South Australian Perinatal Practice Guideline

Shoulder Dystocia

Note:

This guideline provides advice of a general nature. This statewide guideline has been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach. The guideline is based on a review of published evidence and expert opinion.

Information in this statewide guideline is current at the time of publication.

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Health practitioners in the South Australian public health sector are expected to review specific details of each patient and professionally assess the applicability of the relevant guideline to that clinical situation.

If for good clinical reasons, a decision is made to depart from the guideline, the responsible clinician must document in the patient's medical record, the decision made, by whom, and detailed reasons for the departure from the guideline.

This statewide guideline does not address all the elements of clinical practice and assumes that the individual clinicians are responsible for discussing care with consumers in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes:

- The use of interpreter services where necessary,
- Advising consumers of their choice and ensuring informed consent is obtained,
- Providing care within scope of practice, meeting all legislative requirements and maintaining standards of professional conduct, and
- Documenting all care in accordance with mandatory and local requirements

Explanation of the aboriginal artwork:
The Aboriginal artwork used symbolises the connection to country and the circle shape shows the strong relationships amongst families and the Aboriginal culture. The horse shoe shape design shown in front of the generic statement symbolises a woman and those enclosing a smaller horse shoe shape depicts a pregnant woman. The smaller horse shoe shape in this instance represents the unborn child. The artwork shown before the specific statements within the document symbolises a footprint and demonstrates the need to move forward together in unison.

Australian Aboriginal Culture is the oldest living culture in the world yet Aboriginal people continue to experience the poorest health outcomes when compared to non-Aboriginal Australians. In South Australia, Aboriginal women are 2-5 times more likely to die in childbirth and their babies are 2-3 times more likely to be of low birth weight. The accumulative effects of stress, low socio economic status, exposure to violence, historical trauma, culturally unsafe and discriminatory health services and health systems are all major contributors to the disparities in Aboriginal maternal and birthing outcomes. Despite these unacceptable statistics the birth of an Aboriginal baby is a celebration of life and an important cultural event bringing family together in celebration, obligation and responsibility. The diversity between Aboriginal cultures, language and practices differ greatly and so it is imperative that perinatal services prepare to respectfully manage Aboriginal protocol and provide a culturally positive health care experience for Aboriginal people to ensure the best maternal, neonatal and child health outcomes.

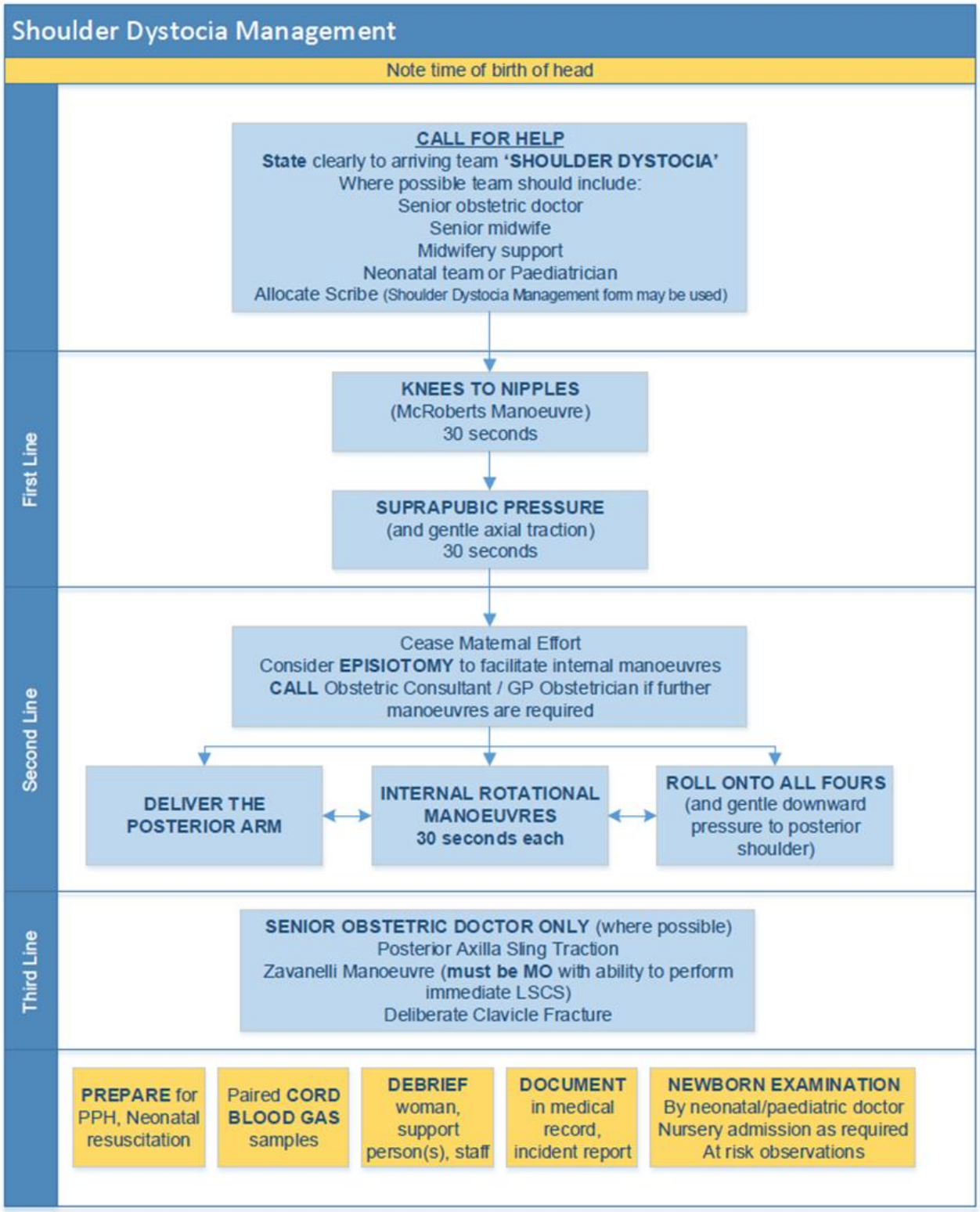
Purpose and Scope of Perinatal Practice Guideline (PPG)

