NHS
Worcestershire Acute Hospitals
NHS Trust

Management of Shoulder Dystocia

This guidance does not override the individual responsibility of health professionals to make appropriate decision according to the circumstances of the individual patient in consultation with the patient and /or carer. Health care professionals must be prepared to justify any deviation from this guidance.

This guideline is for use by the following staff groups:
All Maternity staff

Lead Clinician(s)

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Approved by *Maternity Governance Meeting* on:	17th November 2023
Approved by Medicines Safety Committee on: *Where medicines included in guideline*	NA
Review Date: This is the most current document and should be used until a revised version is in place	17th November 2026

Key amendments to this guideline

Date	Amendment	Approved by:
17/11/23	Full Guideline Review, Updated management – removal of HELPPER algorithm and replaced with PROMPT algorithm in line with our current PROMPT training	MGM

Shoulder Dystocia Definition

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.

Background

Prompt, calm action is vital Pre-disposing factors/warning signs of possible shoulder dystocia

Montgomery vs Lanarkshire 2015: a landmark trial after a diabetic mother was not offered a caesarean section for an LGA baby, resulting in a shoulder dystocia and profound hypoxic brain injury. It states that when patients are consented:

> **"**The doctor is therefore under a duty to **take reasonable care** to ensure that the patient is aware of any **material risks** involved in any recommended treatment, and of **any reasonable alternative** or variant treatments.
> "The test of materiality is whether, in the circumstances of the particular case, **a reasonable person in the patient's position would be likely to attach significance to the risk**, or the doctor is or should reasonably be aware that the particular patient would be likely to attach significance to it."

The general consensus is that if >90th Centile and gestational or other diabetes, offer an elective caesarean section.

Antenatal Risk Factors

- Previous shoulder dystocia (10% - 13% recurrence rate, should be a joint decision about Mode of Delivery)
- Body Mass Index (BMI) >30 / excessive weight gain in pregnancy
- Large baby especially of diabetic women, although ultrasound is less accurate at diagnosing LGA and this is not a good predictor.
- Maternal diabetes (2-4x)
- Induction of Labour (RCOG 2012)
- Previous big baby (over 90th centile)

NB: There is no current evidence to support the induction of labour in non-diabetic women at term for the management of macrosomia. This is currently the subject of the ongoing Big Baby trial, offering induction of labour electively at 38-38+4/40 to look at rates of shoulder dystocia and other complications. 48% of shoulder dystocia will occur in babies <4kg.

Intrapartum Risk Factors

- 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.

Diagnosis and Recognition

The management of shoulder dystocia requires early and prompt recognition. 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
- 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 and gentle axial traction should be applied. (RCOG 2012) (See image below)

Management

- All birth attendants should be able to recognise shoulder dystocia and perform the manoeuvres required to facilitate delivery. These include:
    - McRoberts Manoeuvre
    - Axial Traction +/- Suprapubic Pressure
    - Delivery of the posterior arm
    - Internal Manoeuvres

- One person should be instructed to keep accurate records (scribe)

- The shoulder dystocia proforma on badgernet should be completed after each incident and paper copies scanned in to the badgernet record. 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 Datix should be completed once management is complete.

The PROMPT algorithm for management of shoulder dystocia should be utilised to aid effective management. (on next page)

