Worcestershire Acute Hospitals NHS Trust

Management of Shoulder Dystocia

Key Document code:	WAHT-TP- 094	
Key Documents Owner/Lead:	Dr Hillman	Consultant Obstetrician
Approved by:	Maternity Governance Meeting	
Date of Approval:	15th November 2019	
Date of review:	15th November 2022	

Key Amendments

Date	Amendments	Approved by

Prolonged head to body delivery time requiring additional obstetric manoeuvres to release the shoulders from behind mother's pubic bone or, less commonly, sacral promontory.

Prompt, calm action is vital

Pre-disposing factors/warning signs of possible shoulder dystocia

ANTENATAL

- Previous shoulder dystocia (10% - 13% recurrence rate)
- Body Mass Index (BMI) >30/excessive weight gain in pregnancy
- Large baby especially of diabetic women
- Maternal diabetes
- Induction of Labour (RCOG 2012)
- Previous big baby

NB: There is no current evidence to support the induction of labour in non-diabetic women at term for the management of macrosomia.

INTRAPARTUM

- Post maturity
- High head at term with cervical dilation
- Disproportional dilatation of cervix to descent of foetal head
- Prolonged first and second stage of labour
- Secondary arrest
- Oxytocin augmentation
- Advanced maternal age *(WMPi 2000)*
- Need for assisted delivery *(WMPi 2000)*

- Signs in second stage

  -**difficulty with the delivery of face and chin**
  - head remaining tightly applied to vulva or even retracting (turtle neck sign)
  - failure of restitution of head
  - failure of shoulders to descent

If shoulder dystocia is anticipated on the basis of antenatal or intrapartum risk factors the obstetric registrar should be informed and should be present in the delivery suite at the time of delivery.

Nb. There is no benefit in placing the woman in the McRoberts position prior to the vertex being visible and is not recommended.

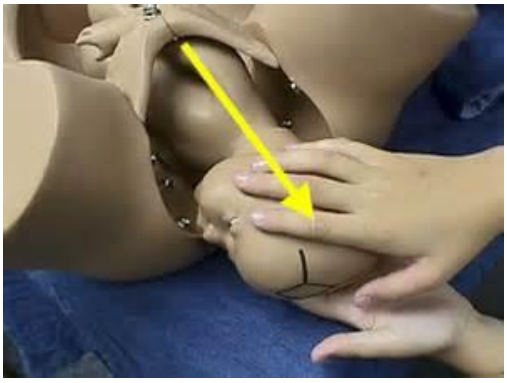
CONSIDER SHOULDER DYSTOCIA IF:

- **You experience difficulty delivering the face and chin or the head remains tightly applied to the vulva or retraction (turtle neck sign) or**
- **Failure of restitution of the head**
- **Failure of the shoulders to descend**

RECOGNITION OF SHOULDER DYSTOCIA

Failure of the delivery of the shoulders using routine traction.

Routine traction is defined as “that traction required for delivery of the shoulders in a normal vaginal delivery where there is no difficulty with the shoulders”. Evidence suggests that lateral and downward traction, and rapidly applied traction are more likely to cause nerve damage, this should be avoided in the management of shoulder dystocia, axial traction should be applied.



Axial traction

The management of shoulder dystocia requires early and prompt recognition.

MANAGEMENT

- All birth attendants should be able to recognise shoulder dystocia and perform the manoeuvres required to facilitate delivery
- One person should be instructed to keep accurate records (scribe)

- The shoulder dystocia proforma (WR1868) should be completed after each incident and transferred onto the K2 system if required
- Communication with the woman and her birth partner is vital. Briefly & clearly explain to her the different manoeuvres adopted to help deliver the shoulder at the time of occurrence. In depth de-briefing is required after delivery

A systematic approach to the management of shoulder dystocia should be adopted.

HELPERR

H Help: Activate Obstetric/Neonatal 2222 and request senior staff.

Call for additional midwifery help.

If in the community request paramedic crew and **two** ambulances

E Evaluate: for episiotomy. Performed to create space for the facilitation of internal manoeuvres.

