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Reference No: SG 135/09

Title:	**Management of women with previous caesarean section**		
Author(s)	[redacted] Consultant, Obstetrics & Gynaecology, [redacted]@belfasttrust.hscni.net		
Ownership:	[redacted] Director, Specialist Hospitals & Women's Health		
Approval by:	Directorate Governance Approval Standards and Guidelines Committee Trust Policy Committee Executive Team Meeting	**Approval date:**	05/12/2019 11/12/2019 06/02/2020 12/02/2020
Operational Date:	February 2019	**Next Review:**	February 2025
Version No.	2	**Supercedes**	V1 – January 2009 – January 2012
Key words:	Previous caesarean section		
Links to other policies			

Date	Version	Author	Comments
01/12/2008	0.1	[redacted]	Initial draft
02/01/2009	1.0	[redacted]	Versio 1 published
24/07/2019	1.1	[redacted]	Drafting of updated guideline
27/09/2019	1.2	[redacted]	Addition of new appendices to previous guideline
February 2019	2		Final version

1.0 INTRODUCTION / PURPOSE OF POLICY

1.1 Background

To provide evidence based information to inform the antenatal and intrapartum care of pregnant women who have had previous caesarean delivery, with the options for delivery being either planned vaginal birth after caesarean section (VBAC) or elective repeat caesarean section (ERCS)

1.2 Purpose

There is generalised consensus (RCOG, NICE, ACOG) that planned VBAC is a clinically safe choice for the majority of women with a single previous lower transverse caesarean delivery. Such a strategy is also supported by health economic modelling1,2 and would also limit any escalation of the caesarean delivery rate and maternal morbidity associated with multiple caesarean deliveries.

1.3 Objectives

To provide guidance on the birth choices services offered to women within the Trust following a previous caesarean section delivery.

2.0 SCOPE OF THE POLICY

Guide the staff in managing previous caesarean sections and provide evidence based guidance on the risks and management of the services provided in this Trust.

3.0 ROLES/RESPONSIBILITIES

All midwives and obstetricans caring for women who have had a previous caesarean section must be familiar with this guideline and the birth choices services that are available and the risk assessment, documentation and guidance available.

4.0 KEY POLICY PRINCIPLES

4.1 Definitions

Planned VBAC (vaginal birth after caesarean) refers to any woman who has experienced a prior caesarean birth and who plans to deliver vaginally rather than elective repeat caesarean section

4.2 Key Policy Statement(s)

More than one in five women (20%) in the UK currently give birth by caesarean delivery and most of these women can have a vaginal birth in their next pregnancy. This guideline is to facilitate VBAC as the first choice of delivery (9).

4.3 Policy Principles

I. Antenatal care for women with previous caesarean section

- The antenatal care schedule should comply with that recommended by the NICE antenatal care guideline (NICE 2008).
- Women with no other risk factors but one previous caesarean section should be booked for antenatal care reviews at Birth Choices Clinic.
- With lack of other identified risk factors women should be reviewed by the team including trained birth choices midwives. Birth Choices Clinic is designed to guide and support women through the informed decision-making process on mode of birth after a primary caesarean delivery. There is evidence from other countries that the specialised clinics improved VBAC attempt rates[3]
- In the majority of cases, counselling for mode of delivery should be conducted by a member of the maternity team during first half of pregnancy, the latest after the woman's anomaly ultrasound, assuming that there were no contraindications to planned VBAC.
- After initial counselling, some more complex cases may need senior support. Discussion should be individualised to the woman's medical circumstances and consider her individual chance of VBAC success and future reproductive preferences as well as her wishes.
- A patient information leaflet and "Your birth after previous caesarean birth" pathway should be part of the decision making process on the mode of birth after caesarean delivery (Appendix 1 and 2) and is an integral part of documentation of antenatal counselling. In most cases, the decision regarding mode of delivery should be finalised by 36+0 weeks of gestation and be agreed upon by the woman and member(s) of the maternity team.

Women should be informed that the success rate of planned VBAC is 72–75%.

Please note: When a date for ERCS is being arranged, a plan for the event of labour starting before the scheduled date should be documented in the notes. As up to 10% of women scheduled for ERCS go into labour before 39+0 weeks, it is good practice to discuss and document a plan for delivery if labour starts prior to the scheduled date.

The checklist for elective caesarean section should be used when booking date for elective caesarean section (Appendix 4)

I.a. Suitability for planned VBAC

Planned VBAC is appropriate for and may be offered to the majority of women with a singleton pregnancy of cephalic presentation at 37+0 weeks or beyond who have had a single previous lower segment caesarean delivery, with or without a history of previous vaginal birth. There is a consensus, endorsed by evidence-based systematic reviews [4,5,6] and clinical guidelines[1,7,8,9] that planned VBAC is a safe and appropriate mode of delivery for the majority of pregnant women with a single previous lower segment caesarean delivery. A review of the previous caesarean delivery records and current pregnancy is recommended to identify contraindications to VBAC.

I.b. Contraindications to VBAC

Planned VBAC is contraindicated in women with:

· previous uterine rupture (risk of repeat uterine rupture estimated at 5%)

· classical caesarean scar

· other absolute contraindications to vaginal birth that apply irrespective of the presence or absence of a scar (e.g. major placenta praevia).

Women with the following risk factors are considered to be at increased risk of adverse maternal and/or perinatal outcome as a consequence of VBAC and decisions should be made on a case-by-case basis by a senior obstetrician with access to the details of previous surgery.

Type of previous uterine incision

· Inverted T incision

· J incision

· Low vertical incision

· Significant inadvertent uterine extension

Previous uterine surgery

· Although previous uterine surgery is not within the scope of this guideline, there is uncertainty whether women who have undergone laparoscopic or abdominal myomectomy, particularly where the uterine cavity has been breached, are at increased risk of uterine rupture. Uterine rupture after hysteroscopic resection of uterine septum is considered a rare complication. Given this uncertainty, women who have had such uterine surgery should be

considered to have delivery risks at least equivalent to those of VBAC and managed similarly in labour.

