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TITLE: Birth After Caesarean (BAC)

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1. Purpose

This guideline outlines the best practice for care of women/people with previous caesarean, whether having a trial of labour (TOL) or an elective repeat caesarean section (ERCS).

Women/people should be well-informed of the main reason for their previous caesarean section, the risks and benefits of each mode of birth in her current pregnancy. Also whether they are clinically eligible for TOL, and an individualised likelihood of achieving vaginal birth after caesarean section (VBAC).

It is important that all decision making regarding mode of birth involves the woman, Lead Maternity Carer (LMC) and Consultant Obstetrician, as per Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines, 2012).

2. Scope

This guideline applies to all Health NZ Te Whatu Ora Lakes Obstetric Medical and Midwifery staff and Lead Maternity Carers (LMC's) and the women/people they provide care for.

3. Definitions

BP	Blood Pressure
CTG	Cardiotocograph
EFM	Electronic Fetal Monitoring
EFW	Estimated Fetal Weight
ERCS	Elective Repeat Caesarean Section
IV	Intravenous
LMC	Lead Maternity Carer
LSCS	Lower Section Caesarean Section
RANZCOG	Royal Australian and New Zealand College of Obstetricians and Gynaecologists
TOL	Trial of Labour
VBAC	Vaginal Birth After Caesarean

4. Background

There are increasing rates of primary caesarean sections which are leading to a larger proportion of pregnant women/people presenting with a history of prior caesarean section.

Those with a prior history of an uncomplicated lower segment caesarean section, in an otherwise uncomplicated pregnancy, should be given the opportunity to discuss the birth options of planned trial of labour (TOL) or elective repeat caesarean section (ERCS) early in the course of their antenatal care.

Each option, either labour with a view to safe vaginal birth, or planned caesarean section, has both potential risks and benefits. The decision about mode of birth should consider the individual woman's preferences and priorities and include discussion about the individual and general risks and benefits of TOL and ERCS. This discussion about mode of birth should occur between the woman/person, an Obstetrician and the LMC.

5. Management - Antenatal

5.1 Initial Antenatal Clinic Consultation

Women/people who have had a previous caesarean section should;

- be referred to Antenatal Clinic at approximately 20 weeks' gestation (Health NZ Te Whatu Ora Referral Guidelines, 2023)
- have clinical records of previous caesarean section surgeries ordered

At the consultation:

- Review previous clinical records for the course of labour, reasons for, and surgical issues with, the previous caesarean section(s), type of uterine scar etc.
- Discuss the options for mode of delivery with the woman/person
- Use the 'Birth After Caesarean (BAC) – Consultation Aid' (EDMS 2947338) to inform and record the discussion of the individual and general risks and benefits of the relevant birth options.
- If relevant; discuss the individual woman/person's chances of success for VBAC

Antenatal discussion should include informing the woman/person of;

- **likely successful outcome of TOL (average 70%)**
- **risk of scar rupture and possible consequences**
- **recommended monitoring**
- **location for labour and/or birth**

- Provide the woman/person with information leaflets; RANZCOG 'Vaginal Birth After Caesarean Section' and/or 'Caesarean Section'
- File the completed 'Birth After Caesarean (BAC) – Consultation Aid' (EDMS 2947338), or document all information provided, in the clinical record.

5.2 Benefits and Risks of TOL

Women/people with a prior history of **one uncomplicated** lower segment caesarean section, in an otherwise uncomplicated pregnancy at term, with no contraindications to vaginal birth, should be encouraged to aim for planned VBAC.

Women considering their options for birth following a single previous lower segment caesarean section, should be informed that, overall, according to the international literature, their chances of VBAC are approximately **70%.** These chances are further increased if they have also had a previous vaginal birth.

Factors associated with reduced chance of successful TOL are;

- Maternal obesity – BMI >30
- Maternal age > 40 years
- No previous vaginal birth
- Fetal macrosomia – EFW and/or abdominal circumference >/= 95th centile for gestation
- Induction of labour
- Previous caesarean section for labour dystocia
- More than one previous caesarean section

Benefits and Risks of TOL cont'd.

Women/people considering the options for birth after a previous caesarean should be informed that **ERCS does increase the risk of;**

- heavy bleeding requiring blood transfusion
- infection
- a longer stay in hospital
- **serious complications in future pregnancies** which includes placenta praevia, placenta accreta and hysterectomy.

Women/people considering the options for birth after caesarean section should also be informed that;

- planned TOL carries a **risk of uterine rupture of 0.5 – 0.7%** (5 to 7 women per 1000).
- If this does occur, there is approximately a **1 in 7 chance of serious adverse outcome** (death or brain injury) for the baby and a risk of hysterectomy (RANZCOG, 2019).