L Legs: McRobert's Manoeuvre (remembering to put the woman's head down)

P Pressure: External manual supra pubic pressure on either maternal side

E Enter: Enter the sacral hollow with the thumb tucked into the palm of the hand

R Remove: the posterior arm. If the arm is trapped at the side of the body, commence internal manoeuvres to release it

R Roll: the woman onto all fours position and repeat

- **NB. The woman should be discouraged from pushing as this may lead to further impaction of the shoulders. The woman should be moved to bring her buttocks to the edge of the bed. Do not apply fundal pressure (associated with a high neonatal complication rate and may result in uterine rupture)**

H - Requesting Help

The following staff should be called (SOAPS)

- S Senior Midwife
- O Obstetrician
- A Anaesthetist
- P Paediatrician /neonatal team
- S Scribe

E - Evaluate for an episiotomy

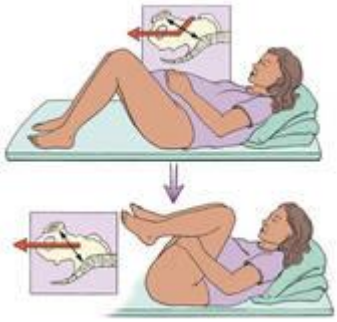
Consider an episiotomy: An episiotomy will not relieve the bony obstruction but will allow the healthcare professional more space to facilitate internal vaginal manoeuvres such as delivery of the posterior arm or internal rotation of the shoulders.

L _ Legs THE McROBERTS MANOEURVE

The McRoberts manoeuvre is an effective intervention with reported success rates as high as 90%. Achieved by Flexion and abduction and outward rotation of the maternal hips, positioning the maternal thighs on her abdomen. It has a low rate of complication and is one of the least invasive manoeuvres, and therefore, if possible should be employed first.

The woman should be laid flat and any pillows removed from under her back, with one assistant on either side, the woman's legs should be hyperflexed. **If the woman is in lithotomy her legs will need to be removed from the supports.** If in the community, use the bed, a sofa or chair. Axial traction should then be applied to the foetal head to assess whether the shoulders have been released.

If the woman is in water stand her up and abduct one leg onto the side of the pool; do not allow the baby to fall into the water



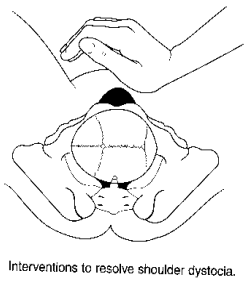
McRoberts Manoeuvre

If the anterior shoulder is not released with the McRoberts position and axial traction, another manoeuvre should be attempted

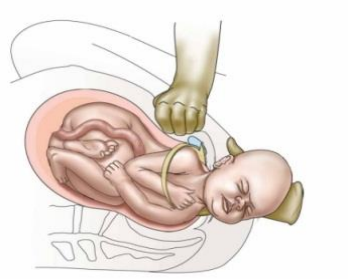
P- Pressure FUNDAL PRESSURE SHOULD NOT BE EMPLOYED

External pressure should be applied by an assistant from the side of the foetal back using the heel of the hand in a downward and lateral direction just above the maternal symphysis pubis (in between contractions)**,** the aim is to push the posterior aspect of the anterior shoulder towards the foetal chest. If difficult to palpate foetal back, then pressure can be applied on the opposite side. Sustained or rocking pressure are both acceptable

Ask the mother not to push (if necessary give entonox to breathe) until shoulder displacement is achieved



Interventions to resolve shoulder dystocia.



If the anterior shoulder is not released with supra pubic pressure another manoeuvre should be attempted

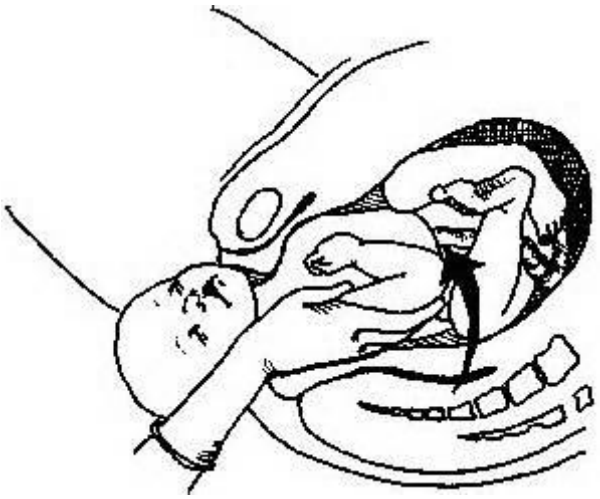
E- ENTER

Enter the sacral hollow using the hand with thumb tucked into palm (Pringle hand) Enter the vagina posteriorly i.e. at 5 o'clock or 7 o'clock if the woman is in the dorsal position. If the posterior arm is there it is a gift take it,