I.c consultant/senior obstetrician review criteria

A senior obstetrician should be involved in any of the following situations (see appendix 3 algorithm of antenatal care)

· the woman has contraindications that precluded VBAC

· she is uncertain of mode of delivery

· she had complicated uterine incision

· she had more than one caesarean section and requests VBAC

· she had previous uterine surgery

· she specifically requests ERCS

· she requires induction of labour

· she develops specific pregnancy complications (e.g. pre-eclampsia, breech presentation, fetal growth restriction, macrosomia).

I.d. Women with two or more prior caesareans

Women who have had two or more prior lower segment caesarean deliveries may be offered VBAC after counselling by a senior obstetrician. This should include the risk of uterine rupture and maternal morbidity, and the individual likelihood of successful VBAC (e.g. given a history of prior vaginal delivery).

A multivariate analysis of the NICHD study showed that there was no significant difference in the rates of uterine rupture in VBAC with two or more previous caesarean births (9/975, 92/10 000) compared with a single previous caesarean birth (115/16 915, 68/10 000)10

These findings concur with other observational studies, which, overall, have shown similar rates of VBAC success with two previous caesarean births (VBAC success rates of 62–75%) and single prior caesarean birth[11,12,13,14] . It is notable that more than half of the women with two previous caesarean deliveries had also had a previous vaginal birth and 40% had a previous VBAC. Hence, caution should be applied when extrapolating these data to women with no previous vaginal delivery.

A systematic review15 has suggested that women with two previous caesarean deliveries who are considering VBAC should be counselled about

· success rate (71.1%)

· uterine rupture rate (1.36%)

· comparable maternal morbidity to the repeat caesarean delivery option

· the rates of hysterectomy 56/10 000 compared with 19/10 000 for one previous cs

· transfusion (1.99% compared with 1.21% for 1 previous cs)

Therefore, provided that the woman has been fully informed by a senior obstetrician of the increased risks and a comprehensive individualised risk analysis has been undertaken of the indication for and the nature of the previous caesarean deliveries, then planned VBAC may be supported in women with two or more previous lower segment caesarean deliveries.

Women seeking multiple (e.g. three or more) future pregnancies should be counselled that opting for ERCS may expose themselves to greater surgical risks for future pregnancies (particularly placenta praevia, placenta accreta and hysterectomy) associated with repeated ERCS delivery and therefore greater consideration ought to be given to attempting VBAC.

I.e. Factors associated with an increased risk of uterine rupture in women undergoing VBAC

An individualised assessment of the suitability for VBAC should be made in women with factors that increase the risk of uterine rupture. Factors that potentially increase the risk of uterine rupture include

· short inter-delivery interval (less than 12 months since last delivery)

· post-date pregnancy

· maternal age of 40 years or more

· obesity

· low pre-labour Bishop score

· fetal macrosomia

The recent study concluded that a short inter-delivery interval (less than 12 months) is not a risk factor for major complications such as uterine rupture and maternal death, but that it is for preterm delivery. There is uncertainty in how to incorporate this knowledge in antenatal counselling and therefore the presence of these risk factors does not contraindicate VBAC. However, such factors may be considered during the decision-making process, particularly if considering induction or augmentation of VBAC labour.

VBAC -Serious adverse maternal outcome

· Uterine rupture - Rates of uterine rupture differ according to whether VBAC labour is spontaneous (0.15–0.4%), induced (0.54–1.4%) or augmented (0.9–1.91%)16,17,18

· Maternal death

· Hysterectomy and other morbidities

No significant difference between planned VBAC and ERCS in

· The rates of hysterectomy

· thromboembolic disease

· transfusion

· endometritis

However, unsuccessful VBAC compared with successful VBAC increased the risk

· of uterine rupture (2.3% versus 0.1%),

· hysterectomy (0.5% versus 0.1%),

· transfusion (3.2% versus 1.2%)

· endometritis (7.7% versus 1.2%)16

Meta-analysis has shown that hysterectomy was required in 14–33% of uterine rupture cases4. A review of Maternal-Fetal Medicine Units Network publications19 suggests that, at term, women undergoing VBAC as compared with ERCS have a significantly greater incidence of blood transfusion (2% versus 1%), but the likelihood of hysterectomy is not increased

VBAC - Adverse perinatal outcomes

· **Antepartum stillbirth**

Planned VBAC is associated with an additional 10 per 10 000 prospective risk of antepartum stillbirth beyond 39+0 weeks of gestation (recommended timing for ERCS delivery) while awaiting spontaneous labour[20] The pathophysiology of the increased risk of stillbirth associated with VBAC is unexplained, but this increased risk is evident in women with previous caesarean delivery compared with no prior caesarean delivery despite correcting for gestation and other factors[20,21]

· **Delivery-related perinatal death**

4 per 10 000 risk of term perinatal death (i.e. intrapartum stillbirth or neonatal death), with around one-third (1.4 per 10 000 overall) of deaths due to uterine rupture[16]. In contrast, ERCS is associated with a risk of delivery-related perinatal death of 1 per 10 000 or less.

· Neonatal hypoxic ischaemic encephalopathy (HIE)

8 per 10 000 planned VBACs and, of these, 60% of cases (7/12) were due to uterine rupture

ERCS and adverse maternal and perinatal outcomes

· Maternal mortality - an increased risk of maternal mortality with ERCS compared with planned VBAC (13/100 000 versus 4/100 000)4

· Neonatal respiratory morbidity - ERCS compared with planned VBAC increased the risks of transient tachypnoea of the newborn (4–5% versus 2–3%) and respiratory distress syndrome (0.5% versus less than 0.05%) 4,16,22. It has been reported that respiratory morbidity was 11.4% at 37 weeks, 6.2% at 38 weeks and 1.5% 39 weeks of gestation following ERCS.

