Caesarean Section: Elective & Emergency (V.10)

Guideline Readership

This guideline applies to all women booking within the Heart of England Foundation Trust, attending clinicians; obstetricians, midwives and specialist midwives.
All care is tailored to individual patient needs, with an in-depth discussion of the intended risks and benefits of either undergoing the procedure or declining intervention.

Guideline Objectives

The objective of the guideline is to provide excellent care to women and their babies, with the overall aim of reducing maternal and neonatal morbidity and mortality associated with the surgical procedure of caesarean section.

Other Guidance

This guideline incorporates the National Institute for Clinical Excellence (NICE) Caesarean Section Guidelines (April 2004 and Nov 2011). The full 2011 guideline is available from: www.nice.org.uk/cg132**.** Items in boxes are quoted from NICE. Local adaptations are marked by an asterisk. And, also includes recommendations from four RCOG greentop guidelines.
Please refer to full reference listing at end of guideline.

Ratified Date: 19th January 2016
Effective from: 22nd January 2016
Review Date: 22nd January 2019
Guideline Author(s) / Reviewer(s): Clinical Governance – Maternity

Contents and page numbers:

1. Flow Chart N/A

2. Executive Summary & Overview

This guideline provides information to all clinicians as to the correct procedure to follow in the event of an emergency or elective caesarean section. It also includes guidance on prophylactic antibiotics, thromboprophylaxis, recovery and postnatal care relating to caesarean section (CS). In 2011 the CS rate for HEFT was 24.8% (emergency 14.3% and elective 10.5%).

3. Body of Guideline

INTRODUCTION AND INFLUENCES ON CS RATES:

Give pregnant women evidence based information on CS including indications, procedure, risks/benefits, and implications for future pregnancies. Document discussion.

Offer planned CS to women with:

- ✓ A term singleton breech (external cephalic version contraindicated/declined/failed)
- ✓ A twin pregnancy with breech first twin -Primary genital herpes third trimester
- ✓ Placenta praevia partly or completely covering the cervical Os

Do not routinely offer planned CS to women with:

- ✓ Twins (first twin cephalic at term)
- ✓ Preterm birth
- ✓ BMI >50 alone
- ✓ Hepatitis B virus
- ✓ Hepatitis C virus
- ✓ A small for gestational age baby
- ✓ Term, recurrent genital herpes
- ✓ HIV +/- hepatitis C: *check plan: depends on viral load (see HIV guideline)

Planning place of birth: Inform healthy pregnant women with anticipated uncomplicated pregnancies that planned home birth reduces CS rate. Planned birth in midwifery led unit does not decrease CS rate.

Maternal request for CS: Explore/discuss/record specific reasons. Discuss benefits/risks of CS (Table 1) & obstetric /midwifery/anaesthetic input as needed. If request is for anxiety around childbirth, offer perinatal mental health support referral (as per mental health guideline) to help address anxiety. If still requests CS, offer planned CS. If needed, refer to an obstetrician who will address.

Reducing CS rates

- ✓ Offer external cephalic version (ECV) if breech at 37 weeks
- ✓ Facilitate continuous support during labour -Offer induction of labour after 41 weeks
- ✓ Use a partogram with a 4-hour action line**
- ✓ Involve consultant obstetricians in CS decision
- ✓ Consider fetal blood sampling before CS for abnormal cardiotocograph in labour
- ✓ Support women in choosing vaginal birth after CS (VBAC: see guideline)

** A 4 hour action line is not used in the unit, however if insufficient progress for 4 hours in labour, medical advice should be sought by midwifery staff.

ELECTIVE CS (ElCS): PLANNING

Making a decision to undertake elective CS (see below for emergency CS)

Making the decision for CS

- ✓ Communication and information should be provided in a form that is accessible.
- ✓ Consent for CS should be requested after providing pregnant women with evidence-based information.*
- ✓ Document factors affecting decision especially which is most influential.
- ✓ Discuss the risks and benefits of CS and vaginal birth with women, taking into account their circumstances, concerns, priorities and plans for future pregnancies
- ✓ A competent pregnant woman is entitled to refuse the offer of treatment such as CS, even when the treatment would clearly benefit her or her baby's

* A CS leaflet should be given to each woman having an elective CS. In an emergency consider leaflet if feasible. See emergency CS section below.