R – REMOVAL/DELIVERY OF POSTERIOR ARM

Once the hand has entered, slide it in until you feel the foetal elbow follow it along until you find the wrist, grasp the wrist then sweep the arm across the foetal chest and the posterior arm should be gently withdrawn from the vagina in a straight line

If posterior arm is trapped by the baby's side, you will need to perform internal manoeuvres



INTERNAL ROTATIONAL MANOEURVES

Wood's screw/Rubin II Manoeuvre

Insert hand into vagina and approach posterior shoulder from front of foetus, aiming to rotate shoulder towards symphysis pubis. Insert fingers of opposite hand behind anterior shoulder, pushing shoulder towards the chest. Combination of these two manoeuvres frees the impacted shoulder and allows delivery. If unsuccessful, consider reverse wood's screw manoeuvre.

Reverse wood's screw manoeuvre

Insert hand into vagina and approach posterior shoulder from behind the foetus in an attempt to rotate in opposite direction to the original wood's screw. if successful shoulders will rotate 180 in opposite direction and then deliver.

R- ROLL ONTO ALL FOURS

ALL FOURS POSITION – Attempt to roll woman onto all fours (Gaskin Manoeuvre), attempt removal of posterior arm in this position and internal manoeuvres. For mobile women without epidural anaesthesia. For less mobile women raised BMI or epidural avoid. If not successful in all fours position put her back on her back, **minimal time should be spent in this position due to pressure on brachial plexus nerves.**

The RCOG guidelines (2012) report states that it is difficult to recommend an absolute time line for the management of shoulder dystocia as there is no conclusive data available, there appears to be a very low rate of hypoxic ischaemia injury up to five minutes. If the manoeuvre is not successful move on to the next one and then repeat, if appropriate ask another member of team to attempt manoeuvres

Third line manoeuvres – In the rare instances that all other manoeuvres have failed, **third line manoeuvres should be considered very carefully to avoid unnecessary maternal morbidity and mortality, particularly by inexperienced practitioners, they include;**

- **Zavenelli Manoeuvre**- rotation, flexion and reinsertion of foetal head into vagina, followed by emergency caesarean section.

- **Symphysiotomy-** attempt as last resort and only by or in presence of consultant obstetrician. Insert urethral catheter to move urethra to one side, make a midline incision in symphyseal joint and perform delivery. To avoid sudden abduction, ensure mother's legs are supported at all times.

- **Cleidotomy** or deliberate fracture of the clavicles. This is a difficult procedure not without risk and should only be undertaken by experienced medical staff.

AFTER DELIVERY

After delivery, there is a significant maternal morbidity associated with shoulder dystocia, it is important to remember that the Mother is at increased risk of: -

- Postpartum haemorrhage
- 3rd & 4th degree tears
- Vaginal lacerations
- Haematoma
- Bladder rupture (rare)
- Uterine rupture (rare)

Baby to be examined by a paediatrician and observed for asphyxia & suspected injuries

- Cord blood samples **must** be taken for blood gases
- Neonatal team member present at delivery will carry out a detailed initial examination, paying attention to arms for the presence of swelling, bruising, tone, posture and movement. If concerns- x ray of affected side, arm and clavicle.
- Observe for:
  - Brachial plexus injury
  - Fractured clavicle and/or
  - Fractured ribs
  - Fractured humerus.

- **No movement noted**- inform neonatal consultant on duty and refer to surgeons to review and investigation of possible brachial plexus injury
- **Some restricted movement noted**- refer to physiotherapy and arrange outpatient follow up

- **Baby appears well**- transfer to postnatal ward with mother. Full neonatal assessment will take place, and findings documented in maternal healthcare record before discharge from hospital.

In cases of suspected or confirmed brachial plexus injury the baby should be reviewed by the consultant paediatrician within two weeks

COMMUNICATION AND DEBRIEFING:

- All cases of shoulder dystocia require in-depth debriefing after delivery.
- All cases where internal manoeuvres were required to help deliver the shoulder should be debriefed by an experienced obstetrician/ midwife.
- All cases where baby is born in poor condition should be debriefed by the on-call consultant
- Medical & midwifery staff involved in the management of severe shoulder dystocia should be debriefed by the on-call consultant/ senior midwife.