Summary of outcomes of planned VBAC versus ERCS

A reasonable summary of the evidence is that planned VBAC exposes the woman to a very low (0.25%) additional risk for experiencing perinatal mortality or serious neonatal morbidity and an additional 1.5% risk of any significant morbidity compared with opting for ERCS from 39+0 weeks of gestation. Nevertheless, it may be helpful to emphasise to women that the absolute risk of delivery-related perinatal death associated with VBAC is extremely low (4 per 10 000 [0.04%]) and comparable to the risk for nulliparous women in labour[23,24]

Cochrane reviews (references 25 & 26 suggest that there are benefits and risks associated with planned ERCS and planned induction of labour in women with a prior caesarean delivery. There is a paucity of randomised controlled trials that would provide the most reliable evidence and help women to make an informed choice. The related evidence for the established care pathways is potentially biased, as it is drawn from nonrandomised studies. Hence, the results and conclusions should be interpreted with caution and the uncertainties should be discussed with women.

The individualised likelihood of VBAC success

· Women with one or more previous vaginal births should be informed that previous vaginal delivery, particularly previous VBAC, is the single best predictor of successful VBAC and is associated with a planned VBAC success rate of 85–90%

· Previous vaginal delivery is also independently associated with a reduced risk of uterine rupture

Increased risk of unsuccessful VBAC (if all these factors present VBAC success rate 40%)

· Induced labour

· no previous vaginal delivery

· BMI greater than 30

· previous caesarean for labour dystocia[16,27]

Increased likelihood of successful VBAC

· Greater maternal height,

· maternal age less than 40 years,

· BMI less than 30,

· gestation of less than 40 weeks and

· infant birthweight less than 4 kg

· white ethnicity

· spontaneous onset of labour

· vertex presentation

· fetal head engagement or a lower station

· and higher admission Bishop score

Indication for previous cs and likelihood of success of VBAC

· previous caesarean for fetal malpresentation (84%)

previous caesarean for labour dystocia (64%)

· fetal distress (73%) indications[16,27]

other facts important when counselling women with previous cs

· Those who had an emergency caesarean delivery in their first birth also had a lower VBAC success rate, in particular those who experienced a failed induction of labour

· successful VBAC appears more likely among women with previous caesarean for dystocia at 8 cm or more compared with women with previous caesarean for dystocia at less than 8 cm

· the success rate for VBAC in women who had a prior caesarean delivery due to an unsuccessful instrumental delivery was high (61.3%).

· a birthweight in the subsequent pregnancy that is higher than the birthweight in the index pregnancy predisposes to failure

II. Intrapartum management of planned VBAC

Women should be advised that planned VBAC will be conducted in a consultant led unit with continuous intrapartum care and monitoring with resources available for immediate caesarean delivery and advanced neonatal resuscitation. Women with an unplanned labour and a history of previous caesarean delivery should have a discussion with an experienced obstetrician to determine feasibility of VBAC.

Continuous monitoring of the labour from the start of contractions is mandatory to ensure prompt identification of

· maternal or fetal compromise,

· labour dystocia

· uterine scar rupture.

Therefore all women in established VBAC labour should receive:

· supportive one-to-one care

· intravenous access with full blood count and blood group and save

· continuous electronic fetal monitoring

· regular monitoring of maternal symptoms and signs

· regular (no less than 4-hourly) assessment of their cervicometric progress in labour.

Epidural analgesia is not contraindicated in a planned VBAC, although an increasing requirement for pain relief in labour should raise awareness of the possibility of an impending uterine rupture. For all labours, a meta-analysis showed that epidural analgesia increased the risk of second stage delay and operative instrumental vaginal delivery[28].The increasing pain and analgesia requirement that is likely to precede uterine rupture may explain the association between uterine rupture and increasing epidural dosing in VBAC labour that progresses to uterine rupture.

· Most uterine ruptures (more than 90%) occur during labour (the peak incidence being at 4–5 cm cervical dilatation),

· with around 18% occurring in the second stage of labour

· 8% being identified post vaginal delivery[29]

The clinical features associated with uterine scar rupture include:

· abnormal CTG the most consistent finding present in 66-76% of uterine rupture

· severe abdominal pain, especially if persisting between contractions

· acute onset scar tenderness

· abnormal vaginal bleeding

· haematuria

· cessation of previously efficient uterine activity

· maternal tachycardia, hypotension, fainting or shock

· loss of station of the presenting part

· change in abdominal contour and inability to pick up fetal heart rate at the old transducer site.

The risk of uterine rupture

· in an unscarred uterus is 2 per 10 000 (0.02%) deliveries

· in planned VBAC is approximately 20–50 per 10 000 (0.2–0.5%)

· in ERCS is 2 per 10 000 (0.02%) [4,17,18]

Early diagnosis of uterine scar dehiscence or rupture followed by expeditious laparotomy and neonatal resuscitation are essential to reduce associated morbidity and mortality.

An observational study indicated a potential upper limit for nonhypoxic neonatal delivery of 18 minutes from suspected uterine rupture to delivery[30]

Please note: scar dehiscence may be asymptomatic in up to 48% of women, and the classic triad of a complete uterine rupture (pain, vaginal bleeding, fetal heart rate abnormalities) may present in less than 10% of cases[31]

Induction of labour or augmentation of labour

· Women should be informed of the two- to three-fold increased risk of uterine rupture and around 1.5-fold increased risk of caesarean delivery in induced and/or augmented labour compared with spontaneous VBAC labour.

· A senior obstetrician should discuss the following with the woman:

o the decision to induce labour

o the proposed method of induction

o the decision to augment labour with oxytocin

o the time intervals for serial vaginal examination

o the selected parameters of progress that would necessitate discontinuing VBAC.

· Clinicians should be aware that induction of labour using mechanical methods (amniotomy or Foley catheter) is associated with a lower risk of scar rupture compared with induction using prostaglandins.

Use of Syntocinon for augmentation or induction of labour should follow the algorithm for the management of syntocinon use in VBCA (Appendix)

Please note: Uterine rupture is more likely to occur if oxytocin was used to overcome delayed progress when uterine activity appeared to be adequate (appropriate strength/frequency uterine contractions) compared with when uterine activity was absent or inadequate), higher dose oxytocin (exceeding 20 milliunits/minute) during VBAC augmentation increases the risk of uterine rupture by four-fold or greater.

