1. **Aim/Purpose of this Guideline**
   This guideline gives guidance to all Obstetricians, Obstetric Anaesthetists, Midwives and Delivery Suite Nurses on the booking and management of Elective and Emergency CS at all gestations.

2. **The Guidance**
   There must be a willingness to abandon the normalisation process should the clinical situation indicate.

2.1. **Elective Caesarean Section**

2.1.1. **Booking an Elective Caesarean Section**
   - The woman will be seen in the Obstetric Clinic and a plan for delivery made. At this time the Doctor authorising the CS should ring delivery suite to book the CS ensuring that all relevant details are given. These include: indication, gestation, person authorising CS, priority to go 1st, BMI, risk of bleeding and any anaesthetic risk.
   - At the time of booking, a pre op appointment should be booked in DAU for 1 week before the CS
   - Take MRSA swabs at 36 week midwifery antenatal appointment
   - Community Midwives to follow up MRSA Suppression when required
   - During this Obstetric Clinic appointment consent for the CS should be taken and filed in the notes
   - All sections should be booked for >39 weeks, unless there are fetal reasons for earlier delivery. If <39 weeks, consideration the use of steroids – with the exception of diabetic women. In these cases it will be discussed in the Joint Diabetic Antenatal Clinic.

2.1.2. **Pre-Operative Assessment for Elective Caesarean Section**
   - The order of the operative list for the following week agreed between the Obstetrician and Anaesthetist upon reviewing the diary at morning handover
   - Midwifery and Anaesthetic assessment should take place
   - Full Blood Count (FBC) and Group and Save (G&S) should be sent
   - The midwife should ensure that the MRSA swabs have been taken
• The woman should be given Ranitidine 150mg to be taken orally the night before the CS

• Give the letter detailing admission times, fasting times and times to take the Ranitidine and pre op drink

• At the pre-op visit the woman should be advised she may wish to bring with her music of her choice to play during the procedure and an isotonic drink for recovery

2.1.3. Admission for Elective CS

• All CS are admitted to Wheal Fortune at the time agreed at pre op assessment

• On admission document a full set of observations on a MEOWS chart, the fetal heart should be auscultated

• A valid G&S will need to be taken if they are at high risk of bleeding or if antibodies have been detected. For all other women a routine G&S is not required.

• If delays are anticipated the Anaesthetist should be requested to review Nil by mouth instructions and decide on an additional pre op drink.

• The Obstetrician planning to perform the CS should see the woman, confirm that she still wishes to proceed, sign the confirmation on the consent form and review notes for any additional surgical risk factors e.g. placental site

• The Obstetrician should decide if a Neonatologist should be present at delivery

• All CS performed for breech should have a presentation scan prior to being taken into theatre

2.1.4. Elective CS in Theatre

• The Midwife/Maternity Nurse looking after the woman on the day of the CS should explore the woman's wishes regarding skin to skin contact and seeing the baby being born. Skin to skin contact should be encouraged. If the woman prefers not to have skin to skin contact during her CS then the partner may consider doing this. The decision regarding skin to skin contact and seeing the baby being born can be communicated to all staff during the ‘sign in’ of the WHO checklist.

• If the woman wishes skin to skin contact with her baby then the cannula should be sited in the woman’s left arm to enable access from the right side. A one-way valve should be used on the IVI
and the blood pressure cuff placed on the same arm as the cannula with the pulse oximetry. The use of an arm board may facilitate this.

- For women who wish to have skin to skin contact, the gown should be freed from her top half when preparing the woman on the operating table and a blanket used to cover her for privacy and dignity

- The woman should be catheterised, cell salvage should be made available and a WHO checklist completed

- A sterile baby wrap should be placed, by the scrub nurse, carefully over the cot covering all the edges of the cot prior to commencing the caesarean section

- When draping, the surgeon should check with the woman whether she wishes to see the baby being born. The surgeon should indicate to the anaesthetist when it is appropriate to lower the drape further enabling the woman and her partner to see the birth

- All women should be given appropriate prophylactic antibiotics prior to incision

- Once the baby is delivered, and following Deferred Cord Clamping of 45 seconds (where appropriate and where there is no excessive bleeding – see Deferred Cord Clamping Guidance) it should be placed in the cot onto the sterile baby wrap by the surgeon. The cot should then be taken immediately to the woman and birth partner where the baby is dried and assessed for the need for resuscitation.