RECORD KEEPING

Accurate documentation is essential. It is important to record on the shoulder dystocia proforma (WR1868) (appendix 1) the following information; which should then be added onto k2

- Time of emergency call 2222
- Medical staff in attendance and time
- Maternal position for delivery
- Mode of delivery
- Time of delivery of head
- The manoeuvres performed, their timing and sequence
- Time of delivery of the body
- Which shoulder was impacted
- Apgar Score
- Weight
- Umbilical cord blood gases

The shoulder dystocia proforma must then be filed in the patient notes

Shoulder dystocia is on obstetric trigger event and must be reported via Datix

Regular skills drills held within the maternity units across the trust

DETERIORATION IN BABY'S CONDITION

- In hospital- contact neonatal junior doctor and/or middle grade depending on severity of problem
- In the community- contact woman's GP/ paediatric assessment unit or A&E department depending on the severity of problem.

DISCHARGE AND FOLLOW UP

Neonatal staff will discuss ongoing care with parents/family before discharge.

SHOULDER DYSTOCIA

Worcestershire NHS
Acute Hospitals NHS Trust

Attach Patient Sticker here or record

NAME: . . . . . .

NHS NO: | | | | | | | | | | |

HOSP NO: | | | | | | | | | | |

D.O.B: D D M M Y Y Y Y Male ☐ Female ☐

Ward: _____ Cons: _____

Date: ___/___/___ How was help called: Emergency Button ☐ Crash Bleep ☐ Time: **2222** ☐☐:☐☐

Delivery of head: Spontaneous ☐ Ventouse: Kiwi ☐ Metal cup ☐ Silastic cup ☐ Time head delivered

Forceps: Neville-Barnes ☐ Keilland ☐ ☐☐:☐☐

Direction head facing after restitution: Right ☐ Left ☐

Registrar called: Yes ☐ No ☐ Present already ☐ Timed Called ☐☐:☐☐ Arrived: ☐☐:☐☐

Senior Midwife called: Yes ☐ No ☐ Present already ☐ Timed Called ☐☐:☐☐ Arrived: ☐☐:☐☐

Paediatrician called: Yes ☐ No ☐ Present already ☐ Timed Called ☐☐:☐☐ Arrived: ☐☐:☐☐

Maternal position for delivery: **Left lateral** ☐ **Supine** ☐ **All fours** ☐ **Lithotomy** ☐ **Other** ☐

PROCEDURE USED TO ASSIST DELIVERY OF THE SHOULDERS

	Tick	Order	Time	Performed by (Print Name)	Grade
McRobert's manoeuvre	☐	☐	☐☐:☐☐	.....	.....
Suprapubic pressure and routine traction*	☐	☐	☐☐:☐☐	.....	.....
Evaluation for episiotomy	☐	☐	☐☐:☐☐	.....	.....
Reason if episiotomy not performed	.....				
Delivery of Right / Left posterior arm *(Delete as applicable)*	☐	☐	☐☐:☐☐	.....	.....
Wood screw manoeuvre	☐	☐	☐☐:☐☐	.....	.....
Mother on all fours / other	☐	☐	☐☐:☐☐	.....	.....

Mother debriefed by midwife / registrar / consultant / other (circle as appropriate) ....

Time of delivery of shoulders ☐☐:☐☐ Which shoulder was impacted: Right ☐ Left ☐

**Routine traction refers to the traction required for delivery of the shoulders in a normal vaginal delivery where there is no difficulty with the shoulders*

Please complete reverse of this form

A~Nursing Notes~WR1868~Version 1~page 1 of 2

Attach Patient Sticker here or record

NAME: . . . . . .

NHS NO: | | | | | | | | | | |

HOSP NO: | | | | | | | | | | |

D.O.B: D D M M Y Y Y Y Male ☐ Female ☐

Ward: _____Cons:_____

BABY'S CONDITION

Weight: ..... g Apgar: 1 Minute ☐ 5 Minutes ☐ 10 Minutes ☐

Cord Gases: Arterial: pH ..... BE..... Venous pH..... BE .....

Paediatric assessment at delivery: . . . . . .

. . . . . .

Admitted to NICU ☐ Bruising ☐ Lacerations ☐

Suspected injuries: Movement of arms Right ☐ Left ☐ Other .....