The decision to induce or augment VBAC labour should be determined following careful obstetric assessment and be made by senior obstetricians in consultation with the women. As part of informed consent, women should be made aware of the increased risks associated with induction and/or augmentation of VBAC labour, and of the alternative option of caesarean delivery. Women who are contemplating future pregnancies may be prepared to accept the additional risks associated with induction and/or augmentation in an effort to avoid the potential long-term surgical risks associated with multiple repeat caesarean deliveries.

In the NICHD study16 prostaglandin induction compared with non-prostaglandin induction (e.g. amniotomy or intracervical Foley catheter) was associated with a higher uterine rupture risk (87 per 10 000 [0.87%] versus 29 per 10 000 [0.29%]) and a higher risk of perinatal death due to uterine rupture (11.2 per 10 000 [0.11%] versus 4.5 per 10 000 [0.045%]).

The use of Cook balloon/Foley catheter is preferred method for induction of labour in women with unfavourable cervix.

Planning and conducting ERCS

ERCS delivery should be conducted after 39+0 weeks of gestation. The date for ERCS should be booked during routine antenatal review appointment at 35 weeks. The use of ERCS checklist should be used in the consenting process Appendix 4) . Please refer to guideline for elective caesarean section.

Special circumstances of VBAC

Clinicians should be aware that there is uncertainty about the safety and efficacy of planned VBAC in pregnancies complicated by

· post-dates

· twin gestation

· fetal macrosomia

· antepartum stillbirth

· maternal age of 40 years or more

Hence, a cautious approach is advised if VBAC is being considered in such circumstances.

Women who are preterm and considering the options for birth after a previous caesarean delivery should be informed that planned preterm VBAC has similar success rates to planned term VBAC but with a lower risk of uterine rupture.

Women with unusual requests

These cases will be brought to the Multidisciplinary team discussion (MDT) (every Wednesday afternoon) and discussed. Decisions that are made will be disseminated to all team members following MDT.

41+0 weeks of gestation

The NICE induction of labour guideline recommends induction of labour from 41+0 weeks as this reduces perinatal mortality without an increase in caesarean delivery rates. There are no adequate data to recommend whether such an approach is equally valid in women with previous caesarean delivery. The risk of stillbirth at or after 39 weeks is between 1.5- and two-fold higher in women with previous caesarean delivery compared with women without previous caesarean delivery (absolute risks 11 per 10 000 [0.11%] versus 5 per 10 000 [0.05%])[20] .

Hence, the reduction in risk of perinatal death that occurs by delivering from 41 weeks is likely to be greater among women with previous caesarean delivery.

However, in such women, induction of labour compared with spontaneous labour is associated with increased risks of emergency caesarean delivery (by 1.5-fold) and uterine scar rupture (by two- to three-fold).

A reasonable approach would be for women who planned VBAC to have a review by a senior obstetrician at 41+0 weeks of gestation if spontaneous onset of labour has not ensued (Appendix II). Such a review should assess her likelihood of successful VBAC (for example, favourable cervix, previous vaginal birth, absence of any obstetric or fetal complications), her understanding of the increased maternal and perinatal risks if induction is chosen, her preference for membrane sweep, spontaneous VBAC, induced (amniotomy or prostaglandin) VBAC or ERCS, and her future reproductive preferences.

In practice, this may mean scheduling a 'provisional ERCS' at around 40+10 weeks and converting to induction of labour depending on further clinical and cervical assessment at 40+10 weeks.

Twin gestation

Various studies, including the NICHD study (n = 186 twin pregnancies)32 and three US retrospective studies (n = 535,139 n = 1850,140 n = 25141 twin pregnancies), have reported similar successful rates of VBAC in twin pregnancies (45–84%) to those in singleton pregnancies.

Suspected fetal macrosomia

In relation to VBAC labour, birthweight of 4 kg or more is associated with an increased risk of

· uterine rupture 3.6%

· unsuccessful VBAC less than 50%

· shoulder dystocia

· third- and fourth-degree perineal laceration[33]

Antepartum stillbirth

Women with an antepartum stillbirth and a previous caesarean delivery undergo labour with a high VBAC success rate (87%). The care of these women should be in line with the guideline of management of antepartum fetal demise.

Maternal age of 40 years or more

Maternal age of 40 years or more is an independent risk factor for

· stillbirth

· unsuccessful VBAC[34,35,36]

Published advice suggests consideration of delivery of women aged 40 years or more by 39+0–40+0 weeks to reduce the risk of adverse perinatal outcome (particularly stillbirth).

However, given the likely additive effects of previous caesarean delivery and raised maternal age on the risk of stillbirth, careful consideration should be given to the timing of the delivery in women aged 40 years or above who plan VBAC. There is insufficient evidence to recommend optimum timing of delivery in this subgroup of women.

Preterm VBAC

The NICHD study showed planned VBAC success rates for preterm and term pregnancies were similar (72.8% versus 73.3%). However, the rates of uterine rupture (34 per 10 000 versus 74 per 10 000 respectively) and dehiscence (26 per 10 000 versus 67 per 10 000 respectively) were significantly lower in preterm compared with term VBAC[47]. Perinatal outcomes were similar with preterm VBAC and preterm ERCS.

II. Postnatal management

Women who had successful VBAC as well as women who underwent emergency cs during labour should have opportunity to discuss their experience. The questions related to the labour should be answered preferably by the clinician present at the delivery. This discussion should be offered before discharge or if preferred by the woman at 6 weeks review.

