Worcestershire Acute Hospitals NHS Trust

Elective Caesarean Guideline

This guidance does not override the individual responsibility of health professionals to make appropriate decision according to the circumstances of the individual patient in consultation with the patient and /or carer. Health care professionals must be prepared to justify any deviation from this guidance.

Introduction

This evidence-based guideline has been developed to help ensure consistency of quality of care experienced by women and pregnant people having an elective caesarean section (CS). It provides evidence-based information on various aspects of elective caesarean sections from the time of decision making until discharge from hospital. CS is major abdominal operation and around 25% to 30% of women or pregnant people have a caesarean birth. In general, it is safe especially when performed as a planned procedure but has associated perinatal morbidity.

This guideline is for use by the following staff groups:

All Staff facilitating conversations and discussions, obtaining consent and partaking in elective caesarean sections.

Lead Clinician(s)

Laura Veal	Consultant Obstetrician – Clinical Director
Approved by *Maternity Governance Meeting* on:	18th October 2024
Review Date: This is the most current document and should be used until a revised version is in place	18th October 2027

Key amendments to this guideline

Date	Amendment	Approved by:
April 2024	Review of Existing guideline with NICE updates and merged with maternal request caesarean section guidance.	MGM
Oct 2024	Reviewed and Includes New Appendices – enhanced recovery, list allocation and FBC	MGM

Classification of Caesarean section
A planned (elective caesarean) section is classified as a Grade 4 caesarean section and includes all CS electively planned or carried out to suit the mother or clinicians. The timing/urgency of CS must be clearly stated.

Maternal refusal of Caesarean section
Women or pregnant people retain the right to refuse a planned CS. All women or pregnant people who decline a C/S which is felt to be clinically indicated should be seen and counselled by the Consultant Obstetrician and a clear management plan must be documented on Badgernet.

Indications for Caesarean section
This list is not exclusive and further indications will be covered in other guidelines.

1. **Major placenta praevia**

See Antepartum haemorrhage including massive obstetric haemorrhage.

2. **Previous caesarean section with a low lying placenta**

All women or pregnant people who have had a previous caesarean section must have their placental site determined in the second trimester and if the placenta is low lying, placental site should be confirmed in the third trimester at 32/40 to enable further imaging to occur in a timely manner. If it is an anterior low lying placenta then USS with colour Doppler should be performed by a radiologist and consideration given to an MRI scan to help classify the degree of invasion.

See Antepartum haemorrhage including massive obstetric haemorrhage and placenta accrete guideline.

3. **Breech**

See Management of breech presentation including Eternal Cephalic Version (ECV)
An ultrasound scan should be performed immediately before transfer to theatre to confirm presentation. The woman or pregnant person should have been informed that where breech was the only indication for C/S, that the C/S will be cancelled, and the woman or pregnant person advised to return home and await spontaneous labour.

4. **Maternal Request for Caesarean Section**

There is some increase in maternal request for CS. There are many reasons for such requests but these are not always revealed by the women or pregnant people or adequately explored and clearly documented.
Evidence suggests that there is a consistent relationship between a woman's or pregnant person's preference for CS and either previous CS, previous negative birth experience, a complication in the current pregnancy or a fear of giving birth. It is estimated that about 6%–10% of pregnant people experience fear of childbirth. Fears concerning childbirth such as pain, obstetric injury, unplanned CS and the effects on family life have been reported to be more common among primips. A request for CS should prompt enquiries to address any issues or concerns.
Primary CS for the purpose of this guidance is defined as CS on a virgin abdomen.

When a woman or pregnant person requests a primary CS with no obstetric, surgical, medical, psychological/ psychiatric indications for CS:

- Offer to discuss and explore the reasons for the request
- Ensure they have balanced and accurate information
- Offer to discuss alternative birth options which may help address the concerns they have about birth
- Offer discussions with a Consultant Midwife
- Offer discussions with a consultant or senior Obstetrician and other members of the team if necessary or requested by the woman or pregnant person
- Record the discussion and decisions on Badgernet.

Discuss the risks and benefits of CS compared with vaginal birth taking into account their circumstances, concerns and priorities. Discuss their plans for future pregnancies and implications for future pregnancy and birth after CS (including the risks of placental problems with multiple CS). These discussions and decisions should be documented on Badgernet.