Having a vaginal birth after previous caesarean section does decrease the caesarean related risks for future pregnancies.

5.3 Contraindications to TOL

There is limited evidence on whether maternal or neonatal outcomes are significantly influenced by the number of prior caesarean births or type of prior uterine scar. However, due to higher absolute risks, or unknown risks, of uterine rupture planned **TOL is contraindicated** in women with:

- Previous uterine rupture
- Previous 'classical' or 'inverted-T' caesarean section
- Unknown position of uterine scar
- Two or more previous caesarean sections
- Other absolute contraindications to vaginal birth e.g. major placenta praevia

Women/people with a prior history of **two uncomplicated** low transverse caesarean sections, in an otherwise uncomplicated pregnancy at term, with no contraindications for vaginal birth, who have been fully informed by a Consultant Obstetrician, may be considered suitable for a planned TOL.

5.4 Other Risk Factors for TOL

A **cautious approach** is advised when a woman/person is considering TOL with one or more of the following risk factors for uterine rupture, as there is uncertainty about the safety and efficacy of planned TOL in these situations;

- Short inter-delivery interval - less than 18 months
- Fetal macrosomia – EFW and/or abdominal circumference >/= 95th centile for gestation
- Post dates
- Maternal age > 40 years
- Maternal obesity – BMI >30
- Twin pregnancy

5.5 Subsequent Antenatal Clinic Consultation

- A plan for mode of birth should be agreed between the woman/person, the Obstetrician and her LMC before the expected/planned birth date (ideally by 36 weeks).
- Post term management and potential complications should be discussed and documented.
- Document a clear plan for labour and birth in the antenatal clinic letter and in the clinical record.
- This should include;
    - Any **specific additional risks** for this pregnancy, i.e. short inter-delivery interval
    - The recommended **location for labour and/or birth**
    - **When** the woman is to present to hospital, i.e. when pain is felt or contractions start
    - The need for **close fetal monitoring** during labour
    - A **plan** in the event of labour starting prior to a scheduled date for ERCS
- Planned ERCS, where the reason is for previous caesarean section alone, should be booked for some time after 39+0 weeks' gestation

6. Management - Intrapartum

6.1 Intrapartum Care During Planned TOL

- Women/people should be advised that planned TOL take place in a secondary/tertiary facility where there is access to electronic fetal monitoring (EFM) and an operating theatre.
- Those having planned TOL (especially those with risk factors for uterine rupture, see 5.4) should be assessed in early labour and admitted to the secondary/tertiary facility.
    - N.B.: initial early labour assessment may take place at the primary facility but arrange transfer to the secondary facility for ongoing monitoring immediately unless birth is imminent
- Women/people should be advised to have continuous electronic fetal monitoring **following the onset of uterine contractions** and for the duration of labour (RANZCOG, 2019)
- If a woman/person declines EFM during TOL, provide counselling about the risk of a delay in diagnosis of uterine rupture due to the possibility of 'silent uterine rupture' and increased risk of injury to the fetus and document the discussion. A three-way conversation about what form of monitoring the woman will accept should follow.
- As a minimum, intermittent auscultation is suggested at 15 minute intervals during the first stage of labour and following every contraction in the second stage of labour (see Fetal Heart Monitoring Guideline 2499498).
- Continuous (one to one) intrapartum midwifery care is required to enable the monitoring of progress in labour and prompt identification and management of uterine scar rupture.
- A partogram should be completed to monitor progress during labour
- Advise the woman/person that all analgesia options are available to her during TOL

Intrapartum Care During Planned TOL cont'd.

- Inform the on call Obstetric Registrar / Consultant Obstetrician of the following:
  - Abnormal progress in labour
  - CTG abnormalities
  - If delivery is not imminent after 30 minutes of effective pushing.

- If a woman/person presents in advanced labour to the rural primary unit and the assessment is that it is unsafe to transfer to a secondary/tertiary facility, intermittent auscultation is the monitoring of choice. The use of continuous CTG in labour in this setting is not supported (see Fetal Heart Monitoring Guideline 2499498)

N.B.: There is no requirement for a woman/person to have an intravenous (IV) line in labour for the indication of previous caesarean section alone – this can be inserted if and when required.

6.2 Induction and Augmentation of Labour

Although induction and augmentation of labour is not contraindicated, it should be preceded by detailed obstetric assessment, maternal counselling and by a consultant-led decision.

When induction or augmentation is required women/people should be informed of the increased risk of uterine rupture and of needing a caesarean section during TOL.

Discussion is recommended regarding the:

- Decision to induce
- Method of induction chosen – prostaglandins may increase the risk of scar rupture
- Decision to augment with oxytocin
- Time intervals for serial vaginal examination
- Progress in cervical dilatation that would prompt advice to discontinue the TOL

The above should be discussed and agreed with the woman/person and her LMC and a Consultant Obstetrician, either directly, or via the Obstetric Registrar who has discussed the specific situation with the Consultant.

