

Vaginal birth after caesarean (VBAC)

Clinical Guideline Presentation v4.0



45 minutes

Towards CPD Hours

References:

Queensland Clinical Guideline: *Vaginal birth after caesarean (VBAC)* is the primary reference for this package.

Recommended citation:

Queensland Clinical Guidelines. Vaginal birth after caesarean (VBAC) clinical guideline education presentation E20.12-1-V4-R25. Queensland Health. 2020.

Disclaimer:

This presentation is an implementation tool and should be used in conjunction with the published guideline. This information does not supersede or replace the guideline. Consult the guideline for further information and references.

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Funding:

Queensland Clinical Guidelines is supported by the Queensland Health, Healthcare Improvement Unit.

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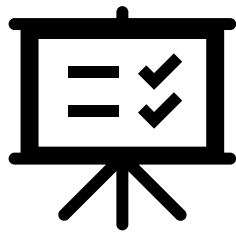
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Abbreviations

- CS: Caesarean section
- CTG: Cardiotocograph
- ERCS: Elective repeat caesarean section
- HIE: Hypoxic-ischaemic encephalopathy
- IOL: Induction of labour
- VBAC: Vaginal birth after caesarean



Objectives

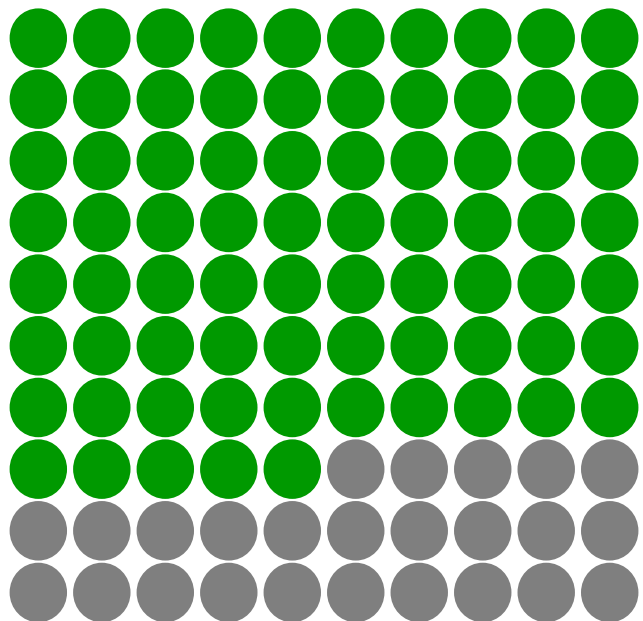
- Identify the risks and benefits of VBAC and ERCS
- Identify factors which favour likelihood of VBAC and reduce likelihood of VBAC
- Outline considerations for:
 - Counselling and mode of birth
 - IOL and augmentation of labour
- Identify recommended care for women planning a VBAC

Background

- CS rates are increasing worldwide
- Overall rate of CS in Queensland is 35.8% (2018 data)
- Increasing primary CS rate has led to an increased proportion of women with a history of previous CS.
- Options for subsequent births:
 - Planned VBAC which will result in either a vaginal birth or an emergency CS
 - An ERCS

Benefits & risks of planned VBAC

- Maternal **benefits** of VBAC
 - Overall 72–75% chance of vaginal birth



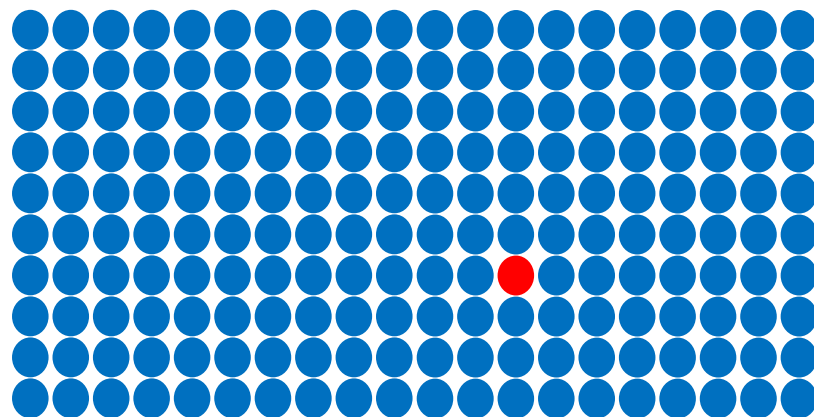
Around **75** out of every 100 women who plan a VBAC will have a vaginal birth and **25** will have a caesarean