Table 1 below shows information to aid discussion with the woman antenatally on mode of delivery. The increased chance of subsequent CS should be communicated. More details of absolute and relative risks are at the website address above.

Table 1: Effect of planned CS compared with planned vaginal birth in women with uncomplicated pregnancy and no previous CS (NICE, 2011)

May be increased after planned CS:	**No difference found in studies:**
Hysterectomy due to haemorrhage	**Mother:**
Length of hospital stay in mother	Injury to bladder/ureter/cervix
Cardiac arrest in mother	Wound infection
Baby admitted to neonatal unit	Iatrogenic surgical injury
May be reduced with planned CS:	Pulmonary embolism
Perineal and abdominal pain during birth and for 3 days postnatal	Perineal and abdominal pain 4 months postpartum
Injury to vagina	Intraoperative trauma
Early post-partum haemorrhage (PPH)	Uterine rupture
Obstetric shock	Assisted ventilation/intubation
Conflicting findings from studies:	Acute renal failure
Maternal death	**Baby:**
Deep vein thrombosis	Hypoxic ischaemic encephalopathy
Blood transfusion	Intracranial haemorrhage
Infection wound and postpartum	Neonatal respiratory morbidity
Hysterectomy	
Anaesthetic complications	
Neonatal mortality	
Apgar <7 at 5 mins	

Elective CS: booking and pre-op procedures

Timing of elective CS:
CS should be carried out after 39 weeks' gestation to decrease the risk of respiratory morbidity.

- ✓ ElCS must be booked with approval of Registrar or Consultant after discussion of risks/benefits with the woman (as above). If interpreter needed do not use a family member.
- ✓ Only staff members able to do the procedure or trained in obtaining consent should complete consent form (Trust Consent Policy). Consent is a process with discussion between professional and patient through pregnancy. Ideally complete form in clinic.
- ✓ Warn women with CS for malpresentation alone, that it will be cancelled if scan shows cephalic presentation on day of surgery.

NB: Any issues e.g. overbooking lists/complex patients inform site theatre team lead, consultant obstetrician/anaesthetist, delivery suite matron **when booking CS** on Ultragenda.

Heartlands Hospital

Lists: ElCS lists on Mon, Tue, Thurs for 5 cases per list, Fri AM for 3 cases.
Pre-op: Complicated cases to be seen in anaesthetic pre-op clinic via Ultragenda. Routine pre-op with midwives book at Maternity Reception.

Good Hope Hospital

Lists: ElCS lists on Monday, Tuesday, Thursday and alternative Wednesday for 3 cases per list, 4 cases may be booked on discussion with consultant obstetrician and anaesthetist.
Pre-op: Appointment for pre-op check on Saturday, Monday, Wednesday the week before the CS on Maternity assessment centre.

Pre-operative assessment:*
- ✓ Check haemoglobin (FBC)-Assess risk for thromboembolic disease (see below)
- ✓ Group & save, prescribe Ranitidine*

For healthy women with uncomplicated pregnancy don't offer:
- ✓ Cross matching of blood & Clotting screen
- ✓ Pre-operative ultrasound to locate the placenta

***Give two doses of antenatal corticosteroids to all women for elective CS prior to 38+6 weeks gestation (RCOG 2010)**. Give second dose 24 hours before planned delivery. See diabetes in obstetrics guideline for management of diabetic women.
*****ALL women to be screened for MRSA (methicillin resistant staphylococcus aureus) when booking for ElCS (at 34-36 weeks gestation). The undertaking of a black charcoal nasal swab is the responsibility of the doctor booking the CS. See HEFT MRSA policy for information on rapid testing if needed.
*****At pre-op: Doctor/midwife: (directive in place at HEFT) to prescribe oral prophylactic Ranitidine 150mg night before surgery and 150 mg 2 hours before surgery.

Crossmatch blood if Hb <8 g/dl, platelets <100 x 10^9/l or placenta praevia. Ensure anaesthetist aware.

- On the day of operation the woman should be asked to take a pre op shower.
- Hair covering the operation site should be removed
- If CS is for breech/abnormal lie, confirm this with scan pre-operatively

EMERGENCY AND ELECTIVE CS: PROCEDURE

Note: check the operation list carefully to ensure request for tubal ligation is followed. Ensure this is communicated to the GP on discharge.
See antepartum/postpartum haemorrhage guideline for key points on management and CS in placenta praevia/accreta. Complete placenta accreta checklist pre-operatively in women with previous CS with placenta underlying the scar.

