Royal Devon University Healthcare NHS Foundation Trust

C-Section and Vaginal Birth Guidelines and Policies

Reference Number: RDF1166-23
Date of Response: 30/01/2023

Further to your Freedom of Information Act request, please find the Trust's response(s) below:

1. Please release all current policy documents, guidelines, memos, minutes of meetings and internal emails (and their attachments) that relate to the Trust's policy on elective C-Sections and so-called 'normal' or 'natural' (vaginal) births

   Joint Trust response: Please find attached Trust Policies/guidelines.
   The Trust does not hold memos' minutes and internal emails surrounding the Trust attached Policies.

2. and in what circumstances either should take place.
   Joint Trust response:

   Please find attached as part of the Trust Policies/Guidelines. The Trust follows NICE Guidelines as explained in the attached.

Royal Devon and Exeter NHS
NHS Foundation Trust

Clinical Guideline for:
Care of Women in Labour in All Care Settings

Summary

This document will encompass care of the normal labouring woman, including low and high risk women and NICE recommendations for when and which course of action should be taken if progress is not adequate. Normal labour is defined as spontaneous initialisation of labour commencing between 37 – 42 weeks gestation. This document will not cover pre-term labour, induction of labour, use of oxytocin in labour or assisted vaginal delivery or associated care. Hyperlinks can be followed to access these on the Trust Maternity documents/guidelines via Hub.

Contents

Hyperlink to Request Form for Placental Examination

1. INTRODUCTION

1.1 The aim of this guideline is to provide documented resource to support excellence in clinical practice and is supported by evidence from National Institute of Health and Care Excellence (NICE) documents.

1.2 This document will encompass care of the normal labouring woman, including low and high risk women and NICE recommendations for when and which course of action should be taken if progress is not adequate. Normal labour is defined as spontaneous initialisation of labour commencing between 37 – 42 weeks gestation. This document will not cover pre-term labour, induction of labour, use of oxytocin in labour or assisted vaginal delivery or associated care. Hyperlinks can be followed to access these on the Trust Maternity documents/guidelines via Hub.

2. ADMISSION

2.1 The woman and her partner should be made welcome, the midwife is responsible for identifying from the handheld notes if the woman is under midwife led or consultant led care.

2.2 There should be a two-way discussion about the plan of care; any specific requests should be recorded. If a birth plan has been written, this should be read, discussed, signed and filed clearly in the continuous notes at this time. If a mother does not wish to receive the care as suggested in these guidelines then this must be respected and the discussion recorded in her notes. Where this decision presents a concern in facilitating a normal labour and birth, this should be discussed with the midwife co-ordinator and obstetric staff.

2.3 For women who are under midwife-led care an initial risk assessment should be undertaken to ensure she remains suitable for midwife-led care. Risk factors for Obstetric unit birth are highlighted in Appendix 1.

2.4 Baseline observation recorded to include:

- Maternal pulse, BP, temperature and urinalysis
- Abdominal palpation – to determine fundal height, baby's lie, presentation, position, engagement and frequency and duration of contractions.
- Auscultation of the fetal heart for a minimum of 1 minute immediately after a contraction and record it as a single rate – palpate the woman's pulse to differentiate between the two. Record accelerations or decelerations if heard.
- Dependent on above findings, vaginal examination should be offered.

2.5 Routine admission Cardiotocograph (CTG) recording is not required in the low-risk woman. See indications in Appendix 2 and Clinical Guideline for electronic fetal monitoring.

2.6 High risk women should be seen or discussed with the labour ward Registrar with the minimum of delay. After discussion with the obstetric registrar and/or consultant, a plan for future management should be agreed with the woman and documented in the notes.

2.7 Women identified with mental health or psychiatric issues should have a clear documented plan of care and treatment documented in the hospital notes.

2.8 If a low risk woman develops any risk factors highlighted in Appendix 3 at any time throughout her labour, the midwife caring for her must refer her to the obstetric team on the labour ward for assessment and a plan of action made. In the event of imminent delivery assess and discuss whether birth in the current location is preferable.

2. 9 **Pregnant women with risk factors who decline standard fetal monitoring for any reason should be advised to be delivered by caesarean section due to the inability to monitor for and identify fetal distress that could lead to fetal death. This would include women with previous caesarean scar, prolonged labour, and women otherwise low risk who decline intermittent fetal monitoring. See Guideline** Clinical Guideline for care of women who refuse recommended Maternity care.

3. FIRST STAGE OF LABOUR

3.1 First Stage of Labour – Latent Phase

3.1.1 On admission the correct diagnosis of the phase of labour is important.

3.1.2 Latent first stage of labour is a period of time, not necessarily continuous, when

- There are painful contractions **and**
- There is some cervical change, including cervical effacement and dilatation up to 4 cm (NICE, 2017)

3.1.3 There are no uniformly accepted contemporary criteria for the normal duration of the latent phase (Satin, 2020), therefore it is very difficult to objectively determine a prolonged latent phase. Key things to assess are, is the woman coping well, is she well supported, what are her wishes and to make a plan **together**. Appendix 4, Checklist for the latent phase prior to returning home, may help with this action and should be completed in all circumstances when a woman returns home following the diagnosis of the latent phase of labour. Women without risk factors should be encouraged to remain at, or return home, **unless doing so leads to a significant risk that she could give birth without a midwife present or become distressed**.

3.2 First Stage of Labour – Active Phase

3.2.1 The active phase of the first stage of labour is defined when the cervix is ≥4 cm dilated in the presence of rhythmical contractions.

3.2.2 If the woman wishes to labour in water see Clinical Guideline for water birth.

3.2.3 In the active phase of labour a partogram should be commenced. It is important that all boxes of the partogram are clearly and fully completed.

3.2.4 All women may have a light diet and free fluids unless specified in their labour record.

3.2.5 **Frequency of data collection to document on partogram**

OBSERVATION	Frequency
BP and temp and offer vaginal examination	4 hourly unless otherwise indicated
Pulse	Hourly
Frequency of contractions	Every 30 mins
Urine	Record frequency of emptying the bladder
Fetal Heart	Every 15 mins after a contraction for 1 min record as single rate *(where possible)*. Record accelerations or decelerations if heard.

Midwives to document observation of vaginal loss regularly during labour, especially in the presence of ruptured membranes and/or epidural analgesia.

3.2.6 **Documenting vaginal examination on the partogram**

- Vaginal examinations (VE) should be offered 4 hourly once in established labour (4 cm regular contractions), with abdominal palpation being recommended before each VE.
- Vaginal examinations should be offered more frequently if delay in labour diagnosed. See 3.2.10

Documentation should include:

- **Cervical Dilatation**
- **Position**
- **Moulding**. The degree of moulding of the fetal head should be noted at vaginal examination, defined as:
  - Bones normally separated 0
  - Suture line closed, no overlap +
  - Overlapping of sutures but reducible ++
  - Overlapping of suture lines and irreducible +++
- **Caput**
- **Station**
- The fetal heart should be auscultated after each vaginal examination.

3.2.7 **Artificial Rupture of Membranes (ARM)**
Membranes should not be artificially ruptured without clinical indication. Indications for rupturing membranes include:

- Delay in first stage (see below).
- Abnormal external CTG.
- Difficulty in achieving an external trace and need for use of fetal scalp electrode.

3.2.8 **Spontaneous Rupture of Membranes**
When membranes rupture spontaneously, the fetal heart should be auscultated.

3.2.9 **Uterine contractions**

- Uterine contractions should be assessed by abdominal palpation. This provides a subjective impression of the strength of the contractions together with the frequency and duration.
- Both frequency and strength of the contractions should be recorded on the partogram, see example below:

3.2.10 **Delay in the first stage as defined as:**

Nulliparous: <2cm dilatation in 4 hours

Parous : <2cm dilatation in 4 hours or **a slowing in the progress of labour**

- Consider amniotomy if membranes intact, and offer vaginal examination in 2 hours whether intact or not.
- After 2 hours if progress > 1cm continue without intervention
  < 1cm diagnose delay and seek obstetric advice which may include transfer from a low risk setting – hyperlink transfer of care.
  Offer continuous electronic fetal monitoring – see Clinical Guideline for electronic fetal monitoring.

4. SECOND STAGE OF LABOUR

4.1 Second stage of labour is defined as cervix has reached full dilatation on vaginal examination or the presenting part is visible. If the woman has no urge to push re-assess in 1 hour.

4.2 In the second stage of labour without complications, it is important that the woman should not be actively encouraged to push until the presenting part is visible or until the desire to push is overwhelming.

4.3 **Frequency of data collection to document on partogram or within birth note text**

OBSERVATION	Frequency
Temp	4 hourly
BP and offer vaginal examination	Hourly unless otherwise indicated
Pulse	Every 15 mins
Frequency of contractions	Every 30 mins
Urine	Record frequency of emptying the bladder
Fetal Heart	Every 5 mins after a contraction for 1 min record as single rate *(where possible)*. Record accelerations or decelerations if heard. Palpate the woman's pulse every 15 minutes to differentiate between the two heart rates

4.4 Midwives to document observation of vaginal loss regularly during labour, especially in the presence of ruptured membranes and/or epidural analgesia.

4.5 The progress of both station and position should be assessed hourly by vaginal examination and documented on the partogram or within the birth note text. Senior advice will be sought if delay is suspected.

4.6 Variation in progress in the second stage is not uncommon, especially in primigravid women with epidural analgesia.

4.7 The second stage may be divided into two phases: the descent/rotation phase and the pushing/active phase.

- The mother should be free to choose her position for delivery within safe and reasonable limits. If the chosen position is not possible ensure that this is adequately explained and documented in the labour notes.
- There is no evidence that sustained (Valsalva) pushing is physiologically more effective (Cochrane 2006).
- The person conducting the delivery should be responsible for giving guidance to the mother. It is important to avoid more than one person talking at any one time.

4.8 **Definition of delay and recommended duration of second stage**.

Nulliparous: Birth expected within 3 hours of active 2nd stage.
If after 1 hour of active second stage progress is inadequate, delay is suspected and amniotomy should be offered.

Parous: Birth would be expected within 2 hours of start of active second stage. If after 30 minutes progress in inadequate, amniotomy should be offered if the membranes are intact.

4.9 If delay is diagnosed in the second stage of labour and it deviates from guidance above then it is the midwife's responsibility to seek obstetric advice, this may include transfer in from a low risk setting – see Clinical Guideline for maternal transfer by ambulance.

5. THE THIRD STAGE OF LABOUR

5.1 The third stage commences with the complete delivery of the baby. It is important that options for management of the third stage have been discussed with the woman (where possible) in advance of its commencement.

5.2 **Women at increased risk of postpartum haemorrhage include**:

- Multiple births
- VBAC
- Grandmultiparity (more than 4 births)
- Significant APH in this pregnancy
- Previous PPH
- Haemoglobin less than 10g/dl

In these cases it is recommended that intravenous access should be secured if not already in place, and active management advised.

5.3 **Active Third stage**

This unit currently uses 1 ampoule of Syntometrine (containing 5 international units (IU) oxytocin and 0.5mg ergometrine) intramuscularly (IM). Contraindication to this would be women with a diastolic blood pressure over 90mmHg and mothers with cardiac disorders. In these circumstances 10 IU of Oxytocin (Syntocinon) should be given IM.

5.4 **Process:**

- Following delivery of the baby administer the appropriate uterotonic drug as above.
- Allow for deferred clamping and cutting of the cord until pulsation has stopped unless clinical indication to do so earlier. Document the time in the labour notes Leave sufficient length for cord blood sampling if required.
- Observe for signs of separation and then deliver placenta by controlled cord traction.
- Delivery of the placenta should be expected within 30 minutes. In the event that it is retained – see Clinical guideline for retained placenta.

5.5 **Observations in the third stage**

- Observe her general physical condition, as shown by her colour, pulse and her own report of how she feels.
- Vaginal blood loss.

5.5.1 In addition, in the presence of haemorrhage, retained placenta or maternal collapse, frequent observations to assess the need for resuscitation are required and documented on the continuous labour notes.

5.6 Physiological Management

5.6.1 May be offered to low risk women and involves no administration of a uterotonic, delivery of the placenta is by maternal effort only without any clamping or cutting of the cord.

5.6.2 **If the baby requires resuscitation or the cord is very short it should be clamped and cut after which the clamp may be removed from the maternal end to drain.**

5.6.3 Delivery of the placenta should be expected within 1 hour. If no sign of separation or delivery consider emptying the bladder, encouraging skin to skin and feeding at the breast or a change of position. After this time Syntometrine 1 ampoule should be administered after an explanation to the women, and obstetric opinion sought. Obtain IV access at this point. Care should now be as for active third stage of labour – see section 5.3.

5.7 Examination and Disposal of the Placenta

5.7.1 After the third stage of labour the placenta and membranes are examined as soon as possible. The midwife should wear the personal protective equipment provided by the Trust - gloves, glasses and apron – same as for a delivery.

5.7.2 The main purposes for the examination are:

- To determine whether or not the placenta and membranes are complete
- To detect other abnormalities this might provide retrospective information about an intrauterine problem. This may be helpful in planning care for the neonate (Enkin et al 2000).

5.7.3 After examination the placenta should be placed in a clear plastic bag, sealed and placed in the yellow placenta pot.

5.8 Placentas needing histological examination

5.8.1 See Request Form for Placental Examination

5.8.2 Histology forms **MUST** be completed and signed by an Obstetric middle grade or Consultant.

5.8.3 The fact that an examination has been requested **MUST** be documented in the labour notes by the midwife and/or medical staff

6. WOMEN PRESENTING IN LABOUR WHO HAVE HAD NO ANTENATAL CARE

6.1 For women who present to the RD&E in labour having had no antenatal care, the following guidance should be followed as far as possible, depending on what is appropriate given the woman's stage of labour.

6.2 Labour Care

6.2.1 'Late Booking' packs are available on labour ward for midwives to use. These include all the paperwork required to follow the guidance below.
If possible, take a full medical, psychological and social history.
• Try to find out why there has been no care during pregnancy.
• Ask the woman who, if anyone, she would like to support her as her birth companion(s) during labour.
• Explore sensitively any possible vulnerability or safeguarding concerns, including:
- young maternal age
- maternal mental health
- maternal learning disability
- maternal substance misuse
- domestic or sexual abuse
- homelessness
- human trafficking
- undocumented migrant status
- female genital mutilation
- the woman or family members being known to children's services or social services.

6.2.2 A midwife should carry out an initial labour assessment as detailed in section 2 of the Care in Labour Guideline.

6.2.3 The on call Obstetric Registrar should be informed and should carry out an obstetric and general medical examination as soon as possible. An assessment of the unborn baby should also be undertaken, including ultrasound if possible, to determine:
• viability
• the presentation
• an estimate of gestational age
• the possibility of multiple pregnancy
• the placental site.

6.3 **Screening Tests**

6.3.1 Women should be offered, tests for:
• anaemia (full blood count)
• haemoglobinopathies
• blood group and rhesus D status
• atypical red cell alloantibodies
• random blood glucose
• asymptomatic bacteriuria
• HIV, hepatitis B and syphilis.

6.3.2 A Family Origin Questionnaire (FOQ) must be completed and sent with the full blood count. The bloods should be sent as urgent and marked as FTSC to ensure the correct tests are done.

6.3.3 Rapid HIV testing should be offered to women thought to be at high risk of infection, which might include:
• recent migrants from countries with high rates of HIV infection
• women who misuse substances intravenously
• suspected sexual abuse.
Following a risk assessment, contact the Microbiology office or the on call Microbiologist out of hours to arrange for rapid testing to be done if required.

