

Master algorithm – obstetric general anaesthesia and failed tracheal intubation

Algorithm 1 Safe obstetric general anaesthesia

Pre-induction planning and preparation
Team discussion

Rapid sequence induction
Consider facemask ventilation (P_{max} 20 cmH₂O)

Laryngoscopy
(maximum 2 intubation attempts; 3rd intubation attempt only by experienced colleague)

Success

Verify **successful** tracheal intubation and proceed
Plan extubation

Fail

Algorithm 2 Obstetric failed tracheal intubation

Declare failed intubation
Call for help
Maintain oxygenation
Supraglottic airway device (maximum 2 attempts) or facemask

Fail

Algorithm 3 Can't intubate, can't oxygenate

Declare CICO
Give 100% oxygen
Exclude laryngospasm – ensure neuromuscular blockade
Front-of-neck access

Success

Is it essential / safe to proceed with surgery immediately?*

No

Yes

Wake[§]

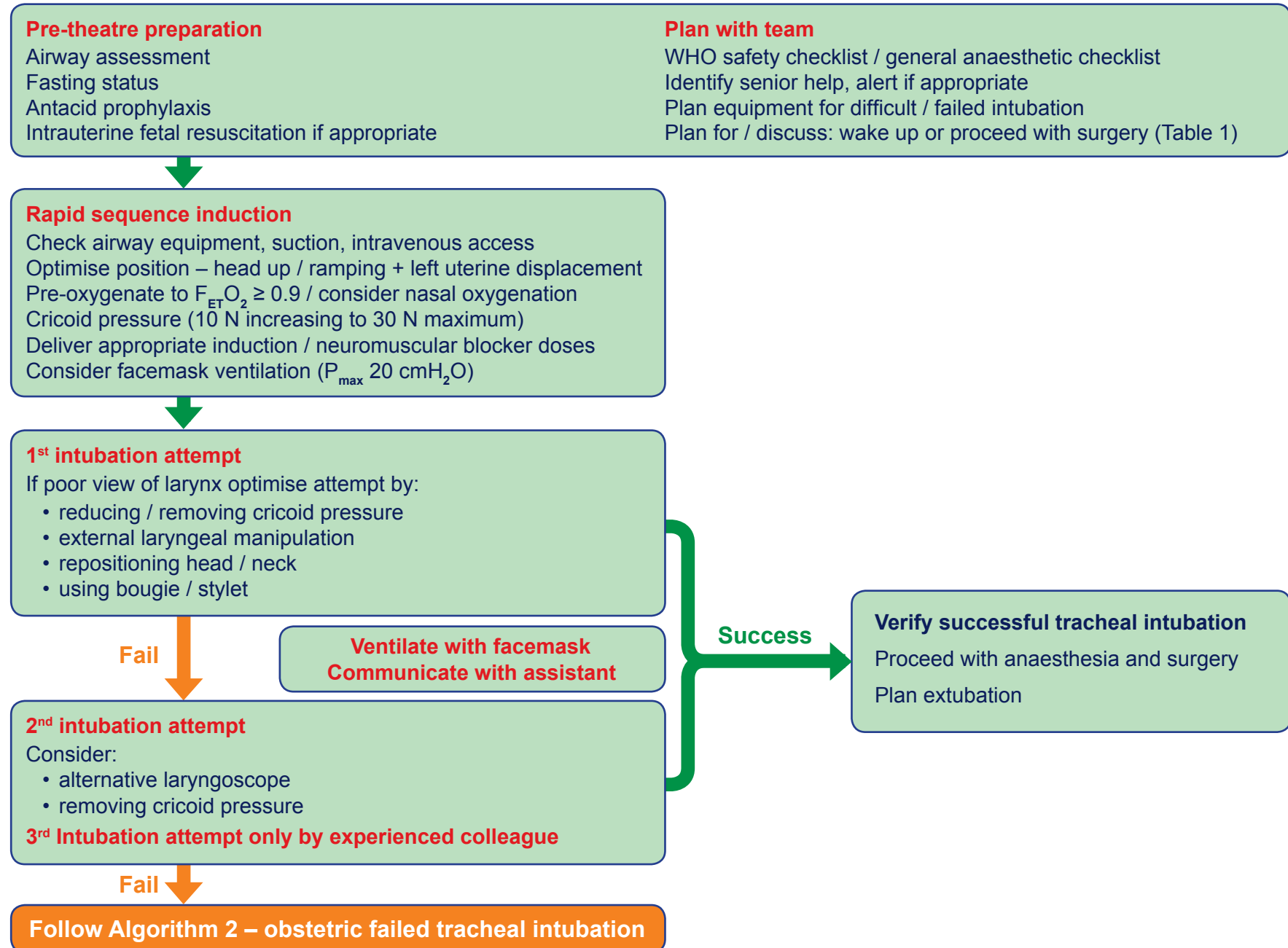
Proceed with surgery[§]



