INTUBATION (1 of 4)

Nick Mark 2014

GATHER/TEST EQUIPMENT

- ☐ NC
- ☐ BVM + PEEP Valve
- ☐ Free flowing IV
- ☐ EKG, SpO_2 monitor
- ☐ ETT x2 sizes
- ☐ Blade x2
- ☐ OPA
- ☐ Suction
- ☐ Video scope
- ☐ LMA
- ☐ Bougie
- ☐ Capnograph
- ☐ Cric kit
- ☐ Ventilator

PLAN

- ☐ Assess for difficult airway (LEMON)
  - **L**ook externally (beard, teeth, etc)
  - **E**valuate with 3:3:2 finger rule
  - **M**allampati score
  - **O**bstruction (burns,)
  - **N**eck Mobility
- ☐ Anticipate risks (HOpI killers)
  - HYPOTENSION → fluid? pressors?
  - OXYGENATION → pre-ox plan?
  - pH (ACIDOSIS) → adequate vent?
  - ICP ISSUES → Premed? BP control?
- ☐ Approach: RSI / DSI / Awake
- ☐ Pre-Medication and Paralytics
  - Consider Succ contra-indications
- ☐ Primary and secondary airway plan
- ☐ Emergency plan/Cric preparations

PRE-MEDICATION

LIDOCAINE 1.5 mg/kg
FENTANYL 3 mg/kg

INDUCTION

ETOMIDATE 0.3 mg/kg
KETAMINE 1 - 2 mg/kg
PROPOFOL 2 - 3 mg/kg
MIDAZOLAM 2 - 4 mg
FENTANYL 100 mcg

PARALYTIC

ROC 1.2 -1.5 mg/kg
SUCC 1.5 mg/kg
CISATRACURIUM 0.3 mg/kg

STOP TIME-OUT/VERBALIZE PLAN STOP

- ☐ CONSENT/EXPLAIN (if possible), verify DNR/DNI STATUS
- ☐ Verbalize the above plan and assign roles
- ☐ Don PPE

INTUBATION (2 of 4)

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PREPARATION/INDUCTION

- ☐ Position patient, adjust height of bed
- ☐ De-nitrogenation
- ☐ Push medications and wait

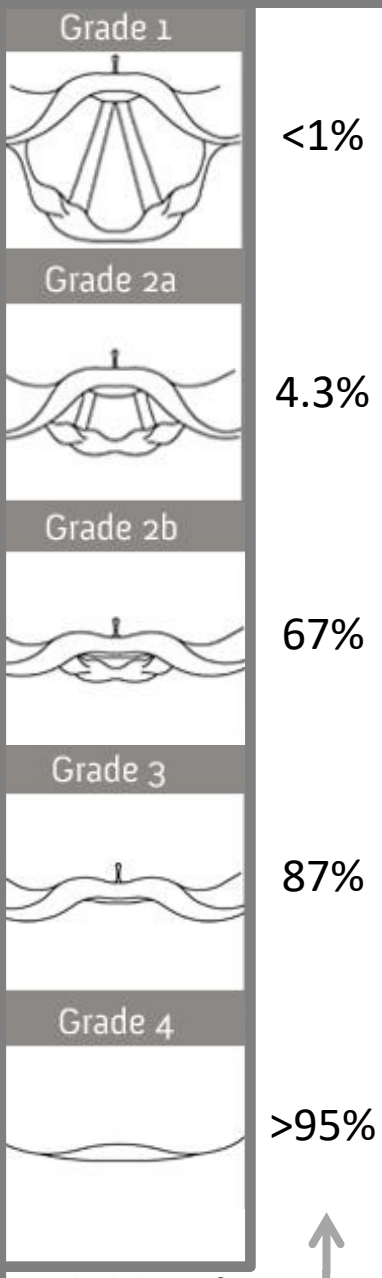
VISUALIZATION/TUBE PLACEMENT

- ☐ Insert Laryngoscope
  - *Sweep tongue, advance blade, lift jaw*
  - *Consider placing towel under occiput*
- ☐ "Call the view" and suction if needed
- ☐ Adjust view if needed
  - If **unable to visualize** → alternative blade/operator
  - Still **unable to visualize** → go to plan B
- ☐ Place tube, withdraw stylete
  - If **unable to pass** → use smaller size tube + lube
  - If **persistent problem** → **difficult airway procedure**