Outcomes which may be more likely for women with CS	Outcomes which may be more likely for babies with CS	Outcomes less likely for women with CS
Peripartum hysterectomy	Neonatal mortality	Urinary incontinence occurring more than 1 year after birth
Maternal death	Asthma	Faecal incontinence occurring more than 1 year after birth; compared to assisted delivery
Length of hospital stay	Childhood Obesity	Vaginal tear: third and fourth degree tears
Placenta accrete in future pregnancy		Pain during birth, 3 days after birth and 4 months after birth
Uterine rupture in future pregnancy or birth		

If the reason for maternal request CS is anxiety about vaginal delivery / Tokophobia referral should be offered to a healthcare professional with expertise in providing perinatal mental health support to help with their anxiety. These healthcare professionals should be able to access the planned place of birth with the woman or pregnant person during the antenatal period, as part of the support offered.

If the woman or pregnant person is referred for request of caesarean section late in third trimester, there may not be enough time for the referral to the psychiatrist. The consultant obstetrician may have to address the anxieties and counsel regarding risks and benefits.

If after thorough counselling the woman or pregnant person chooses to have a caesarean section this should be offered, within our unit, from 39 weeks.

5. Multiple pregnancy

See Multiple Pregnancy Guideline

6. Preterm birth

See preterm guideline

7. HIV, Hepatitis B and Hepatitis C

See relevant guidelines

8. HSV

Offer women or pregnant people with primary genital herpes simplex infection occurring in the third trimester of pregnancy a planned CS to decrease the risk of neonatal HSV

Timing of an elective Caesarean section
The risk of respiratory morbidity is increased in babies born by caesarean section before labour, but this risk decreases significantly after 39 weeks. Therefore, unless clinically indicated, elective CS should be booked from 39 weeks pregnant. If elective CS is booked between 37 to 39 week the patient should be counselled about the benefits and risks of corticosteroids.

Procedure for booking an elective Caesarean section
Once the decision for elective C/S has been made the date should be booked on Bluespier and the woman or pregnant person booked a pre-op appointment 48 hrs prior to their date in DAU.

At the time of booking MRSA swabs should be taken and the woman or pregnant person consented. It should be ensured that a correct and up to date weight is documented on Badgernet and the woman or pregnant person is given her blood forms to take to her pre-op appointment. Omeprazole should be prescribed on a TTO. Patient should be sign posted to the enhanced recovery leaflet on Badgernet.

The theatre team should be informed if the BMI >40 to arrange for special wound dressings. (I think we discuss this on the day only)

The following women or pregnant people undergoing a planned elective C/S should be referred to tissue viability as early on in the pregnancy as possible and at least by 36 weeks for consideration of a VAC dressing (They should be referred through Badgernet):

- BMI ≥45 at booking +/-
    - i. Previous wound infection
    - ii. History of ≥3 C/S
    - iii. Pendulous abdomen
    - (Consideration should also be given to referring poorly controlled diabetics)

Please refer to guideline Obesity or previous bariatric surgery in pregnancy (management of).

Ensure the patient has been referred for anaesthetic opinion if necessary. Patients with BMI >45 should be referred to anaesthetic pre-assessment clinic. If considered particularly high

risk the Consultant Obstetrician should discuss individual cases with the Consultant Anaesthetist on call for that day.

Provide patient with the following link to online video resource describing process for elective CS at WRH: https://www.worcsacute.nhs.uk/maternity-services/having-your-baby-planned-delivery as well as the following leaflets:

- After your Caesarean section
- Caesarean section Pain Control (see Maternity website for both leaflets online at https://www.worcsacute.nhs.uk/maternity-services/after-your-baby-is-born-postnatal-care)

At the DAU appointment:

- Take blood for Group and Save (or X match if clinically indicated) and FBC. The responsibility for checking that all blood tests are within normal limits lies with the MW/individual ordering the test. If any test outside normal limits, the delivery suite Obstetric team should be notified so that plans can be put in place BEFORE the day of surgery.
- Omeprazole should be given and instructions on when to take it give.
- Prepare caesarean section pack including (blood forms, TTO, drug chart, fluid chart, fluid balance, neonatal record, pink and yellow anaesthetic charts, peri-operative checklist and OBS UK proforma)
- Print scanned signed consent form on Badgernet.
- Measure the patient for antiembolic stockings
- Guide patients about process on LSCS day, time to attend.

