**INTRAPARTUM CARE**

**INSTRUMENTAL VAGINAL DELIVERY**

THIS GUIDELINE CONTAINS INFORMATION ON INSTRUMENTAL FORCEPS AND VACUUM BIRTHS, AND PUDENDAL NERVE BLOCK.

### INSTRUMENTAL VAGINAL BIRTH QRG

**PREPARATION:**
1. Prepare equipment, explain the procedure to the woman, gain consent, assess analgesia requirements, check contraindications, & empty the woman’s bladder.
3. Perform an abdominal palpation and vaginal examination & position the woman in dorsal lithotomy.
5. Proceed with either forceps or vacuum procedure below. Evaluate for episiotomy during procedure.

**FORCEPS:**
- a. Consider trial of forceps in theatre if high risk of failure.
- b. Insert the left blade into the left side of vagina while guarding the vaginal tissue with other hand, insert the right blade with right hand. Note the time of forceps application.
- c. Assess the blades to ensure correct application & lock the blades together when positioned correctly.
- d. Apply traction during a contraction while the woman bears down (unless contraindicated), following the pelvic curve. The dominant hand gives outward pull while the other hand gives continuous downward pressure.
- e. Remove forceps in opposite order to the application. Note time forceps removed.

**VACUUM:**
- a. Apply vacuum cup with centre at or behind the flexion point over the sagittal suture. The flexion point is 3cm in front of the posterior fontanelle. Check vacuum position / application & no cervical or vaginal tissue is in the cup.
- b. Apply traction. Only obstetric medical staff competent in assisted birth are to undertake or supervise the procedure.
  - ➢ Note the time the cup is applied / traction initiated & turn on suction pressure as per medical practitioner (up to max. 80kPa). Chignon is formed after 1-2 minutes.
  - ➢ During a contraction & with maternal expulsive effort (unless contraindicated), apply gentle steady traction at right angles to the cup, with the axis of traction following pelvic curve during the contraction. Note the time of each traction pull.
  - ➢ Abandon the procedure if difficult application, no progressive descent, not imminent birth within 3 pulls, cup detachment 3 times, or >15-20 minutes since cup application.
- c. Cease suction & remove vacuum cup when the jaw is visible, birth the baby.

**POST PROCEDURE**
6. Document procedure in the woman’s medical record, MR275 Operative Vaginal Delivery & MR230.01 Labour and Birth Summary including when the attempt has been unsuccessful. *If adverse outcome or unsuccessful assisted vaginal birth complete Clinical Incident Form.
7. Assess & repair vagina trauma (as required). Provide bladder care, analgesia & measures to reduce perineum pain & swelling (if trauma occurred).
8. Prior to hospital discharge medical staff to counsel the woman about the indication for operative delivery, management of complications & prognosis for future births.

*Note: This flowchart represents minimum care & should be read in conjunction with the following full guideline & disclaimer. Additional care should be individualised as needed.*
PURPOSE

To provide assistance for women to give birth vaginally using:

- **Forceps**, involving direct traction on the fetal skull, or
- **Vacuum extraction**, involving traction on the fetal scalp
- **Pudendal nerve block** (as necessary).

BACKGROUND INFORMATION

Instrumental vaginal delivery account for around 11% of births in Australia.\(^1\)

The choice of instrument to assist birth involves the obstetrician considering the goal of minimising morbidity risks and level of morbidity, whilst encouraging maternal input.\(^2\) The use of forceps achieves a successful vaginal delivery more often than a vacuum extraction\(^1\); however forceps are associated with higher analgesic requirements, neonatal facial injuries and maternal injuries.\(^3\) Vacuum assisted birth has a higher risk of cephalhaematoma,\(^3\) although the use of a soft vacuum cup causes less risk of scalp injuries and cephalhaematoma,\(^3\) but has a higher failure rate.

FORCEPS DELIVERY AND VACUUM EXTRACTION BIRTH

KEY POINTS

The following key points are separated into **General Instrumental**, **Vacuum** and **Forceps** points.

