same clinician to reduce variation
- using a standardised technique, measuring the longitudinal axis of the abdomen from the top of the fundus to the superior margin of the symphysis pubis, using a non-elastic tape measure with numbers on the tape measure facing downwards
- serial plotting using the *NSW Health International Symphysis-Fundal Height Standards* chart.

5.1.1. Thresholds for escalation

Serial plotting supports clinicians in identifying variation in SFH, which may assist in the detection of FGR.

Criteria for escalation include:

- **Reduced SFH**: ≥ 3cm below the expected fundal height for the estimated gestational age.
- **Static SFH**: No change in measurement at least one week apart in the absence of descent of the fetus into the maternal pelvis.
- **Increased SFH**: ≥ 3cm above the expected fundal height for the estimated gestational age.

Where criteria for escalation have been identified, consultation, care planning and referral for ultrasound must occur. Local referral processes must be in place to support escalation of care.

5.2. Ultrasound assessment

All growth ultrasound assessments require plotting of all measurements on the *NSW Health Fetal Biometry Ultrasound Growth Scan Charts*.

5.2.1. Growth ultrasound assessment

Growth ultrasound assessments are required from 26-28 weeks gestation, and repeated after 6 weeks (or earlier if clinically indicated), where women have any of the following:

- 2 or more – Level 2 risk factors for FGR
- unsuitable for SFH measurements (for example, BMI ≥ 40 kg/m^2, large uterine fibroids > 10 cm)
- continued substance use (smoking, vaping, drugs, alcohol).

5.2.2. Serial growth ultrasound assessment

Serial growth ultrasound assessment is required at 4 weekly intervals from 24 weeks gestation, until birth, where women have:

- any Level 3 FGR risk criteria.

5.3. Antenatal complications

Serial growth ultrasound assessment is to be considered at 4 weekly intervals where women have new antenatal complications that arise during the pregnancy as outlined in the *NSW Health Fetal Growth Restriction Care Pathway*.

6. Monitoring and escalation

Diagnosis of FGR must prompt monitoring for associated hypertensive disorders of pregnancy with review of blood pressure and urinalysis at each clinical visit.

Women must be supported to understand the importance of fetal movements and advised to present promptly if they notice any change in fetal movement pattern as per the NSW Health Guideline *Care Pathway for Women Concerned About Fetal Movements* [GL2021_019].

Ongoing care must include comprehensive assessment and monitoring, including ultrasounds. Where possible, high-quality ultrasound assessments should be conducted by the same qualified provider to ensure consistency and accuracy in imaging and interpretation.

6.1. Ultrasound monitoring

Following diagnosis of FGR, the following monitoring steps are recommended:

- Serial growth ultrasound should be performed every 2 weeks. Increased frequency of growth ultrasound measurements at greater than a 2 weekly interval is associated with lower sensitivity and therefore not recommended [1-3,10,12].
- Amniotic fluid should be measured weekly and monitoring increased if the deepest vertical pocket (DVP) is < 2 cm or if there are other identified risk factors [1-3,10,12,13].
- Umbilical artery (UA) Doppler should be performed every 1-2 weeks as appropriate [1-3,10,12].
- The UA Doppler frequency should be increased to weekly when the umbilical artery pulsatility index (UA-PI) is > 95th centile [1-3,9,10,12].
- The middle cerebral artery pulsatility index (MCA-PI) is to be assessed as part of each ultrasound assessment [1-3,10-12].
- When the MCA-PI is < 5th centile or cerebroplacental ratio is < 1, at least weekly UA Doppler and amniotic fluid volume assessment is recommended [1-3,10-12].

Note: Whilst MCA-PI can help guide monitoring, it is not currently used as a trigger for birth planning [1,2,10].

6.2. Antenatal electronic fetal monitoring

Routine antenatal cardiotocography (CTG) monitoring is not recommended [1-3,10,12].

In maternity settings where computerised CTG analysis is available, this may be used to assist in birth planning decision making. Local processes are to be in place for the use of computerised CTG analysis.

For women with small for gestational age (SGA) or FGR presenting with maternal comorbidities (for example, hypertension and/or antepartum haemorrhage) or fetal concerns (such as, concerns about fetal movements) CTG monitoring is recommended as per NSW Health Guideline *Fetal Heart Rate Monitoring* [GL2025_004].

6.3. Escalation of care and referral of women

Following diagnosis of FGR, consultation with a specialist obstetrician is required.

Where FGR is diagnosed at less than 32 weeks, there are significant comorbidities or suspected congenital anomalies, consultation with a Level 6 tertiary maternity service, where Maternal Fetal Medicine (MFM) expertise is available, is required.

7. Birth planning

Birth planning must be guided by an individualised risk assessment, considering the full clinical picture and the woman's values and preferences. Any risk assessment is to consider the most appropriate location, timing, and mode of birth to support optimal outcomes.

