WOMEN'S HEALTH AND PAEDIATRICS
MATERNITY UNIT

SHOULDER DYSTOCIA MANAGEMENT
(Including Brachial Plexus Injury)

Amendments			
Date	Page(s)	Comments	Approved by
10/11/06	P7	Proforma added as appendix	Maternity Guidelines Group (Chairman's Action ratification)
October 2008		Complete document review	Maternity Guidelines Group
Nov 2009	P1 P3 P3&6	Title amended Add, see also: Training needs analysis & see also Neonatal Resuscitation Guideline Expectations of staff training Update monitoring section CEMACH reference updated	Women's Health Guidelines group
August 2012		Guideline reviewed against RCOG 2012 guidance References updated Monitoring section updated	Women's Health Guidelines group
Jan 2013		Proforma changed to RCOG 2012 version	Women's Health Guidelines group
February 2018		No changes	Head of Midwifery

Compiled by: Women's Health Guidelines group

In Consultation with: Obstetric Consultants, Senior midwives
Supervisors of Midwives
Paul Crawshaw, Neonatal Consultant

Ratified by: Women's Health Guidelines Group
Paediatric Clinical Management Group

Date Ratified: August 2012
Date Issued: August 2012

Next Review Date: August 2021

Target Audience: Maternity Service Midwives and Medical Staff

Impact Assessment Carried Out By: Women's Health Guidelines group

ASHFORD & ST PETER'S HOSPITAL NHS TRUST

SHOULDER DYSTOCIA MANAGEMENT (Including Brachial Plexus Injury)

See also:

- **Training Needs Analysis**
- **Neonatal Resuscitation guideline**
- **Immediate Care of the Newborn**
- **Physiotherapy – neonatal referrals**

Shoulder dystocia is an obstetric emergency requiring immediate action. It is defined as a delivery that requires additional obstetric manoeuvres to release the shoulders after gentle traction has failed (RCOG 2012)

Good management is essential as shoulder dystocia can lead to brachial plexus injury, especially if excessive traction is used to deliver the shoulders. However it is recognised (RCOG 2012) that not all brachial plexus injuries are due to poor management of shoulder dystocia and some are not associated with clinically evident shoulder dystocia. Accurate documentation is essential in all cases. CMACE (2011) recommended a high level of awareness and training for all birth attendants. Expectations for training within this unit are identified in the training needs analysis.

Incidence: 0.58 – 0.70% of all vaginal deliveries (RCOG 2012)

The problem of shoulder dystocia arises because of disparity between the size of the shoulders and the size of the pelvic inlet. In its simplest form the posterior shoulder enters the pelvis, but the anterior shoulder remains hooked behind the symphisis pubis and fails to rotate into a larger pelvic diameter. Its more serious and less easily correctable extreme exists when both shoulders are impacted into the pelvic brim in an unfavourable (anteroposterior) position.

Factors Associated with Shoulder Dystocia

Pre Labour

- Macrosomia >4.5kg
- Maternal body mass index >30kg/m²
- Maternal diabetes
- Previous shoulder dystocia
- Induction of Labour

Intrapartum

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

Warning Signs

- Gentle traction (in line with baby's spine), good contractions and maternal effort fails to deliver the shoulders
- Chin recedes back into the vagina after the delivery of the head (turtle necking)
- failure of restitution of the fetal head
- failure of the shoulders to descend

Shoulder Dystocia Management
This aims to facilitate delivery and avoid brachial plexus injury (Erbs palsy) which is caused by lateral flexion of the neck not traction on the head. Management based on the HELPERR mnemonic (ALSO 2012) ensures a coordinated, well prepared structured approach to deal with shoulder dystocia when it arises.

Follow the actions described in adapted HELPERR mnemonic. Following McRoberts' manoeuvre and suprapubic pressure, try internal manoeuvres. Order of manoeuvres depends on clinical circumstances and operator experience.

