1. **Aim/Purpose of this Guideline**

To give guidance to obstetricians and midwives on the identification and management of a shoulder dystocia and subsequent care of a baby following a shoulder dystocia

2. **The Guidance**

2.1. **Definition**

Shoulder dystocia is an acute obstetric emergency which requires prompt, efficient action. It is defined as a vaginal cephalic delivery that requires additional obstetric manoeuvres to release the shoulders after gentle downward traction has failed. Shoulder dystocia occurs when either the anterior or, less commonly, the posterior fetal shoulder impacts on the maternal symphysis or sacral promontory.

2.2. **Incidence**

The overall incidence affects 0.1-3% of all births

**Risk Factors:**

Most cases of shoulder dystocia are unexpected. Occurrence cannot be predicted with any certainty, but can be suspected or anticipated when there is evidence of a large baby, especially in association with maternal obesity or diabetes or of a contracted pelvis.

Although most labours preceding shoulder dystocia are normal, there may be warning signs see 2.3 and 2.4

2.3. **Pre-labour**

- Previous shoulder dystocia
- Fetal Macrosomia >4.5kgs
- Maternal Diabetes mellitus
- Maternal Obesity BMI >30kg/m2
- Induction of labour
- Gestational age

2.4. **Intrapartum**

- Prolonged first stage of labour
- Secondary arrest
- Prolonged second stage of labour
- Oxytocin augmentation
- Operative vaginal delivery

2.5. **Plan for Delivery**

- Women with pre labour risk factors should be offered delivery in a consultant led unit
- Women with intrapartum risk factors should be considered for intrapartum transfer to a consultant unit
- Induction of labour is not an appropriate intervention to lower the risk of shoulder dystocia.
- Planned caesarean section should be considered for the small group of women with diabetes and suspected fetal macrocosmia (estimated fetal weight greater than 4.5 kg).
2.6. Recognition of a shoulder dystocia
Diagnosis is made once an addition obstetric manoeuvre has been used to release the shoulders. However, timely management of a shoulder dystocia requires prompt recognition, the delivering attendant should routinely observe for:
- Slow and difficult delivery of the fetal face and chin
- Fetal head delivered, it remains tightly applied to the vulva
- Failure of restitution of the fetal head
- Chin retraction “turtle neck”
- Anterior shoulder fails to deliver with maternal effort and/or ‘routine’ axial traction is applied
- If the woman is giving birth in a pool, she should be evacuated from the pool when the midwife recognises signs of delay with the birth of the shoulders. It may not be possible to confirm a shoulder dystocia at this stage, but the woman should be safely moved out of the pool. **New 2018**

2.7. Ask the woman to stop pushing, clearly state the problem

2.8. Call for help
- Experienced midwives
- Experienced obstetrician
- Health care assistants
- Neonatologists
- Anesthetist & theatre team on stand by

2.9. **In Consultant unit**
- Using emergency buzzer
- Call for: Midwife co-ordinator, additional midwifery help, experienced obstetrician and neonatal team.
- Consider calling for an anaesthetist

**Community or birth centre**
- 2nd midwife, maternity support worker, birth partner
- 999 for emergency ambulance
Algorithm for the management of shoulder dystocia (Permission for use PROMPT Foundation 2017)

CALL FOR HELP
Midwife coordinator, additional midwifery help, experienced obstetrician, neonatal team

Discourage pushing
Lie flat and move buttocks to edge of bed

McROBERTS’ MANOEUVRE
(thighs to abdomen)
(Consider ‘All fours - McRoberts’ if lone birth attendant)
(with routine axial traction)

SUPRAPUBIC PRESSURE
(and routine axial traction)

ONLY consider episiotomy if unable to gain access of whole hand

Try either manoeuvre first depending on clinical circumstances and operator experience

DELIVER POSTERIOR ARM

INTERNAL ROTATIONAL MANOEUVRES

Inform consultant obstetrician and anaesthetist

If above manoeuvres fail to release impacted shoulders, consider
ALL-FOURS POSITION (if appropriate)
OR
Repeat all the above again

Consider clidotomy, Zavanelli manoeuvre or symphysiotomy
2.10. Management of woman and baby after delivery

2.11. Complications
When managed appropriately there is still significant perinatal mortality and morbidity associated with shoulder dystocia (cerebral hypoxia, cerebral palsy, fracture clavicle/humerus, brachial plexus injury), plus increased maternal morbidity including postpartum hemorrhage (11%) and fourth degree perineal tears (3.8%).

