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

Note: The words woman/women/mother/she/her have been used throughout this guideline as most pregnant and birthing people identify with their birth sex. However, for the purpose of this guideline, these terms include people who do not identify as women or mothers, including those with a non-binary identity. All clinicians should ask the pregnant person what their preferred term is and ensure this is communicated to the healthcare team.

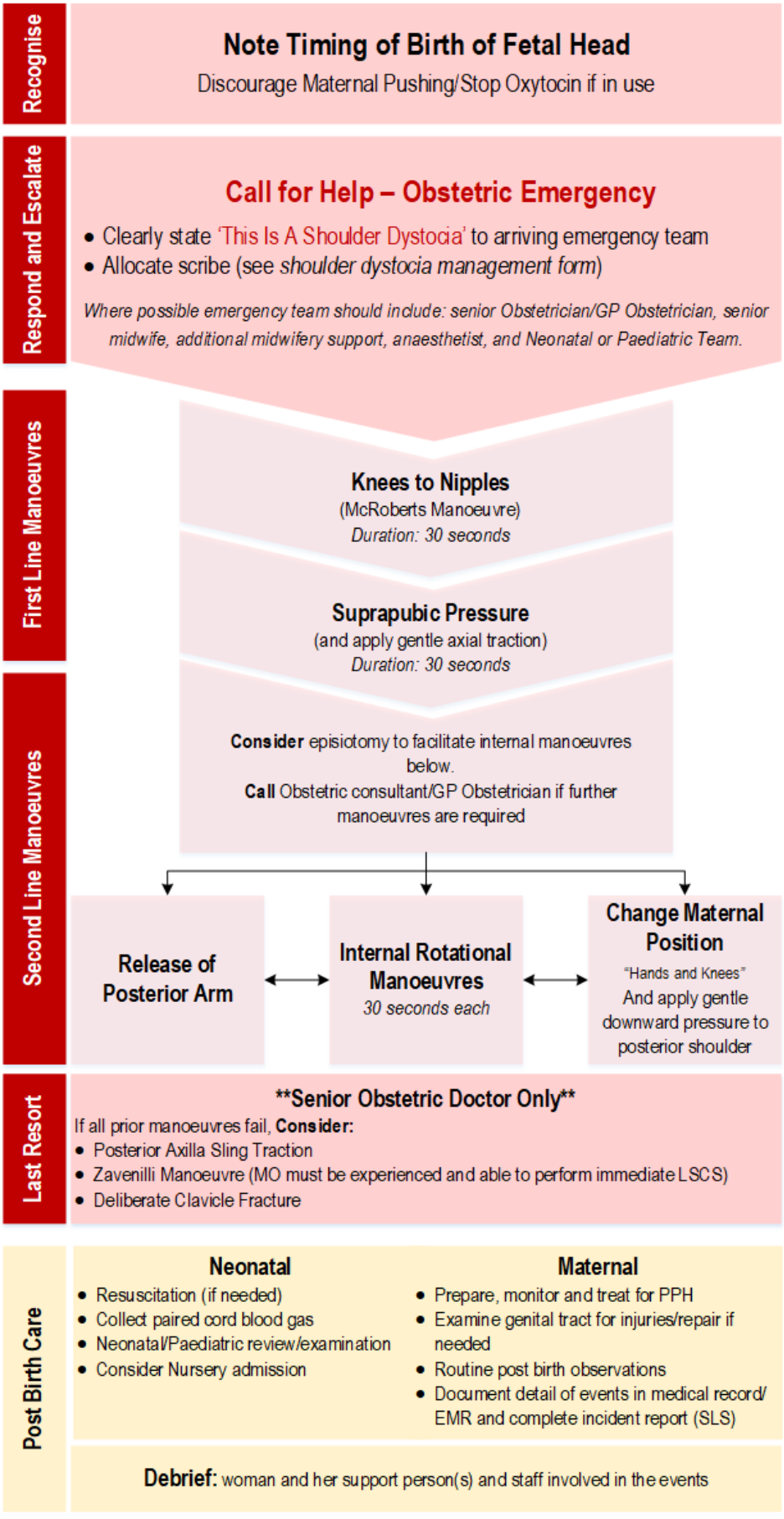
Explanation of the Aboriginal artwork:
The Aboriginal artwork used symbolises the connection to country and the circle shape shows the strong relationships amongst families and the Aboriginal culture. The horseshoe shape design shown in front of the generic statement symbolises a woman and those enclosing a smaller horseshoe shape depicts a pregnant woman. The smaller horseshoe 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 PPG

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

Flowchart 1| Shoulder Dystocia Management



Note: Use this flowchart in conjunction with Shoulder Dystocia Perinatal Practice Guideline (PPG).

