University Hospitals Bristol NHS
NHS Foundation Trust

Patient information service
St Michael's Hospital

Help yourself to a normal birth

Respecting everyone
Embracing change
Recognising success
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For Patients. For Health. For Bristol.

In the majority of cases, normal birth is best for the mother and baby.

Some women have specific conditions where an operative birth will be recommended. You are advised to plan a normal birth unless advised otherwise.

Normal birth is important for mums and their babies because:

- there are usually better short and long term health outcomes for you and your baby
- following a normal birth, it is easier to hold your baby skin to skin to enhance the bonding process
- many women find labour and birth a very positive and empowering experience, even if they have had a previous difficult birth
- you are less likely to have difficulty starting breastfeeding; once started there is no difference in the success rate between normal birth and caesarean section
- you are likely to spend less time in hospital before you are able to take your baby home
- you are less likely to need strong painkillers after the birth
- you are less likely to get an infection needing treatment
- your baby is less likely to be admitted to the neonatal intensive care unit

- it is usually easier to look after your baby and other children without a painful wound on your tummy

- you are less likely to get blood clots in your legs and lungs which can cause serious illness

- you can start driving your car sooner, and it's easier to get on buses without a painful wound on your tummy

- caesarean section leads to a small increase in future pregnancies of stillbirth and problems with your placenta

- about one in five women who have a caesarean find it difficult to get pregnant again, compared to about one in 20 who don't have caesarean

- a caesarean section can make surgery you need in the future more difficult and mean more complications

- some of the rare complications such as needing a hysterectomy or admission to the intensive care unit are less likely after a normal birth.

There are things you can do to help yourself have a normal birth.

Be prepared

Prepare yourself emotionally and physically for labour and the birth of your baby. Feeling confident and positive towards the birth of your baby could improve your experience.

Things that might help include:

- practising relaxation techniques to help you cope with labour
- attending antenatal classes – either hospital, NCT or active birth
- yoga
- aquanatal classes
- hypnosis techniques for birth
- maintaining a regular exercise regime if you have one, tailored to how many weeks pregnant you are
- going for walks or swimming
- giving yourself the opportunity to chat to your midwife about any worries
- if you're going into hospital to have your baby, go for a tour of the birthplace of your choice
- write a birth plan with the support of your midwife, specifying your birth choices

Support in labour

Having a birth partner who is supportive, calm and able to stay with you throughout labour can increase your chance of a normal birth, and reduce your need to use drugs in labour for pain relief.

It can be your partner, sister, mother, friend or anyone else that you choose.

They can help by giving you massage, drinks, positive emotional support, praise and encouragement as well as supporting you to move to different positions through labour. They can also support you if you need to make decisions in labour.

Make sure they know what they need to do before you go into labour.

Avoid having your labour induced unless there's a good reason for it

You know your baby is ready to be born if your labour starts naturally between 37 and 42 weeks of pregnancy.

Induction of labour will be offered if you are two weeks over your due date or if there is a medical reason where induction is recommended for you or your baby's wellbeing. Even if you have induction of labour, don't forget that many of your birth choices can still be used.

With induction we continuously monitor the baby and you may need to consider medicated methods of pain relief, for example epidural.

Stay at home as long as you can

Staying at home in early labour gives you a better chance of having a shorter and more positive experience of labour. You're less likely to need medical interventions in the form of drugs to speed up your labour, or to help you give birth when you go to hospital.

It is much easier to rest and relax in your own home, and eat and drink when you want to. Oxytocin, the hormone (natural chemical) that makes your uterus contract and cervix dilate in labour, works best when you are able to relax and concentrate on your labour.

You can also go for a walk, have a bath or watch the TV to distract yourself in the comfort of your own environment.

However, don't be afraid to telephone for advice.

In some cases, your midwife or the obstetrician would advise you to present early in labour; in this case you should contact the central delivery suite as soon as you think you are in labour.

Ask your community midwife to give you the information leaflet on the 'latent phase' of labour, which has lots of information and tips in to help you cope. This leaflet is also available on our app '**My Pregnancy @ St Michael's**' and on our website: **www.uhbristol.nhs.uk/patients-and-visitors/your-hospitals/st-michaels-hospital/**

Minimise distractions

Being in a dark, quiet, relaxing atmosphere helps oxytocin to work better, so have comfortable pillows, relaxing music, massage oils and anything else that will help you relax in the place you choose to labour.

It's worth getting your birth partner to make sure that anyone in the room speaks to you quietly and gently, and doesn't disturb you when you're having a contraction.

Unless your midwife has pulled the emergency buzzer, no one should enter your room without knocking and waiting for a reply.

Keep your energy and fluid levels up

It's important that you make sure you drink plenty of fluids in labour. This will help your contractions to work efficiently, and will help your baby cope with the contractions. Drinking isotonic sports drinks (**not** energy drinks) will help you stay well hydrated, so it's worth making sure you have some ready for your labour. Drinking plenty of fluids is particularly important if you are in the bath or pool.

It's a good idea to bring in some favourite snacks as well to help keep your energy levels up. Your birth partners may well need some energy foods too!

Some women with specific conditions in pregnancy will be advised not to eat in labour, but your midwife will be able to advise on this.

Have a bath or shower

Using water, such as relaxing in a bath or shower or using a birthing pool, has lots of benefits for labour. It helps you cope with contractions, and will reduce your need for other forms of pain relief. It can also help your contractions work better because you'll be more relaxed. However, try to avoid getting into the pool too soon; the water is likely to work better for you if you are in established labour. Your midwife will advise you.

You may choose to stay in the pool to birth your baby or to leave the water prior to this point; you can discuss this with your midwife.

Keep mobile

Being upright and mobile helps the baby move down through your pelvis and helps you to manage the contractions, encouraging a straightforward birth. You could try:

- swaying
- rocking your hips
- walking
- going up and down stairs
- using a birthing ball to remain upright and mobile.

In the second stage of labour, when you are pushing your baby out, staying off your bottom allows your pelvis and the bottom of your spine to move and allow more room for the baby to be born. It also makes it more likely that your baby will be able to cope well with the contractions.

You could use positions such as:

- lying on your side
- kneeling
- all fours
- standing
- squatting.

When nature needs a hand

Even if you plan a normal birth and do everything suggested in this leaflet, nature sometimes needs help, and you may need a forceps or ventouse birth, or a caesarean section. This may be recommended for a number of reasons where the risks to you or the baby of continuing without any medical intervention are increased. You will always have any procedures explained to you, and your consent will be required before they are carried out. Please make sure that if interventions are suggested you are sure you understand why they are being suggested – it is important that you ask questions if you're not sure. It is also important to remember that this does sometimes happen, and that nothing you do or don't do influences this intervention.