6.3.4 The screening co-ordinators should be informed to ensure there is appropriate tracking and follow-up in place. See the Clinical Guideline for Screening for Infectious Diseases in Pregnancy.

6.4 **Safeguarding**

6.4.1 Explain to the woman why and when information about her pregnancy may need to be shared with other agencies. If possible, contact the woman's GP and, if appropriate, other health or social care professionals for more information about the woman's history and to plan ongoing care.

6.4.2 For any woman who presents in labour who has not been booked to give birth under the care of the RD&E, the Child Protection Information Sharing (CP-IS) system should be checked via the NHS Spine to see if a Child Protection Plan exists for the unborn baby. Any midwives with NHS smartcards, including all the labour ward matrons, are able to undertake this check.
If there are safeguarding concerns, the Trust Safeguarding Children Policy should be followed, including documenting all concerns and actions taken.

6.5 Where no medical conditions or obstetric complications are detected then routine labour care according to the Trust Care in Labour guideline should be given.

7. MONITORING COMPLIANCE WITH THIS GUIDELINE

7.1 Any concern or non-compliance with this guideline that is identified through the investigation of clinical incidents, claims or complaints will be reviewed as per the Trust Policies regarding Incidents, Claims and Complaints, and may result in an audit and/or amendment to the guideline.

7.2 Relevant Policies:

- Incident reporting policy and procedure
- Claims management policy and procedure
- Policy and Procedure for the Management of Complaints, Concerns, Comments and Compliments

8.0 REFERENCES

Ifirevic Z, Gould D. Immersion in Water During Labour and Birth Royal College of Obstetricians and Gynaecologists and Royal College of Midwives Joint Statement No.1 April 2006.

Brown L (1998) The Tide has Turned: An Audit of Water Birth. British Journal of Midwifery. April. Vol. 6, No 4.

Charles C. (1998) Fetal Hypothermia Risk from Warm Water Immersion. British Journal of Midwifery. March Vol 6, No3.

Management of third and fourth degree perineal tears following delivery. RCOG Guideline No 29. Royal College of Obstetricians and Gynaecologists: 2007 London.

Mayes Midwifery; A textbook for midwives. 13th edition 2004.

Methods and materials used in perineal repair. RCOG Guideline No 23. Royal College of Obstetricians and Gynaecologists: 2000 London.

National Institute of Health and Care Excellence (NICE) (2014) Clinical Guideline 190 Intrapartum Care: Care of Healthy women and their babies during childbirth. London: NICE, updated 2017

Satin AJ (2020) Latent phase of labour. UpToDate 2020!

9. ASSOCIATED CLINICAL GUIDELINES OR POLICIES

Clinical Guideline for electronic fetal monitoring

Clinical Guideline for care of women who refuse recommended Maternity care

Clinical Guideline for water birth

Clinical Guideline for maternal transfer by ambulance

10. PUBLICATION DETAILS

Author of Clinical Guideline	Senior Matron
Division/ Department responsible for Clinical Guideline	Specialist Services/CWH/Maternity
Contact details	Ext. 6682
Version number	3.6
Replaces version number	3.5
Date written	08/05/13
Approving body and date approved	Maternity Governance Forum 10/06/2020
Review date	10/03/2023
Expiry date	10/06/2023
Date document becomes live	28/07/2020

APPENDIX 1 – INDICATIONS FOR AN OBSTETRIC LED UNIT BIRTH

This list is not exhaustive, for some women, their individual circumstances will need to be considered during the antenatal period or at the onset of labour in order to provide appropriate, individualised care.

Factor	Additional information
Previous complications	Unexplained stillbirth/neonatal death or previous death related to intrapartum difficulty Previous baby with neonatal encephalopathy Placental abruption with adverse outcome Eclampsia Uterine rupture Primary postpartum haemorrhage >1000mls Retained placenta requiring manual removal in theatre (alongside birth centre may be appropriate if this is the only risk factor) Caesarean section Shoulder dystocia
Current pregnancy	Any condition where continuous EFM is recommended during labour (See Appendix 2) Maternal request for continuous EFM in labour Maternal age ≥40 years at booking Placenta praevia Placental abruption Anaemia – haemoglobin less than 100g/litre at onset of labour Thrombocytopenia – Platelet count <100 Confirmed intrauterine death Substance misuse or alcohol dependency requiring assessment or treatment BMI at booking of greater than 35kg/m^2 for primips or 39.9kg/m^2 for multips Recurrent antepartum haemorrhage Ultrasound diagnosis of oligo-/polyhydramnios
Previous gynaecological history	Myomectomy Hysterotomy
Existing Medical Conditions	Severe cardiac disease Hyperthyroidism Renal disease For women with other pre-existing medical conditions, an individualised care plan will be made during the antenatal period in order to determine the most appropriate place of birth.

Royal Devon and Exeter NHS Foundation Trust

APPENDIX 2 – INDICATIONS FOR CONTINUOUS EFM/CTG (based on FIGO & NICE)

ASSESSMENT

Are any of the following risk factors present?

Maternal Antenatal risk factors:

- Previous caesarean section/uterine scar including myomectomy
- Post term pregnancy (> 42 weeks)
- Preterm (>26/40 - < 37 weeks)
- Maternal diabetes
- Pre-eclampsia/hypertension
- Prelabour ruptured membranes for > 24 hours prior to onset of labour
- Obstetric Cholestasis
- Other maternal medical disease:
  - Severe anaemia
  - Hyperthyroidism
  - Renal disease
  - Suspected chorioamnionitis or maternal sepsis
  - Significant maternal cardiac disease
- Obstetric emergency including:
  - Antepartum haemorrhage
  - Cord prolapse
  - Maternal seizure
  - Maternal collapse

Maternal Intrapartum Risk factors:

- Fresh vaginal bleeding that develops in labour (other than a show).
- A temperature of 38°C or above on a single reading, or above 37.5°C on two consecutive occasions 1 hour apart
- A maternal pulse >120bpm on two occasions 30 mins apart
- Confirmed delay after conservative measures – ARM/Rehydration.
- Oxytocin use
- The presence of **significant** meconium - stained liquor (defined as thick or tenacious dark green/black amniotic fluid, or any meconium - stained amniotic fluid containing lumps of meconium)
- Epidural Anaesthesia
- Maternal request for EFM

Fetal risk factors:

- Fetal growth restriction <5th centile on CGC
- Pre term (>26/40 - <37/40)
- Oligohydramnios
- Abnormal Uterine Artery Doppler
- Multiple pregnancy
- FH abnormalities detected on intermittent auscultation*
- Breech presentation or other abnormal presentation
- Reduced fetal movements on admission – if CTG normal and otherwise low risk may discontinue

NO

NO

Offer intermittent auscultation using either Doppler or Pinard stethoscope:

Always listen for a full minute **after a contraction (when comfortable for the woman)**. Document it as a single rate at least every:

- 15 minutes in the first stage
- 5 minutes in the second stage

Abnormal FHR on auscultation?

FHR less than 110bpm or more then 160bpm*

YES

Offer and recommend continuous EFM/CTG if indicated
(may use telemetry if appropriate)

Light Meconium---stained liquor

Women with light meconium stained liquor should have a full assessment of gestation, stage of labour, volume of liquor, parity, the FHR, the presence of other risk factors & transfer pathway, when deciding if IA is appropriate

YES

Consider offering & recommending continuous EFM/CTG if any other risk factors present (may use telemetry if appropriate)

*** If the fetal heart rate (FHR) is heard above 160 bpm on intermittent auscultation (IA), the FHR should be auscultated for 3 consecutive contractions. If FHR is still raised, EFM should be offered and recommended. If the CTG appears normal (with NO decelerations) after 20 minutes and there are no other risk factors, it may be possible to discontinue EFM and resume IA after consultation with a senior obstetrician. If the FHR is heard above 160bpm at any time subsequently, then continuous EFM should be offered and recommended.**

APPENDIX 3 – TRANSFER TO OBSTETRIC LED CARE IF ANY OF THE FOLLOWING ARE OBSERVED DURING ANY ASSESSMENT

Observations of the woman:

- Any risk factor recorded in the woman's notes that indicate the need for obstetric care
- Pulse >120bpm on 2 occasions 30 minutes apart
- A single reading of a diastolic BP>110mmHg or systolic BP>160mmHg.
- A single reading of diastolic BP>90mmHg or systolic BP>140mmHg associated with 2+proteinuria.
- Either - diastolic BP>90mmHg or systolic BP>140mmHg on **2 consecutive readings taken 30 minutes apart.**
- Temperature of ≥38°c on a single reading, or ≥37.5°c on 2 consecutive readings 1 hour apart.
- Any vaginal blood loss other than a show.
- Rupture of membranes more than 24 hours **before the onset of labour**.
- The presence of significant meconium defined as dark green or black amniotic fluid that is thick or tenacious, or any meconium –stained amniotic fluid containing lumps of meconium. The presence of thin meconium in itself in the absence of other accompanying risk factors does not necessitate transfer from a community setting.
- Pain reported by the woman that differs from the pain normally associated with contractions.
- Confirmed delay in the first or second stage following an ARM procedure where no other risk factors are present and time has been allowed for progress (2 hours in the first stage and 1 hour in the second stage as long as all other observations are normal)
- Request by woman for additional pain relief using regional analgesia.
- Obstetric emergency – including APH, Cord Prolapse, PPH, seizure or collapse, or need for advanced neonatal resuscitation.
- Retained placenta.
- Third or fourth degree tear or other complicated perineal trauma requiring suturing

Observations of the unborn baby;

- Any abnormal presentation, including cord presentation.
- Transverse or Oblique lie
- Free floating head in a nullip
- Suspected IUGR or macrosomia
- Suspected anhydramnios or Polyhydramnios
- Fetal Heart rate of <110
- Fetal Heart rate of >160bpm over 3 consecutive contractions
- A deceleration in FHR heard on intermittent auscultation
- Reduced fetal movements in the last 24 hours reported by the woman

If any of the above factors are observed but birth is imminent, assess whether birth in the current location is preferable to transferring the woman to an obstetric unit and discuss this with the co-ordinating midwife. When escalating concerns use an approved method of communication such as SBAR and ensure that this is documented.

APPENDIX 4 – CHECKLIST FOR THE LATENT PHASE, PRIOR TO RETURNING HOME

Identify	**Latent first stage of labour**		**Tick once complete**
		Are there painful contractions AND some cervical change (including effacement and dilatation up to 4cm)	
Communicate	**Give Information**		
		What to expect in latent first stage of labour	
		How to contact their midwifery care team and what to do in an emergency	
		How to differentiate between Braxton Hicks contractions and active labour contractions	
		Recognition of amniotic fluid ('waters breaking')	
		Description of normal vaginal loss	
	Discuss		
		How she is coping	
		Her wishes, expectations and concerns	
		How to work with any pain experienced	
		How to contact their midwifery care team and what to do in an emergency	
	Advise		
		Encourage her to remain at or return home, unless doing so leads to a significant risk that she could give birth without a midwife present or become distressed.	
		Ensure in your assessment you consider: -	
		• Parity	
		• Geography	
		• What support woman has	
		• Previous obstetric history	
		• Self-recognised length of latent phase*	
Act	**Ensure**	Adequate analgesia	
		Woman and partner happy with plan	
	Document	Individualised plan with the woman	
		Any Obstetric review	

*there is no agreed definition of prolonged latent phase of labour, you must use your clinical judgement to consider if an Obstetric review is required when assessing the latent phase of labour.

Signature: Print: Date:

Document Control

Title **Low Risk Care of Women in Labour at Home or Midwife Led Setting Guideline**			
Author			**Author's job title** Community Team Leader Labour ward co-ordinator Lead Midwife for Community and Outpatients Services
Directorate Clinical Support and Specialist Services			**Department** Women's and Children's / Maternity
Version	**Date Issued**	**Status**	**Comment / Changes / Approval**
0.1	Sept 2019	Draft	Initial version for consultation
1.0	Aug 2020	Final	Addition of home birth risk assessment; MLC criteria – both within appendices. Approved by Maternity Specialist Governance Group
Main Contact A Lead Midwife North Devon District Hospital Raleigh Park Barnstaple, EX31 4JB			**Tel: Direct Dial** – **Tel: Internal** – **Email**:
Lead Director Divisional Director, Clinical Support & Specialist Services			
Superseded Documents None			
Issue Date August 2020	**Review Date** August 2023		**Review Cycle** Three years
Consulted with the following stakeholders: (list all) All staff to include; • Midwives • Obstetric Team to include all Consultants • Risk Midwife • Practice Development Midwife • Anaesthetic Team • Directorate Pharmacist			
Approval and Review Process • Maternity Specialist Governance Group			
Local Archive Reference G:\OBS/GYNAE\Risk\Guideline Development\2019\ Low Risk Care of Women in Labour in **Filename** Low Risk Care of Women in Labour in all Care Settings at Home or Alongside Unit			
Policy categories for Trust's internal website (Bob) Maternity			**Tags for Trust's internal website (Bob)** Home Birth, Low risk, Labour

CONTENTS

1.

1.1. The purpose of this document is to detail the process of Low risk Care for a woman at home or in an alongside unit/ room. The aim of this guideline is to provide documented resources to support excellence in clinical practice and is supported by evidence from National Institute of Health and Care Excellence (NICE) documents and is used in conjunction with existing supporting local guidelines.

1.2. The policy applies to all Trust staff that are likely to come into contact with women in low risk labour.

1.3. Implementation of this policy will ensure that midwives are able to support women in their place of choice of birth, whether this is at home or in an alongside unit after full discussion of the benefits and risks associated with each option. The women will have received an appropriate risk assessment and have a documented plan of care based on local and national guidance. This includes NICE recommendations and working in line with Better Births (NHSE, 2016). For a hospital birth, please refer to the Intrapartum Care of Healthy Women guideline.

2. Definitions

Normal Labour

2.1. Normal labour is defined as spontaneous labour commencing between 37 – 41+6 weeks gestation.

3. Responsibilities

Role of the Midwife

3.1. It is the responsibility of the midwife to ensure that women have sufficient information to make choices about her place of birth. Opinions from the obstetric team may be sought to aid decision making. All discussion and plans must be documented by the relevant clinician within the women hand held records.

3.2. All midwives

- Must give evidence based advice, taking into account the women's individual circumstance, about a suitable place of birth.
- Support a woman's choices ensuring advocacy for women within the maternity service.
- Complete a risk assessment form for women who choose to birth their baby at home
- Refer to the inclusion / exclusion criteria for women who are choosing to birth within the midwife led care room within the Lady well unit. If criteria apply the midwife must document and seek further advice from her line manager, lead midwife or obstetrician (if this is appropriate).
- Must ensure that all discussions and plans for a women place of birth is documented within her hand held records.

Role of Maternity Specialist Governance Group

3.3. The Maternity Specialist Governance Group (MSGG) is responsible for monitoring all governance activity within the service. The MSGG terms of reference identifies the full detail of the responsibilities of this group.

4. Introduction

4.1. The aim of this guideline is to provide documented resources to support excellence in clinical practice and is supported by evidence from National Institute of Health and Care Excellence (NICE) guidance, Better Births, (NHSE, 2016) and local guidelines.

4.2. This document will encompass care of the normal labouring woman who have chosen to labour at home or in the alongside birth setting and will refer to NICE recommendations for transfer to Obstetric care when indicated. Normal labour is defined as spontaneous labour commencing between 37 – 41+6 weeks gestation. This document will not cover pre-term labour, induction of labour, use of oxytocin in labour or assisted vaginal delivery or associated Obstetric care. Hyperlinks can be followed to access these on the Trust Maternity documents/guidelines via BOB.