On the day of surgery

- The woman/birthing person should be reviewed by the surgeon and anaesthetist on the day of surgery and the consent confirmed.
- Sequential pneumatic compression stockings should be used during CS for women with high BMI >40.
- If the indication for C/S is breech an ultrasound should be performed for presentation. (See above).
- Prior to theatre, the midwife responsible (bleep 405) for the patient should check:
    - Hb, platelet count, group and save (availability of blood if indicated)
    - VTE score
    - Maternal rhesus status and need for cord bloods
    - Requirement of paediatric attendance at delivery (required for all CS under GA)
    - Presence of a fetal heartbeat
    - Discuss options that are available in theatre (skin to skin, music, ECG dots on shoulders instead of chest, etc)
- Once the women or pregnant people have been reviewed by the anaesthetic and obstetric team the WHO team brief should be completed in the anaesthetic room at 8:30 am. This is led by the Lead scrub for theatre and should include in attendance the anaesthetist, obstetric surgeon, scrub, ODP, Runner and Midwife. This is to confirm the surgical plan and any extra concerns for the list prior to being in theatre.
- Following insertion of the spinal, or just prior to General Anaesthetic, the fetal heart should be auscultated for 1 minute.

The modified WHO surgical safety checklist will be used for all cases conducted in
Maternity Theatre and completed by the theatre lead.
The following will apply
A **Sign in** will take place with anaesthetist and anaesthetist practitioner
A **Time out** will take place with the whole team prior to skin incision
A **Sign out** will take place with the whole team following completion of the case (vaginal swabbing/PR diclofenac) and once the final swab and instrument count has been completed.

Prophylactic antibiotics:
To be offered prior to skin incision

Non penicillin allergic	Cefuroxime 1.5g IV Metronidazole 500mg IV
Penicillin allergic or hypersensitivity to Cephalosporins	Clindamycin 600mg IV over 20 mins Gentamicin 120mg IV over 5 mins

Aqueous iodine vaginal preparation should be used prior to birth if time allows to reduce the risk of endometritis. If this is not possible, perform it at the end of the procedure – see separate SOP on vaginal cleansing at time of caesarean section.

Thromboprophylaxis:
See guideline Thromboprophylaxis in pregnancy.
Women or pregnant people having a CS should be offered thromboprophylaxis because they are at increased risk of venous thromboembolism, for example, graduated stockings, hydration, early mobilisation, low molecular weight heparin). Duration of thromboprophylaxis is decided on individual basis.
Sequential pneumatic compression stockings should be used during CS for women with high BMI >40.
If thromboprophylaxis is required, drug chart and TTOs should be completed in theatre by the surgical team.

Post-operative care:
(See separate Guideline for Obstetric Theatre Recovery and High Dependency Care and the Management of Severely Ill Obstetric Patient)

After CS women or pregnant people should be observed on a one-to-one basis by a properly trained member of staff until they have regained airway control and cardio-respiratory stability and are able to communicate.

After recovery from anaesthesia, observations (respiratory rate, heart rate, blood pressure, pain and sedation) should be continued every half hour for two hours, and hourly thereafter provided that the observations are stable or satisfactory. If these observations are not stable, more frequent observations and medical review are recommended.
It is the responsibility of the midwife caring for the woman or pregnant person to check for uterine contractility and lochia and to clearly document clinical findings in the notes. This information should be part of handover when the woman or pregnant person is transferred to the ward.
Women or pregnant people who have had intrathecal anaesthesia should have a spinal care pathway completed. The observation regimes for patients receiving intrathecal and epidural

opioids are detailed on the back of Anaesthetic charts and will be specified for each case, after the surgery completed and highlighted to recovery staff. (see appendix 1)

Pain management after CS

Women or pregnant people should be offered diamorphine 300mcg intrathecally for intra and postoperative analgesia because it reduces the need for supplemental analgesia after a CS. Epidural diamorphine 3mg is a suitable alternative. If diamorphine is unavailable, 100mcg intrathecal preservative-free morphine used in conjunction with 15mcg intrathecal fentanyl is an alternative. Note that intrathecal morphine may be associated with increased risk of respiratory depression, for a longer duration, therefore additional monitoring may be needed. There is also increased risk of nausea and itching requiring treatment.