The purpose of this guideline is to give information about the risk factors, diagnosis and management of shoulder dystocia. It also includes a fact sheet for women and a shoulder dystocia management form that can be used to document events.

Government of South Australia

SA Health

Flowchart: Management of Shoulder Dystocia



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Summary of Practice Recommendations

Discuss the risks and management options with women who have identified risk factors for shoulder dystocia and document plan in the case notes and SA Pregnancy Record (SAPR).

Women with a suspected macrosomic infant should be reviewed antenatally by a senior obstetric registrar, consultant obstetrician or GP obstetrician.

Shoulder dystocia is an obstetric emergency and local emergency procedures should be activated as soon as shoulder dystocia is identified.

If nuchal cord is present, cutting the cord is NOT recommended.

A scribe should be assigned to record details and call out 30 second intervals during the event.

Most shoulder dystocias are resolved with the McRoberts manoeuvre and should be first line action.

Internal rotational manoeuvres involve pressure on the scapula or clavicle. Never rotate the fetal head.

Avoid excessive traction as it is associated with neonatal trauma and brachial plexus injury.

Avoid fundal pressure as it is associated with brachial plexus injury, uterine rupture and haemorrhage.

Administer a tocolytic before attempting Zavanelli Manoeuvre to prevent uterine rupture.

Postpartum haemorrhage should be anticipated and acted on immediately with active third stage management recommended.

The need for neonatal resuscitation following a shoulder dystocia should be anticipated.

Paired cord blood gas samples should be collected following a shoulder dystocia

The baby should be assessed at birth by a paediatrician to exclude and/or manage any fetal morbidity.

A detailed description of the manoeuvres employed should be documented in the maternal case notes.

After the birth, the woman and her support persons should be offered opportunities to discuss the birth, reason for the manoeuvres and considerations for future births.

Abbreviations

BMI	Body Mass Index
CTG	Cardiotocography
HIE	Hypoxic Ischaemic Encephalopathy
IV	Intravenous
kg	Kilograms
LGA	Large for Gestational Age
mg	Milligram(s)
mL	Millilitre(s)
mmol/L	Millimoles per litre
OA	Occiput Anterior
OP	Occiput Posterior
OT	Occiput Transverse
O2	Oxygen
PAST	Posterior Axilla Sling Traction
PGL	Plasma Glucose Level
pH	Minus log hydrogen ion concentration
PPH	Postpartum Haemorrhage
RANZCOG	Royal Australian and New Zealand College of Obstetricians and Gynaecologists
RCOG	Royal College of Obstetricians and Gynaecologists
s/c	Subcutaneous

SFH	Symphyseal fundal height
°	Degrees
>	Greater than
%	Percentage
®	Registered Trademark

Introduction

In a vaginal birth a shoulder dystocia occurs following the birth of the fetal head when additional manoeuvres are required beyond routine axial traction to deliver the fetal shoulders.[1] **Shoulder dystocia is an obstetric emergency.**

The fetal bisacromial diameter enters the pelvis at an oblique angle in normal circumstances with the posterior shoulder ahead of the anterior shoulder, rotating to the anterior-posterior position at the pelvic outlet when external rotation occurs.[1] The anterior shoulder can then slide under the symphysis pubis for the birth.[1] In a shoulder dystocia the anterior shoulder (or less commonly the posterior shoulder) becomes impacted behind the symphysis pubis (the posterior shoulder becomes impacted behind the sacral promontory).[1]

Risk Factors

Shoulder dystocia cannot be accurately predicted by antenatal or intrapartum risk factors.[2, 3] **At least 50% of pregnancies that end with a shoulder dystocia have no identifiable risk factors, the predictive value of one or any combination of risk factors for shoulder dystocia is low (less than 10%) [2, 4-6]**

Identified Risk Factors [2, 4]