If you have any questions after the birth, please talk to one of the midwives or obstetric doctors. They will be able to answer your questions and give you information about choices for future births.

Speak to a supervisor of midwives

If you have any questions about the advice and information that you have been given or the experience you have had, and your community midwife hasn't been able to help, you could speak to a supervisor of midwives (SOM) by:

- asking any of the staff to find a SOM for you to talk to
- telephoning the main switchboard on **0117 923 0000**
- telephoning the community midwifery office on **0117 342 5241**.

You can get more information about midwifery supervision at: **www.nmc.org.uk/globalassets/siteDocuments/NMC-Publications/NMC-Supervisor-of-midwives.pdf** or see the leaflet in your bounty pack.

Other leaflets you may want to refer to are:

- Choices and lifestyle in pregnancy
- Latent phase of labour – ideas to help you
- Pain relief in labour
- Reducing the risk of needing stitches after childbirth.

References

National Childbirth Trust. Available at **www.nct.org.uk**

National Institute for Health and Clinical Excellence. (2008) Induction of Labour. London. NICE. Available at **www.nice.org.uk**

Notes/queries

Please note that if for any reason you would value a second opinion concerning your diagnosis or treatment, you are entirely within your rights to request this.

The first step would usually be to discuss this with the doctor or other lead clinician who is responsible for your care.

Smoking is the primary cause of preventable illness and premature death. For support in stopping smoking contact **Smokefree Bristol** on **0117 922 2255**.

As well as providing clinical care, our Trust has an important role in research. This allows us to discover new and improved ways of treating patients.

While under our care, you may be invited to take part in research. To find out more please visit: **www.uhbristol.nhs.uk/research-innovation** or call the research and innovation team on **0117 342 0233**.

For access to other patient leaflets and information please go to the following address:

www.uhbristol.nhs.uk/patients-and-visitors/information-for-patients/

Hospital switchboard: 0117 923 0000

Minicom: 0117 934 9869

www.uhbristol.nhs.uk

For an interpreter or signer please contact the telephone number on your appointment letter.

For this leaflet in large print, audio or PDF format, please email patientleaflets@uhbristol.nhs.uk.

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Clinical Guideline

CAESAREAN SECTION

SETTING Maternity Services, St Michael's Hospital

FOR STAFF Medical, nursing and midwifery staff

PATIENTS Patients undergoing caesarean section procedure

GUIDANCE

This is a practical guide to elective and emergency Caesarean section (CS). Antenatal provision of information and Vaginal Birth after Caesarean is not covered in this guideline.

Women requesting CS without obstetric indication

For pathway see appendix 1

Consent for CS

Written consent should be obtained even in emergencies. Risks of caesarean section should be explained as per the RCOG Consent Advice No 7; discussion should include risks to the mother and the fetus, as well as implications for future pregnancies and birth after CS. Fetal risks include cuts to the skin (approximately 2 in 100 cases) and respiratory morbidity (particularly for Elective CS).
For Elective CS use the UHBristol Caesarean Specific Consent form –v2 (Appendix 2).
However, it is recognized that in severe emergencies (Category 1 CS only) verbal consent is appropriate. The decision and the reasons for verbal consent must be documented.
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 health. Such a refusal and the relevant risks associated with it must be clearly documented in the notes.
A consultant obstetrician or ST6/7 should be involved in the decision for CS unless doing so would be life threatening to the mother of fetus.
The person making the decision for CS must clearly document the indications

- In the maternal hand held record
- On the operation note (Medway delivery record)

Urgency Categorisation

The urgency of CS should be documented using the following scheme in order to aid clear communication between healthcare professionals about the urgency.

Figure 1. A classification relating the degree of urgency to the presence or absence of maternal or fetal compromise

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

Category 1: Immediate threat to the life of the woman or fetus

- Includes CS for acute severe bradycardia, cord prolapse, uterine rupture, fetal blood sampling pH less than 7.2.
- Deliver as quickly as possible taking into account rapid delivery may be harmful incertain circumstances.
- Decision to delivery audit standard = within 30 minutes

Category 2: Maternal or fetal compromise which is not immediately life-threatening

- There is 'urgency' to deliver the baby in order to prevent further deterioration of either the mother or baby's condition.
- Deliver as quickly as possible, in most situations within 75 minutes, taking into account rapid delivery may be harmful in certain circumstances.
- Decision to delivery audit standard = within 30 and 75 minutes

Category 3: No maternal or fetal compromise but needs early delivery

- Includes CS carried out where there is no maternal or fetal compromise but early delivery is necessary e.g. breech with ruptured membranes
- Includes LSCS at < 37 weeks gestation for maternal or fetal reasons
- Decision to delivery standard = within 24 hours

Category 4: Elective CS

- Includes all CS carried out at a planned time to suit the mother and maternity team

Emergency Caesarean (Category 1, 2 & 3)

Emergency CS for maternal or fetal compromise should be undertaken within the time frames relevant to the category of urgency. However, it must be taken into account that emergency situations have the potential to cause psychological trauma to the mother.

Fetal distress:

Start Intra-Uterine Resuscitation

- Stop syntocinon
- Turn mother to left lateral
- Administer terbutaline 250 mcg SC
- Start / Increase IV fluids
- Administer facial 02

The **time of decision** (surgeon decides and woman consents in writing) and **reasons for any delay** in undertaking category 1 or 2 CS **must** be documented in both

- the partogram
- the operative note (Medway delivery record)

Pre-operative requirements

- Inform coordinating midwife who will liaise with the Anaesthetist and Theatre coordinator (**use 2222 call for category 1 CS)**
- Ensure woman is wearing an appropriate identification bracelet and check with the woman that the details on it are correct
- Obtain informed consent
- Site cannula if IV access not already established

- Send bloods for FBC and G&S if not already done
- Administer Ranitidine 150 mg orally or 50mg IV (prescription required)
- Put on anti-embolic stockings
- Mother to remove jewellery and underwear
- Put theatre gown on mother if time
- Transfer to theatre as quickly as possible
- Maintain left lateral position until anaesthesia is initiated **(cat 1 and 2 only)**
- Continue Fetal Monitoring until surgeon ready to commence **(cat 1 and 2 only)**
- Insert indwelling urinary catheter once anaesthesia effective
- Shave pubic area if time
- Call neonatologist

The surgeon should assist in the transfer to theatre unless there is an urgent need for them elsewhere.