5.0 IMPLEMENTATION OF POLICY

5.1 Dissemination

5.2 Resources

5.3 Exceptions

6.0 MONITORING

7.0 EVIDENCE BASE / REFERENCES

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8.0 CONSULTATION PROCESS

9.0 APPENDICES / ATTACHMENTS

Appendix 1 'Your birth after previous caesarean birth' (Pathway document)
Appendix 2 Patient information leaflet
Appendix 3 Algorithm for Syntocinon use
Appendix 4 Elective caesarean section counselling

10.0 EQUALITY STATEMENT

The Trust has legal responsibilities in terms of equality (Section 75 of the Northern Ireland Act 1998), disability discrimination and human rights to undertake a screening exercise to ascertain if this policy/proposal has potential impact and if it should be subject to a full impact assessment. This process is the responsibility of the policy or service lead - the template and guidance are available on the Belfast Trust Intranet. Colleagues in Equality and Planning can provide assistance or support.
The outcome of the Equality screening for this policy is:

Major impact ☐

Minor impact ☐

No impact ☒

11.0 DATA PROTECTION IMPACT ASSESSMENT

New activities that involve collecting and using personal data can result in privacy risks. In line with requirements of the General Data Protection Regulation (GDPR) and the Data Protection Act 2018 the Trust has to consider the impacts on the privacy of individuals and ways to mitigate against the risks. Where relevant an initial screening exercise should be carried out to ascertain if this policy should be subject to a full impact assessment (see Appendix 7). The guidance for conducting a Data Protection Impact Assessments (DPIA) can be found via this **link**.
The outcome of the DPIA screening for this policy is:

Not necessary – no personal data involved ☐

A full data protection impact assessment is required ☐

A full data protection impact assessment is not required ☐

If a full impact assessment is required the author (Project Manager or lead person) should go ahead and begin the process. Colleagues in the Information Governance Team will provide assistance where necessary.

12.0 RURAL IMPACT ASSESSMENTS

From June 2018 the Trust has a legal responsibility to have due regard to rural needs when developing, adopting, implementing or revising policies, strategies and plans, and when designing and delivering public services.
It is your responsibility as policy or service lead to consider the impact of your proposal on people in rural areas – you will need to refer to the shortened rural needs assessment template and summary guidance on the Belfast Trust Intranet. Each Directorate/Division has a Rural Needs Champion who can provide support/assistance in this regard if necessary.

13.0 REASONABLE ADJUSTMENTS ASSESSMENT

Under the Disability Discrimination Act 1995 (as amended), the Trust has a duty to make reasonable adjustments to ensure any barriers disabled people face in gaining and remaining in employment and in accessing and using goods and services are removed or reduced. It is therefore recommended the policy explicitly references "reasonable adjustments will be considered for people who are disabled - whether as service users, visitors or employees.

SIGNATORIES
(Policy – Guidance should be signed off by the author of the policy and the identified responsible Director).

[redacted]

_____ **Date:** 12/02/2020

Authors

[redacted]

_____ **Date:** 12/02/2020

Director

Appendix 1

Belfast Health and Social Care Trust

caring supporting improving together

Insert address/graph or details

Name:

RMH No:

DOB:

Your birth after previous Caesarean Birth

Consultation	Conducted By	Date	Signature
Booking Visit			
28-30 weeks review			
34-36 weeks review			
39-40 weeks review			

Abbreviations & Glossary List

CPD	Cephalopelvic Disproportion	Placenta praevia	A condition in which the placenta partially or wholly covers the neck of the uterus so that it is in the normal delivery of a baby.
C/S	Caesarean Section	Placenta accreta	A serious pregnancy condition that occurs when blood vessels and other parts of the placenta grow too deeply into the uterine wall.
DOB	Date of Birth	RJMS	Royal Jubilee Maternity Service
ERCS	Elective Repeat Caesarean Section	SOL	Spontaneous Onset of Labour
IOL	Induction of Labour	VBAC	Vaginal Birth after Caesarean Section

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Insert addressograph or details
Name
RMH No:
DOB.

What You Should Know

- We would like to give you some information about the risks and benefits of having a vaginal birth or repeat planned caesarean section (C/S):

Planned VBAC is associated with:

- Success rate of around 75%
- Shorter hospital stay
- Earlier return to driving and ability to care for other children
- It is more likely that you will be able to breastfeed your baby successfully
- Reduced incidence of infection and clots in leg and lungs
- 5/1000 (0.5%) incidence of uterine rupture
- 1/1000 (0.1%) prospective incidence of stillbirth beyond 39 weeks
- 0.4/1000 (0.04%) incidence of delivery related perinatal death - Birth-related infant death associated with VBAC is extremely low and comparable to the likelihood for women giving birth for the first time
- If successful, future deliveries will be easier

Please note that even if indication for Caesarean Section was failure to progress in labour or cephalo pelvic disproportion (CPD) successful VBAC is more than 50% likely to be successful espe cially if you come into hospital in spontaneous labour.

Planned ERCS is associated with;

- No serious risks for the baby other than transient respiratory problems.
- Increased incidence of maternal death 13/100 000(0.013%) compared to VBAC 4/100 000 (0.004%) but both are extremely low
- Longer hospital stay/recovery
- Incidence of placenta praevia in future pregnancy:
  - 1% with 1 previous C/S
  - 1.7% with 2 previous C/S
  - 2.8% with 3 previous C/S
- Increased incidence of placenta accreta

11. 14% of women with 1 previous C/S and placenta praevia are diagnosed with placenta accreta
23-40% of women with 2 or more Caesarean Sections and placenta praevia are diagnosed with placenta accreta.
In view of these figures it is important to discuss plan for overall family size.
Reference: Royal College of Obstetricians and Gynaecologists. Birth after a caesarean section: Information for you.

Insert addressograph or details:
Name
RVH No
DOB

Booking visit

This page should be completed by the midwife following discussion with the woman and after review of the woman's previous delivery notes.

1 **Caesarean section (C/S)** It was your first delivery .
You had a baby vaginally before or after C/S

2 **When was your C/S performed?** More than 12 months ago
Less than 12 months ago

3 **Where was your C/S performed?** R/V's Northern Ireland UK Other country

4 Type of Caesarean Section? Planned Emergency
Indication: . ...

5 **How did your labour commence?** Spontaneous onset labour (SOL)
Induction of Labour (IOL)
What was the dilatation of cervix at C/S? .

6 **Baby information** Baby born with APGAR score . . . @ 1min
Baby born with APGAR score . . . @ 5 min
Baby weight . gms

7 **Were there any complications?** None .
Yes If Yes, please specify
. . . . . .
. . . . . .

8 **Any postnatal complications?** None .
Yes . If yes, please specify
. . . . . .
. . . . . .

9 **Are you planning future pregnancies?** 0 . 1 2 2+

10. **Are old notes available for review?** Yes . No . Notes have been requested-Date. . . . . .

