

# Assisted Vaginal Birth

**Maternity Protocol: MP049**

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**MP037** Fetal Heart Monitoring  
**MP038** Fetal Blood Sampling  
**MP040** Bladder Care  
**MD084** BSUH Maternity & Obstetric Training Needs Analysis & Skills and Drills  
**MP054** Perineal Trauma Repair  
**MD090** Fetal Pillow

## Contents

<b>Key Principles.....</b>	<b>5</b>
<b>Scope .....</b>	<b>5</b>
<b>Responsibilities .....</b>	<b>5</b>
<b>1     Assisted Instrumental Vaginal Birth.....</b>	<b>6</b>
1.1     Interventions to reduce need for operative vaginal birth .....	6
1.2     Classification for operative vaginal birth.....	6
<b>2     Indications for offering operative vaginal birth.....</b>	<b>7</b>
<b>3     Contraindications to Operative Vaginal Birth.....</b>	<b>7</b>
<b>4     Conditions and Pre-requisites for Safe Operative Vaginal Birth.....</b>	<b>8</b>
4.1     Who can perform the procedure, the following clinicians can perform operative vaginal birth:.....	8
4.2     Assessment.....	8
4.3     Choice of instrument.....	9
<b>5     Risks of Instrumental delivery .....</b>	<b>10</b>
5.1     Risks of Ventouse delivery .....	10
5.2     Risks of forceps delivery .....	10
5.3     Vacuum extraction compared with forceps is: .....	11
<b>6     Preparation for operative vaginal delivery .....</b>	<b>11</b>
<b>7     Ventouse/Kiwi Assisted Delivery.....</b>	<b>13</b>
<b>8     Non-Rotational Forceps Assisted Delivery – Neville Barnes / Wrigleys .....</b>	<b>14</b>
<b>9     Rotational forceps delivery – Keilland .....</b>	<b>15</b>
<b>10    Sequential instruments .....</b>	<b>16</b>
<b>11    Episiotomy / Perineal care .....</b>	<b>17</b>
<b>12    Abandoned Instrumental and Progression to Caesarean.....</b>	<b>18</b>
<b>13    Prophylactic antibiotics.....</b>	<b>18</b>
<b>14    Aftercare Following Operative Vaginal Birth.....</b>	<b>18</b>
<b>15    Care of the bladder after birth .....</b>	<b>19</b>
<b>16    Post-Delivery Documentation (see also Appendix A) .....</b>	<b>20</b>
<b>17    Debriefing.....</b>	<b>20</b>
<b>18    References.....</b>	<b>21</b>
<b>Appendix A - Instrumental birth Proforma.....</b>	<b>22</b>
<b>Appendix B: Difficulty delivering the head at caesarean section in advanced labour .....</b>	<b>25</b>
18.1    Preparation .....	25

18.2	Uterine incision .....	25
18.3	Manipulation techniques .....	25
<b>Appendix C: Placement of the Fetal Pillow ® .....</b>		<b>27</b>

## Key Principles

*A protocol is a set of measurable, objective standards to determine a course of action. Professional judgement may be used in the application of a protocol.*

## Scope

This protocol applies to:

- Any woman or pregnant person in labour requiring assistance at birth

## Responsibilities

### Midwives & Obstetricians:

- To access, read, understand and follow this guidance
- To use their professional judgement in application of this protocol

### Management:

- To ensure the protocol is reviewed as required in line with Trust and National recommendations
- To ensure the protocol is accessible to all relevant staff

# 1 Assisted Instrumental Vaginal Birth

There will always be a need for assisted vaginal birth, but efforts need to be made to minimize their incidence. The goal of operative vaginal birth is to mimic spontaneous vaginal birth, thereby expediting birth with a minimum of maternal or neonatal morbidity. Operative vaginal birth rates have remained stable at between 10% and 15% (nationally. 1 in 3 nulliparous women / people or pregnant people will have an assisted delivery.

## 1.1 Interventions to reduce need for operative vaginal birth

A variety of interventions can be considered in helping to reduce operative vaginal birth, including:

- 1.1.1 All women / people and pregnant people should be encouraged to have continuous emotional and physical support during labour from their midwife and chosen birthing partners
- 1.1.2 Use of a partogram
- 1.1.3 Use of upright or lateral positions will reduce the need for operative vaginal birth.
- 1.1.4 Avoiding epidural analgesia may also have an impact. If epidural analgesia is used, lying-down lateral positions increase the rate of spontaneous vaginal birth.
- 1.1.5 Delayed pushing for 1-2 hours with an epidural, where appropriate, may reduce the risk of rotational and mid-cavity births.
- 1.1.6 Extreme caution should be taken before using oxytocin for the second stage in multiparous pregnant people.

## 1.2 Classification for operative vaginal birth

<b>Outlet</b>	<ul style="list-style-type: none"> <li>• Fetal scalp visible without separating the labia</li> <li>• Sagittal suture is in the antero-posterior diameter or right or left occiput anterior or posterior position (rotation does not exceed 45 degrees)</li> <li>• Fetal head is at or on the perineum</li> </ul>
<b>Low</b>	<ul style="list-style-type: none"> <li>• Leading point of the skull (not caput) is at station plus 2 cm or more and not on the pelvic floor. Two subdivisions:               <ul style="list-style-type: none"> <li>(a) rotation of 45 degrees or less</li> <li>(b) rotation more than 45 degrees</li> </ul> </li> </ul>

<b>Mid</b>	<ul style="list-style-type: none"> <li>Fetal head is 1/5 palpable per abdomen</li> <li>Leading point of the skull is above station plus 2 cm but not above the ischial spines. Two subdivisions:               <ul style="list-style-type: none"> <li>(a) rotation of 45 degrees or less</li> <li>(b) rotation more than 45 degrees</li> </ul> </li> </ul>
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## 2 Indications for offering operative vaginal birth

No indication is absolute and each case should be considered individually.

