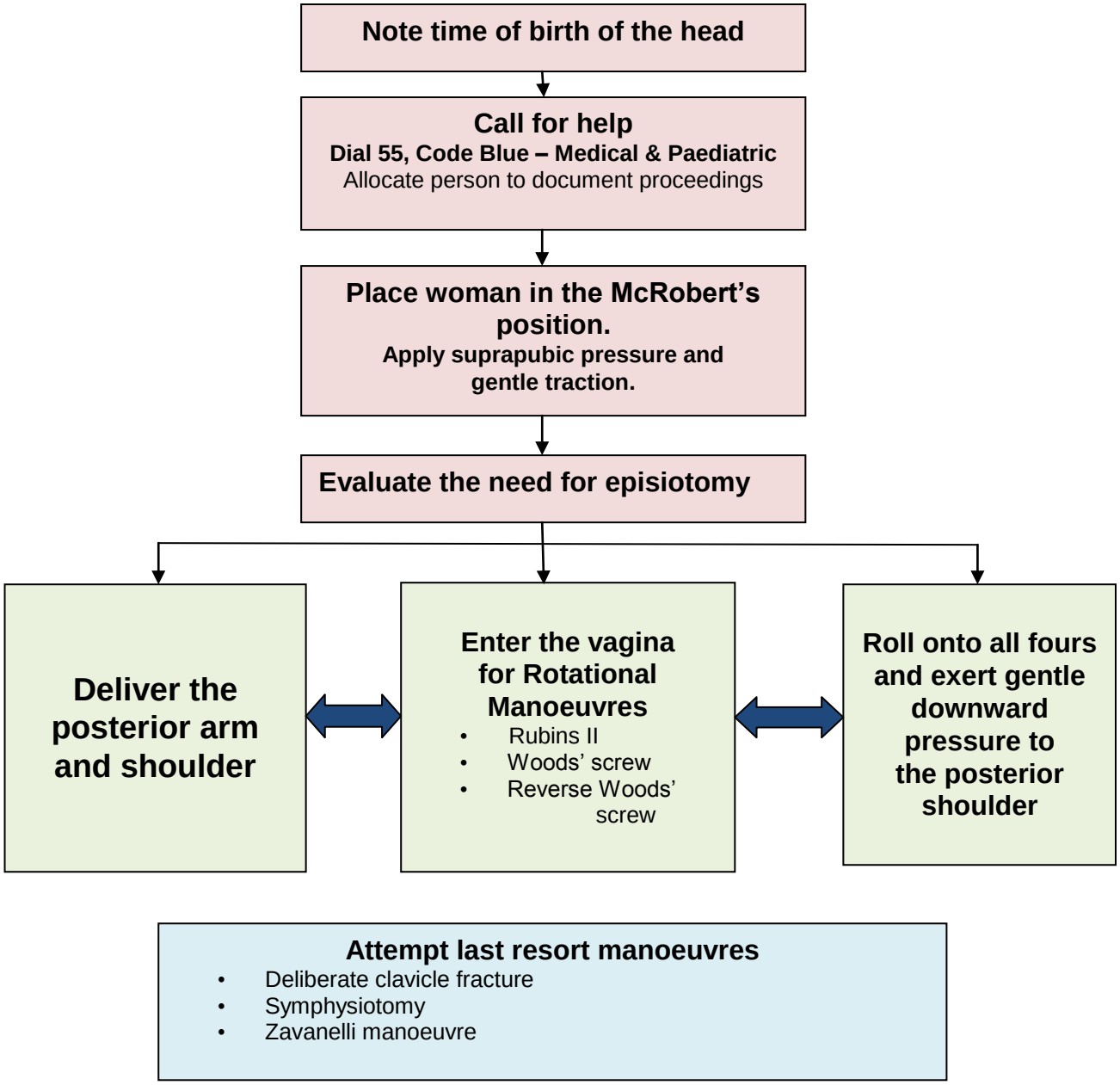
INTRAPARTUM CARE

SECOND STAGE OF LABOUR

SHOULDER DYSTOCIA

Keywords: birth of shoulders, shoulder dystocia, intrapartum emergency, turtle sign, McRoberts, internal manoeuvre, HELPERR, birth manoeuvres, Rubins I, rubins II, woods screw, reverse woods screw, posterior arm, posterior shoulder, difficult delivery, suprapubic pressure, code blue, symphysiotomy, Zavanelli manoeuvre, clavicle fracture, MR276, all-fours

MANAGEMENT



NOTE: This flow chart is to be used in conjunction with the detailed guideline in the following pages

AIM

To assist the safe birth of the baby with minimal morbidity to mother or infant.