**General Points when Performing an Instrumental Delivery**

1. Obstetric medical practitioners performing assisted deliveries should be accredited in these procedures.\(^2\) An obstetric trainee must be supervised by an accredited medical practitioner if conducting an assisted delivery.
2. The choice of instrument used for an instrumental delivery is determined by the clinician’s skill, available choices and the clinical circumstance.\(^1, 3, 4\)
3. The threshold for abandoning an instrumental birth differs between clinicians and clinical situations.\(^1\) Assisted instrumental delivery should be abandoned if there is:
   - difficulty in applying the instrument\(^5\)
   - no evidence of progressive descent with each pull\(^2\)
   - no evidence of imminent birth following three pulls of a correctly placed instrument by an experienced operator.\(^2\)
   - birth is not imminent within a reasonable period of time (e.g.15-20 minutes).\(^5\)
4. Sequential instrumentation should not be used if any of the indications for abandonment are present from the first unsuccessful attempt at delivery. In circumstances where there has been good descent but delivery has not been achieved, the use of a second instrument may be appropriate.\(^5\)
5. All women who have undergone instrumental vaginal delivery should have monitoring of bladder according to the KEMH postnatal Clinical Guideline, O&M: Postnatal: Bladder Care.
6. Routine episiotomy is not required for instrumental vaginal deliveries. Individual clinical judgement should be decided for each birth.\(^6\)

7. Consider trial of instrumental vaginal delivery in theatre for deliveries which are at risk of higher failure rates e.g. maternal body mass of >30, estimated fetal weight >4000g or a clinically big baby, occipital-posterior position, mid-cavity or when 1/5 head is palpated abdominally.\(^2\)

**Forceps Specific Key Points**

1. Clinicians must be accredited prior to using forceps, or a forceps delivery should be conducted with appropriate training and under supervision of a medical practitioner credentialed in forceps delivery.\(^2,10\)

2. Effective analgesia should be obtained prior to commencing a forceps delivery.\(^1\). Although there is insufficient evidence to support one particular analgesic method in instrumental delivery,\(^11\) regional or pudendal block and effective perineal infiltration are adequate forms of analgesia for low and outlet deliveries.\(^6\) A regional block (epidural or spinal) is usually required for a mid-rotational delivery.\(^10\)

3. Rotation of the fetal head should only be attempted when the uterus is relaxed between contractions.\(^10\)

4. Rotational forceps delivery should be abandoned if:
   - the forceps are not easily applied
   - the handles are not easily approximated
   - rotation is not easily effected with gentle traction.\(^10\)

5. Forceps should be conducted in theatre if there is an expectation of difficult delivery / forceps.\(^1\)

6. High forceps delivery should not be attempted.

**Vacuum Extraction Specific Key Points**

1. To decrease risk of cephalhaematoma and intracranial bleeding the utilisation of the vacuum extractor is not recommended in situations with face or breech presentations, or if the fetus is less than 34 weeks gestation.\(^2,7,8\)

2. The use of the vacuum extraction for instrumental delivery is recommended as the first line method of delivery in situations where there are no clear indications for a specific instrument.\(^3\)

3. The preferred option in situations where women are infected or at high risk of infection (e.g. viral infections such as HIV or hepatitis) is to use forceps or a soft cup rather than a metal cup for assisted vaginal deliveries.\(^3\)

4. The use of the metal vacuum cup is superior at achieving greater traction with a higher rate of successful deliveries than with use of a soft cup e.g. for occipito-lateral or occipito-posterior positions.\(^3\) An OP metal cup or the KIWI Omnicup are superior to anterior cups for mid cavity OT and OP positions.

5. When rapid delivery is required, the use of a rapid negative pressure application of vacuum suction rather than increasing pressure in a stepwise increment reduces the duration of the procedure, with no difference in outcomes to the woman or neonate.\(^7\)
6. The use of the metal cup is associated with more cases of scalp injury and cephalhaematoma⁶,⁷, and retinal haemorrhage⁹ than the soft cup.

7. To decrease risk of adverse events correct application of the cup to avoid disengagement, limiting time application to 20 minutes, and limiting the number vacuum pulls to three contractions is recommended.⁹ There must be descent of the presenting part with each pull.