<b>Fetal</b>	<ul style="list-style-type: none"> <li>Presumed fetal compromise</li> <li>Malposition</li> </ul>
<b>Maternal</b>	<ul style="list-style-type: none"> <li>Medical indications to avoid Valsalva (this should be based on a shared decision between the woman or pregnant person, obstetrician and medical specialist and discussed in the antenatal period). e.g. cardiac disease Class III or IV, hypertensive crisis, cerebral vascular disease – particularly uncorrected cerebral vascular malformations, myasthenia gravis, spinal cord injury, proliferative retinopathy.</li> </ul>
<b>Inadequate progress</b>	<ul style="list-style-type: none"> <li>Maternal fatigue or exhaustion.</li> </ul> <p><b>Nulliparous women / people and pregnant people:</b> lack of continuing progress for 3 hours (total of active and passive second stage labour) with regional anaesthesia, or 2 hours without regional anaesthesia</p> <p><b>Multiparous women / people and pregnant people:</b> lack of continuing progress for 2 hours with regional anaesthesia (total of active and passive second stage labour), or 1 hour without regional anaesthesia</p>

## 3 Contraindications to Operative Vaginal Birth

- 3.1 Ventouse should not be performed on a face presentation, or on a baby under 34 weeks gestation. Forceps can be utilised in these instances.
- 3.2 Ventouse should not be used where there is confirmed or high probability of fetal bleeding disorders e.g. maternal ITP

- 3.3 A predisposition to bony fracture e.g. history of osteogenesis imperfect
- 3.4 HIV and Hepatitis B positive status is not a contraindication provided the viral load is undetectable. For both conditions, if the decision has been made to aim for vaginal delivery, they should not be treated differently. Forceps rather than ventouse should be considered to reduce the risk of trauma to fetal scalp.

## 4 Conditions and Pre-requisites for Safe Operative Vaginal Birth

- 4.1 Who can perform the procedure, the following clinicians can perform operative vaginal birth:
  - 4.1.1 Consultant obstetrician
  - 4.1.2 Middle grade / specialty registrar obstetrician with demonstrated competency (see 4.2)
  - 4.1.3 SHO under full supervision by an appropriately trained doctor (see 4.2)
  - 4.1.4 Expertise in the chosen procedure
    - 4.1.4.1 The operator must have the knowledge, experience and skills necessary to use the instruments and manage complications that may arise
    - 4.1.4.2 Obstetric trainees must receive appropriate training in vacuum and forceps birth, including theoretical knowledge, simulation training and clinical training under direct supervision.
    - 4.1.4.3 Competency should be confirmed prior to conducting unsupervised deliveries.
    - 4.1.4.4 Complex assisted vaginal births / mid cavity / rotational deliveries should only be performed by experienced operators or under the direct supervision of an experienced operator.
- 4.2 Assessment

The following should be assessed and confirmed by the clinician prior to performing the procedure. This assessment should be clearly documented in the maternal notes

  - 4.2.1 Vertex presentation
  - 4.2.2 Fetal head is  $\leq 1/5$  palpable per abdomen, and below ischial spines on vaginal examination



- 4.2.3 Cervix is fully dilated and the membranes ruptured
- 4.2.4 The exact position of the head can be determined – to ensure proper placement of instrument
- 4.2.5 The maternal pelvis is deemed adequate – irreducible moulding may indicate cephalo-pelvic disproportion
- 4.2.6 Assessment of any caput and/or moulding

#### 4.3 Choice of instrument

- 4.3.1 The operator should choose the instrument most appropriate to the clinical circumstances and their level of skill
- 4.3.2 Operators should be aware that forceps and vacuum extraction are associated with different benefits and risks (section 5.5). Failure to complete the birth with a single instrument is more likely with vacuum extraction, but maternal perineal trauma is more likely with forceps
- 4.3.3 Rotational births should be performed by experienced operators; the choice of instrument depending on the clinical circumstances and expertise of the individual
- 4.3.4 If there are concerns for fetal wellbeing / abnormal CTG, it is then up to the obstetrician, after reviewing the CTG and the anticipated difficulty of the operative delivery to decide whether to offer caesarean birth, or instrumental birth straight away.

Instrument	Optimal accepted conditions for use
<b>Kiwi™ cup (ventouse)</b>	Occipito-anterior (OA), Occipito-transverse (OT) and Occipital-posterior (OP) positions. Good maternal effort Minimal caput
<b>Anterior metal cup</b>	OA and OT positions - especially if there is moderate or severe caput Also suitable for the slightly deflexed head.
<b>Posterior metal cup</b>	OP and OT positions where deflexion of the head is also usually present.
<b>Ventouse Silicone rubber cup</b>	OA and possibly for OT positions Should not be used for OP position or in the presence of excessive caput. Soft cup vacuum extractors have a higher rate of failure but a lower incidence of neonatal scalp trauma.
<b>Non-rotational (Neville-Barnes)</b>	Most useful for direct OA, LOA, and ROA positions but can sometimes be useful for direct OP positions. Useful where maternal effort is suboptimal, or where there is caput

<b>forceps</b>	Requires a spinal / epidural anaesthesia, or pudendal block
<b>Wrigley's forceps</b>	Delivery assistance during caesarean section. Outlet delivery where ventouse is inappropriate.
<b>Kielland forceps</b>	Rotational deliveries from OT and OP positions. Keillands forceps have a sliding lock, which allows correction of asynclitism to facilitate rotation in the pelvis. Suspected fetal compromise is a relative contraindication, unless the clinician expects an easy delivery.