NB. The decision to remove a woman from the theatre table once she has been transferred to theatre must be on the specific instructions of the consultant obstetrician

Antibiotic prophylaxis for CS (NICE 2011): consult microbiologist if any queries

The anaesthetist will give routine prophylactic antibiotics **before** knife to skin.

Situation	Antibiotic to give IV	If second dose indicated	Notes
No Penicillin allergy	Cefuroxime 750 mg stat	Cefuroxime 750 mg*	Don't give third dose Get Microbiology advice
Penicillin allergy	Metronidazole 500 mg Gentamicin 160 mg stat	Metronidazole 500 mg*	Don't give third dose Get Microbiology advice
MRSA positive	Teicoplanin 400 mg	Not indicated	Safe in breastfeeding

*Second dose is rarely indicated, consultant decision in patients with risk factors (e.g. excess bleeding, prolonged surgery: NICE 2008). This is prophylaxis not treatment.
See PPH guideline for antibiotics if return to theatre for PPH.

Thromboprophylaxis for CS

Venous thromboembolism (VTE) is a leading cause of direct maternal deaths in the UK (CEMACH 2007, CEMACE 2011).

A risk assessment of all patients undergoing elective or emergency caesarean section (CS) should be performed and prophylaxis instituted as appropriate.

Complete VTE risk assessment on-line as per DoH/NICE 2010, and RCOG 2009. Document risk factors for VTE and management plan in intrapartum notes. See local thromboprophylaxis guideline for more details.

DoH risk factors for thromboembolism relevant to pregnancy as per NICE:

- Significantly reduced mobility for 3 days or more
- Active cancer or cancer treatment
- Age >35 years
- Critical care admission
- Dehydration
- Known thrombophilia or personal/first-degree relative with history of VTE
- Obesity (pre-pregnancy or early pregnancy BMI>30 kg/m^2)
- Significant medical co-morbidities (e.g. heart disease; metabolic, endocrine/respiratory pathologies; acute infectious diseases, inflammatory conditions)
- Pregnancy-related risk factor including ovarian hyperstimulation, hyperemesis gravidarum, multiple pregnancy, pre-eclampsia.
- Varicose veins with phlebitis
- Additional risks in individual patients as clinician considers appropriate (parity ≥3, smoking, prolonged labour >24 hours, post-partum haemorrhage over 1 litre or blood transfusion are included in RCOG Guideline, 2009)

The Directorate thromboprophylaxis policy is Low Molecular Weight Heparin (LMWH) Enoxaparin (Clexane®) for all patients having CS unless there are contraindications.

Elective CS	5 days of Enoxaparin
Elective CS with one or more risk factor	7 days of Enoxaparin and TEDS*
Emergency CS	7 days of Enoxaparin and TEDS*

*thromboembolic graduated compression stockings

The first dose of Enoxaparin (Clexane®) will be prescribed by the anaesthetist on the front of the prescription chart, to be given 4 hours after spinal given/epidural catheter removed unless contraindicated. Subsequent regular doses are prescribed to start 24 hours after the initial dose.

See table below for recommended doses for body weight (RCOG 2009). In morbidly obese women and those with medical/obstetric complications, the obstetrician/anaesthetist will discuss need for additional/higher doses of Enoxaparin and pneumatic compression. Refer to Trust thrombo-prophylaxis guideline.

Body weight	**Enoxaparin** (Clexane®) **(100 units/mg)**
<50 kg	20 mg once daily
50 - 90 kg	40 mg once daily
91 - 130 kg	60 mg once daily
131 - 170 kg	80 mg once daily
>170 kg	0.6 mg/kg/day

Anaesthetic care

NB discuss complex cases with consultant anaesthetist in advance.

Anaesthetic care-

- ✓ Offer antacids and H_2-receptor analogues*, and anti-emetics (if required)
- ✓ Offer regional anaesthesia; do in theatre as does not increase anxiety
- ✓ Reduce risk of hypotension using:
  - intravenous ephedrine or phenylephrine infusion**
  - volume preloading with crystalloid or colloid
  - lateral tilt of 15^0
- ✓ General anaesthesia for emergency CS should include pre-oxygenation, cricoid pressure and rapid sequence induction to reduce risk of aspiration***

***** At pre-op: Doctor/midwife: (Trust PGD in place for midwives) to prescribe prophylactic oral Ranitidine 150mg night before operation, 150 mg on the morning prior to CS (ideally, 2 hours before surgery).