5. Booking Appointment

5.1. Women and their partners should be informed of their choices of place of birth at their first antenatal booking appointment with their team midwife. Three options of Home, Midwife Led setting or Obstetric Led hospital labour ward should be offered, (NHSE, 2016).

5.2. All women should be given the NHS leaflet, "Your choice, where to have your baby" either;

https://assets.nhs.uk/prod/documents/NHSE-your-choice-where-to-have-baby-first-baby-sept2018.pdf ' for first time mums, or;

https://assets.nhs.uk/prod/documents/NHSE-your-choice-where-to-have-baby-baby-before-sept2018.pdf for women who have had a baby before.

It is important to discuss with the women their chances of outcomes, rates of transfer to a consultant led unit, according to place of birth, refer to Intrapartum care for healthy women and babies, NICE (2017).

5.3. Document a record of the discussion in the hand held notes.

6. Antenatal Care

Antenatal Care should be performed as per NICE recommendations, Antenatal Care for Uncomplicated Pregnancies, (NICE, 2019).

6.1. For those women eligible for Midwife Led Care, and choose to deliver at home, a Home Birth risk assessment should be completed around 36 weeks of pregnancy, in the woman's home. See Appendix A.

6.2. There should be a two-way discussion about the plan of care; any specific requests should be recorded. If a birth plan has been written, this should be read, discussed and clearly documented in the woman's hand held notes. If a mother does not wish to receive the care as suggested in these guidelines then this must be respected and the discussion recorded in her notes.

6.3. When a risk assessment is completed for a home birth, send a copy to labour ward, place a copy in the hand held notes, and leave the original with the woman.

6.4. For those women with additional risk factors where this decision presents a concern in facilitating a normal labour and birth, this should be discussed with a senior midwife and the woman's named consultant. An individualised plan of care can then be made accordingly.

6.5. If a woman wants to have her baby in the Midwife Led Setting room (within the Ladywell unit) please refer to inclusion/exclusion criteria as detailed in Appendix B.

7. In Labour

The initial assessment of labour will be carried out by telephone triage on labour ward:

7.1. A telephone triage SBAR form must be fully completed by a midwife for each woman who contacts the labour ward for advice.

7.2. Identify choice of place of birth. If requesting Home or Midwife Led room, reassess eligibility according to the current SBAR and pregnancy risk assessment. Consider a face to face assessment of labour at home or in Midwife Led setting, depending upon the woman's planned place of birth.

7.3. Give information about what the woman can expect in the latent first stage of labour and agree a plan of care with the woman, including, if appropriate, guidance about who she should contact next and when.

7.4. Any concerns regarding the clinical triage assessment must be escalated to the labour ward coordinator for support and advice.

7.5. The SBAR must be filed in the woman's main notes when no longer required

8. Care on attendance at home or on admission to Midwife Led setting

8.1. If attending birth in the home setting, equipment as in Appendix D must be taken to the home when attending for the initial assessment.

Initial Assessment of maternal and fetal wellbeing,

8.2. Baseline observations recorded to include:

- Maternal pulse, BP, temperature, respiratory rate and urinalysis.

- Abdominal palpation – to determine fundal height, fetal lie, presentation, position, engagement and frequency and duration of contractions.

- Auscultation of the fetal heart for a minimum of 1 minute immediately after a contraction and record it as a single rate – palpate the woman's pulse to differentiate between the two. Record accelerations or decelerations if heard.

- Dependent on above findings, vaginal examination should be offered.

8.3. Women identified with recognised vulnerabilities but remain eligible for either a home birth or Midwife Led setting, for example, mental health, housing, support concerns, should have a clear documented plan of care and treatment documented in the hospital notes.

8.4. If a woman develops any risk factors highlighted in Appendix C at any time throughout her labour, the midwife caring for her must refer her to the obstetric team on the labour ward for assessment and a plan of action made. In the event of imminent delivery assess and discuss whether birth in the current location is preferable.

9. First stage of labour

Latent Phase

On admission the correct diagnosis of the phase of labour is important.

9.1. The midwife must ensure that the woman is aware of the different stages of labour and that the latent phase may last for several hours. She should be offered advice and support to manage this stage, and empower the women to feel confident in returning

Active phase

9.2. When a woman is in the active phase of labour a partogram should be commenced. It is important that documentation is contemporaneous where possible

9.3. Breathing exercises, relaxation techniques, immersion in water, hypnobirthing and massage will support women in the latent stage of labour, support the woman in her choice. Do not offer or advise the use of hypnobirthing, aromatherapy, yoga or acupressure for pain relief unless you have been appropriately trained in these techniques.

9.4. Labouring in water is supported for healthy women with uncomplicated pregnancies and is recommended for pain relief.

9.5. Entonox (50:50 mix of oxygen and nitrous oxide) is available when supporting a woman at home or in a Midwife Led setting. It should be administered with clear instruction, refer to Analgesia and Anaesthesia in Maternity Guideline. Analgesia and Anaesthesia in Maternity Guideline

9.6. Within the Midwife Led Care setting, diamorphine or other opioids are available to administer, refer to Intrapartum Care including Fetal Monitoring Guideline for further information. Intrapartum Care Including Fetal Monitoring Guideline

9.7. Ongoing assessment of maternal and fetal wellbeing as per NICE guidance;

- Hourly maternal pulse
- 4 hourly Temperature and blood pressure
- Monitor uterine activity, document every 30 minutes
- Record frequency of emptying of maternal bladder
- Auscultation of fetal heart every 15 mins after a contraction for 1 min record as single rate
- Record accelerations or decelerations if heard.
- Vaginal examinations (VE) should be offered 4 hourly once in established labour (4 cm regular contractions), with abdominal palpation being recommended before each VE.
- Document any vaginal loss

9.8. Artificial Rupture of Membranes (ARM)

Membranes do not need to be artificially ruptured in an otherwise low risk labour. If this is to be considered, discuss with the labour ward co-ordinator first.

9.9. Spontaneous Rupture of Membranes

When membranes rupture spontaneously, the fetal heart should be auscultated. Observe and document vaginal loss regularly, especially in the presence of ruptured membranes.

The presence of significant meconium defined as dark green or black amniotic fluid that is thick or any meconium –stained amniotic fluid containing lumps of meconium should be transferred to an Obstetric Led care setting. The presence of thin meconium in itself in the absence of other accompanying risk factors does not necessitate transfer from a community setting, see Appendix B.

9.10. Uterine contractions should be assessed by abdominal palpation. This provides an assessment of frequency and duration. This should be recorded on the partogram.

9.11. If delay in the first stage is suspected take the following into account

- parity
- cervical dilatation and rate of change
- uterine contractions
- station and position of presenting part
- the woman's emotional state
- Offer the woman support, hydration, and appropriate and effective pain relief.

If delay in the established first stage is suspected, assess all aspects of progress in labour when diagnosing delay, including:

- Nulliparous: <2cm dilatation in 4 hours
- Parous : <2cm dilatation in 4 hours or a slowing in the progress of labour

9.12. For all women with confirmed delay in the established first stage of labour, the labour ward co-ordinator must be informed and transfer arranged to obstetric-led care for an obstetric review face to face assessment and a decision about management options.

10. Second Stage of Labour

10.1. Second stage of labour is defined as cervix has reached full dilatation on vaginal examination or the presenting part is visible. If the woman has no urge to push re-assess in 1 hour.

10.2. In the second stage of labour without complications, it is important that the woman should not be actively encouraged to push until the presenting part is visible or until the desire to push is overwhelming.

10.3. Continuous assessment of maternal and fetal wellbeing;

- Maternal temperature 4 hourly
- BP and maternal pulse hourly unless otherwise indicated
- Vaginal examination as clinically indicated
- Frequency of contractions, every 30 mins
- Record frequency of emptying the bladder

- Fetal Heart every 5 mins after a contraction for 1 min record as single rate (where possible). Record accelerations or decelerations if heard.

- Palpate the woman's pulse every 15 minutes to differentiate between the two heart rates

- Continue to monitor and record vaginal loss

10.4. The second stage may be divided into two phases: the descent/rotation phase and the pushing/active phase.

10.5. The mother should be free to choose her position for delivery within safe and reasonable limits. If the chosen position is not possible ensure that this is adequately explained and documented in the labour notes.

10.6. There is no evidence that sustained (Valsalva) pushing is physiologically more effective (Cochrane 2006).

10.7. The person conducting the delivery should be responsible for giving guidance to the mother. It is important to avoid more than one person talking at any one time.

10.8. Definition of delay and recommended duration of second stage.

Nulliparous: If after 1 hour of active second stage progress is inadequate,

Parous: If after 30 minutes progress is inadequate

If delay is suspected, then transfer to the hospital setting is advised for obstetric opinion and plan of management made. If this is from home, please refer to Clinical Guideline Maternal transfer by Ambulance and Appendix C**.**

11. Third Stage of Labour

The third stage commences with the complete delivery of the baby. It is important that options for management of the third stage have been discussed with the woman (where possible) in advance of its commencement.

11.1. Active Third stage:

- Routine use of uterotonic drugs
- Deferred clamping and cutting of the cord
- Controlled cord traction after signs of separation of the placenta

11.2. Physiological third stage:

- No routine use of Uterotonic drugs

- No clamping of the cord until pulsation has stopped
- Delivery of placenta by maternal effort
- If the baby requires resuscitation or the cord is very short it should be clamped and cut after which the clamp may be removed from the maternal end to drain.

11.3. Delivery of the placenta should be expected within 30 minutes or within 60 minutes of the birth with physiological management. In the event that it is retained, transfer to an Obstetric Led care setting. Refer to Appendix C for reasons to transfer to Consultant Led Setting.

11.4. Observations in the third stage;

- her general physical condition, as shown by her colour, respiration and her own report of how she feels
- vaginal blood loss.

12. Monitoring Compliance with and the Effectiveness of the Guideline

This guideline will be reviewed three yearly and compliance with it will be monitored with the audit programme.

Process for Implementation and Monitoring Compliance and Effectiveness

12.1. This guideline will be approved through the Maternity Specialist Governance group every 3 years.

12.2. There will be yearly audit of birth within the MLC setting to ensure compliance with this guideline.

12.3. This audit will be presented at the Audit and Case Review meeting

13. References

- Nice, (2019). Antenatal care or uncomplicated pregnancies. CG 62
- Nice, (2017). Intrapartum care for healthy women and babies CG, 190
- NHS England, (2016). Better Births. Improving outcomes of maternity services in England. A five year forward view for maternity care.

14. Associated Documentation

- Guideline for labour and monitoring

- Maternal transfer
- Water birth guideline

Appendix A

Home Birth Planning Assessment Form

EDD: Gravida: Para:	Named Midwife: Team: GP:	Sticker: Phone number:

The issues below must be discussed with the woman and her birthing partner in the home environment around 36 weeks.

Blood Group **Last Hb**

36 week Assessment at Home	Yes	No	Risks or Potential risk Identified	Actions/Contingency Plans	Signature/Date
Home birth can be offered between 37 weeks & Term+12. After this individual planning with the obstetrician would need to be arranged.					
There will be one midwife present initially to access progress. Once labour established and progressing a second midwife will be called to attend. The Midwives will then work together in the same room with you and your partner ensuring safety and continuity.					
Confirm suitability for a home birth following a full review of her medical, surgical & obstetric					

history (refer to guidelines) Discuss with your Manager if any risks identified Development of an individualised care plan if necessary for diabetes, GBS, BMI>35. (if going against medical advice please speak with team leader and a separate letter will be sent following meeting with woman and partner)					
Contact details for when labour starts.					
Birthplan: Discussed and fully completed on Pg. 29 of Antenatal notes, or ensure personal plan is attached. Please note any specific aspects of care that wish to be declined and advice given.					
Environment					
Location: Parking issues Safety of surrounding area Easily accessible for midwife & ambulance staff: Stairs Lifts Pets Has area for delivery been discussed? (check access/space adequate) Discuss tokens for meters/mobile phone					

reception etc. Availability of heating? Hot water bottle to warm baby towels/clothes if no heating. **Useful tips.** Good lighting, (Torch), Waterproof sheeting. Old towels/blankets. Refreshments and snacks for everyone. **Hospital bag packed**. **Client:** Mobility issues Language spoken (state language) Is there a family member/friend available to care for other children? Hand hygiene/Toilet facilities. Social services involvement					
Routine monitoring in labour as per NICE guidance: Maternal observations as per guidelines • Pulse hourly • Resps hourly • BP 4 hourly • Temp 4 hourly • Bladder care 4 hourly • Abdo palpation 4 hourly • Fetal monitoring every 15 mins in 1st stage and every 5 mins in 2nd stage. To					

include when to monitor-after a contraction and why • VE's in labour • Management of 3rd stage-active –use of syntometrine/Syntocinon or physiological					
Pain relief in labour: • Use of TENS • Use of Entonox • Alternative therapies • Hypnobirthing - if using this method discuss how to get consent.					
Possible reasons for transfer by ambulance & distance from unit/time to transfer discussed? Maternal concerns: • Raised blood pressure • Persistent pyrexia • Prolonged SRM • Haemorrhage • Shoulder dystocia • Cord prolapse • Malpresentation/breech • Maternal complications • Slow/no progress • Retained placenta • Difficult suturing • Maternal request • Any case where there is an ongoing professional concern • Include discussion around transfer rates into					

Hospital- ***See Your Choice, Where to have your baby Leaflet.*** Fetal concerns: • Meconium (*significant meconium defined as dark green/black or any amniotic fluid containing lumps. The presence of thin mec in itself in the absence of the other risk factors does not necessitate transfer from the community setting).* • Fetal heart irregularities • Fetal complications, including if baby needs resus • Hypoglycaemia • Hypothermia/Hyperthermia • Unexpected abnormality					
Document discussion around how staffing for homebirth works: individually assessed based on service availability.					
If booked for a water birth discuss the following: **Discuss possible test run of filling and emptying pool prior to labour.** • Positioning of the pool • Not to get in until a midwife is present • Pool temperature • Maintaining pool temp • Keeping pool clean-responsibility • Performing VE's					

• Observations whilst in the pool & necessity to get out if unable to perform • Monitoring the FH • Whether the 2nd stage will be in the pool • Emergency situations					
What happens after the birth: • Skin to skin • Vitamin K • Need to pass urine • Lochia-what to expect • Routine PN care • Midwife visits • Hearing test • Newborn examination • If any concerns re self or baby in the postnatal period phone Bassett ward. 01272 322612 or Delivery suite 01272 322605.					
Midwife check points. Stickers/Intrapartum/postnatal notes arranged. Home birth details sent to delivery suite folder.					

Midwives Name……..

Date and time…….

Other relatives……

People present at discussion:-

Mother's signature …….

Partner's signature …….

Doula ……..

Appendix B

Midwife Led Care Room (located within the obstetric unit)

(NICE, 2017)

Criteria for booking to be reviewed and decided from 36 weeks until labour

Inclusion

- Singleton pregnancy
- Cephalic presentation
- Uneventful pregnancy with expected growth
- Gestation – 37 +0 – 41+6
- Spontaneous onset of labour
- Spontaneous SROM- clear ; <24 hours
- BMI 18-35
- Para 4 or less
- Women who have agreement (documented) by their named Obstetrician to deliver in the MLC
- Choice

Exclusion

- Labour before 37+0 weeks gestation
- Labour after 42+0 weeks gestation
- Pregnancy complicated by underlying medical condition see PAGE 20/21
- Obstetric complication to include see PAGE 20/21
- Multiple pregnancy
- Grand Multip (Para 5 or above)
- VBAC
- Meconium stained Liquor
- BMI below 18 or above 36
- Continuous fetal monitoring in labour
- Epidural anaesthesia
- Induction of labour

If women enters the midwife care room and develops any of the exclusion criteria she must be transferred to an obstetric room and guidance sought by the labour Ward Coordinator / Obstetrician.

