

Paediatric Airway Management: A few tips and tricks

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Disclosures

- 1) I am not an airway wizard.
- 2) Airway management in children can be scary.
- 3) There are no secrets or magical pieces of equipment
- 4) Airway training is an ongoing process. Skill acquisition and retention requires dedicated whole day workshops



The Royal College
of Anaesthetists



The Difficult
Airway Society

NAP4



- Consultant anaesthetists have airway complications
- Not because of a lack of skills, but because of human factors
 - Poor assessment
 - Poor planning
 - Poor decision making
 - Fibreoptic intubation not done when indicated
 - Fixation error

Children vs Adults: The Good



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ORIGINAL ARTICLE

Incidence and predictors of difficult laryngoscopy in 11.219 pediatric anesthesia procedures

Sebastian Heinrich*, Torsten Birkholz*, Harald Ihmsen, Andrea Irouschek, Andreas Ackermann & Joachim Schmidt

- True difficult *laryngoscopy* is rare (1.3%)

Children vs Adults: The Bad



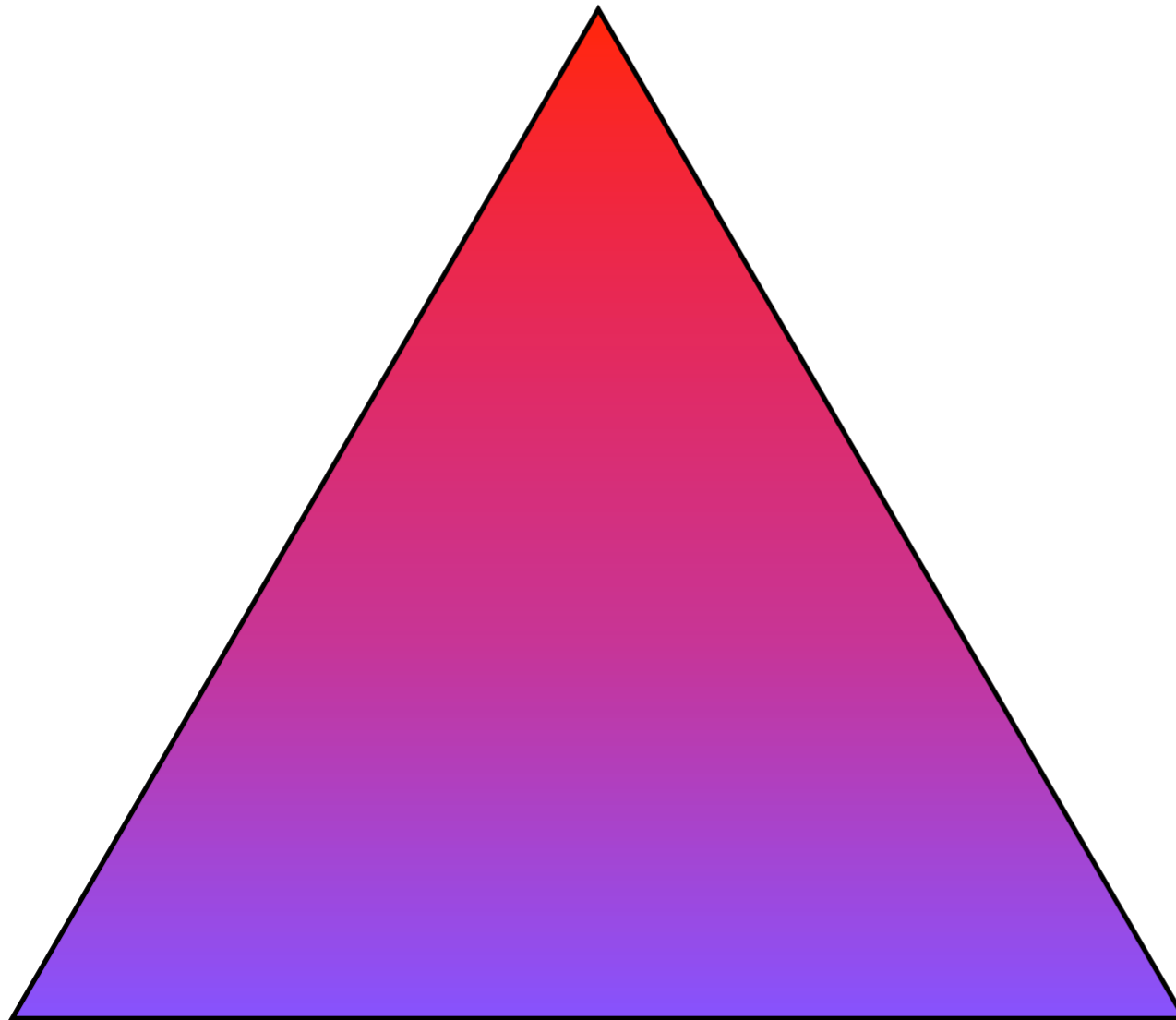
- But,
 - Can't intubate awake
 - Often induce with IV access

Children vs Adults: The Ugly



- Also, when do you bail out?