## 5 Risks of Instrumental delivery

### 5.1 Risks of Ventouse delivery

	<b>Maternal</b>	<b>Fetal</b>
<b>Any extra procedures</b> which may become necessary during the procedure	<ul style="list-style-type: none"> <li>● Episiotomy (5–6 in 10 for vacuum assisted delivery)</li> </ul>	
<b>Serious risks</b>	<ul style="list-style-type: none"> <li>● Third- and fourth-degree perineal tear, 1–4 in 100 with vacuum-assisted delivery (common)</li> <li>● extensive or significant vaginal/vulval tear, 1 in 10 with vacuum</li> </ul>	<ul style="list-style-type: none"> <li>● Subgaleal haematoma, 3–6 in 1000 (uncommon)</li> <li>● Intracranial haemorrhage, 5–15 in 10 000 (uncommon)</li> </ul>
<b>Frequent risks</b>	<ul style="list-style-type: none"> <li>● Postpartum haemorrhage, 1–4 in 10 (very common)</li> <li>● Vaginal tear/abrasion (very common)</li> <li>● Anal sphincter dysfunction/voiding dysfunction.</li> </ul>	<ul style="list-style-type: none"> <li>● Chignon/cup marking on the scalp (practically all cases of vacuum-assisted delivery) (very common)</li> <li>● Cephalhaematoma 1–12 in 100 (common)</li> <li>● Facial or scalp lacerations, 1 in 10 (common)</li> <li>● Neonatal jaundice /hyperbilirubinaemia, 5–15 in 100 (common)</li> <li>● Retinal haemorrhage 17–38 in 100 (very common).</li> </ul>

### 5.2 Risks of forceps delivery

	<b>Maternal</b>	<b>Fetal</b>
<b>Any extra procedures</b> which	<ul style="list-style-type: none"> <li>● Episiotomy (9 in 10 for forceps)</li> </ul>	

may become necessary during the procedure		
<b>Serious risks</b>	<ul style="list-style-type: none"> <li>• third- &amp; fourth-degree perineal tear, 8–12 in 100 (very common)</li> <li>• extensive or significant vaginal/vulval tear, 1 in 5</li> </ul>	<ul style="list-style-type: none"> <li>• Subgaleal haematoma, 3–6 in 1000 (uncommon)</li> <li>• Intracranial haemorrhage, 5–15 in 10 000 (uncommon)</li> <li>• facial nerve palsy (rare).</li> </ul>
<b>Frequent risks</b>	<ul style="list-style-type: none"> <li>• postpartum haemorrhage, 1–4 in 10 (very common)</li> <li>• vaginal tear/abrasion (very common)</li> <li>• anal sphincter dysfunction/voiding dysfunction</li> </ul>	<ul style="list-style-type: none"> <li>• forceps marks on face (very common)</li> <li>• cephalhaematoma 1–12 in 100 (common)</li> <li>• facial or scalp lacerations, 1 in 10 (common)</li> <li>• neonatal jaundice /hyperbilirubinaemia, 5–15 in 100 (common)</li> <li>• retinal haemorrhage 17–38 in 100 (very common).</li> </ul>

### 5.3 Vacuum extraction compared with forceps is:

- more likely to fail delivery with the selected instrument (OR 1.7)
- more likely to be associated with cephalohaematoma (OR 2.4)
- more likely to be associated with retinal haemorrhage (OR 2.0)
- more likely to be associated with maternal worries about baby (OR 2.2)
- less likely to be associated with significant maternal perineal and vaginal trauma (OR 0.4)
- no more likely to be associated with delivery by caesarean section (OR 0.6)
- no more likely to be associated with low 5-minute Apgar scores (OR 1.7)
- no more likely to be associated with the need for phototherapy (OR 1.1)

## 6 Preparation for operative vaginal delivery

Communication	<ul style="list-style-type: none"> <li>• Clear communication with the pregnant woman / person and other healthcare professionals involved is vital</li> <li>• The indication, benefits and risks of the procedure should be clearly explained to the woman or pregnant person (and documented in the maternity notes)</li> </ul>
Informed Consent	<ul style="list-style-type: none"> <li>• The woman or pregnant person must have given informed consent (and the same documented in the maternity notes)</li> <li>• For operative deliveries performed in the delivery room, verbal consent should be gained as a minimum prior to the procedure,</li> </ul>

