Obstetric emergencies SOP

Great North Air Ambulance Service

Further reading

- FPHC Consensus 2015
- AHA Cardiac arrest in pregnancy 2014
- Perimortem Caesarean Section - why when & how
- The Resus Room podcast - Maternal Emergencies 2021

Related SOPs

Haemostasis SOP	Circulatory access SOP	Blood transfusion (BoB) SOP

Pre-eclampsia and eclampsia

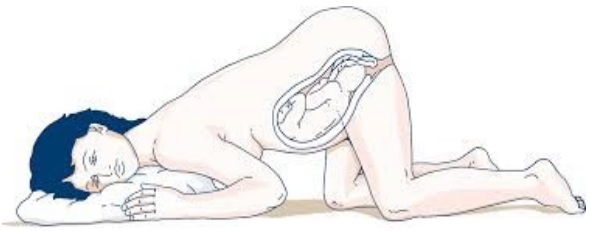
<C>ABCD assessment and supportive care

Magnesium 4g over 5-15 minutes in severe pre-eclampsia (>160/110mmHg) and eclampsia

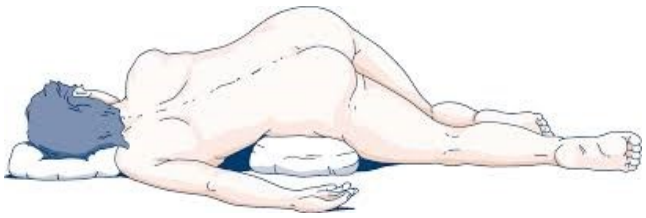
Cord prolapse

Leave the cord alone

All fours knee-chest position initially



For more security during transport, use the exaggerated Sims position with **raised pelvis**



Post-partum haemorrhage

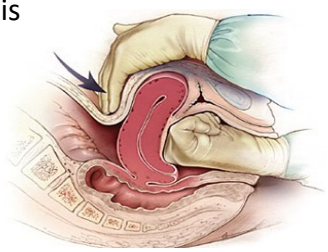
Ensure placenta is delivered

Vigorously massage the fundus until firm and encourage mother to empty bladder

IM syntometrine (500/5) - may be give by slow IV injection in extremis

Consider bi-manual uterine compression if above measures fail

Manage as per Blood transfusion (BoB) SOP



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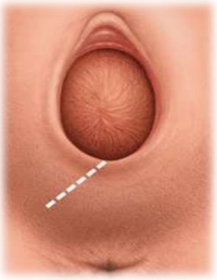
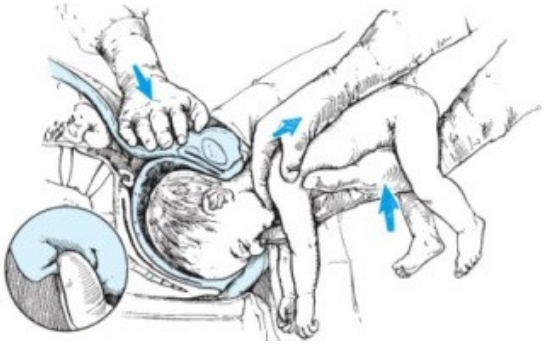
Breech delivery

Evaluate need for episiotomy

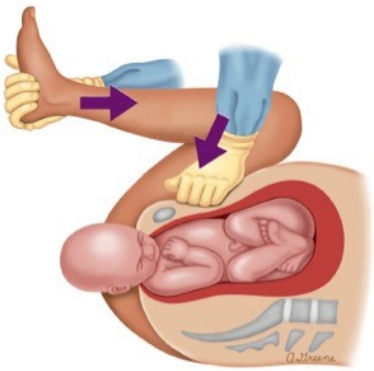


- Minimal handling if possible, **most will deliver spontaneously**
- Allow natural descent of buttocks and encourage mother to push
- Ensure fetal spine is anterior - “back to front”
- If legs fail to deliver spontaneously, assist their delivery one at a time.
- If arms fail to deliver spontaneously, assist delivery one at a time by **gently rotating their torso** and then moving the anterior humerus across the chest whilst flexing at the elbow. Rotate and repeat for the other arm.
- If required, assist head delivery by holding the thorax between the your hands anteriorly and posteriorly. Insert and place the fingers of one hand on to the baby’s maxilla bilaterally. The other hand can apply gentle traction over the shoulders. Simultaneous suprapubic pressure will **encourage neck flexion** whilst baby’s body is lifted to deliver the face first



Shoulder dystocia

- McRobert’s position - lie mother on back with hips/knees at maximum flexion
- **Suprapubic** (not fundal) pressure for 30 seconds to disimpact
- If fails, try all-fours position
- Consider internal rotation manoeuvres
- Consider manual delivery of the posterior arm



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Trauma in pregnancy

CONTINUOUS LEFT UTERINE DISPLACEMENT (PULL)

Maternal well-being is paramount to the survival of the foetus. Management should follow standard <C>ABCD principles, whilst remaining aware of the unique issues associated with obstetric resuscitation. Patients should be transported to MTCs where a full obstetric team is also available.