Antenatal

- Previous shoulder dystocia
  See: Previous Shoulder Dystocia
- Macrosomia
- Most significant risk factor although low positive predictive value,
  See: Suspected Fetal Macrosomia
- Maternal diabetes mellitus
- Risk for shoulder dystocia increased by 2 to 4 times than for babies of the same weight in non-diabetic mothers [7]
- Maternal obesity
- Not significant as an independent risk factor (non-diabetic mother, non-macrosomic infant), although maternal obesity displays high correlation with fetal macrosomia [8]
- Post term pregnancy is associated with infants with higher birth weights,
  See: Suspected Fetal Macrosomia

Intrapartum [7]

- Prolonged first stage
- Prolonged second stage
- Labour augmentation
- Instrumental birth
- Post term pregnancy

Prevalence, Morbidity and Mortality

The reported incidence of shoulder dystocia varies but studies that included the largest numbers of vaginal births suggest an incidence of 0.58% and 0.70%.[4] Neonatal consequences of shoulder dystocia include brachial plexus injury (e.g. Erb's palsy) fractures (humeral and clavicular), hypoxia and stillbirth. Maternal consequences include postpartum haemorrhage, severe vaginal and perineal trauma (3rd and 4th degree tears), cervical tears, uterine rupture, bladder rupture and psychological distress.

Antenatal Counselling

Discuss the risks and management options with women who have identified risk factors for shoulder dystocia and document in detail in the case notes:

- Points discussed
- Woman's choice regarding method of delivery
- Agreed birthing plan

A Patient Information Leaflet may be provided to the woman and her support person to enable them to review the objective data independently. See: Shoulder Dystocia Fact Sheet.

Suspected Fetal Macrosomia

A large for gestational age (LGA) fetus should be anticipated in the following:

- Symphyseal fundal height (SFH) is > 90th percentile
- History of large for gestational age infant (irrespective of gestation)
- Predicted estimated fetal weight on ultrasound is > 90th percentile

Macrosomia refers to fetal growth beyond a specific threshold.[9] The specific thresholds vary between 4000g and 4500g. [9-12] However, RANZCOG define macrosomia as a fetal weight of greater than 4500g.[7]

Serial measurement of fundal height and plotting on a growth chart is a useful screening tool and is recommended (see fetal growth accelerated guideline for further information). This may be inaccurate in women with a high BMI. It is recommended that women with a BMI above 40 have serial growth scans at 28, 32 and 36 weeks gestation and have medical involvement throughout their pregnancy.

Ultrasound examination is the standard way of detecting fetal macrosomia and LGA fetuses.[9] However, estimation of fetal weight can be unreliable (+/- 20%) and the large majority of macrosomic infants do not experience shoulder dystocia.[7] Hadlock's formula incorporating head circumference (HC), abdominal circumference (AC) and femur length (FL) measurements has the highest predictive value of determining fetal LGA and macrosomia in a nondiabetic woman.[9]

There is insufficient data to support induction of labour in nulliparous women without a medical indication (such as diabetes) at term where the fetus is thought to be macrosomic. [7] Elective caesarean section is not recommended for suspected fetal macrosomia without diabetes.

There is evidence to suggest that larger infants are more likely to suffer a permanent, rather than transient, brachial plexus injury after shoulder dystocia.[7] Where a permanent brachial plexus injury occurs, litigation is common. **Women with a suspected macrosomic infant should be reviewed antenatally by a senior obstetric registrar or consultant obstetrician.**

Previous Shoulder Dystocia

The recurrence rate of shoulder dystocia is reported to be between 1% and 25%.[7] This may be an underestimate of the true recurrence risk due to the amount of subsequent elective caesarean sections.[2] Recurrence rate is approximately seven times higher than for those with no previous shoulder dystocia[13], however infant birthweight is the most important factor.[14]

Women who have experienced a previous shoulder dystocia should be debriefed and advised on the steps that can be taken to reduce the risk of recurrence such as:

- Control of diabetes (as applicable)
- Timing of delivery to ensure fetal size is not larger than in her previous pregnancy with a shoulder dystocia

Document a request in the case notes for the presence of an accoucher experienced in the management of shoulder dystocia at the time of birth and immediate access to medical and midwifery backup. Whilst elective caesarean section is not routinely advised; factors such as the severity of any previous neonatal or maternal injury, fetal size and maternal choice should all be considered when offering recommendations for the next birth.[7]

Management

Recognition of a Shoulder Dystocia

Shoulder dystocia should be suspected when:

- the birth of the face and chin is prolonged
- the head emerges and retracts up against the perineum (turtle sign)
- the fetus fails to undergo external rotation
- the anterior shoulder does not emerge with routine axial traction

Shoulder dystocia is confirmed when routine delivery manoeuvres (traction in an axial direction) fail to deliver the fetus and when the head to body delivery interval is prolonged ≥ 60 seconds.[4, 7] Time keeping is vital and wherever possible, a scribe should be assigned to record details and call out 30 second intervals during the event.[15] If nuchal cord is present, cutting the cord is NOT recommended (see Cord Management in Shoulder Dystocia)

