LOCAL OPERATING PROCEDURE – CLINICAL

Approved Quality & Patient Safety Committee 19/05/2022

Review May 2027

FETAL MOVEMENTS – Identification and Management of Reduced Patterns

This LOP is developed to guide clinical practice at the Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this LOP.

1. AIM

- Woman is aware of normal fetal movement (FM) pattern
- Woman is aware of when and whom to contact if she is concerned about FM pattern
- Compromised fetus is identified and appropriately monitored and managed

2. PATIENT

- Pregnant woman greater than 20 weeks gestation

3. STAFF

- Medical and midwifery staff
- Student midwives

4. EQUIPMENT

- Cardiotocograph (CTG) machine
- Fetal heart rate Doppler
- Ultrasound machine

5. CLINICAL PRACTICE

- Enquire about fetal movements (FM) at each antenatal visit from 20 weeks gestation
- Educate woman regarding normal FM, provide verbal and written information about FM by 28 weeks gestation
- Encourage woman to contact hospital or known midwife if she is concerned about FM. Maternal concern and perceived reduction in fetal movements is more important than any definition of decreased FM (DFM) based on movement counting
- Invite woman who contacts the hospital or her known midwife with concern about FM in for prompt assessment. Presentation should not be delayed through efforts to stimulate baby with food or drinks, or by requesting woman to phone back after period of concentrating on FM

Assessment of woman presenting with DFM

History

- Review history of DFM – duration, pattern and intensity of FM, previous concerns/presentations
- Assess for other symptoms e.g. abdominal pain, contractions, vaginal bleeding or fluid loss, headaches, blurred vision, or itchy hands/feet
- Screen for risk factors for stillbirth:
  - Previous stillbirth
  - Known or suspected small for gestational age (SGA) i.e. <10th centile
  - Antepartum haemorrhage
  - Hypertension/preeclampsia
  - Pre-existing diabetes
  - Pre-existing hypertension

- Maternal obesity (body mass index (BMI) >30)
- Maternal age >35 years
- Nulliparity
- Assisted reproductive technology pregnancy
- Post-term pregnancy (> 41 weeks)
- Rhesus isoimmunisation
- Aboriginal or Torres Strait Islander , African ethnicity and South Asian ethnicities
- Smoking, illicit drug use
- No antenatal care
- Low socioeconomic status or education

Examination

- Perform baseline maternal observations - temperature, heart rate (HR), blood pressure (BP), respiration rate (RR).
- Perform blood sugar level (BSL) if diabetic, unwell, or poor dietary intake
- Measure symphysiofundal height (SFH) in centimetres (cm)
- Listen to fetal heart with handheld Doppler if < 25 weeks gestation, or commence electronic fetal heart rate monitoring (cardiotocograph CTG) if ≥ 25 weeks gestation

Monitoring

- Arrange urgent medical review (as per clinical emergency response system (CERS)) where clinical and/or CTG findings are abnormal
- Recommend no further investigations for the woman if she is ≥ 25 weeks gestation and:
  - CTG and clinical assessment are normal
  - no risk factors for stillbirth are identified
  - it is the woman's first presentation for DFM
  - there are no ongoing maternal concerns of decreased FM
- Arrange medical review in triage if above criteria are not met

Investigations

- Arrange formal ultrasound for fetal growth and wellbeing (UA Doppler and AFI) within 24-48 hours (depending on workload capacity, may require external ultrasound scan to be followed up by ordering medical officer) if the woman has not had an ultrasound within the previous two weeks, and:
  - ≥2 presentations with DFM
  - booked in a high-risk antenatal clinic
  - multiple gestation
  - presence of risk factors for stillbirth
  - examination finds SFH ≥2cm less than expected
  - less than 25 weeks gestation at any presentation
- Order Kleihauer test if there are sustained or repeated concerns regarding FM (please discuss with Maternal Fetal Medicine (MFM) in business hours – if >1mL)

Management

- Discharge (by midwife) if normal CTG, no risk factors and no ongoing maternal concerns about fetal movements
- Inform consultant obstetrician if CTG and/or ultrasound are abnormal as per CERS pathway
- Consider performing a vaginal examination for calculation of a Bishop score +/- membrane sweep if ≥ 38 weeks gestation and aiming for a vaginal birth

- Discuss timing of delivery for woman with DFM at term. Birth should not be planned prior to 39 weeks unless clinically indicated
- Document discussion and advice provided
- Ensure follow-up plan for care organised (with usual antenatal care provider, or triage)

6. DOCUMENTATION

- Medical records

7. EDUCATIONAL NOTES

- Up to 40% of women express concern over DFM at some point in pregnancy [1,4]
- Stillbirths are often preceded by maternal perception of DFM [1]
- Women are usually aware of movements by 20 weeks gestation. Until 24 weeks they may not feel daily movements. After 24 weeks the movements should be regular. There is no set number of normal movements. Women should be encouraged to get to know their baby's movements and understand what is normal for them and their baby[10]
- 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.[1]
- DFM is strongly linked to adverse perinatal outcome e.g. neurodevelopmental disability, infection, feto-maternal haemorrhage, emergency delivery, umbilical cord complications, and small for gestational age (SGA) [1,4]
- There are no randomised control trials of ultrasound verse no ultrasound in women with DFM. A prospective cohort study of 3014 women in with DFM, 94% had USS with 11.6% having an abnormality detected in growth, AFI, doppler or morphology. The CTG was abnormal 3.2% of the time [7]
- The risk factors for stillbirth in this LOP have been derived from the SBB. The risk of stillbirth in NSW, as estimated by SBB is 6 in 1000[10]. This includes congenital abnormalities which is the most common cause of perinatal death[11]
- A case-control study in Queensland of 1800 birth showed 16% of women with DFM had growth restriction
- There is insufficient evidence to recommend “kick-counting” using a specified limit. There is a wide range of normal, and women should be aware of their baby’s individual pattern. A meta-analysis of counting fetal movements and perinatal mortality showed no difference in perinatal outcomes, but a modest increase in preterm delivery, IOL and caesarean [5]

