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Royal Cornwall Hospitals NHS Trust

Operative Vaginal Delivery Clinical Guideline

V3.0

December 2022

1. Aim/Purpose of this Guideline

1.1. 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.

1.2. This version supersedes any previous versions of this document.

1.3. This guideline makes recommendations for women and people who are pregnant. For simplicity of language the guideline uses the term women throughout, but this should be taken to also include people who do not identify as women but who are pregnant, in labour and in the postnatal period. When discussing with a person who does not identify as a woman please ask them their preferred pronouns and then ensure this is clearly documented in their notes to inform all health care professionals.

Data Protection Act 2018 (General Data Protection Regulation – GDPR) Legislation

The Trust has a duty under the Data Protection Act 2018 and General Data Protection Regulations 2016/679 to ensure that there is a valid legal basis to process personal and sensitive data. The legal basis for processing must be identified and documented before the processing begins. In many cases we may need consent; this must be explicit, informed, and documented. We cannot rely on opt out, it must be opt in.

Data Protection Act 2018 and General Data Protection Regulations 2016/679 is applicable to all staff; this includes those working as contractors and providers of services.

For more information about your obligations under the Data Protection Act 2018 and General Data Protection Regulations 2016/679 please see the Information Use Framework Policy or contact the Information Governance Team

Royal Cornwall Hospital Trust rch-tr.infogov@nhs.net

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, OP metal cup, or kiwi 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.
- Delivery of baby after manual rotation to OA position.
- 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.
- 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**

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 women and her baby. This should be documented using the instrumental delivery consent sticker.

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. Please ensure that a clean pair of sterile gloves are used.

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. **Categorisation**

2.8.1. Classification of Urgency of instrumental delivery should be stated and documented at the time of the decision to deliver. This should be in line with the Caesarean section classification as below.

2.8.2. 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.

2.8.3. It is recognised that in some circumstances these time frames may not be achievable.

2.8.4. If the delivery 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.

- 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.

2.9. **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.

2.10. **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.

2.11. **Indications for abandoning Ventouse Procedure (New 2022)**

- Where there is no evidence of progressive descent with moderate traction during each pull of a correctly applied instrument by an experienced operator. (RCOG 2020)

- Complete vacuum-assisted birth in the majority of cases with a maximum of three pulls to bring the fetal head on to the perineum. Three additional gentle pulls can be used to ease the head out of the perineum (RCOG 2020).

- If there is minimal descent with the first two pulls of a vacuum, the operator should consider whether the application is suboptimal, the fetal position has been incorrectly diagnosed or there is cephalopelvic disproportion. Less

experienced operators should stop and seek a second opinion. Experienced operators should re-evaluate the clinical findings and either change approach or discontinue the procedure (RCOG 2020).

- Discontinue vacuum-assisted birth if there have been two ‘pop-offs’ of the instrument. Less experienced operators should seek senior support after one ‘pop-off’ to ensure the woman has the best chance of a successful assisted vaginal birth (RCOG 2020).

2.12. **Indications for abandoning Forceps Procedure (New 2022)**

- Where the forceps cannot be applied easily, the handles do not approximate easily or if there is a lack of progressive descent with moderate traction (RCOG 2020).

- Discontinue rotational forceps birth if rotation is not easily achieved with gentle pressure (RCOG 2020).

- Discontinue attempted forceps birth if birth is not imminent following three pulls of a correctly applied instrument by an experienced operator (RCOG 2020).

- If there is minimal descent with the first one or two pulls of the forceps, the operator should consider whether the application is suboptimal, the position has been incorrectly diagnosed or there is cephalopelvic disproportion. Less experienced operators should stop and seek a second opinion. Experienced operators should re-evaluate the clinical findings and either change approach or discontinue the procedure (RCOG 2020).

2.13. **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.

2.14. **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.

2.15. **Use of Sequential Instruments**

2.15.1. 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.

2.15.2. 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.

2.15.3. The use of outlet/low-cavity forceps following failed vacuum extraction may be judicious in avoiding a potentially complex Caesarean Section.

2.15.4. 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. There is also an increased risk of premature labour in future pregnancies (New 2022). 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 abandoned forceps proceeding to Caesarean Section.