Call for Help

- Press the emergency bell to get assistance from:
  - senior midwife and additional midwifery staff
  - the most experienced obstetrician available (preferably consultant)
  - anaesthetist
  - neonatologist or paediatric doctor
- State the problem clearly to the arriving team as 'this is shoulder dystocia'
- Note the time the head was birthed
- Pushing should be discouraged as it can further contribute to the impaction and will not resolve the dystocia [4]
- The woman should be positioned with her buttocks flush with the edge of the bed
- Assign a scribe to document events contemporaneously. The use of a Shoulder Dystocia Management Form (such as the included pro forma) can assist clinicians to accurately record the management of the emergency
- At least two experienced clinicians may be required to achieve the following manoeuvres

Manoeuvres

Up to 90% of shoulder dystocias are resolved by the McRoberts manoeuvre[7], beyond this there is no evidence that one intervention is superior to another. The simplest and least invasive methods are usually tried first, progressively leading to the more invasive. Variations in the sequence may be appropriate depending on operator skill and preference.[4,16] Throughout these manoeuvres, ensure that rotation is achieved through pressure on the scapula or clavicle. Never rotate the fetal head.

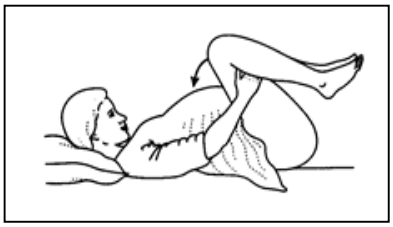
Considerations

- Avoid excessive traction as it is associated with neonatal trauma and permanent brachial plexus injury. Downward traction is strongly associated with brachial plexus injury. [4] Routine traction should always be applied slowly and gently in an axial direction (no sudden force or downward traction) [4]
- Avoid fundal pressure as it is associated with brachial plexus injury, uterine rupture and haemorrhage
- Avoid rotation of the fetal head

First Line Manoeuvres

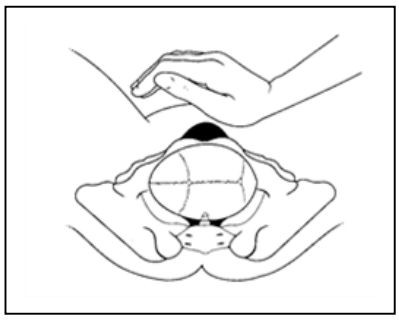
"Knees to Nipples" - McRobert's Manoeuvre

- It is one of the least invasive manoeuvres and should be employed first
- Flatten the bed with 1 pillow only beneath the woman's head. Assist the woman to the end of the bed or remove the end of the delivery bed.



- The woman's hips should be maximally flexed and abducted alongside her abdomen with her knees flexed. This is commonly known as 'knees to nipples'
- Apply routine axial traction to the fetal head to assess whether the anterior (or posterior) shoulder has been released
- McRoberts' position increases the anteroposterior diameter of the pelvic outlet

Suprapubic Pressure



- Can be combined with McRoberts' manoeuvre
- The accoucher continues routine axial traction to the fetal head. An assistant applies continuous downward pressure on the fetus' anterior shoulder above the maternal symphysis pubis, for 30-60 seconds (may use a rocking motion if continuous pressure is not successful)
- The heel of the assistant's hand should be over the back (scapula side) of the fetus' anterior shoulder just above the symphysis pubis. If the assistant is unsure of the location of the fetal back, apply suprapubic pressure from the most likely side of the fetal back and if that is not successful attempt from the other side[4]
- The aim is to push the anterior shoulder into the oblique diameter of the pelvic inlet, allowing it to escape under the symphysis pubis with routine axial traction
- Suprapubic pressure should be stopped if the accoucher attempts internal manoeuvres

Second Line Manoeuvres

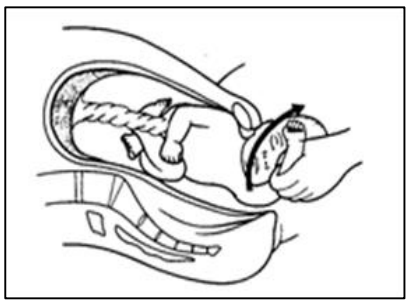
Second line manoeuvres may be performed in any sequence according to accoucher preference. Each manoeuvre should be attempted for 30 seconds.

Consider an Episiotomy

An episiotomy will not relieve the dystocia, as a shoulder dystocia is a problem where the baby's shoulder is obstructed by the maternal pelvis. There is no greater risk of permanent brachial plexus injuries to the fetus or severe perineal trauma when internal rotational manoeuvres are utilised without episiotomy.[17] There is not a decrease in brachial plexus injuries in the neonate when an episiotomy is performed for shoulder dystocia management.[18]

An episiotomy might be considered to allow greater access to the vagina to perform the internal manoeuvres that are necessary to rotate the fetus or to deliver the posterior arm.[19] The most spacious part of the pelvis is in the sacral hollow; vaginal access can be gained more easily posteriorly.[7] The correct hand position has been described 'as if putting on a tight bracelet' where the fingers are compressed and the thumb tucked in to the palm.[4]

