Surrey and Sussex NHS Healthcare NHS Trust

A Division-Specific Clinical Guideline for Lower Segment Caesarean Section

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Equality statement

This document demonstrates commitment to create a positive culture of respect for all individuals, including staff, patients, their families and carers as well as community partners**.** The intention is, as required by the Equality Act 2010, to identify, remove or minimise discriminatory practice in the nine named protected characteristics of age, disability, sex, gender reassignment, pregnancy and maternity, race, sexual orientation, religion or belief**,** and marriage and civil partnership. It is also intended to use the Human Rights Act 1998 to promote positive practice and value the diversity of all individuals and communities. This document is available in different languages and formats upon request to the Trust Procedural Documents Coordinator and the Equality and Diversity Lead.

1. Classification of caesarean sections.

1.1 Category 1 Caesarean section EMERGENCY (Crash)

Represents an immediate threat to the life of the mother or foetus

Telephone: 2222 “Crash caesarean section” Group emergency call requires immediate response and includes the following which is not an exhaustive list:

- Suspected uterine rupture
- Abruption
- Severe haemorrhage and shock
- Cord prolapse
- FBS pH of ≤ 7.2
- Pathological CTG

Category 1 caesarean section will aim to deliver as soon as is safely possible from the time of decision but not longer than 30mins.

The indication/reason for the Category 1 Caesarean Section must be documented in the record by the Obstetrician making the decision.

The switchboard will activate the Group Crash Call for caesarean section.

On receipt of the Group Call for Category 1 (crash) CS the following personnel are instructed to immediately attend maternity theatre:

- Obstetric Anaesthetist on-call
- Theatre team on-call for obstetrics
- Obstetric on call registrar
- Obstetric SHO
- Midwifery coordinator on delivery suite
- The neonatal registrar

The Group Call for CS operates through the baton bleep system which must be handed personally to the next person taking over.

- A modified WHO Surgical Safety Checklist, ie identity check, consent and patient allergies must be completed, prior to commencing surgery.
- A full WHO Surgical Safety Checklist Sign Out phase, must be completed at the end of the procedure

1.2 Category 2 URGENT Caesarean section

Represents maternal or foetal compromise that is not immediately life threatening.

There is no time limit set for Category 2 CS, but an auditable standard should be to deliver within 90 minutes from the time of the decision.

Each person involved in a Category 2 CS needs to be contacted individually, by the Co-ordinator or her deputy.

The following procedure should be followed:

- Once a Category 2 CS situation has been identified, co-ordinator midwife/deputy will contact Theatre Operation Department Practitioner (ODP) via bleep 596, Scrub Practitioner bleep 477 and the anaesthetist via bleep 730
- The neonatal team should be contacted and informed of the clinical situation and recalled once the woman is in the obstetric theatre.

1.3 Category 3 Scheduled Caesarean section (also known as Expedited)

Represents the mother who needs early delivery but there is no maternal or fetal compromise.

An example of this, is the woman who is booked for an elective LSCS but who is admitted with Spontaneous Rupture of Membranes (SRM) or in early labour.

1.4 Category 4 Elective Caesarean section

Represents the delivery date given to the mother to attend Burstow ward for their elective caesarean section.

Caesarean section as a planned procedure, timed to suit the woman, staff once other eligibility criteria are met.

1.5 Making the Decision for caesarean section

A clear rationale for performing CS is essential and therefore exploration of reasons why this operation is a preferred method of birthing for some women is taken seriously and not discarded. The National Institute for Clinical Excellence (NICE) guidelines suggest that maternal request is not on its own an indication for CS, and specific reasons for the request should be explored, discussed and recorded (NICE, 2004).At the booking appointment if a woman request a Caesarean section, they should be referred to the VBAC team. Women referred to the VBAC team should continue with the routine antenatal care in addition to their special appointments (see Antenatal Care Guideline)

Women will be seen by the VBAC midwife at 22-24 weeks following their anomaly scan. A woman seen by the VBAC midwife who makes an informed decision to have a

caesarean section will be referred to the consultant clinic at 28 weeks gestation. The function of this referral is to work in partnership with women who request CS to explore their reasons using different support mechanisms. The aim of this approach is to work with the woman towards a good outcome for herself and her baby, ensuring mutuality between the practitioner/client relationship. The service involves counselling, psychological assessment and focused midwifery and medical support.

- The decision for caesarean section must be discussed by the obstetrician with the woman & her partner and documented in the woman's hospital notes.
- Written Consent for LSCS should be requested after giving the woman Evidence based information including the benefits and risks of having a baby by caesarean section compared with a vaginal delivery[1].
- In rare instances when it is not possible to obtain written consent the reason must be documented in the woman's notes.
- A competent woman is entitled to refuse the offer of treatment such as LSCS, even when the treatment would clearly benefit her or her baby's health. A consultant review must be gained, and the supervisor of midwives informed.
- **The on call consultant** must be included in the decision for caesarean section. The registrar should discuss the case findings of the woman with the consultant on-call, unless doing so would be life threatening to the woman or her fetus.
- The time of decision, the Category of emergency(or urgent caesarean section) and the reason for the caesarean section must be documented in the notes.
- The woman with an ongoing medical /obstetric complication must have an individual plan of care documented in the "special instructions for labour" page in the antenatal notes
- A woman identified in the "special instructions for labour" having specialized drug therapy for delivery must be advised that she may have to be admitted sooner than the day of the caesarean section.
- Cell salvage is a consideration in some caesarean sections.

