MATERNITY UNIT

GUIDELINE: Shoulder Dystocia

SCOPE: All midwives, LMCs, nurses and obstetricians working in maternity

AUTHOR: Director of Midwifery & Clinical Midwife Manager

PURPOSE: To provide health professionals with clear guidance on the correct management of shoulder dystocia.

DEFINITIONS: Shoulder dystocia is when additional manoeuvres are required to complete the birth of the baby, after routine traction has failed to release the shoulders during normal vaginal birth.

GUIDELINE:

Incidence

There is wide variation in the reported incidence of shoulder dystocia. Studies involving the largest number of vaginal deliveries (34 800 to 267 228) report incidences between 0.58% and 0.70%.

Risk Factors

Prelabour	**Intrapartum**
Previous shoulder dystocia	Prolonged first stage
Macrosomia	Prolonged second stage
Gestational diabetes	Labour augmentation
Maternal obesity	Instrumental delivery
Advancing maternal age	Epidural anaesthesia
Male fetus	
Maternal pelvic trauma or disease	
Maternal short stature	

There is often a combination of the above risk factors but the majority of cases of shoulder dystocia have no associated risk factors, therefore the midwife needs to be prepared for the possibility of shoulder dystocia at every birth.

Management

Shoulder dystocia is an obstetric emergency. The aim of management is to safely deliver the infant before asphyxia occurs, and without causing neurological injury or birth trauma. Most interventions are intended to disimpact the anterior shoulder from behind the symphysis pubis by rotating the fetal trunk or delivering the posterior arm and shoulder. See **Appendix ONE** for flow chart.

Excessive neck rotation, head and neck traction, and fundal pressure **should not be performed** because this combination of manoeuvres can stretch and injure the brachial plexus. These actions may further impact the shoulders and cause uterine rupture or other injury.

HELPERR

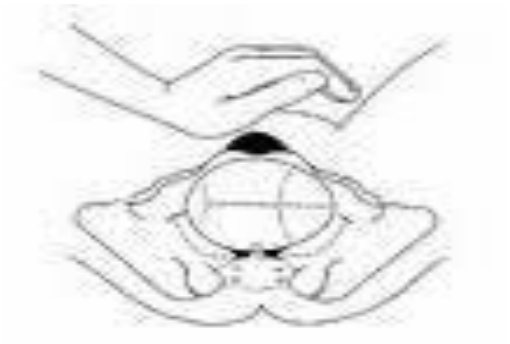
1. **H**elp-Ring emergency bell & phone 777 and state "Obstetric and Neonatal Emergency".
2. Explain to the woman what is happening so she will follow your instructions. **Advise her not to push until you instruct her to do so.**
3. When help arrives, use the SBARR tool as a means to communicate the situation verbally. Assign a scribe to document times, manoeuvres and length of time each manoeuvre on the shoulder dystocia Proforma (**Appendix TWO**)
4. As the situation allows, assign someone to keep the support person/s informed of events.
5. Remove bottom of bed and lie the woman flat, removing pillows.
6. **E**valuate for an episiotomy.
7. **L**egs- McRobert's manoeuvre.
8. **P** - Instruct your assistant to apply supra pubic pressure from the posterior aspect of the baby. If position of baby is not clear, attempt from one side then the other. This is combined with the McRoberts manoeuvre. Apply pressure continuously up to 30 seconds and evaluate. Then apply intermittent pressure for a further 30 seconds, then evaluate. These manoeuvres are combined with downward traction. If not successful, move onto the next the manoeuvre.
9. **E**nter to perform internal rotation **-** Rubin manoeuvre, Wood Screw and Reverse Wood Screw.
10. **R**emove Posterior arm.
11. **R**oll woman onto all fours if prior manoeuvres unsuccessful.
12. Once the baby is born, perform a quick assessment as to whether the baby can be placed skin-to-skin, or transferred to the heat table for resuscitation.
13. Paediatrician to examine baby post-birth and follow up as necessary.
14. Keep the woman and support persons informed of events.
15. Each registered staff member present should document thoroughly what they have seen and done with accurate times of events in the woman's MCIS records.
16. Take paired cord blood gas samples for analysis.
17. Check perineum for trauma post-delivery.
18. Debrief amongst staff if appropriate.
19. Fully inform the woman and family about what happened.