Benefits & risks of planned VBAC

- Maternal **benefits** of VBAC
 - If vaginal birth
 - Shorter hospital stay and faster recovery
 - Avoidance of major surgery and multiple CS in future
 - Increased likelihood of vaginal birth in future
 - Sense of satisfaction with having vaginal birth
 - Reduced risk maternal mortality
 - Increased rates of breastfeeding

Benefits & risks of planned VBAC

- Maternal **risks** with planned VBAC
 - Overall 25–28% of emergency CS
 - Emergency CS associated with increased morbidity compared to ERCS
 - Around 0.5% risk of uterine rupture



Around **1** in every 200 women who plan for a VBAC will experience uterine rupture and **199** women will not

Benefits & risks of planned VBAC

- Maternal **risks** with planned VBAC
 - If vaginal birth
 - Potential trauma to perineum and pelvic floor
 - Increased risk of anal sphincter injury for women having second birth following one previous CS compared with nulliparous women

Benefits & risks of planned VBAC

- **Benefits** to baby of planned VBAC
 - Increased likelihood of breastfeeding
- **Fetal risks** of VBAC
 - Increased risk of perinatal mortality compared with ERCS
 - 0.1% risk stillbirth beyond 39+0 weeks while awaiting onset of labour
 - Increased risk of HIE (majority of cases associated with uterine rupture)

Additional considerations

- Risk of hysterectomy
 - Does not differ considerably between VBAC and ERCS
- Haemorrhage and transfusion risk
 - Limited evidence
 - Systematic review and meta-analysis does not demonstrate a significant difference

Contraindications for VBAC

- Previous uterine rupture
 - Higher risk (5% or greater) of recurrent rupture in labour
- Previous classical CS
- Other contraindications to vaginal birth which apply irrespective of history of CS (e.g. major placenta praevia)

Uterine rupture

Signs and symptoms

- Typically non-specific, some may be rare and associated with other obstetric complications making diagnosis difficult
- Most common sign is prolonged, persistent and profound bradycardia (present in up to 80% of cases)
- Classic triad of uterine rupture (pain, vaginal bleeding and fetal heart rate changes) present in less than 10% of cases

Uterine rupture

Signs and symptoms

Abnormal CTG	Abnormal vaginal bleeding
Abdominal pain (especially if persisting between contractions)	Cessation of previously efficient uterine activity
Acute onset of scar tenderness	Abnormal progress of labour
Loss of intrauterine pressure	Haematuria
Chest pain or shoulder tip pain (especially in absence of vaginal bleeding)	Easier abdominal palpation of fetal parts
Maternal hypotension, tachycardia or shock	Loss of station of presenting part

Two or more previous CS

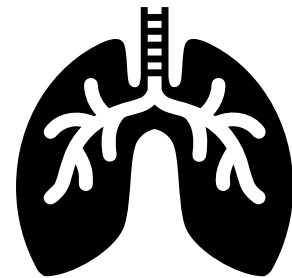
- Not considered a contraindication to VBAC
- Limited studies and mixed findings
- Overall, similar VBAC rates as those with one prior CS
- Systematic review of literature on vaginal birth after two CS reported
 - VBAC rate of 71% and uterine rupture risk of 1.36%
 - Comparable maternal morbidity with 3rd CS and no significant difference in neonatal outcomes
- Retrospective cohort study reported similar VBAC rates and maternal morbidity for women with 3 or more CS compared to those who had ERCS
- Recommend counselling with obstetrician