What is a difficult “airway”?



Syndromic

Pathology

Physiological

Neonatal

Functional

Predicting Difficult Laryngoscopy in kids

- Age below 1 year
- Low BMI
- Mallampatti*
- ASA
- Faciomaxillary and cardiac surgery

Scenario 1: Chubby Infant



- No IV access during a gas induction is tricky
- If either the IV access, or the anaesthetic, are hard: have 2 experienced pairs of hands

Scenario 2: The art of the gas induction



Scenario 3: Laryngospasm



- Very common cause of hypoxia
- Spectrum of severity
- Best if nipped in the bud

Laryngospasm Risk Factors



- PHx of laryngospasm, asthma, smoking, GORD
- Recent URTI
- Secretions/Blood in airway
- Multiple attempts at airway instrumentation
- Stimulation during the “in between” phase
- ENT and airway surgery
- Inexperienced (paediatric) anaesthetist

Laryngospasm

- Prevention
 - Cancel case
 - Avoid irritant volatiles
 - ?Opioids and propofol use
- Management
 - CPAP
 - Propofol
 - Suxamethonium

Laryngospasm controversies

- ETT vs LMA
- Deep vs Light
- IV lignocaine prophylaxis and treatment

Scenario 4: Planning



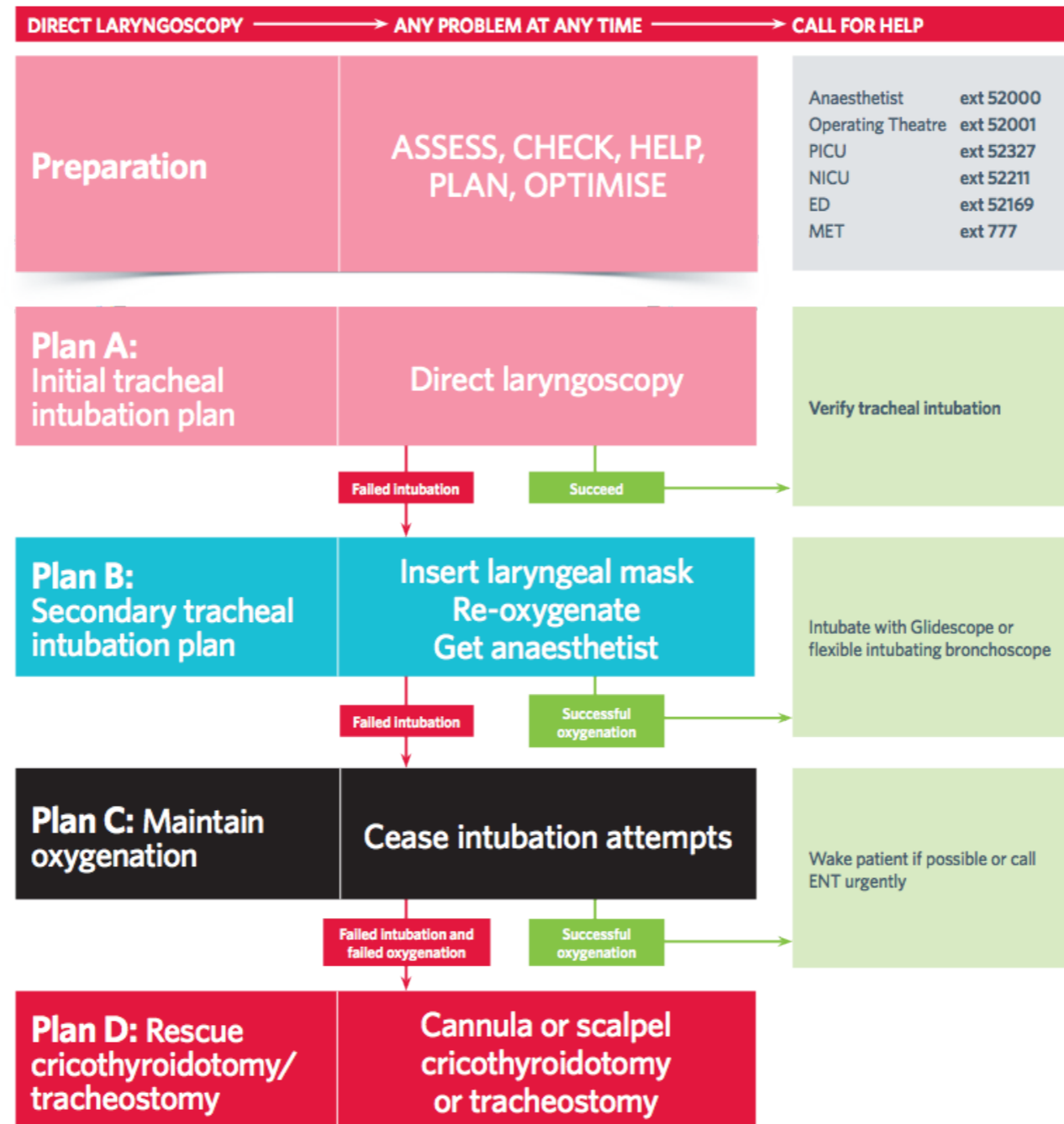
- Elaine Bromiley

Unanticipated difficult emergency intubation

USE IN CONJUNCTION WITH BASIC LIFE SUPPORT GUIDELINES.
SEE RCH AIRWAY MANAGEMENT CLINICAL PRACTICE GUIDELINES.



