P.R.E.P.A.R.E.

Team-Based
Emergency Airway Management

ADAPTED FROM:

Brindley, Peter G., Martin Beed, J. Adam Law, Orlando Hung, Richard Levitan, Michael F. Murphy, and others, **'Airway Management Outside the Operating Room: How to Better Prepare'**, *Canadian Journal of Anesthesia/Journal Canadien d'anesthésie*, 2017 http://dx.doi.org/10.1007/s12630-017-0834-z

OTHER REFERENCES:

EMCrit Podcast
EM Cases Podcast
EM Updates

PREPARE

Team & **P**atient, **P**osition, **P**re-Oxygenate

Prepare Team – take a deep breath!

What do we know? What do we expect? What will we do first? Back-up plan? Assign roles +/- call for help.

Prepare Patient

- Code status? Informed Consent?
- Predict HARD TO VENTILATE? **BOOTS**
  Beard - **O**ld - **O**SA - no **T**eeth – **S**tridor
- Predict HARD TO INTUBATE? **LEMON**
  Look externally - **E**valuate 3-3-2 - **M**allampati - **O**bstruction - **N**eck movement
- Dentures = **IN** for BVM, **OUT** for intubation

Position

- Head & torso elevated, if possible;
- Auditory meatus at sternal notch, face parallel to ceiling
- Obese: ramp up PRN, reverse Trendelenburg + foot rest

Pre-Oxygenate (goal >= 95%)

- NP + NR Mask, both at 15 L/min, deep breaths x 8 or 3 min. of regular breathing; may need BVM + PEEP

PREPARE

Resuscitate before you intubate!

HYPOXIA

- NP @ 15 LPM
- NRM @ 15 LPM
- +/- Step up to BVM + PEEP
- If combative -> **DSI***

HYPOTENSION

- Give NS/Blood PRN
- Push-dose EPINEPHRINE on hand
- NOREPINEPHRINE drip ready (+/- IO/Central line)

METABOLIC ACIDOSIS

NEVER LET THE PATIENT GO APNEIC!

Continue to ventilate during induction/paralysis (RR 12)

Once intubated, increase RR to 30

ELEVATED ICP

MUST AVOID:

- SBP < 90
- Sat < 90%
- Hypercapnia (aim for pCO2 35-40)

CHF/COPD/ASTHMA

IDEALLY, DO NOT INTUBATE!

Try NPPV first

(+/- Ketamine sedation)

***DSI = Delayed sequence intubation**

PR**E**PARE

Equipment* = **MIDSOLES**

Monitors (cardiac, pulse Ox, CO2, BP **cycle q5min**)

IV x 2, ? **I**O

Drugs (Pre-treatment, Induction, Paralysis, Sedation)

Suction x 2, under head of bed

O2 (NP + NRM @ 15 LPM, BVM + PEEP, **KING Airway/LMA** for rescue ventilation/oxygenation)

Laryngoscope +/- video-laryngoscope, tested

ET tubes (8.0 and 7.5 + 10mL syringe; test + lube cuffs)

Stylet & **S**ecuring device/tape for ET tube

Surgical airway equip. (#10 scalpel, Bougie, 6.0 ET tube)

*For pediatric patients, use **Broselow Tape** or **Pedi STAT App**

PREPARE

Verbalize Plan A, B and C

PLAN A

Best position, assistant ready for guided BURP

Best approach (NPPV? Awake? DSI? RSI? Surgical?)

Ventilate
Regroup

PLAN B

Reposition?

New approach? (eg.: Bougie, new blade, new drugs)

Ventilate
Regroup

Plan C

Switch providers +/- new approach

Prepare for possible surgical airway

PREP**A**RE

Assess, Adjust, pay Attention

ASSESS

Periodically **A**SSESS the situation OUT LOUD

Invite the team's INPUT

ADJUST

Remain flexible

Keep resuscitating:

- Evolving hypotension?
- Worsening hypoxia?

Adjust medication dosages/strategy accordingly

ATTENTION

Designate someone to pay **a**ttention to:

O2 Sat, BP, HR, CO2, need for/quality of CPR

and call out any concerns

PREPA**R**E

Remain, **R**eview

REMAIN

Once intubation is complete, DO NOT LEAVE THE ROOM!

Continue to monitor closely and go through POST-INTUBATION Checklist

REVIEW

Repeat primary/secondary survey

Review case OUT LOUD and consider next steps

Invite Team's INPUT

PREPARE

Exit, Explore

EXIT

Organize transfer, if need be

Ensure safe handover

IPASS mnemonic for Handovers:

I – Illness/severity: stable or not? MOST?
P – Patient Summary, concise and up to date
A – Action items = prioritized “To Do” list
S – Situation Awareness = what to watch out for, contingency plan
S – Synthesis by receiver = receiver briefly summarizes what they heard, action items and plan, +/- asks for clarification

EXPLORE

Speak with family

Debrief with Team right away (+/- later)