Important comments regarding previous Caesarean Section(s):
. . . . . .
. . . . . .
. . . . . .

Your preference for mode of birth in this pregnancy at the time of booking:

I am keen for VBAC

I would like an ERCS

I would like an ERCS but, if I am in spontaneous labour prior to the date of my ERCS, I am happy to try for VBAC.

I would like an ERCS even if in spontaneous labour

Insert addressograph or details:
Name:
RMH No
DOB:

Antenatal Care Assessment for Women with Previous Caesarean Birth(s)

Questions 1 – 6 must be completed and answers circled by Midwife/Obstetrician at booking

1. How many C/S has the woman had?

   1 | More than 1 → Must be counselled by a Consultant Obstetrician during this pregnancy (preferably a Consultant Obstetrician with experience in VBAC following multiple C/S)

2. Did the woman have a classical uterine incision at C/S or inverted T incision or complicated uterine scar?

   No | Yes → Individualised obstetric care plan to be completed

3. Has the woman had any other uterine surgery? (e.g. myomectomy, hysterotomy)

   No | Yes → Individualised obstetric care plan to be completed

4. Was the C/S for a recurring indication? (e.g. True diagnosis of Cephalopelvic Disproportion (CPD)

   No | Yes → Individualised obstetric care plan to be completed

5. Does the woman have any other indication for Obstetric Consultant care?

   No | Yes → Individualised obstetric care plan to be completed

6. Has the woman been advised she will need a repeat C/S by an Obstetrician?

   No | Yes → Individualised obstetric care plan to be completed

If you have answered **No** to all the above questions:

- Recommend VBAC and normal midwifery antenatal appointment schedule
- Routine Obstetrician follow up at 39 or 40 weeks appointment
- Consultant opinion to be sought if other concerns or factors develop during the pregnancy
- Please note: If old operative notes are not accessible for review, an Obstetric Consultant should assess the factors/concerns.

Individualised Obstetric Care Plan

Insert addressograph or details.
Name:
RMH No.
DOB:

Date	Plan	Signature

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Insert address/graph or details:
Name:
RMH No.
DOB:

34-36 weeks review appointment

We would like to start preparation for your delivery. Your midwife will record today your preference. Please make sure that you are happy with the plan.

I have read and discussed the information on the chances of adverse outcomes and benefits of both VBAC and ERCS and:

- ☐ I am keen for VBAC
- ☐ I would like ERCS (Date for CS) : ....
- ☐ I would like ERCS but if in spontaneous labour prior to the date of ERCS, I am content to try for VBAC
- ☐ I would like ERCS even if in spontaneous labour.
- ☐ I am undecided I need more information before final decision

Your signature.....,Date.....

Health Care Professional signature..... Date.....

Please be aware that on occasion you may present in advanced labour or progressing very quickly and therefore repeat C/S may not be the safest option.
On very rare occasions we may not be able to accommodate your emergency C/S due to dealing with other emergencies. This is very rare and we will do our best to follow your wishes.

In the instance of women with multiple previous Caesarean births wishing to attempt a VBAC, the Consultant Obstetrician responsible for Labour Ward **MUST** be informed of your admission in labour. Management of women with multiple previous Caesarean births is otherwise the same as the management of women with a single previous C/S.

Insert addressograph or details
Name
RMH No:
DOB:

Antenatal Pathway of Care

Antenatal Pathway for Mode of Birth Decision

Planned ERCS

Planned VBAC

Discuss with the woman:

- Maternal chances of adverse outcomes and benefits of VBAC
- Maternal chances of adverse outcomes and benefits of elective C/S
- Perinatal chances of adverse outcomes and benefits of VBAC
- Perinatal chances of adverse outcomes and benefits of emergency C/S
- Chances of adverse outcomes of emergency C/S after failed VBAC
- Future fertility

28-30 weeks

- Review by VBAC team (Obstetrician/Midwife)
- Review options and answer questions

34-36 weeks - Planned C/S (ERCS)

- Review by VBAC team (Obstetrician/Midwife)
- Review options and answer questions
- Determine location of placenta (if previously low lying)
- Document on AN medical history
- Book date for ERCS with Obstetrician
- When booked for planned C/S, review options if labour ensues before planned date of surgical birth and document the plan of care

34-36 weeks - VBAC

- Review by VBAC team (Obstetrician/Midwife)
- Review options and answer questions
- Determine location of placenta (if previously low lying)
- Document on AN medical history

39 weeks

- Review by VBAC team (Obstetrician/Midwife)
- Review options and answer questions
- Offer 'stretch and sweep' if possible
- Document on AN medical history

40 weeks

- Review by VBAC team (Obstetrician/Midwife)
- Review options and answer questions
- Offer 'stretch and sweep' if not already had one
- Document on AN medical history

Induction and Augmentation

- Should only be considered with Consultant Obstetrician involvement as the risk of uterine rupture is increased
- Consider use of cervical ripening balloon if Induction/Augmentation is undertaken

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Patient information leaflet

Birth after caesarean section

Most women who have had a caesarean section can give birth normally to their next baby. However, it is important to consider the circumstances of your caesarean and to consider how you feel about that experience and any preferences that you may have. At Belfast Health and Social Care Trust (BHSCT) we recommend that most women plan a normal birth. This is sometimes called VBAC – vaginal birth after caesarean. Before you decide whether to plan for a normal birth or elective (planned) caesarean section, it is important to consider and understand the advantages and disadvantages of each type of birth.

It is helpful to talk to your midwife or doctor about why your baby was born by caesarean section. There may have been concerns about the baby's heart beat, a slow labour or your baby may have been breech (bottom first). None of these problems are likely to happen again. Most women have a 70 – 80% chance of a normal birth after a caesarean section, depending on the reason for the caesarean and whether they have also had normal births. This means that seven to nine women out of every 10 women who have had a previous caesarean should be able to have a normal birth.

You are even more likely to give birth normally this time if you have had a previous normal birth, whether this was before or after your caesarean. In this situation, your chance of having a normal birth are 90% or 9 out of 10.