	<p>but written consent can also be gained if the situation allows. Discussion of the conversation should be documented.</p> <ul style="list-style-type: none"> <li>• For operative deliveries in theatre, written consent should be obtained</li> </ul>
Location	<ul style="list-style-type: none"> <li>• Operative vaginal births can be performed in the birth room if deemed appropriate</li> <li>• Non-rotational low-pelvic and lift out assisted vaginal births have a low probability of failure and most procedures can be conducted safely in a birth room.</li> <li>• If adequate pain relief is not achievable in the room, patient should be delivered in theatre with appropriate anaesthesia</li> <li>• Operative vaginal births that have a higher rate of failure should be considered a 'trial' and conducted in theatre, where immediate recourse to caesarean birth can be undertaken. Theatre staff should be immediately available to allow a caesarean section to be performed without delay (less than 30 minutes).</li> <li>• Higher rates of failure are associated with but are not complete contra-indication to delivery in the room: <ul style="list-style-type: none"> <li>○ Maternal body mass index &gt;30</li> <li>○ Shorter maternal stature</li> <li>○ Estimated fetal weight &gt;4000 g or head circumference &gt; 95th percentile</li> <li>○ Occipito-posterior position</li> <li>○ Mid-cavity birth or when 1/5 head palpable abdominally</li> <li>○ Increased duration of second stage prior to delivery attempt</li> <li>○ Soft cup vacuum extractor use</li> </ul> </li> </ul>
Analgesia	<ul style="list-style-type: none"> <li>• Appropriate analgesia should be in place</li> <li>• Options for analgesia: <ul style="list-style-type: none"> <li>○ epidural/spinal analgesia</li> <li>○ pudendal block with local anaesthetic, vulval and perineal infiltration</li> <li>○ If the head is distending the perineum then infiltration of the perineum and vulva with local anaesthetic may be acceptable</li> </ul> </li> </ul>
Bladder Care	<ul style="list-style-type: none"> <li>• An in-out catheter should be recommended prior to the procedure, if an indwelling catheter is not in situ</li> <li>• An indwelling catheter should be removed or the balloon deflated prior to the procedure</li> </ul>
Hygiene	<ul style="list-style-type: none"> <li>• Aseptic techniques should be employed</li> <li>• Personal protective equipment should be used to protect against splash injury (gown, gloves, eye protection etc)</li> </ul>
Neonatal Resuscitation	<ul style="list-style-type: none"> <li>• Personnel present who are trained in neonatal resuscitation</li> </ul>
Pre-delivery	<ul style="list-style-type: none"> <li>• All of the above must be clearly documented in the</li> </ul>

documentation	labour and delivery notes to include examination findings
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## 7 Ventouse/Kiwi Assisted Delivery

### 7.1 Application of Ventouse and Method of use

- 7.1.1 For Kiwi™ and metal cups, lubricate and insert sideways. For silicone cups, lubricate cup, fold and gently insert into the vagina.
- 7.1.2 Apply to the flexion point (3cm anterior to the posterior fontanelle on the sagittal suture)
- 7.1.3 Ensure no maternal tissue is trapped under the cup.
- 7.1.4 Increase vacuum to 0.2 kg/cm<sup>2</sup> and check again for entrapment of maternal tissue. Increase vacuum to 0.8 kg/cm<sup>2</sup>.
- 7.1.5 Apply traction along the pelvic axis during contractions and helped by maternal effort. With the posterior metal cup the first pull should be in the direction required to flex the head followed by traction along the pelvic axis.
- 7.1.6 Use the thumb of the non-pulling hand to apply counter traction to the cup to avoid detachment, whilst assessing descent using the index and middle finger of the same hand.
- 7.1.7 Mediolateral episiotomy may be necessary as the occiput distends the vulva
- 7.1.8 Paired cord blood samples should be processed and recorded following all attempts at operative vaginal birth

### 7.2 Indications for abandoning procedure

- 7.2.1 Discontinue vacuum-assisted birth where there is no evidence of progressive descent with moderate traction during each pull of a correctly applied instrument i.e. with each contraction.
- 7.2.2 Delivery not imminent following three pulls  
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.

- 7.2.3 The cup should not be reapplied more than twice – i.e. discontinue 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.

## **8 Non-Rotational Forceps Assisted Delivery – Neville Barnes / Wrigleys**

Non-rotational (Neville-Barnes) forceps are most for direct OA, LOA, and ROA positions but can sometimes be useful for direct OP positions. Wrigley’s forceps are used for cases requiring assistance during caesarean section or outlet delivery where ventouse is inappropriate.

### **8.1 Application of Forceps and Method of Use**

- 8.1.1 Carefully check the pair of forceps match, fit together and lock before application.
- 8.1.2 Apply the blades of the forceps to the fetal head between contractions. Apply the left blade first, using the other hand to protect the maternal tissues during application. Check correct application by:
- Ensuring sagittal suture is in midline of shanks
  - No more than a finger-tip can be placed through the fenestration of the blade and the fetal head
- 8.1.3 Traction
- Traction should be applied along the correct axis of birth canal and exerted with each contraction in conjunction with maternal expulsive efforts.
  - Pajot’s manoeuvre should be used where dominant hand pulls in axial direction and non-dominant hand exerts downwards pressure on shank of forceps.
  - The angle of traction is changed as the occiput appears at the vulva.
- 8.1.4 Forceps can be relaxed between contractions to reduce fetal cranial compression.
- 8.1.5 Perform episiotomy as the occiput distends the vulva.
- 8.1.6 Disarticulate and remove the forceps as expulsion is certain, the jaw visible, but before the widest diameter of the fetal head passes through the introitus. Remove the blades- right blade followed by left.
- 8.1.7 Paired cord blood samples should be processed and recorded following all attempts at operative vaginal birth