- **If any delay occurs** in performing the caesarean section the reason for this must be documented in the notes.

The midwife must complete the Preoperative preparation for a Category 1 caesarean section in the operation notes.

The obstetrician on-call must document the reason/s for performing a Category 1 or Category 2 caesarean section in the healthcare records. Any reason for delay in under-taking a caesarean section must be documented in the notes.

1.6 Caesarean section Category's 1 – 3

- The midwife must check the patient's name band and allergy status.
- Pubic shave (if time permits)
- Continue CTG

- Give prescribed i.v.Ranitidine 50mg if not given within the last six hours.
- Women having a G.A. give Sodium Citrate 30ml orally just prior to transfer to
- theatre.
- The midwife caring for the woman is responsible for completing and
- documenting the pre operative checklist
- The anaesthetist should be aware of the last time the woman ate or drank.
- Anaesthetic review prior to / in theatre.
- Site 14 gauge/ 16 gauge cannula. Commence intravenous fluids (IVI) if not already in progress
- Send blood sample to the pathology laboratory to check hb, group &save serum (check if results already available)
- Blood should be sent for clotting studies for women with low platelet levels/ pre- eclampsia.
- X-match blood must be made available for women at the request of the obstetrician / anaesthetist.
- In the case of fetal compromise, the patient should be transferred to theatre in the left lateral tilt position.
- An indwelling urinary catheter is inserted by the midwife following siting of regional anaesthetic. If the patient is having GA, the urinary catheter is usually inserted prior to induction of anaesthesia.
- Assess risk for thrombo-embolic disease, Put TED stockings on. Consider use of “flowtron boots” according to Venous Thrombo -embolic (VTE) policy.
- Cardiotocograph (CTG) must be recommenced after transfer to theatre for Cateagory
- 1 & Cateagory 2 CS (before & after regional anaesthetic).
- Where the partner is not present, (i.e. For general anaesthetic) the partner must be kept informed.
- The full WHO surgical checklist adapted for obstetrics must be used prior to commencing the caesarean section including a full Sign Out phase

1.7 Caesarean Section Category 4

Pre admission assessment for Category 4 Caesarean section

- Women booked for a caesarean section are seen at a pre-assessment clinic within 3 days prior to admission. The discussion is documented in the antenatal notes and an information leaflet is given
- Full blood count (FBC) group and save serum is taken.
- The patient is given and instructed to take oral Ranitidine 150mg prior to admission.
- Methicillin Resistant Staphylococcus Aureus (MRSA) screening and treatment is instigated if necessary, according to the MRSA Trust Screening policy
- Patient are advised; nil by mouth 6 hours (for food) prior to surgery and to drink water up until 2 hours before LSCS.
- Planned regional anaesthesia; the woman may drink up to 250 ml of isotonic sports drinks,/ apple juice, 2 hours before the caesarean section.

- Sodium citrate is not routinely required for Category 4 LSCS under regional anaesthesia.

1.8 Pre-operative Procedure for Category 4 Caesarean section

- Women for Category 4 caesarean section are admitted to the postnatal ward.
- Baseline observations: Temperature, Pulse, B/P, Respiration and urinalysis are performed and documented. **Check allergy status and attach appropriate name band to wrist.**
- Auscultate fetal heart rate with a Sonicaid and document
- A discussion should take place regarding the woman and her partner's wishes regarding skin to skin contact at delivery.
- Ultrasound scan (USS) for an inconclusive presentation or a breech presentation. If cephalic and suitable for vaginal delivery, discuss & cancel from elective CS list
- Blood results from the pre-assessment clinic are obtained from the APEX system and documented on the theatre checklist.
- Ensure the woman has taken the Ranitidine tablets prescribed at the given time.
- Complete the pre-operative checklist and sign when completed. Check pubic area & shave if necessary.
- The woman is seen and consented on the day of the caesarean section by the Obstetrician and the consent form signed.
- The woman is reviewed by the anaesthetist.
- Assess risk for thrombo-embolic disease, all women should have TED stockings as thrombo-prophylaxis prior to surgery, consider use of flowtron boots see Venous Thrombo-embolic (VTE policy)
- The woman is taken to theatre via the Pre-operative Patient Preparation Area (POPPA) to ensure pre- operative checks are completed
- The woman's partner is encouraged/ given the opportunity to accompany the woman to & in theatre.
- An IVI is commenced on admission to theatre
- A urinary catheter is inserted with anaesthetic agreement. (Ideally immediately before CS if a General anaesthetic), or once spinal/epidural effective
- For Category 3 and 4 caesarean section, the midwife should auscultate the fetal heart with the handheld Doppler prior to and, following the regional anaesthetic. Document the findings in the delivery notes.
- The full WHO surgical checklist adapted for obstetrics must be used prior to commencing the caesarean section including a full Sign Out phase

1.9 The Role of the Midwife

- The Midwife is responsible for the provision of care to the mother pre-operatively and post-operatively to the mother & her baby, including the documentation. Ensure that the resuscitation/cot equipment is ready for use.
- Support the woman while in theatre. Assist with positioning for regional anaesthesia

- Auscultate and document the fetal heart following regional anaesthesia
- Resume CTG monitoring following transfer to theatre in Category 1 and Category 2 caesarean sections.
- Contact the neonatologist, should be present at all Category 1 CS performed under General anaesthetic and where there is known fetal compromise or complications. Inform neonatologist of estimated time of delivery and give a further call to the Neonatologist if not already present when scrubbing up. Inform NNU if a transfer of the baby is likely.

