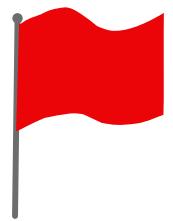


ASSESSMENT AND PREPARATION

History Red Flags

- Prematurity
- Age <6 months
- Age <12 months + <10 kg
- Extremes of body weight
- Presence of craniofacial syndrome
- Obstructive sleep apnoea
- Previous difficult Intubation
- Systemic illness (sepsis, cardiomyopathy, cardiac failure)



Examination Red Flags

- Respiratory distress/stridor
- Presence of foreign body
- Micrognathia
- Midface hypoplasia
- Congenital neck or airway mass
- Facial asymmetry
- Limited mouth opening
- Limited cervical spine mobility
- Obesity
- Trauma/ infection/ burns



Airway Plan

- 1) Formulate plans A, B, C and D as per the DAS guidelines. [\(QR1\)](#)
 - Verbalise the plan with the team.
- 2) Prepare for failure
 - Prioritise maintenance of oxygenation throughout all airway interventions.
- 3) Call for help early
 - In the presence of red flags consider whether you need a consultant or ENT team on site PRIOR TO INDUCTION.

QR1



DAS Guidelines

Before proceeding to intubation ask yourself these critical questions:

1) Is senior expertise required from the outset?

- Consider if you need consultant/ ENT presence for induction?

2) Is all necessary equipment available and checked?

3) What is the rescue strategy if intubation fails?

4) Is this the appropriate setting?

- Should/can this child be transferred to theatre/another centre before intubation?
- Close liaison with South Thames Retrieval Service

INTRA-PROCEDURE

Getting the basics right

Teamworking

- Establish team roles and leaders.
- Use a paediatric checklist. [\(QR2\)](#)

Monitoring

- Oxygen saturation with audible tone
- Heart rate
- Blood pressure
- Continuous capnography

Equipment

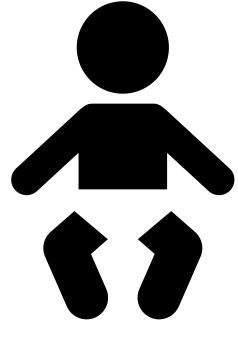
- Calculate appropriately sized equipment. [\(QR3\)](#)
- Ensure presence of all necessary equipment (including sizes above and below). [\(QR4\)](#)
- Nasogastric tube – continuous aspiration from beginning of pre-oxygenation.
- Videolaryngoscope first line.

Drugs

- Ensure adequate depth of anaesthesia.
- Use of neuromuscular blockade (unless spontaneous ventilation is essential).
- Ensure maintenance drugs available.

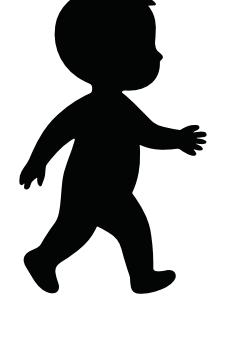
Optimising airway and ventilation

- Correctly sized facemask
- Correctly sized oropharyngeal airway
- T-piece circuit with adjustable PEEP
- Consider two-handed technique
- Position fingers on the bone of the mandible - avoid soft tissue compression



<2 years

- Neutral head position
- Shoulder roll & head ring
- Nasogastric tube with continuous aspiration



2-8 years

- Neutral head position
- Lift chin until optimal ventilation achieved



>8 years

- Sniffing the morning air position

Role of ENT in airway emergencies

- Every hospital is covered by an on-call ENT team. [\(QR5\)](#)
- Hospital should have essential ENT equipment available and easily accessible. We recommend use of a MAST (making airways safe trolley). [\(QR6\)](#)
- Examples of ENT roles in difficult paediatric intubation:
 - Airway visualisation
 - Ventilation via bronchoscope
 - Foreign body removal
 - Tracheostomy
- Early contact with ENT in the event of a suspected difficult airway.

Managing failure of plan A

- Oxygenation must be maintained throughout.
- Follow your airway plan to maintain oxygenation via a supraglottic airway or facemask ventilation.
- Once oxygenation has been achieved:
 - Avoid repeating unsuccessful techniques
 - Change intubator
 - Reposition the patient
 - Change equipment (consider direct vs video vs fiberoptic)
 - Ensure adequate depth of anaesthesia/ paralysis
 - Contact ENT for bronchoscope ventilation.
 - Unable to oxygenate and critical signs present (Sats <80% and HR dropping) declare can't intubate can't ventilate and move onto front of neck access.

FRONT OF NECK ACCESS (FONA)

Declare failed airway

- Ensure ENT is notified and on their way
- Ensure muscle relaxation
- Continue oxygenation attempts whilst preparing

Use pre-prepared FONA packs to ensure rapid access to essential equipment. [\(QR7\)](#)

ENT immediately available?

No

Alternative options:

- Cannula cricothyroidotomy (venflon / quicktrach) [\(QR8\)](#)
- Cricothyroidotomy - Scalpel, Bougie, Tube [\(QR9\)](#)

Yes

ENT options:

- Tracheostomy
- Cricothyroidotomy
- Rigid bronch and intubate
- Ventilating bronchoscope

QR7



QR8



QR9



Surgical Cricothyroidotomy Kit List

For guidance ONLY, not a substitute for experienced clinical judgement. Always consult local policy where available.