If a GA is going to be hazardous, call for help early. The only exception is the need for an immediate GA to save the mother's life and the expectation that you will be able to manage the airway.

It may be possible to avoid a GA by using intra-uterine resuscitation to relieve foetal distress as follows. **As soon as decision made for emergency CS for foetal compromise:**

- Turn off Oxytocin infusion.
- **Follow Obstetric guideline on Acute Uterine Relaxation** for use of Terbutaline or GTN.
- Put patient in full left lateral position (try right lateral or knee-elbow if CTG remains abnormal).
- Give Oxygen 15 L/min by mask with reservoir.
- Give 1 litre of Hartmann’s by rapid IV infusion.
- Treat any hypotension with vasopressors.
- Transfer to theatre (do not delay for catheterisation/shave etc.)
- In theatre: re-assess foetal heart rate (FBS if necessary).
- Reassess degree or urgency – is there time for regional anaesthesia?
- Aim for delivery within 30 minutes from decision.

**Anaesthesia**

**Adequate Preoperative Assessment**

- Quick history
- Fasting status
- Allergies
- Airway assessment

**WHO Safety Checklist**

- Discuss plan with the team

**Check Equipment**

- Ensure IV access
- Check table can be tilted head-down
- Check suction
- Check airway equipment

**Antacid Prophylaxis**

- Women in labour should be on regular oral Ranitidine. If not, IM/IV Ranitidine should be administered prior to transfer to theatre.
- Once in theatre, 30 ml of 0.3 M Sodium Citrate should be given.
Pre-oxygenation

- Optimise position – 25 degrees head up position or ramped position lowers the diaphragm, improves oxygen reserve and makes airway management easier.
- Use the Oxford Head Elevating Pillow in obese patients.
- Use a flow of at least 10 L/min via the circle system to eliminate rebreathing of exhaled nitrogen.
- Ensure tight seal of the mask on the patient’s face so that there is movement of the reservoir bag, otherwise room air will be entrained reducing the efficacy of pre-oxygenation. The gold standard to achieve is a flat topped capnograph waveform.
- Aim for an expired oxygen concentration of >90% with a flat topped capnograph. Additional insufflation of 2 – 5 litres of Oxygen via nasal cannulae or catheter improves pre-oxygenation and oxygen reserve. Pre-oxygenation should be done for at least 3 minutes, even for Category 1 sections.
- Maintain airway, with an airtight seal and 100% Oxygen for the apnoeic patient until airway instrumentation is commenced.

Induction

- Thiopentone is the traditional induction agent in obstetrics, but if you are more familiar and comfortable with using Propofol for rapid sequence induction, then that is acceptable. Use precalculated doses: 5 mg/kg for Thiopentone, and 1.5 mg/kg for Propofol.
- Suxamethonium (1 – 1.5 mg/kg) is the first choice of muscle relaxant. A nerve stimulator should be applied as soon as possible, ideally before induction of anaesthesia. Hypertensive patients should receive an adequate IV dose of opioid at induction to reduce the hypertensive response to intubation. Cerebral haemorrhage has occurred in this group of patients when this has not been done. Suitable choices are Alfentanil 10 – 20 mcg/kg or Remifentanil 0.5 mcg/kg. Avoid Fentanyl as it has a long half-life in the neonate.
- Inform the paediatrician that the mother has had an opioid.

Cricoid Pressure

- Specifically agree the location of the cricoid cartilage with the assistant before you induce anaesthesia. Ensure the anaesthetic assistant is comfortable in the role.
- Excessive cricoid force applied by the anaesthetic assistant can lead to failed intubation. Anaesthetic assistants regularly check their cricoid force on the theatre scales to maintain it at 20 to 30 N (2 to 3 kg on the scales). Please encourage them to do this. A pressure of 10 N should be applied prior to loss of consciousness and the assistant must be instructed to increase the pressure as soon as consciousness is lost.
**Intubation**

- Optimise position to ensure higher success rate in the first attempt.
- Use Macintosh size 4 blade with the short handled laryngoscope.
- Size 7.0 ETT, inflate cuff as soon as tube is in.
- Once intubated, check for chest expansion and capnography trace.
- Instruct assistant to release cricoid pressure.
- In case of poor view at laryngoscopy, the assistant should be asked to adjust or remove cricoid pressure. Inappropriate and excessive pressure can make intubation difficult.
- Remember Failed Intubation Guidelines

**Maintenance**

- Awareness is more common in obstetric patients. Do not use low fresh gas flows until after the baby is delivered, to be sure of an adequate depth of anaesthesia when you may be otherwise occupied.
- Don’t allow the obstetrician to make skin incision until clinical signs indicate patient is sufficiently anaesthetised and the ETT is secured. The patient can be prepped and draped before induction in extreme urgency.
- Do use Nitrous Oxide ($N_2O$) along with a volatile agent. Usually 50% $N_2O$ pre-delivery and 67% post-delivery. This is to take advantage of rapid onset, MAC sparing effect upon volatile agents and analgesic effect. Ensure rapid increase to a MAC of 1 – 1.5 after induction.
- Post-delivery, opioids should be administered and volatile agent adjusted to maintain a MAC of 1. This reduces uterine atony.
- It may be possible to avoid using a non-depolarising muscle relaxant by using pressure support ventilation. Use a depth of anaesthesia monitor if available and you are familiar with using it. The electrodes should be applied before induction of anaesthesia.

**At Delivery**

- Administer Oxytocin as soon as cord has been clamped.
- Opioids.
- Increase $N_2O$ to 67%.
- Reduce volatile agent to a MAC of 1.

**Analgesia and Antiemesis**

- Ensure the patient has had an adequate dose of IV opioid. Opioids should be administered as soon as the cord has been clamped. Rapid onset of Alfentanil
will aid in maintaining analgesia until Morphine takes effect. Due to larger volume of distribution, these patients require larger doses of Morphine.

- Give Paracetamol IV and Diclofenac PR unless contraindicated.
- At least two anti-emetics should also be given.
- Transversus Abdominis Plane (TAP) blocks if no contraindication.
- Use the same post-operative analgesic prescription as for regional anaesthesia. PCAs should only be used if oral administration is not possible, for example with PONV or ileus.

**Extubation**

- Ensure patient is awake and responsive prior to extubation.
- Consider head up position especially for obese patients.