Table of Contents

Summary of Practice Recommendations

Antenatal discussion of the risks and management options with women who have identified risk factors for shoulder dystocia and a documented written plan in the case notes and SA Pregnancy Record (SAPR).

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

Shoulder dystocia is an **obstetric emergency** and local emergency procedures must 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 dystocia are resolved with the McRoberts manoeuvre (knees to nipples) and therefore, 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.

The collection of paired cord blood gas samples following a shoulder dystocia is recommended.

Neonatal or Paediatric review of the newborn at birth is recommended post shoulder dystocia to exclude and/or manage any fetal morbidity.

Document a detailed description of the manoeuvres employed during a shoulder dystocia, in the maternal case notes.

Offer the woman and her support person(s) opportunities to discuss the birth, reason for the manoeuvres and considerations for future births in the prior to discharge. Consider mental health or counselling services referrals if needed.

Abbreviations

>	Greater than
≥	Greater than or equal to
<	Less than
≤	Less than or equal to
BMI	Body Mass Index
CTG	Cardiotocography
EFW	Estimated fetal weight
g	Gram(s)
HIE	Hypoxic Ischaemic Encephalopathy
IV	Intravenous
kg	Kilograms
LGA	Large for Gestational Age
mg	Milligram(s)
mL	Millilitre(s)
Microg	Microgram(s)
mmol/L	Millimoles per litre
OA	Occiput Anterior
OP	Occiput Posterior
OT	Occiput Transverse
PAST	Posterior Axilla Sling Traction
PGL	Plasma Glucose Level
PPH	Postpartum Haemorrhage
RANZCOG	Royal Australian and New Zealand College of Obstetricians and Gynaecologists
SFH	Symphyseal fundal height

Introduction

Shoulder dystocia occurs following the birth of the fetal head when additional manoeuvres are required beyond routine axial traction to deliver the fetal shoulders during vaginal birth.

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, 2] 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, 2]

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%.[3]

Neonatal consequences of shoulder dystocia include brachial plexus injury (e.g., Erb's palsy) fractures (humeral and clavicular), hypoxia and stillbirth.[4]

Maternal consequences include postpartum haemorrhage, severe vaginal and perineal trauma (3rd and 4th degree tears), cervical tears, uterine rupture, bladder rupture and psychological distress.[1, 5]

Risk Factors

Shoulder dystocia cannot be accurately predicted by antenatal or intrapartum risk factors.[6, 7] 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%).[6] Accelerated fetal growth velocities between 28–36 weeks has been associated with increased incidence of shoulder dystocia.[8]

Perinatal service providers need cultural sensitivity within a non-judgemental environment when planning care with and for Aboriginal women. Aboriginal women and their support person should be consulted about any decisions in the first instance, if requested an Aboriginal Health Professional should be consulted.

Antenatal Risk Factors

- 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.[9, 10]
- Maternal obesity:
  - not significant as an independent risk factor (non-diabetic mother, non-macrosomic infant), although maternal obesity displays high correlation with fetal macrosomia[10]
  - post-term pregnancy is associated with infants with higher birth weights (see: Suspected Fetal Macrosomia).[6]

Intrapartum Risk Factors

- Prolonged first stage
- Prolonged second stage[11]
- Labour augmentation and induction
- Instrumental birth
- Post term pregnancy.[12,13]

Suspected Fetal Macrosomia

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

- 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.[14, 15] The specific thresholds vary, however consensus, and RANZCOG now cite 4000–4500 grams and over as Macrosomia.[15]