- On arrival into theatre there must be clear communication of the patient's name, reason for caesarean section and urgency category.
- The urgency category may change once the patient is in theatre i.e. following recovery of a fetal bradycardia, and in this instance clear communication is required within the team.
- The operating surgeon must be ready for knife-to-skin as soon as adequate anaesthesia is achieved, particularly for category 1 CS.
- The surgeon should communicate with the neonatologist if there any additional concerns i.e. possible fetal sepsis or hypovolaemia
- It is the responsibility of the attending neonatologist to determine whether senior support is required.

Elective Caesarean (Category 4)

The risk of respiratory morbidity is increased in babies born by CS before labour, but this risk decreases significantly after 39 weeks.

- Planned CS should not routinely be carried out before **39** weeks.
- The reason should be clearly documented if a planned CS is performed before 39 weeks.
- If CS for Breech presentation with no other obstetric indication inform the woman that a scan will be performed on the morning of admission and if no longer breech a caesarean will not be required.

There is evidence that antenatal steroids can reduce the need for NICU admissions if an elective CS has to be performed before 39 weeks. This should be discussed on an individual patient basis.

Maternal Haemoglobin should be optimised antenatally to aim for a HB ≥110g/l at the time of elective section, if Haemoglobin <110 g/l at 36 weeks consider need for intravenous iron.

Booking elective CS in clinic

1. Written consent should be obtained by the obstetrician booking the CS (use the procedure specific consent form - appendix 2)
2. The CS date should be booked in the Caesarean Section diary by calling ANC on ext 25299/ 25297

3. Give the patient's name, hospital number, EDD, gestation on the date of Caesarean (in weeks and days), indication and the named Consultant Obstetrician. Highlight any potential intraoperative risks.
4. Ensure the woman's correct telephone number is recorded in the diary
5. Give the woman the UHBristol Caesarean Section – Enhanced Recovery information leaflet and explain that the woman will be contacted on the evening before the planned CS to confirm the time of admission on the day of the procedure
6. Explain that occasionally the CS date may be changed if there is a need to re-prioritise cases due to clinical workload or complex cases
7. Arrange pre-op clerking appointment within 7 days of the agreed CS date
8. Provide anti-embolic stockings with instructions

The following may be done at the time of booking the CS or at a pre-op clerking appointment:

9. Arrange an anaesthetic review (bleep 2923)
10. A Group and Save (G&S) and a full blood count (FBC) should be taken within 7 days of the agreed CS date.
11. Prescribe and supply antacid/ anti-emetic regimen (premeds) and pre-op drinks. Women should be given instruction on the timing of their medications according to the time of admission on the day of the CS.

    Early admission
    - Take ranitidine at 10 pm
    - Come in at 8am
        - No food from 2am
        - Clear fluids until 6am
        - Take medication/ pre-op drinks at 6am

    Late admission
    - Take ranitidine at 10 pm
    - Come in at 10am
        - No food from 5am
        - Clear fluids until 9am
        - Take medication/ pre-op drinks at 9am
12. Provide Chlorhexidine skin wash and advise the woman to shower using this on the morning of the CS.

Elective CS in Women with Diabetes

- Delivery recommended by 38 weeks in women with Type 1 and Type 2 Diabetes
- Steroids should be considered if CS undertaken before 38 weeks with Supplementary insulin cover to optimise maternal glycaemic control; see guideline Supplementary IV Insulin Following Betamethasone
- Women with diabetes should not receive pre-op drinks
- When CS prioritised should be first on the operating list
- If requires insulin in pregnancy will need sliding scale insulin perioperatively; see guideline Diabetes in pregnancy Intrapartum Care

Practicalities of the Elective CS List

Elective CS lists are held daily on normal working days.
During the CDS handover the obstetrician responsible for running the CS list will be identified; this may be the Consultant, ST 6-7 or ST3-5 dependent on the complexity of the cases and the workload on CDS.
An extra obstetric SHO is allocated to help run this list, and is identified on the SHO rota.
If there is no dedicated 'Section SHO' then the SHO or consultant for CDS will assist.

Theatre briefs take place at 8.30 (Mon-Thurs) and 9.00 am (Fri) to allow for patient review and pre-op checks between 8.00am to 8.30am.
The CS list will start promptly after the theatre brief.
The SHO should remain in theatre after the brief to complete the sign-in for the first patient.

The theatre brief should:

- Include the theatre practitioner, anaesthetic assistant, operating surgeon, anaesthetist and midwife/ nurse caring for the women
- Determine list order
- Share information about potential anaesthetic or surgical problems

Emergency obstetric cases take priority over elective CS cases.
The reasons for any significant delay in elective CS must be recorded on a clinical incident form and Medway.

Preoperative Checks

- Ensure woman is wearing an appropriate identification bracelet and check with the woman that the details on it are correct
- Check FBC results and that the G&S is in date
- Check e-match status. In high-risk women (placenta praevia, coagulation disorders etc.) liaise with the consultant obstetrician and anaesthetist to decide whether to cross-match blood/ use intra-operative cell salvage
- Confirm the gestational age according to the dating scan
- Check presentation by ultrasound before CS for Breech presentation
- Note position of placenta on past ultrasound reports
- Verify consent on admission to CDS
- Sign the admission VTE risk assessment on the drug chart
- Once the patient is in theatre the surgeon undertaking the procedure verifies:
    - the identity of the patient
    - the procedure to be carried out
    - consent
- The patient's name and the procedure to be undertaken is written on the board in theatre

All CS

Women's preferences for the birth, such as lowering the screen to see baby born, choice of music should be accommodated where possible. Only one partner/relative/friend is allowed in theatre for CS under regional anaesthesia unless exceptional circumstances in which case gain prior agreement with senior surgeon, anaesthetist, and CDS co-ordinator.
If under General Anaesthetic birth supporters are not allowed.

WHO Surgical Checklist will be undertaken at every CS, however in the event of a category 1 CS the full check may be delayed until the situation allows a time out.

Neonatology attendance is required for all CS except elective (category 4) operations unless there is evidence of fetal abnormality or fetal problems are anticipated.

Antibiotic Prophylaxis will be administered at all CS. Antibiotics will be administered before knife to skin. Antibiotics effective against endometritis, urinary tract and wound infections, which occur in about 8% of women who have had a CS, should be used (refer to antibiotic policy).

Delayed Cord Clamping consider delayed cord clamping for at least 1 minute unless immediate neonatal resuscitation is required or there is significant maternal blood loss.

Cord Gases Paired cord blood samples should be taken and analysed after *all* CS. Results must be documented as per **Monitoring the Fetus in Labour** guideline.