BACKGROUND

Shoulder dystocia is best defined as the need for additional obstetric manoeuvres to effect the birth of the shoulders of the baby. The incidence varies around 1%, with a high associated perinatal morbidity and mortality despite appropriate management[2]

Maternal morbidity is increased due mostly to post-partum haemorrhage (PPH) and fourth degree perineal tears.[1] The most common fetal injury is brachial plexus palsies; with research indicating that the frequency of injury remains constant regardless of operator expertise. Most of the palsies resolve within 6 to 12 months, with less than 10% resulting in permanent injury.[2] Other causes of brachial palsies may also result from causes other than shoulder dystocia e.g. in-utero positioning of the fetus, precipitate delivery and maternal forces.[2]

RISK FACTORS[2]

Maternal	Fetal	Labour related
• Abnormal pelvic anatomy	Suspected macrosomia	• Operative vaginal birth
• Type 1 & Type 2 Diabetes		• Precipitate birth
• Maternal Obesity BMI greater than 30		• Prolonged active phase in first stage of labour
• Post-dates pregnancy		• Prolonged second stage
• Previous shoulder dystocia		
• Short stature		
• Gestational Diabetes		

WARNING SIGNS FOR SHOULDER DYSTOCIA

- Difficulty with birth of the face and chin
- The fetal head retracts against the perineum. Referred to as the 'turtle' sign.[2]
- Failure of the fetal head to restitute.[1]
- Failure of the shoulders to descend.

Once shoulder dystocia is suspected, the midwife must summon help immediately and attempt birth manoeuvres.

KEY POINTS

1. Medical and midwifery staff should attend regular drills in the management of shoulder dystocia to familiarise and increase their level of skills at responding to the emergency.
2. Senior medical and midwifery staff should be advised when birth is imminent in cases for high risk for shoulder dystocia.

3. Manoeuvre's should not be repeated, or continued for more than 30-60 seconds without clear evidence of success.[3]
4. **Throughout these manoeuvres the shoulders must be rotated using pressure on the scapula or clavicle. Never rotate the head.**
5. Caesarean section is not routinely advised for a subsequent pregnancy after shoulder dystocia. The decision regarding mode of birth will consider factors such as the severity of maternal or fetal injury, fetal size and maternal choice.[1]
6. Avoid excessive traction at all times. Strong downward traction or jerking without disimpacting the shoulder is associated with neonatal trauma including permanent brachial plexus.
7. Avoid fundal pressure. This is associated with a high rate of brachial plexus injury, uterine rupture and haemorrhage from potential detachment of a fundal placenta.
8. Use the mnemonic HELPERR:
    - H = Help
    - E = Evaluate for episiotomy
    - L = Legs (McRobert's Manoeuvre).
    - P = Pressure (Suprapubic)
    - E = Enter vagina (Rubin's, Woods)
    - R = Remove the posterior arm
    - R = Roll the patient onto all fours

MANAGEMENT

	PROCEDURE	ADDITIONAL INFORMATION
1	**Preparation for risk of shoulder dystocia**	
	• Advise the Obstetric Registrar and Co-ordinator of the imminent birth.[2] • Educate the woman of management should shoulder dystocia occur[2] • Ensure the woman's bladder is emptied prior to birth.[2]	Allows staff to be in the vicinity should their assistance be required. Encourages the woman to co-operate calmly and efficiently to assist the accoucheur

PROCEDURE	ADDITIONAL INFORMATION
Note the time of the birth of the head	
Call for help • Dial 55, **Code Blue - Medical** • Dial 55, **Code Blue - Paediatric**	A person should be assigned for documentation, and a staff member also available to support and advise the woman and support persons during the event. Maternal pushing should be discouraged unless directed by the accoucheur, as it may lead to further impaction of the shoulders.[1]
Evaluate the need for episiotomy Perform an episiotomy to facilitate rotational manoeuvres as required.	Shoulder dystocia is a bony impaction, so episiotomy will not release the shoulders. Therefore, episiotomy should be considered for facilitating manoeuvres rather than mandatory.[1, 2]

PROCEDURE	ADDITIONAL INFORMATION

Birth Manoeuvres

McRobert's Manoeuvre

Position the woman in the McRobert's position:

- flex and abduct the maternal hips
- position the thighs up onto her abdomen.