** Local variation: ...or bolus of metaraminol.

***When a woman has a full stomach, reduce gastric volume & pressure by gentle "in and out" insertion of a wide bore orogastric tube before considering tracheal extubation (CMACE 2011).

Roles in theatre

The peri-operative communication checklist occurs at the start of the elective list (details entered onto theatre ipad/electronically). The WHO surgical safety checklist (maternity) is completed before and at the end of every case to confirm counts are correct. A count must be undertaken and documented for all procedures where swabs, instruments and sharps could be retained: refer to HEFT 'Policy on accounting for swabs, packs, sharps and instruments.' A retained foreign body is a 'never event' (DoH 2011).

Note: A practitioner skilled in the resuscitation of the newborn should be present at CS with a general anaesthetic, presumed fetal compromise or preterm baby.

Midwifery role: The midwife retains overall responsibility as below with assistance from appropriately trained staff e.g. theatre team, maternity care assistant.

- Confirm woman understands proposed operation, including consent.
- Ensure appropriate fasting and antacid regime adhered to
- Auscultate fetal heart if not done on ward area (see note below re urgent CS)
- Re-check pre-operative checklist/documentation: haemoglobin, allergies, gown, thorough shave, name bands, jewellery, nail varnish removed.
- Instruct birth partner on procedure and escort woman to theatre
- Ensure theatre team have a complete handover and remain with woman in theatre for support. ODA/ODP to check pre-operative sheet
- Bleep neonatologist/neonatal unit support if needed at delivery.
- Check resuscitation apparatus is equipped and in working order
- Catheterise woman once anaesthetic is effective
- Take the baby once delivered, and/or support neonatal team
- Promote maternal and paternal bonding once baby has been assessed
- Check placenta is complete
- Responsibility for ensuring paired cord samples are taken rests with the attending midwife and the scrub ODP/nurse/midwife. The delivering doctor and attending midwife must ensure printed results are attached firmly to the notes and written in the intrapartum notes.
- Responsibility for taking cord blood for Coomb's testing lies with the midwife
- Disposal of placenta – unless required for histology
- Checking and weighing of baby
- Cleaning and restocking of and equipment used, i.e. Resuscitaire
- Completing all relevant documentation.

Surgeons' role to include:

- Review woman's notes, checking medical and obstetric history (including placental site and previous surgery notes), gain maternal consent
- Review woman prior to entering theatre, addressing any questions
- Complete WHO surgical safety checklist with team
- Confirm presentation – if elective CS for malpresentation undertake scan.
- Ensure appropriate use of prophylactic antibiotics, thromboprophylaxis and oxytocin

Documentation

- Theatre runner to maintain operation times on white board
- Theatre runner and scrub ODP/nurse/midwife to complete instrument, swab and needle count
- Midwife: maternal and neonatal observations, intrapartum/postpartum notes, birth notification and register, including computer data
- Surgeon: operative notes, computer data, postnatal instructions.

- Scrub nurse/midwife: operative check list and theatre register
- Anaesthetist: anaesthetic record and postpartum analgesia
- ODA/ODP: to complete checklist, recovery chart and assist anaesthetist

Surgical techniques

Do

- ✓ Wear double gloves for CS for women who are HIV positive
- ✓ Use a transverse lower abdominal incision (Joel Cohen incision)
- ✓ Use blunt extension of the uterine incision
- ✓ Give oxytocin 5 international units by slow intravenous injection
- ✓ Use controlled cord traction for removal of the placenta
- ✓ Close the uterine incision in two layers
- ✓ Check umbilical artery pH if CS performed for fetal compromise*
- ✓ Consider women's preferences for birth (such as playing music in theatres)
- ✓ Facilitate early skin-to-skin contact for mother and baby

Don't

- Close subcutaneous space (unless > 2cm fat)
- Use superficial wound drains
- Use separate surgical knives for skin and deeper tissues
- Use forceps routinely to deliver baby's head
- Suture either the visceral or the parietal peritoneum
- Exteriorise the uterus routinely
- Manually remove the placenta

***Take paired cord blood samples for all babies delivered by caesarean section.**

Blunt needles are used unless consultant obstetrician states otherwise.