Safety

A vaginal birth is safer for you than a caesarean whether planned (elective) or done as an emergency. Women are twice as likely to die after an elective caesarean as a vaginal birth and the risk is 12 times higher after an emergency caesarean. However, the risk is still very small. The risks from elective caesarean section increase with the number of caesarean sections that a woman has. For example there is an increased risk of problems with the placenta (afterbirth) injury to the bladder, hysterectomy and the need for blood transfusion the more caesareans you have.

Recovery time

If you have a vaginal birth you will recover much more quickly and will have a much shorter hospital stay. A shorter and easier recovery means that you will also be better able to look after your other children or relatives. You need more time to recover from a caesarean because it is a major operation. You will have an abdominal (tummy) wound which is painful and time to your stitches to heal internally.

Breastfeeding

If you have a vaginal birth you are more likely to breastfeed successfully. Many women also find that bonding with their baby is easier.

Self-esteem
Many women feel that giving birth vaginally is very important to them. It can be a satisfying and fulfilling experience which some women say improves their self-esteem.

Risk of complications
Although the risk of complications is small, a planned caesarean has an increased risk of injury to the bladder, hysterectomy, a greater need for further surgery and an increased risk of blood clots (deep vein thrombosis). The risk of complications from surgery increases with the number of caesarean sections that you have. If you are planning to have more children it is particularly important to avoid another caesarean, if possible, as the surgical risks increase with each caesarean.

[illegible]

There is a very small chance that your old caesarean scar on your womb could open, causing a problem for you and your baby. Research suggests that this is likely to happen to about only one in 200 women. Having your labour started artificially (induction) increases the risk of this happening, so we do not offer it routinely.

If your scar opens there is a very small risk – about 1 in 2500 – of your baby dying (about the same as when a woman has her first baby). But if your labour is monitored carefully and a caesarean is done promptly, should it become necessary, your baby is very likely to be fine.

There is also a very small risk – about 1 in 3000 – that you will need a hysterectomy to control bleeding if your scar did open in labour. Your midwife will observe you carefully in labour to detect as soon as possible any signs of your scar opening. This should avoid serious problems for you and your baby.

[illegible]

Support
Good support during your labour is one of the most important factors in helping you to have a normal birth. Being encouraged and feeling well cared for is known to help women cope with the pain of labour. Good support may also affect the length of your labour and what sort of birth you have, although there are other factors that can influence your labour.

Mobility
Moving about and adopting different positions is also likely to help keep your labour normal. You may find movement helps you to cope with pain and being upright can help get your baby's head into a good position and encourage it to move down into your pelvis.

[illegible]

Many women come into hospital very early in labour. However, this is not necessarily, you may experience more likely that your labour is considered slow. If you come in very early you may be more likely to have an operation, as you may feel you have used up your own resources to help you cope with your pain.

We recommend you wait until the contractions are regular (coming every five minutes and lasting for a whole minute) before you come into hospital.

But do come to hospital before this point if:

- You have bleeding
- Your waters break
- You have any severe abdominal pain that is not related to your contractions
- You have any worries about your baby

[illegible]

Your choice of pain relief may also affect your labour. Epidurals are very good at relieving pain but may slow down the second stage of your labour, making you a little more likely to have an instrumental birth. You may wish to consider using your own resources as much as possible and either delay or avoid having an epidural, if possible.

A drug called diamorphine is also sometimes used for pain relief. Its main effect is to make you feel very drowsy, which may make you less likely to move around and more likely to lie on the bed.

[illegible]

We recommend that your baby's heart rate is monitored continuously with an electronic monitor once you are in established labour and have strong, frequent and regular contractions. This will help us to detect any changes in your baby's heart rate that could be related to problems with your scar.

However, if you are being monitored in this way you will be less able to move about freely. This may make it harder for you to use movement to cope with pain and will restrict your ability to adopt different positions that help you to have a normal birth. However, it is usually possible to be monitored while standing and kneeling.

[illegible]

We recommend you have a small plastic tube put in a vein in your arm (this is called an intravenous cannula or venflon) so we can easily attach a drip (intravenous infusion) if you need a caesarean. Although we can insert a cannula quite quickly if needed, it may cause a slight delay if you do not have one and you need another caesarean. We can also do any blood tests needed at the same time.

The cannula may seem intrusive but most women say that they do not find it a problem.

[illegible]

To minimise the risks of problems with your scar in labour we expect you to make good progress once you are in established labour. If your progress is excessively slow, it may mean you are developing a problem. We may consider a drug called Syntocinon to help speed up your labour but this can increase your risk of scar opening so it is not used routinely.

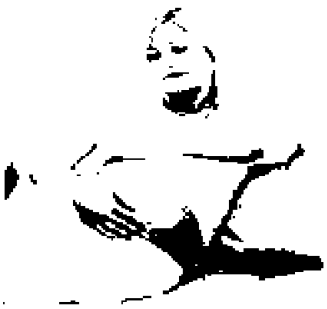
The third stage of labour (when your placenta is delivered) should be no different to other vaginal births.

[illegible]

We have no evidence on the safety of water births for women with previous caesarean, although it is widely known that these are safe for women with straightforward pregnancies.

Many women find labouring in water helps them to cope with pain

team easily. As we now have equipment that can be used to monitor your baby when you are in the pool, waterbirth is now another option for women planning a VBAC. However, it is important to discuss this with your midwife or obstetrician any other reasons why it may not be recommended for you.



We do not have any evidence on the safety of home birth for women who have previously had a caesarean. If you have had a caesarean before, we recommend a hospital birth as you can have a caesarean immediately if necessary.

If you have a home birth it could delay you having a caesarean if you need one because of problems with your scar, although the likelihood of this happening is very small. Some women may decide to have a home birth because they feel strongly that their chances of a normal birth are better in that familiar partner will be able to support them more easily.

However, we cannot monitor your baby's heart rate continuously if you have a home birth, instead we use a handheld device to check your baby's heart rate at regular intervals. While there is no evidence that this method is less effective at detecting problems with your baby's heart rate, we may not be able to pick them up as quickly.

