Document Control

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Operative Vaginal Delivery Guideline			
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Directorate Clinical Support & Specialist Services		**Department** Labour Ward	
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5.1	April 21	Revision	Amendments : Instrumental delivery Performa is added as Appendix 3 Approved at Maternity Specialist Governance Group

			Meeting
6.0	April 21	Final	Approved at Maternity Specialist Governance Group Meeting

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Superseded Documents

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April 2021	April 2024	Three years

Consulted with the following stakeholders:

- Senior Midwives
- Obstetricians and Gynaecologists
- Women's and children's Directorate Management

Approval and Review Process

- Maternity Specialist Governance Group meeting

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CONTENTS

1. Introduction and Key Points

This document sets out Northern Devon Healthcare NHS Trust's best practice guidelines for all women who require an operative vaginal delivery of their baby.

1.1. Prerequisites For Assisted Vaginal Delivery:

- Full abdominal and vaginal examination
  Head < 1/5th palpable
  Vertex presenting
  Cervix fully dilated and membranes ruptured
  Exact position of head defined
  Assessment of caput & moulding
  Pelvis deemed adequate (irreducible moulding may indicate cephalo-pelvic disproportion)

- Preparation of mother
  Clear explanation and informed consent obtained
  Appropriate analgesia
  Empty maternal bladder (indwelling catheter removed or balloon deflated)
  Aseptic technique

- Preparation of staff
  Operator to have knowledge, experience and skill necessary
  Appropriate equipment, bed, and lighting
  Back-up plan in case of failure to deliver
  Senior obstetrician competent in performing mid-cavity deliveries present if junior trainee performing delivery
  Anticipate shoulder dystocia & PPH
  Personnel trained in neonatal resuscitation present

2. Purpose

2.1. The purpose of this document is to ensure women who are in the care of the Northern Devon Healthcare Trust Maternity services who need assistance with the delivery of their baby, have the appropriate procedure with the relevant anaesthesia and the right choice of instrument made

2.2. The policy applies to all maternity staff.

3. Background

Operative vaginal delivery rates have remained stable at between 10% and 15% in the UK with almost one in three nulliparous women gives birth by vacuum or forceps, yielding safe and satisfactory outcomes for the majority of

mothers and babies. There has been an increasing awareness of the potential for morbidity for both the mother and the baby. The increased risk of neonatal morbidity in relation to operative vaginal delivery is long established although with careful practice overall rates of morbidity are low.

- Encourage women to have continuous support during labour as this can reduce the need for assisted vaginal delivery.

- Inform women that administering epidural in the latent phase compared to the active phase of labour does not increase the risk of assisted vaginal delivery.

- Encourage women not using epidural to adopt upright or lateral position in the second stage.

- Encourage women using epidural to adopt lying down lateral position in second stage.

- Delayed pushing for 1 – 2 hours in primiparous women with an epidural will reduce the risk of rotational and mid-cavity deliveries.

- Do not routinely discontinue epidural during pushing, as this increases the woman's pain with no evidence of a reduction in the incidence of assisted vaginal delivery.

- There is insufficient evidence to recommend any particular regional analgesia technique in terms of reducing the incidence of assisted vaginal delivery.

- There is insufficient evidence to recommend routine oxytocin augmentation for women with epidural as a strategy to reduce assisted vaginal delivery.

- There is insufficient evidence to recommend routine manual rotation of fetal malposition in 2nd stage of labour as a strategy to reduce assisted vaginal delivery

- As operative vaginal delivery can be associated with maternal and neonatal morbidity, strategies that reduce the risk of operative vaginal delivery should be used.

- Operative vaginal delivery is an operative procedure that should be undertaken with tested effective anaesthesia.

- If a women declines Epidural anaesthesia in labour, or if time does not allow for an Epidural to be sited, a Pudendal block combined with a local anaesthetic to the perineum should be used during operative delivery.

- The choice of instrument depends on a balance of clinical circumstance and Practitioner experience.

- Operators should be aware that forceps and vacuum are associated with different benefits and risks. Failure to complete the birth is more likely with vacuum, but perineum trauma is more likely with forceps.

4. Responsibilities

4.1. Role of the Chief Executive

The Chief Executive of Northern Devon Healthcare Trust holds overall responsibility of the safety of all the staff and patients cared for within the Trust.

4.2. Role of Director of Nursing / Medical Director

The responsibility at Executive Director level for Midwifery and Obstetric Services is a shared one between the Director of Nursing and the Medical Director.

4.3. Role of the Consultant/Staff Grade (Trained Healthcare professional)

- An assisted vaginal delivery should only be performed by an operator who has the knowledge, experience and skills necessary to assess and to use the instruments and manage complications that arise.