Factors indicating increased risk suggesting planned place of birth at an obstetric unit/room

Previous complications

- Unexplained stillbirth/neonatal death or previous death related to intrapartum difficulty
- Previous baby with neonatal encephalopathy
- Pre-eclampsia requiring preterm birth
- Placental abruption with adverse outcome
- Eclampsia
- Uterine rupture
- Primary postpartum haemorrhage requiring additional treatment or blood transfusion
- Retained placenta requiring manual removal in theatre
- Caesarean section
- Shoulder dystocia

Current pregnancy

- Multiple birth
- Placenta praevia
- Pre eclampsia or pregnancy induced hypertension
- Preterm labour or preterm prelabour rupture of membranes
- Placental abruption
- Anaemia – haemoglobin less than 85 g/litre at onset of labour
- BMI at booking of greater than 35 kg/m2
- Recurrent antepartum haemorrhage
- Induction of labour
- Substance misuse
- Alcohol dependency requiring assessment or treatment
- Onset of gestational diabetes
- Malpresentation – breech or transverse lie
- Small for gestational age in this pregnancy (less than fifth centile or reduced growth velocity on ultrasound)
- Abnormal fetal heart rate/Doppler
- Ultrasound diagnosis of oligo /polyhydramnios
- Confirmed intrauterine death

Previous gynaecological history

Myomectomy
Hysterotomy

Medical conditions indicating increased risk suggesting planned birth at an obstetric unit/room.

Cardiovascular	Confirmed cardiac disease Hypertensive disorders
Respiratory	Asthma requiring an increase in treatment or hospital treatment Cystic fibrosis
Haematological	Haemoglobinopathies – sickle-cell disease, beta-thalassaemia major History of thromboembolic disorders Immune thrombocytopenia purpura or other platelet disorder or platelet count below 100×10^9/litre Von Willebrand's disease Bleeding disorder in the woman or unborn baby Atypical antibodies which carry a risk of haemolytic disease of the newborn
Endocrine	Hyperthyroidism Diabetes
Infective	Risk factors associated with group B streptococcus whereby antibiotics in labour would be recommended Hepatitis B/C with abnormal liver function tests Carrier of/infected with HIV Toxoplasmosis – women receiving treatment Current active infection of chicken pox/rubella/genital herpes in the woman or baby Tuberculosis under treatment
Immune	Systemic lupus erythematosus Scleroderma
Renal	Abnormal renal function Renal disease requiring supervision by a renal specialist
Neurological	Epilepsy Myasthenia gravis Previous cerebrovascular accident
Gastrointestinal	Liver disease associated with current abnormal liver function tests
Psychiatric	Psychiatric disorder requiring current inpatient care

Appendix C

Indications for Maternal Transfer From a MLC Setting to an Obstetric Unit / Room

Please also see Maternal Transfer by Ambulance Maternal Transfer By Ambulance Guideline

Indications for Transfer

Antenatal

- Preterm Labour • Preterm rupture of membranes
- Severe hypertension in pregnancy
- Ante partum haemorrhage
- Medical conditions in Pregnancy; diabetes, amnionitis, heart disease.
- Multiple gestation with complications
- Intrauterine growth restriction with non-reassuring fetal monitoring.
- Trauma
- Fetal anomaly
- Inadequate progress in labour
- Malpresentation.
- Any other obstetric or neonatal emergency.

Intrapartum

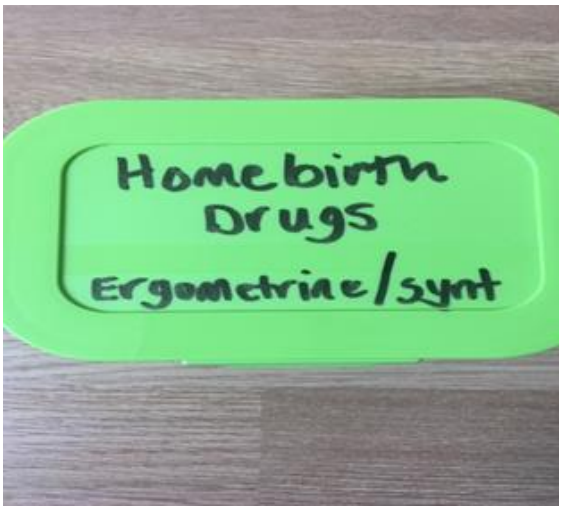
- Cord prolapse
- Failure to progress in labour
- Bleeding
- Malpresentation
- Analgesia
- Fetal compromise
- Maternal compromise

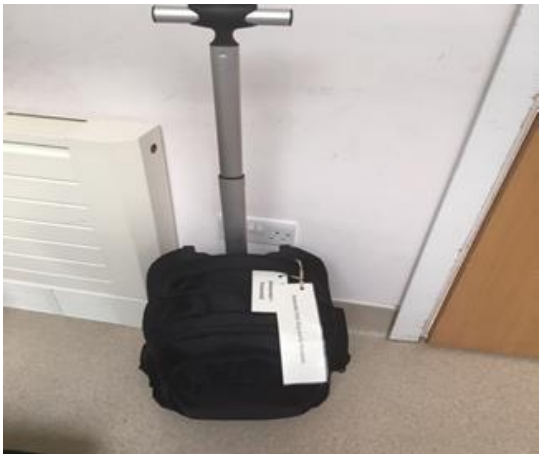
Postnatal

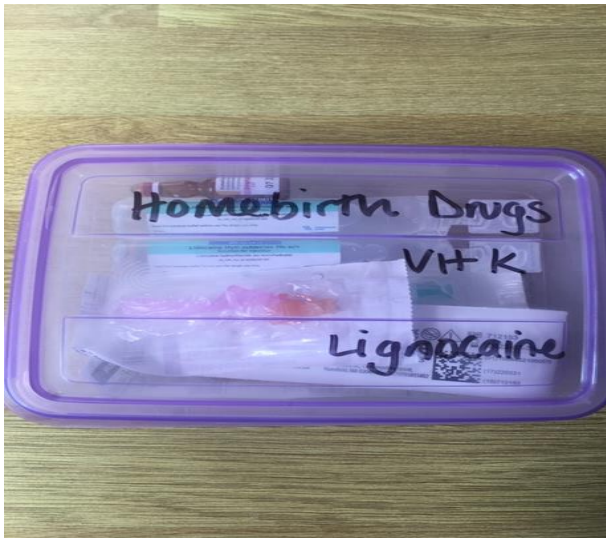
- Haemorrhage
- Suturing (if needs obstetric input)
- Retained Placenta
- Maternal or fetal compromise
- Birth asphyxia
- Infection
- Thromboembolic complications.

Appendix D

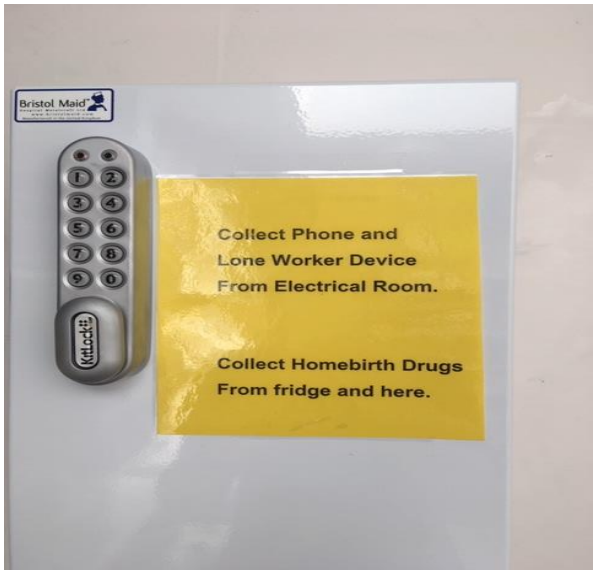
Midwifery Kit Needed for Home Births, Available on Central Delivery Suite






Homebirth Drugs
VIT K
Lignocaine


ENTONOX


Bristol Maid
Collect Phone and
Lone Worker Device
From Electrical Room.
Collect Homebirth Drugs
From fridge and here.

Clinical Guideline for:
Elective Caesarean Section

Summary

This guideline outlines the process for carrying out elective caesarean section.

Key Points

Antenatal Period

- Give enhanced recovery leaflet and explain what it means
- Highlight need to purchase own analgesia for post-op
- Give patients expectations of going home after 24hrs
- Midwife check Hb at 32wks and commence iron (200mg BD) if <110g/dl

Pre-Operatively

- Usual anaesthetic review
- Anaesthetist to decide order of list in consultation with obstetrician
- Patients to be told to attend Labour Ward at 07.30 on the day of their operation
- Clear advice regarding eating and drinking pre-op
- 2 carbohydrate drinks to be given with instructions

Intrapartum

- Joel-Cohen Technique
- Minimal dissection of rectus sheath inferiorly
- Use of cell salvage
- Carbetocin instead of Oxytocin infusion
- Use of rectus sheath blocks if under GA

Postnatal Period

- FBC 9-18 hours (depending on time of day)
- Catheter out after 12hrs (regardless of time of day)
- Regular analgesia provided and patients encouraged to take
- Proactive BF support
- Aim home after 24hrs

CONTENTS

1. INTRODUCTION

1.1 Caesarean Section is a major abdominal surgical procedure, and has many associated risks whether an emergency or a planned procedure.

1.2 This guideline sets out the required paperwork and process for booking and admitting women who require a caesarean section in the Royal Devon & Exeter NHS Foundation Trust Maternity Service.

1.3 It continues to provide the guidance on the midwifery process from admission on the day of Caesarean Section, through postnatal care to discharge home, ensuring an holistic approach to patient journey and minimising risks of errors and omissions.

2. ANTENATAL

2.1 Booking an elective caesarean section

2.2 Discussion and consent for an elective caesarean section can take place at any time in the antenatal period by the Consultant Obstetrician or Registrar in the antenatal clinic. At this time the patient information leaflet on caesarean section should be given to read, this should be documented in the medical and handheld notes.. Information should be based on current research recommendations as per NICE guidance (see Appendix 1).

2.3 A date for the caesarean section should be booked in the computerised caesarean diary

2.4 Information required in the computerised booking slot – name, hospital number, parity, gestation, reason for C/S, named consultant.

2.5 Enhanced Recovery – Inform patient regarding enhanced recovery and establish expectations of discharge after 24 hours. Also empower patient with planning information for example purchasing their own post-operative analgesia (paracetamol and ibuprofen if no contra-indications) and ensuring they have their FBC checked at 32-34 weeks – see Hyperlink to LSCS checklist

2.6 Timing; Planned caesarean section **should not be** routinely carried out before 39 weeks of gestation – The risk of respiratory morbidity is increased in babies born by caesarean section before labour, but this risk significantly decreases after 39 weeks. (NICE 2004). If an elective LSCS is booked before 39 weeks the reason must be clearly documented.

2.7 An appointment and time is arranged for the woman to attend the Fetal Maternal Assessment Unit (FMAU) at the Centre for Women's Health 1 day prior to the procedure (if the procedure is on a Monday then the appointment will be on a Friday afternoon). A letter outlining pre-operative clinic and procedures is given to the woman to take home.

2.8 If two sets of multiple births are booked on the same day inform labour ward so appropriate staffing can be arranged in advance.

3. PROCESS DURING ELECTIVE CAESAREAN SECTION PRE-OP CLINIC

3.1 Use of an elective caesarean pack (outlined in Appendix 2).

3.2 Complete checklist adding extra detail as required.

3.3 **Blood testing -**Take a FBC for urgent Hb.
A Group and Save is not required except for the following patients:

- Placenta Praevia (crossmatch 2 units)
- 3 x Previous LSCS
- Hb <100
- Plts <100
- Previous PPH
- Multiple Pregnancy
- Known Antibodies
- If Rhesus Status not known

3.4 On call Anaesthetist for labour ward to come to Fetal and Maternal Assessment Unit to review the woman and provide her with the anaesthetic information sheet to read and discuss.

3.5 Information given to the woman:

- Take oral Omeprazole 20mg at 18.00hrs the night before operation.
- Fast from midnight (unless specific circumstances dictate otherwise).
- Take 2nd Ranitidine 20mg at 06.00hrs on the morning of operation.
- Clear fluids (including tea and coffee with <1tbsp milk) should be encouraged until 2hrs prior to the time of surgery. (See Pre-Operative Fasting Guideline).Women should be advised not to chew gum or suck boiled sweets.
- To drink carbohydrate drinks when advised by Midwives.
- Do not remove pubic hair for at least a week before surgery.
- Attend labour ward at 07.30
- Explain that only one birth partner will be able to visit whilst in recovery. (Duration of stay in recovery is approximately 2 hrs, but will depend on clinical situation at time)
- Reiterate to woman to call Triage if she goes into spontaneous labour, reduced fetal movement, PV bleeding, or if her membranes rupture.

3.6 Other actions required in pre-op clinic

- Organise order for operation list based on reason for caesarean, anaesthetic required.

- Ensure the Neonatal Unit has capacity if the LCSC is for fetal reasons and higher dependency care is likely.
- Log details on Theatre Management System.
- Document pre-op attendance in maternity hand held notes
- Check and document blood results on pathway
- Order units of blood via transfusion if patient is known to have placenta praevia
- Once checklist is completed take hospital case notes to Labour ward – clearly document on LW whiteboard and disseminate operating list

4. Intrapartum

4.1 On the day of elective caesarean section the woman will arrive on labour ward and will be introduced to the Midwifery Support Worker (MSW) who will prep her for surgery.

- Check bed booked on postnatal ward.
- Review notes with woman and ensure she remains well informed about the planned procedure and no other problems or concerns have occurred since being seen in the Fetal and Maternal Assessment Unit (FMAU) pre-op clinic.
- Complete the 'Pre-operation and Pre-procedure Nursing Checklist' in the elective caesarean pack, and help fit Anti-embolic (TED) stockings.
- Take baseline observations of BP, Temperature, Pulse, and abdominal examination with fetal heart auscultation.
- If woman to have a spinal / epidural provide theatre scrubs and footwear for the birth partner.
- Ultrasound scan (USS) if breech or multiple pregnancy

4.2 Emergency procedures will have priority over planned, and it is important that if the ward is busy with emergency procedures that the women and her birth partner are informed and kept up to date as to delays. All women should be offered 50ml water per hour up until the time of surgery. If there are going to be substantial delays then further fluids may be offered after discussion with the anaesthetist.

4.3 If no other obstetric operative procedures are being undertaken the first women will be taken into theatre to start her procedure at approximately 08.30, with the second following consecutively. Midwife to check that ward bed is ready outside theatre for when operation complete.

4.4 Role and responsibility of the midwife in theatre:

- Support – during insertion of Spinal / Epidural.
- Accommodate women's preferences for the birth where possible, such as music playing in theatre, lowering the screen to see the baby born, or silence so that the mother's voice is the first the baby hears. Midwife to convey above to theatre team.
- Fetal heart auscultation after the anaesthesia has been sited and administered.

