Document No: **1561674**

TITLE: Prevention, Detection and Management of the Small for Gestational Age (SGA) or Intrauterine Growth Restricted (IUGR) Fetus

Contents

1. Purpose

To ensure that the New Zealand Maternal Fetal Medicine Network (NZMFMN) Guideline for the Management of Suspected Small for Gestational Age Singleton Pregnancies after 34 weeks is followed within Te Whatu Ora Health New Zealand Lakes by means of a planned approach to care.

This guideline describes a clinical pathway based on the *NZMFM Network National Guideline* published in September 2014, which has undergone national consultation. Responsibility for the content and further review of the national guideline rests with the NZMFM network.

All Lead Maternity Carers (LMCs) are encouraged to refer women according to the national guideline. The national guideline is available through CIS and familiarisation with this document is recommended (EDMS 1015628).

This guideline does not include the management of SGA once detected. Under Section 88 of the Public Health and Disability Act 2000, when SGA is diagnosed the woman must be referred to a specialist obstetrician.

2. Scope

All Te Whatu Ora Health New Zealand Lakes medical and midwifery staff and LMC's working within the Maternity Service and the women they are providing care to.

3. Definitions

AC	Abdominal Circumference
ANC	Antenatal Clinic
ASUM	Australasian Society for Ultrasound Medicine
BMI	Body Mass Index
BP	Blood Pressure
CIS	Clinical Information System
GP	General Practitioner
GROW	Gestation Related Optimal Weight – Customised antenatal chart for plotting estimated fetal weight
HC	Head Circumference
IUGR	Intrauterine Growth Restriction: EFW or AC crossing centiles by at least 30 percent. Discrepancy between HC and AC of at least 30 percent
LDA	Low dose Aspirin
LMC	Lead Maternity Carer
MOH	Ministry of Health
NZMFMN	New Zealand Maternal Fetal Medicine Network
PET	Pre-eclampsia
SGA	Small for Gestational Age: <10th centile on customised growth chart, or birthweight <10th customised birth weight centile
SMO	Senior Medical Officer
USS	Ultrasound Scan

4. Background

A fetus with SGA or IUGR is at increased risk of perinatal morbidity and mortality.
Early identification of risk factors is important so measures can be taken towards prevention and early detection.

Risk Factors

Each risk factor in the table below (and included in the SGA pathways) more than doubles the risk of SGA occurring in pregnancy.

Risk Factors
Pre-existing risk factors
• Previous SGA born before 34 weeks gestation
• Renal disease
• Severe chronic hypertension - *Systolic BP >160 AND/OR Diastolic BP>105 AND/OR proteinuria*
• Anti-phospholipid syndrome - *Systolic BP 140-160, AND/OR Diastolic BP 90-105*
• Diabetes with vascular disease
• Mild-moderate chronic hypertension
• Maternal age > 40 years
• Previous stillbirth - *Stillbirth after 20 weeks gestation, or weighing more than 400 grams*
• Drug abuse
• Previous baby with SGA born after 34/40 gestation
• Smoker of >10 cigarettes/day
Pregnancy related risk factors
• Threatened miscarriage - *Period like bleeding prior to 14 weeks gestation*
• Echogenic bowel - *Fetal bowel is more echogenic than fetal bone on the 20 week anomaly scan*
• Poor maternal weight gain
• Unexplained antepartum haemorrhage - *Vaginal bleeding > 20 weeks gestation, unknown cause*
• Pre-eclampsia - See PET guideline
• Gestational hypertension - See PET guideline

Table 1. Risk Factors for SGA

This pathway does not include an exhaustive list of all risk factors for abnormal fetal growth. If clinically indicated, ultrasound scan for fetal growth should be requested through the usual process.

Symphysial Fundal Height Measurements

In low risk women, ultrasound screening has not been shown to improve the detection of SGA.

- Low risk women should have serial symphysial fundal height measurements plotted on a customised growth chart.
- If fundal height measurements are not normal, SGA/IUGR should be confirmed on serial ultrasounds.
- Symphysial fundal heights are not reliable in women with;
  - a BMI of greater than 35
  - polyhydramnios
  - multiple gestations
  - multiple/large fibroids

These women should have ultrasound screening for fetal growth, even when low risk.

5. Understanding the SGA Pathways

There are two components to SGA, each presented in separate pathways;

1. **Screening** – for the prevention and detection of SGA – see Appendix 1
2. **Management** – to optimise care for mothers and babies once SGA is detected – see Appendix 2

6. Screening

The SGA Prevention and Detection Pathway aims to stratify a woman's risk for SGA and it recommends an appropriate care bundle/schedule.

Entry onto the SGA Prevention and Detection Pathway

Women may be placed on the SGA Prevention and Detection Pathway (Appendix 1.) at any time in pregnancy. This may be initiated by medical staff, midwives, GPs, or LMCs.

