

A Guideline for the management of Caesarean Section

Document Summary

To provide up-to-date information for medical and midwifery staff, to ensure the provision of consistent and evidence based care for women undergoing caesarean section (CS) at Hereford County Hospital

“As a service we engage with women to provide personalised care. This document is a guideline and individualised care must be given but if care varies from the guideline it must be justified in the records

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Important Note:

The Intranet version of this document is the only version that is maintained.

Any printed copies should therefore be viewed as 'uncontrolled' and, as such, may not necessarily contain the latest updates and amendments.

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1. SCOPE

This policy applies to all staff who works within the maternity department at Wye Valley NHS Trust.

2. INTRODUCTION

This guideline on Caesarean Section (CS) is aimed towards achieving the best possible outcome for mother and baby. Pregnant women should be offered evidence- based information and support to enable them to make informed decisions about childbirth. Addressing their views and concerns should be recognised as being integral to the decision making process.

The woman's consent for caesarean section will be obtained after providing her with evidence based information and in a manner that respects her dignity, privacy, views and culture whilst also considering the clinical situation.

The category and reason for performing the caesarean section will be clearly documented in the Maternity EPR (Badgernet) by the person who makes the decision in order to aid clear communication between healthcare professionals.

It is also necessary to create a waiting list entry on Maxims when booking for Elective LSCS.

The risk of respiratory morbidity is increased in babies born by CS before labour, but this risk decreases significantly after 39 weeks. Therefore CS should not routinely be performed before 39+0 weeks of pregnancy (National Institute of Clinical Excellence (NICE), 2011).

A Consultant Obstetrician should always be involved in the decision regarding caesarean section, unless doing so would be life threatening to the woman or fetus. The safety of the mother must always be the most paramount focus and must never be overridden by an unnecessary attempt at immediate delivery without thorough assessment. Take into account the condition of the woman and the unborn baby when making decisions about rapid delivery. Remember that rapid delivery may be harmful in certain circumstances. (National Institute of Clinical Excellence (NICE), 2011).

The four main classifications of Caesarean section and their possible indications are summarized in Appendix 1 to allow consistent and high quality practice. Also attached in Appendix II is the Standard Operative Procedure for an Enhanced Recovery Pathway (ERP) for Caesarean Section.

3. STATEMENT OF INTENT

The objectives of this guideline are aimed to ensure best practice in relation to the care of women having a Caesarean Section. It aims to improve the consistency and quality of care for women who are considering a caesarean section or have had a caesarean section in the past and are now pregnant again. The guideline will:

- Support staff involved in the classification, timing and reason for all Caesarean Sections (CS) undertaken.
- Ensure that all women undergoing a CS receive the correct information prior to any planned or emergency procedure.
- Ensure that all women requiring CS are managed appropriately to avoid

unnecessary complications.

- Ensure that all women undergoing a CS have had their cases discussed with, or have been seen by a senior clinician prior to surgery and that a plan for the Caesarean Section (CS) is clearly documented on the Maternity EPR (Badgernet). This must include the indication for the CS
- Inform staff of the correct level of observation that are necessary in the post-operative period and care required in the immediate post-operative period
- Ensure that all women (post-surgery) have the implications for future pregnancies discussed with them prior to discharge and that information is documented in the Maternity EPR.

4. DEFINITION

Lower Segment Caesarean Section (LSCS)

A surgical operation which facilitates the delivery of baby/babies through a cut in the abdomen and lower segment of the uterus. (Royal College of Obstetricians and Gynaecologists (RCOG)2010).

5. DUTIES

The duties of the health professionals involved are documented within this guideline

6.0 PROCEDURE

6.1 Classification / Categorisation and timings for CS:

GRADE 1 CS

Definition:

CRASH - Immediate threat to the life of mother and / or fetus

Decision to Delivery Interval:

As soon as it's safely possible – aim for within 30 minutes.

Transfer the woman to theatre immediately a decision has been made.

Shift Coordinator (who may delegate other staff) to:

- Call 2222 and say – Obstetric Emergency Category 1 Caesarean section, Delivery Suite
- If the Consultant Obstetrician and / or Consultant Anaesthetist are needed urgently then they should be paged / phoned.

Indications:

- Prolonged Fetal Bradycardia > 4minutes
- Abnormal CTG without FBS
- FBS – Lactate above 4.8 or PH of 7.20 or below
- Massive Placental abruption/APH/Uterine rupture
- Cord prolapse
- Failed instrumental (decision time – at time of failure of instrumental)
- Maternal cardiac arrest (Within 4 minutes to facilitate resuscitation)
- Breech in advanced labour/rapidly progressing and decision for CS

This list is not exhaustive. If in doubt, involve Consultant Obstetrician immediately.

GRADE 2

Definition:

URGENT – Maternal or fetal compromise but not immediately life threatening

Decision to Delivery Interval:

As soon as it's safely possible – aim for within 75 minutes.

Liaise with Anaesthetist immediately and then transfer to theatre as soon as it's safely possible. Document any reasons for delay, if unable to transfer immediately to theatre.

Shift Coordinator (who may delegate other staff) to:

Contact Theatre team (bleep 409), Obstetric Team, Anaesthetist (middle grade – bleep 220) and Paediatric team (SHO - bleep 178). – informing them of the location that the team is needed e.g. Labour ward theatre / procedure room, the category, indication and timing for CS.

Indications:

- Non-reassuring CTG (not abnormal)
- Minimal to moderate Abruption/APH
- Failure to progress
- Undiagnosed breech in labour
- Planned LSCS in active labour
- Maternal exhaustion/maternal request during active labour

This list is not exhaustive. If in doubt, involve Consultant Obstetrician immediately.

GRADE 3

Definition:

SCHEDULED - Needs early delivery, but no immediate maternal or fetal compromise

Decision to Delivery Interval:

As soon as feasible – aim for within 24 hours.