Uterotonic agents

- **Carbetocin 100 micrograms** by *slow* intravenous injection should be given once the baby is born to encourage contraction of the uterus and to decrease blood loss
- **Syntocinon 5 – 10 units** may be recommended for women with significant cardiac disease (see Individualised maternal medicine care plans for recommended management)
- **If further uterotonics are required** use oxytocin infusion, syntometrine (unless contraindicated) and prostaglandins (misoprostol/ carboprost) as in guideline Management of Obstetric Haemorrhage.

Thromboprophylaxis

- VTE Risk Assessment will be completed in line with the local guideline **Thromboprophylaxis During Pregnancy, Labour & Postnatal Period**
- All women undergoing CS require anti-embolic stockings unless specifically contraindicated
- Where appropriate prescribe Low Molecular Weight Heparin (Clexane)

Post CS information letter (appendix 3)

- Women delivering by their 1st or 2nd CS should have a 'Post Caesarean Information Letter' completed by the surgeon when the operation notes are written
- If the women is deemed not suitable for VBAC in a future pregnancy this letter will not be completed and this will be indicated on the operation notes

Anaesthetic Care (see obstetric anaesthesia guideline)

The obstetrician informs the anaesthetist of the urgency category and indication
Women having a CS should be given information on different types of post-CS analgesia so that analgesia best suited to their needs can be offered.
Women are encouraged to have CS under regional anaesthesia rather than GA because it is safer and results in less maternal and neonatal morbidity. This includes women who have a diagnosis of placenta praevia.
General anaesthesia for emergency CS should include preoxygenation, cricoid pressure and rapid sequence induction to reduce the risk of aspiration.
The surgeon must be ready for immediate knife-to-skin.
The operating table for CS should have a lateral tilt of 15 degrees.

Surgical Technique

If problems are encountered timely senior support (ST6/7 or consultant) must be requested.

The surgeon should use the technique he/she is most familiar with and taking into account the good practice points from the NICE guidance, these include:

- Follow *infection control* precautions. Wear double gloves for Serology positive women.
- Use a *Joel Cohen* technique if possible (appendix 4)
- *Blunt* rather than sharp extension of the uterine incision results in less blood loss and lower PPH incidence
- Repair the uterus in two layers
- Do not *routinely* exteriorize the uterus
- If possible use controlled cord traction and *not* manual removal of the

placenta to reduce the risk of endometritis
- Do not routinely close the visceral or the parietal peritoneum
- In the event that a midline abdominal wall incision is used, the abdominal wall should be closed by a mass closure technique using slowly absorbable sutures (PDS or equivalent)
- Routine closure of the fat layer does not reduce the incidence of wound infection, however the fat layer should be closed where there is >2cm subcutaneous fat

Post-Operative Care
Care will be administered as detailed in **Recovery after Obstetric Operative Intervention** guideline
Early eating and drinking: Women who are recovering well after CS and who do not have complications can eat and drink when they feel hungry or thirsty.
Urinary catheter removal: Removal of the urinary bladder catheter should be carried out once a woman is mobile after a regional anaesthetic and not sooner than 12 hours after the last epidural 'top up' dose or spinal.

Post CS discussion
The obstetrician undertaking the post-operative review on day 1 or 2 will:

- Ensure mother understands the indication for CS
- Discuss implications for future pregnancies before discharge
- Give the post CS information letter to the woman and discuss as appropriate
- Tick the box on the P/N review sticker to indicate that the letter has been given and discussed

The process for continuous audit, multidisciplinary review of audit results and subsequent monitoring of action plans.

Process	Tool	Responsibility of:	Frequency of review	Responsibility for: (plus timescales)			
				Review of results	Development of action plan and recommendations	Monitoring of action plan and implementation	Making improvement lessons to be shared
Documentation of • Classification of Urgency of CS • Timing of all grade 1 CS • Reason for performing a grade 1 CS	Continuous Clinical Audit	Multi-professional group reporting to CDS Working party (CDSWP)	Continuous Audit-reviewed monthly at CDSWP	Monthly at CDSWP Presented quarterly to Women's Services Clinical Audit Meeting	Multi-professional group undertakes recommendations and action planning	Review and monitoring monthly at CDSWP	See CDSWP monitoring proforma for dissemination of learning

The above table outlines the minimum requirements to be audited; additional audits will be commissioned in response to deficiencies identified within the service through morbidity and mortality reviews/benchmark data provided by CHKS or in response to national initiatives e.g. NICE, RCOG guidelines, CNST standards
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Consultation
CDS Working Party, Antenatal Working party, Supervisors of Midwives

Ratified by
CDS Working Party October 2015

Date: Oct 15
Review Due: Oct 18

RELATED DOCUMENTS

Thromboprophylaxis During Pregnancy, Labour & Postnatal Period
Recovery after Obstetric Operative Intervention
Monitoring the Fetus in Labour
Obstetric Anaesthesia guideline
Obs & Gynae Antibiotic Guideline
Anaemia Antenatal & Postnatal
Supplementary IV Insulin Following Betamethasone
Diabetes in pregnancy Intrapartum Care