How to Use the SGA Prevention and Detection Pathway?

- Read DOWN the list of risk factors.
- Read ACROSS the page to the appropriate care bundle/schedule.
- Risk factors are not cumulative. The FIRST RELEVANT FACTOR identified on the list determines the level of care.
- The responsible clinician must arrange, and follow up on, ultrasound scan results

N.B.: Smoking cessation: if women become smoke-free prior to 15 weeks' gestation the risk of SGA due to smoking returns to the baseline.

Exiting the SGA Prevention and Detection Pathway

Women may exit the SGA Prevention and Detection Pathway when they have birthed their infant, or when SGA is detected. When SGA is detected it is strongly recommended that they are transferred to the SGA Management Pathway (Appendix 2.)

7. Prevention

Low Dose Aspirin

There is clear evidence of benefit for the prophylactic use of Low Dose Aspirin (LDA) in the prevention of small for gestational age babies, and pre-eclampsia. The experience of low dose aspirin in pregnancy is adequate to demonstrate that the embryo-fetal risk is very low, or non-existent (NZ Formulary).

- Contraindications

  These are rare in women of reproductive age, but include:
  - Previous peptic ulcer
  - Asthma induced by Non-Steroidal Anti Inflammatory Drugs
  - Allergy to aspirin

  The patient information leaflet 'Taking Aspirin in Pregnancy' has been developed to facilitate the consent process (EDMS 2480090)

- Prescribing

  When taken from prior to 16 weeks' gestation until term, low dose aspirin (100mg EC, nocte) reduces the risk of SGA in high risk women.

  The prescription of aspirin is within a midwifery scope of practice. Medical staff, midwives, GPs, and LMCs can prescribe aspirin for high risk women. When uncertain about the indication, or contraindications midwives and GPs are encouraged to consult with a specialist obstetrician prior to 16 weeks' gestation.

- Vaginal Bleeding

  Approximately 20% of women who have ongoing pregnancies will experience vaginal bleeding before 20 weeks. Aspirin has anti-platelet effects by inhibiting the production of thromboxane, which binds platelets together to create a patch over damaged walls of blood vessels

  Women taking LDA who experience bleeding should be advised to contact their midwife or maternity care provider**.** LDA can be continued if spotting or light vaginal bleeding occurs in early pregnancy, however specialist advice is recommended for all women with moderate to heavy bleeding (bleeding like a period or with blood clots). If moderate to heavy bleeding occurs discontinue aspirin and arrange specialist consultation.

8. Management

The detection of SGA or IUGR requires all ultrasound scans (USS) to be plotted on a customised growth chart (customising expected size for maternal characteristics), and on an ASUM population growth chart.
Details on how to determine if SGA or IUGR is present can be found in the NZMFMN guideline.

Entry onto the SGA Management Pathway

Once SGA is detected women should be placed on the SGA Management Pathway (see Appendix 2.).

- Responsibility for Care

  Depending on severity, SGA requires either a consultation or transfer of clinical responsibility under the Maternity Referral Guidelines (MOH).

  Referral to the antenatal clinic is strongly recommended if the woman is not already under the supervision of a consultant obstetrician/SMO.

  Communication regarding responsibility for care is to be conducted separately, and deliberately, in accordance with the Maternity Referral Guidelines (MOH).

  These guidelines recommend transfer of clinical responsibility if there is;

  1. Decreased liquor
  2. Abnormal umbilical artery dopplers

  Where there are abnormal Dopplers, abnormal liquor, abnormal fetal movements, or hypertension, an urgent SBARR referral to the on-call obstetrician is required.

  All other women with a suspected SGA fetus must be referred to a specialist obstetrician for individualised care in line with the Maternity Referral Guidelines (MOH).

Exiting the SGA Management Pathway

Women may exit the SGA Management Pathway when they have birthed their infant, or if the fetus is found to be of normal growth.

Women may move between the monitoring groups as their risk factors develop (e.g., if Dopplers' become abnormal, women may move from the 'frequent monitoring group' to the 'intensive monitoring group').

De-escalation is possible, but requires input from the responsible consultant obstetrician/SMO.