A dose of intravenous dexamethasone 6.6mg should be considered for all CS patients (regardless of anaesthetic choice), administered after cord clamping. A dose reduction to 3.3mg is recommended for diabetic patients. This has been shown to improve pain control. This can be combined with a dose of Ondansetron 4mg IV after baby delivered as prophylaxis for both opioid induced nausea as well as itching.

Any patients not receiving intrathecal/epidural opioid, should be offered wound infiltration with 0.25% or 0.5% bupivacaine/levobupivacaine, or TAP blocks.
Patient-controlled analgesia using opioid analgesics may be considered after CS under GA.

Regular oral paracetamol should be prescribed for all patients undergoing CS. A dose should be offered in recovery providing the patient has not received any paracetamol within the last 4hrs.

Rectal diclofenac (given at the end of the procedure) should be offered to all patients undergoing CS, unless NSAIDs are contraindicated. Consent should be obtained prior, if CS is under GA. Regular oral ibuprofen should be prescribed for ongoing analgesia, ensuring that an adequate period of time has passed after initial rectal diclofenac dose (12hrs), and ensuring that no more than 2 doses of ibuprofen are prescribed in first 24hrs after rectal diclofenac.

Regular oral dihydrocodeine should be offered to all patients with contraindication to NSAIDs, and patients should be informed that it is safe to breastfeed whilst taking this.

Oral morphine sulphate should be prescribed ‘as required’ on the drug chart for all CS patients, and patients should be informed that it is safe to breastfeed whilst taking this.

Codeine/Co-codamol should NOT be prescribed to any patient who is going to breastfeed.

Early eating and drinking after CS

Provided no complications women or pregnant people who have had a CS under regional anaesthesia can eat and drink as soon as they feel hungry or thirsty.

Post-operative anti-emetics/antihistamine

Women or pregnant people should be prescribed ‘as required’ ondansetron, cyclizine and prochlorperazine, providing there are no contraindications.

Consider prescribing ‘as required’ oral loratadine 10mg (once per day) for all patients who receive neuraxial opioid. A small section of patients experience severe itching, which is typically during the first night and can have a significant impact on their experience.

Assessing motor function after regional anaesthetic
For any patient receiving an epidural or spinal, a yellow bracelet must be applied to wrist at time of insertion. This can then be removed when the patient has demonstrated a straight leg raise (SLR) in bed **NO LATER THAN** 4 hrs after insertion. If the patient is not able to do this, the team should contact the on-call anaesthetist and low molecular weight heparin should be withheld until the patient is assessed. See separate guidelines: Anaesthetic Management of Postpartum Neurological complications management and Regional Anaesthesia Alert Bracelet.

Urinary catheter removal after CS – see guideline on bladder management.
Indwelling catheters should be removed as soon as the patient is mobile, but no sooner than 12 hours after the last regional anaesthetic dose. For women or pregnant people having their catheter removed at midnight a reasonable amount of flexibility can be used to suit the woman or pregnant person,
but it should be between 2300 and 0200 hours. In certain conditions urinary catheter may need to stay in for a longer period and this should be clearly specified in post-operative instructions within Badgernet.

Length of hospital stay and readmission to hospital.
Women or pregnant people who are recovering well, are apyrexial, do not have pre-existing risks or medical conditions and complications following CS should be offered early discharge (after 24 hours) from hospital and follow up at home, because this is not associated with more infant or maternal readmission.

Criteria for discharge

All uncomplicated LSCS with an EBL less than 1litre are eligible for midwifery led discharge.

Any complications that arise or additional complexities should be considered by the operating surgeon and a plan for follow up and discharge should be clearly documented on Badgernet as part of the operation note and handed over to the postnatal ward.