Obstetric Consultant to specify time depending on the urgency of each individual case. Following consultation with the Obstetrician, the Shift Coordinator to contact Theatre team (bleep 409), Obstetric Team, Anaesthetist (middle grade – bleep 220) and Paediatric team (SHO - bleep 178). – informing them of the location that the team is needed e.g. Labour ward theatre/room 4, the category, indication and timing for CS.

Indications:

- Planned LSCS admitted with pre- labour SROM and or very early labour/latent phase
- Failed IOL
- Preeclampsia needing CS (and requiring stabilization)
- IUGR needing CS
- Delayed/cancelled Elective CS due to other Obstetric emergencies (See SOP on intranet)

This list is not exhaustive. If in doubt, involve Consultant Obstetrician immediately. In some situations, this can be undertaken after 24hrs, depending on Consultant Obstetrician's assessment of each individual case.

GRADE 4

Definition:

PLANNED - When the delivery is planned on an elective list to suit the woman and/or the service.

Delivery gestation:

Between 39+0 weeks to 39+6 weeks gestation unless specified. Obstetric registrars may book a CS from 39 weeks gestation.

Decision to deliver before 39+0 weeks gestation must be made by a Consultant Obstetrician.

Give steroids if < 39+0 weeks. Maximum benefit is between 24hrs and 7days of delivery.

A CS may sometimes be booked at 41-42 weeks gestation where spontaneous labour is desired but induction is to be avoided.

Indications:

- Placenta praevia (around 38 weeks)
- Failed ECV with normal CTG if patient request for LSCS
- Breech presentation / malpresentation – decision for CS made
- Multiple pregnancy with first twin non-cephalic (around 36wks for Monochorionic and 37wks for Dichorionic pregnancies)
- Previous 2 or more LSCS
- Previous Classical LSCS (around 36 to 37weeks)
- Previous uterine surgery i.e. Myomectomy breeching cavity
- Maternal request after previous 1 CS/ or for other reasons
- Maternal/fetal medical/structural conditions in which vaginal delivery is contraindicated

This list is not exhaustive. If in doubt, involve Consultant Obstetrician immediately.

Special Indications

Maternal request for CS

If a woman requests a CS when there is no other indication, discuss the overall risks and benefits of CS compared with vaginal birth and document this discussion in Maternity EPR (Badgernet). Include a discussion with other members of the obstetric team (including the obstetrician, midwife and anaesthetist) if necessary to explore the reasons for the request, and ensure the woman has accurate information. For women requesting a CS, if after discussion and offer of support (including perinatal mental health support for women with anxiety about childbirth), a vaginal birth is still not an acceptable option, offer a planned CS. An obstetrician unwilling to perform a CS should refer the woman to an obstetrician who will carry out the CS (National Institute of Clinical Excellence (NICE), 2011).

Morbidly adherent placenta

If a colour-flow Doppler ultrasound scan result suggests morbidly adherent placenta: discuss with the woman the improved accuracy of magnetic resonance imaging (MRI) in addition to ultrasound to help diagnose morbidly adherent placenta and clarify the degree of invasion explain what to expect during an MRI procedure inform the woman that current experience suggests that MRI is safe, but that there is a lack of evidence about any long-term risks to the baby offer MRI if acceptable to the woman. [NICE 2011]

Mother-to-child transmission of HIV

Do not offer a caesarean section (CS) on the grounds of HIV status to prevent mother-to-child transmission of HIV to:

- women on highly active anti-retroviral therapy (HAART) with a viral load of less than 400 copies per ml or
- women on any anti-retroviral therapy with a viral load of less than 50 copies per ml.

Inform women that in these circumstances the risk of HIV transmission is the same for a CS and a vaginal birth. [NICE 2011]

6.2 Duties for Emergency CS – Grades 1-3

Consultant Obstetrician:

- Must be involved in the decision making and communication with his team as to classification and urgency of the CS and reason for Grade 1- 3 CS.
- He / she must provide support and be in attendance for junior colleagues at high risk cases

Specialty Obstetrician:

- Inform consultant on call and document the grade and reason for CS in Maternity EPR. Inform the shift coordinator immediately.
- Discuss the reasons for the CS with the woman and inform her of the potential risks and complications associated with surgery and gain her written signed consent.
- Prescribe 40mg IV omeprazole in 100ml saline for all emergency CS unless had oral in last 6 hours.
- Ensure that the Anaesthetist is aware of the level of urgency and any medical problems/comorbidities.
- Ensure that the Paediatric team are aware of the level of urgency and any neonatal alerts.
- It is the surgeon's responsibility for taking Cord blood samples. These must be given immediately to the shift coordinator for prompt analysis.
- Review the woman in the first 24 hours post-surgery, discuss the delivery and recommendations for future pregnancies and document in Maternity EPR.

Shift Coordinator (Band 7 Midwife)

- The Shift Coordinator (who may delegate other staff) must always liaise with the obstetrician and then communicate the reasons, category and timing of CS to the entire team.
- The Shift Coordinator must also ensure that the Obstetric theatre drug keys are available and handed over to the theatre staff immediately on their arrival to labour ward.
- For Grade 1 CS, she must call 2222 and say – Obstetric Emergency Category 1 Caesarean section, Delivery Suite
- For Cat 2, 3 and 4 CS, she must contact the Theatre team (bleep 409), Obstetric Team, Anaesthetist (middle grade – bleep 220) and Paediatric team (SHO - bleep 178). – informing them of the location that the team is needed e.g. Labour ward theatre / procedures room, the category, indication and timing for CS.
- She must support the midwife in charge of the patient at all times and must also escalate any concerns to the Obstetric and / or Anaesthetic Consultants when deemed necessary.