2.16. Post Delivery Care

- Paired umbilical cord gases must be obtained.
- A single prophylactic dose of intravenous coamoxiclav 1.2g should be recommended following assisted vaginal birth within 6 hours as it significantly reduces confirmed or suspected maternal infection compared to placebo.
- If Penicillin allergic without anaphylaxis 1g Ceftriaxone plus 400mg metronidazole.
- Or if penicillin allergic with erythroderma / anaphylaxis Clindamycin 600mg plus Gentamicin as per weight.
- Prescribe analgesia and thromboprophylaxis accordingly.
- Inform women that there is a high probability of a spontaneous vaginal birth in subsequent labours following assisted vaginal birth. (New 2022).
- Offer advice and support to women who have had a traumatic birth and wish to talk about their experience. The effect on the birth partner should also be considered (New 2022).
- Offer women with post-traumatic stress disorder (PTSD) symptoms at 1 month referral to skilled professionals (New 2022).
- Women who have had an operative vaginal delivery should be referred to the Perinatal Pelvic Health Service (PPHS).

2.17. Care of the Bladder

2.17.1. 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.

2.17.2. 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.

2.17.3. 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.

2.17.4. Women should be educated about the risk of urinary retention so that they are aware of the importance of bladder emptying in the postpartum period (New 2022).

2.17.5. The timing and volume of the first void urine should be monitored and documented (New 2022).

2.17.6. A post void residual should be measured if urinary retention is suspected using the bladder scanner by an appropriately trained operator (New 2022).

3. Monitoring compliance and effectiveness

Information Category	Detail of process and methodology for monitoring compliance
Element to be monitored	• Was an operative vaginal delivery proforma completed and filed in the notes • Was the procedure performed or supervised by an experienced, appropriately trained practitioner • Was the operative delivery appropriately categorised? A selection of these will be audited according to current drivers • Was the reason for the procedure documented • Was verbal consent obtained and documented. • If a trial, was written consent obtained for instrumental and Caesarean Section • If sequential instruments, were forceps used appropriately following failed ventouse • Were there any indications to abandon the procedure • If indications to abandon were present, was the procedure abandoned
Lead	Labour Ward Lead Consultant
Tool	Patient notes and Euroking used to pull data from and analyse
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

Information Category	Detail of process and methodology for monitoring compliance
Reporting arrangements	Maternity Patient Safety Forum or Clinical Audit Forum
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, Inclusion and 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

Information Category	Detailed Information
Document Title:	Operative Vaginal Delivery Clinical Guideline V3.0
This document replaces (exact title of previous version):	Operative Vaginal Delivery Clinical Guideline V2.2
Date Issued/Approved:	December 2022
Date Valid From:	December 2022
Date Valid To:	December 2025
Directorate / Department responsible (author/owner):	Dr Karen Watkins Consultant Obstetrician Obs and Gynae Directorate
Contact details:	01872 252727
Brief summary of contents:	To give guidance to Obstetricians on identifying when an operative vaginal delivery is safe and how it should be safely conducted
Suggested Keywords:	Forceps, operative, vaginal, ventouse, theatre, sequential, instrumental, caesarean, section, kiwi, manual, rotation
Target Audience:	RCHT: Yes CFT: No CIOS ICB: No
Executive Director responsible for Policy:	Chief Medical Officer
Approval route for consultation and ratification:	Maternity Guidelines Group Obs and Gynae Directorate Divisional Board for noting
General Manager confirming approval processes:	Caroline Chappell
Name of Governance Lead confirming approval by specialty and care group management meetings:	Caroline Amukusana
Links to key external standards:	CNST 3.3

Information Category	Detailed Information
Related Documents:	• Operative Vaginal Delivery Guideline (2005) RCOG, London • Extraction versus Forceps for assisted vaginal delivery (2004) Johanson RB and Menon BKV Cochrane Database • Cohort Study of Operative Vaginal Delivery in the Second Stage of Labour and Standard of Obstetric Care (2003) Murphy DJ, Liebling RE, Patel R, Verity L, Swingler R. Br Journal of Obstet5ics & Gynaecology • Effect of mode of delivery in nulliparous women on neonatal intracranial injury (1999) Towner D, Castro MA, Eby- Wilkens E and Gilbert WM. N Engl J Med • Early maternal and neonatal morbidity associated with operative delivery in second stage of labour: a cohort study (2001) Murphy DJ, Liebling RE, verity L, Swingler R, Patel R. Lancet
Training Need Identified?	No
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet and Intranet
Document Library Folder/Sub Folder:	Clinical/Midwifery and Obstetrics