CONFIRMATION

- ☐ Auscultate
- ☐ Capnography
- ☐ Repeat DL/VL if uncertain

MODIFIED CORMACK-LEHANE GRADE



ETT SIZING/DEPTH

Women	7.0 - 8.0 mm ETT	21 cm
Men	7.5 - 8.5 mm	23 cm
Peds	(16 + age in yrs) / 4	

INTUBATION (3 of 4)

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POST INTUBATION MANAGEMENT

- ☐ Secure ETT
- ☐ Reassess hemodynamics and oxygenation
  - Consider fluid bolus/pressors
  - If unstable → **hemodynamic collapse post intubation protocol**
- ☐ Analgesia/Sedation plan
  - Hypertensive: propofol gtt + fentanyl bolus
  - Hypotensive: fentanyl bolus + low dose midazolam bolus
    - address and treat cause of hypotension
- ☐ Ventilator settings
  - Oxygenation: start FiO2 1.0, if hypoxemic add PEEP
    - wean FiO2/PEEP for goal SpO2 > 90%
  - Ventilation: ensure MV is at least matching pre-intubation MV
    - use ETCO2 or ABG to adjust
  - Document plateau pressure (before paralytics wear off) _____
  - Monitor for breath stacking as paralytics wear off
- ☐ Connect in-line suction
- ☐ Place NG/OG Tube
- ☐ ABG (ideally at least 10 min post intubation)
- ☐ Chest radiograph (ideally post NG placement)
- ☐ HOB > 30 degrees

INTUBATION (4 of 4)

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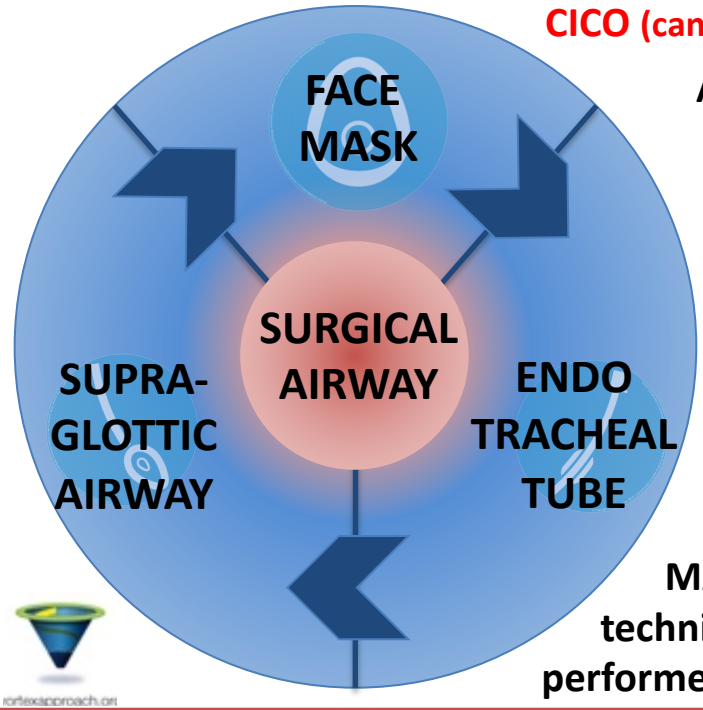
DIFFICULT AIRWAY PROCEDURE



CICO (can't intubate can't oxygenate) → eFONA

After each failure consider:

1. **MANIPULATION of**
   - Head/neck position
   - External larynx
   - Device
2. **Use of ADJUCTs**
3. **Different SIZE/TYPE**
4. **Use of SUCTION**
5. **Optimizing MUSCLE TONE**

MAXIMUM of THREE attempts of each technique. At least one attempt should be performed by the most experienced clinician.

EMERGENCY FRONT OF NECK AIRWAY (eFONA)

1. **Position** (neutral neck) and **Prep**: sterilize skin, local analgesia *(if time)*
2. **Palpate** cricothyroid and **stabilize** trachea (non-dominant hand)
3. **Vertical incision** 2-3 cm midline
4. **Horizontal incision** 1-2 cm through cricothyroid membrane
5. **Insert scalpel** into trachea, rotate 90 degrees
6. **Place Tracheal hook** into incision, apply superior traction
7. **Insert endotracheal tube** and **confirm placement**

HEMODYNAMIC COLLAPSE POST INTUBATION

POSITION – esophageal, R mainstem?	→ **1. verify placement**
PEEP – Auto-PEEP from breath-stacking?	→ **2. break circuit, use BVM**
PRELOAD – loss of preload? hypovolemic?	→ **3. fluid bolus**
TONE – loss of sympathetic tone	→ **5. start/increase pressors**
TENSION – development of tension PTX?	→ **4. chest US, consider needle**