INDICATIONS FOR INSTRUMENTAL VAGINAL DELIVERY

- Fetal compromise – suspected or anticipated¹,²,⁴,¹²,¹³
- Delay in second stage¹,²,⁴,¹²,¹³
- Maternal medical conditions where maternal effort is contraindicated¹,²,⁴ e.g. cerebral aneurism, risk of aortic dissection, proliferative retinopathy, severe hypertension or cardiac failure¹, myasthenia gravis, spinal cord injury, cerebral vascular disease²
- Maternal exhaustion/fatigue¹,²,⁴

CONTRA-INDICATIONS FOR INSTRUMENTAL VAGINAL DELIVERY

- High fetal head / not engaged.²,¹⁴ Fetal station higher than +0 or > 1/5 palpable abdominally²,⁸
- Less than full dilatation.²,⁸ *Exception: a prolapsed cord in a multiparous woman, or a second twin.²

Relative contraindications:

- Fetal bleeding disorders¹,² (e.g. alloimmune thrombocytopenia)
- Fetal pre-disposition to fracture¹,² (e.g. osteogenesis imperfecta)
- Unknown fetal position⁸ or malpresentation⁸
- Evidence of absolute cephalopelvic disproportion (CPD)⁸
- Inexperienced operator⁸.

N.B. Maternal blood-borne viral infections are not a contraindication, however care should be taken to avoid situations where increased trauma to the fetal scalp is more likely.²

PREREQUISITES FOR INSTRUMENTAL VAGINAL DELIVERY

- Informed maternal consent²,⁶
- Vertex presentation²,⁶
- The head is ≤ 1/5 palpable abdominally²,⁶
- Cervix is fully dilated and the membranes are ruptured²,⁶,¹³
- Pelvis is deemed adequate²,⁶,¹³
• The exact position of the head is able to be determined to allow correct placement of the instrument$^2, 6$
• Adequate analgesia is effective e.g. regional block or pudendal$^2, 13$
• The maternal bladder is empty.$^6, 13$ Deflate or remove an indwelling catheter.$^2$
• Personnel trained in paediatric resuscitation are available$^2$
• Skilled trained operator to perform the procedure$^2, 6$
• A backup plan is made should the instrumental delivery be unsuccessful$^2, 6$ i.e. caesarean section delivery capability.$^{12, 13}$

TYPES OF FORCEPS AVAILABLE AT KEMH

Outlet and/or Low Forceps:
• Wrigley – suitable for use when the head is on the perineum, for the after-coming head of a breech delivery, and at caesarean section.$^{15}$
• Neville-Barnes – used for low or mid-cavity delivery.$^4$
• Laufe – outlet forceps.

Mid cavity forceps
• Kielland – generally used for rotational delivery when the head is in the transverse or the occipital-posterior position. The lock allows sliding to correct asynclitism.$^{15}$

EQUIPMENT

1. Check all equipment is available for use:
   • Sterile bowl pack
   • Lithotomy pole
   • Urinary catheter
   • Plastic apron, protective glasses/face shield and mask
   • Instrument pack – including X4 Howard Kelly forceps, X1 episiotomy scissors, X1 cord cutting scissors
2. Ensure equipment is available as required to perform an episiotomy
   • 1X 20 mL syringe
   • 1X 22 gauge needle
   • 1X 19 gauge needle
   • 10 mL 1% Lignocaine
3. Ensure equipment is available for pudendal analgesia:
   • Pudendal needle
   • Lignocaine 1%.
4. Vacuum extraction machine – ensure it is tested and working prior to commencement.
5. Provide a selection of vacuum cup types and sizes and a selection of forceps.
6. Check the Neonatal resuscitation cot is pre-warmed, checked, and equipment is operational.
## PROCEDURE

<table>
<thead>
<tr>
<th>PREPARATION</th>
<th>ADDITIONAL INFORMATION</th>
</tr>
</thead>
</table>

### 1 Informed consent

Ensure the woman has given informed consent and document in the medical record. Check for contraindications.