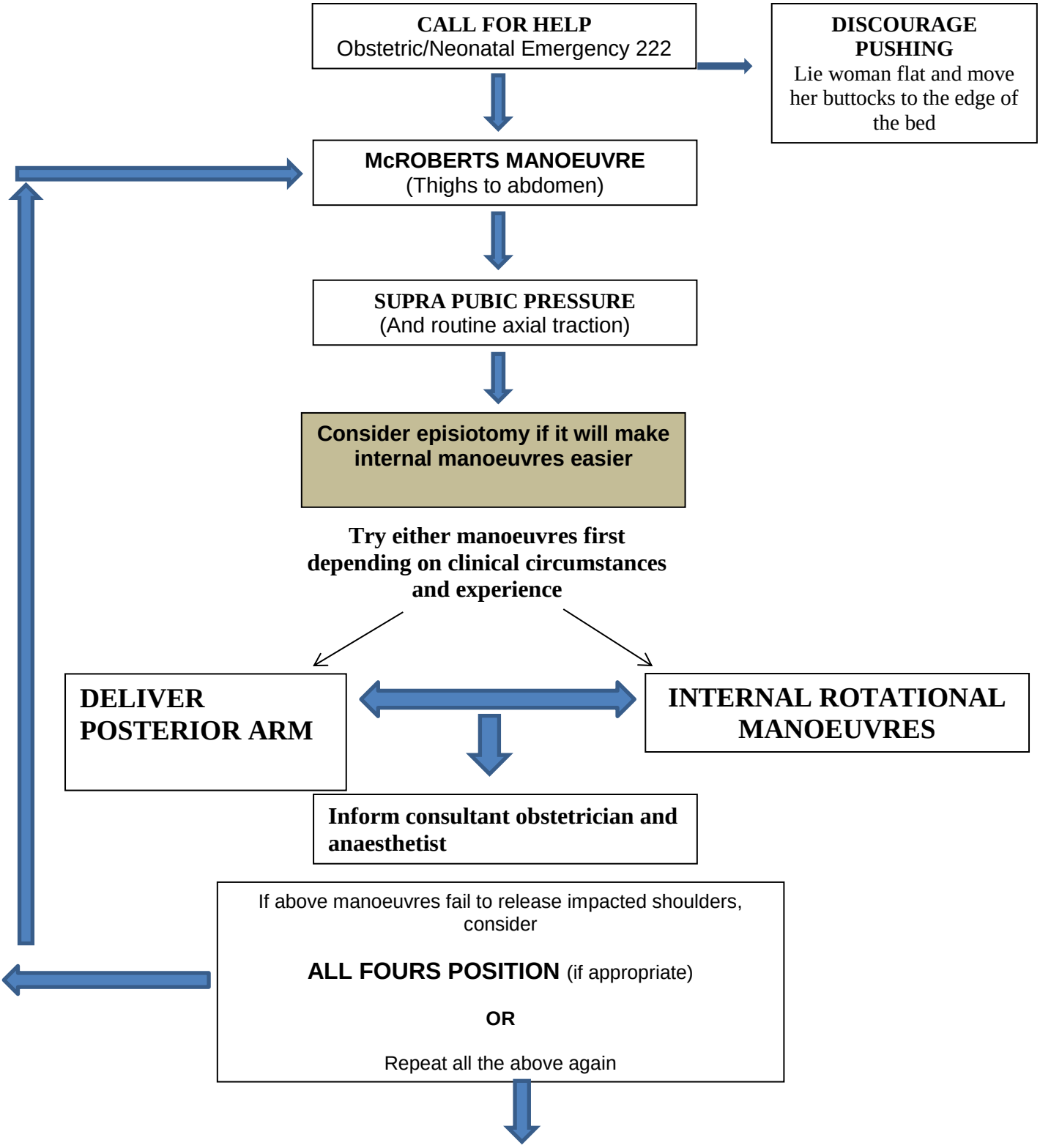
List persons present (including scribe):

Full Name	Job Title	Full Name	Job Title
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

Signed:..... Print Name.....

DIF1 Completed by ..... Web reference number .....

Algorithm for the management of shoulder dystocia (RCOG 2012) – Appendix 3



Baby to be reviewed after birth by paediatricians

DOCUMENT ALL ACTIONS ON PROFORMA AND COMPLETE DATIX