This position is successful in 90% of cases of shoulder dystocia.[1]

McRoberts position

The position flattens the sacral promontory and results in cephalad rotation of the pubic symphysis. It is associated with an increase in uterine pressure and amplitude of the contractions.[1, 2]

Rubins I Manoeuvre

Simultaneously, while the woman is placed in the McRobert's position:

- Place both hands suprapubically over the posterior aspect of the fetal shoulder, and apply continuous pressure in a downward lateral motion.[2]
- Next apply the pressure in a rocking intermittent motion.
- Gentle traction should be applied

This is applied for 30 seconds. There is no evidence to show if continuous pressure or a 'rocking' movement is more effective.[1]

Rubins I /suprapubic pressure

Supra pubic pressure improves the success rate when applied with the McRobert's manoeuvre by reducing the bisacromial diameter and rotating the anterior shoulder into the oblique diameter.[1]

PROCEDURE	ADDITIONAL INFORMATION

Advanced internal manoeuvres

These include:

- Rubins II
- Wood screw
- Reverse Woods' screw
- Posterior shoulder and arm

There is some evidence which suggests that there may be an advantage in delivery of the posterior arm when compared to internal rotational manoeuvres.[8]

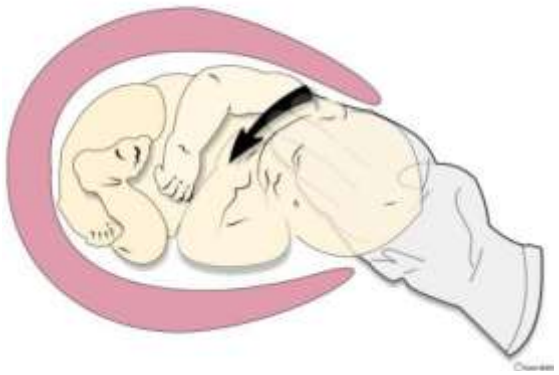
Clinical judgement and experience should determine the most appropriate management.[1]

5.4 Rubins II manoeuvre

Insert the hand into the vagina posteriorly and sweep two fingers up to the posterior aspect of the anterior shoulder and push it into the oblique diameter of the pelvis.

This manoeuvre adducts the fetal shoulder girdle, reducing the diameter and rotating the shoulders forward into the oblique diameter.[4]

Rubins II



PROCEDURE	ADDITIONAL INFORMATION

Wood's screw manoeuvre

While performing Rubins II enter the vagina and apply pressure with two fingers to the anterior aspect of the posterior shoulder i.e. maintaining rotation in the original direction

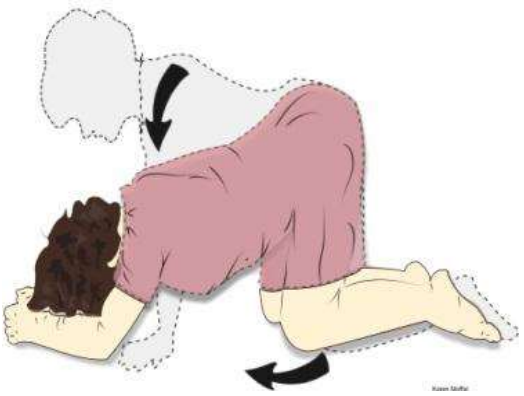
If this manoeuvre is unsuccessful then the accoucheur moves onto the reverse Woods screw manoeuvre.