## 8.2 Indications for abandoning procedure

- 8.2.1 Forceps cannot be applied easily or do not lock.
- 8.2.2 No evidence of progressive descent with moderate traction.
- 8.2.3 Delivery not imminent following three pulls (i.e. with three contractions) of a correctly applied instrument by an experienced operator).
- 8.2.4 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.
- 8.2.5 The operator should not be fixated on achieving a vaginal delivery. It is essential that the operator be willing to abandon a planned or attempted operative vaginal delivery and perform a caesarean section if re-evaluation of the clinical status shows that an instrumental delivery is not succeeding.
- 8.2.6 A DATIX incident report should be completed by the clinician following birth if sequential instruments or instrumental birth abandoned.
- 8.2.7 Paired cord blood samples should be processed and recorded following all attempts at operative vaginal birth

## 9 Rotational forceps delivery – Keilland

Kielland forceps are used for rotational deliveries from OT and OP positions.

The key difference between this instrument and straight forceps lies in the sliding lock, which allows correction of asynclitism and the parallel axis of the blades and handles, which facilitates rotation in the pelvis.

Suspected fetal compromise is a relative contraindication, unless the clinician expects an easy delivery.

### 9.1 Application of Keilland Forceps

- 9.1.1 Keilland's forceps delivery should take place theatre.
- 9.1.2 Check the pair of forceps match, fit together and lock before application
- 9.1.3 Align the knobs on the handle towards the occiput.
- 9.1.4 Apply the blades in between contractions.

- 9.1.5 In OP positions, apply the blades as for non-rotational deliveries i.e. the lower blade or posterior blade is applied followed by the anterior blade and the knobs are facing downwards. Check that the forceps lock with ease and that the suture lines are parallel with the long axis of the blades.
  - 9.1.6 In OT positions either blade can be applied first, but many obstetricians prefer to apply the anterior blade first.  
This blade is initially applied like non-rotational forceps using one of the two methods:
    - Wandering method: The blade is then guided over the fetal face into position under the symphysis.
    - Direct method: Slide anterior blade between the head and the symphysis pubis.
  - 9.1.7 Gently slide the posterior forceps blade into the posterior vagina, guiding the heel of the blade into position where posterior blade is directly along the concavity of the sacrum with your thumb. The handle should follow in a downwards arc.
  - 9.1.8 Engage handles and correct asynclitism
  - 9.1.9 Disengage head and rotate head by shortest arc after depressing the handles.
  - 9.1.10 Effect rotation between contractions, using only light pressure
  - 9.1.11 Check rotation of the fetal head has occurred by feeling for the sagittal suture
  - 9.1.12 Apply moderate traction with contractions initially downwards and outwards, moving in an arc to finish with the handles positioned over the symphysis pubis.
  - 9.1.13 Perform mediolateral episiotomy as the head descends with traction.
- 9.2 Indication to abandon the procedure
- 9.2.1 Failure to insert or align forceps blades
  - 9.2.2 Failure to rotate the head (Kielland)
  - 9.2.3 As per section 8.2

## 10 Sequential instruments

The use of sequential instruments is associated with an increased risk of maternal and neonatal morbidity



- 10.1 The operator must balance the risks of a caesarean section following failed vacuum extraction with the risks of forceps birth following failed vacuum extraction and discuss the consequences with the woman to help her make an informed decision.
- 10.2 The use of outlet forceps following failed vacuum extraction may be judicious in avoiding a potentially complex caesarean section.
- 10.3 A second type of instrument should be offered with agreement from the Consultant Obstetrician on call if feasible (i.e. the time taken to discuss / agree would potentially affect the outcome). If a discussion takes place this should be documented in the maternal notes.
- 10.4 If forceps are applied and the blades do not 'lock' and hence no traction is applied, ventouse could be considered. It would not be appropriate for the same operator to fail to birth the baby using forceps and then to attempt a ventouse.
- 10.5 Due to the risk of neonatal morbidity following a failed instrumental or sequential use of instruments, the neonatologist must be informed if this occurs
- 10.6 Any use of sequential instruments must be clearly documented in the delivery notes and a DATIX incident report completed by the clinician following birth.

## **11 Episiotomy / Perineal care**

- 11.1 Mediolateral episiotomy should be discussed with the woman as part of the preparation for assisted vaginal birth and maternal informed consent should be gained in case episiotomy is required
- 11.2 It is not mandatory to perform an episiotomy - the evidence to support use of mediolateral episiotomy at assisted vaginal birth in terms of preventing OASI is stronger for nulliparous women / people and for birth via forceps.
- 11.3 The person performing the procedure should consider whether an episiotomy should be performed. The decision should be tailored to the circumstances at the time and the preferences of the woman.
- 11.4 The person performing the procedure should ensure there is effective analgesia prior to performing the episiotomy.
- 11.5 The rationale for performing an episiotomy should be documented in the maternal notes along with maternal informed consent.
- 11.6 When performing a mediolateral episiotomy the cut should be at a 60 degree angle initiated when the head is distending the perineum.