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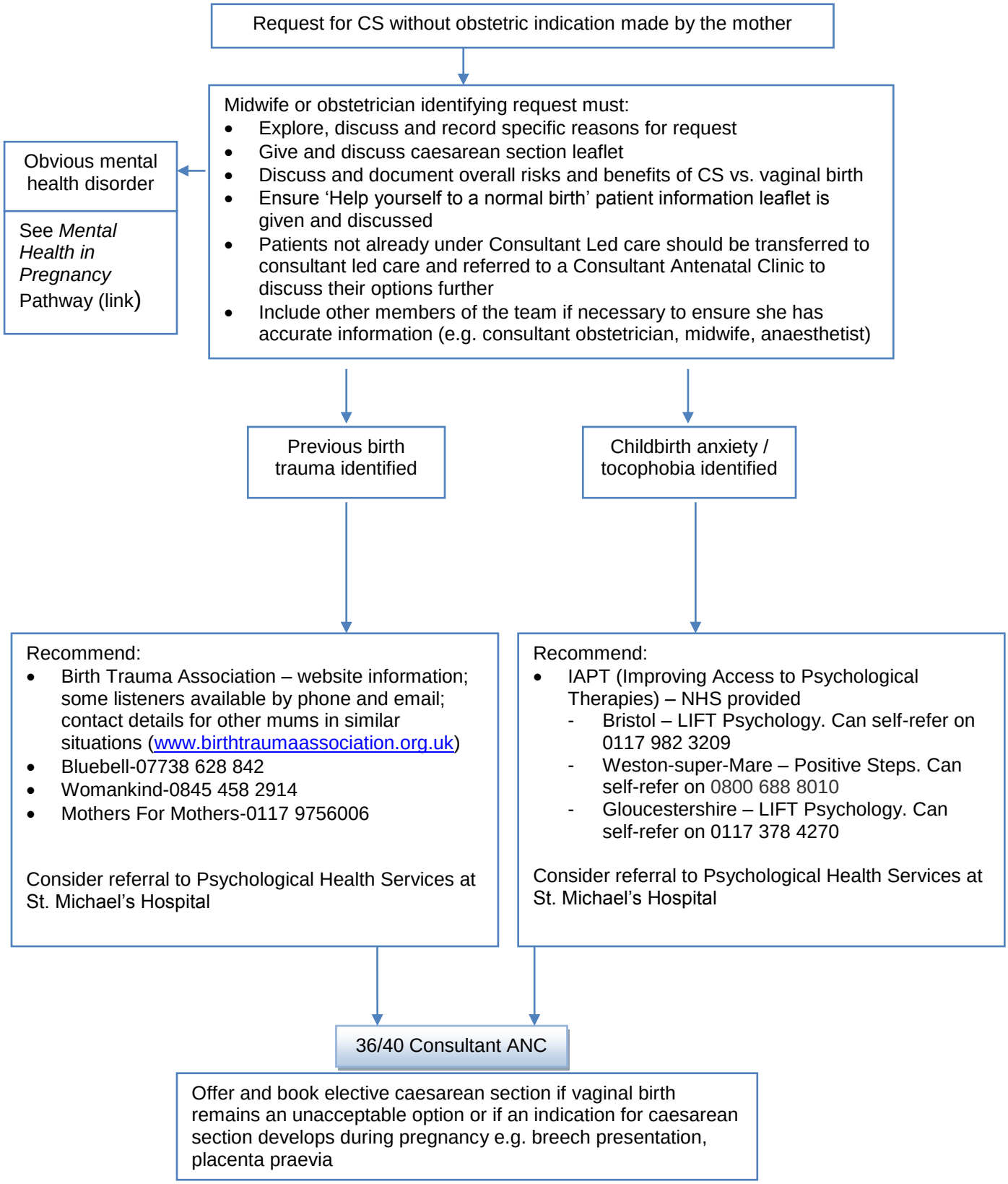
SAFETY

There are no unusual or unexpected safety concerns to staff or patient.

QUERIES

Contact [redacted] or the obstetric on call team on Central Delivery Suite. Telephone [redacted] for contact bleep numbers

Appendix 1 **Pathway for women requesting CS without obstetric indication**



Appendix 2

Consent Form 1

Hospital no: _____

NHS no: _____

Surname _____

Forename _____

Gender _____ D.o.B. ___/___/_____

Name of proposed procedure or course of treatment

Caesarean section

An operation to deliver your baby/ babies through a cut in the tummy, this can be a planned procedure for example if the baby is breech or you have had a previous caesarean section; or an emergency caesarean if there are complications of labour or concerns about the wellbeing of you or your baby.

Statement of health professional *(to be filled in by health professional with appropriate knowledge of proposed procedure, as specified in consent policy)*

I have explained the procedure to the patient. In particular, I have explained:

The intended benefits*: Safe delivery of baby/babies in a situation where the risks of vaginal delivery are more than those of a caesarean section operation*

Serious or frequently occurring risks

Frequent risks:

- *Common: persistent wound and abdominal discomfort, repeat caesarean section in subsequent pregnancies, readmission to hospital, minor cuts to the baby's skin*
- *Uncommon: haemorrhage (bleeding), infection, breathing difficulties in baby*

Uncommon but Serious risks:

- *Emergency hysterectomy (removal of the womb) , 7-8 women in every 1000 (uncommon)*
- *Need for further surgery at a later date, 5 women in every 1000 (uncommon)*
- *Admission to intensive care unit, 9 women in every 1000 (uncommon)*
- *Increased risk of a tear in the womb in future pregnancies, 2-7 women in every 1000 (uncommon)*
- *Developing a blood clot in the veins of the leg or lung, 4-16 women in every 10 000 (rare)*
- *Stillbirth in future pregnancies, 1-4 women in every 1000 (uncommon)*
- *In a future pregnancy, the placenta covers the entrance to the womb (placenta praevia), 4-8 women in every 1000 (uncommon)*
- *Injury to the urinary system, 1 woman in every 1000 (rare)*
- *Injury to the bowel, 1 woman in every 1000 (rare)*
- *Death, approximately 1 woman in every 12 000 (very rare)*

Any extra procedures which may become necessary during the procedure

☐ blood transfusion

☐ other procedures*: hysterectomy(removal of the womb), repair to damaged organs*

I have also discussed what the procedure is likely to involve, the benefits and risks of any available alternative treatments (including no treatment) and any particular concerns of this patient.

- The following leaflet/tape has been provided: _____
- This procedure will involve: ☐ general and/or regional anaesthesia ☐ local anaesthesia ☐ sedation

Doctor's Signature ……..….. Date ……

Name (PRINT) …… Job title ……..

Contact details (if patient wishes to discuss options later) ……..……

Top copy accepted by patient: yes/no (please ring)

Statement of interpreter (where appropriate)

I have interpreted the information above to the patient to the best of my ability and in a way which I believe he/she can understand.

Signature…….. Date……

Name (PRINT)……..

Appendix 3

University Hospitals Bristol NHS
NHS Foundation Trust
St Michaels's Hospital
Southwell Street
Bristol
BS2 8EG
Tel: 0117 3425201

Name:

Address:

Hospital ID:

Dear

About your caesarean section

Congratulations on the birth of your baby on:

Your baby was born by caesarean section because:

After giving birth by caesarean most women are able to give birth vaginally in future pregnancies. If you have another pregnancy you will be seen by an obstetrician as well as your midwife and they will discuss your birth options with you. Most women (around 3 out of every 4) who plan a VBAC (Vaginal Birth after Caesarean) go on to give birth to their next baby vaginally and unless your obstetrician or midwife advises otherwise, we recommend that you plan for a VBAC with any future baby.

If you would like to discuss anything arising from this letter or need any further information clarified, please contact your community midwife in the first instance.