9. Related Documentation

- SGA Prevention and Detection Pathway
- SGA Management Pathway
- GROW Charts
- ASUM Charts
- New Zealand Maternal Fetal Medicine Network (NZMFMN) Guideline for the Management of Suspected Small for Gestational Age Singleton Pregnancies after 34 weeks. September 2014. (EDMS 1015628)
- Taking Aspirin in Pregnancy – Patient Information (EDMS 2480090)
- Why is My Baby Small – Patient Information (EDMS 993995)

10. References

- Ministry of Health (MOH) (2012). Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines). Wellington: Ministry of Health.
- NZ Formulary: https://nzf.org.nz/nzf_1529 (accessed 20/04/2022)
- New Zealand Maternal Fetal Medicine Network (NZMFMN) Guideline for the Management of Suspected Small for Gestational Age Singleton Pregnancies after 34 weeks. September 2014

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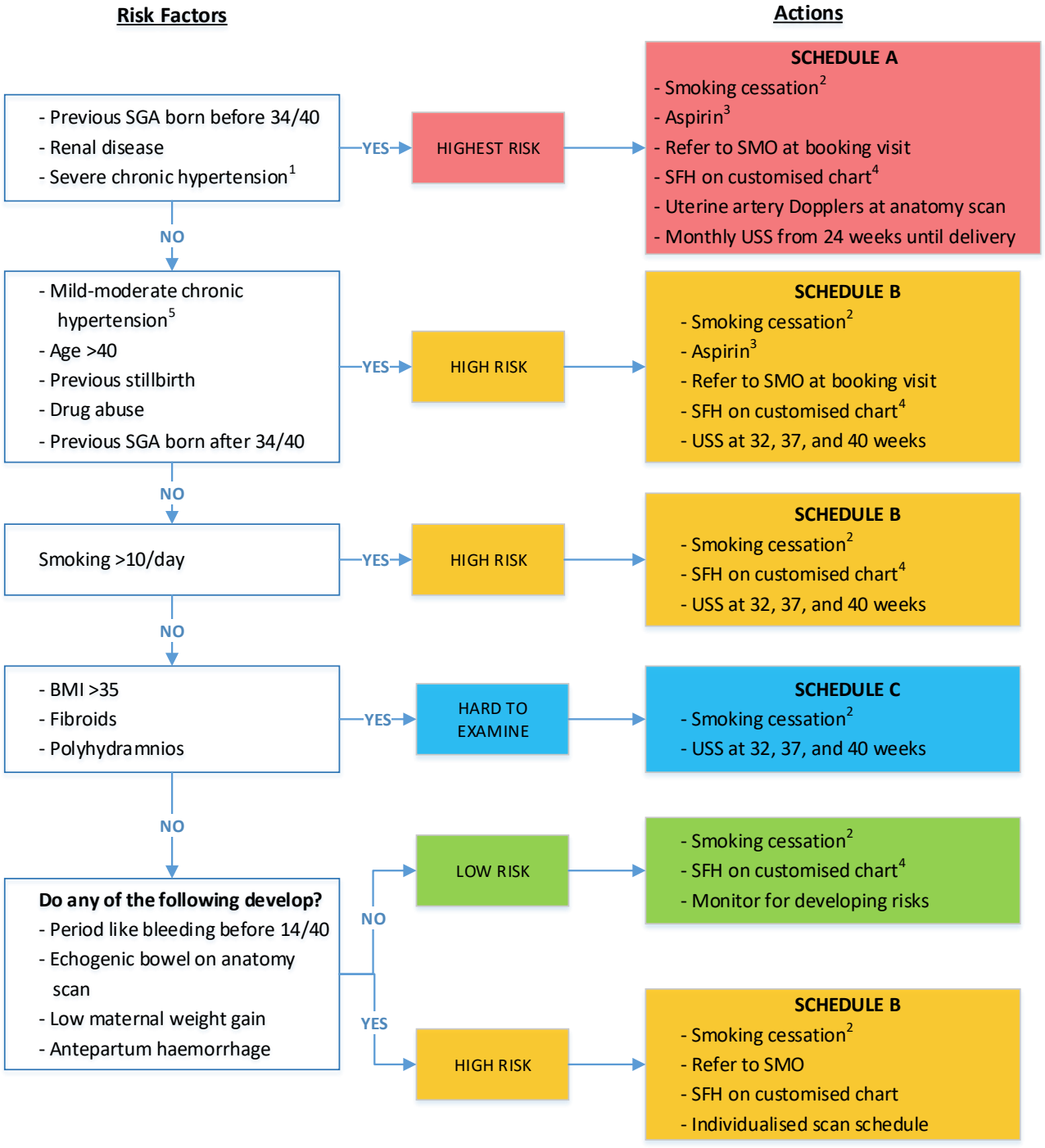
Authorised by: **Maternity Clinical Quality Improvement (CQI) Meeting**

Appendix 1. SGA Prevention and Detection Pathway

SGA Prevention and Detection Pathway



1. Systolic BP >160, AND/OR Diastolic BP >105, AND/OR proteinuria
2. Smoking cessation by 15 weeks returns SGA risk to baseline
3. Aspirin 100mg nocte starting between 12-16 weeks
4. If SFH under 10th centile, or falls by 30% consider referral/earlier scan
5. Systolic BP 140-160, AND/OR Diastolic BP 90-105
6. If SGA is diagnosed SMO consultation is recommended as per the maternity referral guidelines

Appendix 2. SGA Management Pathway