## 12 Abandoned Instrumental and Progression to Caesarean

- 12.1 Obstetricians should be aware of the potential neonatal morbidity following a failed attempt at forceps birth and should inform the neonatologist when this occurs to ensure appropriate care of the baby.
- 12.2 Obstetricians should be aware of the increased risk of fetal head impaction at caesarean birth following a failed attempt at forceps birth and should be prepared to disimpact the fetal head using recognised manoeuvres.
- 12.3 Consider the fetal pillow device prophylactically following a failed trial of instrumental whilst the operator is still present vaginally and where appropriate training has been undertaken  
See Appendix B – Disimpaction of the fetal head and Appendix C Fetal Pillow

## 13 Prophylactic antibiotics

- 13.1 A single prophylactic dose of antibiotics should be given within 6-hours flowing assisted vaginal delivery.  
This has been shown to reduce postpartum infections including perineal infections/breakdown and UTIs

- No known penicillin allergy: Co-amoxiclav 1.2g IV
- Non-anaphylaxis penicillin allergy: Cefuroxime 1.2g IV + Metronidazole 400mg IV
- True penicillin allergy: Clindamycin 600mg IV + Gentamycin 160mg IV

- 13.2 Good standards of hygiene and aseptic techniques are recommended

## 14 Aftercare Following Operative Vaginal Birth

- 14.1 Thorough inspection of perineal and vaginal trauma should be completed by operating obstetrician and appropriate repair undertaken according findings. (MP054 Perineal Trauma Repair)
- 14.2 Paired cord blood samples should be processed and recorded following all attempts at operative vaginal birth
- 14.3 Antibiotics should be given as per Section 13.
- 14.4 A stat PR suppository of Diclofenac 100mg should also be considered post-operative delivery if no contraindications – this lasts for 16 hours.
- 14.5 Regular analgesia, *eg.* paracetamol 1gram QDS and ibuprofen 400mg TDS, should be considered after an operative vaginal birth in the absence of contraindications.
- 14.6 Before and after instrumental vaginal birth a swab and instrument count must be performed, in the same way as for intra-abdominal surgery
- 14.7 Provide information on how to maintain good perineal hygiene
- 14.8 Women / people should be reassessed after an operative birth for risk factors for venous thromboembolism and prescribed thromboprophylaxis as required.

## **15 Care of the bladder after birth**

- 15.1 The timing and volume of the first void of urine should be recorded in the maternity notes for all women / people
- 15.2 Women / people should be educated about the risk of urinary retention so that they are aware of the importance of bladder emptying in the postpartum period.
- 15.3 A post void residual should be measured if urinary retention is suspected.
- 15.4 Women / people who have had spinal anaesthesia or epidural anaesthesia may be at increased risk of retention and should be offered an indwelling catheter, to be kept in place for at least 12 hours following birth to prevent asymptomatic bladder overfilling. The obstetrician should document an individualised plan of care regarding the catheter removal and review. Refer to Guideline
- 15.5 Offer physiotherapy-directed strategies to reduce the risk of urinary incontinence at 3 months.

## 16 Post-Delivery Documentation (see also Appendix A)

- 16.1 If not already done, documentation of the benefits and risks discussed, and informed consent obtained pre-delivery must be made in the maternity notes
- 16.2 Full documentation of the indication for operative vaginal birth and the procedure performed must be made in the proforma for operative vaginal birth in the maternity notes
- 16.3 Documentation in the maternal notes that the clinician ensured the mother had adequate analgesia prior to performing the procedure
- 16.4 Swab and instrument count documented and signed by both 'counters'.
- 16.5 Documentation of any sequential instruments used, or if procedure abandoned with clear rationale and explanation by the clinician performing the procedure. In this scenario a Datix must be completed ideally by the person performing the procedure.
- 16.6 Complete the perineal repair documentation
- 16.7 The decision to birth time interval must be recorded in the maternity notes

## 17 Debriefing

- 17.1 Review on the ward prior to discharge to discuss the indication for assisted vaginal birth, management of any complications and advice for future births. Where possible, best practice is where the woman is reviewed by the obstetrician who performed the procedure.
- 17.2 Advice for future births - women / people should be encouraged to aim for a spontaneous vaginal birth in a subsequent pregnancy, as there is a high probability of success
- 17.3 Individualise care for women / people who have sustained a third- or fourth-degree perineal tear, or who have ongoing pelvic floor morbidity. (cross ref to the protocol for perineal trauma)
- 17.4 Ensure there is an opportunity for the woman to ask questions during the postnatal period.
- 17.5 Offer advice and support to women / people who have had a traumatic birth and wish to talk about their experience. The effect on the birth partner should also be considered.
- 17.6 Offer debriefing / 'birth stories' service prior to discharge.



## 18 References

- 1) Royal College of Obstetricians and Gynaecologists. April 2020. Assisted Vaginal Birth: Green-top Guideline No.26. London: RCOG
- 2) NHS Digital. (2019). NHS Maternity Statistics , England 2018-2019. London: NHS Digital.
- 3) Healthcare Commission. (2008). Towards better births: A review of maternity services in England. London: Commission for Healthcare Audit and Inspection.
- 4) King's Fund. (2008). Safe Births: Everybody's business - Independent Inquiry into the Safety of Maternity Services in England. London: King's Fund.
- 5) National Institute for Health and Clinical Excellence. (2006). Routine postnatal care of women / people and their babies. London: NICE.
- 6) National Institute for Health and Clinical Excellence (NICE). (2014). Intrapartum Care for Healthy Women / people and Babies. London: NICE.
- 7) Royal College of Anaesthetists, Royal College of Midwives, Royal College of Obstetricians and Gynaecologists, Royal College of Paediatrics and Child Health. (2007). Safer Childbirth: Minimum Standards for the Organisation and Delivery of Care in Labour. London: RCOG Press.
- 8) Royal College of Obstetricians and Gynaecologists, Royal College of Anaesthetists, Royal College of Midwives, Royal College of Paediatrics and Child Health. (2008). Standards for Maternity Care: Report of a Working Party. London: RCOG Press.

