1. **Aim/Purpose of this Guideline**
Operative vaginal delivery occurs in about 10-15% of deliveries and has the potential for morbidity for mother and baby. It is therefore important that operative vaginally delivery is performed in a way to minimise this risk. The following guideline is aimed to clearly identify when an operative vaginal delivery is safe and how it should be safely conducted.

2. **The Guidance**

2.1. **Indications: to be documented on the Proforma**
- Proven or suspected fetal compromise or failure to progress in second stage of labour
- Maternal exhaustion or poor maternal effort
- Maternal medical indications which need to avoid valsalva e.g. Cardiac Disease Class III or IV, hypertensive crisis, Cerebral Vascular Disease, particularly uncorrected Cerebral Vascular Malformations), Myasthenia Gravis, Spinal Cord Injury

2.2. **Choice of Instruments**
Either ventouse or forceps may be used; the choice will depend on the clinical circumstances and the preference of the operator. Although ventouse is associated with less maternal perineal and vaginal trauma, it is associated with an increased risk of failed procedure and the increased risk of cephalhaematoma and retinal haemorrhage in the baby. There are certain situations in which ventouse is contraindicated and when forceps are preferable. If ventouse is considered appropriate, the Obstetrician should select the Silastic, OA metal or OP metal cup according to the clinical situation.

2.3. **Ventouse Delivery Contraindications**
- The use of ventouse for preterm infants is uncertain. Caution should be exercised at less than 36 weeks. Consider less negative pressure for cup application.
- Face presentations
- Suspected fetal bleeding disorder
- Predisposition to fracture e.g. Osteogenesis Imperfecta
- Maternal Hepatitis C or Human Immunodeficiency Virus (HIV)

2.4. **Forceps Delivery**

2.4.1. **Indications**
- Very urgent occiput anterior delivery
- OA delivery in which there is significant caput or where there is doubt whether a ventouse extraction can be achieved (New 2018)
- Delivery of baby after manual rotation to OA position (New 2018)
- No or minimal maternal effort is available
- Rotation delivery by Kiellands forceps in experienced hands. No middle grade should use this instrument unless fully signed off as competent (New 2018)
- Delivery of the after-coming head in a vaginal breech delivery
- After failed Ventouse only with extreme caution when an experienced operator is confident that safe vaginal delivery
can be readily achieved with forceps without inappropriate traction. The increased risk of trauma to the infant must be balanced against the risks of a potentially complex Caesarean Section.

2.4.2. Contraindications
- Maternal HIV or Hepatitis C
- Suspected fetal bleeding disorder ('lift out' is acceptable)
- Predisposition to fracture e.g. Osteogenesis Imperfecta, unless 'disimpaction' is likely to lead to greater trauma at caesarean section

2.5. Pre-requisites
- No more than 1/5th of the fetal head palpable per abdomen. This equates to the 'true' head being at the level of the ischial spines. Caput and moulding may extend well below the spines and be misleading.
- Full cervical dilatation and ruptured membranes
- Fetal position and attitude must be defined
- Effective analgesia (see below)
- Empty bladder and catheter removed
- Full explanation to the woman and her partner
- Verbal consent obtained and documented in the maternity records (see below)
- Detailed documentation, may need to be retrospective but with times recorded
- Willingness to abandon the attempt promptly if the procedure proves difficult

2.6. Consent (New 2018)
There should be a full explanation of what the procedure will involve, including performing an episiotomy (if needed). The woman should be informed that an assisted vaginal delivery is a safe and appropriate method of delivery for them when compared to an emergency Caesarean Section as a caesarean section performed at full dilatation, when the baby's head is very low in the birth canal, can be traumatic for both the woman and her baby.

The risks of the procedure should be discussed and should include the following serious or frequently occurring risks:

2.6.1 Maternal risks-
- vaginal or vulval tears which may involve the anal sphincter or may lead to the formation of a haematoma
- excessive bleeding
- future problems with control of bladder and bowel function

2.6.2 Risks to baby-
- baby may become jaundiced
• baby may have marks or abrasions to the face with forceps or swelling on the scalp where the suction cup attaches with ventouse (inform the woman that these should heal quickly)
• bleeding beneath the skin can occur with the suction cup but this usually resolves without problems; bleeding between the skull and scalp or bleeding in the brain can occur but this is uncommon
• facial nerve injury is possible with forceps but rare.

2.6.3 Other procedures that may be necessary
• If baby’s shoulders are difficult to deliver then manoeuvres will be performed to aid their delivery.
• A Caesarean section may be needed if the Operative Vaginal Delivery is unsuccessful,
• Any tears, if sustained, or Episiotomy, if performed will be repaired after.