- Obstetric trainees must have received the appropriate training and had their competency assessed before conducting unsupervised deliveries.

- An experienced operator, competent at mid-cavity deliveries, should be present from the outset for all attempts at rotational or mid-cavity assisted vaginal delivery.

4.4. Role of the Midwife

It is the responsibility of the Midwife to support the woman throughout her delivery and to act as advocate for the woman during the procedure. The midwife will be responsible for the care of the woman and the baby once delivery has taken place.

4.5. Role of the Anaesthetist

Role of the Anaesthetist is to provide appropriate anaesthesia care for any woman requiring General or Regional anaesthesia.

5. Decision process for an Operative Vaginal delivery

If a midwife has cause for concern during delivery either with regards to fetal wellbeing at full dilatation or the progress a woman is making in the second stage of labour she should inform the Labour Ward Coordinator and call a Consultant or SAS Doctor to review the woman.

Safe operative vaginal delivery requires a careful assessment of the clinical situation, clear communication with the mother and healthcare personnel and expertise in the chosen procedure.

It is the Consultant / SAS Doctor responsibility to decide whether an operative vaginal delivery is appropriate

Indications for operative vaginal delivery: No indication is absolute and each case should be considered individually

Type	Indication
Fetal	Presumed fetal compromise
Maternal	To shorten or reduce effects of 2nd stage of labour on medical conditions e.g. cardiac disease, hypertensive crisis, myasthenia gravis, proliferative retinopathy
Inadequate progress	- Primip- lack of continuing progress for 3 hrs (passive & active) with epidural OR 2 hrs without epidural. - Multip – lack of continuing progress for 2 hrs (passive & active) with epidural OR 1 hr without epidural. - Maternal fatigue / exhaustion.

The vacuum extractor is contraindicated with a face presentation. At present, the RCOG recommends avoiding the use of vacuum below 32 weeks and should be used with caution between 32+0 and 36+0 weeks, because of the susceptibility of the preterm infant to cephalohaematoma, intracranial haemorrhage and neonatal jaundice.

Suspected fetal bleeding disorders or a predisposition to fracture are relative contraindications to assisted vaginal delivery.

Blood borne viral infections are not an absolute contraindication to assisted vaginal delivery.

The use of vacuum is not contraindicated following FBS or application of FSE.

Forceps and vacuum extractor deliveries before full dilatation of the cervix are contraindicated.

There are a few exceptions which include a prolapsed cord at 9 cm in a multiparous woman or a second twin. Forceps are indicated for the aftercoming head of the breech and in situations where maternal effort is impossible or contraindicated

If the option of operative vaginal delivery is chosen, then the Consultant or SAS Doctor must explain the forthcoming procedure to the labouring woman and her partner, as well as the possible need for Episiotomy.

Ensure obstetric trainees receive appropriate training in vacuum and forceps birth. Competency should be demonstrated before conducting unsupervised births.

Consent:
Women should be told in the AN period about assisted delivery, especially in their first pregnancy.
For deliveries in the delivery room, verbal consent should be obtained before the assisted vaginal delivery and documented in the Birth Notes. If circumstances allow, written consent may also be obtained.
Written consent should be obtained for trial of assisted delivery in theatre. A procedure specific consent form is available on Labour Ward.

The documentation in the Birth notes must include;

- Anaesthetic used and confirmation of effect e.g. Local infiltration, pudendal block etc…
- Procedure undertaken
- Indication
- Time instrument applied to presenting part and when removed.
- Number of traction pulls
- Outcome, including decision to delivery interval
- Suturing
- Record any difficulty with the procedure and the decision to abandon vaginal operative delivery

- Any complications post delivery
- Note the location of the procedure.