Methods of last resort

If the manoeuvres described in the HELPERR mnemonic are unsuccessful after several attempts , the following techniques have been described as 'last resort' manoeuvres that may be attempted (if the fetus is still alive) by an experienced operator;

(a) cephalic replacement (Zavanelli manoeuvre) followed by LSCS
(b) Symphysiotomy
(c) Intentional fracture of clavicles (cleidotomy)

Following birth of baby

- Blood must be taken from both the umbilical artery and vein for cord gases.

- Documentation of shoulder dystocia management should include manoeuvres performed, duration, actions of team members, cord pH and on which arm/shoulder manoeuvres were performed. This information must be recorded on the shoulder dystocia proforma (see appendix 1).

- The proforma must be filed in the woman's maternity notes. The incident must be entered onto Datix web

- Full explanation of events should be given to the parents; all discussions must be documented in case notes. The attending multidisciplinary team will nominate a person to do this.

Baby

The Neonatal SHO will have been fast bleeped as part of the shoulder dystocia management (HELPERR mnemonic) and will usually be present for the delivery.

The Neonatal SHO will:

- Assess the baby's condition at birth and resuscitate following the Neonatal resuscitation guidelines

- Make an assessment of the baby's upper limb movements, and document the need for a repeat observation of limb movements by the midwife performing the initial examination of the baby.

Day 1 Neonatal check

The baby must have a full physical examination (baby check) carried out by a Paediatrician or suitably qualified midwife or nurse on day 1 (see guideline for the first full examination of the newborn).

If there is any suspicion of fracture (reduced movement, distress or pain on handling, crepitus or tenderness over the clavicle), an x-ray of the clavicle and upper limb must be arranged. If the baby has a fracture and shows signs of discomfort, simple analgesia (Paracetamol) can be prescribed. Fractured clavicles are often relatively asymptomatic. Humeral fractures may require analgesia and immobilisation (by placing the baby's arm inside the baby-grow).

- All babies with humeral fractures will be referred to the Orthopaedic team and the paediatric physiotherapist
- If there is any suspicion of brachial plexus injury:
  - inform attending Neonatal Consultant
  - refer as soon as possible to the paediatric physiotherapist who will arrange to assess the baby on the maternity unit.
  - If the baby is born over the weekend but is well enough for discharge, inform the physiotherapist as soon as possible during the following working week. The baby will then be reviewed by the physiotherapist as an outpatient.

Long Term Follow Up of baby:

The physiotherapist will arrange follow up for babies with fractures or evidence of brachial plexus injury. Babies with suspected brachial plexus injury will also require an outpatient appointment with the attending Consultant at 6 – 8 weeks. If there are continuing concerns at that time (no return of biceps) the Consultant will refer the baby to the Peripheral Nerve Injury Clinic at The National Orthopaedic Hospital, Stanmore.

Monitoring:
Compliance with this guideline will be monitored as detailed in the table below. Where monitoring has identified deficiencies, recommendations and an action plan will be developed.

Element to be monitored	Lead	Tool	Frequency	Reporting arrangement	Acting on recommendations and Lead(s)	Change in practice and lessons to be shared
a. identification of factors associated with shoulder dystocia b. systematic emergency management of shoulder dystocia c. standards for record-keeping in relation to shoulder dystocia d. **process for using a reporting form which contains the RCOG minimum data set*** e. **process for the follow up of the newborn where there is actual/suspected brachial plexus injury or any other injury associated with the complications of the delivery**	**Criterion Lead** Sandra Newbold Obstetric Consultant	Case notes review using proforma of all women who have delivered following Shoulder Dystocia All newborn's where there was actual/suspected brachial plexus injury or any other injury associated with the complications of shoulder dystocia	Continuous audit	Reported quarterly to Labour Ward Forum	Labour ward obstetric lead Labour ward manager Neonatal Consultant team	1. Educational half days/annual perinatal audit day 2. Perinatal mortality meetings 3. Communication bulletin as appropriate 4. Individual support if required One or all of the above

References:

Advanced Life Support in Obstetrics (ALSO) 2012 *Provider course syllabus Revised 5th Edition* America Academy of Family Physicians Kansas USA. www.also.org.uk

Royal College of Obstetricians and Gynaecologists (RCOG) 2012. *Shoulder Dystocia, guideline No. 42*, London: RCOG. www.rcog.org.uk

Centre for Maternal and Child Enquires (CMACE) 2011. *Saving Mothers' Lives: Reviewing Maternal Deaths to make Motherhood Safer: 2006-2008. The eighth report on Confidential Enquiries into maternal death in the United Kingdom.* London: Wiley- Blackwell.