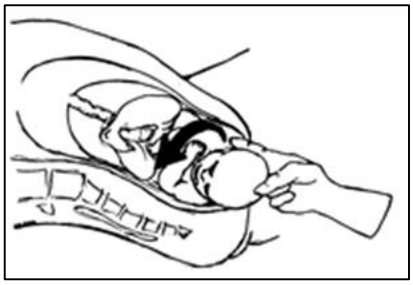
Deliver the Posterior Arm



- Delivering the posterior arm will reduce the diameter of the fetal shoulders by the width of the arm[4]
- The accoucher's hand is inserted posteriorly into the hollow of the sacrum and well into the vagina across the fetal chest to locate the fetal elbow
- The elbow of the fetal arm is flexed and the hand is grasped and gently withdrawn from the vagina in a straight line. This often allows the anterior shoulder to be displaced and delivered
- If this fails despite delivering the posterior arm, then the fetal head and trunk can be rotated through 180° to allow delivery. The accoucher should support the fetal head and posterior arm and gently rotate the baby.[4] The posterior shoulder will then become the new anterior shoulder and should be below the symphysis pubis[4]

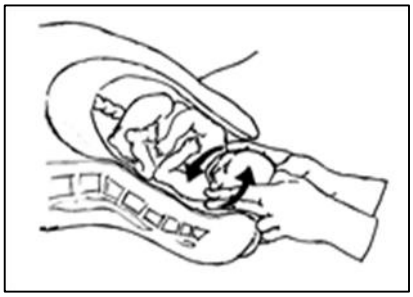
Internal Rotational Manoeuvres

Internal Anterior Shoulder Displacement



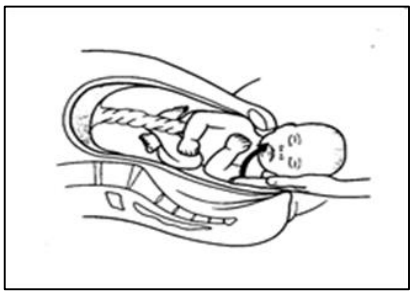
- The accoucher inserts the whole of one hand posteriorly into the sacral hollow of the vagina and applies pressure behind the anterior shoulder so that the anterior shoulder is displaced towards the fetal chest
- While the accoucher is attempting to rotate the fetal shoulders, they can instruct an assistant to perform suprapubic pressure to assist the rotation
- Once in the oblique diameter, attempt delivery

Internal Anterior and Posterior Shoulder Rotation



- The fingers of the first hand remain behind the anterior shoulder. The accoucher then inserts the fingers of his/her second hand in front (chest side) of the posterior shoulder
- Apply anterior shoulder pressure in combination with additional pressure to the front of the posterior shoulder to rotate into the oblique. If delivery is not achieved, continue rotation throughout 180° if able

Reverse Posterior Shoulder Rotation



- Pressure is applied behind the posterior shoulder with two fingers
- The posterior shoulder is then rotated 180° forward towards the fetal chest wall
- The aim is to release the anterior shoulder from under the symphysis
- The posterior shoulder passes beneath the symphysis and delivery is attempted

All Fours Position

- All fours position (rotating the woman onto her hands and knees) increases the pelvic diameters allowing better access to the posterior shoulder
- Consideration should be given to the time taken and difficulty associated with achieving this position especially if the woman is obese and / or has an epidural[4]
- If already in all fours position, assist the woman to adopt the McRoberts manoeuvre position and attempt to deliver the posterior shoulder

Third-line Manoeuvres

Posterior Axilla Sling Traction (PAST)

Posterior axilla sling traction (also called Hofmeyr Sling) can be used to resolve a shoulder dystocia when other methods have not been successful. Currently there is insufficient data to support its use.[4,7] It involves the accoucheur using a soft suction catheter or urinary catheter that is folded into a loop over the accoucheur's index finger and fed through the posterior axilla until it can be retrieved with the accoucheur's other index finger.[1]

The loop is then unfolded which creates a sling around the baby's posterior shoulder, the two ends of the sling are clamped and the shoulder is delivered by applying moderate traction to the sling.[1] It can also be used to rotate the fetal shoulders 180 degrees that can be assisted by counter pressure on the back of the fetal anterior shoulder.[1] Posterior Axilla Sling Traction should only be performed following appropriate training in the procedure.

Zavanelli Manoeuvre

This is a manoeuvre reserved for use on the rare occasion when vaginal manoeuvres have not been successful. This is a procedure that should only be considered by an obstetrician who is then able to conduct the caesarean section. Preparations should be concurrently made for a category one caesarean section.