Manoeuvres:

Allow up to 30 seconds for each manoeuvre but if there is no movement at all, then proceed to the next manoeuvre within the 30 seconds. The manoeuvres can be done in a different sequence, depending on the initial position of the woman (**Appendix THREE**). No manoeuvre is superior to another for resolving the dystocia.

- **McRobert's manoeuvre** involves two assistants flexing and abducting the woman's hips positioning the maternal thighs up onto the maternal abdomen. The woman is laid flat and the bottom half of the bed removed.

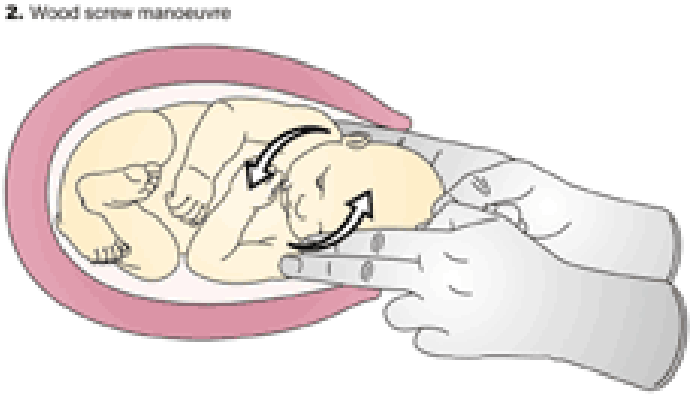
- **Supra-pubic pressure** – (often used in conjunction with McRoberts) applied by an assistant using the heel of the hand, while standing at the side of the bed facing the fetal back, and pressing down and forward. This can be continuous or intermittent pressure. The woman is not to push unless there is movement of the shoulder.



- **Rubin manoeuvre -** enter the vagina posteriorly and move fingers up, to behind the anterior shoulder. If the fetal spine is on the maternal left, the operator's right hand is used; the left hand is used if the fetal spine is on the maternal right. Apply pressure for 30 seconds then try to deliver. The aim is to adduct the shoulders and move them into the oblique diameter. This can be combined with supra pubic pressure. The woman is not to push unless there is movement of the shoulder.

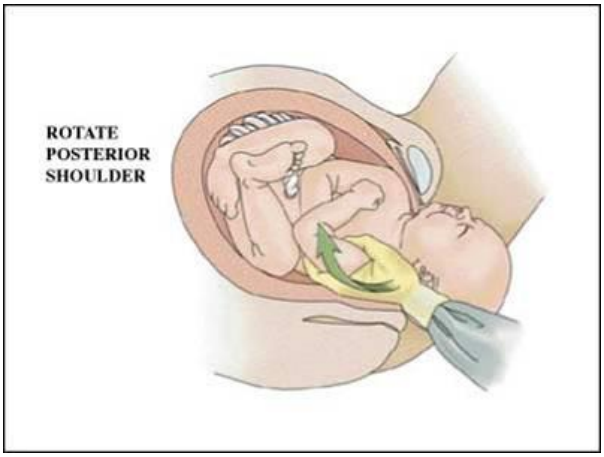
- **Wood Screw manoeuvre**

  While maintaining pressure on the posterior aspect of the anterior shoulder the midwife introduces two fingers of her second hand into the vagina locating the anterior aspect of the posterior shoulder. Applying pressure for up to 30 seconds the midwife then attempts to manoeuvre both shoulders in an anti-clockwise action into the oblique diameter of the pelvis. If this is not effective, try the next manoeuvre.