2.12. Perinatal Complications
- Stillbirth
- Hypoxia
- Brachial plexus injury
- Fractures (humeral and clavicle)

2.13. Maternal Complications
- Postpartum hemorrhage
- Third and fourth degree tears
- Uterine rupture
- Psychological distress

2.14. Brachial Plexus Injuries in Newborn

4-16% with 10% injuries lasting > 1 year incidence of permanent injury 1/2300 live births in the UK

Fetal brachial plexus injuries (Erb’s palsy, Klumpke’s paralysis) complicate 4-16% of deliveries complicated by shoulder dystocia with less than 10% resulting in permanent disability. This is the most common cause for litigation in relation to shoulder dystocia and the incidence of brachial plexus injury in the UK is 1 in 2300 live births. Both excess downwards traction and maternal expulsive efforts contribute to causing these injuries.

Erb’s Palsy
Is the most common injury. The upper arm is flaccid and lower arm is extended and rotated towards the body with the hand held in a ‘waiters tip’ posture. Up to 90% of Erb’s palsies recover by 12 months

Klumpke’s Palsy
Is less common. The hand is limp, with no movement of the fingers. The recovery rate is lower, with around 40% of injuries resolving within 12 months

Total brachial Plexus injury
Occurs in approximately 20% of brachial plexus injuries. There is a total sensory and motor deficit of the entire arm, making it completely paralysed with no sensation.

Humeral and clavicular fractures
Can occur after a shoulder dystocia and may be related to poor care and/or
inaccurate execution of the release manoeuvres. These fractures usually heal quickly and have a good prognosis

2.15. Management
If brachial plexus injuries and associated injuries are diagnosed or suspected by a paediatrician undertake:
- Referal to aftercare physiotherapists
- Arrange paediatric follow up.

2.16. Umbilical paired cord samples
If birth has taken place in the acute unit, umbilical paired cord samples should be taken and tested for acid base measurement and the results documented in both the maternal and neonatal notes and filed in the secure store envelope.

2.17. Documentation
Should be factual, consistent and accurate and be written as soon as possible after an event has occurred.
A shoulder dystocia proforma must be completed to ensure the correct information has been documented. (Appendix 3)
If available, a staff member should be asked to note times, manoeuvres and staff present, as the event is occurring.
- Head & body delivery times
- Staff attendance and the times they arrived
- Which manoeuvres were performed and their order
- The degree and direction of traction applied
- The anterior shoulder at the time of the dystocia
- Condition of the baby at birth
  - Apgars
  - Cord PHs
  - Signs of neonatal injury

2.18. Incident reporting
An incident form to be completed for any shoulder dystocia resulting in a poor neonatal outcome. E.g. afgars < 6 at 5 minutes, arterial PH of less than 7.05, suspected fractures/brachial plexus injury, unexpected admission to the neonatal unit, stillbirth or poor maternal outcome e.g. PPH > 1000mls, 3rd/4th degree tear, Zavanelli manoeuvre or symphysiotomy.
These incidents will be reviewed as per the maternity risk management strategy for Royal Cornwall Hospitals NHS Trust.

2.19. Training in shoulder dystocia
All midwives, Maternity support workers, Anesthetist and Obstetricians employed by Royal Cornwall Hospitals NHS Trust attend annual Training in Practical Obstetric Multidisciplinary Training (PROMPT), as per the maternity services training needs analysis (TNA) New 2018
### 3. Monitoring compliance and effectiveness

| Element to be monitored | • The audit will take into account record keeping by obstetricians and midwives  
| | • The results will be inputted onto an excel spreadsheet  
| | • The audit will be registered with the Trust’s audit department  

| Lead | Audit Midwife  

| Tool | • Was a shoulder dystocia proforma completed  
| | • Was it filed chronologically in the health records  
| | • Were there any ante natal risk factors  
| | • Were there any intrapartum risk factors  
| | • Were the procedures used to assist delivery clearly documented on the proforma  
| | • Was the fetal position during the dystocia clearly documented on the proforma  
| | • Was the baby assessment after birth clearly documented on the proforma  
| | • Were there any actual or suspected associated neonatal injuries  
| | • If Yes: Was there appropriate follow up of the baby  