1.10 The Role of the Anaesthetist

Pre-operative

- Women are encouraged to have a caesarean section under regional anaesthesia rather than GA, unless contraindicated
- The Anaesthetist must be informed of the classification of the LSCS and indication for operation.
- For Category 4 CS, the woman must confirm she has had no food for six hours and no clear fluids for two hours prior to surgery. Confirm oral ranitidine has been taken. In all other classifications the anaesthetist must be informed of when the woman last ate or had clear fluids.
- Oral Ranitidine 150mg and oral Sodium Citrate 30ml (where necessary) is given as prescribed (confirm and check)
- Use Diamorphine(0.2-0.4mg intrathecal); in any spinal block for post-operative pain relief unless contraindicated.
- Management of hypotension, co-load with crystalloid or colloid. Angle the theatre table at a lateral tilt of 15^0, or use a wedge under the right hip. Use IV phenylephrine 0.1 mg/ml solution (50micrograms-200 micrograms boluses) or i.v. ephedrine 3mg/ml solution(3mg-9mg boluses) as indicated by the clinical situation. An infusion of phenylephrine (0.1mg/ml solution) at 0-50ml/h may also be used via a syringe driver.
- Ideally the ECG leads are attached to the woman's back, the saturation monitor attached to the ear and the gown placed to enable skin to skin contact following delivery of the baby.
- Antibiotic therapy is administered prior to knife to skin by the anaesthetist to all women undergoing a caesarean section in accordance with the Trust's antibiotic prophylaxis guideline. Currently this guidance recommends:-

1^{st} line: Cefuroxime 1.5g I.V. plus metronidazole 500mg i.v.
If penicillin or cephalosporin allergy then i.v.Clindamycin 600mg in 50ml saline over 20minutes

If MRSA positive then add Teicoplanin 400mg i.v.

- Women having a general anaesthesia for CS should be pre-oxygenated and have rapid sequence induction to reduce the risk of aspiration.

1.11 Following Delivery

- Following the delivery of the baby; give Oxytocin 5 units I.V in increments over 1 to 5 minutes and/or
  40 units oxytocin in 500ml N/Saline over 4 hours using a Graseby pump. If patient is fluid restricted (e.g. PET protocol) then use 40 units oxytocin in 40ml NaCl 0.9% i.v. via a syringe pump.
- Estimate blood loss accurately, this will include weighing the swabs if the estimated loss is greater than 500mls.The anaesthetist must be informed of the ongoing blood loss.
- Give epidural diamorphine 3mg diluted with N.Saline 0.9% (flush the epidural catheter with 2ml N.Saline) and remove the catheter at the end of surgery unless contra-indicated.
- Non-steroidal anti-inflammatory analgesics should be given to reduce the need for opioid analgesia, if there are no contraindications: Diclofenac 100mg per rectum.
- Prescribe post-operative analgesia/ anti-emetics/ thromboprophylaxis.
- Usual first line prescription should be:
- Regular analgesia:-
    - Paracetamol orally 1g QDS
    - Ibuprofen 400 QDS (unless contraindicated) to start 12 hours after the rectal diclofenac to be reduced to 400mg TDS after 72 hours and on discharge, which ever is earlier.
    - Dihydrocodeine 30mg oral QDS
- Oral morphine 10-20mg PRN (max every 2 hours**)** either as oral solution or sevredol
- Antiemetic:-
    - Cyclizine 50mg i.v, i.m or orally 6 hourly PRN (max three times daily)
    - Ondansetron 4mg i.v. 6 hourly prn
- Any drugs given in theatre must be documented on the Anaesthetic chart.
- Antibiotics and all relevant analgesics given should also be prescribed on the drug chart
- Measure & fit graduated TED stockings.
- Thrombo prophylaxis Clexane must be prescribed for all women starting 4 hours after spinal anaesthetic or 4 hours following the removal of the epidural (6 hours if traumatic), unless otherwise indicated. This is administered in line with the VTE policy.
- Advise women to keep hydrated up to 1-1½ litres a day
- **If a general anaesthetic** has been given without a regional block, give intra-operative IV Paracetamol 1g (if over 50kg), consider bilateral TAP block with local anaesthetic and consider PCA morphine postoperatively

1.12 Surgical Techniques for caesarean section

- Double gloves are advised for all caesarean sections to avoid transmission of blood-borne viruses. Blunt needles are recommended, particularly for closure of the uterus.
- All operators must wear goggles/eye protection.
- A transverse lower abdominal incision is normally indicated
- Use blunt extension of the uterine incision; unless the woman has had previous LSCS
- Use controlled cord traction for removal of the placenta once separation has occurred.
- Close the uterine incision with two suture layers; unless previous LSCS when this may not be possible.
- Always check the ovaries are morphologically normal.
- Paired cord blood samples must be obtained if LSCS performed for fetal compromise and for all emergency and urgent caesarean sections (Catagory 1 &2). The cord blood sample results must have the patient's name and unit number written & attached in the delivery notes & transcribed on eclipse.
- If the mother would like delayed cord separation it is at the surgeon discretion a delay of up to 5 minutes can be considered.
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- Consider women's preference for music and skin to skin contact.
- Do not routinely exteriorise the uterus with a regional block. Always discuss with the anaesthetist in the first instance.
- Do not routinely close the peritoneum.
- Close subcutaneous space if greater than 2 cm.