- Cord blood samples must be taken by the surgeon and then, given immediately to the shift coordinator for prompt analysis. This should be recorded in the Maternity EPR; the paper results must be filed in the patient's notes.

Midwives

- Communicate the reasons for CS and ensure that the woman has a good understanding of the potential risks following discussion with the Specialty Obstetrician/Registrar.
- Prepare the woman physically and emotionally for the CS and liaise with other team members to ensure the CS is conducted in a timely manner according to the classification as soon as it's safely possible. Ensure effective communication with woman and her partner/relatives.
- Accompany and support both woman and birth partner throughout the surgery and take responsibility for the baby once it has been delivered, liaising with the paediatrician if required. Secure IV access and obtain and send bloods for FBC, Group and Save and other investigations when warranted.
- Prepare and connect Omeprazole infusion
- Switch off syntocinon if in use.
- Complete the Theatre care plan and Preoperative checklist.
- Apply anti-thromboembolic stockings and theatre gown.
- Insert a Foley's catheter prior to CS
- Assist in the woman's post-operative recovery and escalate any concerns to the Anaesthetist / Obstetrician pre and post-surgery according to the woman's condition

Obstetric Anaesthetist

The Obstetric Anaesthetic Middle Grade doctor will attend the delivery suite in a timely manner. He / she will perform an assessment on the woman after discussing with the Obstetrician and will recommend the optimum method of anaesthesia taking into account the woman's wishes/ condition and the urgency of the procedure. He/she will liaise with a Consultant Anaesthetist in high risk cases and will ask them to attend when deemed necessary.

Theatre team

The theatre team must attend the delivery suite in a timely manner according to the classification of the CS. The theatre team must support both anaesthetists and surgeons, pre-operatively, peri-operatively and post-operatively with the care of the woman.

Support Worker

The Band 3 Obstetric Support worker will assist the surgeon with the operation unless specified to do otherwise. **In the event of the Obstetric Support Worker being unavailable, the Surgical Foundation Year 1 doctor must be contacted to attend and assist with the operation.** The maternity support worker will assist midwifery staff with the care of the woman and her baby in the initial post-operative period and escalate any concerns to the midwife in charge.

6.3 Procedure for Emergency CS – Grades 1-3

- The woman must be transferred to theatre on the delivery bed
- The midwife will ensure all preparations are correct in accordance with the Obstetric Theatre Checklist
- Midwife to give Omeprazole 40mg IV if not had it orally in last 12 hours.

- 30ml 0.3M sodium citrate (PO) to be given in theatre at anaesthetist's discretion. The duration of action of sodium citrate is about 30 minutes after which it is ineffective.
- The midwife will connect the CTG (if spinal being administered) and catheterise the patient once the anaesthesia is effective. If a general anaesthetic is required catheterisation will take place prior to anaesthesia.
- The patient checklist must be discussed and reviewed by the midwife in charge of the case, the Operating Department Practitioner (ODP) and/or the anaesthetist
- Sterile Cord blood sample bottles to be given to the scrub nurse by the midwife after catheterisation. Cord blood samples to be taken by the surgeon after the birth from both the arterial and venous sites; this must be specified immediately and given to the shift coordinator for prompt analysis. This should be recorded in the Maternity EPR; the paper results must be filed in the notes.

The surgeon performing the procedure should document, in the operation notes section of the Maternity EPR (Badgernet) (ensuring that all the relevant pages are completed appropriately), any possible implications of the surgery for future deliveries should be documented.

Comprehensive documentation at this time will assist with future debriefing, which should be undertaken by an obstetrician prior to women being discharged home. This information will also assist in preparing women for VBAC when they are seen in the Antenatal Clinic (ANC) during the next pregnancy.

During Multiple Obstetric Emergencies:

- If two Obstetric Emergencies requiring theatre all occur simultaneously, the Anaesthetic room (known as the procedures room) in Delivery Suite should be prepared for the second case (refer to SOP for second theatre on intranet).
- When two emergencies requiring anaesthetic intervention occur simultaneously the on-call Consultant anaesthetist for the hospital should be contacted on bleep 714
- The obstetric Consultant on call should also be called to attend.

6.4 Procedure for Elective Caesarean Section - Grade 4

Booking Elective CS:

- Book on Monday AM, Wednesday AM or Friday AM – Maximum 2 on a list. Consultants may decide to book an extra if required depending on the complexity of each case.
- Refer to SOP on intranet if there are no slots in the CS diary / if there are significant delays during routine elective CS necessitating cancellations.
- The obstetrician should always discuss the indication, benefits and risks of CS with the woman and obtain a signed written consent form in ANC and give a copy of the consent form to the patient. This gives patient chance to digest whole discussion and information prior to her scheduled CS date, when she may ask any further questions. Consent form must be filed securely in the notes.
- Most patients should be eligible for **enhanced recovery** allowing them to be discharged between 24 and 36 hours post-op. They should be given the information leaflet at the time of booking the caesarean section and advised of what to expect. See the protocol in the appendix.
- The obstetrician must document all discussions and the management plan in the Maternity EPR (Badgernet).
- The 'Booking a caesarean section' tab should be fully completed

- The obstetrician booking the Elective LSCS should also add the Elective LSCS to the waiting list entry on Maxims.
- In very high risk cases, the Obstetrician must liaise in advance (email if possible) with all the relevant/appropriate staff i.e. – Hot-week Consultant, Anaesthetist, LW manager and /or Paediatricians in order to plan ahead and put some necessary arrangements in place.