| Frequency | • All health records of women who have delivered following a shoulder dystocia will be audited continuously over the lifetime of the guideline  
| | • All health records of newborns where there was actual or suspected brachial plexus injury, or any other injury associated with the complications of a shoulder dystocia delivery, will be audited  

| Reporting arrangements | • A formal report of the results will be received annually at the Patient Safety Meeting and clinical audit forum, as per the audit plan  
| | • During the process of the audit if compliance is below 75% or other deficiencies identified, this will be highlighted at the next Maternity Forum and clinical audit forum and an action plan agreed.  

| Acting on recommendations and Lead(s) | • Any deficiencies identified on the annual report will be discussed at the Maternity Forum or clinical audit forum and an action plan developed  
| | • Action leads will be identified and a time frame for the action to be completed by  
| | • The action plan will be monitored by the Audit midwife and clinical audit forum until all actions complete  

| Change in practice and lessons to be shared | • Required changes to practice will be identified and actioned within a time frame agreed on the action plan  
| | • A lead member of the forum will be identified to take each change forward where appropriate.  
| | - The results of the audits will be distributed to all staff through the patient safety newsletter/audit forum as per the action plan  

4. **Equality and Diversity**

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement.

4.2. **Equality Impact Assessment**

The Initial Equality Impact Assessment Screening Form is at Appendix 2.
## Appendix 1. Governance Information

<table>
<thead>
<tr>
<th>Document Title</th>
<th>Management of Shoulder Dystocia Clinical Guideline V2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Issued/Approved:</td>
<td>7th June 2018</td>
</tr>
<tr>
<td>Date Valid From:</td>
<td>7th June 2018</td>
</tr>
<tr>
<td>Date Valid To:</td>
<td>7th June 2021</td>
</tr>
<tr>
<td>Directorate / Department responsible (author/owner):</td>
<td>Charlotte Boswell, Community Midwife Link trainer Obs and gynae directorate</td>
</tr>
<tr>
<td>Contact details:</td>
<td>01872 252270</td>
</tr>
<tr>
<td>Brief summary of contents</td>
<td>To give guidance to obstetricians and midwives on the identification and management of a shoulder dystocia and subsequent care of a baby following a shoulder dystocia</td>
</tr>
<tr>
<td>Suggested Keywords:</td>
<td>Shoulder dystocia</td>
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<tr>
<td>Target Audience</td>
<td>RCHT</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Executive Director responsible for Policy:</td>
<td>Medical Director</td>
</tr>
<tr>
<td>Date revised:</td>
<td>7th June 2018</td>
</tr>
<tr>
<td>This document replaces (exact title of previous version):</td>
<td>Guideline for the management of shoulder dystocia V1.2</td>
</tr>
<tr>
<td>Approval route (names of committees)/consultation:</td>
<td>Clinical Guidelines Group Maternity Governance Obstetrics and Gynaecology Directorate Policy Review group Divisional Board for approval</td>
</tr>
<tr>
<td>Divisional Manager confirming approval processes</td>
<td>Tunde Adewopo</td>
</tr>
<tr>
<td>Name and Post Title of additional signatories</td>
<td>Not required.</td>
</tr>
<tr>
<td>Name and Signature of Divisional/Directorate Governance Lead confirming approval by specialty and divisional management meetings</td>
<td>{Original Copy Signed} Name: Caroline Amukusana</td>
</tr>
<tr>
<td>Signature of Executive Director giving approval</td>
<td>{Original Copy Signed}</td>
</tr>
</tbody>
</table>
Publication Location (refer to Policy on Policies – Approvals and Ratification):  
| Internet & Intranet | ☑️ Intranet Only |

Document Library Folder/Sub Folder  
Clinical / Midwifery and Obstetrics.

Links to key external standards  
CNST .8 Evidence 90% of each maternity staff group have attended in house multi professional maternity emergency session within the last training year

Related Documents:


Training Need Identified?  
Annual PROMPT training day

Maternity staff attendees should include: obstetricians (including Consultants, staff grades and trainees); obstetric anaesthetic staff (Consultants and relevant trainees); midwives (including midwifery managers and matrons, community midwives; birth centre midwives (working in co-located and stand alone birth centres) and bank midwives); maternity theatre and critical care staff; health care assistants (to be included in the maternity skill drills as a minimum) and other relevant clinical members of the maternity team.