Anaesthesia, PICU, NICU, and Emergency



Example Plan for a neonate



- Plan A:

- 3.5 ETT ready, size 1 Macintosh laryngoscope blade
- Small orange Bougie (pre bent), have a size 1 Miller blade available
- Have a shoulder roll ready, but I won't put it in place
- Have a white guedel airway available if I am having difficulty with ventilation
- If that doesn't work I will do the 2 person technique
- We will ventilate the patient between attempts, and I only want to spend about 5 minutes on Plan A before moving to Plan B

- Plan B

- Size 1.5 laryngeal mask, call in charge anaesthetist on x52000
- Use Glidescope

- Plan C

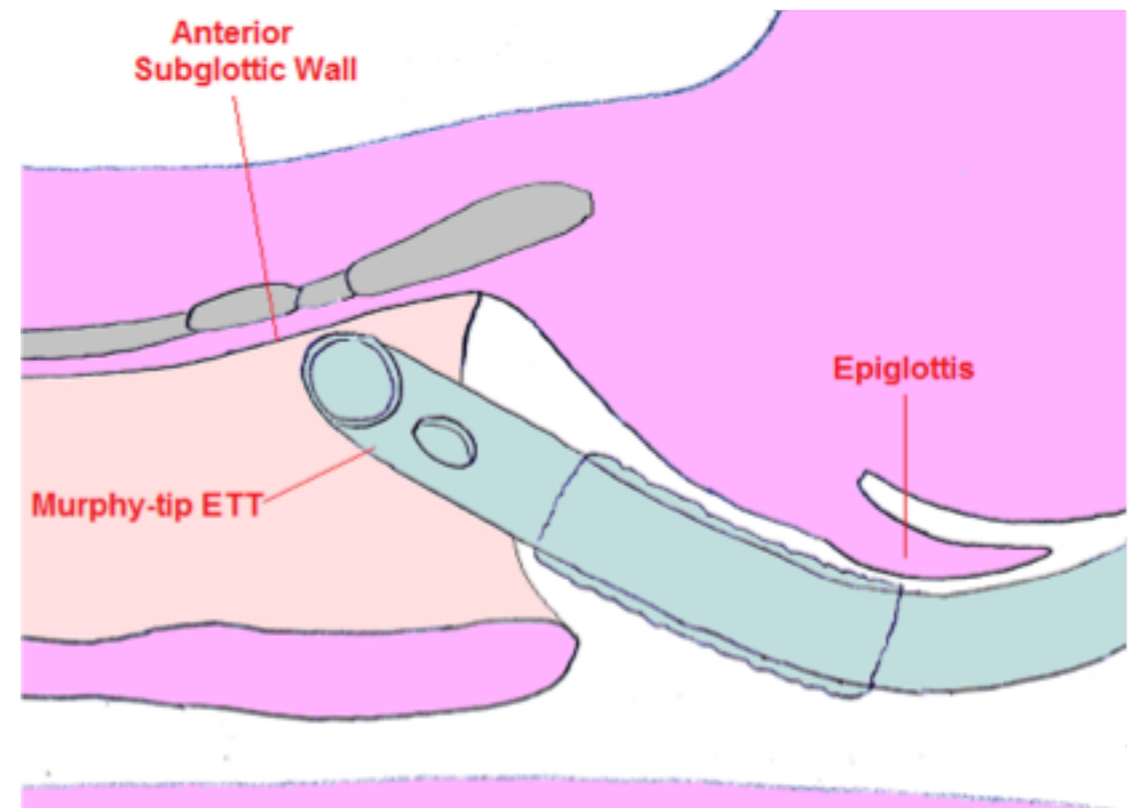
- Maintain oxygenation, get ENT for a tracheostomy

- Plan D

- Open CICO pack, and perform cannula cricothyroidotomy

Scenario 5: GlideScope

- Don't get too close
- Relax the lifting force
- Parker or "bullet tipped" ETTs
- Rotating ETT
- Introducer shy of the tip and a warmed tube helps
- Similarities to nasal intubation: lifting the head, rotating ETT



GlideScope

- Prepare the ETT with stylet
- Proprietary stylet only fits a 6 ETT
- Mouth - Screen - Mouth - Screen
- “Seeing is not believing”
- Documentation



What we haven't talked about today



- Flexible intubating bronchoscopy (fiberoptic)
- Management of the CICO scenario
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