- Once the assessment and any resuscitation needs have been completed, skin to skin contact can commence. The blanket should be placed over both baby and mother without obscuring the baby’s face.

- A photograph of baby +/- woman and birth partner should be allowed during the CS

2.1.5. **Elective Post-operative Care**

- Provided there are no complications, on completion of the CS, the intra-venous fluids can be taken down prior to transfer to recovery and the cannula capped off

- Skin to skin contact should be resumed as soon as possible in recovery. Support infant feeding with skin to skin contact.

- Encourage oral fluid intake
2.2. Decision to delivery time for unplanned Caesarean Section

2.2.1. Classification of Urgency of Emergency CS
Perform category 1 and 2 as quickly as possible after making the decision, especially category 1. Perform category 2 in most situations within 45 minutes of making decision and ensure time of decision is clearly documented (New 2018). It is recognised that in some circumstances these time frames may not be achievable. If the CS falls out of the agreed timeframe the reasons should be documented in the health records.

- Category I = Immediate threat to the life of the woman or fetus – aim for decision to delivery time of 30 minutes (New 2018)
- Category II = Maternal or fetal compromise which is not immediately life threatening – Aim for decision to delivery time of 30 minutes and should be delivered within 45 minutes
- Category III = No maternal or fetal compromise but needs early delivery. For this category the time to delivery must be decided by the Obstetrician and communicated clearly to all those involved and documented in the health records
- Category IV = Delivery timed to suit woman or staff with no urgency for delivery.

2.2.2. The Consultant on call should be involved in the decision making

2.2.3. The time of decision to proceed, the indication for section and Category should be clearly documented in the health records and communicated to all staff

2.2.4. Emergency CS Procedure
- Obtain written consent. For Category I caesarean sections verbal consent alone is appropriate and must be documented in the health records
- Send blood for FBC and Group and Save if not already done
- X Match blood if indicated
- Cell salvage should be made available whenever possible
- Transfer woman to theatre in left lateral position and ensure a fetal monitor is available to record the fetal heart in theatre
• In theatre if there is improvement in the fetal heart rate, consideration should be given to re-classification of urgency

• If there is fetal distress, consider the use of Terbutaline 250 mcg s/c to relax the uterus and increase placental perfusion. Transfer to theatre should not be delayed because of this

• If caesarean section is for fetal bradycardia which then resolves, the need for CS should be reconsidered

• If there is the potential for rapid labour progress and therefore vaginal delivery a vaginal examination should be repeated in theatre prior to the commencement of the CS section

• The Neonatologist or ANNP must be called to attend and should be informed of the category of the CS

• The decision regarding the method of anaesthesia should be made by the Anaesthetist after discussion with the Obstetrician

• The woman should not be left alone after the decision to perform a category 1 or 2 caesarean section has been made

• Paired cord blood samples should be taken for all Emergency CS’s and results filed in Safe Store envelope

• All Category I CSs should be reported by completing a Datix

2.3. Uterotonics for all Caesarean Sections
• After the birth of the baby Carbetocin 100mcg (diluted in 10mls of saline) should be given over a minute intravenously. Carbetocin requires caution with hyponatraemia, cardiovascular disease and severe hypertension. Do not use Carbetocin before delivery of the baby, or if previous hypersensitivity has occurred.

• Carbetocin should be used on all CS unless a Syntocinon infusion is already in progress. If a Syntocinon infusion is in progress, a single dose of Syntocinon 5IU, IV is given and the Syntocinon infusion increased to 125ml/hr of 40IU in 500mls.