Trusts should be evidencing the position as at end April 2018.

Version Control Table

<table>
<thead>
<tr>
<th>Date</th>
<th>Versio n No</th>
<th>Summary of Changes</th>
<th>Changes Made by (Name and Job Title)</th>
</tr>
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Shoulder Dystocia Clinical Guideline V2.0
<table>
<thead>
<tr>
<th>Date</th>
<th>Version</th>
<th>Description</th>
<th>Responsible Officer</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 2003</td>
<td>V1.0</td>
<td>Initial document</td>
<td>Sally Budgen</td>
</tr>
<tr>
<td>April 2009</td>
<td>V1.1</td>
<td>Updated inline with RCOG guidance</td>
<td>Jan Clarkson</td>
</tr>
<tr>
<td>May 2011</td>
<td>V1.2</td>
<td>Reviewed and compliance monitoring added</td>
<td>Jan Clarkson</td>
</tr>
<tr>
<td>September 2012</td>
<td>V1.3</td>
<td>Changes to compliance monitoring tool only</td>
<td>Jan Clarkson</td>
</tr>
<tr>
<td>7th June 2018</td>
<td>V1.3</td>
<td>Changes to recognition of shoulder dystocia in the pool, training in shoulder dystocia, algorithm changed in line with PROMPT See all New 2018 in body of text</td>
<td>Charlotte Boswell, Community Midwife and PROMPT trainer</td>
</tr>
</tbody>
</table>

**All or part of this document can be released under the Freedom of Information Act 2000**

This document is to be retained for 10 years from the date of expiry.  
This document is only valid on the day of printing

**Controlled Document**

This document has been created following the Royal Cornwall Hospitals NHS Trust Policy for the Development and Management of Knowledge, Procedural and Web Documents (The Policy on Policies). It should not be altered in any way without the express permission of the author or their Line Manager.
### Appendix 2. Initial Equality Impact Assessment Form

*This assessment will need to be completed in stages to allow for adequate consultation with the relevant groups.*

| Name of Name of the strategy / policy / proposal / service function to be assessed Management of Shoulder Dystocia Clinical Guideline V2.0 |
|---|---|
| **Directorate and service area:** Obs & Gynae | **Is this a new or existing Policy?** Existing. |
| **Name of individual completing assessment:** Charlotte Boswell | **Telephone:** 01872 250000 |

1. **Policy Aim**
   - Who is the strategy / policy / proposal / service function aimed at?
   - To give guidance to obstetricians and midwives on the identification and management of a shoulder dystocia and subsequent care of a baby following a shoulder dystocia

2. **Policy Objectives**
   - To ensure correct emergency are procedures are followed in the case of a shoulder dystocia

3. **Policy – intended Outcomes**
   - Best possible outcome for mother and baby in a shoulder dystocia situation

4. **How will you measure the outcome?**
   - Compliance monitoring tool

5. **Who is intended to benefit from the policy?**
   - Pregnant women and their babies

6a. **Who did you consult with**
   - Workforce
   - Patients
   - Local groups
   - External organisations
   - Other
   - X

   b). Please identify the groups who have been consulted about this procedure.
   - Maternity Guidelines Group
   - Maternity Governance
   - Obstetrics and Gynaecology Directorate
   - Policy Review group
   - Divisional Board

**Please record specific names of groups**

What was the outcome of the consultation?
- Guideline agreed
7. The Impact

Please complete the following table. If you are unsure/don’t know if there is a negative impact you need to repeat the consultation step.