Appendices:

Appendix 1 – Adapted RCOG Shoulder Dystocia proforma
Appendix 2 – Manoeuvre diagrams
Appendix 3 – HELPERR mnemonic

Appendix 1 – Shoulder Dystocia Proforma

Ashford and St. Peter's Hospitals NHS
NHS Foundation Trust

Mothers Name		**Date**	
Date of birth		**Time**	
Hospital number		**Person completing form**	
Consultant		**Signature**	

Called for help at :		**Emergency call via switchboard at:**		
Staff present at delivery of head		**Additional staff at delivery of shoulders**		
Name	**Role**	**Name**	**Role**	**Time arrived**

Procedures used to assist delivery	**By whom**	**Time**	**Order**	**Details**	**Reason if not performed**
McRoberts' position	Right leg:				
	Left leg:				
Suprapubic pressure				From maternal left/right (please circle)	
Episiotomy				Enough access/tear present/ already performed (circle as appropriate)	
Delivery of posterior arm				Right/left arm (circle as appropriate)	
Internal rotational manoeuvre					
Description of rotation					
Description of traction	Routine axial (as in normal vaginal delivery)	Other		Reason if not axial	
Other manoeuvres used					

Mode of delivery of head	Spontaneous			Instrumental (select: forceps/ventouse)			
Time of delivery of head				**Time of delivery of body**		**Delivery of head to body interval**	
Fetal position during dystocia	Facing maternal left/right						
Birth weight	kg	**APGAR at 1 min**		**APGAR at 5 mins**		**APGAR at 10 mins**	
Cord gases	**Arterial pH**		**Arterial BE**	**Venous pH**		**Venous BE**	
Explanation to parents	Yes/no Carried out by:			**Datix and proforma completed**		**Incident number**	

Paediatrician called? Yes/no Time arrived…….. Name……
If paediatrician not called or did not arrive, please state reason ……
……..

Baby assessment completed after birth	Yes	No	If yes to any of these questions, baby must be followed up by consultant paediatrician.
Any sign of arm weakness?	Yes	No	
Any sign of potential bony fracture?	Yes	No	
Admission to NICU?			
Assessment by……Status ……			

Please complete and safely secure in notes, along with a Datix printout

Appendix 2 – Diagrams of manoeuvres

Figure 1. The McRoberts' manoeuvre (from the SaFE study)

Figure 2 Suprapubic pressure (from SaFE study)

Figure 3 Delivery of the posterior arm (from the SaFE study)

Appendix 3

HELPERR mnemonic

Help – Call for help. Pull emergency bell, Obstetric/Neonatal priority (2222)
Discourage pushing and move buttocks to edge of bed.

Evaluate – the need for episiotomy to improve access to the pelvis

Legs – flatten the head of the bed and flex legs into McRoberts position (thighs to abdomen)
If in lithotomy position remove legs from stirrups

Pressure – apply external suprapubic pressure from above
(3rd assistant needed) while the person conducting the delivery applies gentle traction in line with baby's spine

Enter – the vagina to perform internal manoeuvres

1) Rubin's II Manoeuvre
2) Wood's Screw Manoeuvre
3) Reverse Wood's Screw Manoeuvre

Remove – the posterior arm

Inform Consultant Obstetrician and Anaesthetist

Roll – onto all fours position to facilitate delivery
of the posterior shoulder with downward traction

If unsuccessful repeat manoeuvres again

ALSO (2012) Adapted ASPH version mapped against RCOG Algorithm for the management of Shoulder Dystocia 2012