Pre-admission

- Once the Obstetrician has made the decision for delivery by planned CS he/she must ring the Delivery Suite to ensure there is a space in the diary on a scheduled CS list
- The Obstetrician will give the Delivery Suite staff the patient details, gestation, the indication for CS and the name of the Booking Consultant and these details must be entered into the ward diary. These details will also be put into the maternity ward diary.
- The Consultant must document the plan in the Maternity EPR (Badgernet)
- If sterilisation is to be performed at CS, the Obstetrician must document this decision in the obstetric record and ensure that the plan for sterilisation is documented in the CS diary at LW.
- The Obstetrician will prescribe Omeprazole and give the woman clear instructions about administration. (Omeprazole 20mg must be taken orally at 22.00hrs on the evening prior to admission and 20mg repeated at 06.00 on the day of operation).
- The antenatal clinic midwife (or designated deputy) will take swabs for Methicillin Resistant Staphylococcus Aureus (MRSA) screening is nasal and groins which must be between 6 and 1 week prior to the date of operation and make a pre-op appointment for the day before the planned surgery.
- At the preop appointment the midwife working will:
 - Blood is taken for Full Blood Count and Group and save.
 - Give the woman an information sheet 200ml of clear apple juice.
 - Advise the woman to remain no solid food from midnight on the morning of the operation; Apple juice at 6.00am.
 - Still water is permitted up to 07.00hrs on CS day
 - Remind the woman that Omeprazole 20mg must be taken orally at 22.00hrs on the evening prior to admission and another 20mg repeated at 06.00 on the day of operation.
- If the woman's first language is not English and communication is limited an interpreter must be offered through Patient Advisory and Liaison Services (PALS). This also applies on the day of admission for planned CS.

Admission to Maternity Ward

- The woman will be admitted to the maternity ward (her birth partner may accompany her) admission time is between 07.00-07.30 on the morning of elective CS.
- The midwife will orientate the woman to the Maternity Ward and undertake a full assessment of the mother and fetus as follows:-
 - Review the management plan on Badgernet and liaise with Obstetrician and / or Anaesthetist accordingly
 - Baseline observations – temperature, pulse, blood pressure, urinalysis, weight, abdominal palpation, fetal heart auscultation (a continuous fetal monitoring assessment may be required, dependent on individual risk factors identified in the pregnancy).
 - Confirm that the MRSA screen has been undertaken

- Confirm the Group and Save and Full Blood Count results (and other investigation results as specified in the individual management plan).
 - Check that she has already signed a written consent form in ANC
 - Commence the Theatre care plan and Preoperative checklist.
 - All jewellery should be removed.
 - An enquiry should be made to ascertain whether the woman has taken her premedication and last time she ate or drank anything.
 - The midwife will give the woman and her birthing partner the opportunity to ask any questions and indicate their preferences for discovering the sex of the baby for herself, lowering the screen in order to be able to see the birth of the baby, or maintaining silence so that mother's voice is the first the baby hears, feeding intent and consent for the baby to have Vitamin K. These preferences should be recorded in the obstetric record and accommodated where possible.
 - The Midwife will give the women Anti- thromboembolic stockings. These must be the right size for the woman and be fitted correctly.
- On the morning of admission the Obstetrician will visit the woman on the ward and review the management plan on Maternity EPR, review checks already done by the midwife / any investigation/results and confirm the written consent for surgery. This should be done by the Hot Week consultant or the registrar before the 08:30hrs handover.
 - The obstetrician or midwife must secure the consent form in the obstetric record.
 - If sterilisation is planned at CS, this must be confirmed and communicated specifically to the surgeon and theatre team.
 - If the CS indication is breech presentation, an ultrasound scan should be performed on the maternity ward by the obstetric doctor to confirm the presentation. If the presentation is found to be cephalic, the management plan must be changed appropriately and documented in the obstetric record. The Senior Obstetrician must give the woman an explanation of the reason for the change of plan.
 - All women will be seen and assessed by an Anaesthetist on the morning of CS and the chosen anaesthetic discussed and agreed and documented in the obstetric record i.e. spinal anaesthetic or general anaesthetic.
 - The woman should be given a theatre gown to wear.
 - If the woman is intending to breastfeed, opportunities should be made to discuss hand expression of breast milk prior to theatre and reasons and encouragement and support to commence hand expression.

Pre-operative procedure

The entire team including the midwife should do a team brief ideally at 08:45hrs in Anaesthetic room (especially if there are no other Emergencies in LW), going through the theatre list and discussing any potential issues and making the necessary arrangements.

- The midwife accompanying the woman to theatre will then be asked to escort the woman and her birth partner to the anaesthetic room at the appropriate time – the woman may choose to walk to the operating theatre.
- The midwife will show the woman's birthing partner where to get changed into theatre attire and provide them with a theatre hat.
- The midwife will escort the woman to the anaesthetic room where the theatre nurse will check the patient details and the Theatre care plan and preoperative checklist and initiate the WHO maternity theatre safety checklist.
- The midwife must ensure that the obstetric records are complete and handed over to the anaesthetist.
- The midwife will stay with the woman and her partner providing support and

assistance to the anaesthetist if required

- The obstetrician performing the operation must check that the consent form has been signed before commencing the operation.
- The anaesthetist will insert the spinal anaesthesia and ensure the 'block' is complete and effective.
- The midwife will auscultate the fetal heart pre and post anaesthesia.
- The midwife will insert an indwelling urinary catheter with consent, utilising an aseptic technique once the anaesthetic is effective.
- Prior to starting to clean and drape the patient there must be a 'time out' and the WHO checklist completed

All grades of CS:

Prophylactic Antibiotic Therapy

During LSCS a single dose of **Co-Amoxiclav 1.2 mgs IV** will be given by the anaesthetist before skin incision. **N.B.** for penicillin-allergic women the recommendation is **Clindamycin 600mgs IV plus IV Gentamicin 2mg/kg**. The anaesthetist must record drug given on the anaesthetic observation chart. (Consensus from MDT at WVT)

Checking the swabs and instruments

All instruments and swabs must be checked at the beginning (before skin incision) of the case and the count recorded on the white board by the circulating practitioner. There are then three further counts. All swabs and sharps are counted when the surgeon closes the uterus. There is then a full count including instruments when closing the fascia, followed by a final count of swabs and sharps when closing the skin. When the dressing has been applied and the vagina swabbed out the scrub practitioner and circulator must do a final 'away from the table count.' Ideally all of these counts should be completed by the same circulator. Any missing instrument or swabs must be located prior to closure and in the event of a lost swab or sharp, the patient must be x-rayed. When everything is correct, the WHO theatre time out must be completed and signed by a member of theatre staff. It is the responsibility of the scrub nurse to ensure that the Theatre register is completed and signed by both themselves and the person doing their final count confirming that all swabs, instruments and sharps are correct.