1.13 Complications

- If excessive blood loss (>1000 mls), or problems with haemostasis, or operation >60 minutes call the consultant (See PPH policy)
- If blood loss is continuing and exceeds 2000mls the lead clinician must call "**A CODE BLUE EMERGENCY**" massive obstetric haemorrhage; telephone 2222 (Code blue policy)
- The Anaesthetist should be made aware of any break through pain as further analgesia or general anaesthetic may be necessary
- The Consultant Obstetrician should be called

PERI-PARTUM Caesarean section

See Emergency Department Trust Policy

1.14 Care of the Baby

- The neonatologist **must attend Cateagory 1 and 2 Caesarean sections** and if there are any other neonatal risk factors
- If the neonatologist is not present at CS, the midwife assesses the baby's Apgar score and initiates resuscitation where required.
- Call for neonatologist assistance if required. 2222 neonatal emergency state Location. If the neonatologist is present assist with resuscitation
- Dry baby, keep warm.
- Do not leave baby unattended at any time.
- Give mother and/or partner an opportunity to hold the baby if operation under regional block, early skin-to-skin contact for mother and baby should be facilitated.
- Label and attach two (2) identity bracelets (one to each ankle of the baby). Labels should be checked by the mother /partner
- Examine and weigh baby, in full view of the mother & partner, ideally whilst the woman is being recovered on delivery suite.
- Clean and restock resuscitative as soon as possible.

1.15 The Role of the Instrument Nurse

- The nurse assigned to scrub for theatre is responsible for coordinating all other members of the theatre team
- The scrub nurse must ensure all equipment and swabs are counted before and following the operation to ascertain no losses and, the check list is correct & signed.

1.16 The role of the Circulating Healthcare Assistant (HCA)

- The Healthcare Assistant is responsible for the equipment required by the instrument midwife/nurse. S/he ensures a tidy, clean and safe environment for the woman and staff. S/he communicates with the instrument midwife/nurse and should seek permission from the instrument midwife/nurse prior to leaving theatre
- The HCA should ensure the theatre register is completed and signed.

1.17 Care of the woman and her baby in the first 24hrs after caesarean section

After caesarean section the woman should be observed on a one-to-one basis by an appropriately trained member of staff until the woman has regained airway control and cardio-respiratory stability and is able to communicate. The woman must be kept under clinical observation at all times and all observations must be recorded on the MEWS chart. The frequency of recordings; ¼ hourly observations for the 1st hour & any further instructions will depend on the stage of recovery and clinical condition of the patient in line with the Recovery Policy.

Oral fluids should commence when thirst dictates and should start with sips of water building to free fluids unless there are any surgical reasons not to (in this situation the obstetrician must document a plan of care).
Light diet (soup, toast) should commence as soon as hunger dictates unless there are any surgical reasons not to (the obstetrician must document a plan of care).
The midwife facilitates early skin-to-skin contact for mother and baby. Additional support should be given to the woman to start breast feeding as soon as possible.
Where neonatal complications have been identified (e.g. meconium, GBS, hypoglycaemia etc.), the documented plan of care must be followed and observations recorded on the MEWS chart.
Check Eclipse for "safeguarding" issues

Follow guidelines for examination of the newborn policy.

1.18 Postoperative monitoring

- The Anaesthetist must accompany the patient to the recovery room/area
- The Anaesthetist must document and verbally convey clear instructions for the post-operative period to the midwife/nurse receiving the patient.
- If the woman has had a general anaesthetic she is transferred to the Post Anaesthetic Care Unit (PACU) for one to one observations by a theatre recovery nurse or an appropriately skilled midwife, until the woman has airway control and cardiorespiratory stability.
- If the woman has had a spinal/epidural anaesthetic she is recovered on the Delivery suite, the woman should not be left unattended during the recovery period for a minimum of 30 minutes, after which time; if she is stable she may be transferred to the postnatal ward.

Observations

- Observations should be documented on the Modified Early Obstetric Warning Score[2] MEWS, or the PACU Care plan Observations monitored and documented more frequently if patient's condition dictates. Any deviation from normal should be reported to anaesthetist /obstetrician.
- **The MEWS early warning score should be calculated and documented and action taken accordingly.**
- **1-2 Observe & maintain routine observations.**
- **3 Repeat &increase frequency of observations. Inform co-ordinator.**
- **4-5 Bleep Obstetric Registrar & Obstetric Anaesthetist. Inform the coordinator. Initiate treatment (ABC) maintain minimum of hourly observations**
- **>6 Call 2222 State obstetric emergency & Location. Request Consultant Obstetrician to attend. Fast bleep 766 (critical care Outreach team). Involve neonatologist as indicated**.