Monocryl should be the first choice for skin closure at CS. This should be the suture given to the surgeon at CS unless consultant requests alternative. Consider interrupted prolene for obesity/risk of bleeding/return to theatre. Subcuticular prolene to be used only by consultants, or with direct consultant supervision.

Beware fetal laceration at opening uterus especially breech/decreased liquor volume.

If need to relax uterus to aid delivery, Terbutaline 250 micrograms subcutaneous is the tocolytic of first choice in the Trust.

Emergency CS (EmCS)

Grading of urgency:
Perform category 1 and 2 CS as quickly as possible after making the decision, particularly for category 1. Standards are for audit only and not to judge team performance for any individual CS (NICE 2011).

Document the urgency of CS by the following grading (Trust standards)

1. Immediate threat to the life of the woman or fetus: Aim to deliver in 30 minutes (decision-to-delivery interval: DDI). Audit to this standard.
2. Maternal or fetal compromise not immediately life threatening: Aim to deliver in most situations in 75 minutes. Audit to standard of DDI 30 and 75 minutes
3. No maternal or fetal compromise but needs early delivery: Aim to deliver in 90 minutes.
4. Delivery timed to suit woman or staff (elective CS).

Procedure for Emergency CS

- ✓ Include a consultant obstetrician in the decision-making process unless doing so would be life threatening to the woman or the fetus. Document this discussion.
- ✓ The person making the decision must document at the time in the notes:
- ✓ Grade of urgency, indication for caesarean section, any reasons for delay in undertaking the caesarean section
- ✓ Relay level of urgency to all involved staff members. Good teamwork is vital in order to achieve the standards in the box above.
- ✓ Take into account condition of the woman and baby when making decisions about rapid delivery. Remember rapid delivery may be harmful in certain circumstances.

NB: In situations where the fetal heart beat was present and then acutely disappears e.g. rupture, abruption, cord prolapse, consideration should be given to expedite delivery by immediate caesarean section unless vaginal delivery is imminent. Attempts at locating the FH by auscultation, application of fetal scalp electrode or ultrasound scan in such situations can lead to delay in delivery of the baby. Contact the consultant for advice as needed.

Suggested task allocation (may vary depending on workload/skill mix):

Consultant or registrar	Obtain consent, documentation, contact anaesthetist
Senior House Officer	Site IV cannula and take and send appropriate bloods
Midwife in charge	Put out 2222 call if indicated and co-ordinate staff/workload including contacting neonatal/theatre team. May also contact anaesthetist.
Allocated Midwife	Prepare patient ready for theatre, monitor fetal and maternal condition
Maternity Support Worker	Assist allocated midwife with pre-operative task

RECOVERY AND POSTNATAL CARE FOR ALL CAESAREAN SECTIONS

Care of the woman and her baby after CS

- ✓ Provide additional support to help women to breastfeed as soon as possible*
- ✓ Offer non-steroidal anti-inflammatory analgesics to reduce need for opioids**
- ✓ Women who are feeling well and have no complications can eat and drink when they feel hungry or thirsty
- ✓ After regional analgesia remove catheter when woman is mobile
- ✓ Remove wound dressing after 24 hours; keep wound clean and dry
- ✓ Discuss reasons for CS and implications for future pregnancy before discharge from hospital. Provide both verbal and printed information about birth options for any future pregnancies. If the woman prefers, provide this at a later date.***
- ✓ Offer earlier discharge (after 24 hours) to women who are recovering, are apyrexial and have no complications (see below for more details)

***Offer skin-to-skin contact with mother/father regardless of feeding intention**

**PR Voltarol 100 mgs is to be given to all patients unless severe PET, known allergy to Voltarol/NSAID, brittle asthmatic or on the decision of the anaesthetist and consider 1G paracetamol PO in recovery.

*** See VBAC guideline for more details

Perform full blood count for haemoglobin (Hb) on day after CS only if estimated blood loss >500 mls, or clinically indicated (symptomatic anaemia, previous low Hb.)

Following uneventful elective CS (day 1) for women with a normal post-operative course, the midwife should aim to discharge the patient by the end of day 2 or the morning of day 3. Medical staff should be involved if the midwife has any concerns.