Checking the placenta

- The midwife must examine the placenta and membranes prior to closure of the uterus and must report any abnormal findings to the surgeon so that the surgeon can examine the placenta if necessary.
- The midwife will obtain cord blood samples when the woman has a Rhesus Negative blood type.
- Placenta must be sent for histology when specified (using the specific Birmingham Women Hospital histology forms). When in doubt or during unexpected Term admissions to SCBU, the Obstetrician must liaise with the Hot week Obstetric Consultant and Paediatric Consultant in order to make a joint decision whether to send placenta for histology.
- Photographs of the placenta or placental histology must be discussed before placenta is frozen prior to disposal

6.5 Post-Operative Care

Immediate care post CS in first 24 hours

Special note: The equipment available in the obstetric theatre recovery area will be compliant with AAGBI guidelines (oxygen and suction equipment, emergency drug

boxes) to assist clinicians in rare cases when anaphylaxis may occur (refer to Post-operative care in the obstetric theatre recovery area guideline)

- When the woman is haemodynamically stable and the Obstetrician and Anaesthetist are satisfied with the woman's condition she is transferred from the obstetric theatre to the recovery area.
- The woman will remain in the recovery area until the Recovery Practitioner/Midwife is satisfied with the woman's post-operative condition
- The Anaesthetist will liaise with the Recovery Practitioner ensuring that any management plans are documented and abnormalities recognised quickly for action
- Following surgery all women will have their observations recorded using the anaesthetic record initially and then the Maternal Early Warning Score chart (MEWS). Temperature, blood pressure, pulse, O² saturation, urine output, pain score should be recorded
- All women will receive one to one care in recovery. Observations will be taken and recorded every 5 minutes for a minimum of 30 minutes after transfer from theatre or, until vital signs, blood loss, pain management and conscious levels are satisfactory – according to the anaesthetist/recovery practitioner.
- All women should be encouraged to provide skin to skin contact with their babies under direct supervision of the midwife, regardless of their method of feeding, as soon as possible after delivery.
- The woman may be transferred to the Maternity Ward / Delivery Suite when her condition is satisfactory.
- Before the woman is transferred to the ward, the midwife must collect the patient from recovery and check that all points below are within acceptable parameters :-
 - The observations are satisfactory
 - The lochia is normal
 - That urinary output is monitored and the catheter draining
 - That the wound dressing is clean and there are no signs of active bleeding
 - That adequate pain relief is achieved
 - That documentation is complete
 - The ward are informed of the transfer
 - The midwife has performed the initial neonatal examination.
 - The baby has had opportunities to initiate feeding.

Fluids and Diet

- Women who have no complications following the CS may eat and drink when they wish.
- Intravenous fluids should be administered as prescribed and may be discontinued once women are tolerating oral fluids and have a good diuresis (800-2000mls /24hr output: 2000ml fluid intake).
- The urinary bladder catheter may be removed when women are mobile following regional anaesthesia or as indicated by the Surgeon. This should be no sooner than 12hrs following the last top up dose of analgesia.
- Fluid balance chart should be maintained until removal of the urinary catheter. Any deficit in input: output ratio should be escalated to medical staff and a management plan documented in the postnatal notes.
- The time of removal of the urinary catheter and amount of urine in the catheter bag should be documented in the maternal records.
- Women should be encouraged to pass urine by six hours following removal of the catheter. The time and amount of urine passed should be recorded in the fluid

balance chart and the maternal records (Refer to the guideline for post-delivery bladder care management).

Wound Care

- On admission to the Maternity Ward post CS the wound dressing should be observed for signs of oozing. The dressing should be removed 48hrs post operatively. The dressing may be removed in the shower if the woman requests.
- If re-dressing of the wound becomes necessary, this should be undertaken using an aseptic non-touch technique
- The wound should be observed for signs of infection e.g. redness, discharge and increased pain. If there are any deviations from the normal inform appropriate medical staff
- Removal of drains should be according to the surgeon's instructions.
- Type of wound suture and plans for removal should be documented in the maternal records and undertaken according to the surgeons' instructions. Women with staples to the wound should be sent home with a staple remover, liaising with the community.
- Women should be encouraged to take over the care of the wound and be advised to clean and dry the area at least daily. They should be advised to observe for signs of infection e.g. redness, discharge and increased pain. If there are any deviations from the normal they should be advised to seek medical advice

Transfer to Maternity Ward

The midwife caring for the woman will transfer the mother and baby from the recovery area to the ward and will give a personal handover to a designated midwife. The woman will be transferred on a ward bed.

Postoperative Observations

All maternal observations must be recorded on the appropriate Trust Maternal Early Warning Score (MEWS) chart.

Following transfer to the ward routine observations must be performed as follows:-

- ½ hourly for 1 hour
- Hourly for 2 hours
- 2 hourly for 4 hours
- 4 hourly thereafter and for the remainder of the first 24 hours post-surgery.

If the observations are not stable, more frequent observations will be required together with an obstetric review and possible involvement of the Critical Outreach team.