### 2 Analgesia

Assess and provide appropriate analgesia. Pudendal block, regional block, or perineal infiltration is appropriate for low and outlet deliveries. This is not essential for vacuum extraction. Regional analgesia (spinal or epidural) is recommended for rotational forceps.

### 3 Notify appropriate personnel

- Inform the Labour/Birth Suite Midwifery Coordinator.
- Advise the Paediatrician to attend the birth.

### 4 Abdominal palpation

Perform an abdominal palpation, followed by a bimanual vaginal examination. Ascertain the side of the fetal back and limbs and the side of the fetal heart (this is best done by placing the doppler in the midline and angulating to either side to detect where it is louder). When the fetal back is on the left, the position is twice as likely to be OA than OP. When the fetal back is on the right, the position is twice as likely to be OP than OA.

### 5 Maternal positioning

Place the woman in dorsal lithotomy position.

### 6 Bladder care

- Ensure the bladder is empty. A full bladder may inhibit progress of labour.


See Clinical Guideline, O&M: Postnatal: Bladder Care for...
### PROCEDURE

<table>
<thead>
<tr>
<th>7</th>
<th><strong>Fetal heart rate monitoring</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor the fetal heart rate during the procedure</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8</th>
<th><strong>Vaginal examination</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Perform a vaginal examination to determine:</td>
<td></td>
</tr>
<tr>
<td>- dilatation</td>
<td></td>
</tr>
<tr>
<td>- position</td>
<td></td>
</tr>
<tr>
<td>- station</td>
<td></td>
</tr>
<tr>
<td>- moulding</td>
<td></td>
</tr>
<tr>
<td>- presence of caput.</td>
<td></td>
</tr>
<tr>
<td>- Overall size of the pelvis</td>
<td></td>
</tr>
</tbody>
</table>

If the position on vaginal examination is not in agreement with the expected findings on abdominal examination, an ultrasound scan should be performed.

### ADDITIONAL INFORMATION

- Information regarding bladder management post instrumental vaginal deliveries.

- See [Clinical Guideline, O&M, Intrapartum: Fetal Heart Monitoring (Intrapartum)](#).

- Allowance should be made for extensive caput and/or moulding of the fetal head. If substantial caput is present soft parts of the fetal head may be felt below the ischial spines, but the leading bony part of the head may be above the ischial spines. This will influence if an instrumental delivery can be safely performed.

### Follow either forceps or vacuum procedure below:

**FORCEPS:**

**Location for forceps**

Consider a ‘trial of forceps’ delivery in theatre if the woman is in the ‘higher risk for failure’ group.

**Application of the forceps**

1. Insert the left blade into the left side of the vagina while simultaneously guarding the vaginal tissue with the right hand. Careful positioning avoids maternal tissue being caught under the forceps blade.
2. Insert the right blade into the right side of the vagina while guarding the vaginal tissue.
3. Note the time of forceps application.

**Adjustment and articulation of the blades**

1. Assess the blades to ensure correct application. Adjust if required.

Higher failure rates are associated with a body mass index >30, occipital-posterior positions, a macrosomia fetus (estimated >4kg), mid-cavity delivery or when the head is 1/5 palpable abdominally.

Correct application presents the smallest cranial diameter to the birth.
**PROCEDURE**

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.5</td>
<td>Lock blades together when positioned correctly&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

**Applying traction**

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.6</td>
<td>Instruct the woman to bear down with the contraction unless contra-indicated.&lt;sup&gt;17&lt;/sup&gt;</td>
</tr>
<tr>
<td>9.7</td>
<td>Apply traction to follow the pelvic curve during contraction. The dominant hand gives outward pull which is deflected by continuous downward pressure by the accoucheur’s other hand.&lt;sup&gt;17&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

**Removing the forceps**

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.8</td>
<td>The forceps are removed in the opposite order to the application.&lt;sup&gt;4&lt;/sup&gt; Note the time forceps are removed. Then go to 10: Post-procedure care.</td>
</tr>
</tbody>
</table>