A

Airway management more difficult than in non-obstetric population

Early use of guedel/2-handed techniques

Anticipate a difficult intubation - consider higher threshold for PHEA

If FONA required, consider vertical skin incision first

B

Assess and manage depending on associated injuries

Rapid desaturation may occur - use high flow oxygen initially

Normal $EtCO_2$ is lower in pregnancy - **aim 3.5-4.0 KPa** if ventilated

Consider PEEP routinely

In late pregnancy, the diaphragm will be pushed higher. Exercise caution if performing thoracostomies - 3rd/4th space mid-axillary line

C

Manage in **left lateral position** if feasible

If supine will require **continuous uterine displacement (pull)**

Avoid hypotensive resuscitation in major haemorrhage - **aggressive volume resuscitation** is appropriate

TXA is safe in pregnancy - use if necessary

Pelvic binders should still be used as normal

Check for external PV bleeding

D

Assess and manage as in non-obstetric population

Standard analgesic, sedative, PHEA and anti-emetic drugs may be used if necessary

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Maternal cardiac arrest

Confirm cardiac arrest diagnosis and place supine

Delegate:

- **Chest compressions**
- **Left uterine displacement (pull)**
- **Attach defibrillator**
- **Airway - Igel initially, but may require ETT if inadequate. Use $EtCO_2$**
- **Standard ALS**
- **Vascular access**

Critical care team prepare for <u>immediate resuscitative hysterotomy</u> in-situ

Resuscitative hysterotomy

Resuscitative hysterotomy (perimortem C-section) in maternal cardiac arrest **improves the likelihood of good outcome for both mother and baby**. It is indicated **immediately** if:

>20weeks gestation (fundus at umbilicus)

AND

Estimated <30mins since arrest with ongoing CPR

DO NOT DELAY

Equipment and team

PPE, scalpel, scissors, clamps - ideally **use both the thoracotomy tray and maternity pack**

Allocate roles - consider who will manage which patient after delivery

Consider the setting - clear away bystanders

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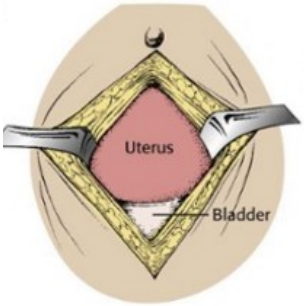
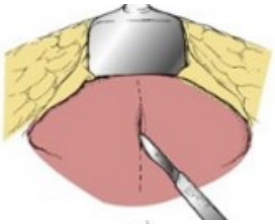
Technique

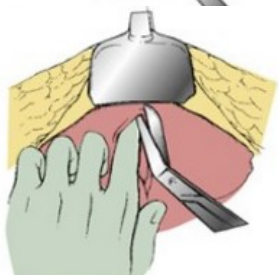
1 Vertical incision with scalpel through skin, from the fundus to the symphysis pubis. Enter peritoneum with scalpel and carefully extend with scalpel or scissors vertically to expose the uterus superiorly and bladder inferiorly



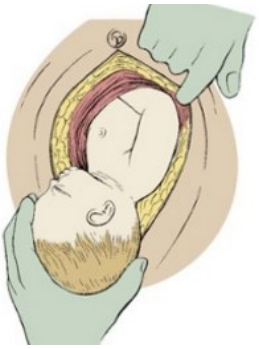
2 Perform a careful small vertical incision in the uterus with the scalpel. Expect a significant amount of amniotic fluid.



3 Use blunt scissors to carefully (but generously) extend the uterine incision vertically. Use a finger to help guide the scissors to avoid harming the foetus.



4 Insert a hand to find the foetal head. Deliver head first, applying fundal pressure to assist. Clamp the cord x2 and cut in between. Initially hand baby over to a waiting team for newborn life support.



5 Apply gentle cord traction and use other hand to manually separate/scoop the placenta from the uterine wall. Squeeze and massage the uterus to increase the tone. Ongoing bleeding can be managed with temporary packing. Give intravenous tranexamic acid and intravenous syntometrine.

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