2.7. Analgesia
If there is a working epidural then this should be topped up further if necessary. If there is no analgesia and time allows discuss the option of regional analgesia with the women. If this is declined, or urgent delivery indicated a pudendal block should be sited and the woman offered Entonox during the procedure. In certain circumstances such as fetal bradycardia a pudendal block may cause further delay and Entonox should be used.

2.8. Swab and Instrument Count
When the assisted delivery pack is opened swabs and instruments should be counted and the count repeated when the delivery is completed. This should be documented on the proforma following delivery.

2.9. Conducting the Delivery
• Explain the procedure fully to the woman and partner and obtain verbal consent
• Ensure there is adequate analgesia
• Transfer to a larger room if necessary
• Ensure neonatologist present in adequate time to prepare for delivery
• For trials of instrumental delivery the procedure should be performed in theatre (See Sections 2.10 & 2.11)
• The woman should be placed in the lithotomy position, perineum cleaned and drapes applied
• The bladder should be emptied with an in out catheter using an aseptic technique
• The position, degree of flexion, station, degree of caput and moulding should be reassessed and the suitability of delivery vaginally and in the room reassessed
• The procedure should be abandoned if any of the following are encountered
2.10. Indications for abandoning Ventouse Procedure
- Cup detachment twice, unless the head is distending the perineum in which case a third application could be considered
- No significant descent of the ‘true’ head over two contractions. A third contraction may be considered if flexion and rotation have been achieved.
- Delivery is not imminent following 3 pulls of a correctly applied instrument. If however there is progress descent with each pull or delivery is imminent then a further pull may be considered.
- Cup application for greater than fifteen minutes

2.11. Indications for abandoning Forceps Procedure
- Failure of the blades to be applied and to lock with ease
- Failure of immediate descent with appropriate traction
- Delivery is not imminent following 3 pulls of a correctly applied instrument. If however there is progress descent with each pull or delivery is imminent then a further pull may be considered.

2.12. Trial of Ventouse or Forceps Delivery
If there is any uncertainty about achieving a safe vaginal delivery the instrumental delivery should be considered a ‘trial’ performed in theatre.

2.13. Trial of Instrumental Delivery needs the following requirements
- Maternal written consent for ‘trial’ and Caesarean Section
- The consultant on for delivery suite should attend for all trials in which there is an inexperienced operator
- Transfer to theatre: adequate analgesia, CTG, staff and equipment ready for LSCS

2.14. Use of Sequential Instruments
The use of sequential instruments is associated with an increased risk of trauma to the infant; however, the operator must balance the risks of a Caesarean Section following failed vacuum extraction with the risks of forceps delivery following failed vacuum extraction.
Obstetricians should be aware of increased neonatal morbidity with failed operative vaginal delivery and/or sequential use of instruments and should inform the neonatologist when this occurs to ensure appropriate management of the baby. The use of outlet/low-cavity forceps following failed vacuum extraction may be judicious in avoiding a potentially complex Caesarean Section. 
Caesarean Section in the second stage of labour is associated with an increased risk of Major Obstetric Haemorrhage, prolonged hospital stay and admission of the baby to the Neonatal Unit compared with completed instrumental delivery. This must be balanced with the increased risk of neonatal trauma associated with sequential use of instruments. The risk of intracranial haemorrhage is 1 in 256 deliveries for two instruments versus 1 in 334 for failed forceps proceeding to Caesarean Section.
2.15. Post Delivery Care

- Paired umbilical cord gases must be obtained
- Prescribe analgesia and thromboprophylaxis accordingly
- Obstetricians should review the woman the following day to discuss the delivery and prognosis for future deliveries and check for complications
- Consider physiotherapy referral

2.16. Care of the Bladder

2.16.1 Women that have had an operative vaginal delivery under a normal epidural top up should have an indwelling catheter left insitu for at least 6-8 hours.
2.16.2 Women who have had an operative vaginal delivery with an additional stronger top up should have an indwelling catheter left insitu for at least 12 hours.
2.16.3 If the woman has not had a regional anaesthesia an indwelling catheter should be considered if she has had a long labour or there are any other risk factors. The timing of the catheter removal, followed by the timing and volume of the first void should be documented in the post-natal notes.