Serial measurement of fundal height and plotting on a growth chart is a useful screening tool and is recommended (see *Fetal Growth Accelerated PPG* found in the A-to-Z index at www.sahealth.sa.gov.au/perinatal). However, 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.[15] However, estimation of fetal weight can be unreliable (+/- 20%) and the majority of macrosomic infants do not experience shoulder dystocia.[9]

Hadlock's three-parameter (head circumference (HC), abdominal circumference (AC) and femur length (FL) formula has the highest predictive value for determining fetal LGA and macrosomia in a nondiabetic woman.[16]

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.[9]

Elective caesarean section is not recommended for suspected fetal macrosomia without diabetes unless the EFW is greater than 5000 grams.[15]

There is evidence to suggest that larger infants are more likely to experience a permanent, rather than transient, brachial plexus injury after shoulder dystocia.[9] Where a permanent brachial plexus injury occurs, litigation is common.

Note: *RANZCOG recommend the principles of Shared Decision Making (SDM) be applied to make individualised plans for timing of birth in partnership with the woman taking into consideration the full clinical picture.[15] The discussion including risks, benefits, options with documented recommendations.[15] Women with a suspected macrosomic baby 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%.[9] This may be an underestimate of the true recurrence risk due to the amount of subsequent elective caesarean sections.[6] Recurrence rate is difficult to predict,[17] however infant birthweight is the most important factor.[17]

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 birth 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 accoucheur 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.[9]

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 birth
- agreed birth plan.

It is recommended that an information leaflet is provided to the woman and her support person(s) to enable them to review the objective data independently. See: Shoulder Dystocia Fact Sheet (appendix 2)

Aboriginal women should be referred to an Aboriginal Health Professional to support their care. Healthcare providers need to ensure cultural sensitivity and understanding when planning care with and for Aboriginal women and families.

Management of Shoulder Dystocia

Recognise

- 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 birth manoeuvres (traction in an axial direction) fail to deliver the fetus and when the head to body birth interval is prolonged ≥ 60 seconds.[4,7]
- Note timing of birth of fetal head. Time keeping is vital and wherever possible, a scribe should be assigned to record details and call out 30 second intervals during the event.
- Pushing should be discouraged as it can further contribute to the impaction and will not resolve the dystocia [1, 3]

Note: *If nuchal cord is present,* ***cutting the cord is <u>not</u> recommended*** *(see management of the umbilical cord in shoulder dystocia).*

Respond and Escalate

- Call for help.
- Press the emergency bell to get assistance from:
  - senior midwife and additional midwifery staff
  - the most experienced obstetric doctor available (preferably consultant)
  - anaesthetist
  - neonatologist or paediatric doctor
- State the problem clearly to the arriving team as **'this is shoulder dystocia'**.
- The woman should be assisted to move 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 (appendix 1) 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

Most shoulder dystocias are resolved by the McRoberts manoeuvre[18], 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. 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.[3] Routine traction should always be applied slowly and gently in an axial direction (no sudden force or downward traction).[3]
- 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" - McRoberts Manoeuvre

- McRoberts position increases the anteroposterior diameter of the pelvic outlet. 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 birth 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' (figure 1).
- Apply routine axial traction to the fetal head to assess whether the anterior (or posterior) shoulder has been released.

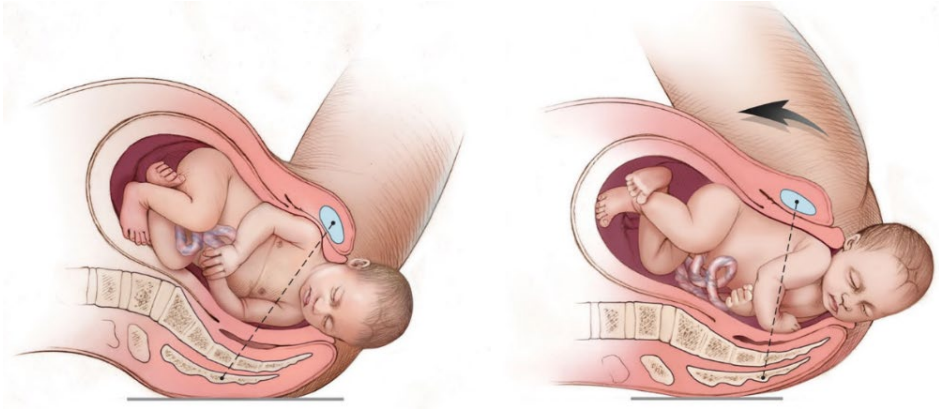


Figure 1: McRoberts Maneuver.[2] Illustrations by Christy Krames, reproduced with permission (www.kramestudios.com).