It is important to acknowledge the significant stress, fear, and grief that women and their families may be experiencing when a pregnancy is not progressing as expected. In these circumstances, counselling and other psychosocial supports should be actively offered to provide emotional and psychological support throughout the process.

7.1. Timing of birth

Birth planning must be guided by a comprehensive assessment, evaluating the risks of intervention against continuing the pregnancy. Ultrasound findings can guide care and help ensure the woman is in the right place, at the right time for birth. Clinicians must ensure the woman is fully informed and actively involved in decision-making throughout the process.

7.2. Ultrasound indicators for birth planning

The following table outlines the various ultrasound indicators for birth planning (see Table 4) [1-3,8-10,12].

Table 4: Ultrasound indicators for birth planning

Gestation	Ultrasound indicators for birth planning
23^{+0} - 29^{+6} weeks	Plan birth if the Ductus Venosus A wave is absent or reversed. Note: Birth planning needs to be individualised with multidisciplinary team input, including MFM and the neonatal team. The plan must align with the woman, and her family or support person(s) preferences.
30^{+0} - 31^{+6} weeks	Plan birth if umbilical artery end diastolic flow is reversed.
32^{+0} - 35^{+6} weeks	Plan birth if umbilical artery end diastolic flow is absent.
36^{+0} - 37^{+6} weeks	Plan birth if any of the following are present: • umbilical artery pulsatility index (UA-PI) is > 95^{th} centile, or • if estimated fetal wight (EFW) < 3^{rd} centile, or • if abdominal circumference (AC) < 3^{rd} centile.
38^{+0} - 39^{+0} weeks	Plan birth for any FGR which has not met criteria for earlier birth.
39^{+0} - 40^{+0} weeks	Plan birth for small for gestational age (SGA) alone; EFW < 10^{th} centile, with normal dopplers and weight and AC ≥ 3^{rd} centile (specifically, EFW < 10^{th} centile with no other criteria for FGR diagnosis [see Section 3.1.2]).

7.3. Intrapartum electronic fetal monitoring

A fetus with fetal growth restriction (FGR) will have limited placental reserves and is therefore likely to decompensate more rapidly when subjected to hypoxic stress during labour and birth. In the fetus with FGR, the use of Altered Calling Criteria may assist in the earlier recognition of deterioration.

Assessment of fetal wellbeing must be undertaken from the first contact in labour as per NSW Health Guideline *Fetal Heart Rate Monitoring* [GL2025_004].

7.4. Birth planning with the neonatal team

As part of birth planning, communication with the neonatal team is to occur. Clinical handover is to include:

- gestational age
- estimated fetal weight (EFW)
- any maternal and/or pregnancy risk factors
- relevant fetal investigations
- condition of the fetus
- planned mode of birth
- timing of corticosteroids and magnesium sulphate ($MgSO_4$) administration.

Optimal care planning includes the location of birth and the availability of multidisciplinary team members to support stabilisation and potential admission to a neonatal unit.

Where birth occurs without appropriate neonatal services, early escalation within the Tiered Perinatal Network (TPN) and early communication with the NSW Newborn and paediatric Emergency Transport Service (NETS) [IB2020_015] is required.

8. Postnatal care

8.1. Feeding considerations

All women are to receive consistent, impartial, evidence-based information to support safe feeding for their baby.

There is no clear evidence to support routine antenatal breast expression prior to 36 weeks gestation [15,16]. Antenatal breast expression may be useful in maximizing access to breastmilk for a growth restricted baby and expressing close to the day of planned birth may offer support of lactogenesis and availability of expressed human milk for the baby.

Any contraindications for the woman and fetus must be determined prior to any antenatal breastmilk expressing plans being made. Consultation with the lead maternity care provider is required.

Clinicians must refer to the NSW Health Policy Directive *Breastfeeding in NSW - Promotion, Protection and Support* [PD2018_034] and the NSW Health Policy Directive *Maternity – Breastmilk: Safe Management* [PD2023_021].

8.2. Placental histology

A formal histological examination of the placenta may provide valuable explanation for fetal growth restriction (FGR), as well as information relevant to the care of the baby and/or subsequent pregnancies. Refer to the NSW Health Guideline *Maternity – Indications for Placental Histological Examination* [GL2014_006].

8.3. Debriefing and support

It is recommended all women be offered the opportunity to debrief with clinicians about their birth experience, review postnatal care plans, and discuss any clinical outcomes or investigations. Inclusion of family or support persons should be offered, and psychosocial support. Appropriate follow-up care must be made available where needed.

8.4. Care planning for future pregnancy

Women with a history of FGR should receive multidisciplinary preconception care to optimise health, support healthy lifestyle choices, and plan timing of future pregnancies.

In subsequent pregnancies, early specialist referral and tailored multidisciplinary care should be provided based on previous history and individual risk factors.

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