## Appendix A - Instrumental birth Proforma (as appears on Badgernet 2021)

Key Details	
Fetus 1	
<b>Fetus 1</b>	
Birth Location	<input type="text"/>
Status of Person Conducting Delivery	<input type="text"/>
Delivered By	<input type="text"/>
	<input type="button" value="Use Current User..."/>
Supervised By	<input type="text"/>
	<input type="button" value="Use Current User..."/>
<b>Fetus 1 Ventouse Birth</b>	
Ventouse Birth Discussed With Consultant	<input type="radio"/> Yes <input type="radio"/> No
Indications/Risks and Benefits Discussed With Patient	<input type="radio"/> Yes <input type="radio"/> No
Name of Person Undertaking Procedure	<input type="text"/>
	<input type="button" value="Use current user..."/>
Grade	<input type="text"/>
GMC/NMC No	<input type="text"/>
Name of Additional Assistant	<input type="text"/>
	<input type="button" value="Use current user..."/>
Consent Gained	<input type="text"/>
Indication for Ventouse Birth	<input type="text"/>
Date and Time Ventouse Birth Commenced	<input type="text"/> at <input type="text"/>
Type of Cup Applied	<input type="text"/>
Rotational Ventouse Birth	<input type="radio"/> Yes <input type="radio"/> No
<b>Fetus 1 first application of cup</b>	
Date/time cup applied	<input type="text"/> at <input type="text"/> <input type="button" value="Now"/>
Date/time 1st traction applied	<input type="text"/> at <input type="text"/> <input type="button" value="Now"/>
Date/time 1st traction ended	<input type="text"/> at <input type="text"/> <input type="button" value="Now"/>
Duration Traction Applied	<input type="text"/> minutes <input type="text"/> seconds
Was baby born?	<input type="radio"/> Yes <input type="radio"/> No
<b>Fetus 1 - Total cup applications</b>	
Number of Times Cup Applied	<input type="text"/>
Total Duration Cup Applied	<input type="text"/> minutes <input type="text"/> seconds

Key Details Fetus 1	Number of Times Traction Applied <input type="text"/> Number of Contractions from Application to Birth <input type="text"/> Was Baby Born? <input type="radio"/> Yes <input type="radio"/> No
	<b>Fetus 1 Forceps Birth</b> Forceps Birth Discussed With Consultant <input type="radio"/> Yes <input type="radio"/> No Indications/Risks and Benefits Discussed With Patient <input type="radio"/> Yes <input type="radio"/> No Name of Person Undertaking Procedure <input type="text"/> <a href="#">Use current user...</a> Grade <input type="text"/> GMC/NMC No <input type="text"/> Name of Additional Assistant <input type="text"/> <a href="#">Use current user...</a> Consent Gained <input type="text"/> Reason for Forceps Birth <input type="text"/> Date and Time Forceps Birth Commenced <input type="text"/> at <input type="text"/> Type of Forceps Birth <input type="text"/> Type of Forceps for CMACE (formerly CEMACH) <input type="text"/> Application checked <input type="radio"/> Yes <input type="radio"/> No Locking easy <input type="radio"/> Yes <input type="radio"/> No
	<b>Fetus 1 first application of forceps</b> Date/time 1st blade applied <input type="text"/> at <input type="text"/> <a href="#">Now</a> Date/time 2nd blade applied <input type="text"/> at <input type="text"/> <a href="#">Now</a> Date/time 1st traction applied <input type="text"/> at <input type="text"/> <a href="#">Now</a> Date/time 1st traction ended <input type="text"/> at <input type="text"/> <a href="#">Now</a> Duration Traction Applied <input type="text"/> minutes <input type="text"/> seconds Was baby born? <input type="radio"/> Yes <input type="radio"/> No
	<b>Fetus 1 - Total applications</b> Number of Times Forceps Applied <input type="text"/> Number of Times Traction Applied <input type="text"/> Duration Traction Applied <input type="text"/> minutes <input type="text"/> seconds Number of Contractions from Application to Birth <input type="text"/>
<b>Episiotomy, Tears and Perineal Trauma</b> Intact Perineum <input type="radio"/> Yes <input checked="" type="radio"/> No Episiotomy <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Not Known Tear <input type="text"/> <a href="#">Tear Definitions</a> Other Trauma to Vaginal Tract <input type="text"/> Illustrate Tear/Trauma <a href="#">No Image</a> PR Examination Performed <input checked="" type="radio"/> Yes <input type="radio"/> No PR Examination Details <input type="text"/> Repair Required <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Yes - Declined Countersignature Required <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A Peer Countersignature <input type="text"/> <a href="#">Authorise</a> <a href="#">Perineal Repair</a>	