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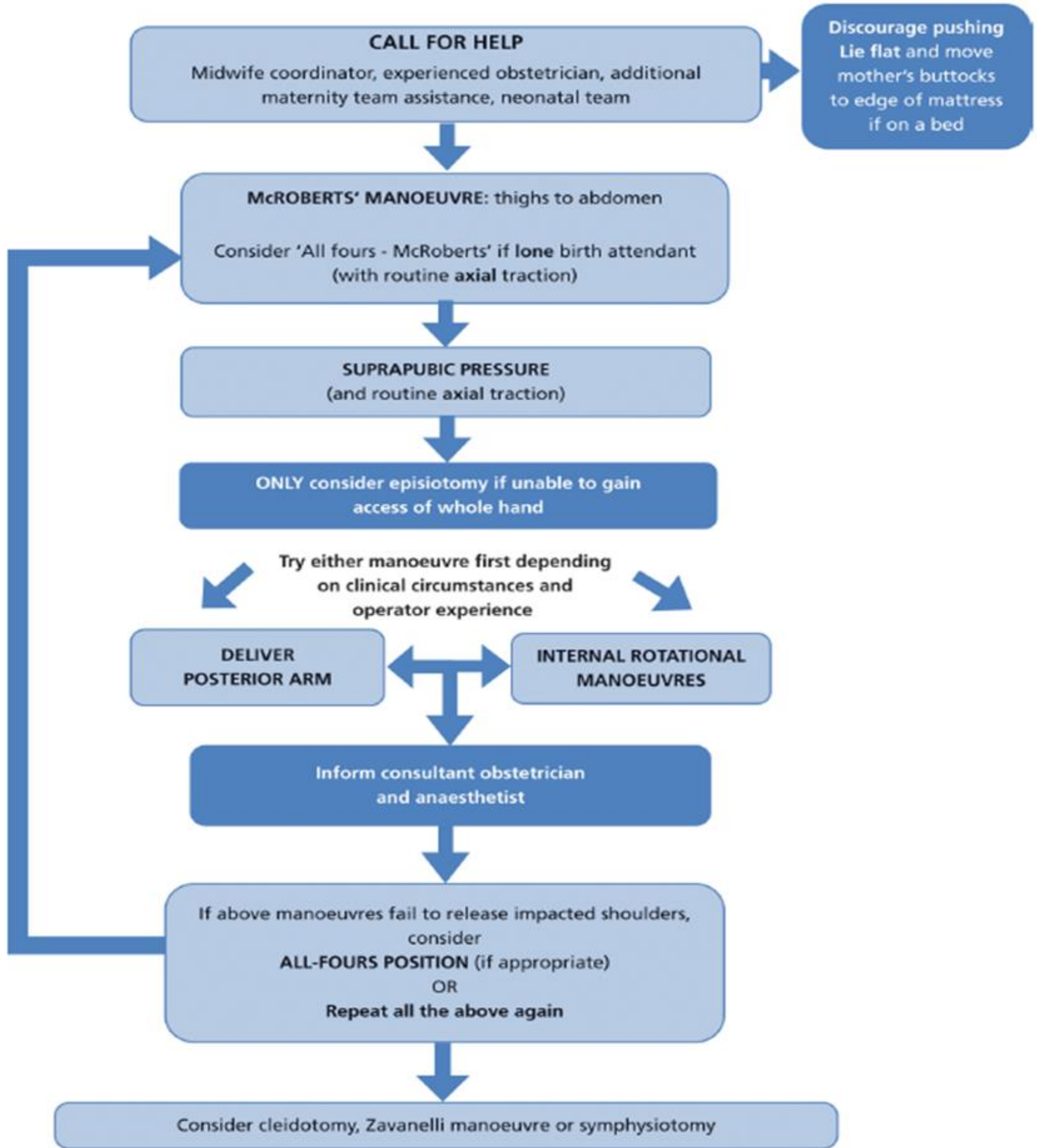

Third line manoeuvres

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. This is the most appropriate option if bilateral shoulder impaction.

- **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.

Post 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 (11%).
- 3rd & 4th degree tears (3.8%)
- Vaginal lacerations
- Haematoma
- Bladder rupture (rare)
- Uterine rupture (rare)
- Cervical tears (rare)
- Symphyseal separation (rare)
- Sacroiliac joint dislocation (rare)
- Lateral femoral cutaneous neuropathy (rare).

Baby to be examined by a paediatrician and observed for suspected injuries, especially if >5mins of delay to shoulder delivery.

- 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 (2.3-16%)
  - Fractured clavicle and/or
  - Fractured ribs and/or pneumothorax.
  - 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.

<u>Communication and debriefing:</u>

- 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 either directly onto badgernet or hand written on dystocia proforma (WR1868) (appendix 1) the following information; which should then be added onto badgernet:

- 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

If handwritten, the shoulder dystocia proforma must then be scanned into the badgernet record.

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

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.

Training

Regular skills drills held within the maternity units across the trust as part of PROMPT, this is part of the annual mandatory training programme.

SHOULDER DYSTOCIA

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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

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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 ....

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Monitoring

Page/ Section of Key Document	Key control:	Checks to be carried out to confirm compliance with the Policy:	How often the check will be carried out:	Responsible for carrying out the check:	Results of check reported to: *(Responsible for also ensuring actions are developed to address any areas of non-compliance)*	Frequency of reporting:
	WHAT?	**HOW?**	**WHEN?**	**WHO?**	**WHERE?**	**WHEN?**
	Incidences and management of shoulder dystocia	DATIX/PSIRF reporting and themes	Monthly	Governance Team	Maternity Governance Safety Report	Monthly

Contribution List

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This key document has been circulated to the following individuals for consultation;

Designation
All Maternity Staff – Newsletter

This key document has been circulated to the chair(s) of the following committee's / groups for comments;

Committee
Maternity Guidelines Forum
Maternity Governance Meeting