- 'Trim' pubic area using electric trimmer provided in theatre (if required).
- Ensure that the baby cot with sterile drape (placed over by the scrub nurse) is positioned close to the foot of the theatre table so that the surgeon (obstetrician) can place the baby into it after clamping and cutting the cord.
- Take cot to resuscitaire, dry, wrap and take baby to mother and birth partner to hold if mother is awake. If the mother has a general anaesthetic the baby must remain in theatre and not be taken to the birth partner in recovery until the patient and midwifery staff are out of theatre.
- Examine placenta and membranes in dirty utility room in theatre and take Direct Coombes Test (DCT) if woman is Rhesus negative. Double bag and dispose.

NICE guidance does not support routine blood gas analysis on elective caesarean or 'normal' deliveries unless there is a clinical indication of fetal compromise where a result may provide further information and a basis for referral or treatment.

- When operation complete, assist with transfer to normal bed and move to recovery area along with baby and partner.

4.5 Intrapartum considerations for the surgeon

- Offer women prophylactic antibiotics at CS before skin incision. Inform them that this reduces the risk of maternal infection more than prophylactic antibiotics given after skin incision, and that no effect on the baby has been demonstrated.
- The transverse incision of choice is the Cohen incision because it is associated with shorter operating times and reduced postoperative febrile morbidity.
- When there is a well formed lower uterine segment, blunt rather than sharp extension of the uterine incision should be used because it reduces blood loss, incidence of postpartum haemorrhage and the need for [blood] transfusion at CS.
- Carbetocin 100 micrograms by slow intravenous injection or a syntocinin 5iu bolus followed by an infusion (for cases of high chance of uterine atony) should be used at CS to encourage contraction of the uterus and to decrease blood loss.
- Routine closure of the subcutaneous tissue space should not be used, unless the woman has more than 2 cm subcutaneous fat, because it does not reduce the incidence of wound infection.

4.6 Role and responsibility of midwife in Recovery

See the Clinical Guideline for Obstetric Recovery

Ensure that Fragmin is prescribed and given as indicated at 4 hrs post delivery in accordance with the Venous Thromboembolism – Obstetric Prophylaxis Guideline.

5. POSTNATAL

5.1 Transfer from recovery to ante/postnatal ward will be based on criteria set out in Obstetric Recovery Guideline and will be determined by the recovery nurse and midwife caring for the woman.

5.2 Routine Post-operative Postnatal observations:

5.2.1 For women who have had Epidural or Spinal Diamorphine:

- Pulse, BP, respiratory rate and sedation score - hourly for 12 hours then 4 hourly for another 12 hours.
- Temp 4 hourly.
- Pain and nausea/vomiting hourly for 4 hours, then 4 hourly.
- Encourage patient to inform staff of any side effects e.g. nausea, pruritus.

5.2.2 For women who have Patient Controlled Analgesia (PCA) - whilst PCA in progress

- As above but additionally:
- Pump observations - hourly for 8 hours, then 4 hourly

5.3 Caesarean wound care should include:

- Removing the dressing on Day 3 after the CS.
- Assessing the wound for signs of infection (such as increasing pain, redness or discharge), separation or dehiscence. Also assess general maternal wellbeing.
- Encouraging the woman to wear loose, comfortable clothes and cotton high-waisted underwear.
- Gently cleaning and drying the wound daily in shower.
- If needed, planning the removal of sutures or clips at the pre-specified time which is generally day 4 after caesarean section.

5.4 Women who have a CS should be prescribed and encouraged to take regular analgesia for postoperative pain

5.5 The first 12 - 24 hours

- Urinary catheter should be removed after 12 hours if mobilizing to bathroom and no clinical indication to leave in. See Bladder Care Guideline.
- IV cannula to remain in situ for 12 hours, but may be removed if not required for medication or potentially needed for further treatment ie. blood transfusion.
- Women who have had an elective CS should be offered the opportunity to discuss with their health care providers the reasons for the CS for future

pregnancies. A copy of the CS operation note should be given to the patient on discharge.

- Review by obstetric SHO to discuss any concerns, and to sign prescription chart ready to arrange take home medication.
- Ensure regular oral analgesia, and where possible self-medication.
- Fragmin – 9 further doses (making a total of 10 doses). See Venous Thromboembolism – Obstetric Prophylaxis Guideline.

5.6 Discharge and follow up – mother and baby

- Discharge home can be made any time after 24 hours although this should be based upon clinical grounds.
- Do not give routine analgesia as patient should have own supply pre prepared – if requiring additional analgesia ensure appropriate take home medication is provided with clear written and verbal instructions on use, and is taken from the labelled 'TTO' drug cupboard.
- Ensure that emergency contact numbers for mother and baby are given and documented, and discharge handed out to appropriate community team.
- 6-8 week postnatal follow-up is routinely arranged by the GP.

6. REFERENCES

- National Institute of Clinical Excellence (NICE) 2011 Caesarean Section. Clinical Guideline. London: NICE (CG132)
- National Institute of Clinical Excellence (NICE) 2004 Caesarean Section. Summary of effects and procedural aspects. Clinical algorithm. London: NICE.

7. MONITORING COMPLIANCE WITH THIS GUIDELINE

7.1 Any concern or non-compliance with this guideline that is identified through the investigation of clinical incidents, claims or complaints will be reviewed as per the Trust Policies regarding Incidents, Claims and Complaints, and may result in an audit and/or amendment to the guideline.

7.2 Relevant Policies:

- Incident reporting policy and procedure
- Claims management policy and procedure
- Policy and Procedure for the Management of Complaints, Concerns, Comments and Compliments

8. PUBLICATION DETAILS

Author of Clinical Guideline	Labour Ward Lead Clinician
Directorate/Department responsible for Clinical Guideline	Specialist Services/ CWH/Maternity
Contact details	6681
Version number	6.3 (Replace Ranitidine with Omeprazole)
Replaces version number	6.2
Date written	August 2008
Approving body and date approved	Maternity Governance Forum (chairs action 01/06/20)
Review date	04/12/2022 – Review date not changed
Expiry date	04/03/2023 – Expiry date not changed
Date document becomes live	17/06/2020

APPENDIX 1 – NICE ALGORITHM FOR BOOKING ELECTIVE CAESAREAN SECTION

Pregnant women should be given evidence-based information on caesarean section (CS) – as 1 in 4 will have a CS – including indications, what the procedure involves, risks and benefits, and implications for future pregnancies.
The decision about mode of birth should consider maternal preferences and priorities, general discussion of the overall risks and benefits of CS (specific risks and benefits uncertain), risk of uterine rupture and perinatal mortality and morbidity.

Do not routinely offer planned CS to women with:

✗ Twin pregnancy (if first twin is cephalic at term)
✗ Preterm birth
✗ A 'small for gestational age' baby
✗ Hepatitis B virus
✗ Hepatitis C virus
✗ Recurrent genital herpes at term

Offer planned CS to women with:

✔ A term singleton breech (if external cephalic version is contraindicated or has failed)
✔ A twin pregnancy with breech first twin
✔ HIV
✔ Both HIV and hepatitis C
✔ Primary genital herpes in the third trimester
✔ A placenta that partly or completely covers the internal os

Women who want VBAC should be supported and:

- Be informed that uterine rupture is very rare but is increased with VBAC (about 1 per 10,000 repeat CS and 50 per 10,000 VBAC)
- Be informed that intrapartum infant death is rare (about 10 per 10,000 – the same as the risk for women in their first pregnancy), but increased compared with planned repeat CS (about 1 per 10,000)
- Be offered electronic fetal monitoring during labour
- Should labour in a unit where there is immediate access to CS and on-site blood transfusion
- If having induction of labour should be aware of the increased risk of uterine rupture (80 per 10,000 if non-prostaglandins are used, 240 per 10,000 if prostaglandins are used)
- Be informed that women with both previous CS and a previous vaginal birth are more likely to give birth vaginally

Increased with CS

- Abdominal pain
- Bladder injury
- Ureteric injury
- Need for further surgery
- Hysterectomy
- Intensive therapy/high dependency unit admission
- Thromboembolic disease
- Length of hospital stay
- Readmission to hospital
- Maternal death
- Antepartum stillbirth in future pregnancies
- Placenta praevia
- Uterine rupture
- Not having more children
- Neonatal respiratory morbidity

No difference after CS

- Haemorrhage
- Infection
- Genital tract injury
- Faecal incontinence
- Back pain
- Dyspareunia
- Postnatal depression
- Neonatal mortality (except breech)
- Intracranial haemorrhage
- Brachial plexus injuries
- Cerebral palsy

Reduced with CS

- Perineal pain
- Urinary incontinence
- Uterovaginal prolapse

APPENDIX 2 – PREPARATION PACK CHECK LIST

- ☐ Elective LSCS Checklist
- ☐ Exeter Department of Anaesthesia ‘Anaesthesia for Caesarean Section’ leaflet
- ☐ Anaesthetic Record card
- ☐ Waterlow Risk Assessment Card (yellow sheet)
- ☐ Blood forms – Blood Transfusion
- ☐ Chemistry/Haematology
- ☐ Out-patient Clinic Prescription Chart
- ☐ Drug Prescription and Administration Record card
- ☐ Pre-operation and Pre-procedure Nursing Checklist
- ☐ Neonatal Vitamin K Prescription Form
- ☐ Purple postnatal notes

Document Control

Title			
Caesarean Section Guideline			
Author		**Author's job title** Consultant Obstetrician, Labour Ward Lead. Consultant Obstetrician Consultant Microbiologist. Lead Clinical Midwife.	
Directorate Womens and Childrens		**Department** Maternity	
Version	**Date Issued**	**Status**	**Comment / Changes / Approval**
0.1	Jul 2009	Draft	First Draft of new Guidelines/Reviewed into new trust format.
0.2	Aug 2009	Draft	Amendments following review by Guideline Group.
1.0	Aug 2009	Final	Approved, ratified and on Tarkanet.
1.1	Jan 2010	Revision	Revised to incorporate CNST Assessors comments.
2.0	Feb 2010	Final	Approved at February Guidelines Group and Maternity Services Patient Safety Forum.
2.1	Jul 2010	Revision	Revised to amend Compliance section and audit tool and update Document Control Report.
3.0	Jul 2010	Final	Approved, Ratified and Published on Tarkanet.
3.1	Aug 2011	Revision	Amendments made in new Format and new proforma.
4.0	Sep 2011	Final	Approved and Published on Trust Intranet.
4.1	Sept 2012	Revision	Revised for new CNST standards 2012-2013.
5.0	Oct 2012	Final	Approval by Maternity Guideline group in October 2012 and noted at October 2012 Maternity Services Patient Safety Forum.
5.1	Feb 2013	Revision	Minor amendments by Corporate Governance to document control report and formatting for document map navigation and semi-automatic table of contents.

5.2	Sep 2013	Revision	Amendments made according to NICE Quality Standard 32
5.3	Oct 2013	Revision	Changes made as a result of consultation with users of the guideline
6.0	Oct 2013	Final	Approved by Maternity Guideline Group in October 2013
6.1	Dec 2014	Revision	Clarification made to urgency of caesarean section and maternal request for caesarean section
7.0	Dec 2014	Final	Approved by Maternity Guideline Group in December 2014 and Published on Bob.
8.0	Jan 2018	Final	Amalgamated with Antibiotic Prophylaxis for CS Guideline and transferred to new template. Minor amendments made.
8.1	Mar 2018	Revision	DTC approved 15.03.18
9.0	Mar 2018	Final	DTC approved 15.03.18

Main Contact Consultant Obstetrician, Labour Ward Lead North Devon District Hospital Raleigh Park Barnstaple, EX31 4JB	**Tel: Direct Dial** **Tel: Internal** **Email**:
Lead Director Director of Nursing	
Superseded Documents Antibiotic Prophylaxis for Caesarean Section	

Issue Date	**Review Date**	**Review Cycle**
March 2018	March 2021	Three years

Consulted with the following stakeholders:

- Maternity Guidelines group
- Maternity link Pharmacist
- Infection Control
- Microbiologist

Approval and Review Process

- Maternity Services Guideline Group
- Drugs and Therapeutics Committee

Local Archive Reference
G:\OBSGYNAE\Risk\Guideline Development\2018
Filename
Caesarean Section Guideline v8.0 January 2018

Policy categories for Trust's internal website (Bob) Maternity	**Tags for Trust's internal website (Bob)** Antibiotic, prophylaxis

CONTENTS

1. Purpose

1.1. The purpose of this document is to detail the process for Caesarean Section procedures at North Devon Healthcare NHS Trust.

1.2. The policy applies to all Maternity and Theatres staff.

1.3. Implementation of this policy will ensure that all women requiring Caesarean Section will have the procedure completed in accordance with this guideline.

2. Definitions

2.1. **CS** - Caesarean section

2.2. **LSCS** - Lower Segment Caesarean section

2.3. **DDI** - Decision delivery interval

2.4. **VBAC** - Vaginal birth after caesarean

3. Responsibilities

Role of the Midwife

3.1. The Midwife is responsible for:

- Acting as an effective advocate for the woman ensuring that she is fully informed in order to make her decision about Caesarean Section.
- Ensuring that necessary preparation and checks are completed in accordance with the timeline for CS. These will include MRSA swabs, blood tests for full blood count and Group & Save, blood results, observations and pre-operative medications, pre-operative shave, application of anti-embolism stockings.
- Ensuring that observations and checks are performed at key stages before, during and after the procedure to reduce the risk of adverse outcomes associated with the procedure including infection and bleeding.
- Ensuring that any abnormal findings are escalated and acted upon promptly and effectively.

Role of the Obstetrician

3.3. The Obstetrician is responsible for:

- Taking a lead role in ensuring the procedure timeline and safety checks are completed promptly and effectively.
- Ensuring that the woman fully understands the risks and benefits of the procedure thus obtaining fully informed consent prior to the procedure.
- Ensuring that the procedure is completed in accordance with this guideline.
- Ensuring that there is a clearly documented plan for post-procedure observations and checks including analgesia and any other medications prescribed as required.
- Ensuring that any abnormal findings are responded to and acted upon in a timely and effective manner.

Role of the Anaesthetist

3.4. The Anaesthetist is responsible for:

- Taking a lead role in ensuring the procedure timeline and safety checks are completed promptly and effectively.
- Ensuring that the woman fully understands the risks and benefits of the Anaesthetic procedure required for the CS thus obtaining fully informed consent prior to the procedure.
- Ensuring that the Anaesthetic procedure required for the CS is completed in accordance with Trust policy.
- Ensuring that all medication given in theatre and those required postnatally are prescribed in accordance with Trust policy.
- Ensuring that there is a clearly documented plan for post-Anaesthetic procedure observations and checks.
- Ensuring that any abnormal findings are responded to and acted upon in a timely and effective manner.

4. General Principles

Provision of information

All pregnant women will be given evidence-based information about Caesarean Section during the antenatal period, because about 1 in 4 women will have a Caesarean Section (Department of health, 1994).

Information will include:

- indications for Caesarean Section (such as presumed fetal compromise, 'failure to progress' in labour, breech presentation)
- what the procedure involves
- associated risks and benefits

- implications for future pregnancies and birth after Caesarean Section.

Timing of Planned Caesarean Section

4.1. Pregnant women having a planned caesarean section have the procedure carried out at or after 39 weeks 0 days, unless an earlier delivery is necessary because of maternal or fetal indications.

4.2. All women for whom elective caesarean section is planned prior to 39 weeks 0 days gestation, antenatal corticosteroids will be given because of the risk of neonatal respiratory morbidity (3-4%).

