Clinical Practice Procedures: Obstetrics/Shoulder dystocia

<table>
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<tr>
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<th>CPP_OB_SD_0619</th>
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<tr>
<td>Date</td>
<td>June, 2019</td>
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<td>Purpose</td>
<td>To ensure a consistent procedural approach for shoulder dystocia.</td>
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<td>Scope</td>
<td>Applies to Queensland Ambulance Service (QAS) clinical staff.</td>
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<td>Health care setting</td>
<td>Pre-hospital assessment and treatment.</td>
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<tr>
<td>Population</td>
<td>Applies to all ages unless stated otherwise.</td>
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<td>Source of funding</td>
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**Shoulder dystocia** occurs when the anterior shoulder of the foetus becomes impacted behind the symphysis pubis of the mother, which prevents delivery, either spontaneously or with gentle traction.[1,2] This is a time-critical emergency because the pH of the umbilical artery drops rapidly between delivery of the head and initiation of breathing.[3] The aim should be to resolve the situation within four minutes as asphyxial injury is likely when the dystocia lasts for more than six minutes.[4]

If management is not accomplished correctly, the mother may suffer PPH and there may be birth trauma to the newborn, including brachial plexus injury and fractures to either humerus or clavicles.[5]

Once recognised as shoulder dystocia, aim for delivery within 4 minutes, timing interventions with contraction if the mother is still actively contracting, encourage pushing. Note that contractions may also cease with shoulder dystocia. It is important to quickly move through the interventions.

### Indications
- The anterior shoulder does not deliver spontaneously with good contractions.
- The head does not restitute and externally rotate
- The chin burrows into the perineum as the anterior shoulder is caught on the symphysis pubis
- Shoulder dystocia is confirmed when the standard delivery manoeuvres (traction in an axial direction) fail to deliver the foetus and the head to body delivery interval in prolonged ≥ 60 seconds.[1]

### Contraindications
- Nil

### Complications
- Damage to the upper brachial plexus
- Foetal hypoxia
- Foetal death
- Cerebral palsy
- Maternal postpartum haemorrhage
The goal of management is to facilitate delivery of the anterior shoulder. While steps towards this goal are outlined in *CPG: Shoulder dystocia*, specific strategies are described here in their order of priority:

**External interventions:**

*Exaggerated manoeuvre for delivery:* \(^{[1,2]}\)
- If possible, move the mother so her buttocks are at the edge of the bed and apply moderate downward traction to the baby’s head, aiming to release the anterior shoulder.

*McRoberts manoeuvre:* \(^{[1,2]}\)
- With the woman on her back, ask her to flex both thighs, bringing her knees as far up as possible towards her chest, assisting her to achieve this position, if necessary. Again apply moderate downward traction to the baby’s head. Do not pull on the baby’s head.

*Rubin I (suprapubic pressure):* \(^{[1,2]}\)
- While continuing to apply moderate downward traction, and with the mother still in the McRoberts position, have another person apply downward pressure just superior to the symphysis pubis. Either, continuously or in a rocking motion for 30–60 seconds. This is aimed at rotating the baby so the anterior shoulder slips under the symphysis pubis and, accordingly, the pressure should be directed somewhat obliquely towards the anterior scapula.\(^{[6]}\) It is therefore important to know the direction the baby is facing and crucial not to apply fundal pressure, as the latter can cause uterine rupture.
Procedure – Shoulder dystocia

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**Procedure – Shoulder dystocia**

**All-fours (Gaskin) manoeuvre:**

This involves getting the mother on her hands and knees, which may help to increase the pelvic outlet diameter. There are associated difficulties with this technique, especially with exhausted or obese patients, or birthing in a restricted space, and the time to attain the position must be taken into consideration.\[7\]

**Internal interventions:**

Within the limited time available, clinicians should exhaust external options, before attempting to internally manipulate the baby.\[1,2\]

**Rubin II manoeuvre**

While suprapubic pressure is being applied (Rubin I), the fingers of one hand are inserted into the vagina and used to apply pressure behind the anterior shoulder, pushing the shoulder towards the baby’s chest.

**Woods screw manoeuvre**\[1,2\]

If the Rubin II manoeuvre fails to deliver the baby, the fingers of the first hand remain in position, while the fingers of the second hand are inserted in front of the posterior shoulder and used to add further pressure to rotate the baby’s shoulders.
Procedure – Shoulder dystocia

Reverse Woods screw manoeuvre

Again, failure of the previous technique requires this attempt to turn the baby 180° in the opposite direction, applying pressure to the back of the posterior shoulder.

Delivery of the posterior arm [1,2]

The elbow of the posterior arm is located and flexed, sweeping the arm across the foetal chest and out of the vagina to lie beside the head. The newborn should be observed closely post-partum for cerebral and neurological damage. The mother should be observed for potential uterine atony, shock or PPH.

If all these measures fail, transport code 1 to nearest suitable facility and request urgent assistance en route.