Are there concerns that the policy **could** have differential impact on:

<table>
<thead>
<tr>
<th>Equality Strands:</th>
<th>Yes</th>
<th>No</th>
<th>Unsure</th>
<th>Rationale for Assessment / Existing Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>X</td>
<td></td>
<td></td>
<td>All pregnant women.</td>
</tr>
<tr>
<td>Sex (male, female, trans-gender / gender reassignment)</td>
<td>X</td>
<td></td>
<td></td>
<td>All pregnant women.</td>
</tr>
<tr>
<td>Race / Ethnic communities /groups</td>
<td>X</td>
<td></td>
<td></td>
<td>All pregnant women.</td>
</tr>
<tr>
<td>Disability - Learning disability, physical impairment, sensory impairment, mental health conditions and some long term health conditions.</td>
<td>X</td>
<td></td>
<td></td>
<td>All pregnant women.</td>
</tr>
<tr>
<td>Religion / other beliefs</td>
<td>X</td>
<td></td>
<td></td>
<td>All pregnant women.</td>
</tr>
<tr>
<td>Marriage and Civil partnership</td>
<td>X</td>
<td></td>
<td></td>
<td>All pregnant women.</td>
</tr>
<tr>
<td>Pregnancy and maternity</td>
<td>X</td>
<td></td>
<td></td>
<td>All pregnant women.</td>
</tr>
<tr>
<td>Sexual Orientation, Bisexual, Gay, heterosexual, Lesbian</td>
<td>X</td>
<td></td>
<td></td>
<td>All pregnant women.</td>
</tr>
</tbody>
</table>

You will need to continue to a full Equality Impact Assessment if the following have been highlighted:
- You have ticked “Yes” in any column above and
- No consultation or evidence of there being consultation- this **excludes** any policies which have been identified as not requiring consultation. **or**
- Major this relates to service redesign or development

8. Please indicate if a full equality analysis is recommended.  
<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

9. If you are not recommending a Full Impact assessment please explain why.

No areas indicated
Keep one copy and send a copy to the Human Rights, Equality and Inclusion Lead
c/o Royal Cornwall Hospitals NHS Trust, Human Resources Department, Knowledge Spa,
Truro, Cornwall, TR1 3HD

This EIA will not be uploaded to the Trust website without the signature of the Human Rights, Equality & Inclusion Lead.

A summary of the results will be published on the Trust’s web site.

Signed Sarah Jane Pedler

Date 7th June 2018
### Appendix 3

**SHOULDER DYSTOCIA DOCUMENTATION**

<table>
<thead>
<tr>
<th>Date .........................</th>
<th>Time .........................</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person completing form .................</td>
<td>Signature .........................</td>
</tr>
</tbody>
</table>

Called for help at:  
Emergency call via switchboard at:  

<table>
<thead>
<tr>
<th>Staff present at delivery of head:</th>
<th>Additional staff attending for delivery of the shoulders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Role</td>
</tr>
<tr>
<td>Name</td>
<td>Role</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Procedures used to assist delivery</th>
<th>By whom</th>
<th>Time</th>
<th>Order</th>
<th>Details</th>
<th>Reason if not performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>McRoberts' position</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suprapubic pressure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Episiotomy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivery of posterior arm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal rotational manoeuvre</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description of rotation**  
**Description of traction**  
Routine axial (as in normal vaginal delivery)  
Other: -  
Reason if not routine: -  

**Other manoeuvres used**

<table>
<thead>
<tr>
<th>Mode of delivery of the head</th>
<th>Spontaneous</th>
<th>Ventous</th>
<th>Forceps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time of delivery of head</td>
<td>Time of delivery of baby</td>
<td>Head-to-body delivery interval</td>
<td></td>
</tr>
<tr>
<td>Fetal position during dystocia</td>
<td>Head facing maternal left, left fetal shoulder anterior</td>
<td>Head facing maternal right, right fetal shoulder anterior</td>
<td></td>
</tr>
<tr>
<td>Birth weight</td>
<td>kg</td>
<td>Apgar score</td>
<td>1 min :</td>
</tr>
<tr>
<td>Art pH :</td>
<td>Vein pH :</td>
<td>Art BE :</td>
<td>Vein BE :</td>
</tr>
<tr>
<td>Cord gases</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Paediatric team called?**  
Yes  
Time paediatric team arrived: ................. name ................................

If not called or didn't arrive, give reason .................................................................

**Baby assessment after birth (can be completed by a M/W) If yes to any of the questions refer to neonatal team**

- Any sign of arm weakness  
  yes/no (circle)
- Any sign of possible bony fracture  
  yes/no (circle)
- Baby admitted to NNU  
  yes/no (circle)

Assessment completed by ................................................................. sign  ................................................................. date  .................................................................

---

Mother’s Name ______________________
Date of birth ______________________
Hospital Number ______________________
Consultant ______________________