- As a minimum 4 hourly maternal observations of temperature, pulse, blood pressure, respiratory rate and oxygen saturation will be required for the first 24hrs
- As a minimum fluid input and fluid output will be recorded for the first 24hrs.
- For women who have epidural opioids or patient controlled analgesia with opioids, there should be routine hourly monitoring of respiratory rate, sedation and pain scores throughout treatment and for at least two hours after discontinuation of treatment.
- The tone of the uterus must be monitored and the lochia observed. Heavy vaginal bleeding or loss of uterine tone must be reported to the surgeon and a regime of **40 units Syntocinon in 500ml Hartmann's solution commenced at 125ml/hr via a volumetric pump. Very heavy loss should be managed in accordance with the Massive Obstetric Haemorrhage protocol.**

Women's vaginal loss should be monitored closely post CS, and become part of the daily postnatal examination.

BabyCare and Infant Feeding

- Early skin contact between mother and baby should be encouraged and facilitated because it improves maternal perceptions of the infant, mothering skills, maternal behaviour, breastfeeding outcomes and reduces infant crying.
- Women who have had a CS are less likely to start breastfeeding in the first few hours after birth, but when breastfeeding is established they are as likely to continue as women who have had a vaginal birth. Therefore it is important that they are offered additional breastfeeding support as soon as possible after giving birth. Women who have a planned LSCS should be shown how to harvest and store their expressed breast milk after 36 weeks gestation.
- Women should also be given assistance with baby care and personal hygiene until able to mobilise and care for their babies and themselves independently.
- All care planned and implemented should be documented in the maternal records.

Analgesia

- Women should be offered opioid analgesia post CS, which may be required for up to 48hrs. Women should also be encouraged to take regular oral analgesia such as paracetamol and should be encouraged to have readily their own supply when they are fit to go home
- Pain should be observed and analgesia given as necessary and in accordance with the anaesthetists regime as written on the prescription chart.
- When a woman has been given Morphine Sulphate she should be observed for signs of respiratory distress.

Thromboprophylaxis

- Women who have a CS are at increased risk of thromboembolic diseases such as deep vein thrombosis and pulmonary embolism.
 - Below the knee anti embolic stockings will be applied prior to CS or as soon as possible post CS. Women should be advised to keep the stockings on for at least 7 days.
 - Risk assessment forms for venous thromboembolism begin at the Antenatal clinic booking appointment, and continue throughout the pregnancy and during labour and post-delivery. Refer to the Venous Thromboembolism Guideline.
 - A venous thromboembolism risk assessment must be carried out for all women following CS and if required Enoxaparin is prescribed by the anaesthetist and will be continued as prescribed on the prescription chart (See Venous thromboembolism Policy).
 - Particular attention needs to be paid to women who have chest symptoms such as shortness of breath or leg symptoms such as painful swollen calves or those who have a history of thromboembolic disease.
 - Women should be reviewed by a physiotherapist following surgery in the first 48 hours. They will be given advice on deep breathing techniques, leg exercises and postnatal exercises suitable post-surgery.

6.7 Requirement to discuss with women the implications for future pregnancies before discharge

- Women should be given the opportunity to discuss with their health care providers the reason for the CS and implications for the child and future pregnancies.
- Following surgery the consultant / specialty obstetrician must document information regarding the prognosis for future pregnancies e.g. any difficulties encountered during procedure. The Obstetrician must document clearly into the Maternity EPR about suitability for VBAC in future pregnancy (see VBAC

guidance on intranet)

6.8 Discharge Home

- Women who are afebrile and are not suffering from any complications may be offered early discharge (after 24hrs) from hospital and be followed up at home, as this is not associated with an increase in infant or maternal re- admissions.
- All post CS women should be reviewed by a member of the medical staff on the 1st day post CS.
- The woman's discharge can be planned and managed by the midwife if the obstetrician has documented 'fit for midwifery led discharge', in the postnatal notes. If there are deviations from normal then obstetric opinion must be sought.
- A full blood count should be taken on day 2 post CS either in the home or in the hospital.
- Women should be advised not to lift heavy objects or perform heavy manual housework for 4-6 weeks post-delivery. Sexual intercourse can be resumed once they are fully recovered from the CS. Driving should be avoided until they are able to perform an emergency stop safely without pain.

This guideline cannot anticipate all possible circumstances and exist only to provide general guidance on clinical management to clinicians

Appendix 1 - Classification of Caesarean Section - (1.NICE guidance for CS 2011, 2. Consensus agreement of the Consultant Obstetricians, Anaesthetists, Paediatricians and Senior Midwives at WVT)