Risks of multiple CS

- Risks of serious maternal morbidity increases with number of CS
- Risks include
 - Hysterectomy
 - Haemorrhage and blood transfusion
 - Adhesions
 - Surgical injuries
 - Placenta praevia and accreta

Neonatal respiratory morbidity

- Can occur regardless of mode of birth
- Conflicting evidence regarding whether VBAC or ERCS results in more transient tachypnoea of the newborn
- CS is known to be associated with respiratory morbidity, especially prior to 39+0 weeks gestation



Likelihood of VBAC

Factors favouring likelihood of VBAC	Factors reducing likelihood of VBAC
Previous vaginal birth (strongest predictor)	No previous vaginal birth
Fetal malpresentation was indication for previous CS	Previous CS for: <ul style="list-style-type: none"> • Dystocia or failure to progress • Failed induction of labour • Cephalopelvic disproportion
Spontaneous onset of labour	Induction of labour
Higher Bishop score	Hypertensive disorders
Uncomplicated, low risk pregnancy	Obesity
	Advance maternal age
	Current fetal macrosomia
	Diabetes (gestational or pre-existing)

Inter-pregnancy interval

- Refers to time from CS (birth) to conception or onset of next pregnancy
- Inter-pregnancy interval of less than 12 months is associated with increased risk of
 - Uterine rupture
 - Placenta praevia
 - Placental abruption
 - Preterm birth
- Inter-pregnancy interval of less than 12 months is not a contraindication for VBAC
 - Facilitate consultation with obstetrician
 - Consider individual and clinical circumstances

Case study

Gillian is a G1P1 who has had an elective CS for breech presentation

What is important to discuss with Gillian following her CS?

- Interval from CS to next pregnancy and birth
- Contraception
- Considerations for mode of birth in subsequent pregnancies
- Offer opportunity to discuss and debrief her CS birth experience

Mode of birth considerations

Two years later, Gillian is pregnant for the second time. She presents to her local hospital for her booking in appointment

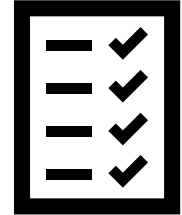
What information needs to be obtained at this visit?

- Date and indication for previous CS
- Type of CS performed
- Operation report to verify incision type, closure technique and any postoperative complications



Antenatal counselling

What are some important considerations for counselling Gillian?



- Discuss risks and benefits in a balanced and systematic way
- Wherever possible, use a standardised counselling checklist to promote consistent information
- Individualise discussions according to Gillian's circumstances and preferences
- Be mindful that women weigh potential risks and benefits uniquely
- Consider Gillian's intended family size and risks of additional CS with recognition that future plans may change

Induction of labour

Gillian is planning a VBAC and is now 41+0 weeks pregnant.

What are some considerations to discuss with Gillian about VBAC and induction of labour (IOL)?

- IOL is not contraindicated in VBAC, but is associated with an increased risk of uterine rupture and lower rates of VBAC
- Consider IOL if risks of expectant management outweigh risks of IOL
- Consider only if Gillian prefers IOL over CS
- Use mechanical methods of IOL and avoid prostaglandins where possible



Labour and birth

Gillian goes into spontaneous labour at 41+1 weeks

What intrapartum care is recommended for women having a VBAC?

- Provide one-to-one midwifery care and continuous support
- Recommend continuous electronic fetal monitoring during labour
- Observe for signs and symptoms of uterine rupture
- If difficult cannulation is anticipated or additional risk factors are present, insert an intravenous cannula
- Women having a VBAC can safely access full range of pain relief options including water immersion and epidural

Postnatal care

Gillian progresses to a normal vaginal birth

What postpartum care is recommended for Gillian?

- Provide standard postnatal care
- Offer Gillian the opportunity to discuss the implications for future pregnancies of her birth experience
- Assess Gillian's emotional wellbeing and facilitate corresponding support where indicated