If you are considering a home birth please discuss it with your midwife who will refer you to see one team midwife and a consultant obstetrician. If you decide to plan a home birth we will support you but we need to ensure that you understand the risks and benefits.

[illegible]

We have very little evidence about the safety of a VBAC in women who have had two previous caesareans. You will be able to discuss why you had your previous caesareans with your midwife or doctor to get a clearer idea of what is best for you. It is usually recommended that you have an elective caesarean at 39 weeks if you have had more than one previous caesarean because the risk of problems with your scar might be higher, but there is very little evidence that this is actually the case. If you would like to consider a VBAC after two previous caesareans, your midwife will refer you to the consultant midwife and a consultant obstetrician to discuss it.

[illegible]

Having a planned caesarean may mean you can avoid the uncertainty of whether you will need a caesarean once you are in labour. You may feel that it gives you a greater sense of control if you had a very difficult experience with your previous birth. It can be helpful to discuss what happened during your previous birth and gain an understanding of whether it is likely to happen again.

Having an elective caesarean avoids the possibility of an emergency caesarean in labour, which carries increased risks compared to an elective caesarean. It will also avoid perineal trauma and perineal pain that may be associated with a vaginal birth.

If you do choose to plan an elective caesarean, there is a chance

that you will go into labour before the caesarean takes place. You will then need to have an unplanned (or emergency) caesarean or reconsider whether it is possible to have a vaginal birth. Please think about this carefully as women who go into labour before 40 weeks do have a better chance of having a vaginal birth.

[illegible]

Avoiding labour means you will not have the chance to see if you can give birth vaginally. You may choose an elective caesarean to avoid the pain of labour, but you will still have the pain of an abdominal wound and your recovery will be slower.

The process of labour helps prepare babies to breathe once they are born. When a baby is born without labour this process may not happen as effectively so some babies may develop breathing problems. This is much more likely if you have an elective caesarean before 39 weeks. We recommend that you have an elective caesarean after 39 weeks to try to avoid this.

Having another caesarean may make you more likely to have problems with your placenta – such as placenta praevia (this is when your placenta is very low in your uterus which can cause serious problems with bleeding) and adeptic pregnancy – in future pregnancies. If you would like more children this may be particularly important to avoid another caesarean if possible, as the risks from surgery increase with each operation. Research shows that women who have caesareans tend to have longer gaps between children and are more likely to have fewer children although the reason for this is not known.

[illegible]

We recommend that your caesarean is booked for you when you are more than 39 weeks pregnant, unless there is a medical reason for having it earlier. This is because your baby will be more mature at this stage and so less likely to have breathing problems which could require admission to the Special Care Unit.

We will give you a patient information leaflet about elective caesareans which explains in detail all the risks, benefits and alternatives, as well as exactly what will happen during the procedure.

[illegible]

Your decision about whether to plan to go into labour or have an elective caesarean depends on a number of factors:

- The reason for your previous section
- How you feel about having had a caesarean before and the prospect of having another one
- How you feel about the advantages and possible risks of both a VBAC and caesarean
- Any new clinical factors that happen during your current pregnancy

Bedast Trust has regular antenatal classes for women who have had caesarean births. These classes are attended by a consultant obstetrician and our consultant midwife. Ask at the antenatal clinic for dates and times.

1.Algorithm for induction of labour with syntocinon

0- 4 hours of Syntocinon

Syntocinon level	Incremental time
2 ml/hr	30min
4	30min
6	30min
8	30min
10	30min
12	30min
14	30min
16	30min
18	30min
20	Reassess

If no contractions after 4 hours of syntocinon – CS

If at any stage of increasing syntocinon level:
contractions more than 4 in 10 min
- consider decreasing syntocinon level
- do not increase further

The highest routine level of syntocinon = 20mls/hr
May be increased only following **direct assessment** by consultant on call

2. **4-8 hours of Syntocinon use**

4 hours of syntocinon + contractions 4/10 = baseline VE assessment

Review in 2 hours - *preferably by the same person*

No progress despite 4/10 contractions

Consider CS
-discuss with the mother further mx
(Risk of uterine rupture increases)

Review in 2 hours -*preferably by the same person*

No progress = CS
(Significant risk of uterine rupture if Syntocinon continues)

Progress

Continue augmentation with the lowest dose of syntocinon maintaining 3 - 4 contractions in 10min
Consider reducing syntocinon if contractions maintained at 4/10

Progress- continue

Review progress 2 hourly

Appendix 4

Belfast Health and Social Care Trust
Royal Jubilee Maternity Service

Consent: Caesarean Section

Addressograph label

This pro forma should be completed and attached to official trust consent forms. The information below relates to the risks of a Caesarean section and all other relevant information should be included on the attached consent form.

Risks of Caesarean section

- All risks are increased in those who are obese (BMI>30), have had previous surgery or have a pre-existing medical condition

Patient to initial each

Serious maternal risks

- Emergency hysterectomy (7-8 in 1000) _____
- Need for further surgery at a later date (5 in 1000) _____
- Admission to Intensive care unit (9 in 1000) _____
- Thromboembolic disease (4-16 in 10000) _____
- Injury to Bladder (1 in 1000), Bowel or Ureter (3 in 10000). _____
- Death (1 in 12000) _____

Risks in Future Pregnancies

- Increased risk of uterine rupture (2-7 in 1000) _____
- Increased risk of stillbirth (1-4 in 1000) _____
- Increased risk of placenta previa or accreta (4-8 in 1000) _____

Frequent risks

- Persistent wound and abdominal discomfort (9 in 100)
- Increased risk of repeat caesarean section when vaginal delivery attempted in subsequent pregnancies (1 in 4) _____
- Readmission to hospital (5 in 100) _____
- Haemorrhage (5 in 1000) _____
- Infection (6 in 100) _____
- Laceration to Fetus (1-2 in 100) _____

Extra procedures

- Blood transfusion _____
- Repair of damage to bowel, bladder or ureter _____

I confirm that all of above points have been explained to me by Dr ..... and that I understand and accept these risks.

Patient Signature..... Date .....

Signature of person taking consent ..... Date .....

Printed name of person taking consent.....