Ongoing recovery following CS

- ✓ Offer postnatal care, plus specific post CS care, and management of pregnancy complications
- ✓ Prescribe regular analgesia
- ✓ Monitor wound healing
- ✓ Inform women that they can resume activities e.g. exercise, driving (check with own insurance company) when pain not distracting or restricting
- ✓ Consider CS complications: endometritis if excessive PV bleeding (more likely than retained products) / urinary tract infection if urinary symptoms / thrombo-embolism if cough, pleuritic chest pain, sudden dyspnoea or swollen calf / urinary tract trauma (fistula) if leaking urine

4. Reason for Development of the Guideline

The guideline provides information to all clinicians as to the most appropriate management of women undergoing a caesarean section.

5. Methodology

Development of all guidelines adheres to a process of examining the best available evidence relevant to the topic, incorporating guidance and recommendations from national and international reports.

Finalised guidelines will ultimately be approved and ratified by the Obstetrics and Gynaecology Guideline Group and minuted within O&G clinical Directorate as ratified.

6. Implementation in HEFT & Community

All members of the Women's Health Guideline group and the O&G Guideline group will be informed at meetings and via trust email of new/updated guidelines. This information will then be disseminated to all members of the multidisciplinary team, relevant to O&G, via trust email, audit meetings, team (ward) meetings, in-house training and any relevant workshops.

Electronic copies of the guideline will be available via the trust intranet and paper copies stored within designated clinical areas.

7. Monitoring & Suggested Quality Standards

All guidelines will be disseminated with a date when it is 'effective' from; this will not only give staff the opportunity to read and digest the changes within the guideline, but will also assist with clinical risk and any investigations.

The clinical guideline will be monitored through regular clinical audit.

Multidisciplinary auditing of a clinical guideline will be allocated and overseen by the Clinical Audit Lead.

Element to be monitored	**Tool**	**Frequency**
• **Implementation of the classification and timings of all Grade 1 Caesarean sections (minimum NICE requirements)** • **Requirement to document the reason for performing Grade 1 Caesarean sections in the health records by the person who makes the decision.** • Inclusion of a consultant obstetrician in the decision making process unless doing so would be life threatening • Documentation of any reasons for delay • All women to be offered prophylactic antibiotics and thromboprophylaxis (minimum NICE requirements) • Care of the mother in the first 24 hours after delivery (minimum NICE requirements) • Discuss implications for future pregnancies before discharge • What was the gestation on the day of the caesarean section • If less than 39 weeks have steroids been given and if not reason why	Proforma Maternity information system Clinical records	All women who have delivered following a Grade 1 caesarean section will be continuously monitored. Reports will be presented monthly as below.
Reporting arrangements	**Acting on recommendations and lead(s)**	**Change in practice and lessons to be shared**
The completed reports will go to the clinical governance group monthly and be presented at the departmental audit meetings. Action plans will be documented in minutes.	The leads will use the electronic tracker system for audit to track action plans, which will have stated time frames. To ensure completion of actions, monthly updates will be reported to the clinical governance group by the clinical audit lead or deputy.	Required changes to practice will be identified and implemented continually. A lead member of the team will be identified to take each change forward where appropriate. Lessons will be shared with all the relevant stakeholders.

Following clinical audit of a guideline an addendum to change in clinical practice may be necessary. Any change to a clinical guideline requires that it must be ratified by the directorate locally.

Review dates will be set at a period of three years; however this set period can be overridden in light of new clinical evidence.

All unused/previous guidelines will be logged and archived electronically, and in paper format within the trust.

8. References

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Meta Data

Guideline Title:	Caesarean Section. Elective & Emergency.
Guideline Sponsor:	Obstetric & Gynaecology Directorate
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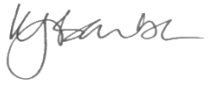
Related Policies/Topic/Driver	• Accounting for swabs, packs, sharps and instruments during sterile procedures. HEFT policy on-line at: http://sharepoint/policies/Office%20Documents/Forms/Nursing.aspx • Antepartum and postpartum haemorrhage • Trust consent to examination or treatment policy • Diabetes in obstetrics • Electronic fetal monitoring • HIV in pregnancy • Maternal mental health • MRSA screening and treatment policy (HEFT) • Postoperative recovery • Postnatal bladder care • Thromboprophylaxis in the antenatal, intrapartum and postnatal period • Women who decline blood / blood products • Vaginal birth after Caesarean section (VBAC)