EQUALITY IMPACT ASSESSMENT TOOL

Name: Shoulder Dystocia Management

Policy/Service: Women's Health and Paediatrics

Background • Description of the aims of the policy • Context in which the policy operates • Who was involved in the Equality Impact Assessment
• To ensure consistent high standard of evidence base care • Women's Health Guideline Group
Methodology • A brief account of how the likely effects of the policy was assessed (to include race and ethnic origin, disability, gender, culture, religion or belief, sexual orientation, age) • The data sources and any other information used • The consultation that was carried out (who, why and how?)
Policy widely circulated for comments within the Multidisciplinary Maternity Team.
Key Findings • Describe the results of the assessment • Identify if there is adverse or a potentially adverse impacts for any equalities groups
Accepted and understand the relevance of high standards of evidence based practice. Principles of equality have been adhered to.
Conclusion • Provide a summary of the overall conclusions
Improvement and consistency of maternity care provision in accordance with RCOG(2012) recommendations.
Recommendations • State recommended changes to the proposed policy as a result of the impact assessment • Where it has not been possible to amend the policy, provide the detail of any actions that have been identified • Describe the plans for reviewing the assessment
none

Guidance on Equalities Groups

Race and Ethnic origin (includes gypsies and travellers) (consider communication, access to information on services and employment, and ease of access to services and employment)	**Religion or belief** (include dress, individual care needs, family relationships, dietary requirements and spiritual needs for consideration)
Disability (consider communication issues, access to employment and services, whether individual care needs are being met and whether the policy promotes the involvement of disabled people)	**Sexual orientation including lesbian, gay and bisexual people** (consider whether the policy/service promotes a culture of openness and takes account of individual needs
Gender (consider care needs and employment issues, identify and remove or justify terms which are gender specific)	**Age** (consider any barriers to accessing services or employment, identify and remove or justify terms which could be ageist, for example, using titles of senior or junior)
Culture (consider dietary requirements, family relationships and individual care needs)	**Social class** (consider ability to access services and information, for example, is information provided in plain English?)

If further assessment is required please see the Integrated Single Equality Scheme.

For advice in respect of answering the above questions, please contact, HR Manager, on extension 2552.

PROFORMA FOR RATIFICATION OF POLICIES AND GUIDELINES BY RATIFYING COMMITTEE

Policy/Guidelines Name: Policy	Shoulder Dystocia
Name of Person completing form:	Dianne Casey
Date:	August 2012

Author(s)	Reviewed by Vasanth Andrews
Name of author or sponsor to attend ratifying committee when policy/guideline is discussed	Dianne Casey
Date of final draft	August 2012
Has this policy/guideline been thoroughly proof-read to check for errors in spelling, typing, grammar and consistency?	Yes
By whom:	Women's Health Guidelines Group
Is this a new or revised policy/guideline?	revised

Describe the development process used to generate this policy/guideline.
Women's Health Guidelines Group, Labour Ward Forum, Obs & Gynae
Who is the policy/guideline primarily for?
Health Professionals working within the maternity service
Is this policy/guideline relevant across the Trust or in limited areas?
Maternity Services
How will the information be disseminated and how will you ensure that relevant staff are aware of this policy/guideline?
Intranet, newsletters,
Describe the process by which adherence to this policy/guideline will be monitored.
See *monitoring section of policy*
Is there a NICE or other national guideline relevant to this topic? If so, which one and how does it relate to this policy/guideline?
See *reference section of policy*
What (other) information sources have been used to produce this policy/guideline?
See *reference section of policy*
Has the policy/guideline been impact assessed with regard to disability, race, gender, age, religion, sexual orientation?
No impact
Other than the authors, which other groups or individuals have been given a draft for comment?
All obstetric Consultants, Women's Health Guidelines Group,
Which groups or individuals submitted written or verbal comments on earlier drafts?
Any comments received considered by Women's Health Guidelines Group
Who considered those comments and to what extent have they been incorporated into the final draft?
All comments considered
Have financial implications been considered?
Yes