<u>Blood pressure</u>

Pulse & respirations: Every 15 minutes until transfer to P/N ward for a minimum 30 minutes. The written instructions by the anaesthetist or a change in the patient's condition is escalated in line with the MEWS referral pathway.

Respiratory Rate: If patient has had Fentanyl or Diamorphine into the sub-arachnoid space. **Monitor respirations hourly for 8 hours**

Oxygen Saturation: Following spinal/epidural anaesthetic, monitor and document oxygen saturations every 15 minutes until transferred to the ward for a minimum 30 minutes. Following a GA monitor O_2 saturation levels continuously for 30 minutes.

Temperature: On return from theatre: if within normal limits, 4 hourly. If pyrexial (>37.6^{o}C) or hypothermic (<35.^{0}C) seek an anaesthetic/ obstetric review.

Alertness: Check patient conscious level every 15 minutes until transferred to the ward for a minimum 30 minutes.

Analgesia

- If post-operative opiate analgesia is given intravenously, the patient must be kept in the recovery room for a further 30 minutes, to observe for adverse reactions.
- If analgesia is inadequate, refer to anaesthetist.
- If Patient controlled analgesia (PCA) pump is used, record use of PCA Pump.
- Monitor pain control and give prescribed analgesia as necessary.

Fluid balance/eating and drinking

- IV therapy administered in theatre must be documented on the anaesthetic chart. Further IV therapy is administered as prescribed and recorded on the fluid balance chart.
- Check cannulation site 4 hourly.
- Monitor and record urinary output, and contact obstetrician/ anaesthetist if < 30mls per hour and report any new haematuria.

Oral fluids should commence when thirst dictates and should start with sips of water increasing to free fluids unless there are any surgical reasons not to (check with obstetrician).

Light diet (soup, toast) should commence as soon as hunger dictates unless there are any surgical reasons not to (check with obstetrician). Women who feel well and have no complications can eat or drink when they feel thirsty or hungry

Blood Transfusion

If blood or blood products are given, the Blood/Blood Product Transfusion Record Chart must be completed. The porter collects the blood from Pathology (see the Trust Blood Transfusion Policy). 2 units of Emergency “0 negative” blood is kept in the fridge outside theatre 7.

1.19 Transfer To Ward

- The patient must remain in the recovery room/area for a minimum of 30 minutes. If all observations are stable, then the patient may be transferred to the ward without further consultation with the medical staff.
- A trained member of staff must escort the patient to the postnatal ward and communicate clear instructions to the midwife/nurse receiving the patient. The SBAR communication tool should be used (see the Handover Policy) and include any specific instruction/s from the operative notes and/ or the anaesthetist.
- Patients who require high dependency care, Maternity HDU, must be seen by the senior obstetrician / anaesthetist (if applicable) before transfer to the delivery suite and a plan of care documented.
- The obstetrician must review the patient prior to transfer to the P/N ward.
- The MHDU record must be completed

Continuing Observations

- On transfer to the ward a full set of observations must be performed and documented.
- Observations including pain score, sedation, respiratory, rate, heart rate and blood pressure must be continued on the MEWS chart following transfer from the delivery suite or theatre recovery at the following intervals: 1hour, $1_{1/2}$ hours, 2hrs, 3hrs, 4hrs, 8hrs, 12hrs and 24hrs. All observations are monitored and documented more frequently if patient's condition changes.
- A patient warded from the MHDU must be reviewed by the consultant obstetrician on-call within 24 hours of transfer.
- An obstetric review should be sought if the MEWS dictates or if the midwife has concerns at any time.
- Follow the documented postnatal management plan,
- May commence mobilization after 6 hours.

Catheter Care

- The urinary catheter can be removed no sooner than 12 hours following the time of birth & once the woman has achieved her pre-operative mobility status. Measure and record the first void, in accordance with the Bladder care Policy
- Give analgesia as prescribed

Wound care

Following LSCS an Aquacel dressing should be in situ.

- Observe wound site, drains, lochia and uterine contractility every 15 minutes, more frequently as patients' condition dictates until transfer to the ward and document in patient's notes.
- If a pressure dressing has been applied, this should be removed 6 hours
- following the LSCS.
- Oozing wounds should be cleaned with normal saline/ plain water & replace with the appropriate day dressing.

- Day 2- Review dressing. If soiled change dressing & replaced with Aquacel
- surgical dressing. Otherwise leave original dressing.
- Day 5- Midwife/ MSW to change the dressing. Replace with Tegaderm
- Day 10- Midwife/ MSW to change the dressing & replace with Tegaderm. Advise women to keep their wound covered until the 14th day.
- Monitor and document wound healing

1.20 Discharge Home following Caesarean Section

- The obstetrician who performed the CS should see and debrief the women.
- **The implications of having a caesarean section** for future pregnancies should be discussed and recommendations documented in the woman's notes by either the Obstetrician or Midwife. The woman is given a letter reiterating the discussion.
- Offer early discharge (after 24hours) to women who are recovering; apyrexial and have no complications
- Prescribe and dispense analgesia
- General Caesarean section wound care advice should be given, encouraging women to take prescribed analgesia and to complete antibiotic regime if prescribed
- Send women home with 2 Tegaderm dressings to be applied by CMW/ MSW on
- days 5 & 10.
- Advice should be given about daily bath/showers. Wearing loose clothing and cotton underwear is also recommended.
- Inform women that they can resume activities (such as driving/ exercise) when the pain is not distracting or restricting their movements.
- Midwives may discharge women from hospital who have had an uncomplicated post-caesarean recovery following obstetric review.
- Women have their 6 week postnatal check at their GP surgery.
- If required, a hospital follow up appointment with the obstetric team is sent to the woman following discharge.
- A midwife counsellor is available for referral.
- Ensure the postnatal SBAR tool is completed prior to transfer to community care.
- Ensure women have hospital and support groups contact details.