**VACUUM:**

**Application of the vacuum cup**

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.1</td>
<td>Apply the centre of the cup at or behind the flexion point located over the sagittal suture 3cm in front of the posterior fontanelle.&lt;sup&gt;5&lt;/sup&gt; For a 6cm outer diameter cup (Bird OP or KIWI), the edge of the cup will be on the edge of the posterior fontanelle. The distance from the other edge of the cup to the edge of the anterior fontanelle should be 3 cm for an average fetus.</td>
</tr>
<tr>
<td>9.2</td>
<td>Check the position and application of the cup.</td>
</tr>
</tbody>
</table>

**ADDITIONAL INFORMATION**

- canal to facilitate delivery.<sup>17</sup> The plane of the shank lies over the cranial flexion or pivot point, the sagittal suture should lie in the midline of blades, and blades should be symmetrically applied to the skull.<sup>17</sup>
- Consider episiotomy as the head nears delivery.<sup>4</sup>
- Application of the cup over the flexion point maximises traction and minimises cup detachment.<sup>5, 9</sup>
- Placing cup in front of flexion point can result in unwanted head extension.
- Placing the cup over the flexion point presents the smallest diameter of the head to the maternal pelvis resulting in less force required to assist delivery.<sup>10</sup> When the edge of the vacuum cup is at least 2cm, the occiput rotates anteriorly at delivery in 96% of cases.<sup>32</sup>
- Ensure no vaginal or cervical tissue is caught by the cup.<sup>8, 9</sup> Risk for subgaleal haemorrhage increases if...
**PROCEDURE**

**ADDITIONAL INFORMATION**

**Applying traction**

9.3 Note the time the cup is applied and traction is initiated. Adequate chignon forms within 1-2 minutes of suction.\(^9\)

Discontinue traction between contractions or if an audible hiss is heard indicating a loss of vacuum. Rotating or side-to-side movements should be avoided as this increases the risk for cup detachment and vaginal wall injury.\(^{18}\)

9.4 Turn on the suction pressure as requested by the medical practitioner up to the limit of 80 kilopascals (kPa). Note: Some practitioners may request the pressure be initially turned up to 20 kPa; the position of the cup is checked, then the assistant may be requested to turn up the pressure to 80 kPa.

The rapid negative pressure application method, rather than increasing pressure in a stepwise method, reduces time when a rapid delivery is required, with no difference to maternal or neonatal outcomes.\(^7\)

An adequate chignon is formed within 2 minutes of creating the vacuum, and traction may be commenced after 1 minute without effecting the efficiency or safety.\(^7\),\(^{19}\)

9.5 During a contraction apply gentle steady traction, at right angles to the cup, with the axis of traction following the pelvic curve during a contraction.\(^5\)

With maternal expulsive effort during the contraction the accoucheur applies traction.\(^8\)

Note the time of each traction pull. Prolonged traction may lead to intracranial injury.\(^5\)

9.6 Abandon the procedure if there is:

- Difficulty in application of the instrument\(^5\)
- No evidence of progressive descent with each pull\(^2\),\(^5\)
- No evidence of imminent birth following three pulls of correctly placed instrument by an experienced operator.\(^2\),\(^5\),\(^9\)
- Cup detachment three times\(^5\)
- More than 15\(^5\) to 20\(^9\) minutes has elapsed since the time of application.\(^5\)

With effective uterine contractions and maternal expulsive effort observational studies have shown almost all vacuum extraction deliveries can be completed within 15 minutes.\(^{19}\)

Routine episiotomy does not reduce and may increase the incidence of maternal trauma.\(^5\)

9.7 Evaluate the need for **episiotomy**. The majority of malpractice litigation results from failure to abandon the procedure at an appropriate time.\(^2\)

Increased risk of neonatal trauma and admission to special care units are associated with excessive pulls (>3) and sequential use of instruments.\(^2\)

With effective uterine contractions and maternal expulsive effort observational studies have shown almost all vacuum extraction deliveries can be completed within 15 minutes.\(^{19}\)
PROCEDURE

Removing the vacuum cup

9.8 Cease the suction pressure and remove the cup when the jaw is visible. Note the time the cup was removed. Note the time of birth.