3. Monitoring compliance and effectiveness

<table>
<thead>
<tr>
<th>Element to be monitored</th>
<th>Record keeping by Obstetricians, Anaesthetists and Neonatologists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>Labour Ward Lead Consultant</td>
</tr>
<tr>
<td>Tool</td>
<td>• Was an operative vaginal delivery proforma completed and filed in the notes</td>
</tr>
<tr>
<td></td>
<td>• Was the procedure performed or supervised by an experienced, appropriately trained practitioner</td>
</tr>
<tr>
<td></td>
<td>A selection of these will be audited according to current drivers</td>
</tr>
<tr>
<td></td>
<td>• Was the reason for the procedure documented</td>
</tr>
<tr>
<td></td>
<td>• Was verbal consent obtained and documented.</td>
</tr>
<tr>
<td></td>
<td>• If a trial, was written consent obtained for instrumental and Caesarean Section</td>
</tr>
<tr>
<td></td>
<td>• If sequential instruments, were forceps used appropriately following failed ventouse</td>
</tr>
<tr>
<td></td>
<td>• Were there any indications to abandon the procedure</td>
</tr>
<tr>
<td></td>
<td>• If indications to abandon were present, was the procedure abandoned</td>
</tr>
<tr>
<td></td>
<td>• If performed under normal epidural top up was an indwelling catheter insitu for 6-8 hours</td>
</tr>
<tr>
<td></td>
<td>• If performed under stronger epidural top up was an indwelling catheter insitu for 12 hours</td>
</tr>
<tr>
<td></td>
<td>• Was the timing of the catheter removal, followed by the timing and volume of the first void documented in the post natal notes</td>
</tr>
</tbody>
</table>

Frequency

- 1% or 10 sets, whichever the greater, of all health records of women who have delivered following and operative vaginal delivery, will be audited over the lifetime of this guideline
<table>
<thead>
<tr>
<th>Reporting arrangements</th>
<th>• Maternity Patient Safety Forum or Clinical Audit Forum</th>
</tr>
</thead>
</table>
| Acting on recommendations and Lead(s) | • Maternity 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  
• The action plan will be monitored by the Maternity Patient Safety or Clinical Audit Forum until all actions complete |
| 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 the forum will be identified to take each change forward where appropriate  
• Maternity Patient Safety Newsletter |

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><strong>Document Title</strong></th>
<th>Operative Vaginal Delivery Clinical Guideline V2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date Issued/Approved:</strong></td>
<td>14 November 2018</td>
</tr>
<tr>
<td><strong>Date Valid From:</strong></td>
<td>November 2018</td>
</tr>
<tr>
<td><strong>Date Valid To:</strong></td>
<td>November 2021</td>
</tr>
<tr>
<td><strong>Directorate / Department responsible (author/owner):</strong></td>
<td>Dr Karen Watkins Consultant Obstetrician Obs and Gynae Directorate</td>
</tr>
<tr>
<td><strong>Contact details:</strong></td>
<td>01872 252727</td>
</tr>
<tr>
<td><strong>Brief summary of contents</strong></td>
<td>To give guidance to Obstetricians on identifying when an operative vaginal delivery is safe and how it should be safely conducted</td>
</tr>
<tr>
<td><strong>Suggested Keywords:</strong></td>
<td>Forceps, operative, vaginal, ventouse, theatre, sequential, instrumental, caesarean, section, kiwi, manual, rotation</td>
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<td><strong>Target Audience</strong></td>
<td>RCHT</td>
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<tr>
<td><strong>Executive Director responsible for Policy:</strong></td>
<td>Medical Director</td>
</tr>
<tr>
<td><strong>Date revised:</strong></td>
<td>1 November 2018</td>
</tr>
<tr>
<td><strong>This document replaces (exact title of previous version):</strong></td>
<td>Operative Vaginal Delivery Clinical Guideline</td>
</tr>
<tr>
<td><strong>Approval route (names of committees)/consultation:</strong></td>
<td>Maternity Guidelines Group Obs and Gynae Directorate Divisional Board for noting</td>
</tr>
<tr>
<td><strong>Divisional Manager confirming approval processes</strong></td>
<td>Head of Midwifery</td>
</tr>
<tr>
<td><strong>Name and Post Title of additional signatories</strong></td>
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</tr>
<tr>
<td><strong>Signature of Executive Director giving approval</strong></td>
<td>{Original Copy Signed}</td>
</tr>
<tr>
<td><strong>Publication Location (refer to Policy on Policies – Approvals and Ratification):</strong></td>
<td>Internet &amp; Intranet</td>
</tr>
<tr>
<td><strong>Document Library Folder/Sub Folder</strong></td>
<td>Clinical/Midwifery and Obstetrics</td>
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Links to key external standards | CNST 3.3
---|---

- Extraction versus Forceps for assisted vaginal delivery (2004) Johanson RB and menon BKV Cochrane Database