Version Control Table

Date	Version Number	Summary of Changes	Changes Made by
May 2005	V1.0	Initial Guideline	Rob Holmes Consultant Obstetrician
December 2009	V1.2	Updated and proforma included	Rob Holmes Karen Watkins Consultant Obstetricians

Date	Version Number	Summary of Changes	Changes Made by
January 2011	V1.3	Updated to include compliance monitoring	Rob Holmes Karen Watkins Consultant Obstetricians
April 2012	V1.4	Updated in line with CNST compliance	Rob Holmes Karen Watkins Consultant Obstetricians
September 2012	V1.5	Changes to Compliance monitoring Tool	Karen Watkins Consultant Obstetrician
17th November 2015	V1.6	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	Karen Watkins Consultant Obstetrician
14 November 2018	V2.0	Addition of consent to the guideline. Changes to the forceps delivery indications.	Karen Watkins Consultant Obstetrician
4th July 2019	V2.1	Addition to section 2.6.3 following a Freedom of Information request and the use of the Instrumental Delivery consent sticker.	Kate Putman, Governance Support Midwife.
6th February 2020	V2.2	Addition of equality and inclusion statement. Addition of section 2.8 Amendment to section 2.16	Sophie Haynes Consultant Obstetrician
December 2022	V3.0	Full version update. All changes are labelled with New 2022. Addition of new Trust template	Karen Watkins Consultant Obstetrician

Appendix 2. Equality Impact Assessment

Section 1: Equality Impact Assessment (EIA) Form

The EIA process allows the Trust to identify where a policy or service may have a negative impact on an individual or particular group of people.

For guidance please refer to the Equality Impact Assessment Policy (available from the document library) or contact the Equality, Diversity and Inclusion Team rcht.inclusion@nhs.net

Information Category	Detailed Information
Name of the strategy / policy / proposal / service function to be assessed:	Operative Vaginal Delivery Clinical Guideline V3.0
Directorate and service area:	Obstetrics and Gynaecology
Is this a new or existing Policy?	Existing
Name of individual completing EIA (Should be completed by an individual with a good understanding of the Service/Policy):	Sophie Haynes, Consultant Obstetrician.
Contact details:	01872 252730

Information Category	Detailed Information
1. Policy Aim - Who is the Policy aimed at? (The Policy is the Strategy, Policy, Proposal or Service Change to be assessed)	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 each outcome?	Compliance Monitoring Tool
5. Who is intended to benefit from the policy?	Pregnant women and their babies

Information Category	Detailed Information
6a. Who did you consult with? (Please select Yes or No for each category)	• Workforce: Yes • Patients/ visitors: No • Local groups/ system partners: No • External organisations: No • Other: No
6b. Please list the individuals/groups who have been consulted about this policy.	**Please record specific names of individuals/ groups:** Maternity Guidelines Group Obstetrics and Gynaecology Care Group
6c. What was the outcome of the consultation?	Agreed
6d. Have you used any of the following to assist your assessment?	**National or local statistics, audits, activity reports, process maps, complaints, staff or patient surveys:** No

7. The Impact
Following consultation with key groups, has a negative impact been identified for any protected characteristic? Please note that a rationale is required for each one.

Where a negative impact is identified without rationale, the key groups will need to be consulted again.

Protected Characteristic	(Yes or No)	Rationale
Age	No	
Sex (male or female)	No	
Gender reassignment (Transgender, non-binary, gender fluid etc.)	No	
Race	No	
Disability (e.g. physical or cognitive impairment, mental health, long term conditions etc.)	No	
Religion or belief	No	
Marriage and civil partnership	No	

Protected Characteristic	(Yes or No)	Rationale
Pregnancy and maternity	No	
Sexual orientation (e.g. gay, straight, bisexual, lesbian etc.)	No	

A robust rationale must be in place for all protected characteristics. If a negative impact has been identified, please complete section 2. If no negative impact has been identified and if this is not a major service change, you can end the assessment here.

I am confident that section 2 of this EIA does not need completing as there are no highlighted risks of negative impact occurring because of this policy.

Name of person confirming result of initial impact assessment: Sophie Haynes

If a negative impact has been identified above OR this is a major service change, you will need to complete section 2 of the EIA form available here:
Section 2. Full Equality Analysis