• If further uterotonics are required due to uterine atony, proceed to Post-Partum Haemorrhage Guideline and do not give a second dose of Carbetocin
2.4. **Additional considerations for CS of Preterm infants**

2.4.1. **Neuroprotection is indicated for gestations <34+6 weeks**
- A loading dose of 4 grams (8 ml of 50% Magnesium Sulphate), diluted with 12 ml of Saline 0.9% (total 20 ml), is given IV over 5 minutes using a 20 ml syringe.

- A maintenance dose of 10 grams (20 ml Magnesium Sulphate), diluted with 30 ml of Saline 0.9% (total 50 ml) is set up to deliver 1 gram per hour (5 ml/hr) using a syringe driver, until delivery.

- If delivery is imminent it is appropriate to give only the loading dose

2.4.2. **Management at Delivery**
- Ensure umbilical cord is kept long to allow venous access

- Liaise with Neonatologist regarding use of placing the baby in a plastic bag to reduce neonatal hypothermia

2.5. **Post Procedure Care**
- A CS proforma must be completed

- Thromboprophylaxis should be prescribed refer to RCHT Venous Thromboembolism Risk Assessment Clinical Guideline

- Removal of the urinary catheter should be carried out at 6-8 hrs following Elective CS and 12 hrs following an Emergency CS, unless instructed to leave in for a longer time by the surgeon. The time of the removal of the catheter should be documented on the catheter care plan and the notes, followed by the timing and amount of the next void which should be documented in the notes.

- The dressing should be observed each day for soiling or damage. The dressing should be removed on day 5 post operatively.

- Appropriate analgesia should be prescribed

- Indications for CS, procedure and implications for future pregnancies should be discussed postoperatively with all women by an Obstetrician prior to discharge home.

- Women, who are recovering well, from an uncomplicated caesarean section, should be offered discharge from hospital after 24 hours. For an uncomplicated Elective CS with no concerns a midwifery discharge is appropriate.
## 3. Monitoring compliance and effectiveness

<table>
<thead>
<tr>
<th>Element to be monitored</th>
<th>The audit will take into account the record keeping by Obstetricians, Midwives, Nurses and Anesthetists. The audit will be registered with the Trust Audit Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>Audit midwife</td>
</tr>
<tr>
<td>Tool</td>
<td>El LSCS</td>
</tr>
</tbody>
</table>
|                         | • If a patient is having a planned LSCS and she is <39 weeks were steroids given (except in the case of a diabetic woman)  
|                         | • Were MRSA swabs taken and the results appropriately actioned  
|                         | • On admission were a full set of observations taken and plotted on a MEOWS chart and the fetal heart auscultated and documented.  
|                         | • If breech, was a presentation scan performed prior to going to theatre  
|                         | • Was the WHO Checklist thoroughly completed?  
| Em LSCS                 | Was the Em LSCS performed within the time that the category dictates?  
|                         | Was the LSCS reclassified  
|                         | Was Terbutaline given if fetal distress  
|                         | Was the neonatologist/ANNP present at delivery  
|                         | Was MgS04 given if the gestation was <34+6 if appropriate.  
| Postnatal               | Was the urinary catheter removed after 6-8 hours if an El LSCS and 12hours if an emergency LSCS unless otherwise instructed.  
| Frequency               | 1% or 10 sets, whichever is the greater, of all health records of women who have delivered by LSCS over the lifetime of this guideline.  
| Reporting arrangements  | A formal report of the results will be received over the lifetime of this Guideline at the Patient Safety Forum or Clinical Audit Forum as per the audit plan.  
|                         | During the process of the audit, if compliance is below 75% or other deficiencies identified this will be highlighted at the next Obstetric Patient Safety Forum or Clinical Audit Forum and an action plan agreed.  
| Acting on recommendations and Lead(s) | Any deficiencies identified will be highlighted at the next Patient Safety Forum or Clinical Audit Forum and an action plan developed.  
|                         | Action leads will be identified and a time frame for the action to be completed by.  
|                         | The Action plan will be monitored by the Patient Safety |
| Change in practice and lessons to be shared | • Required changes to practice will be identified and actioned within a time frame agreed on the action plan.  
• A lead member of staff will be identified to take each change forward where appropriate.  
• The results of audits will be distributed to all relevant staff via the Patient Safety Newsletter or other appropriate route. |

4. **Equality and Diversity**

4.1 This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the 'Equality, Diversity & Human Rights Policy' or the [Equality and Diversity website](#).