Suprapubic Pressure

- The aim of suprapubic pressure 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.
- 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 (figure 2). 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.[3]
- Suprapubic pressure should be stopped if the accoucher attempts internal manoeuvres.

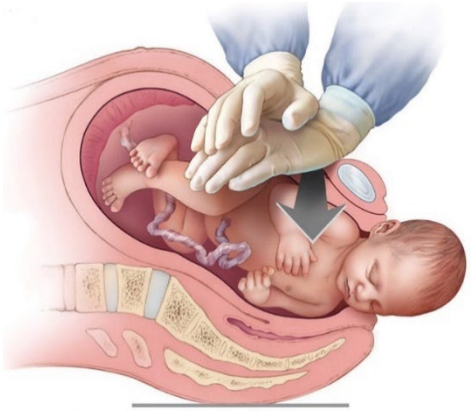


Figure 2: Suprapubic pressure.[2] Illustration by Christy Krames, reproduced with permission (www.kramestudios.com).

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 increased risk of permanent brachial plexus injuries to the fetus or severe perineal trauma when internal rotational manoeuvres are utilised without episiotomy.[4, 19]
  - There is no decrease in brachial plexus injuries in the neonate when an episiotomy is performed for shoulder dystocia management.[20]
  - 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.[3] The most spacious part of the pelvis is in the sacral hollow; vaginal access can be gained more easily posteriorly. 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 (see figure 3).[3]

Figure 3: Hand position for internal manoeuvres.

Release the Posterior Arm

- Releasing the posterior arm will reduce the diameter of the fetal shoulders by the width of the arm.[3]
- 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 (figure 3).
- If this fails despite delivering the posterior arm, then the fetal head and trunk can be rotated through 180° to allow birth. The accoucher should support the fetal head and posterior arm and gently rotate the baby.[3] The posterior shoulder will then become the new anterior shoulder and should be below the symphysis pubis.

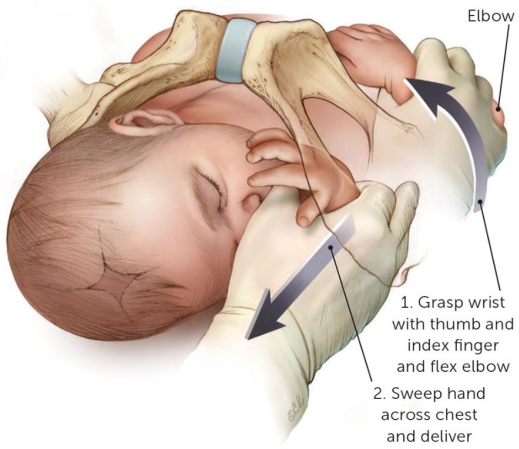


Figure 4: Posterior arm release.[2] Illustration by Christy Krames, reproduced with permission (www.kramestudios.com).

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 (figure 4).
- 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 birth.

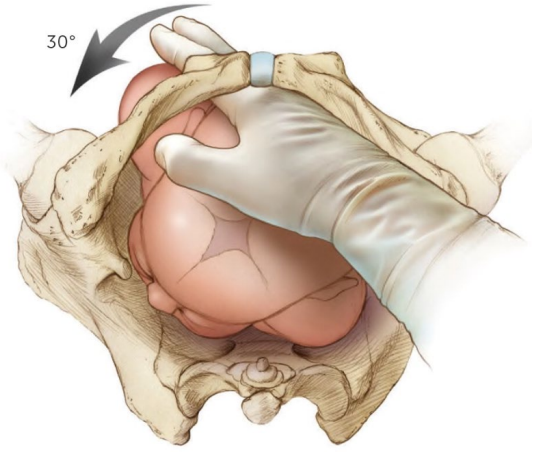


Figure 5: Internal anterior shoulder displacement.[2] Illustration by Christy Krames, reproduced with permission (www.kramestudios.com).