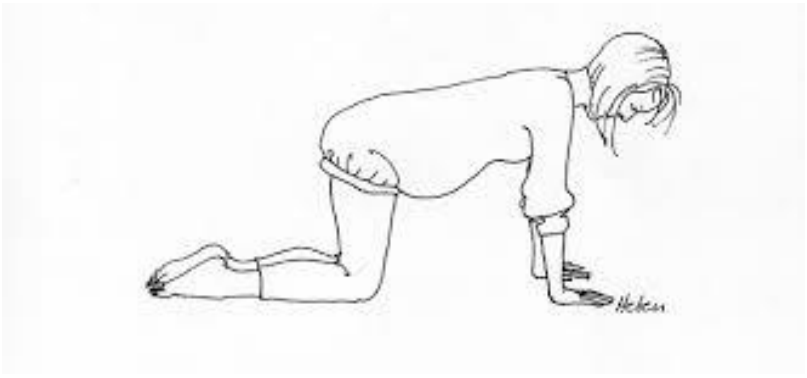


- **Reverse Wood Screw manoeuvre**
  The fingers on the posterior shoulder are removed from the vagina and the two fingers on the anterior shoulder are moved down the fetal back to the posterior aspect of the posterior shoulder. The midwife then attempts to rotate the shoulder in the opposite direction clockwise for 30 seconds.

- **Remove posterior arm**
  Removing the posterior arm aims to shorten the bisacromial diameter enabling the impaction of the anterior shoulder to be released into the hollow of the pelvis after removing the posterior arm. Two fingers are inserted into the vagina down the front of the posterior arm as far as possible to flex the arm at the baby's elbow and the forearm is delivered in a sweeping motion over the fetal anterior chest wall.



- **Roll**
  Ask the woman to roll over onto her hands/knees. The infant is delivered from this position by gentle downward traction on the posterior shoulder (the shoulder against the maternal sacrum) or upward traction on the anterior shoulder (the shoulder against the maternal symphysis).



Actions to avoid:

- Fundal pressure (risk of ruptured uterus)
- Excessive traction on fetal neck (may cause brachial plexus injury)
- Twisting or bending of neck (risk of brachial plexus damage)
- Left lateral delivery (encourages excessive neck traction)

Maternal and fetal risks of shoulder dystocia	**Prevention**
Fetal morbidity eg: brachial plexus – Erbs or Klumpke's palsy, fetal petechiae, soft tissue damage - bruising	Gentle delivery of baby
Fetal mortality/stillbirth	Prompt diagnosis of shoulder dystocia and safe timely delivery
Maternal split symphysis pubis	Investigate post delivery
Fetal asphyxia/anoxia	Prompt delivery
Maternal Haemorrhage	Active management of third stage of labour
Vaginal or cervical lacerations	Inspection and repair post delivery
Perineal and/or pelvic floor damage (including 3rd degree tear)	Inspection and repair post delivery
Post-traumatic stress disorder & psychological trauma	Debrief by LMC and or staff involved with emergency. Referral to support agencies

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Authorised By (HOD Obstetrics)