CLASSIFICATION	DEFINITION	DECISION TO DELIVERY INTERVAL	INDICATIONS (Every case should be discussed with consultant – clearly mentioning the category & indication. The examples below are not exhaustive /exclusive and situations can change.....)
Category 1 Call 2222 and say – Obstetric Emergency Category 1 Caesarean section, Delivery Suite	CRASH - Immediate threat to the life of mother or fetus	As soon as it's safely possible – aim for within 30 minutes Transfer to theatre immediately a decision has been made	<ul style="list-style-type: none"> • Prolonged Fetal Bradycardia > 4minutes • Abnormal CTG without FBS • FBS – Lactate above 4.8 or PH of 7.20 or below • Massive Placental abruption/APH/Uterine rupture • Cord prolapse • Failed instrumental (decision time – at time of failure of instrumental) • Maternal cardiac arrest (Within 4 minutes to facilitate resuscitation) • Breech in advanced labour/rapidly progressing
Category 2	URGENT – Maternal or fetal compromise but not immediately life threatening	As soon as it's safely possible - aim for within 75 minutes Transfer to theatre immediately a decision has been made	<ul style="list-style-type: none"> • Non-reassuring CTG (not abnormal) • Minimal to moderate Abruption/APH • Failure to progress • Undiagnosed breech in labour • Planned LSCS in active labour • Maternal exhaustion/maternal request during active labour
Category 3	SCHEDULED - Needs early delivery, but no immediate maternal or fetal compromise	As soon as feasible – aim for within 24 hours (Obstetrician to specify time depending on the urgency of each individual case)	<ul style="list-style-type: none"> • Planned LSCS admitted with pre- labour SROM and or very early labour/latent phase • Failed IOL • Preeclampsia needing CS (and requiring stabilization) • IUGR needing CS
Category 4 (Elective) Consultant to decide on specific cases needing delivery soon. (ie. within a few days after steroid cover)	PLANNED - Delivery timed to suite the woman and staff	Between 39+0 weeks to 39+6 weeks gestation unless specified Give steroids if < 39+0 weeks. Maximum benefit between 24hrs and 7days of delivery Please consent during the decision at ANC Book on Monday AM , Wednesday AM and Friday AM– Maximum 3 on a list Refer to SOP on intranet if no slots in CS diary	<ul style="list-style-type: none"> • Placenta praevia (around 38weeks) • Failed ECV with normal CTG if patient request for LSCS • Breech presentation / malpresentation – decision for CS made • Multiple pregnancy with first twin non-cephalic (around 36wks for Monochorionic and 37wks for Dichorionic pregnancies) • Previous 2 or more LSCS • Previous Classical LSCS (around 36 to 37weeks) • Previous uterine surgery i.e. Myomectomy breeching cavity • Maternal request after previous 1 CS/ or for other reasons • Maternal/fetal medical/structural conditions in which vaginal delivery is contraindicated • Other (Liaise with consultant)

Classification of Caesarean Section - Author: Mr H Katali, Consultant Obstetrician & Gynaecologist - Wye Valley NHS Trust – April 2016

Appendix II - Enhanced Recovery Programme (ERP) for Caesarean Section – Standard Operating Procedure (SOP)

Authors: Dr Thiru Bavanantham – Consultant Obstetrician, Mrs Julie Taylor – Midwifery Manager - Wye Valley NHS Trust -July 2018

1. SCOPE

This guideline is to be used by staff working within the Maternity Service at all hospital sites across the Trust

2. INTRODUCTION

An enhanced recovery programme after elective caesarean section has been devised to improve the patients experience and speed up her return to normality. Pre-delivery planning needs to be robust to ensure the woman is fully informed as to the recovery process, as her commitment is key to its success. This document does not include complete guidance for caesarean sections

3. STATEMENT OF INTENT

The purpose of this SOP is to ensure that a patient's care is optimised prior to, during and after an elective caesarean section.

4. DEFINITIONS

ERP: Enhanced Recovery Programme

5. DUTIES

Obstetrician

The obstetrician booking an elective caesarean section will be responsible for ensuring that the patient is fully briefed about ERP and understands that they are expected to be fit for discharge the day after surgery

Clinic and DAU midwives

Midwives working in these areas should ensure that all the pre-operative testing is performed in a timely manner and that the patient has received full information. Careful explanation of the drinking and eating rules prior to surgery should be given.

Postnatal ward

The midwives, physio assistants and medical staff should all ensure that everything is done to mobilise patients quickly and that they are reviewed in a timely manner

6. PROCEDURE

Planning for Enhanced Recovery Programme (ERP) Elective Caesarean Section in Antenatal clinic:

ERP elective CS should be offered to all women planning an elective Caesarean Section who do not have any major co-morbidities or where prolonged postnatal care is required.

- A date for CS should be agreed in the Antenatal Clinic.
- Women should be made aware of the planned process following her caesarean section by counselling and giving the Elective CS patient information leaflet
- The expected date of discharge should be also be given in the Antenatal Clinic so that the patient is able to arrange support at home before she comes in hospital.
- The dates should be filled on the cover of the patient leaflet by the doctor booking the caesarean section.
- Consent should be taken in the clinic by the doctor booking the CS
- MRSA swabs should be taken no more than 6 weeks before scheduled date of EL LSCS

- All Women need to be offered referral to antenatal breastfeeding classes –give EBM pack and instructions

In Pre-Clerking Clinic (at least a day before the operation)

- Ensure two eligible samples of blood grouping and serum save are taken within 3 days of surgery
- A consent should be taken at this stage if not already completed in the Antenatal Clinic
- Any allergies should be checked.
- Explain carefully to the woman and her partner the following:
 - Post-operative pain relief
 - Post-operative mobility and exercises to reduce pain and enable early mobilisation
 - Fasting.
 - Eat on the day before the operation up to midnight.
 - 200mls of clear non-fizzy apple juice 200mls to be taken at 06.00 day of the operation to reduce the ill effects of fasting (carbohydrate).
 - Water only should be taken up to 2 hours before the operation.
- Pre-operative medication should be supplied:
 - Night before: Omeprazole , 20mg
 - Morning of CS: Omeprazole , 20mg

On the day of surgery

- The first patient is admitted at 07.30hrs for pre-operative preparation to be ready for admission to theatre CS at 08.30hrs by the assigned midwife
- The obstetrician and anaesthetist should review the patients prior to the team brief at which the order of the list will be decided.

Procedure in theatre

- Regional nerve blockade will be used unless contraindicated/refused: the anaesthetist will decide this following an overall assessment and an informed discussion with the woman.
- The operation should be supervised by the senior obstetric and anaesthetic staff.
- A total operating time of less than one hour should be aimed for.
- After the surgery the consultant/surgeon should agree if the patient is still appropriate for enhanced recovery.
- In all cases where the baby is born in good condition and the mother is well and agrees skin-to-skin contact should be actively encouraged.
- The baby can be dried on the mother's chest and then covered with a warm towel to keep warm.
- If the patient is deemed not to be able to participate in the ERP programme, it should be documented in the maternity EPR.