2 Rationale

The caesarean section policy reflects the care for the women during caesarean section and her new born infant (CS) as recommended in the NICE clinical guidelines 13 (published April 2004) Updated 2011
The National Confidential Enquiry into Patient outcome & Death (NCEPOD) recommend categorisation of operation into four Cateagorys of urgency: The Royal College of Obstetricians & Gynaecologists (RCOG) and the Royal College of Anaesthetists (RCA) have endorsed adaptation of this recommendation.
The maternity information technology (IT) system also uses four categories for CS and it is important both for the clinical care of the mother and baby that the correct classification is used and documented.

Caesarean section classifications	Category 1 Emergency
	Category 2 Urgent
	Category 3 Scheduled/Expedited
	Category 4 Elective

3 Scope

This policy is for obstetricians, anaesthetists, midwives, nurses, student midwives, medical students and auxiliary staff involved in the care of women undergoing a caesarean section

- To identify the expected standards of care and patient safety
- To classify caesarean sections
- To maintain the best available evidence.
- To provide guidance for the multi-disciplinary team giving care to women having a caesarean section.

4. Responsibilities

The Obstetric Consultant is responsible for the overall decision making for caesarean section. An on-call consultant obstetrician is always available for consultation from junior obstetricians and midwives and in an emergency situation. The consultant attends all Obstetric emergencies.
The Obstetric Registrar is responsible for day to day care of the woman who has had a caesarean section and her post delivery care.

The Obstetric Anaesthetist is responsible for a pre-operative anaesthetic assessment and discussion with the woman, her anaesthetic care throughout the operation, including antibiotics, managing the fluid balance in an emergency situation and giving written instructions for pain, fluid and ante-coagulation management post delivery. The anaesthetist attends emergency MEWS call.

The Midwife Co-ordinator is responsible for ensuring a midwife prepares and accompanies the woman having an emergency caesarean section to theatre, receives the baby at section and accompanies and cares for the recovering woman in the recovery area. Assigning a Healthcare assistant to run at an emergency caesarean section.

Lead Midwife for Elective Caesarean section is responsible for preparation of the woman prior to caesarean section, checking notes, consent, blood results, obstetric & anaesthetic reviews prior to LSCS, preparation of obstetric theatre & recovery area. Care in theatre of the mother and baby, and the immediate post delivery observations, pain management and the on-going immediate post delivery care.

The Nurse responsible for the elective caesarean section list checks the notes, blood results, allergy status, performs the observations, escorts to theatre and the immediate post delivery observations, pain management and the on-going immediate post delivery care.

The Midwife is responsible for the peri-operative preparation, care in theatre of the mother and baby, and the immediate post delivery observations, pain management and the on-going immediate post delivery care.

5 Compliance Monitoring arrangements

All Emergency or urgent CS are subject to continuous audit. Where continuous audit identifies deficiencies an action plan will be developed and implemented.
A nominated Consultant Obstetrician will coordinate an audit which investigates specific issues or themes arising from the continuous audit. Audit findings will be monitored by the Directorate Health Care Governance committee and presented to staff at multi-disciplinary rolling audit half days

Criterion: 1.2.6	**Caesarean Section**
Criterion lead:	Adaline Smith Intrapartum services matron
Criterion details	Monitoring section from organisational approved document

Minimum requirement to be monitored	**Process for monitoring e.g. audit**	**Responsible individual/ group/ committee**	**Frequency of monitoring**	**Responsible individual/ group/ committee (plus timescales) for:**		
				Review of results	**Development of action plan**	**Monitoring of action plan and implementation**

	All health records of delivered women following Cateagory 1&2 caesarean section will be reviewed continuously against the points listed a-h. A six monthly report will be generated including points a to h.	Matron for inpatient services	On-going audit to inform a 6 monthly report.	Results of the audit will be presented to the divisional quality and risk meeting. The person responsible for the audit will formulate a resultant action plan and the action plan will be monitored by the divisional quality and risk team meeting. Any changes to practice will be evaluated through re audit

Minimum requirement to be monitored	**Process for monitoring e.g. audit**	**Responsible individual/ group/ committee**	**Frequency of monitoring**	**Responsible individual/ group/ committee (plus timescales) for:**		
				Review of results	**Development of action plan**	**Monitoring of action plan and implementation**
a. classification of all caesarean sections as agreed by the maternity service*						
b. timing for Cateagory 1 classification of caesarean section as agreed by the maternity service						
c. requirement to document the reason for performing a Cateagory 1 caesarean section in the health records by the person who makes the decision						