You can get further information from

- www.caesarean.org.uk
- www.Nct.org.uk or 0300 330 0700
- www.powertopush.ca
- National Institute of Clinical Excellence at www.nice.org.uk/guidance?action=download&o=29336
- Association for Improvements in the Maternity Services: www.aims.org.uk or on 0300 365 0663. They also publish a booklet called 'Birth after Caesarean'

Signed: Print Name:

Job Title: Date:

Appendix 4

Technique of Abdominal Incision for Caesarean Section

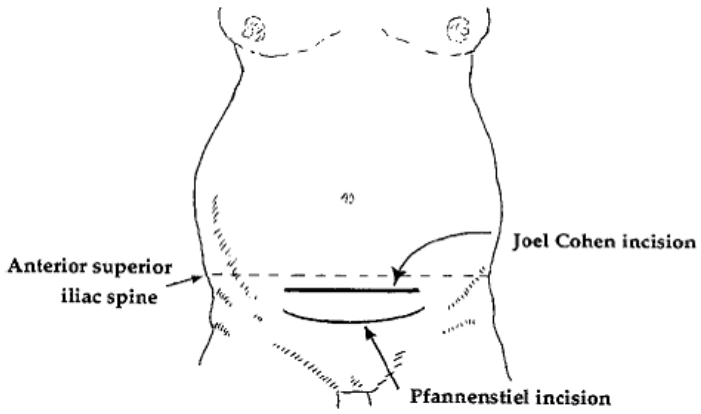
Pfannenstiel Incision

The traditional lower abdominal incision for caesarean delivery is the incision described in 1900 by Pfannenstiel. Classically, this incision is located two fingers-breadth above the pubic symphysis. Here the skin may be entered via a low transverse incision that curves gently upward, placed in a natural fold of skin (the 'smile' incision). After the skin is entered, the incision is rapidly carried through subcutaneous tissue to the fascia, which is then nicked on either side of the midline. The subcutaneous tissue is incised sharply with a scalpel. Once the fascia is exposed, it is incised transversely with heavy curved Mayo scissors. In the standard technique, the upper and then the lower fascial edges are next grasped with a heavy toothed clamp, such as a Kocher, and elevated. Under continuous tension, the fascia is then separated from the underlying muscles by blunt and sharp dissection. Once the upper and lower fascia have been dissected free, and any perforating vessel sutured or electrocoagulated, the underlying rectus abdominus muscles are separated with finger dissection. If the muscles are adherent, sharp dissection is necessary to separate them. The peritoneum is then opened sharply in the midline. The initial entry is then widened sharply with fine scissors exposing intraperitoneal contents.

Joel-Cohen Technique

Joel-Cohen (Joel-Cohen 1977) described a transverse skin incision, which was subsequently adapted for caesarean sections. This modified incision is placed about 3 cm below the line joining the anterior superior iliac spines. This incision is higher than the traditional Pfannenstiel incision. Sharp dissection is minimised. After the skin is cut, the subcutaneous tissue and the anterior rectus sheath are opened a few centimetres only in the midline. The rectus sheath incision may be extended laterally by blunt finger dissection (Wallin 1999) or by pushing laterally with slightly opened scissor tips, deep to the subcutaneous tissues (Holmgren 1999).The rectus muscles are separated by finger traction. If exceptional speed is required in the transverse entry, the fascia may be incised in the midline and both the fascia and subcutaneous tissue are rapidly divided by blunt finger dissection (Joel-Cohen 1977).

The Joel-Cohen incision has several advantages compared to the Pfannenstiel incision. These include less fever, less pain (and therefore less analgesic requirements), less blood loss, shorter duration of surgery and shorter hospital stay.



NHS
University Hospitals Bristol
NHS Foundation Trust

Patient information service
St Michael's Hospital

Caesarean section

Enhanced recovery

Respecting everyone
Embracing change
Recognising success
Working together
Our hospitals.

Above & Beyond
Fundraising for Bristol city centre hospitals

What is a caesarean section?

A caesarean section is an operation to deliver your baby through your tummy (abdomen). The cut is usually made along the bikini line. There are many possible reasons why this operation may be recommended.

An elective caesarean means that it is a planned operation carried out before labour begins.

An emergency caesarean is one that is carried out as a result of some complication arising during labour.

Your obstetrician will have discussed with you the reasons for your caesarean section. Do ask if you are uncertain why you are having a caesarean or need any other information.

What are the benefits of caesarean section?

There is less risk of injury to the birth canal. There is no labour pain. Any other risks or benefits specific to you will be discussed with you before the caesarean section is arranged.

What are the risks of a caesarean section?

To me

Infection. The uterus or nearby pelvic organs such as the bladder or kidneys can become infected, although the most common site of infection is the wound. Antibiotics are given during your caesarean section to reduce the chance of these infections.

Bleeding. On average, blood loss is about twice as much with caesarean birth as with vaginal birth. Between two and four women in every 100 will need a blood transfusion.

Thrombosis and pulmonary embolism. These are clots in the blood that may affect the legs or lungs. This can be a very dangerous complication and you are routinely asked to wear special socks which improve the blood circulation in your legs. Women with a moderate to high risk will be given Clexane (blood thinning) injections routinely after caesarean section to reduce the risk.

Decreased bowel function. The bowel sometimes slows down for several days after surgery, resulting in distension (abdominal enlargement), bloating and discomfort.

Longer hospital stays and recovery time. Two to four days in the hospital is the traditional length of stay for an uncomplicated caesarean section. Women are usually home within 24 to 48 hours following a vaginal birth. As long as all is well, women may go home six hours after a normal birth.

Allergic reactions. Some people suffer allergic reactions to wound dressings, cleaning solutions and, in rare instances, medications, including anaesthetic agents.

The risk of additional surgery (such as hysterectomy or bladder repair) is rare. Women are more likely to be admitted to an intensive care unit after a caesarean than after a vaginal birth, although the risk remains rare. They are also more likely to be readmitted to hospital with a complication.

Death. The estimated risk of a woman dying after a caesarean birth is less than one in 12,000.

Risks that are increased in a future pregnancy following a caesarean section:

- tearing of the scar on the womb (uterine rupture) – one out of 200 to 500
- the placenta covers the entrance to the womb (placenta praevia)
- death of the baby before labour starts
- you may take longer to become pregnant in the future and have fewer babies than women who do not have a caesarean.

What are the risks of a caesarean section?

To my baby

Breathing problems. About 35 of every 1,000 babies born by caesarean section have breathing problems just after the birth, compared with five of every 1,000 babies after a vaginal birth.

Low Apgar scores (assessment of baby's condition). Babies born by caesarean are sometimes less vigorous at birth. This can be an effect of the anaesthesia and caesarean birth, or the baby may have been in distress to begin with, or perhaps the baby was not stimulated as he or she would have been by vaginal birth.

Fetal injury. The surgeon can accidentally cut the baby while making the uterine incision – one to two out of 100.

Premature birth. If the due date was not accurately calculated, the baby could be delivered too early.

Women who have a caesarean section are less likely to start breastfeeding in the first hours after the birth, but if they do start they are just as likely to continue breastfeeding as those who have a vaginal delivery.