Maternal request for caesarean section

4.3. Pregnant woman who request a caesarean section when there is no clinical indication, specific reasons for caesarean section will be identified, discussed and documented.

4.4. There must be a documented discussion about the overall risks and benefits of a caesarean section compared with vaginal birth.

4.5. Woman requesting a caesarean section because of anxiety about child birth is offered a referral to a health care professional with expertise in psychological therapy.

4.6. A Consultant Obstetrician can decline a woman's request for a Caesarean Section In this instance they will refer the woman to an obstetrician who will carry out the Caesarean Section.

4.7. If necessary, discussion will be facilitated with other members of the Consultant Obstetric team for second opinion.

4.8. For woman requesting a Caesarean Section, if after discussion and offer of support, a vaginal birth is still not an acceptable; a planned Caesarean Section will be offered.

4.9. Please complete the maternal request for caesarean section "discussion form **(Appendix 7)** "and "agreement form" **(Appendix 8)** at the antenatal clinic**.** Patient will be given the Agreement form to read through it and make the decision.

Urgency of caesarean section

4.10. It is the responsibility of the person that makes the decision for caesarean section, to identify the grade of urgency. The decision depends on judgement of the expected outcome and the priority of workloads and appropriate to the risk to the baby and the safety of the mother.

4.11. The Consultant on-call must be informed of the plan to perform CS and will be involved in the decision-making process for elective or emergency caesarean sections.

4.12. The concept of urgency of caesarean section represents **a continuum of risk rather than discrete categories. It is not the time-based definition: (See Appendix 3).** Four broad categories of risk are defined. All staff will be aware that, within each category, the degree of risk in individual cases can vary**.** This variance in degree of risk requires an individual, case-by-case approach in deciding the specific DDI.

4.13. Grade 1 (Immediate threat to the life of the woman or fetus)

4.14. DDI target of 30 minutes will be achieved unless the clinical situation changes in theatre.

Certain clinical situations will require a much quicker DDI than 30 minutes. Examples are Fetal bradycardia, Abnormal fetal blood pH& gases, Cord prolapse, Maternal collapse or maternal cardio-respiratory distress, Antepartum haemorrhage with hypovolaemia, Significant placental abruption, Uterine rupture, failed instrumental delivery, certain cases of pathological CTG. Undue haste to achieve a short DDI can introduce its own risk, both surgical and anaesthetic, with the potential for maternal and neonatal harm.

4.15. Grade 2 (Maternal or fetal compromise which is not immediately life-threatening)

DDI for Grade 2 CS is both 30 and 75 minutes. Grade 2 caesarean sections can be upgraded if clinical circumstances change. Examples are certain cases of pathological CTG, Cord presentation with no fetal compromise, Antepartum haemorrhage with no maternal or fetal compromise, Suspected uterine rupture with no maternal or fetal compromise, Severe Pre-eclampsia.

4.16. Grade 3 (No maternal or fetal compromise but needs early delivery)

Examples are breech presentation in early labour or failure to advance.

4.17. Grade 4 Delivery time to suit the woman and maternity services.

4.18. **NOTE:** Grading, time of decision of Caesarean Section and the reason for Caesarean Section must be documented in the patient's labour notes at the time the decision is made by the appropriate person making the decision.

Perform category 1 and 2 CS as quickly as possible after making the decision.

The surgeon will communicate with the anaesthetist on-call (and remain on CDS) and midwifery team to inform the theatre staff with **specific instructions on the degree of urgency.**

The first person who arrives to theatre (anaesthetist/ theatre staff) will inform Delivery Suite to accept transfer of the patient. Shift co-ordinator is responsible for ensuring timely transfer to theatre. The roles are interchangeable where appropriate.

Use these grades as audit standards only and not to judge multidisciplinary team performance for any individual caesarean section.

5. LSCS Procedure

Preparation

5.1. All members of the multidisciplinary team must be informed of the need (or likely need) for caesarean delivery as early as possible.

5.2. Antacids to reduce gastric volumes and acidity. Prescribe 30 ml of sodium citrate 0.3 mmol/ml liquid, to be given orally immediately prior to theatre. Ranitidine 50 mg by IV bolus - refer to Medusa if unsure of administration rate, dilute with at least 20 ml of sodium chloride or glucose 5% prior to administration unless oral dose within preceding 6 hours but will not delay transfer to theatre in urgent cases.

5.3. Apart from exceptional circumstances ensure written consent is obtained.

5.4. Categorisation of risk will be reviewed by the multidisciplinary team when the mother arrives in the operating theatre as the risk factors may change in the DDI.

Antibiotics for LSCS

5.5. The risk of developing a surgical site infection, endometritis or UTI post-operatively is about 8% of all patients undergoing CS according to NICE CG132, 2011. A more recent Cochrane review cites the risk of developing post-operative surgical site infection rates at between 3-15% and endometritis at 10-20% despite adequate use of prophylactic antibiotics prior to surgery [Hadiati et al, 2014].

5.6. Some patient groups will be more susceptible to post-operative infections due to pre-existing conditions. These include maternal obesity, diabetes, immunosuppressive disorders (eg. HIV infection), chorioamnionitis, PPROM, anaemia or systemic corticosteroid use. Prolonged labour prior to Caesarean Section, a lengthy operation and heavy blood loss peri-operatively are unforeseen risk factors which have also been shown to increase the risk of developing post-operative infections [NICE CG132, 2011;.

5.7. Post-Caesarean Section infections can be divided into two main types. Bacteria found in amniotic fluid at birth due to prolonged labour or rupture of membranes can cause internal infection such as endometritis [Hadiati et al, 2014]. Contamination from the skin surface introduced at the site of incision, with Staphylococcus auerus is also reported [Jido and Garba, 2012].

5.8. Post-CS infection places strain on maternity services and may also adversely affect the woman's family at home due to delayed discharge and inability to care for the newborn. Adequate preventative measures are key to ensuring early recovery and avoiding complications. Following good operating practice procedures, using the appropriate scrubbing technique and antibiotic prophylaxis pre-operatively reduces the risk of post-operative complications. Prophylactic antibiotics given prior to Caesarean Section will cover for UTI, endometritis and surgical site infections [NICE CG132, 2011]. NICE specifically exclude the use of co-amoxiclav for CS prophylaxis [NICE, 2011].

5.9. Antibiotics given before C-section are mainly intended to reduce the incidence of surgical site infection. **This means that the antibiotics must be administered before knife to skin, optimally 15 minutes before surgery (but within A MAXIMUM of 1 hour of surgery)**. Exposure of the foetus to antibiotics has not been linked to adverse outcome.

5.10. If there is co-incident chorioamnionitis or evidence of maternal sepsis, these will be treated as per protocol. Additional prophylactic antibiotics will be given (as in this appendix). Phone microbiology for advice if necessary.

5.11. **1st line (including mild penicillin allergy);** Cefuroxime 1.5g IV stat

5.12. **Penicillin allergy (anaphylaxis) or known MRSA positive (at any time);** Teicoplanin 800mg IV stat (if maternal weight more than or equal to 60kg) OR Teicoplanin 400mg IV stat (if maternal weight less than 60kg)

Anaesthetics

5.13. Administer IV antibiotic 15 minutes prior to knife to skin (see 5.9 – 5.12) or if emergency situation dictates other priorities, maximum within one hour of surgery. For all non-emergency CS this may mean administering IV antibiotic when the IV is sited and/or before the spinal is sited, epidural topped up or GA inducted.

5.14. Choice of anaesthesia depends upon urgency of situation, technical feasibility and skills of the anaesthetist. Therefore, joint decision of anaesthetist and obstetrician is required.

5.15. Operating table for Caesarean Section will have a lateral tilt of 15°.

5.16. Women having a Caesarean Section under regional anaesthesia, intravenous ephedrine or phenylephrine, and volume pre-loading with crystalloid or colloid will be considered.

5.17. General anaesthesia for unplanned Caesarean Section will include pre-oxygenation, cricoid pressure and rapid sequence induction.

5.18. Anaesthetist on-call must be informed of admission of women with high risk patients for anaesthesia such as those with BMI=/> 40, thrombocytopenia, serious maternal cardiac or respiratory problems when delivery likely to take place.

Surgical technique

5.19. Transverse lower abdominal skin incision is recommended (Joel-Cohen incision).

5.20. Separate surgical knives for skin and deeper tissues are no longer recommended.

5.21. The uterine incision will be extended by blunt digital separation rather than sharp division in the majority of cases in order to minimise blood loss.

5.22. Forceps will only be used when there is difficulty in delivering the fetal head, not as a matter of routine practice.

5.23. Delayed cord clamping will be implemented in all cases where there is no fetal compromise. N.B Strict attention must be paid to thermoregulation of the neonate however and the baby must be thoroughly dried while awaiting clamping and cut of the cord.

5.24. Skin to skin contact can commence immediately at delivery in all cases where there is no fetal or maternal compromise.

5.25. Controlled cord traction will be employed for delivery of the placenta.

5.26. Use oxytocin 5IU by slow intravenous injection. See Medusa for guidance.

5.27. Uterine incision will be closed in 2 layers.

5.28. Peritoneum will not routinely be closed.

5.29. If a midline abdominal incision is used, mass closure with slowly absorbable continuous sutures e.g. polydiaxanone (PDS) strength 1 suture will be considered.

5.30. Paired arterial and venous blood samples will be taken from umbilical cord for pH and blood gas analysis after all Caesarean Section for suspected fetal compromise.

5.31. At the discretion of the operating surgeon it may be appropriate to consider closing the subcutaneous tissue space where the woman has more than 2 cm subcutaneous fat in depth OR where the woman had a very low BMI to avoid the skin becoming adherent to the rectus sheath resulting in a puckered scar.

5.32. Do not routinely use superficial wound drains.

5.33. Written post-operative care plan will be documented at the end of the surgical procedure.

Post Caesarean Section care

Post Caesarean Section care consists of general postnatal care, specific post Caesarean Section care and care of pregnancy complications.

Observations

5.34. The following observations will be made and documented on the MOEWS chart as a minimum every 30 minutes for 2 hours, followed by hourly for 4 hours, then every 4 hours, for a total of 24 hours:

- Respiratory rate, heart rate, oxygen saturation, blood pressure and pain and sedation.
- Vaginal loss, level and tone of uterine fundus, wound dressing for oozing.
- If observations are not stable, more frequent monitoring is required.

5.35. In addition to routine observations, swelling, redness, or discomfort of legs, bladder and bowel function, will be monitored every 24 hours.

5.36. Maintain fluid balance charts until IV fluids discontinued and patient drinking freely and voiding urine normally.

Care of the baby born by Caesarean Section

5.37. A paediatrician will be present at Caesarean Section performed under general anaesthesia or where there is evidence of fetal compromise.

5.38. Thermal care will be in accordance with good practice for thermal care of the new-born baby. Encourage and facilitate early skin-to-skin contact between the woman and her baby.

5.39. Offer additional support to help women start breastfeeding as soon possible after the birth of their baby.

Care of the woman after Caesarean Section

Analgesia

5.40. Combination therapy with different drugs by different routes provides best effect.

5.41. If GA give IV PCA Morphine (or fentanyl).

5.42. If Regional anaesthetic Morphine Sulphate Solution 10mg in 5ml (Oramorph) 10-20 mg orally 2 hourly PRN.

5.43. PARACETAMOL 1 g oral or IV QDS regularly.

5.44. NSAID Give Diclofenac regularly unless contraindicated by allergy, pre-eclampsia, renal impairment or clotting abnormality. Diclofenac 100 mg PR in theatre followed by 50 mg orally TDS with first dose at least 16 hours after rectal dose.

5.45. Anti-emetic; Ondansetron 4-8 mg IV TDS PRN or if not effective, Cyclizine 50 mg TDS IV slowly PRN

General aspects

5.46. **Early Feeding**: is recommended to women who are recovering well with no complications when they feel hungry or thirsty. Early feeding leads to faster recovery of bowel function (reduce the risk of Ogilvie Syndrome) and less post-operative pain.

5.47. **Bladder Care:** *Refer to trust guideline Bladder Care in Labour and Postpartum*

5.48. **Caesarean Section wound care:** Dressing should be removed after 24 hrs of Caesarean Section. Advise the wound should be kept clean and dry.

5.49. **Venous Thromboembolism Prophylaxis**: *Refer to trust guideline "Reducing the risk of venous thromboembolism"*

5.50. **Postnatal Support**: All patients will be offered additional support regarding breastfeeding and general care of baby in view of reduced mobility.

Post-natal discharge

5.51. Timing of discharge: Women are routinely discharged day 2- 3. Early discharge (after 24 hours) with follow up at home can be offered to women who are recovering well, are apyrexial and do not have complications. Hospital stay-5 days- is advised to those with moderate or severe pre-eclampsia.

5.52. Information before discharge: It is the responsibility of the Obstetrician who performed the CS to have a post-delivery discussion of events with the mother prior to discharge, covering the reasons for their caesarean section and birth options for future pregnancies. A statutory Duty of Candour discussion must be completed where applicable; this must be clearly stated as such to the woman and in writing in her hospital records. This information will also be provided in writing (see discharge letter template in Appendix 5). The discharge letter will be completed by the surgeon (the Obstetrician who performed the operation) and the completed letter will be issued to the woman by a midwife from the Bassett Ward.

5.53. A leaflet on "VBAC" will be provided to the women who have the option of vaginal birth in next pregnancy.

5.54. A follow up debriefing at later date may be beneficial in certain cases and should be offered.

5.55. Discussion will also include 2 to 3 fold increase in risk of uterine scar rupture with a short inter-delivery interval (below 24 months), to enable the women to plan their preferred spacing intervals for subsequent pregnancies.

6. Monitoring Compliance with and the Effectiveness of the Guideline

- Monitoring of implementation, effectiveness and compliance with the Caesarean Section guidelines is the responsibility of the senior clinical/management team.
- The guidelines will be reviewed every 3 years. The author will be responsible for ensuring the guidelines are reviewed and revisions approved by the maternity services guidelines group in accordance with the Document Control Report.
- All versions of these guidelines will be archived in electronic format by the author within the maternity Team policy archive.
- Any revisions to the final document will be recorded on the Document Control Report.
  To obtain a copy of the archived guidelines, contact will be made with the maternity team/ author.

7. References

Classification of urgency of caesarean section- A continuum of risk, Good Practice No. 11, April 2010, Royal College of Obstetricians and Gynaecologists and The Royal College of Anaesthetists.

NICE Caesarean Section Clinical Guideline National Collaborating Centre for Women's and Children's Health: November 2011. Modified August 2012

Early post-operative feeding post LSCS, Cochrane 2008

Interval between decision and delivery by caesarean section- are current standards achievable? Observational case series. Tuffnell DJ, Wilkinson K, Beresford N. BMJ 322 1330-3

Royal College of Nursing (2004). The postnatal health needs of women following caesareansection.http://www.rcn.org.uk/ data/assets/pdf file/0005/78611/002296.pdf.

NICE Caesarean Section Quality Standards, QS32- Issued: June 2013

Department of Health (1993) Changing Childbirth. Report of the Expert Maternity Group (Cumberlege Report). HMSO: London

Tuffnell DJ, Wilkinson K, Beresford N. Interval between decision and delivery by caesarean section: are current standards achievable? Observational case series. BMJ 2001;322:1330–3.