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 (figure 5). If birth is not achieved, continue rotation throughout 180° degrees, if able.

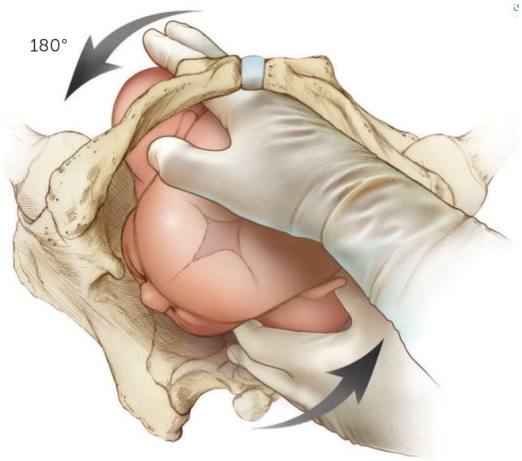
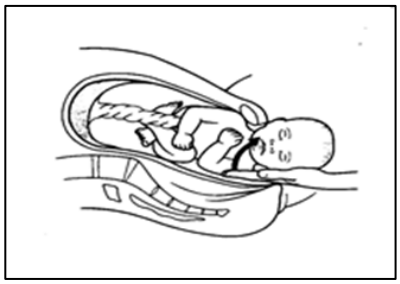


Figure 6: Internal anterior and posterior shoulder rotation.[2] Illustration by Christy Krames, reproduced with permission (www.kramestudios.com).

Reverse Posterior Shoulder Rotation



- Pressure is applied behind the posterior shoulder with two fingers.
- The posterior shoulder is then rotated 180° degrees 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 birth is attempted.

Change Maternal Position to Hands & Knees

- Changing maternal position onto her hands and knees or “all fours” 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.
- If already in all fours position, assist the woman to adopt the McRoberts manoeuvre position and attempt to deliver the posterior shoulder.

Management of the Umbilical Cord in Shoulder Dystocia

A healthy fetus will compensate during a shoulder dystocia for a finite amount of time. Shoulder dystocia places the fetus at increased risk of asphyxia due to cord compression.

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. 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.[1]
- Deliver the baby through the cord.
- 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.
- Keep the cord intact to allow reperfusion unless resuscitation is required.[1]
- In the event resuscitation of the infant is necessary, cord clamping should not be delayed in order to ‘milk’ the umbilical cord.

Umbilical Cord Blood Gas Collection

- Paired cord blood gas samples should be collected following a shoulder dystocia.[19]
- Umbilical cord blood gas sampling is the most objective determinant of fetal metabolic condition at the moment of birth.

- Values from the umbilical cord artery provide the most accurate information regarding fetal and newborn acid-base status. Information gained from umbilical cord blood sampling can also be useful from a medical and medicolegal perspective.
- 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.

Last Resort

Last resort manoeuvres should be carefully considered and only to be performed by an experienced senior medical officer in circumstances where first line and second line manoeuvres have not been successful.

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.[1, 21] 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 (for tocolytic recommendations and doses see *Tocolysis for Uterine Hypercontractility PPG* found in the A-to-Z index at www.sahealth.sa.gov.au/perinatal)

Consider 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 accoucheur uses firm and constant pressure and proceeds to caesarean section.[22]

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 birth.[23] The procedure is performed by pulling the anterior clavicle outward. It can be a difficult procedure to perform and can lead to injury to the baby's vascular and pulmonary structures.[23] It should be performed by an obstetrician only.

Symphysiotomy (Not Recommended)

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 procedure, and it is most 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.

Post Birth Care

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-to-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

- A neonatologist should review the neonate immediately post birth. Provide them a full clinical history, manoeuvres used, whether the left or right shoulder was anterior and if any trauma is suspected.
- Neonatal checks should include assessing for any sign of arm weakness or bony fracture(s) and a management plan determined.
- Admit to the nursery as required.
- Assess need for Plasma Glucose Levels (PGLs) in accordance See *Neonatal Hypoglycaemia PPG* in A-to-Z list available at www.sahealth.sa.gov.au/perinatal for further information.
- Observations (as per RDR chart) for 24–48 hours; medical review prior to discharge (exclude from criteria led discharge).