6. Preparation for performing operative vaginal delivery

- Full abdominal palpation and vaginal examination
- Pelvis is deemed adequate
- Full dilation of the cervix (Particularly with forceps) and ruptured membranes
- Empty Bladder and I.V. access sited.
- Effective Epidural Analgesia or pudendal block combined with local anaesthesia to the perineum
- Effective uterine contractions (Use syntocinon as required, see Use of Syntocinon guideline)
- Maternal effort should continue to be encouraged and the use of the ventouse / forceps coordinated with the contraction and maternal effort.
- Episiotomy: Decision should be tailored to the circumstances and the preference of the woman.
- The operator should choose the instrument most appropriate to the clinical circumstances and their level of skill. Forceps and vacuum extraction are associated with different benefits and risks. Failed delivery with selected instrument is more likely with vacuum extraction.
- The options available for rotational delivery include Kielland forceps, manual rotation followed by direct traction forceps or rotational vacuum extraction. Rotational deliveries should be performed by experienced operators, with the choice depending on the expertise of the individual operator.
- When midpelvic or rotational birth is indicated, the risks and benefits of assisted vaginal birth should be compared with the risks and benefits of second stage Caesarean birth for the given circumstances and skills of the operator. Written consent should be obtained. Shared decision making, good communication and positive support during labour and birth have a potential to reduce psychological morbidity following birth.
- Obstetricians should be aware of the increased risk of head impaction at caesarean birth following a failed attempt at birth via forceps and should be prepared to disimpact the fetal head using recognised manoeuvers.
- A single dose of IV amoxicillin and cluvulanic acid (Augmentin) should be recommended following assisted vaginal birth as it significantly reduces maternal infection compared to placebo.
- Paired cord blood samples should be processed and recorded following all attempts at assisted vaginal birth.
- When choosing the ventouse, make sure to use the Occipito-Posterior cup for Occipito-Posterior and Occipito-Lateral positions (available in the Ladywell unit)

- Clinicians should be aware that ultrasound assessment of the fetal head position prior to assisted vaginal birth is more reliable than clinical examination.
- Be alert to the possibility of Shoulder Dystocia and the possible need for neonatal resuscitation therefore a paediatrician should be present at delivery.

7. Important consideration

Assisted vaginal births that have a higher risk of being unsuccessful (listed below) should be considered a trial and conducted in a place where immediate recourse to caesarean section can be undertaken. This does not necessarily equate to such deliveries being done in the operating theatre itself, so long as easy access to a theatre is available. However, it is important to balance the possibility of worse fetal outcomes due to delays involved in transfer to theatre.

- BMI > 30 – (odds ratio 2.4)
- EFW > 4000g or clinically big baby – (odds ratio 2.3)
- OP position – (odds ratio – 2.5)
- Mid-cavity delivery or 1/5th head palpable abdominally

The operator must have the knowledge, experience and skills necessary to use the instruments and manage complications that may arise.

Classification for operative vaginal delivery (adapted from ACOG 2000)21

Term	Definition
Outlet	Fetal scalp visible without separating the labia Fetal skull has reached the pelvic floor Sagittal suture is in the anterior-posterior diameter or right or left occiput anterior or posterior position(rotation does not exceed 45 degrees) Fetal head is at or on the perineum
Low	Leading point of the skull (not caput) is at station plus 2 cm or more and not on the pelvic floor Two subdivisions: (a) rotation of 45 degrees or less (b) rotation more than 45 degrees
Mid	Fetal head is 1/5 palpable per abdomen Leading point of the skull is above station plus 2 cm but not above the ischial spines Two subdivisions (a) rotation of 45 degrees or less

	(b) rotation more than 45 degrees
High	Not included in the classification as assisted delivery is not recommended in this situation where the head is 2/5th or more palpable abdominally and the PP is above the level of the ischial spines.

Sequential use of Instruments

There is an increased risk of trauma to the neonate and of neonatal morbidity when sequential instruments are used, therefore, they should only be used following a failed vacuum extraction if there is:

- Evidence of progressive descent of the head
- Evidence that delivery is imminent

Sequential use of instruments should only be attempted by an experienced and trained operator.

A paediatrician should be present at the delivery and informed of the use of sequential instruments.

Operative vaginal delivery should be abandoned where there is no evidence of progressive descent with each pull or where delivery is not imminent following three pulls of a correctly applied instrument by an experienced operator.

Consider use of terbutaline 250mcg SC or glycerine tri nitrate (GTN) spray (1 spray) sublingual which will aid relaxation and assist with disengagement of presenting part if instrumental delivery is abandoned.

Adverse outcomes, including unsuccessful forceps or vacuum delivery, should trigger an incident report as part of effective risk management processes.

Paired cord blood samples should be processed and recorded following all attempts at operative vaginal delivery.

Caesarean section should be advised if vaginal delivery deemed not possible, **there is no place for difficult instrumental delivery.**

The bulk of malpractice litigation results from failure to abandon the procedure at the appropriate time, particularly the failure to eschew prolonged, repeated or excessive traction efforts in the presence of poor progress

Rotational forceps delivery must only be performed by highly skilled healthcare professionals.

Operative Vaginal delivery increases the risk of PPH, 3rd degree and 4th degree tears, therefore ensure venous access prior to procedure.

8. Care following operative vaginal delivery

- A single dose of IV Amoxicillin and clavulanic acid (Augmentin) should be considered following assisted vaginal delivery as it significantly reduces risk of infection when compared to placebo.
- Offer early skin to skin contact in theatre, delivery suit and / or recovery.
- Provide additional support to help women to start breastfeeding as soon as possible.
- Regular paracetamol and Ibuprofen should be offered in the absence of contraindications
- Care of the bladder

The timing and volume of the first void should be measured and documented in the woman's post-natal care plan.