8. Associated Documentation

- Maternal Sepsis and antibiotic guideline during pregnancy, labour and the post-labour period
- "Bladder care in labour and postpartum" guidelines
- "Reducing the risk of thrombosis and embolism during pregnancy and the puerperium" – Guideline
- "Birth after previous Caesarean Delivery " Guideline
- "Recovery of women under the care of an obstetrician" Guideline.
- "Multiple pregnancy" Guideline.
- Pain Relief and Anaesthesia in Maternity guideline

APPENDIX 1: Planned Caesarean Section (Indications)

Planned Caesarean Section (Indications)

Do not routinely offer planned Caesarean Section to women with	Offer planned Caesarean Section to women with
An uncomplicated twin pregnancy at term where the first twin is cephalic	A singleton breech presentation at term, for whom external cephalic version is contraindicated or has been unsuccessful
Preterm birth	A twin pregnancy where the first twin is not cephalic
A 'small for gestational age' baby	A placenta that partly or completely covers the internal cervical os
HIV receiving HAART therapy with a viral load less than 400 copies per ml	HIV who are not receiving any retroviral therapy
HIV receiving any retroviral therapy with a viral load less than 50 copies per ml	HIV and a viral load equal to or greater than 400 copies per ml regardless of anti-retroviral therapy
Hepatitis B virus	HIV with hepatitis C virus
Hepatitis C virus	Primary genital herpes simplex virus (HSV) infection occurring in the third trimester of pregnancy
Recurrent genital herpes at term	
A BMI of over 50 (and no other risk factors)	

APPENDIX 2: Factors that affect the Caesarean Section

Factors that affect the Caesarean Section

No influence of likelihood of Caesarean Section	Interventions that may reduce the rate of Caesarean Section
Walking in labour Non-supine position during the second stage of labour Immersion in water during labour Epidural analgesia during labour Use of raspberry leaves Active management of labour or early amniotomy to augment the progress of labour	Consultant obstetrician's involvement in the decision making for Caesarean Section External cephalic version if breech at 36 weeks (exceptions include women in labour, women with a uterine scar or abnormality, fetal compromise, ruptured membranes, vaginal bleeding or medical conditions) Continuous support during labour from women with or without prior training Induction of labour beyond 41 weeks Fetal blood sampling before Caesarean Section for abnormal cardiotocograph in labour if it is technically possible and there are no contraindications Use of partogram with a 4-hour action line for women in spontaneous labour with an uncomplicated singleton pregnancy at term.

APPENDIX 3: A classification relating the degree of urgency to the presence or absence of maternal or fetal compromise (RCOG/RCA)

A classification relating the degree of urgency to the presence or absence of maternal or fetal compromise (RCOG/RCA)

Urgency		Definition	Category
	Maternal or fetal compromise	Immediate threat to life of the woman or fetus	1
		No immediate threat to life of the woman or fetus	2
		Requires early delivery	3
	No maternal or fetal compromise		
		At a time to suit the woman and maternity services	4

APPENDIX 4: Procedure for calling staff for emergency Caesarean Section

Procedure for calling staff for emergency Caesarean Section

GRADE 1

Dial switch board operator and say “Grade 1 emergency caesarean section”.

A call will rapid bleep, with voice-over, the following personnel who will go directly to Labour Ward:

Obstetric Consultant on-call (in hours)
Obstetric Staff grade on-call
Obstetric SHO on-call
Anaesthetist on-call
ODP on-call
Theatre team on-call
Paediatric Registrar on-call
Paediatric SHO on-call

Out of hours the switch board operator will contact the Consultant Obstetrician on call who will then contact CDS to establish the details of the emergency and if their presence on CDS is required (Note: January 2018: In the interim period while this plan is being implemented with switchboard, the Staff Grade Obstetrician and CDS Co-ordinator must ensure that the Consultant Obstetrician is informed of the decision for Grade 1 CS, the details of the emergency and if their presence on CDS is required.

NB The Consultant Obstetrician MUST be contacted about ALL GRADE 1 CS.

GRADE 2

Bleep/call the relevant people via the numbers below and say “Grade 2 emergency caesarean section” and **then need to state clearly the urgency of caesarean section. The staff grade must directly communicate to anaesthetist with specific instruction on the degree of urgency.**

BLEEP NUMBER	BLEEP/EXTENSION
Anaesthetist	822
ODP	119
Paediatric SHO	270
Obstetric SHO	299
Obstetric Staff grade	013
Midwifery Shift Co-ordinator	025
Scrub nurse (theatre team)	256
To activate a bleep dial 74 – bleep number – labour ward extension	

GRADE 3 Caesarean Section – call the personnel as for GRADE 2 Caesarean Section.

APPENDIX 5: Discharge letter for women who have recently had a Caesarean Section

Date:

Dear ……..,

Congratulations on the birth of your baby on……

Your baby was delivered by Elective/ Emergency caesarean section. .

The reason that caesarean section delivery was required on this occasion was……..... .

In your circumstances, you have the option of vaginal birth or elective caesarean section in future pregnancy.

In any future pregnancy, we would plan to see you at the Consultant Antenatal/ Midwifery VBAC (vaginal birth after caesarean) clinic.

Yours sincerely,

Bassett Ward

Copies: GP
: CMW

APPENDIX 6: POST-OPERATIVE ILEUS (OGILVIE SYNDROME)

2 - 12 days post Caesarean Section:

EARLY SIGNS:

- Abdominal pain (non-specific)
- Bowel movements reduce or cease +/- diarrhoea
- Nausea with no vomiting
- Tachycardia
- Increased WBC
- No sepsis or peritonism
- Progressive distension

LATE SIGNS:

- Vomiting
- Dehydration, oliguria
- Pyrexia
- Peritonism
- Right iliac fossa tenderness

APPENDIX 7: Discussion Monitoring Form

Please COPY both sides of this form (original to be filed in notes, copy to be filed in AUDIT box in maternity reception).

Maternal request for caesarean section

Discussion Monitoring Form

(This form is to be completed in Consultant clinics at the time of the request. For women who have previously had a caesarean section, please use the VBAC discussion form)

Patient's label

Date:

1 Clinic Obstetrician ☐ Senior Midwife ☐ SAS Dr ☐

2 What were the specific reasons for the request? (Explored & discussed)

3 Was there a discussion of the overall risks and benefits of caesarean section compared with vaginal birth

Yes ☐ No ☐

4. Did the woman request caesarean section because she had anxiety about childbirth?

Yes ☐ No ☐

5. If yes, did the discussion take place with a healthcare professional with expertise in providing perinatal mental health support? (Could be a member of the maternity team or a mental health expert if clinically indicated) Yes ☐ No ☐

6. Did the woman maintain that vaginal birth was unacceptable? Yes ☐ No ☐

7. Was the woman offered a planned caesarean section? Yes ☐ No ☐

8. If the woman's obstetrician was unwilling to perform a caesarean section, was she referred to an obstetrician who would carry out the procedure? Yes ☐ No ☐

9. Was the woman given a consent form for the procedure? Yes ☐ No ☐

10. Was the consent form signed and dated? Yes ☐ No ☐

APPENDIX 8: Maternal Request for Caesarean Section (Agreement form)

Patient's Label

Maternal Request for Caesarean Section (Agreement form)

Caesarean section is sometimes agreed to perform on the woman in respect of the woman's views, dignity and privacy when the pregnant woman without previous caesarean section, requests elective (planned) caesarean section although the current pregnancy is an uncomplicated pregnancy, provided she is fully informed.

The specific reason for requesting planned caesarean section is:

……

Please disclose other reasons if present:

1.

2.

3.

Following evidence based information was provided by the health care professional and I am fully aware of the benefits and disadvantages of planned caesarean section compared with planned vaginal birth.

Planned caesarean section may reduce the risk of the following in women:

- perineal and abdominal pain during birth and 3 days postpartum
- injury to vagina
- early postpartum haemorrhage
- Obstetric shock.

Planned caesarean section may increase the risk of the following in babies:

- Breathing problems and neonatal intensive care unit admission.

Planned caesarean section may increase the risk of the following in women:

- longer hospital stay
- hysterectomy caused by postpartum haemorrhage
- anaesthetic risks
- cardiac arrest
- lower threshold for repeat caesarean section in next pregnancy

The following serious complications significantly increase with increasing number of repeated caesarean deliveries:

- placenta accreta (placenta become adherent to the previous caesarean scar and further invasion into uterine muscles)
- injury to bladder, bowel or ureter; ileus; the need for postoperative ventilation
- intensive care unit admission; hysterectomy; blood transfusion requiring four or more units and the duration of operative time and hospital stay
- The slight increased risk of stillbirth in women with previous caesarean delivery, in the presence or absence of other previous complications (for example, pre-eclampsia, preterm delivery, small for gestational age).

References

- Caesarean Section. NICE guidelines (CG132); November 2011
- Royal College of Obstetricians and Gynaecologists. Birth after Previous Caesarean Birth. Green-top Guideline No. 45 February 2007.
- Smith GC, Pell JP, Dobbie R. Caesarean section and risk of unexplained stillbirth in subsequent pregnancy. Lancet 2003; 362:1779–84.
- Smith GC, Shah I, White IR, Pell JP, Dobbie R. Previous preeclampsia, preterm delivery, and delivery of a small for gestational age infant and the risk of unexplained stillbirth in the second pregnancy: a retrospective cohort study, Scotland, 1992–2001. Am J Epidemiol 2007; 165:194–202?

Despite these evidence-based information regarding implications of planned caesarean section in the absence of medical indication, I strongly believe that, planned vaginal birth is not an acceptable option.

Signature: Date:

Print:

Signature of Obstetrician: Date:

Print: Job Title:

Water birth

Summary

This guideline outlines the process of facilitating a water birth and eligibility for use of the pool during labour and birth.

Key Points

The essential elements of this guideline are:

- Criteria for pool entry
- Intrapartum care of women in the pool
- 3rd stage of labour
- Safety precautions

CONTENTS

1.0 INTRODUCTION

1.1 Water can be both relaxing and pain relieving to women in labour; benefits include psychological, physiological, spiritual and hormonal (Garland 2011l) and should be offered to all women following a risk assessment.

1.2 This guideline outlines the advice and safety measures that should be implemented in promoting and using the birth pool for labouring women.

2.0 PRE-USE COUNSELLING

2.1 Inform woman and partner of known benefits and risks. Water birth reduces need for analgesia in first stage and potential to lessen length of labour (Garland 2011). The evidence to support underwater birth is less clear and complications are seemingly rare. If good practice guidelines are followed in relation to infection control, management of the cord and strict adherence to eligibility criteria, these complications should be further reduced (RCOG/RCM 2006-2009)

2.2 Discuss reasons as to why the woman may be asked to leave the pool and ensure co-operation regarding immediate vacation of the pool should complications occur:

- Lessening of contractions
- Prolonged 1st or 2nd stage
- Thin meconium stained liquor (unless birth imminent or using Telemetry)
- Significant meconium
- Abnormal bleeding
- Deviation from normal maternal and fetal observations

2.3 Partners can enter pool if fit and well, wearing swimwear and have no known infection/virus

2.4 Warn parents that babies are often noted to be pale and quiet at birth, due to the environment in which their baby has been born (Garland 2011)

3.0 CRITERIA FOR ENTRY TO POOL

3.1 Latent Phase - Women can relax in a bath or pool for hydrotherapy**/**pain relief for a maximum of an hour. If contractions lessen within this hour encourage her to leave the bath to become established in labour**.** Immersion in water can significantly reduce length of 1st stage (Cochrane Review 2012)

3.2 The following eligibility criteria should be used for pool entry:

- 'Low Risk' (no known antenatal, postnatal, obstetric or medical complications)

Women with a BMI ≤35 can use the birth pool in any birth setting, those with a BMI 36-39.9 may use the birth pool of the Exeter Birth centre or on Labour Ward. It is not recommended that women with a BMI >40 use the birth pool due to increased risks especially with manual handling.

- Cephalic, singleton, term pregnancy ≥ 37 weeks gestation
- Spontaneous onset of labour
- Low risk post term induction of labour only requiring propess
- Established labour –confirm established labour, observation of maternal behaviour may indicate advancement in labour and a vaginal examination may not always be necessary if not 4 hours from previous examination.
- Normal predicted average weight of baby. If in doubt consider using the pool only for the 1st stage of labour. Important factors to consider include: reduced frequency of contractions, slow descent and slow rotation; if in doubt get her out
- Women who develop significant meconium the woman must leave the pool
- SROM <24hours labour is established before the 24hr period is reached birth appears to be imminent
- Normal maternal and fetal observations
- An individual risk assessment should be performed for all women prior to entering the pool to ensure women able to mobilise effectively, this should be documented in the hospital notes
- **Group B Strep -** Women known to be GBS positive can use the pool on labour ward, The initial dose of antibiotics must be given before pool entry and venflon covered with a glove. Continue to give antibiotic therapy as per the Guideline for prevention of early onset group B streptococcus. (Plumb et al 2007).
- Lack of evidence suggests that there is no contraindication for women who are HIV, Hepatitis C or Hepatitis B positive having a water birth. However, adequate glove protection should be worn at all times.
- **VBAC -** Women opting for VBAC can use the pool on labour ward with telemetry and CTG is reassuring is prior to pool entry – see Guideline for vaginal birth after Caesarean section.
- **Home Water Birth** - a risk assessment must be undertaken to ensure suitability of pool usage at home. Consider pool placement, evacuation procedure, electrical equipment and encourage parents to have a wet run (time taken to fill pool prior to labour)

4.0 GUIDELINES FOR INTRAPARTUM CARE OF MOTHERS IN THE POOL

See Guideline for care of women in labour in all care settings

4.1 Additional labour care information:

- Environmental temperature 21-22 C (for environmental stimuli for baby's first breath)

- Water temperature to be maintained 37°c (ideally nearer 37°c - to reduce potential fetal distress) and recorded every 30 minutes on the Partogram.
- Maternal temperature recorded hourly
- Encourage frequent fluid intake and cool bathing of forehead.
- Vaginal Examinations may be performed underwater.
- Ensure that all vaginal loss, vomit or faeces are removed from the pool with the sieve provided, in a timely and sensitive manner, if heavily stained empty pool and refill.
- Ensure bed is prepared prior to birth: for immediate usage and in case of an emergency
- Visibility of the perineum in the second stage is limited. Hands off is essential or minimal handling (if needed) during birth. A mirror can be used on the pool floor to assist with visibility and allow the woman to visualise birth of the head.
- Bring the baby gently to the surface, face first, within a few seconds. The baby should be left immersed in water up to the neck to prevent hypothermia.

4.2 Be aware:

- Aromatherapy oils and additives should not be used in water
- Following Diamorphine administration women should not enter the pool within two hours

4.3 Third Stage of Labour

There is no research to suggest there is additional risk associated with delivery of the placenta and membranes in water.

4.3.1 Management of a Physiological 3rd stage:

- Cord stop pulsating (may take longer in water due to environment)
- Mum & Baby to leave pool with cord attached if wanting to get out (support needed)
- Maternal effort to deliver placenta, may occur as woman leaves pool have receiver ready
- If maternal or fetal condition necessitates clamping and cutting the cord unclamp maternal end once out of pool
- Watchful waiting is required for oxytocin release (Garland 2011)

Management of 3rd stage - see Guideline for care of women in labour in all care settings.

4.3.2 Active Management of 3rd stage:

- Early cord clamping and cutting (1-3 minutes)
- Leave water prior to syntometrine/Oxytocin (Syntocinon) administration, and administer within 10 minutes of birth (Garland)
- Hand baby to birth companion whilst woman exits pool
- CCT as normal

IT IS IMPOSSIBLE TO ESTIMATE BLOOD LOSS IN THE POOL SO CLOSE OBSERVATION OF MATERNAL CONDITION IS ESSENTIAL

- Delay Suturing of the perineum for one hour due to the effect on the tissues of being immersed in water.