4.2 **Equality Impact Assessment**

   The Initial Equality Impact Assessment Screening Form is at Appendix 2.
## Appendix 1. Governance Information

<table>
<thead>
<tr>
<th>Document Title</th>
<th>Caesarean Section (CS) Clinical Guideline V3.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Issued/Approved:</td>
<td>7th June 2018</td>
</tr>
<tr>
<td>Date Valid From:</td>
<td>7th June 2018</td>
</tr>
<tr>
<td>Date Valid To:</td>
<td>7th June 2021</td>
</tr>
<tr>
<td>Directorate / Department responsible (author/owner):</td>
<td>Dr Sophie Haynes Consultant Obstetrician Obs and Gynae Directorate</td>
</tr>
<tr>
<td>Contact details:</td>
<td>01872-250000</td>
</tr>
<tr>
<td>Brief summary of contents</td>
<td>This guideline gives guidance to all Obstetricians, Obstetric Anaesthetists, Midwives and Delivery Suite Nurses on the process and procedure for all grades of Caesarean Section.</td>
</tr>
<tr>
<td>Suggested Keywords:</td>
<td>Skin, normalising, normal, caesarean, section, elective, emergency, uterotonics, pre, meds, operative, care, deferred, CS,</td>
</tr>
<tr>
<td>Target Audience</td>
<td>RCHT</td>
</tr>
<tr>
<td>Executive Director responsible for Policy:</td>
<td>Medical Director</td>
</tr>
<tr>
<td>Date revised</td>
<td>7th June 2018</td>
</tr>
<tr>
<td>This document replaces (exact title of previous version):</td>
<td>CAESAREAN SECTION (CS) – CLINICAL GUIDELINE V2.0</td>
</tr>
<tr>
<td>Approval route (names of committees)/consultation:</td>
<td>Maternity Guidelines Group Obs and Gynae Directorate Divisional Board for noting</td>
</tr>
<tr>
<td>Divisional Manager confirming approval processes</td>
<td>Tunde Adewopo</td>
</tr>
<tr>
<td>Name and Post Title of additional signatories</td>
<td>Not Required</td>
</tr>
<tr>
<td>Name and Signature of Divisional/Directorate Governance Lead confirming approval by specialty and divisional management meetings</td>
<td>{Original Copy Signed} Name: Caroline Amukusana</td>
</tr>
</tbody>
</table>
### Signature of Executive Director giving approval

{Original Copy Signed}

### Publication Location (refer to Policy on Policies – Approvals and Ratification):

Internet & Intranet ✅ Intranet Only

### Document Library Folder/Sub Folder

Clinical/Midwifery and Obstetrics

### Links to key external standards

- UNICEF Baby Friendly initiative
- RCHT (2014) Infant Feeding Policy
- RCHT (2012) Bladder Care Intrapartum and Postpartum Bladder Care
- NICE (2011) CG132 Caesarean Section

### Training Need Identified?

No

### Version Control Table

<table>
<thead>
<tr>
<th>Date</th>
<th>Version No</th>
<th>Summary of Changes</th>
<th>Changes Made by (Name and Job Title)</th>
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</thead>
<tbody>
<tr>
<td>10th February 2012</td>
<td>V1.0</td>
<td>Initial Issue</td>
<td>Karen Watkins Consultant Obstetrician</td>
</tr>
<tr>
<td>17th December 2015</td>
<td>V2.0</td>
<td>Merging of previous 4 Caesarean Section Guidelines into one guideline for all Grades of Caesarean Section. Includes advice upon normalising Caesarean Section and changes in preoperative medication.</td>
<td>Sophie Haynes Senior Obstetric Registrar</td>
</tr>
<tr>
<td>7th June 2018</td>
<td>V3.0</td>
<td>Timings for category 1 and category 2 updated in line with NICE CG132</td>
<td>Helen Odell quality and safety improvement lead</td>
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</tbody>
</table>
All or part of this document can be released under the Freedom of Information Act 2000