Training Need Identified? | No

Version Control Table

<table>
<thead>
<tr>
<th>Date</th>
<th>Versio n No</th>
<th>Summary of Changes</th>
<th>Changes Made by (Name and Job Title)</th>
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<tr>
<td>May 2005</td>
<td>V1.0</td>
<td>Initial Guideline</td>
<td>Rob Holmes  Consultant Obstetrician</td>
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<tr>
<td>December 2009</td>
<td>V1.2</td>
<td>Updated and proforma included</td>
<td>Rob Holmes  Karen Watkins  Consultant Obstetricians</td>
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<tr>
<td>January 2011</td>
<td>V1.3</td>
<td>Updated to include compliance monitoring</td>
<td>Rob Holmes  Karen Watkins  Consultant Obstetricians</td>
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<tr>
<td>April 2012</td>
<td>V1.4</td>
<td>Updated in line with CNST compliance</td>
<td>Rob Holmes  Karen Watkins  Consultant Obstetricians</td>
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</table>

Operative Vaginal Delivery Clinical Guideline V2.0
<table>
<thead>
<tr>
<th>Date</th>
<th>Version</th>
<th>Changes</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 2012</td>
<td>V1.5</td>
<td>Changes to Compliance monitoring Tool</td>
<td>Karen Watkins</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Consultant Obstetrician</td>
</tr>
<tr>
<td>17th November 2015</td>
<td>V1.6</td>
<td>Minor change advising: If ventouse is considered appropriate the Obstetrician should select the Silastic, OA metal or OP metal cup according to the clinical situation</td>
<td>Karen Watkins</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Consultant Obstetrician</td>
</tr>
<tr>
<td>14 November 2018</td>
<td>V2.0</td>
<td>Addition of consent to the guideline. Changes to the forceps delivery indications.</td>
<td>Karen Watkins</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Consultant Obstetrician</td>
</tr>
</tbody>
</table>

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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
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# Appendix 2. Initial Equality Impact Assessment Form

Name of Name of the strategy / policy / proposal / service function to be assessed (hereafter referred to as **policy**) (Provide brief description):

Operative Vaginal Delivery Clinical Guideline V2.0

<table>
<thead>
<tr>
<th>Directorate and service area:</th>
<th>Is this a new or existing Policy?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs &amp; Gynae Directorate</td>
<td>Existing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of individual completing assessment:</th>
<th>Telephone:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karen Watkins</td>
<td>01872 252730</td>
</tr>
</tbody>
</table>

1. Policy Aim*  
Who is the strategy / policy / proposal / service function aimed at?  
To give guidance to Obstetricians on identifying when an operative vaginal delivery is safe and how it should be safely conducted

2. Policy Objectives*  
To give guidance to Obstetricians on identifying when an operative vaginal delivery is safe and how it should be safely conducted

3. Policy – intended Outcomes*  
Safe outcome for mother and baby following operative vaginal delivery

4. *How will you measure the outcome?  
Compliance Monitoring Tool

5. Who is intended to benefit from the policy?  
Pregnant women and their babies

6a Who did you consult with  

<table>
<thead>
<tr>
<th>Workforce</th>
<th>Patients</th>
<th>Local groups</th>
<th>External organisations</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b). Please identify the groups who have been consulted about this procedure.  
Guidelines Group  
Obs and Gynae Directorate

What was the outcome of the consultation?  
Guideline agreed

---

7. The Impact  
Please complete the following table.

Are there concerns that the policy **could** have differential impact on:
<table>
<thead>
<tr>
<th>Equality Strands:</th>
<th>Yes</th>
<th>No</th>
<th>Rationale for Assessment / Existing Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td>X</td>
<td>All pregnant women</td>
</tr>
<tr>
<td><strong>Sex</strong> (male, female, trans-gender / gender reassignment)</td>
<td></td>
<td>X</td>
<td>All pregnant women</td>
</tr>
<tr>
<td><strong>Race / Ethnic communities /groups</strong></td>
<td></td>
<td>X</td>
<td>All pregnant women</td>
</tr>
<tr>
<td><strong>Disability</strong> - learning disability, physical disability, sensory impairment and mental health problems</td>
<td></td>
<td>X</td>
<td>All pregnant women</td>
</tr>
<tr>
<td><strong>Religion / other beliefs</strong></td>
<td></td>
<td>X</td>
<td>All pregnant women</td>
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<tr>
<td><strong>Marriage and civil partnership</strong></td>
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<td>All pregnant women</td>
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<tr>
<td><strong>Pregnancy and maternity</strong></td>
<td></td>
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<td>All pregnant women</td>
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<tr>
<td><strong>Sexual Orientation, Bisexual, Gay, heterosexual, Lesbian</strong></td>
<td></td>
<td>X</td>
<td>All pregnant women</td>
</tr>
</tbody>
</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
- Major service redesign or development

8. Please indicate if a full equality analysis is recommended.  
   Yes | No  
   X    |  

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

N/A

Signature of policy developer / lead manager / director  
Karen Watkins  
Date of completion and submission  
14 November 2018

Names and signatures of members carrying out the Screening Assessment  
1. Karen Watkins  
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

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

Signed: Caroline Amukusana