Aboriginal woman should be consulted on the care of the newborn baby in the first instance. Consult with the preferred Aboriginal health professional if requested.

Documentation

A detailed description of the manoeuvres employed when managing a shoulder dystocia should be documented in the maternal case notes/EMR. The use of a 'Shoulder Dystocia Management' form, such as included in the guideline, may assist the accoucheur 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 OBTraceVue), 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 Clinical Incident Management 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.

All follow up plans should be referred to the nominated Aboriginal health professional to ensure timely referral back to community and/or primary care provider.

Staff Training

- All staff working in birth and birth suites should participate in regular practical based simulated shoulder dystocia training.[3]
- Attending a shoulder dystocia can be distressing for all staff and students 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.

Resources

SAPPGs Web-based App:
Practice Guidelines (sahealth.sa.gov.au)

Medicines Information: (sahealthlibrary.sa.gov.au)
https://sahealthlibrary.sa.gov.au/friendly.php?s=SAPharmacy

SA Health Pregnancy:
Pregnancy | SA Health

Australian Government Pregnancy, Birth and Baby: (www.pregnancybirthbaby.org.au)
Pregnancy, Birth and Baby | Pregnancy Birth and Baby (pregnancybirthbaby.org.au)

Pathology Tests Explained: (https://pathologytestsexplained.org.au/)
Pathology Tests Explained

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South Australian Perinatal Practice Guidelines
Clinical Practice Tool

Shoulder Dystocia (SD) Management Form

Facility / Unit: .....

(Affix identification label here)

URN:

Family name:

Given name(s):

Address:

Phone:

Date of birth:

Date:	Time:	Call for help at (time):	Accoucheur:

Signs of Shoulder Dystocia: ☐ **Prolonged 2nd Stage** ☐ **Slow advancement of fetal head** ☐ **"Turtling"** ☐ **No restitution of fetal head**

Mode of birth of fetal head: ☐ **Ventouse** ☐ **Forceps** ☐ **Unassisted** | **Time of birth of fetal head:**

Name of team present at birth of fetal head:

Time of birth (when SD resolved): | **Maternal position at birth:**

Position of fetal occiput at birth: | **Position of fetal spine at birth:**

Direction fetal head facing at birth: ☐ Maternal Left ☐ Maternal Right

Manoeuvres Attempted: (tick all that apply) ***attempt manoeuvres for up to 30 seconds before moving on to next manoeuvres***

First line:	☐ **Knees to Nipples** (McRoberts) ☐ **Suprapubic pressure** (from: ☐ Maternal Left ☐ Maternal Right)
Second line:	☐ **Episiotomy** ☐ **Posterior arm release** (☐Left arm ☐ Right arm) ☐ **Rotation of woman onto all fours** (hands & knees) ☐ **Internal rotational manoeuvres** (describe rotation type attempted):
Last resort:	☐ **Posterior axilla sling traction** ☐ **Zavenilli** ☐ **Deliberate clavicle fracture** ☐ **Other** (describe):
Degree of dystocia:	☐ **Mild** (1-2 Manoeuvres) ☐ **Moderate** (3-4 Manoeuvres) ☐ **Severe** (5-7 Manoeuvres)

Notes:

Neonatal Outcome

Cord Gases		Resuscitation	Birth Weight: grams			
Venous	**Arterial**	☐ Stimulation ☐ T-piece device PEEP ☐ IPPV ☐ ETT IPPV duration: …… ☐ Oxygen ☐ Adrenaline ☐ Volume expanders ☐ Naloxone ☐ External Chest Compressions ☐ Not applicable	**Apgars:**	1 minute:	5 minutes:	10 minutes:
PH:	PH:		**Clavicles:** ☐ Intact ☐ Review:			
BE:	BE:		**Transfer to higher care facility?** ☐ **Yes** ☐ **No**			
Lactate:	Lactate:		**Date of Transfer:**		**Time of Transfer:**	
			Receiving Facility:			

Notes:

Debrief

Debrief provided to parents: ☐ **Yes** ☐ **No**	**Debrief organised for staff:** ☐ **Yes** ☐ **No**
By whom: **Date:**	**By whom:** **Date:**
Details:	**Reported to O&G Consultant:** ☐ **Yes** ☐ **No**
	SLS recorded: ☐ **Yes** ☐ **No** *Report Number* **Date:**

Attendance:

Name	Role	Time arrived

Notes:

Scribe Signature:	
Scribe Name:	
Designation:	

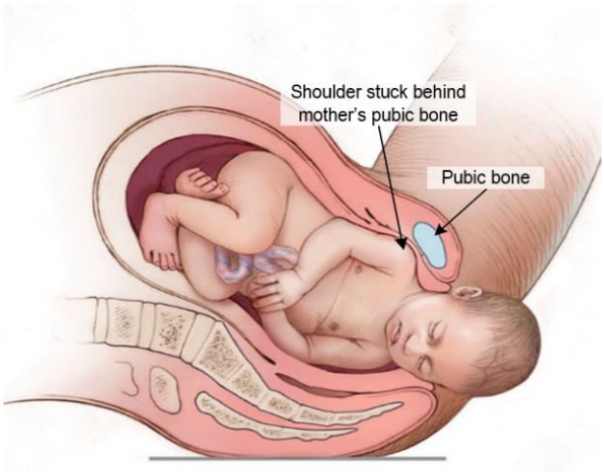
SHOULDER DYSTOCIA RECORD

Fact Sheet

Shoulder Dystocia

Shoulder dystocia is when the baby's shoulder gets stuck under the pubic bone after the head is born.

It is a rare, but serious problem that happens without warning during some vaginal births. With the help of your midwife and/or doctor, most shoulder dystocia can be fixed quickly.



Shoulder Dystocia

Illustration by Christy Krames, reproduced with permission (www.kramestudios.com)

What makes shoulder dystocia more likely?

Shoulder dystocia can happen without warning, but we know some factors make shoulder dystocia more likely. For example:

- you have had a shoulder dystocia in the past
- you have diabetes
- you are overweight
- your labour is induced
- you have a long labour
- you need help from a forceps or ventouse device to birth your baby.

Having a large baby (weight more than 4.5 kg) does not mean that you will have shoulder dystocia, but if your baby is large on a scan, and you have any factors from the list above your doctor or midwife will talk to you about your birth options. This might include inducing your labour before your due date or occasionally, a caesarean birth.

Note that scans alone cannot tell us that you are at risk of shoulder dystocia. We look at all the factors that may increase the chances of your baby's shoulder getting stuck.

What happens if the baby's shoulders get stuck?

Shoulder dystocia is an emergency, so things will move fast. The midwife or doctor will call for help and extra maternity staff will come into your room to assist.

There are some things the doctor or midwife can do to help free the shoulder. They might:

- ask you to stop pushing
- help you change position to make more space in your pelvis
- assist you back to bed, if you are not on it
- help you lie flat on your back and lift your knees to your chest, and/or
- push on your stomach, above the pubic bone.

What could this mean for you and your baby?

For you:

- sometimes a small cut (episiotomy) between the vagina and the anus (the perineum) may be needed. This cut will help make room for the midwife or doctor to release your baby's shoulder, or
- it could cause tears inside or around your vagina that will need stitches, or
- you might have heavier bleeding after the birth that might need treatment, or
- it might impact your birth options in the future.

For your baby:

- it may cause:
  - temporary or permanent injury to the arm nerve (brachial plexus)
  - fracture of the arm or collarbone, or
- in very rare cases, lack of oxygen during birth may cause brain damage.

A doctor and/or midwife will be ready to check and support your baby after the birth.

After the birth

Your doctor or midwife will speak to you about the events, to help you understand what happened. You can use this time to ask any questions you may have.

It is okay if you do not wish to do this right after birth. You can request to speak with them at a time that works for you. You can also ask your doctor or midwife for counselling support, if needed.

For more information, please speak to your midwife or doctor.

Shoulder Dystocia Fact Sheet.
SA Perinatal Practice Guidelines.
www.sahealth.sa.gov.au/perinatal

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