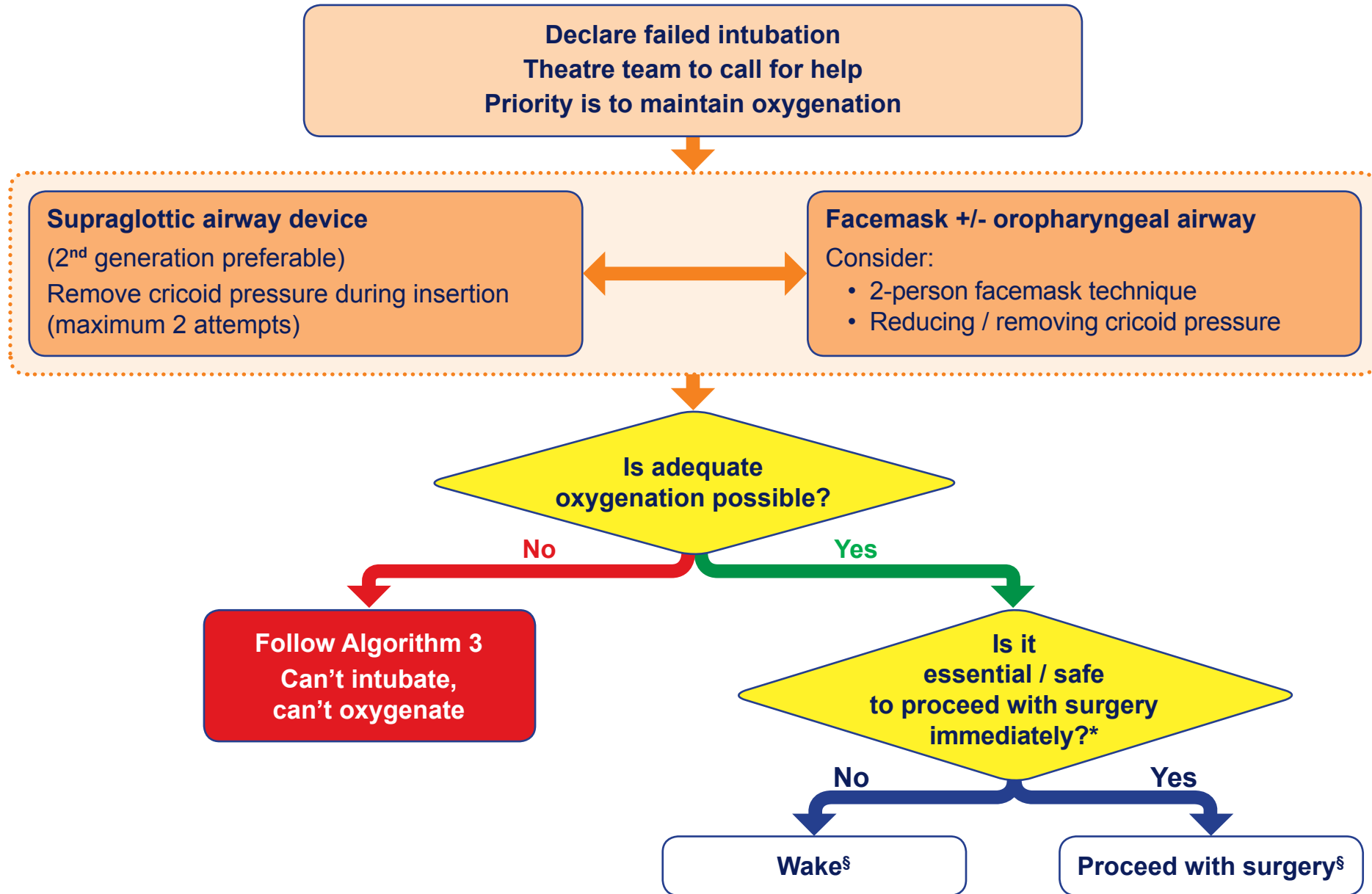
*See Table 1, §See Table 2



Algorithm 1 – safe obstetric general anaesthesia

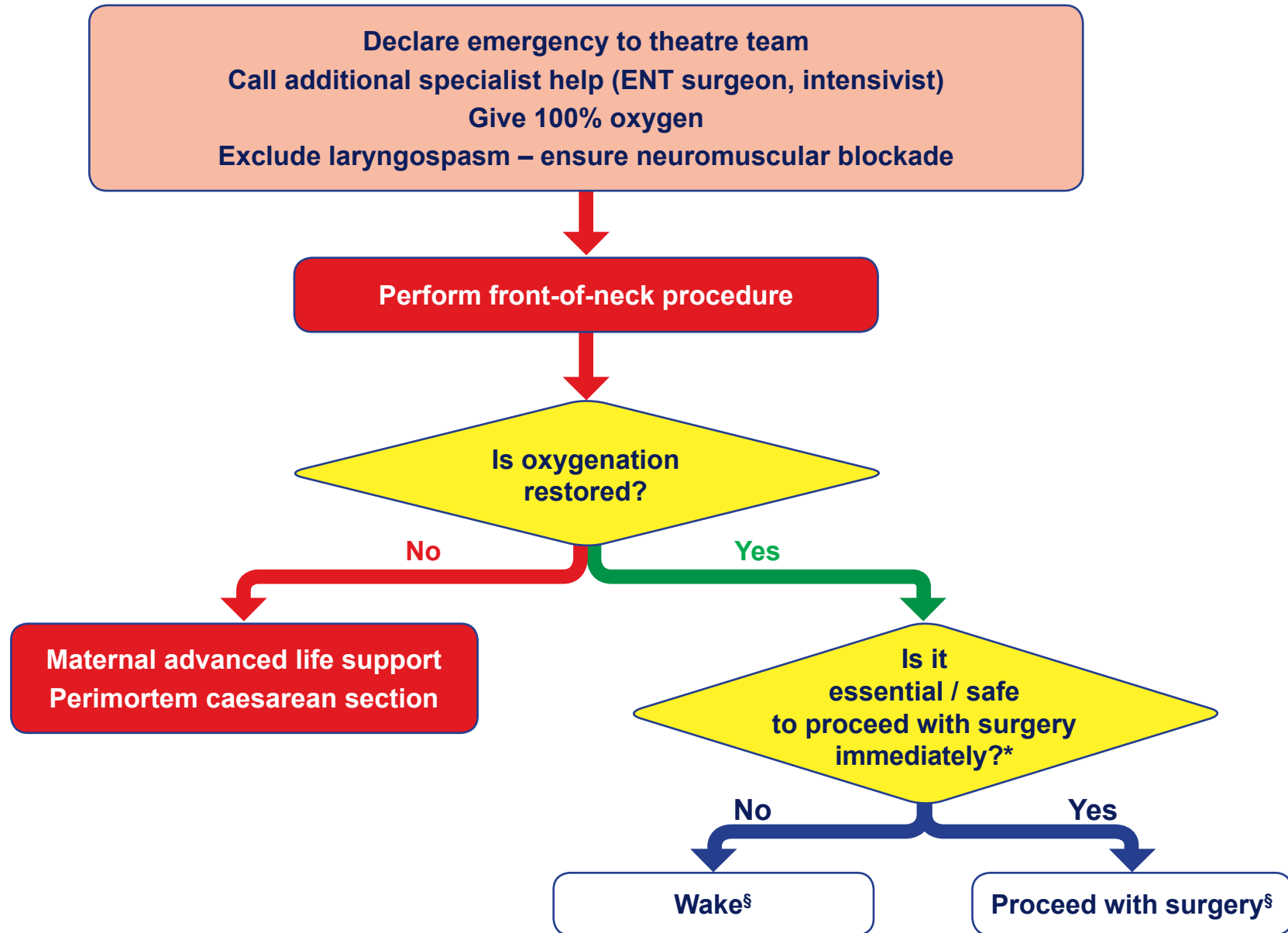


Algorithm 2 – obstetric failed tracheal intubation



*See Table 1, §See Table 2

Algorithm 3 – can't intubate, can't oxygenate



*See Table 1, §See Table 2

Table 1 – proceed with surgery?

Factors to consider	WAKE	←—————→	←—————→	PROCEED	
Before induction	Maternal condition	• No compromise	• Mild acute compromise	• Haemorrhage responsive to resuscitation	• Hypovolaemia requiring corrective surgery • Critical cardiac or respiratory compromise, cardiac arrest
	Fetal condition	• No compromise	• Compromise corrected with intrauterine resuscitation, pH < 7.2 but > 7.15	• Continuing fetal heart rate abnormality despite intrauterine resuscitation, pH < 7.15	• Sustained bradycardia • Fetal haemorrhage • Suspected uterine rupture
	Anaesthetist	• Novice	• Junior trainee	• Senior trainee	• Consultant / specialist
	Obesity	• Supermorbid	• Morbid	• Obese	• Normal
	Surgical factors	• Complex surgery or major haemorrhage anticipated	• Multiple uterine scars • Some surgical difficulties expected	• Single uterine scar	• No risk factors