Administer a tocolytic before attempting Zavanelli Manoeuvre to prevent uterine rupture:

Salbutamol

Give intravenous salbutamol slowly in 50 microgram boluses up to 250 micrograms in total (often 100 micrograms will be sufficient). Ventolin® obstetric injection contains 5 mg / 5 mL (1,000 micrograms / mL)

- Draw up 0.25 mL of salbutamol in a 1 mL syringe
- Add this to 9 mL of 0.9 % sodium chloride in a 10mL syringe to provide approximately 25 micrograms / mL
- Ensure medical order before administration
- Ensure monitoring of maternal pulse during administration. Stop administration if maternal pulse >140

Terbutaline

Terbutaline: 1 mL ampoule 500 micrograms / 1 mL

May be given subcutaneously or intravenously

Subcutaneous

- Using a 1 mL syringe, draw up 0.5 mL (250 micrograms) of terbutaline and administer subcutaneously

Intravenous

- Using a 1 mL syringe, draw up 0.5 mL (250 micrograms) of terbutaline
- Add to a 10 mL syringe and make up to 10 mL with sodium chloride 0.9 % (25 micrograms per mL)
- Ensure medical order before administration
- Give intravenous terbutaline slowly in 50 microgram boluses up to 250 micrograms in total (often 100 micrograms will be sufficient).
- Ensure monitoring of maternal pulse during administration. Stop administration if maternal pulse >140.

Sublingual Glyceryl Trinitrate spray (Nitrolingual®)

Administration

- Nitrolingual pump spray should be primed before using it for the first time by pressing the nozzle five times
- The woman should ideally be in a sitting position but in a shoulder dystocia it is acceptable for the woman to be supine
- The bottle should be kept vertical with the nozzle head uppermost
- Hold the opening of the nozzle head as close to the open mouth as possible
- Give 1 metered spray (400 micrograms) administered as spray droplets beneath the tongue (do not inhale)
- Close the mouth immediately after each dose
- Can be repeated after 5 minutes
- No more than 2 metered doses should be given
- Ensure medical order before administration

In an emergency situation, analgesia is not always available. Consideration should be given to analgesia for the woman if epidural anaesthesia is not in place.

The fetal head should be replaced back into the uterus by depressing the posterior perineum and applying the palm of the hand to the vertex and applying upward pressure. Once the head is replaced the accoucher uses firm and constant pressure and proceeds to caesarean section. [19]

Cleidotomy (Fracture of Fetal Clavicle)

Consider cleidotomy if all other measures have failed. It may be considered earlier if the fetus has succumbed. This will shorten the biacromial diameter and allow delivery.[1] The procedure is performed by pulling the anterior clavicle outward.[1] It can be a difficult procedure to perform and can lead to injury to the baby's vascular and pulmonary structures.[1] It should be performed by an obstetrician only.

Symphysiotomy

Partial surgical division of the maternal symphysis pubis ligament has been historically performed to increase the size of the pelvic opening. There is a high incidence of serious maternal morbidity associated with the procedure4, and it is most commonly performed when the fetus has demised, or in situations where access to emergency caesarean section is unavailable. Given the high association with serious maternal morbidity, its use is not recommended in SA Health services.

Following the Birth

Management of the Umbilical Cord in Shoulder Dystocia

A healthy fetus will compensate during a shoulder dystocia for a finite amount of time.[4] A shoulder dystocia places the fetus at increased risk of hypovolaemia, with or without a nuchal cord. Compression on the cord and the fetus may cause additional volume loss to the placenta, and may be additionally responsible for the poor condition of a neonate following the birth.

If nuchal cord is present, cutting the cord is NOT recommended. This has the potential to increase the risk of severe metabolic acidosis, Hypoxic Ischaemic Encephalopathy (HIE), Cerebral Palsy and death.[4,20] Maintaining an intact cord is advisable.

Recommended options for management following the release of the shoulders include:

- If the cord is loose, slip the cord over the baby's head[21]
- Deliver the baby through the cord[21]
- Utilise the 'somersault manoeuvre' – deliver the baby slowly and keep the fetal head near the vulva. Avoid traction on the cord. When the body is delivered, the baby may be untangled [21, 22]
- Keep the cord intact to allow reperfusion. A pale and flaccid neonate is indicative of hypovolaemia. A delay in cord clamping and/or rapidly 'milking' the cord from the vulva toward the neonatal umbilicus 2-4 times prior to clamping and cutting the cord is associated with up to 30% increase in neonatal blood volume[22]

Umbilical Cord Blood Gas Collection

- Paired cord blood gas samples should be collected following a shoulder dystocia.
- Umbilical cord blood gas sampling is the most objective determinant of fetal metabolic condition at the moment of birth[23]
- Values from the umbilical cord artery provide the most accurate information regarding fetal and newborn acid-base status.[23] Information gained from umbilical cord blood sampling can also be useful from a medical and medicolegal perspective [24]
- A cord base excess of 12 to 16 mmol/L is associated with encephalopathy in 10 % of neonates, and the rate increases to 40 % in neonates who have an umbilical arterial base deficit greater than 16 mmol/L [23]

Preparation for Postpartum Haemorrhage

Shoulder dystocia is strongly correlated with Postpartum Haemorrhage (PPH).[1] As such, a PPH should be anticipated and acted on immediately. Active third stage management is strongly advised, with a low threshold for additional prophylaxis. See "Postpartum Haemorrhage" PPG in A-Z list available at www.sahealth.sa.gov.au/perinatal for further information.

Preparation for Neonatal Resuscitation

The need for Neonatal Resuscitation following a shoulder dystocia is likely, and should be anticipated. Where possible, expert neonatal or paediatric assistance should be summoned on recognition of the shoulder dystocia.