ADDITIONAL INFORMATION

POST PROCEDURE

10 Documentation

Document the instrumental delivery or unsuccessful attempt on the:

- MR275 Operative Vaginal Delivery
- MR230.01 Labour and Birth Summary

Complete an electronic clinical incident form if adverse outcomes or an attempt at assisted vaginal delivery was unsuccessful. A DatixCIMS form does not need to be completed for an unsuccessful instrumental delivery performed in theatre. A form should be completed though is there are other issues with the delivery or neonate.

The electronic clinical incident form is sent to the Obstetrical Clinical Review Committee as part of effective risk management process.

11 Post procedure management

11.1 Assess the vagina for trauma and repair as required.

See also Clinical Guideline, O&M, Intrapartum: Perineal Trauma: Management of Third and Fourth Degree and Episiotomy/Genital Laceration: Suturing.

Risk factors for third and fourth degree perineal laceration include age, primiparous, occipital-posterior position, gestational age >40 weeks, forceps for arrest, and absence of episiotomy.

11.2 Discuss bladder management with the woman and monitor voids. See Clinical Guideline, O&M, Postnatal: Bladder Care

Women who have spinal or epidural top-ups for an instrumental delivery should be informed they will have an indwelling catheter in situ for 12 hours post procedure.

11.3 Initiate measures to reduce swelling and pain to the perineum if trauma has occurred.


11.4 Offer regular analgesia after operative

Unless contraindicated, regular paracetamol and anti-inflammatory
**PROCEDURE**

<table>
<thead>
<tr>
<th>4</th>
<th>delivery.(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.</td>
<td>Prior to discharge the medical team should counsel the woman about:</td>
</tr>
<tr>
<td>5</td>
<td>the indication for operative delivery,</td>
</tr>
<tr>
<td></td>
<td>management of any complications,</td>
</tr>
<tr>
<td></td>
<td>prognosis for future deliveries.(^2)</td>
</tr>
</tbody>
</table>

Where possible, the obstetrician who performed the delivery should review and debrief the woman.\(^2\)

**ADDITIONAL INFORMATION**

- are beneficial for perineal pain after operative delivery.\(^2\)
- Women should be encouraged to aim for a spontaneous vaginal delivery in a subsequent pregnancy if the forceps delivery was accomplished as there is a high probability (80%) of success.\(^2\)
- For women who experience a third or fourth degree tear, the obstetric team should discuss risk of recurrence and implications with future births.\(^2\)

**PUDENAL NERVE BLOCK**

Pudendal nerve blocks are used to provide analgesia for second stage labour pain,\(^21\) low forceps deliveries,\(^21,22\) or vacuum extraction deliveries,\(^23\) women who have contra-indications to lumbar analgesia; episiotomy;\(^22,24\) or for the repair of vaginal or perineal lacerations.\(^21-24\)

**BACKGROUND INFORMATION**

The pudendal nerves derive from the lower sacral nerve roots of S2, S3 and S4 and provide sensory innervation for the lower vagina, the vulva, and the perineum, and also motor innervation for the perineal muscles. Pudendal nerve block anaesthetisation is achieved by depositing local anaesthesia behind each of the sacrospinous ligament.\(^25\)

The pudendal nerve can be blocked by two approaches which are transvaginal or transperineal.\(^26\) At KEMH the preferred mode for insertion is transvaginal. Generally the analgesic effect has a short delay\(^22\) of 6-15 minutes, so timing of the administration is central to effective obstetric use.\(^27\) The pudendal nerve block can provide effective anaesthesia for outlet forceps delivery.\(^25\) This analgesia however does not provide effective analgesia for labour pain, and is generally ineffective for mid-forceps delivery, exploration of the uterus\(^25,28\), or repair of cervical and upper vaginal wall lacerations.\(^28\)

Maternal complications are rare, but can include local anaesthetic toxicity, haematoma formation,\(^22\) infection,\(^25\) retropsoal and subgluteal abscesses\(^21\), and sciatic nerve block/injury.\(^29\) A potential complication for the accoucheur is a needle-stick injury due to the close proximity of the finger palpating for the correct position to inject.\(^26\)
### EQUIPMENT