A post void residual should be measured if retention is suspected.

Women who have had a spinal/epidural anaesthetic that has been topped up for a trial of operative vaginal delivery may be at increased risk of urine retention and should be advised to have an indwelling catheter in place for a minimum of 12 hours post-delivery to prevent asymptomatic bladder overfilling.

- Women should be offered physiotherapy-directed strategies to prevent urinary incontinence.
- Women should be reassessed after an operative delivery for risk factors for venous thromboembolism and, if appropriate, thromboprophylaxis should be prescribed.
- The Obstetrician / SAS supported by the midwife should ensure the reasons for the operative delivery and implications for future pregnancies are discussed before discharge home and documented in the postnatal record.
- Inform women that there is a high probability of a spontaneous vaginal delivery in subsequent labours, following assisted vaginal birth.
- Offer women with persistent post-traumatic stress disorder (PTSD) symptoms at 1 month referral to skilled professionals as per NICE guidance on PTSD.

9. Monitoring Compliance with and the Effectiveness of the Guideline

Monitoring of implementation, effectiveness and compliance with the Operative Vaginal Delivery guidelines is the responsibility of the senior clinical/management team. The maternity services audit programme and methodology of process, reporting and escalation is described in Appendix 1 using the audit criterion in Appendix 2.

10. References

- RD&E Clinical Guideline for assisted vaginal delivery
- National Institute of Clinical Excellence – Instrumental delivery Guidance.
- Royal College of Gynaecologists press.

11. Associated Documentation

- Caesarean Section Guidelines
- Care of the Bladder Guidelines
- High dependency care for pregnant women Guidelines
- Auscultation and Fetal Monitoring Guidelines
- Fetal Cord Blood Sampling Guidelines
- Care and Repair of Perineal Trauma Guidelines

Appendix 1 – Audit Methodology for Operative Vaginal Delivery

NDHT Obstetrics, Gynaecology and Midwifery Guideline:	Operative Vaginal Delivery				
CNST Ref:	Standard:	3	Criterion:	3	
Monitoring arrangements	Clinical Audit			Y	Annual
	Monitoring			Y	See below
	Case Review			N	
	Training records review			N	
	Other			N	
	If other describe:				
Lead for Monitoring Compliance	Name:			Post Holder	
	Job role:			Lead Clinician for Obstetrics	
Method					
• Sample	1% or 10 sets, whichever is the greater, of health care records of women who have delivered following an operative vaginal delivery. 1% or 10 sets, whichever is the greater, of health care records where sequential instruments have been used 1% or 10 sets, whichever is the greater, of health care record of women who have had operative procedures abandoned				
• Audit tool	An audit tool will be developed using the standard statements set out below. The tool will be piloted prior to use.				
• Data collection process	Patient notes will be audited by a clinically qualified member of staff. The information will be recorded using the audit tool.				
• Process for collating and reporting data	Data will entered and analysed using appropriate software to show compliance levels. Results will be reported using an electronic template.				

Frequency of monitoring/audit	Annual
Process for reviewing results and ensuring improvements in performance occur	Each month, the Lead for Monitoring Compliance will report results to the Maternity Services Patient Safety Forum. Where monitoring identifies deficiencies an action plan will be agreed. Actions will be implemented under the authority of Lead for Midwifery, Clinical Lead and Directorate Manager. Implementation of actions will be monitored by the Maternity Services Patient Safety Forum.

Appendix 2 – Audit Criterion for Operative Vaginal Delivery

Criterion statements for audit tool							
Ref	Criterion statements	Target	Exceptions	Indicator/Location of information		National guidance Reference	Trust guideline reference
				Where is the information against which compliance can be audited recorded? Eg. Postnatal notes Eg Stork screen	Page no/ Field	Which national guidance does this demonstrate compliance with eg. NICE CG13 p22	On which page of the Trust guideline is the relevant statement?
1	Has it been documented who performed the procedure?						
2	Was it documented why the procedure was indicated?						
3	Was informed consent taken and documented?						
4	If sequential instruments were used was this clearly documented?						
5	If the procedure was abandoned was it documented clearly?						
6	Is care of the bladder clearly documented?						
7.	Is the decision to delivery interval						

8.	documented? Has Analgesia been tested?						

Appendix 3 – Electronic Proforma

Instrumental Delivery Note performa is also available in the Public (G) Drive, then choose OBSGYNAE, the choose 1.Obstetric Procedure Template

Item 2.5bii Operative Vaginal Delivery - Elec