Full blood count after CS
Surgical team is responsible for deciding regarding the need for postoperative FBC for CS patient and this should be documented on Badgernet CS notes and handed over to the postnatal team (see appendix 2)

Appendix 1: Enhanced Recovery Flowchart

Decision for elective CS should be taken before 36 weeks and add to list as early as possible:

- Add to Bluespier (document indication, gestation, BMI, medical comorbidities, parity, continuity status, placental site and complexity of surgery if required)
- Consent (to be scanned on Badgernet in clinic and original to be given back to patient) if ward clerk not available, a non signed copy of the consent form should be handed to the patient.
- Complete TTTO for omeprazole (20 mg OD for 2 days)
- Book preoperative assessment
- MRSA swab
- Sign post patient to CS enhanced recovery PIL on Badgernet (including QR codes for maternity) and provide them with PIL for anaesthesia.

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Preoperative assessment on DAU

- Preoperative FBC, G&S.
- Prepare caesarean section pack including (blood forms, TTO, drug chart, fluid chart, fluid balance, neonatal record, pink and yellow anaesthetic charts, peri-operative checklist and OBS UK proforma)
- Print scanned signed consent form on Badgernet.
- Measure the patient for antiembolic stockings
- Give patient omeprazole with clear instructions how to use it.
- Guide patients about process on LSCS day, time and place to attend. (1st case of DS, all others on PNW)
- Check investigation results and inform obstetric on call team if any abnormality.

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Preoperative on day of surgery

- Patient should attend for admission and LSCS pack kept with them (DS or PNW)
- The midwife should check fetal heart, VTE risk and confirm investigations (FBC, G&S, Blood group)
- Patient to be reviewed by anaesthesia and surgeon, consent to be confirmed.
- Ultrasound if CS for malpresentation
- WHO Team debrief to be done by 08:30 (any delay in starting should be Datixed by theatre staff and documented on Bluespier)

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Postoperative surgical team should decide regarding:

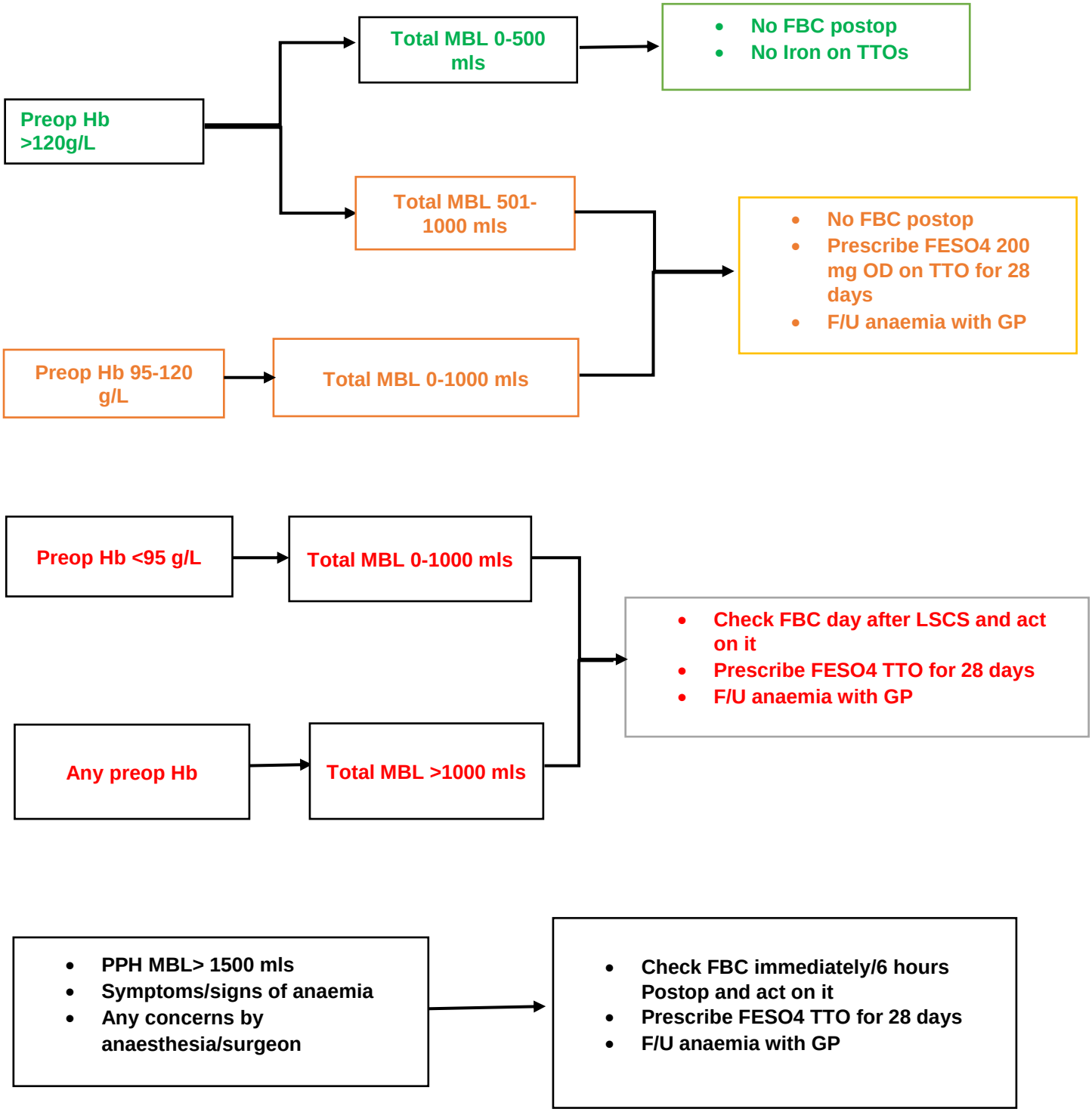
- Suitability for VBAC (Explain to patient point of surgery).
- Prescribe thromboprophylaxis and complete TTO if required.
- Criteria for discharge (midwifery led/ Doctor led) *.
- Need for FBC/Iron and complete TTO if required.