Combined Rubins II & Wood screw

Reverse Woods screw manoeuvre

Apply pressure to the posterior aspect of the posterior shoulder and attempt to rotate it through 180° in the opposite direction to the Woods screw manoeuvre.[4]

Reverse Wood screw

PROCEDURE	ADDITIONAL INFORMATION
Delivery of the Posterior Arm Insert the hand into the vagina along the sacral curve and locate the posterior arm or hand.[5] Apply pressure to the antecubital fossa to flex the elbow in front of the body, and remove the forearm in a sweeping motion over the fetal anterior chest wall (catlick motion)	Removing the posterior arm shortens the bisacromial diameter, allowing the fetus to drop into the sacral hollow, which frees the impaction.[2] Grasping and pulling directly on the fetal arm may fracture the humerus.[4] This shortens the bisacromial diameter as the fetus drops into the sacral hollow and impaction is freed anteriorly. Remove the posterior arm 
Rotation of the woman onto all-fours Rotation of the woman onto all-fours may also facilitate birth by increasing the pelvic diameters and allowing better access to the posterior shoulder.	Roll over onto all-fours (maintain McRoberts's position) 

PROCEDURE	ADDITIONAL INFORMATION
Last resort manoeuvres • As a last resort an experienced accoucheur may attempt: • Deliberate fracture of the clavicle • Symphysiotomy • Zavanelli manoeuvre (midwife to give a tocolytic)	
Assess for Consequences ***Maternal:*** Assess the vagina and cervix for soft tissue damage Assess blood loss. Consider ordering a follow-up full blood picture if there has been significant blood loss. Treat the woman with the Prophylactic treatment for Postpartum haemorrhage i.e. Syntocinon® Infusion, IDC and Misoprostol See Clinical Guideline, O&M, Complications of the Postnatal Period, Postpartum Haemorrhage, Oxytocic Infusion Regimes: Therapeutic / Prophylactic ***Neonatal:*** • Asphyxia • Brachial Plexus Injury • Fracture & dislocations • **Death**	Vaginal, cervical and perineal lacerations, or haematomas may result from the manipulation involved in shoulder dystocia.[5] Postpartum haemorrhage is a complication resulting from shoulder dystocia.[2] See Clinical Guideline, Restricted Area Guidelines (*Intranet only*), O&M, Primary Postpartum Haemorrhage Ensure the Shoulder Dystocia Form MR 276 is completed

PROCEDURE	ADDITIONAL INFORMATION
Document management of the event on the MR 276 'Shoulder Dystocia Delivery Form' noting[1]: • time of birth of the head and body • direction the head was facing after restitution • type of manoeuvres used, timing and sequence • time of delivery of the body • time help was called for • staff in attendance and their arrival time • condition of the baby at birth • arterial umbilical cord blood acid-base balance	Notation of which arm was impacted is beneficial in the event of subsequent nerve palsy developing.
Debriefing Medical and/or midwifery staff should discuss the delivery events with the parents. Refer to Psychological Medicine Services as required. Debriefing the parents shall be documented.	The risk for post-traumatic stress syndrome is increased in women whose birth expectations have not been met, those that have had lack of control in labour and birth, or those who have had a negative childbirth experience.[5]

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REFERENCES / STANDARDS

1. **Royal College of Obstetricians and Gynaecologists**. Guideline No. 42 Shoulder dystocia. RCOG Guidelines. 2014.
2. Baxley EG, Gobbo RW. Shoulder Dystocia. **American Family Physician.** 2004;69(7):1707-14.
3. **Women's Hospital Australasia. Clinical Practice Guidelines.** Shoulder dystocia.2005.
4. Thorogood C, Hendy S. Life-threatening emergencies. In: Pairman S, Pincombe J, thorogood C, Tracy S, editors. **Midwifery preparation for practice.** Sydney: Churchill Livingstone; 2006. p. 756-802.
5. Coates T. Shoulder Dystocia. In: Henderson C, MacDonald M, editors. **Mayes' Midwifery A textbook for midwives**. London: Bailiere Tindall; 2004. p. 939-53.

ACKNOWLEDGEMENT

The Royal Women's Hospital. Clinical Practice Guideline Shoulder Dystocia 2013.

National Standards – 1- Care Provided by the Clinical Workforce is Guided by Current Best Practice
9- Recognising and Responding to Clinical Deterioration in Acute Health Care
Legislation -
Related Policies – KEMH Clinical Guidelines: O&M: Complications of the Postnatal Period
Other related documents – MR 276- Shoulder Dystocia Delivery Record

RESPONSIBILITY	
Policy Sponsor	**Director of Obstetrics**
Initial Endorsement	July 2003
Last Reviewed	May 2016
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Review date	May 2019

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Access the current version from the WNHS website.