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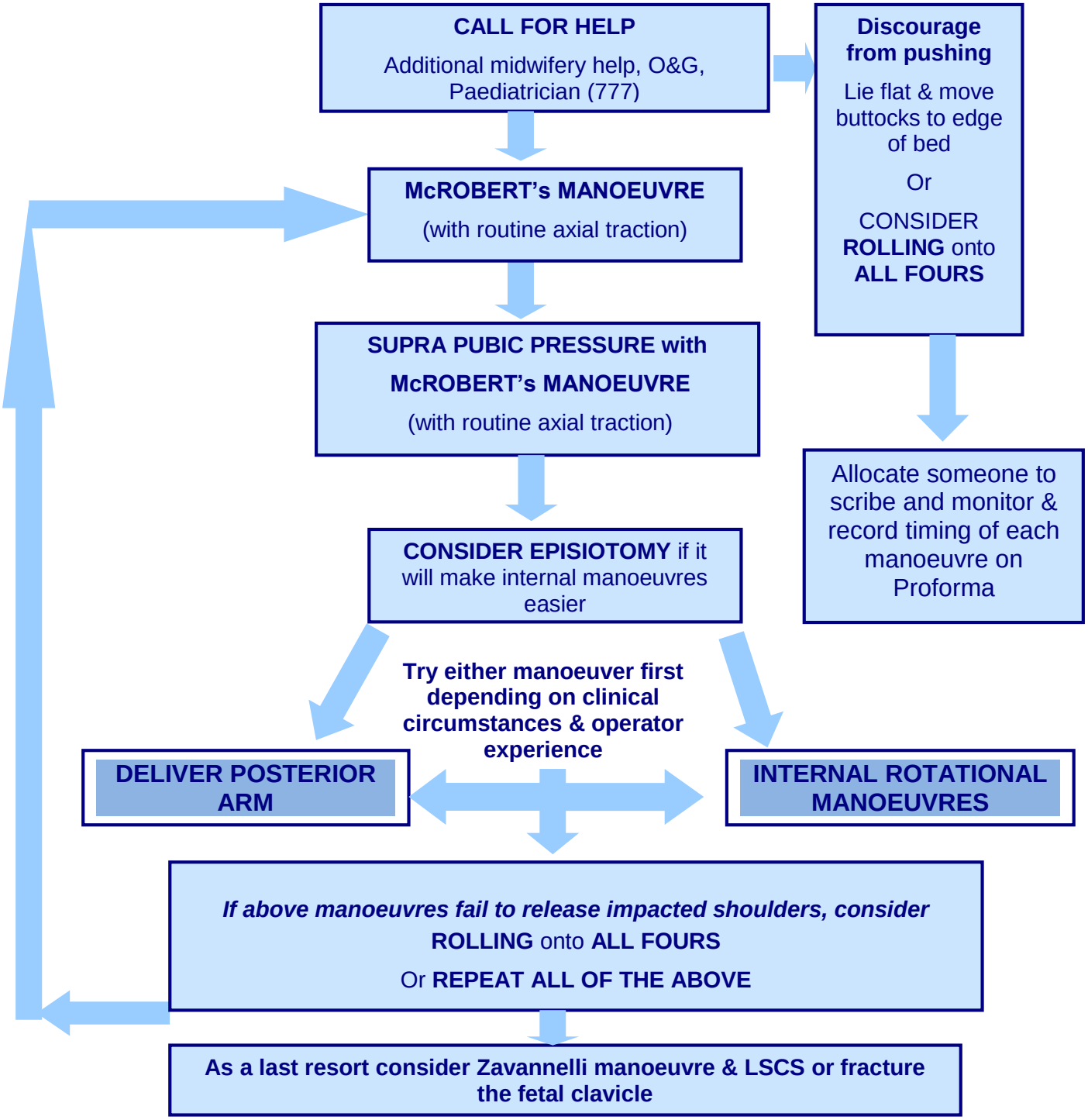
APPENDIX ONE

Algorithm for the Management of Shoulder Dystocia



Baby will require a paediatric referral. Document all actions taken on the PROFORMA and complete a clinical incident form. Debrief woman and whanau.

APPENDIX TWO

SHOULDER DYSTOCIA PROFORMA
Attach woman ID label here

Date and Time of diagnosis	
Diabetic	**Yes No**
Maternal Age	
BMI	
Labour and birth time of	**Onset of active labour:**
	Onset of second stage:
	Birth of head:
	Birth of posterior shoulder:
	Birth of infant:
Epidural insitu	**Yes No**
Forceps used	**Yes No**
Ventouse used	**Yes No**
Indication for instrumental birth	
Station of head when forceps or vacuum applied	
Position of fetal head	
Time applied	
Number of pulls used	
Assistance called – time and personnel present	
Personnel present at birth	
	Time Commenced Time Completed
Time Manoeuvres Attempted & Duration	**McRoberts:**
	Suprapubic pressure:
	Roll onto all fours:
	Episiotomy:
	First internal manoeuvre:
	Second internal manoeuvre:
	Third manoeuvre:
	Delivery of posterior arm:
	Other (describe):
Episiotomy Yes/No	
Apgar score	**@1 = @5 = @10 =**
Birth weight	**g**
BWC	
Umbilical cord blood gas result	**Arterial pH Venous pH**
Paediatric referral made - date	
Any trauma from the birth to mother or baby?	

APPENDIX THREE

MIDWIFERY ACTION WHEEL for SHOULDER DYSTOCIA