Minimum requirement to be monitored	**Process for monitoring e.g. audit**	**Responsible individual/ group/ committee**	**Frequency of monitoring**	**Responsible individual/ group/ committee (plus timescales) for:**		
				Review of results	**Development of action plan**	**Monitoring of action plan and implementation**
d. need to include a consultant obstetrician in the decision making process unless doing so would be life threatening to the woman or the fetus						
e. requirement to document any reasons for delay in undertaking the caesarean section						
f requirement for all women to be offered antibiotic and thrombo prophylaxis						
g care of the mother in the first 24 hours following delivery*						

Minimum requirement to be monitored	Process for monitoring e.g. audit	Responsible individual/ group/ committee	Frequency of monitoring	Responsible individual/ group/ committee (plus timescales) for:		
				Review of results	Development of action plan	Monitoring of action plan and implementation
h requirement to discuss with women the implications for future pregnancies before discharge						

Monitoring approval, amendments and document control

1. **New regime for post caesarean analgesia**
2. **Identified recovery room on theatre recovery**
3. **Wound care**
4. **Added in the criteria for MEWS escalation**
5. **Lead midwife for elective LSCS responsibilities**

- The process and frequency for monitoring is in line with the clinical audit strategy for Women & Children's health division. This can be further monitored through the divisional audit programme.
- The results will be reviewed and discussed in the recognised clinical governance reporting mechanisms and appropriate clinical forums.
- Improvements (in compliance) will be ensured using the clinical audit action plan report. .

Medication doses increased if patient not responding & polypharmacy
Changes to post-operative analgesic regime

6 Training to ensure compliance with this guideline

Band 7 team leaders are informed by E-mail of new/ updated policies and they in turn inform their team of new and updated policies.

Hospital obstetricians informed by E-mail via the obstetric consultants' secretary; new and updated policies & guidelines

The guideline/ policy is held on the Maternity database, and archived in line with the arrangements in the Organisation wide Policy for the Management and Development of Procedural Documents.

Working copies will be available on request by E-mail from the Policy Editor Eileen Lanzon / maternity I.T. (Arkadiusz Kozlowski). Authorization needs to be sought from Adaline Smith, the Lead Matron.

7 References and associated documents

1. NICE guidelines caesarean section April 2004 CG132 Reviewed July 2014

2. “Early-Warning Score In Obstetrics”. P.Harrison, C.Howe, F. McIvenney.. Dept of Anaesthetics, Stirling Royal Infirmary, Stirling, UK

Handover Policy
Recovery Policy
Examination of the Newborn Policy
Bladder care
Epidural anaesthetic
MHDU guideline

8 Glossary / explanation of terms used in this document

Acronym/ Abbreviation/ Term	**Meaning**
MEWS	Modified Early Obstetric Warning Score
LSCS	Lower Segment Caesarean Section
CTG	Cardiotocograph
FBS	Fetal Blood sample
ODA	Operating Department assistant
SROM	Spontaneous Rupture of Membranes
PACU	Post anaesthetic care unit
POPPA	Pre-operative patient preparation area

9 Document Control

This procedural document supports:

Standard(s)/ Key Lines of Enquiry:	Para/ I.D. no.	Standard/title
NICE Guideline 132	July 2014	NICE guidelines caesarean section April 2004

Consultation record

Relevant service	Speciality, Sponsor or User Group name	Individual's name	Job title	Date consulted	Date feedback received
WaCH	Anaesthetics	David Burwell	Lead anaesthetics	03/16	23/3/16
Trust	Pharmacy	Cedro-Sogliani	Lead pharmacist	March 2016	23.3.2016
WaCH	Obstetrics	Sharmila Sivarajan	Obstetrician	Feb 2016	
WaCH	Risk	Denise Newman	Lead Risk	Feb 2016	Feb 2016
WaCH	Maternity	Adaline Smith	Matron	11/1/16	11/1/16
WaCH	Maternity	Heather Dewhurst	Midwife lead for LSCS	Dec 15	Dec 15
Trust	Theatres	Deborah Maine	Lead Theatre sister	11/1/16	18/1/16
WaCH	Maternity	Mandy Morgan	Manager P/N	11/1/16	11/1/16
WaCH	Maternity	Sarah Cowley	Manager LW	18/1/16	18/1/16

9 Document Control (continued)

Change History

Version	Date (DD/MM/YYYY)	Author/ Lead	Job title	Details of Change	Ratification body	Archiving location
5	March 2016	Heather Dewhurst Amanda Morgan Eileen Lanzon Deborah Maine Sarah Cowley	Midwife Manager P/N ward Policy Editor Lead Theatre sister Manager LW	Updated. Reviewed P/N analgesics, wound care. Added MEWS escalation. Lead LSCS midwife's responsibilities	WaCH	Maternity
4.2	March 2013				WaCH	Maternity
4.1	January 2013	M. Cudjoe,	Head of Midwifery	Minor amendment 5.14	WaCH	Maternity
4	May 2012	Dr M J Mackenzie, A.Smith Dr Srivistava	Anaethetist Inpatient Matron Consultant Obstetrician	Starvation times, Antibiotic prophylaxis, Analgesia, postoperative oral diet	WaCH	Maternity
3.1	June 2011	Ms. S. Sivarajan	Con Obstetrician	Audit tool added see appendix 2	WaCH	Maternity
3	Jun 2009	K. Zedgitt E. Lanzon	Midwife Policy editor	Amalgamation with classification of caesarean	WaCH	Maternity
2	2005	M. Cudjoe & E. Lanzon	Risk manager LW manager	Cateagorys of caesarean section identified & types of anaesthesia	WaCH	Maternity
1	1999	Not known		Group call for crash caesarean section	WaCH	Maternity

Appendix 1 Equality Analysis (EqA)

By completing this document in full you will have gathered evidence to ensure, documentation, service design, delivery and organisational decisions have due regard for the Equality Act 2010. This will also provide evidence to support the Public Sector Equality Duty.