All this information should be handed over by the theatre midwife to the postnatal team.

* All uncomplicated LSCS with an EBL less than 1litre are eligible for midwifery led discharge.

Any complications that arise or additional complexities should be considered by the operating surgeon and a plan for follow up and discharge should be made and clearly documented in the notes and handed over to the postnatal ward.

Appendix 2: Post LSCS assessment for FBC/ FESO4 need



Appendix 3: CS List Allocation

Caesarean sections – List allocation

BASIC (75mins)	INTERMEDIATE (100mins)	COMPLEX (120mins)	EXTREMELY COMPLEX (Will need all day list in main theatre)
Maternal request	2 previous C/S	3+ previous C/S	Placenta accreta/percreta
Breech/malpresentation	Low lying placenta (posterior)	Low lying placenta (anterior)	
Previous 3rd/4th degree tear	Previous fibroid surgery/known fibroids	Previous major abdominal surgery	
Previous shoulder dystocia	BMI >40	BMI >50	
Primary herpes 3rd trimester	Previous/predicted anaesthetic difficulties	≥2 intermediate risk factors	
1 previous C/S	Previously difficult IV access	Classical C/S	
LGA (no other issues)	C/S with tubal ligation/cystectomy		
	Multiple pregnancy – 1 set per list		
(Cervical suture if added)	Prematurity <34 weeks		

Consultant Criteria (+ timings)	
Placenta accrete/percreta	
Placenta praevia	
Previous midline laparotomy	
≥ 3 C/S	
Previous PPH > 2.5L at C/S	
BMI >45	BMI >50
Gestational thrombocytopenia with platelets <100	
Triplets	
Previous classical C/S	
Anterior fibroid in lower segment	
Jehovahs witness	
Recommendation from previous C/S	
Stage IV Endometriosis	
Previous endometrial ablation	
Preterm < 34 weeks	
Transverse lie	
Uterine didelphys	

Consultant C/S lists on Tuesday and Thursday AM only

Max capacity – 3 C/S morning (270mins), 2 C/S afternoon (210mins)

Contribution List

This key document has been circulated to the following individuals for consultation;

Designation
Maternity guidelines forum Members
All Maternity staff Maternity Governance Meeting Members

This key document has been circulated to the chair(s) of the following committee's / groups for comments.

Committee
Maternity Quality Governance Meeting