- 1 X Disposable pudendal block needle
- 10mL Local anaesthetic e.g. 1% Lignocaine
- 1 X 20mL syringe

### PROCEDURE

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1    | Prior to commencing the procedure
   | Obtain maternal consent\(^\text{16}\) & prepare equipment.\(^\text{30}\) |
| 2    | Position
   | Place the woman in lithotomy position.\(^\text{29}\) |
| 3    | Technique
   | 3.1 Clean the area with antiseptic solution and aseptic technique.\(^\text{30}\) |
   | 3.2 Hold the guarded needle between the middle and index finger of the right hand to block the right pudendal nerve (The left hand holds the needle for the left side). |
   | 3.3 Palpate the ischial spine.\(^\text{29}\) |
   | 3.4 Advance the needle posterior to the ischial spine to a depth of 1-1.5 cm\(^\text{29}\) using a loss of resistance method.\(^\text{27}\) This places the needle through the sacrospinous ligament.\(^\text{29}\) |
| 4    | Aspirate for blood.\(^\text{30}\) |
| 5    | Inject up to 10mL of local anaesthetic e.g. 1% Xylocaine / Lignocaine. |

### ADDITIONAL INFORMATION

- Obtain consent after explaining rationale.\(^\text{30}\)
- The needle guards the vaginal mucosa and protects the fetal head.\(^\text{21}\)
- The sacrospinous ligament lies 1 cm medial and posterior to the ischial spine.
- The tip of the needle will now lie in the area of the pudendal nerve.
- Aspiration is essential due to the close proximity of the pudendal artery.\(^\text{27}\) If blood present, withdraw and reposition.\(^\text{30}\)
- Xylocaine 1% appears in maternal and fetal blood within 5 minutes of the block, and peaks between 10 to 20 minutes. For episiotomy, insert 3-4mL initially as needle is withdrawn, then (without removing the needle) administer the remainder in a fan shape on either side of original injection.\(^\text{30}\)
<table>
<thead>
<tr>
<th>PROCEDURE</th>
<th>ADDITIONAL INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.7</td>
<td>Repeat the procedure on the opposite side. Allow a minimum 4-5 minutes after pudendal block administration for effect to start prior to commencing painful procedures.</td>
</tr>
</tbody>
</table>

See also: [Clinical Guideline, O&M, Intrapartum: Episiotomy & Infiltration of the Perineum](#)
REFERENCES / STANDARDS


7. Suwannachat B, Lumbiganon P, Laopaiboon M. Rapid versus stepwise negative pressure application for vacuum extraction assisted vaginal delivery (Review). Cochrane Database of Systematic Reviews. 2012 (8).


Instrumental Vaginal Delivery
Clinical Guidelines: Obstetrics & Midwifery

KEMH
Perth, WA

All guidelines should be read in conjunction with the Disclaimer at the beginning of this manual
National Standards – 1.7.2 Clinical care
Legislation - Nil

Related Policies –
- WNHS Policy No. W036: Documentation in medical records

Other related documents – KEMH Clinical Guidelines, Obstetrics & Midwifery:
- Intrapartum: Fetal Heart Monitoring (Intrapartum).
- Intrapartum: Episiotomy & Infiltration of the Perineum
- Intrapartum: Episiotomy / Genital Laceration: Suturing
- Postnatal: Bladder Care
- Postnatal: Perineal Care
- For Clinical Guidelines specific to the Family Birth Centre see:
  Obstetrics & Midwifery: Family Birth Centre: Prescription & Administration of Routine Medications: Lignocaine Administration:
  - Prior to performing an episiotomy in FBC
  - For perineal repair in the FBC.

RESPONSIBILITY
Policy Sponsor          Director of Obstetrics
Initial Endorsement    July 2003
Last Reviewed          May 2014
Last Amended           February 2016
Review date            May 2017

Do not keep printed versions of guidelines as currency of information cannot be guaranteed. Access the current version from the WNHS website.