Newborn Assessment

- The paediatrician should review the baby and be advised of what manoeuvres were necessary, if the left or right shoulder was anterior and if any trauma is suspected
- The baby should be assessed at birth by a paediatrician to exclude and/or manage any fetal morbidity
- Neonatal checks should include checking for any sign of arm weakness or bony fracture(s)

- Admit to the nursery as required
- Assess need for Plasma Glucose Levels (PGLs) in accordance See "Neonatal Hypoglycaemia" PPG in A-Z list available at www.sahealth.sa.gov.au/perinatal for further information.
- Observations for 24-48 hours; exclude from criteria led discharge

Documentation

A detailed description of the manoeuvres employed when managing a shoulder dystocia should be documented in the maternal case notes. The use of a 'Shoulder Dystocia Management' form, such as included in the guideline, may assist the accoucher to accurately document the event as well as providing valuable information for the care of the woman in any subsequent pregnancy. If a centralised CTG monitoring system was in use (such as OBTraceVu or Philips IntelliSpace Perinatal), the shoulder dystocia event should also be recorded in the system.

Open Disclosure, Debriefing and Ongoing Support

All shoulder dystocia cases should be managed as per the *SA Health Patient Incident Management and Open Disclosure Policy.* Considerations include:

- Clear communication and instructions to the woman and support persons is vital during the emergency
- After the birth, the woman and her support persons should be offered opportunities to discuss the birth and the reason for the manoeuvres
- Long term follow-up should be offered
- Counselling should be offered
- A social work referral should be offered
- Arrange a clinical review postnatally to further debrief and discuss the recommended approach to future pregnancy
- A Shoulder Dystocia Consumer Information flyer may be a useful adjunct to counselling

Staff Training

- All staff working in delivery and birth suites should participate in regular practical based simulated shoulder dystocia training7
- Attending a shoulder dystocia can be distressing for all staff involved. If possible, a counselling session should occur after the emergency to debrief regarding the events and discuss any issues with the case as a team

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Appendices

Appendix 1: Shoulder Dystocia Management Form

South Australian Perinatal Practice Guidelines
Clinical Practice Tool

SHOULDER DYSTOCIA MANAGEMENT FORM

Facility / Unit: .....

(Affix identification label here)

URN:

Family name:

Given name(s):

Address:

Phone:

Date of birth: Sex: ☐ M ☐ F ☐ I

Date: ..... **Time:** .....

Scribe Signature/Name/Designation:

.....

Call for help at: .....

Accoucheur: .....

Others present for birth of head:

....

....

Signs of Shoulder Dystocia

- ☐ Prolonged 2nd Stage
- ☐ Slow advancement of fetal head
- ☐ "Turtling"
- ☐ No restitution of fetal head

Mode of Delivery of head: .....

Time of delivery of head: ..... **Time of Birth:** .....

Maternal position for birth: .....

Position of Occiput: ..... **Position of Fetal Spine:** .....

Head facing maternal: *LEFT* *RIGHT*

Manoeuvres attempted	30 secs	60 secs
Knees to Nipples (McRoberts – perform 1st)		
Suprapubic Pressure From maternal *LEFT* *RIGHT*		
Episiotomy Required *YES* *NO* *Enough access / tear present / already performed*		
Internal Rotational manoeuvre		
Description of rotation		
Delivery of Posterior Arm *LEFT* *RIGHT*		
Roll onto all fours (Gaskin Manoeuvre)		

Assistance:

Name	**Role**	**Time arrived**
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Traction: Axial (as for NVB)

Other: .....

Degree of Shoulder Dystocia:

- ☐ Mild (1-2 Manoeuvres)
- ☐ Moderate (3-4 Manoeuvres)
- ☐ Severe (5-7 Manoeuvres)

NEONATAL OUTCOME

Cord Gases		**Resuscitation**
Arterial	**Venous**	☐ Stimulation
pH:	pH:	☐ T-piece device PEEP
BE:	BE:	☐ IPPV
Lactate:	Lactate:	☐ ETT IPPV duration: .....
		☐ Oxygen
		☐ Adrenaline
		☐ Volume expanders
		☐ Naloxone
		☐ External Chest Compressions

Birth Weight: .....grams

Apgars: 1 minute: ..... 5 minutes: ..... 10minutes: .....

Clavicles: ☐ Intact ☐ Review

Transfer to higher care facility: YES NO

Receiving Facility: .....

Time of Transfer: .....

DEBRIEF

Debrief provided to parents: YES NO

By whom: ..... Date: .....

Details: .....

.....

.....

Debrief organised for staff: YES NO

By whom: ..... Date: .....