This document is to be retained for 10 years from the date of expiry.
This document is only valid on the day of printing

Controlled Document
This document has been created following the Royal Cornwall Hospitals NHS Trust Policy on Document Production. It should not be altered in any way without the express permission of the author or their Line Manager.
## Appendix 2. Initial Equality Impact Assessment Form

*This assessment will need to be completed in stages to allow for adequate consultation with the relevant groups.*

<table>
<thead>
<tr>
<th>Name of Name of the strategy / policy / proposal / service function to be assessed</th>
<th>Caesarean Section (CS) Clinical Guideline V3.0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Directorate and service area:</strong></td>
<td><strong>Is this a new or existing Policy?</strong></td>
</tr>
<tr>
<td>Obs &amp; Gynae Directorate</td>
<td>Existing</td>
</tr>
<tr>
<td><strong>Name of individual completing assessment:</strong></td>
<td><strong>Telephone:</strong></td>
</tr>
<tr>
<td>Sophie Haynes</td>
<td>01872-255000</td>
</tr>
</tbody>
</table>

1. **Policy Aim***

   *Who is the strategy / policy / proposal / service function aimed at?*

   This guideline gives guidance to all Obstetricians, Obstetric Anaesthetists, Midwives and Delivery Suite Nurses on the process and procedure for all grades of Caesarean Section

2. **Policy Objectives***

   To achieve a positive birth experience and safe delivery for a woman undergoing birth by Caesarean Section

3. **Policy – intended Outcomes***

   Safe delivery of a baby born by Caesarean Section

4. **How will you measure the outcome?**

   Compliance Monitoring Tool

5. **Who is intended to benefit from the policy?**

   All women and their babies undergoing birth by Caesarean Section

6a **Who did you consult with**

   Workforce   Patients   Local groups   External organisations   Other

   X

b. **Please identify the groups who have been consulted about this procedure.**

   Maternity Guidelines Group
   Maternity Governance
   Obstetrics and Gynaecology Directorate
   Policy Review group
   Divisional Board for approval
What was the outcome of the consultation?

Guideline agreed

7. The Impact

Please complete the following table. **If you are unsure/don’t know if there is a negative impact you need to repeat the consultation step.**

<table>
<thead>
<tr>
<th>Are there concerns that the policy <strong>could</strong> have differential impact on:</th>
<th>Yes</th>
<th>No</th>
<th>Unsure</th>
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<tr>
<td><strong>Equality Strands:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>X</td>
<td>All women and babies undergoing birth by caesarean section</td>
<td></td>
</tr>
<tr>
<td>Sex (male, female, trans-gender / gender reassignment)</td>
<td>X</td>
<td>All women and babies undergoing birth by caesarean section</td>
<td></td>
</tr>
<tr>
<td>Race / Ethnic communities /groups</td>
<td>X</td>
<td>All women and babies undergoing birth by caesarean section</td>
<td></td>
</tr>
<tr>
<td>Disability - Learning disability, physical impairment, sensory impairment, mental health conditions and some long term health conditions.</td>
<td>X</td>
<td>All women and babies undergoing birth by caesarean section</td>
<td></td>
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<tr>
<td>Religion / other beliefs</td>
<td>X</td>
<td>All women and babies undergoing birth by caesarean section</td>
<td></td>
</tr>
<tr>
<td>Marriage and Civil partnership</td>
<td>X</td>
<td>All women and babies undergoing birth by caesarean section</td>
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<tr>
<td>Pregnancy and maternity</td>
<td>X</td>
<td>All women and babies undergoing birth by caesarean section</td>
<td></td>
</tr>
<tr>
<td>Sexual Orientation, Bisexual, Gay, heterosexual, Lesbian</td>
<td>X</td>
<td>All women and babies undergoing birth by caesarean section</td>
<td></td>
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</table>