During labour;

- Oxytocin augmentation should be titrated such that it should not exceed the maximum rate of contractions of **four in 10 minutes**; the ideal contraction frequency would be **three to four in 10 minutes**.
- Detailed serial vaginal examinations to assess cervical dilatation, preferably by the same person, are necessary to ensure there is adequate cervical progress to enable the TOL to continue.

6.3 If Labour Starts Before Planned Caesarean Section

If a woman/person, who has planned for ERCS, experiences abdominal pain or goes into labour;

- Advise them to present to the Secondary Facility as soon as possible
- Advise them to be nil by mouth
- On arrival, complete a full midwifery assessment
- Auscultate fetal heart rate with doppler and commence continuous CTG monitoring
- Notify the Obstetric Registrar or Consultant Obstetrician on call
- Insert an IV line and take bloods
- Depending on risk factors in the previous and current pregnancy;
  - If clinically appropriate & labour has started, offer information about TOL
  - Support the woman/person's choice to change plan to TOL, or proceed with ERCS
- Any decision for early delivery must include the classification of urgency with which caesarean section needs to take place.
- Ensure adequate analgesia regardless of final decision about mode of birth

N.B.: Once baby is born, notify the theatre scheduler to remove woman/person from the elective caesarean section list.

7. Management of Suspected Uterine Scar Rupture

Early diagnosis of uterine scar rupture, followed by rapid caesarean section and resuscitation is essential to reduce the associated morbidity and/or mortality in the mother and fetus/neonate.

There is no single clinical feature that is indicative of uterine rupture but the presence of any of the following should raise concern of the possibility of this occurring or having occurred and prompt a full clinical assessment;

- **Abnormal CTG** - the most common finding in uterine rupture and may include sudden changes in fetal heart rate pattern.
- **Abdominal pain** – severe, constant lower abdominal pain, may worsen during contractions (+/- shoulder tip pain, vomiting and suprapubic tenderness).
- **Raised maternal pulse rate** – may rise slowly
- **Blood loss** – fresh vaginal blood loss which may be mistaken for a "show"
- **Haematuria**
- **Cessation of contractions** – rupture at height of contraction, then contractions cease.
- **Maternal shock** – faintness, tachycardia, hypotension.
- **Fetal parts** more easily palpable.
- **Recession of the baby's head** from the pelvis.
- **Loss of station** of presenting part.
- Change in abdominal contour and **fetal heart rate not detected** at old transducer site
- **Undetectable fetal heart rate**
- **Dilatation** of the cervix regresses

7.1 Secondary Facility - Emergency Management of Suspected Uterine Rupture

- Press emergency buzzer to obtain help
- Call 777 and include the Obstetric, Neonatal and Anaesthetic emergency teams
- Monitor maternal blood pressure (BP), pulse, oxygen saturations, calculate MEWS
- Expedite delivery - forceps delivery (if feasible), otherwise Category 1 emergency caesarean section
- Maternal oxygen at 6 litres via rebreather mask, unless instructed by medical team to administer at a higher level
- Provide reassurance and emotional support to the woman/person and family/whānau
- Document events and times as soon as practical

7.2 Primary Facility - Emergency Management of Suspected Uterine Rupture

- Press emergency buzzer to obtain help
- Call 777 to obtain help from Emergency Department etc.
- Monitor maternal blood pressure (BP), pulse, oxygen saturations, calculate MEWS
- Maternal oxygen at 6 litres via rebreather mask, unless instructed by medical staff to administer at a higher level
- Site IV line
- Call Operator and speak to Consultant Obstetrician on call
- Request emergency transport as per Consultant Obstetrician's instructions
- Complete Transfer Record (2632402) - prepare for transfer as per the checklist and any additional instructions from the Consultant Obstetrician on call
- Transfer to secondary facility – take and document observations etc. enroute
- Provide reassurance and emotional support to the woman/person and family/whānau
- Document events and times as soon as practical

8. Related Documentation

- Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines). 2023.
- Induction of Labour Guideline – EDMS 978951
- Fetal Heart Monitoring Guideline – EDMS 2499498
- Caesarean Section Guideline – EDMS 43075
- Maternity Assessment Referral – LMC Process – EDMS 219729
- Maternity Referrals and Models of Care Guideline – EDMS 2499420
- Maternity Care Plan Summary
- RANZCOG Patient Education Leaflet – Vaginal Birth after Caesarean Section
- RANZCOG Patient Education Leaflet – Caesarean Section
- Transfer Record – EDMS 2632402

9. References

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