Reported to O&G Consultant: YES NO

Event SLS: YES NO

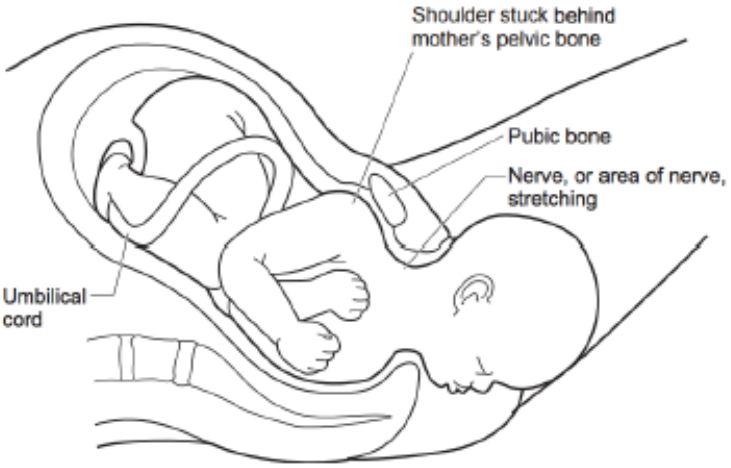
Date sent: .....

SHOULDER DYSTOCIA RECORD

Fact Sheet

Shoulder Dystocia

Shoulder Dystocia occurs when the baby's shoulder get stuck under the pubic bone after the head has been born. Extra help is needed to help release the shoulder. It is an emergency that can occur during vaginal births, but is quite difficult to predict. In half of all cases of shoulder dystocia, there are no risk factors at all. In the majority of cases, the baby is born safely with a little help from the midwives and doctors.



What are the risk factors for shoulder dystocia?

Although hard to predict, shoulder dystocia is more likely to occur if:

- You have experienced a shoulder dystocia with a previous birth
- You have diabetes
- You have a body mass index (BMI) of 30 or greater
- Your labour is induced
- You have a long labour
- You have assistance from forceps or ventouse to deliver your baby

Shoulder dystocia is more likely to occur if your baby is large, however the majority of babies who weigh over 4.5kg do NOT experience shoulder dystocia. Half of the cases of shoulder dystocia occur in babies weighing less than 4kgs. Another consideration is that ultrasounds are not very accurate at determining the size of your baby so are not recommended for predicting shoulder dystocia if you have no other risk factors. If you have diabetes as well as having a large baby, your doctor will discuss the additional risks and help you to make a plan for your birth. This might include an induction of labour or a caesarean section.

What happens if a shoulder dystocia occurs?

Because shoulder dystocia is an emergency, time is important. Your baby must be born fairly quickly once the head has delivered so that the baby can begin breathing. The midwife will press the emergency call bell and a team of midwives, obstetric doctors and neonatal doctors are likely to come into the room to assist. It can be very frightening for you and your support person, however it is important to remember that everyone is there to help you and your baby and will assist you to release the shoulder and finish birthing your baby. There are a number of manoeuvres that can be used to help to release the shoulder.

Your doctor or midwife will usually:

- Ask you to stop pushing;
- Reposition you to allow more room in the pelvis. This will involve laying on the birth bed, flat on your back and bringing your knees up to your chest. If you were birthing in water or off the bed, you may be asked to get onto the bed and assume this position; and/or
- Push on your abdomen, just above your pubic bone to try and release the shoulder

These simple manoeuvres are usually enough to complete the birth of your baby however sometimes additional manoeuvres must be used to deliver your baby, including:

- making a cut (episiotomy) to allow better access to your baby's shoulders internally;
- placing a hand inside of your vagina to try and rotate the shoulder or deliver the baby's arm; or
- assisting you to roll onto your hands and knees, which can also help to release the shoulder

What could a shoulder dystocia mean for you and your baby?

Some women who experience a shoulder dystocia can have large vaginal tears. Sometimes in rare cases they can extend to the rectum. It can also mean heavy blood loss after the birth (postpartum haemorrhage) which may require additional treatment.

For your baby, a shoulder dystocia can cause:

- Stretching of the nerves extending from the neck into the arm, which can cause a temporary or permanent injury called a brachial plexus injury. Permanent injury is rare. In most cases movement returns within hours or days. These injuries can occur even without having had a shoulder dystocia;
- Other injuries such as breaks (fractures) in the arm(s) (humerus) or collar bone(s) (clavicle). These injuries generally heal well; or
- In very rare cases, babies can suffer brain damage if the birth is delayed long enough that he or she did not get enough oxygen and sometimes this can lead to death

We highly recommend that if you do or have experienced a shoulder dystocia, you have the opportunity to debrief, discuss your concerns with the midwives and doctors who were involved, and ask lots of questions. You may not feel ready to do this immediately following the birth, but this can be arranged for you at a mutually convenient time down the track. Counselling can also be arranged through the social work department of your birthing hospital.

Acknowledgements:
This information is provided in conjunction with the South Australian Shoulder Dystocia Perinatal Practice Guideline. It has been adapted from the Royal College of Obstetrics and Gynaecology Shoulder Dystocia Patient Information (2012).
It is intended to be educational and informative, not prescriptive or recommending of treatments.
You should always discuss your questions and concerns with your doctor or midwife.

For more information please speak to your midwife or doctor.

Shoulder Dystocia Fact Sheet

SA Maternal, Neonatal and Gynaecology Community of Practice
SA Health

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