	Aspiration risk	• Recent food	• No recent food • In labour • Opioids given • Antacids not given	• No recent food • In labour • Opioids not given • Antacids given	• Fasted • Not in labour • Antacids given
	Alternative anaesthesia • regional • securing airway awake	• No anticipated difficulty	• Predicted difficulty	• Relatively contraindicated	• Absolutely contraindicated or has failed • Surgery started
After failed intubation	Airway device / ventilation	• Difficult facemask ventilation • Front-of-neck	• Adequate facemask ventilation	• First generation supraglottic airway device	• Second generation supraglottic airway device
	Airway hazards	• Laryngeal oedema • Stridor	• Bleeding • Trauma	• Secretions	• None evident

Criteria to be used in the decision to wake or proceed following failed tracheal intubation. In any individual patient, some factors may suggest waking and others proceeding. The final decision will depend on the anaesthetist's clinical judgement.



Table 2 – management after failed tracheal intubation

Wake

- Maintain oxygenation
- Maintain cricoid pressure if not impeding ventilation
- Either maintain head-up position or turn left lateral recumbent
- If rocuronium used, reverse with sugammadex
- Assess neuromuscular blockade and manage awareness if paralysis is prolonged
- Anticipate laryngospasm / can't intubate, can't oxygenate

After waking

- Review urgency of surgery with obstetric team
- Intrauterine fetal resuscitation as appropriate
- For repeat anaesthesia, manage with two anaesthetists
- Anaesthetic options:
 - Regional anaesthesia preferably inserted in lateral position
 - Secure airway awake before repeat general anaesthesia

Proceed with surgery

- Maintain anaesthesia
- Maintain ventilation - consider merits of:
 - controlled or spontaneous ventilation
 - paralysis with rocuronium if sugammadex available
- Anticipate laryngospasm / can't intubate, can't oxygenate
- Minimise aspiration risk:
 - maintain cricoid pressure until delivery (if not impeding ventilation)
 - after delivery maintain vigilance and reapply cricoid pressure if signs of regurgitation
 - empty stomach with gastric drain tube if using second-generation supraglottic airway device
 - minimise fundal pressure
 - administer H₂ receptor blocker i.v. if not already given
- Senior obstetrician to operate
- Inform neonatal team about failed intubation
- Consider total intravenous anaesthesia