Types of anaesthetic

There are two types of anaesthetic that are used for caesarean section (in this hospital, nine out of 10 are done under regional anaesthesia):

Regional anaesthesia: spinal and/or epidural anaesthetic

You will be awake for your operation, which means that your partner can stay with you. This is the technique used for more than 90 per cent of caesarean sections at St Michael's Hospital. An injection into your back will numb the pain sensation to the lower half of your body. In most cases, this is the type of anaesthetic that we recommend, as it is better for you and your baby.

General anaesthesia: In some cases, it may be appropriate for you to have a general anaesthetic for your caesarean section. You will be given some oxygen to breathe through a mask, and then given some medicine into a drip, which will make you unconscious for the whole operation. You will be woken up after the surgery has finished and you will be able to see your baby as soon as possible. Your birth partner will not be in the operating theatre if you have a general anaesthetic.

Whatever the choice of anaesthetic, you will usually be seen in antenatal clinic by an anaesthetist, who will give a full explanation of the choice of anaesthetic and the risks and benefits for your particular situation. Occasionally, the anaesthetist may not be able to see you in antenatal clinic, but in all cases, an anaesthetist will see you before you go to theatre on the day of your operation.

Further information on anaesthesia for caesarean section can be found at **www.labourpains.com**. If you do not have access to the internet please ask your midwife or doctor to help you get a copy of the information.

1. Your midwife and obstetrician will help you decide if a caesarean section is the best option of delivery for you and your baby; this will probably be at an antenatal clinic visit.

2. You will be given a provisional date for your caesarean section and a date for a 'pre-section clerking appointment' about one week before.

3. At the 'pre-section' appointment you will meet a midwife and midwifery assistant, who will answer your questions, take some blood tests, test your urine and may perform some nasal swabs for MRSA (see MRSA screening leaflet).

4. You will meet an anaesthetist (anaesthetic doctor) to discuss the anaesthetic and pain relief that you will receive during your caesarean section.

5. If you have not already signed your consent form, you will meet an obstetrician (obstetric doctor) who will talk you through the caesarean section and the associated risks and ask you to sign a consent form.

The day before your caesarean section

You will be called by a member of staff on central delivery suite (CDS) the night before to inform you of the time that you should come in the next day. If you have not heard anything from CDS by **8pm** the night before, you should call them on **0117 342 5213** or **0117 342 5214**.

Please tick below when you are told if you are on the **early** or **late** list.

Early ☐

- Take ranitidine at 10pm the night before
- Come in at 8am
  - No food from 2am
  - Clear fluids until 6am
  - Medicines (6am)
    - ranitidine
    - metoclopramide
    - pre-op drinks (if you are diabetic you should have a large glass of water instead of a pre-operative drink).

Late ☐

- Take ranitidine at 10pm the night before
- Come in at 10am
  - No food from 5am
  - Clear fluids until 9am
  - Medicines (9am)
    - ranitidine
    - metoclopramide
    - pre-op drinks (if you are diabetic you should have a large glass of water instead of a pre-operative drink).

On the day of your caesarean birth

Checklist:

Take medications and pre-op drinks at 6am or 9am (diabetics do not have pre-operative drinks). ☐

Have a bath or shower and put on anti-thrombosis socks. ☐

Take off nail varnish and make-up. ☐

Leave jewellery at home – you may wear a wedding band. ☐

Bring notes, suitcase and a urine sample. ☐

Park in the pay and display car park. After you have paid for the first ticket you are entitled to a parking permit. Ask the receptionist or midwife about this if you haven't already been given a pass. ☐

If you would like to, you are welcome to bring a CD with you to listen to in theatre. ☐

Bring slippers and a dressing gown. ☐

You will walk to the theatre with a midwife and be greeted by theatre staff. Your details will be checked and your birth partner taken to change into theatre clothing if they are coming into theatre with you.

You will sit on the operating table whilst routine monitoring is set up. A blood pressure cuff is placed on your arm, a peg to monitor oxygen in your blood put on your finger, and sticky pads put on your chest to monitor your heart rate.

A drip will be put into your hand or arm for fluids and any drugs that are required to be given to you. If you are having a

general anaesthetic, you will be given a drink of sodium citrate (antacid), which helps to reduce the acidity of your stomach contents.

If you are having a spinal anaesthetic, the anaesthetic injection will be inserted into your back while you are either sitting or lying down. You will lie on the theatre table which will be tilted to the left – you will be quite safe and supported.

A midwife will pass a tube (catheter) into your bladder. This will stay in for at least 12 hours. A small amount of your pubic hair will be removed with a clipper.

The anaesthetist will check the anaesthetic and will only let the operation begin when both you and they are ready.

Who will be in theatre?

- one or two anaesthetists
- anaesthetic assistant
- obstetrician
- assistant obstetrician
- scrub nurse
- circulatory nurse (to get equipment for surgeon and nurse)
- midwife (to care for the baby)
- occasionally a neonatologist (a specialist doctor who deals with babies) and possibly medical students or student midwives with your permission.

What happens during the caesarean?

When the anaesthetist gives the obstetrician permission, your operation will start. Your tummy will be cleaned with an antiseptic lotion and a drape applied. A further safety check will then be carried out by the team before the operation starts.

The drape forms a screen which means that you and your partner cannot see the operation. The screen can be lowered, if you wish, when the baby is born.

You will hear various noises of people moving around in the theatre during your operation. If any of the noises bother you, please tell us. You can also bring in your own music.

The baby will be delivered, usually in five to 10 minutes. Depending on the condition of your baby, it will be given to you as soon as possible. If you would like to discover your baby's sex yourself, please ask the midwife to let everyone in the operating theatre know.

To help the baby stay warm, and regulate its breathing and heartbeat, we will encourage you to have skin-to-skin contact as soon as possible after the birth. Your midwife will be able to help you with this. If you feel unhappy with this or are feeling sick, skin contact can be initially with your birth partner or the baby can be wrapped and given to your partner to cuddle until the operation is finished.

At the end of the operation – usually after 30 minutes or more – the wound is closed with stitches, which are sometimes dissolvable, and sometimes have to be removed.

A dressing will be applied to your tummy and occasionally a drain (tube) is left in the wound for about 12 hours. The midwife will remove this when appropriate on the ward.

Various methods of pain control are available, which should have been discussed before the operation (tablets, suppositories (tablets put in the bottom) or injection). You will receive regular pain relief, but it is important for you tell us if you are uncomfortable.

You will be transferred onto a bed before being taken to the recovery room. As long as your condition and that of your baby allows, you will be given another opportunity for skin-to-skin contact, and help with the first feed when your baby is ready.

Enhanced recovery

Enhanced recovery is a slightly different approach to elective surgery, which ensures that patients are in the optimal condition for treatment, have enhanced care during their operation, and experience optimal post-operative rehabilitation.