8. RELATED POLICIES / PROCEDURES / CLINICAL PRACTICE LOP

- Australian College of midwives (ACM) Guidelines for consultation and referral
- Care Pathway for women Concerned About Fetal Movements MoH GL2021_019 NSW Health
- Fetal heart rate Monitoring – Maternity – MoH GL2018_025 NSW Health
- Maternity – Oxytocin for the Induction of Labour at or Beyond Term MoH PD2011_075 NSW Health

9. RISK RATING

- Low

10. NATIONAL STANDARD

- Standard 2 - Partnering with Consumers
- Standard 5 - Comprehensive care
- Standard 8 - Recognising and responding to Clinical deterioration

- **REFERENCES**

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11. Centre for Epidemiology and Evidence. *New South Wales Mothers and Babies 2020*. NSW Ministry of Health, 2021

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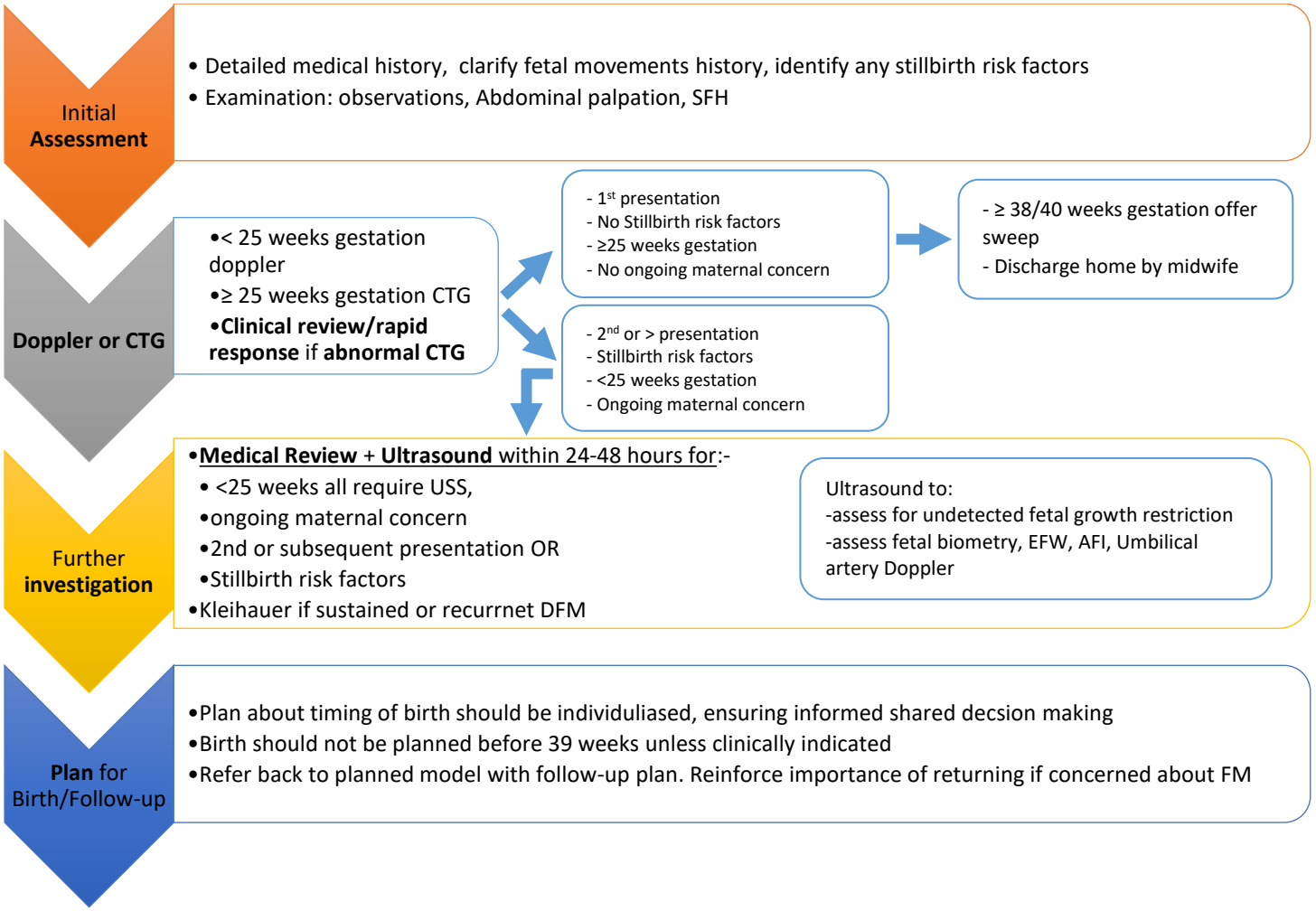
Decreased Fetal Movement



STILLBIRTH RISK FACTORS

- Previous stillbirth
- Known or suspected small for gestational age (SGA) i.e. <10th centile
- Antepartum haemorrhage
- Hypertension/preeclampsia
- Pre-existing diabetes
- Pre-existing hypertension
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- Maternal age >35 years
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