Postnatal Care

- The midwife should provide support to help the woman to start breastfeeding as soon as possible if this is her chosen method of infant feeding.
- Offer a drink in recovery and food asap on arrival to ward.
- Discontinued IV fluids once oral fluids are well tolerated. Flush the cannula.
- The woman should be sitting out of bed by the evening and have showered the following morning at the latest.
- If required, the physiotherapist will review the patient and help the midwifery team facilitate early mobilisation. This will be assessed on an individual basis
- Keep the wound clean and dry after removal of dressing

Bladder Care – see guideline

Follow Bladder Care guideline. The urinary catheter should be removed 12 hrs post op or next morning. If the catheter is left in until the morning, the patient will still need to mobilise on the day of CS.

Medication

- Every woman is prescribed adequate post-operative analgesia ideally:
 - Paracetamol 1gm orally 6 hourly +
 - Diclofenac 100mgs per rectum post operatively
 - Ibuprofen (10 hours after the last dose of Diclofenac.) 400mg qds

- o Zomorph 10mg at 06:00 & 18:00 – 4 doses
- Nausea should be also treated appropriately and quickly:
 - o 1st line Ondansetron 4mg iv 8 hourly (this is also effective against pruritus)
 - o 2nd line Cyclizine 50mg iv/po/im 8 hourly
- TTOs ordered next day

Clinical Review

- On the first postnatal day the obstetric team and the anaesthetic team will review the patient a comprehensive assessment of the voiding history should be performed.
- An experienced doctor from the obstetric team will review the woman to clarify any remaining questions concerning this pregnancy and to explain any future obstetric implications for her. This will occur before discharge and be clearly documented in the maternity EPR. The debriefing from a CS leaflet should be given.
- The midwife will ensure completion of the discharge procedure.
- If the patient is taken off the ERP program this should be documented on Maternity EPR.

Discharge

- The time of discharge is aimed at 24-36 hours after the operation.
- This is suitable if there are no medical or midwifery concerns and the patient has support at home.
- The woman should be given information about the Maternity triage and asked to contact it if there are any concerns.
- Community midwife will visit next day of discharge.

Neonatal admission does not preclude Enhanced Recovery

7. TRAINING

All midwifery staff will receive training annually on postoperative care and theatre etiquette as part of the mandatory multidisciplinary intrapartum day. Staff will sign attendance sheets on the intrapartum day. Monitoring of attendance will be audited by the practice development midwife. Non- attendees will be notified via letter and asked to book onto the next available session and their line manager notified.

8. MONITORING COMPLIANCE WITH THIS DOCUMENT

The table below outlines the Trusts monitoring arrangements for this policy/document.

Aspect of compliance or effectiveness being monitored	Monitoring Method	Individual responsible for the monitoring	Frequency of the monitoring activity	Group/ committee which will receive the findings monitoring report	Group committee / individual responsible for ensuring that the actions are completed

<p>Audit the implementation of the classification and timings for all Grade 1 caesarean sections</p>	<p>10 sets of electronic records of women who have delivered following a grade 1 caesarean section</p>	<p>Consultant Obstetrician/ Midwives</p>	<p>Annually</p>	<p>Obstetric & Gynaecology Governance Committee</p>	<p>Obstetric & Gynaecology Governance Committee</p>
<p>Audit of the requirement to document the reason for performing a Grade 1 caesarean section in the health records by the person who makes the decision</p>	<p>10 sets of electronic records of women who have delivered a grade 1 caesarean section</p>	<p>Consultant Obstetrician/ Midwives</p>	<p>Annually</p>	<p>Obstetric & Gynaecology Governance Committee</p>	<p>Obstetric & Gynaecology Governance Committee</p>

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10. RELATED TRUST POLICY/PROCEDURES

VTE, post-operative care, Intrapartum care

11. EQUALITY IMPACT ASSESSMENTS

Equality Impact Assessment



Policy / Service Details	
Name of policy, service, process, etc:	Caesarean Section
Is this a new policy, service or process?	Updated <input type="checkbox"/> <input checked="" type="checkbox"/>
Policy Aims, Data and Research	
What are the main aims and purpose of the policy, service or process?	
This guideline provides staff with guidance on the care of the caesarean section	
Who are the keystakeholders?	

This guideline applies to all in Maternity Services.

What data is available to help inform the impact assessment? Is there any research data or reports, surveys etc concerning race, religion/belief, disability, gender, sexual orientation and age which relates to this policy, service or process?

This guideline does not disadvantage any individual or group of people.

Likely impact on equality

Could the policy, service or process impact any equality group?

Group affected	Positive impact	Negative impact	Reason
Ethnic groups (race, ethnicity, colour, national origin)	YES		See above
Gender (male, female, transsexual, transgender, marital status)	YES		
Disability (physical or sensory impairment, mental health status)	YES		
Age (or perceived age)	YES		
Sexual orientation (gay, lesbian, bisexual)	YES		
Religion or belief	YES		

Assessment Narrative

Could you minimise or improve any negative impact? Explain how

There is no negative impact

Have you considered any alternatives that would minimise or improve negative impact?

There is no negative impact

How have you consulted with stakeholders and equalities groups likely to be affected by the policy?

There is no negative impact

What are your conclusions about the likely impact for minority equality groups of the introduction of this policy, service or process?

This guideline provides staff with guidance on the care of the caesarean section

How will the policy, service or process details be published and publicised?

The Document will be on the intranet and launched within the Maternity Department via E mail and hard copy.

How will the impact of the policy, service or process be monitored and reviewed?

The Obstetric/Gynaecology/Neonatal Clinical Governance Committee is responsible for monitoring effectiveness and any negative effects.

Names and job titles of staff completing this assessment form:

Mr M Cohn- Consultant Obstetrician and Gynaecologist

Date Updated:

July 2020

Date Completed:

July 2020