5.0 SAFETY PRECAUTIONS

5.1 Women should not be left alone in the pool on any occasion. The birth partner may remain in the room but must be shown how to call for help.

5.2 In an emergency do not empty the pool until the woman is out. There is a net available in each of the pool rooms to evacuate women from the pool

5.3 The resuscitaire and other electrical equipment must be kept at least 2½ metres away from the pool

6.0 EMERGENCY EVACUATION FROM THE BIRTHING POOL

6.1 Emergency procedure:

DO NOT EMPTY THE POOL

Pull the red emergency bell located in the birth pool room to alert other staff in the vicinity as applicable.

- Add more water to aid buoyancy.

- A member of staff to ring **2222** for the obstetric team to go to the specific location of the emergency.

- Move delivery bed into position (as illustrated) with the foot end of the bed next to the step end/seat end of the pool. Position the trolley as close as possible to the pool. Ensure the bed height is level with the rim of the pool.

- Position the net so that it spans the rim of the pool and the bed.

- Minimum 6 members of staff in position, so that there are 3 either side of the pool.

- Staff closest to the head of the woman to support the woman's head during the evacuation.

- Put the net underneath the woman by floating her to the surface. Staff take a secure hold of the net sides and float the woman to the surface.

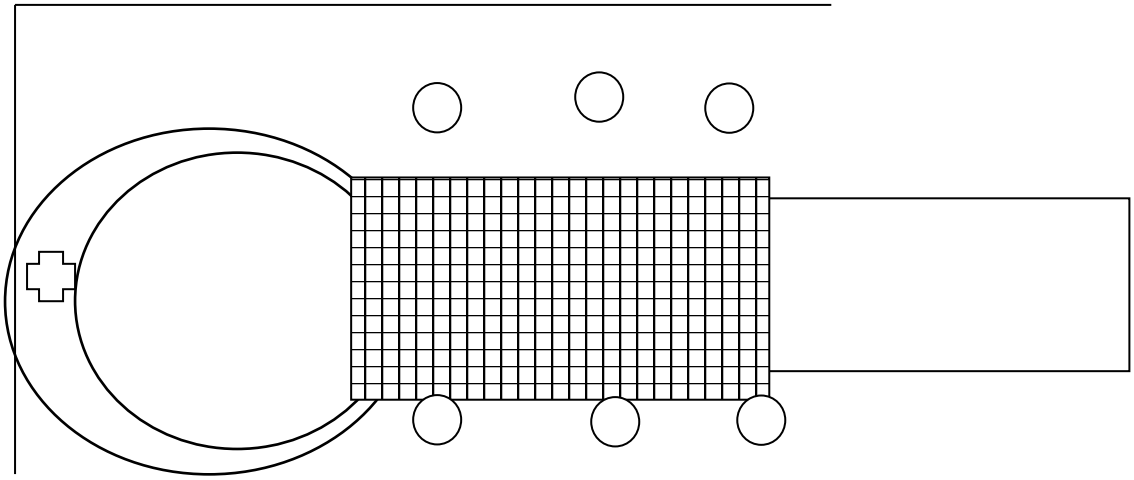
- The staff member at the head end of the woman gives the command to put tension on the net and to lift and slide onto the bed : Ready … steady … lift … (and slide if using a slide sheet).

Dry the women as soon as possible

- **At home** the midwife should discuss how the couple plan to make an emergency evacuation. The birth partner will be required to get the woman out of the pool.

NB Staff who are pregnant or who have musculo-skeletal health issues may wish to exclude themselves from the evacuation procedure.

BIRTHING POOL EMERGENCY EVACUATION



Position of staff
At least 3 either side
(Preferably one extra person to support the head)

STAFF WITH PREVIOUS BACK INJURIES / PAIN SHOULD NOT ATTEMPT ANY LIFTING.

7.0 MATERNAL EMERGENCY PROCEDURES

7.1 In the event of an obstetric emergency the emergency call bell must be pulled to seek immediate assistance. In the majority of circumstances the woman should be transferred to Labour ward for Obstetric care. In the Community Birth Centre or at home (9)999 will be dialled to call for emergency ambulance to transport the woman to RDEFT Labour ward – see Guideline for maternal transfer by ambulance. One Registered Midwife will escort the woman. Please note that midwifery students may only accompany the woman/ baby if a midwife is present in the ambulance. A call will be made to the Labour Ward to inform them of the impending arrival. A full handover will be given on arrival. Risk assessment of an impending birth must be made in consultation with the attending midwife and obstetric medical staff on the Labour ward or the Labour Ward Coordinator.

7.2 In a minority of cases it may not be possible to transfer the woman without immediate treatment e.g. In the event of shoulder dystocia. In these cases the emergency call bell should be pulled to summon help.

8.0 EQUIPMENT

- Only baths inspected and approved by Infection Control should be used.
- There should be a separate intake and drainage system.
- Cold water should be run for 2 minutes prior to filling the pool. The pool should be filled immediately prior to use.

9.0 ROUTINE CLEANING OF THE POOL

- Plumbed-in pools should have taps opened 5 minutes per day to flush the system -this happens automatically in a 24 hour period.
- Run cold water for two minutes immediately prior to pool use.
- The pool must be washed with hot water and a neutral detergent on a daily basis regardless of use, then rinsed and dried thoroughly and left with taps closed.

10.0 DECONTAMINATION FOLLOWING USE

- Apply apron, gloves and eye protection
- The pool must firstly be washed with hot water and a neutral detergent
- Clean with Chlorclean 1000ppm as per manufacturer's instructions
- All surfaces of the pool must then be washed again using hot water and neutral detergent and rinsed thoroughly
- Dry thoroughly and keep tap closed

11.0 MEASURABLE STANDARDS

1. Women do not enter the pool before established labour.
2. Documented evidence of water and maternal temperature.
3. Documented evidence of NICE guidelines for normal labour being implemented.
4. Length of first, second and third stage.
5. Condition of baby at birth.
6. Record of pool cleaning

12.0 REFERENCES

Garland D (2011) Revisiting Waterbirth An Attitude to Care Palgrave Macmillan - London

Plumb J, Holwell D, Burton R and Steer P (2007) Water birth for women with GBS: a pipe dream? Practising Midwife April

Royal College of Obstetricians and Gynaecologists/Royal College of Midwives (2006-2009) Immersion in Water During Labour and Birth Royal College of Obstetricians and Gynaecologists and Royal College of Midwives Joint Statement No.1 April 2006

13.0 PUBLICATION DETAILS

Author of Clinical Guideline	Senior Matron and Birth Centre Matron
Directorate/Department responsible for Clinical Guideline	Specialist Services/ CWH/Maternity
Contact details	Ext. 6682
Version number	1.5
Replaces version number	1.4
Date written	June 2008
Approving body and date approved	Maternity Governance Forum Chairs Action 04/09/2019
Review date	04/06/2022
Expiry date	04/09/2022
Date document becomes live	18/09/2019

Document Control

Title

Telemetry Management of High Risk Women in Labour and Birth using Water/Birthing Pool and Telemetry Standard Operating Procedure

Author	**Author's job title** Specialty Doctor O&G Midwife
Directorate Women & Children	**Department** **Team/Specialty** Maternity

Version	Date Issued	Status	Comment / Changes / Approval
0.1	Oct 18	Final	Initial version for consultation
1.0	Apr 19	Final	Approved by Maternity Services Guideline Committee

Main Contact Specialty Doctor O&G North Devon District Hospital Raleigh Park Barnstaple, EX31 4JB	**Tel: Direct Dial** – [redacted] **Tel: Internal** – **Email**:
Lead Director Medical Director	
Document Class Standard Operating Procedure	**Target Audience** Obstetricians – all grades, Midwives
Distribution List Senior Management	**Distribution Method** Trust's internal website
Superseded Documents	

Issue Date	Review Date	Review Cycle
Apr-19	Apr-22	Three years

Consulted with the following stakeholders: (list all) • Obstetricians • HOM • Lead Midwives • Midwifery coordinators • Supervisors of Midwives • Practice Development Midwife	**Contact responsible for implementation and monitoring compliance:** Lead Midwife for Normal Birth & Maternity In-patients **Education/ training will be provided by:** Practice Development Midwife
Approval and Review Process • Maternity Guidelines Committee	
Local Archive Reference G:\Maternity Services **Local Path** Policies and procedures folder **Filename** Telemetry: Management of High Risk Women in Labour & Birth using Water/Birthing pool and Telemetry SOP V1.026Aug19	
Policy categories for Trust's internal website (Bob) Maternity Services	**Tags for Trust's internal website (Bob)** Telemetry. Water Birth Pool

CONTENTS

1. Introduction

1.1. Offer telemetry to any woman who needs continuous cardiotocography during labour (NICE 2017, 1.10.9)

Offer the woman the opportunity to labour in water for pain relief (NICE 2017, 1.8.4)

There is evidence that immersion in water offers women a safe and effective form of pain relief in labour. To those women who require or opt for continuous electronic monitoring in labour, the use of telemetry provides greater choice and control. The use of telemetry promotes increased mobility and upright positions in labour as well as facilitating the use of water in labour.

2. Purpose

This Standard Operating Procedure (SOP) has been written to facilitate continuous fetal monitoring of high risk women in labour and birth who wish to use the birthing pool.

Telemetry is a wireless fetal monitoring device which facilitates continuous cardiotocograph (CTG) monitoring in the first and second stage of labour on a consultant led delivery suite.

Prior to the woman being offered the use of the birthing pool on the delivery suite, consideration should be given to the plan of care and requirements of the woman and baby by reviewing the full antenatal history.

3. Scope

This Standard Operating Procedure relates to the following staff groups who may be involved in the assessment and delivery of intrapartum care:

- Registered Midwives
- Obstetric Staff

Staff undertaking this procedure must be able to demonstrate continued competence in using telemetry in the birthing pool as per the organisation's policy on assessing and maintaining competence.

4. Location

4.1. This Standard Operating Procedure can be implemented in all clinical areas where competent staff are available to undertake this role.

5. Equipment

- Telemetry for continuous fetal monitoring – for full instructions please refer to Avalon Fetal Monitor manual available on Labour Ward

Inclusion and Exclusion CriteriaInclusion criteria for High Risk Women requiring continuous CTG who wish to use the Birthing Pool for Labour and Birth:

- Woman's informed choice
- Pregnancy equal to or over 37 weeks' gestation
- Established labour (regular contractions and dilating cervix)
- Cephalic presentation
- Singleton
- Maternal and fetal observations normal throughout labour
- At least 3-4 hours since administration of opioids
- No known or suspected active infection

NOTE: Indications for Continuous Electronic Fetal Monitoring are as per Fetal Wellbeing and Monitoring Guideline (2018)

Criteria for women with higher risk pregnancies using the pool on labour ward:

The following lists are not exhaustive and there should be multi-disciplinary

discussion and a documented agreement of the plan. It is also dependent on an adequate CTG trace with telemetry when indicate

5.1. Medical reasons

Pool may be considered	Pool not recommended	Comments
Hypertension – depending on extent and pathology		More intensive monitoring of BP needed - discuss with consultant on admission whether pool appropriate or not
	epilepsy	

5.2. Obstetric Reasons

Pool may be considered	Pool not recommended	comments
GDM diet-controlled	GDM requiring insulin	
Induction for post dates		Providing post prostin/propess/balloon CTG is normal
GBS		After 1st dose of antibiotics
VBAC		With telemetry
Raised BMI of 35-50 when individual assessment shows auscultation possible		If the woman requires telemetry, obtaining an adequate trace is essential
Previous PPH		Cannula to be inserted prior to going in pool and active 3rd stage conducted out of the pool
Previous MROP		
Fibroids		Cannula to be inserted prior to going in pool and active 3rd stage conducted out of the pool
Previous shoulder dystocia		For labour ONLY
	Low Hb < 100g/dl	
	Syntocinon infusion	
Prolonged SROM		With telemetry
Fetal size estimated >97th centile		For labour ONLY
	Suspected IUGR	SGA babies with reassuring scans and dopplers may be considered

Exclusion criteria for High Risk Women who require Continuous CTG in labour and Birth who SHOULD NOT USE the Birthing Pool:

This list is not exhaustive. If in doubt seek obstetric management plan for other high risk women requiring continuous CTG and requesting the use of the Birthing Pool

- Major medical disease requiring intensive maternal monitoring e.g. cardiac disease, diabetes, or posing a risk of seizure or collapse
- Pregnancy complications posing risk of seizure or collapse e.g. current APH, PET
- Significantly compromised mobility
- Maternal pyrexia (37.5 on two occasions or 38 once) and/or evidence of active infection
- Active herpes
- Gestation less than 37 weeks

- Less than 3 hours since administration of opiates such as diamorphine or pethidine, or if the woman is still drowsy
- Placenta praevia
- Breech Presentation
- Unstable lie
- Significant polyhydramnios
- Non engaged head
- Multiple pregnancy

5.3. Procedure

• Prior to the woman entering the pool ensure the woman and birth partner have been given relevant information to facilitate informed choice, and document this discussion in the maternal labour record (yellow notes)
• Explain to the woman she may choose to leave the pool at any time and will be requested to leave the pool should any complication arise

• Document the time of entry and exit in the yellow notes

• In an emergency situation where the woman is unable to leave the pool there is dedicated lifting equipment available to evacuate the pool quickly. This equipment is to be checked prior to using the pool and correct sized sling to be chosen in case the hoist is required. All checks to be documented in the yellow notes.

• All maternal and fetal observations to be recorded as indicated in Clinical Guideline http://ndht.ndevon.swest.nhs.uk/intrapartum-care-care-of-healthy-women-and-their-babies-during-childbirth-including-fetal-monitoring-in-labour/ except for maternal temperature, which should be recorded hourly as maternal pyrexia increases the risk of fetal tachycardia

• Pool temperature to be checked and documented regularly. This should be comfortable for the woman, but not to exceed 37˚C and to be kept between 36.5˚C and 37˚C when baby's birth is imminent.

• Management of the third stage is mother's choice, although she should be aware that an actively managed third stage reduces the risk of haemorrhage. Refer to appropriate individual Clinical Guideline re high risk and management of the third stage.
https://www.nice.org.uk/guidance/cg190/chapter/Recommendations#third-stage-of-labour

• If active management is chosen, the third stage should be undertaken out of the pool

• If the woman's condition permits, perineal suturing should be delayed for up to one hour to allow the tissue to revitalise after water immersion.

6. References

Garland, Dianne (2017) *Revisiting waterbirth: an attitude to care* (2nd edition) London: Palgrave

National Institute for Health and Care Excellence (NICE) (2017) *Intrapartum care for healthy women and babies* (CG190) https://www.nice.org.uk/guidance/cg190

7. Associated Documentation

Fetal Wellbeing and Monitoring Guideline (2018)

http://ndht.ndevon.swest.nhs.uk/auscultation-and-electronic-fetal-monitoring-guidelines/

Delivery after previous caesarean section guideline (2018)

http://ndht.ndevon.swest.nhs.uk/birth-after-previous-caesarean-delivery-guidelines/

Intrapartum care: care of healthy women and their babies during childbirth Including Fetal Monitoring in Labour (2018)

http://ndht.ndevon.swest.nhs.uk/intrapartum-care-care-of-healthy-women-and-their-babies-during-childbirth-including-fetal-monitoring-in-labour/

This website incorporates information about waterbirth as well asa full list of references:

https://evidencebasedbirth.com/waterbirth/