Perineal Repair	
Discussed with Woman	<input checked="" type="radio"/> Yes <input type="radio"/> No
Consent Obtained	<input type="radio"/> Yes <input type="radio"/> No
Location Sutured	<input type="text"/>
Type of Trauma Sutured	<input type="text"/>
Analgesia and/or Anaesthesia For Perineal Repair	<input type="text"/>
Catheterised	<input type="radio"/> Yes <input type="radio"/> No
Indwelling in Situ	<input type="radio"/> Yes <input type="radio"/> No
Tampon in Situ	<input type="radio"/> Yes <input type="radio"/> No
Date and Time Suturing Commenced	<input type="text"/> at <input type="text"/>
Same Suture Material Throughout?	<input type="radio"/> Yes <input type="radio"/> No
Rectal Examination Before Suturing	<input type="radio"/> Yes <input type="radio"/> No
Outcome of Rectal Examination	<input type="text"/>
Vaginal Wall Sutured	<input type="text"/>
Perineal Muscle Sutured	<input type="text"/>
Perineal Skin Sutured	<input type="text"/>
Labia Sutured	<input type="text"/>
Sutured By	<input type="text"/>
	 Use current user...
Suturing Supervised	<input type="radio"/> No <input type="radio"/> Yes
Additional Perineal Repair Notes	<input type="text"/>
Post Suturing	
	 Swab and Needle Check
Vaginal Examination Following Repair	<input type="radio"/> Yes <input type="radio"/> No
Rectal Examination following Repair	<input type="radio"/> Yes <input type="radio"/> No
Rectal Exam Notes	<input type="text"/>
Date and Time Suturing Completed	<input type="text"/> at <input type="text"/>
Analgesia Given	<input type="radio"/> Yes <input type="radio"/> No
Antibiotics Prescribed	<input type="radio"/> Yes <input type="radio"/> No
Postnatal Consultant Review Required	<input type="radio"/> Yes <input type="radio"/> No
Topics Discussed	<input type="text"/>
Additional Advice Given	<input type="text"/>
Additional PostSuturing Notes	<input type="text"/>



**Appendix B: Difficulty delivering the head at caesarean section in advanced labour**

Caesarean section in the second stage of labour is associated with high maternal morbidity and can be extremely difficult. Caesarean section at full dilatation should be decided and conducted or supervised by a senior obstetrician with demonstrated competency.

**18.1 Preparation**

Flex and reduce the head for those who have had a failed trial of instrumental. Consider the fetal pillow device following a failed trial of instrumental whilst the operator is still present vaginally and where appropriate training has been undertaken.

If not using a pillow, consider maintaining a modified lithotomy after a failed instrumental – this can open the pelvis to aid delivery and allows for ease of access if requiring pressure from below during delivery.

**18.2 Uterine incision**

When performing a caesarean section in the second stage of labour the lower uterine segment will have stretched and its upper limit can extend much higher than expected. Careful attention to the utero-vesicle fold should be made. Incision should not be made too low as this may be the cervix and can lead to extensions involving the vagina.

**18.3 Manipulation techniques**

Do not fight a contraction, wait for the uterus to relax before manipulating.

Struggling to manipulate the fetal head against uterine activity will prolong the uterine contraction and is highly likely to fail and cause extension of the uterine angles.

Wait with the hand unmoving until the contraction eases off then proceed with disimpaction, flexion, rotation and delivery.

It may be helpful to request administration of a tocolytic – e.g. 250mcg terbutaline IV, with circulatory support and intensive monitoring. Or GTN 50mg (1 ampoule) into 1 litre saline (i.e. 50mcg/ml), with a bolus of 5ml every 5 minutes, takes 1 – 2 minutes to work (contraindicated with hypovolaemia, raised intracranial pressure, or nitrate sensitivity).

Pushing the head up from below should only be undertaken by a senior midwife or doctor, using a cupped hand.

Pushing up the fetal shoulder by the surgeon or surgical assistant may also be of benefit.

Uterine extension, usually with an inverted 'T' or 'J' can improve access if space is inadequate.

Do not use any instruments - trying to apply one blade of the forceps to scoop the head up is illogical and dangerous.

Patwardhan procedure can be used which involves delivering the fetal breech first. The operators hand is passed upwards until a leg is reached and either the leg or breech is delivered, the rest of the delivery is as for caesarean breech delivery.

An extremely premature infant in the transverse or breech position with absent liquor may be best managed with a vertical incision of the uterus.


Be prepared for possible complications and expect the unexpected. Always ask for support from a senior if expecting a difficult extraction. Maintain good exposure, minimal tissue trauma, meticulous haemostasis, thoughtful surgical and anatomical awareness.





## Appendix C: Placement of the Fetal Pillow ®

Please refer to MD090 for full guidance on using the Fetal Pillow ®

# Fetal Pillow®

## 4 Key Steps



STEP 1    INSERTION	STEP 2    PLACEMENT
 <ul style="list-style-type: none"> <li>Bi-fold the device in two</li> <li>Lubricate device</li> <li>Insert vaginally ensuring the balloon surface is in contact with the fetal head</li> </ul>	 <ul style="list-style-type: none"> <li>Push the device as posteriorly as possible, towards the coccyx</li> <li>Placement is similar to a posterior ventouse cup</li> </ul>
STEP 3    LEGS FLAT	STEP 4    INFLATE
 <ul style="list-style-type: none"> <li>Lay the legs flat in the operating table - otherwise it can be expelled or displaced if legs are open</li> </ul>	 <ul style="list-style-type: none"> <li>Inflate with 180ml of saline using the 60ml syringe provided -Three Full Syringes</li> </ul>

This quick reference guide does not include all of the information necessary for selection and use. Please see instructions for use for complete product and handling details.

Contact details for new order, or any queries, [info@safetob.com](mailto:info@safetob.com) or [www.safetob.com](http://www.safetob.com) ©Safe Obstetric Systems 2013

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