The aim of enhanced recovery programme is to get you back to full health as soon as possible. Research indicates that the earlier we get you up and around, eating and drinking following surgery the quicker the recovery time is for you and less likely that complications will develop. In order to do this you need to take an active role in your recovery.

We will explain your predicted length of stay in hospital to enable you to make plans for going home.

As part of the enhanced recovery programme, it is very important that you eat and drink well and continue to be active before and after your operation, as this will help you recover more quickly. On the day of your operation, if there is a delay, you may be offered a small amount of water to keep you hydrated.

Before your operation

Food and drink

While waiting for surgery, try to eat a healthy diet in the time leading up to your operation. Ask your midwife if you need more information.

Smoking

As well as being bad for your baby, smoking cigarettes will compromise healing after surgery and make you more prone to infection. Smoking reduces the amount of oxygen delivered to the tissues, which is vital to the healing process. If you haven't already stopped smoking in your pregnancy, it is advisable to stop smoking at least two weeks prior to surgery and for at least six weeks after to give tissues time to heal.

We can refer you to the smoking cessation service.

Activity

It is important to continue to be active while you are in hospital. You will be encouraged to sit out of bed soon after your operation and also on a regular basis. It is anticipated that you will be able to care for your baby.

You will need to maintain frequent breathing exercises and leg exercises. You will be encouraged to mobilise certain distances on the ward and this will be discussed with you on arrival. Please bring some loose fitting, easy to wear clothes into hospital with you as we would like you to get dressed as soon as possible after your operation.

Typical recovery times

Day before – take pre-meds at 10pm.

Day of caesarean – drink two pre-op drinks and take morning pre-meds at 6am (early) or 9am (late) (unless diabetic).

0 hours – skin to skin in theatre with mum or dad.

One hour – baby's first feed. You can drink freely as tolerated.

Two to six hours – if all is well, you will go to the postnatal ward; try to fit in two more feeds for baby. The feeling will start returning to your legs after about four hours; try to start wiggling your toes.

12 to 18 hours – once you can walk to the toilet, your bladder catheter will be removed. The amount of urine you then pass will be measured to make sure you are emptying your bladder properly.

You will be given help the first time you get out of bed.

24 to 48 hours – a blood test will be done to check for anaemia (low iron levels). If you are anaemic you will be offered iron tablets.

It will be recommended that you stay in hospital until you are well enough to be at home and baby is doing well.

My recovery diary

You and your birth partner can fill this out before and after your caesarean.

Pre-op

Tick off pre-meds night before ☐

Tick off pre-meds morning of operation ☐

Tick off each pre-op drink [1] ☐ [2] ☐

0 hours – Have you managed skin to skin with baby? Are you feeling nauseated?

How well is your pain controlled? Pain score = 

Two to six hours – Have you managed to feed baby? Ask for help if you are having difficulty.

Is your pain well controlled? Pain score = 

Have you managed to eat or drink? If not, why not?

Can you move your toes yet?

12 hours – Has your catheter been removed? Have you managed to pass urine?

Is your pain well controlled? Pain score = 

18 hours – Have you been out of bed? Have you passed any wind?

Is your pain well controlled? Pain score = 

24 hours – Can you eat and drink normally? Can you walk around without difficulty? Is baby feeding well? Is there anything stopping you eating or drinking?

If you have other children at home, you may need extra help looking after them for the first week or so.

Most women start to feel that they can do their normal activities after three to four weeks.

You must wait six weeks before driving (check with your insurance company for details).

If you become pregnant again, you will see a doctor in antenatal clinic to discuss your options for delivery. If this was your first or second caesarean, it may be recommended that you have a vaginal birth after caesarean section (VBAC) next time.

Frequently asked questions

How long is the operation going to take?

The operation can take any amount of time from 30 minutes onwards, depending on how complicated the surgery is.

How long will I be in theatre?

The anaesthetic will probably take about half an hour, so in total you will be in theatre at least an hour, but it could be longer.

How long do I need to stay in hospital?

If you and baby are well, you could go home after 24 hours. Most women stay in for two nights. You may be advised to stay in hospital longer if you need support with breastfeeding.

Will I get help with breastfeeding and am I allowed skin to skin and to breastfeed in theatre?

The midwives and midwifery assistants will offer lots of help with breastfeeding. We will encourage you to have skin to skin in theatre. You might find it difficult to breastfeed until you get to the recovery room, as you will not be able to sit up or lie on your side until the caesarean is finished.

Do I have to supply my own milk if I don't want to breastfeed?

We will be able to supply the first few feeds of formula milk.

How long will I stay in recovery following the caesarean?

You will stay there for at least an hour or so; sometimes you may have a hormone drip that takes four hours to finish. If there are any concerns about your recovery, you may stay in the recovery room for longer.

What are the visiting hours on delivery suite?

While on delivery suite you can have visitors at any time, but only three at any one time.

Why can only one person go into theatre with me?

It is safest for you and your baby if there is only one extra person in the operating theatre.

How many caesarean sections are there on the day?

Usually three elective (planned) caesareans. But there can be any number of emergencies that could delay your caesarean.

Where am I on the list?

The order of the list will be decided the night before, based on the clinical needs of the women and their babies.

Who decides the order of the list?

The order is decided by the obstetric and midwifery team on CDS.

Why can I only find out where I am on the list on the morning of the operation?

Because there can often be last minute or unforeseeable changes, but you will always be kept well informed. You will be told what time to come in the night before.

If I'm found to be anaemic (low iron) what happens?

Depending on how anaemic you are, you may be offered oral iron tablets, an intravenous iron infusion or, in extreme situations, a blood transfusion.

Notes/queries

Please note that if for any reason you would value a second opinion concerning your diagnosis or treatment, you are entirely within your rights to request this.

The first step would usually be to discuss this with the doctor or other lead clinician who is responsible for your care.

Smoking is the primary cause of preventable illness and premature death. For support in stopping smoking contact **Smokefree Bristol** on **0117 922 2255**.

As well as providing clinical care, our Trust has an important role in research. This allows us to discover new and improved ways of treating patients.

While under our care, you may be invited to take part in research. To find out more please visit: **www.uhbristol.nhs.uk/research-innovation** or call the research and innovation team on **0117 342 0233**.

For access to other patient leaflets and information please go to the following address:

www.uhbristol.nhs.uk/patients-and-visitors/information-for-patients/

Hospital switchboard: 0117 923 0000

Minicom: 0117 934 9869

www.uhbristol.nhs.uk

For an interpreter or signer please contact the telephone number on your appointment letter.

For this leaflet in large print, audio, or PDF format, please email patientleaflets@uhbristol.nhs.uk.

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