You will need to continue to a full Equality Impact Assessment if the following have been highlighted:

- You have ticked “Yes” in any column above and
- No consultation or evidence of there being consultation- this **excludes** any **policies** which have been identified as not requiring consultation. **or**
8. Please indicate if a full equality analysis is recommended.  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>X</th>
</tr>
</thead>
</table>

9. If you are **not** recommending a Full Impact assessment please explain why.

No areas indicated

<table>
<thead>
<tr>
<th>Signature of policy developer / lead manager / director</th>
<th>Date of completion and submission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sophie Haynes</td>
<td>7th June 2018</td>
</tr>
</tbody>
</table>

| Names and signatures of members carrying out the Screening Assessment | 1. Sarah-Jane Pedler  
2. Human Rights, Equality & Inclusion Lead |
|---------------------------------------------------------------------|--------------------------------------|

Keep one copy and send a copy to the Human Rights, Equality and Inclusion Lead  
c/o Royal Cornwall Hospitals NHS Trust, Human Resources Department, Knowledge Spa,  
Truro, Cornwall, TR1 3HD

This EIA will not be uploaded to the Trust website without the signature of the Hu-
man Rights, Equality & Inclusion Lead.

A summary of the results will be published on the Trust’s web site.

Signed **Sarah-Jane Pedler**  
Date 7th June 2018
Appendix 3: Grade descriptions for Emergency CS

Category I - Immediate threat to the life of a woman or fetus:

Any Caesarean Section in which immediate delivery is required with every member of the team working to transfer the woman without any delay into theatre so that the Caesarean Section can commence immediately. Written consent would be inappropriate and verbal consent should be obtained. In most cases, a general anaesthetic would be indicated, however, if the anaesthetist has already started topping up an existing epidural or if the anaesthetist is experienced and feels confident to site a spinal, then these also may be indicated. The aim would be that the baby would be delivered within 30 minutes of the decision. Examples include:

- Cord prolapse with pathological CTG
- Fetal bradycardia
- Abruption with maternal collapse
- Woman attempting a VBAC with signs of uterine rupture
- Fetal blood sample with a pH of <7.00
- STAN events mandating delivery (New 2018)

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

These are urgent Caesarean Sections in which there is compromise, however not life threatening. Written consent is appropriate and transfer to theatre, although needing to be prompt, should be done in a calm and safe manner so that other patients on the delivery suite are not put at risk. The aim should be for the delivery to be completed within 30 minutes. Delivery should not be longer than 45 minutes from decision. Examples of these caesarean sections include:

- Fetal blood sample with a pH of <7.20
- Pathological CTG in which a fetal blood sample is not possible/contraindicated but where the pH would be expected to be <7.20
- Significant abruption without signs of shock/fetal compromise
- Cord presentation or prolapse without pathological CTG
- Secondary arrest in a women attempting VBAC
- Failure to progress in second-stage with pathological CTG

Category III – No maternal or fetal compromise but needs early delivery:

A set time frame has not been set for these and for each case the obstetrician should set a time which is appropriate depending to clinical condition and the other priorities on labour ward at the time. The time decided upon should be communicated clearly to the anaesthetist and may be between 45 minutes to next day. As a general rule, category 3 CS, in established labour, should be accomplished within 60 minutes (New 2018). For example the decision to delivery interval for a woman who fails to progress in labour is likely to be less than a woman who has had a failed induction. It may be that the obstetrician will decide that the woman who has failed to progress needs to be delivered within 45 minutes. This should be communicated to the whole team.
Examples of these would include:

- Failure to progress in the absence of a pathological CTG
- Woman admitted in established labour who was booked for elective caesarean section
- Undiagnosed breech in labour who wishes a caesarean section and CTG normal
- Failed induction (for a medical indication)

**Category IV – delivery timed to suit woman or staff:**

This category basically includes all Elective Caesarean Section or other non-urgent CS’s e.g. when a woman booked for a CS is admitted with some uterine activity but not in labour or a failed induction for non-urgent reasons. These CS’s can be planned at any time and have no urgency.