Name of the guideline	Caesarean Section	
Date last reviewed or created & version number	V5	
Briefly describe its aims and objectives:	To identify the expected standards of care and patient safety To classify caesarean sections To maintain the best available evidence. To provide guidance for the multi-disciplinary team giving care to women having a caesarean section.	
Directorate lead	Michelle Cudjoe HOM	
Target audience (including staff or patients affected)	Midwives, Nurses & Obstetricians	
Screening completed by (please include everyone's name)	**Organisation**	**Date**
Eileen Lanzon	WaCH	Jan 11th 2016
Amanda Morgan	WaCH	

Equality Group ***(Or protected characteristic):***	**What evidence has been used for this assessment?**	**What engagement and consultation has been used**	**Identify positive and negative impacts**	**How are you going to address issues identified?**	**Lead and Timefr ame**
Age	Maternity booking questionnaire - collects information and data locally. See reference in policy for national and international recommendations and good practice	Data collected on the maternity electronic system, MSLC Questionnaire for service users following delivery, & “Your care matters” feedback from service users Labour ward Forum	No	None identified, however all service users are treated on an individual basis, recognising their specific needs	
Disability					
Gender reassignment					
Marriage & Civil partnership					
Pregnancy & maternity					
Race					
Religion & Belief					
Sex					
Sexual orientation					
Carers					

Appendix 2 MEWS Referral Pathway

MEWS Referral Pathway	
1-2	**Observe and maintain routine observations**
3	**Repeat and increase frequency of observations.** **Inform Co-ordinator**
4-5	**Bleep Obstetric Registrar and Obstetric Anaesthetist.** **Inform the midwife Co-ordinator.** **Initiate treatment Maintain minimum of hourly observations**
>6	**Call 222. State Obstetric emergency.** **Request Consultant Obstetrician to attend.** **Fast bleep 766 Critical Care Outreach team.** **Involve Neonatologist as indicated.**

Appendix 3 Caesarean Section Audit

Questions	Answers	Date	Initi als
1. Name & Cateagory of Surgeon / Assistant surgeon	a) Surgeon b) Assistant surgeon		
2. Indication for caesarean section			
3. Classification of caesarean section	a) Emergency (crash) Cateagory 1 b) Urgent Cateagory 2 c) Expedited Cateagory 3 d) Elective Cateagory 4		
4. Decision time of caesarean section	Use 24 hour clock		
5. Time of caesarean section	Use 24 hour clock		
6. On-call consultant informed	**Yes / No**		
7. Paired blood gases taken Recorded in notes.	**a) Yes / No** **b) Yes /No**		
8.Prophylaxis antibiotic therapy given?. Tinzaparin prescribed & given?. `	**a) Yes / No** **b) Yes / No**		
9. TED stockings fitted?	**Yes / No**		

Lower segment caesarean section (LSCS) Post-op Analgesia

Regular analgesia **up to 72 hours** post-op **(for inpatient only)** ***** 30mg QDS can be continued beyond 72 hours at doctor's discretion (in hospital only)	Oral Dihydrocodeine 30mg QDS*** Oral Paracetamol 1gm QDS Oral Ibuprofen 400mg QDS Plus a regular Laxative e.g. Lactulose (15ml B.D.) or Ispaghula Husk (one sachet BD), with plenty of water.
As required antiemetic (inpatient only)	Cyclizine I/V or oral 50mg 8 hourly prn **or** Ondansetron 4mg I/V prn max every 6 hours
As required analgesia (if dihydrocodeine not adequate) –**inpatient use**	Oral Morphine 10-20mg 3-4 hourly
Analgesia **on discharge**	Co-dydramol *(dihydrocodeine 10mg and Paracetamol 500mg per tablet)* : One or Two tablets PRN max QDS (supply of 30 tabs TTO prepack) Ibuprofen 400mg TDS PRN (supply of 24 tabs, TTO prepack))

Information on Dihydrocodeine safety in Breastfeeding:

- *Extensive experience of safe use in breastfeeding (however limited published evidence)*
- *Monitor infants for drowsiness, adequate weight gain, and developmental milestones, especially in younger (up to one month), exclusively breastfed infants.*

Information on Morphine safety in breastfeeding:

- *Significant published evidence of use in breastfeeding.*
- *Amount in breast milk depends on dose administered (up to 10mg – small amounts in breast milk, therefore use lowest effective dose)*
- *Infant monitoring advised, especially in young infants (see summary).*

based on information from UKMI, Midlands medicines lactation advisory service, ;Drugs in pregnancy and Lactation' by Briggs