Revision History

Version No.	Date of Issue	Author	Reason for Issue
1	July 07	C Rhodes	Merger
2	December 07	C Rhodes	Addendum Audit - page 4 Grading for Em.C/S - page 11
3	May 2008	Contributions: Infection Control Dr Pillay – Cons. Microbiologist	Screening for MRSA with El.C/S – page 7 New antibiotic regime (prophylaxis)– page 8
4	July 2008	C. Rhodes	p.4 MRSA added to audit p.7-8 Screening for MRSA p.8 Clexane Regimen p.9 'oral' added to Ranitidine prophylaxis p.11 Terbutaline – choice of tocolysis
5	November 2010	C. Rhodes M. Dobson	Review
6	April 2011	M. Dobson	p. 6 Addendum on use of steroids for elective CS
7	August 2011	C. Rhodes	p. 9 Addendum re type of suture for skin. p. 12 Monitoring section reviewed for new CNST manual

8	July 2012	C. Rhodes	Reviewed to update re NICE Caesarean Section guideline Nov 2011. Updated on: p. 5 Indications for CS in placenta praevia, BMI, HIV, place of birth, maternal request, refer to mental health and VBAC guideline. p. 6 Making decision: documentation and discussion p. 6 Table 1 updated as per appendix C in NICE p. 7 Local changes in lists and booking. Steroids clarified. p. 7 Placenta accreta checklist and APH/PPH guideline for CS in praevia/accreta p. 7 Ultragenda and informing theatre team added, Antibiotic prophylaxis updated. Thromboprophylaxis drug clarified. p. 8 VTE CEMACE update p. 9 regional anaesthesia in theatre, cricoid pressure, orogastric tube, drugs for hypotension, peri-operative communication checklist, WHO surgical safety checklist, trust policy on swabs etc. p.11 decision to delivery interval recommendations. Rapid delivery may harm. Information on birth options, refer to VBAC guideline. Catheter out when mobile. p. 12 recovery after CS: note on endometritis and retained products. Paracetamol in recovery. Driving advice. p. 14 references updated with recent guidelines/enquiries Appendix added for checklist.
9	April 2015	C Rhodes Consultant Obstetrician	P 10 Lines added re scan/auscultation in urgent CS. <u>Good Hope Hospital</u> Lists: ElCS lists on Monday, Tuesday, Thursday and alternative Wednesday for 3 cases per list, 4 cases may be booked on discussion with consultant obstetrician and anaesthetist. The peri-operative communication checklist occurs at the start of the elective list (Appendix 1 or details entered onto theatre ipad).
10	January 2016	Clinical Governance, actions from SUI Merging of elective CS checklist – Maxine Abukhalil RM	Actions from SUI: p.6 the decision to remove a woman from the theatre table once she has been transferred to theatre must be on the specific instructions of the consultant obstetrician p.10 NB: In situations where the fetal heart beat was present and then acutely disappears e.g. rupture, abruption, cord prolapse, consideration should be given to expedite delivery by immediate caesarean section unless vaginal delivery is imminent. Attempts at locating the FH by auscultation, application of fetal scalp electrode or ultrasound scan in such situations can lead to delay in delivery of the baby. Contact the consultant for advice as needed. Added to audit for compliance: What is the gestation on the day of the caesarean section and If less than 39 weeks have steroids been given and if not reason why. Appendix 1 added Re: elective CS checklist Removal of paper copy of WHO checklist in appendices, now stored electronically

Clinical Director: **Signed:** 

Name: Katherine Barber

Date: 19th January 2016

Caesarean section checklist – elective

Date caesarean booked	
Gestation at caesarean section date	
Gravida & Parity	
Reason for caesarean /relevant history	
No of previous caesarean sections	
Sterilisation at caesarean section	Yes / No
Steroids needed (prescribe steroids for ALL if c/s prior to 38+6) for Diabetics: do not give steroids between 38 and 38+6 weeks (steroids needed before this)	Prescribed Yes / No
Information leaflet given	Yes / No
Seen by anaesthetist	Yes / No / Not required
Anaesthetic type	Spinal / GA
Infection Control alerts	Yes / No Details:
Allergies:	Yes / No Details:
MRSA swab taken	Yes / No
Cell salvage	Yes / No
Reason for cell salvage	Details:
BMI	
Pre op booked	Date/Time:
For Jehovah's Witness:	
- Advance Directive available	
- Continuous Circuit required	
- Open circuit acceptable	

Specialist booking caesarean section/Designation /sign/print	