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](http://dx.doi.org/10.1007/s12630-017-0834-z)

OTHER REFERENCES:
EMCrit Podcast
EM Cases Podcast
EM Updates
**PREPARE**

Team & Patient, Position, Pre-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 - Old - OSA - no Teeth – Stridor
- Predict HARD TO INTUBATE? **LEMON**
  - Look externally - Evaluate 3-3-2 - Mallampati - Obstruction - Neck 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*
**PREPARE**

Equipment* = MIDSOLES

<table>
<thead>
<tr>
<th>Monitors</th>
<th>(cardiac, pulse Ox, CO2, BP cycle q5min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV x 2, ? IO</td>
<td></td>
</tr>
<tr>
<td>Drugs</td>
<td>(Pre-treatment, Induction, Paralysis, Sedation)</td>
</tr>
<tr>
<td>Suction x 2, under head of bed</td>
<td></td>
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<tr>
<td>O2</td>
<td>(NP + NRM @ 15 LPM, BVM + PEEP, <strong>KING Airway/LMA</strong> for rescue ventilation/oxygenation)</td>
</tr>
<tr>
<td>Laryngoscope</td>
<td>+/- video-laryngoscope, tested</td>
</tr>
<tr>
<td>ET tubes</td>
<td>(8.0 and 7.5 + 10mL syringe; test + lube cuffs)</td>
</tr>
<tr>
<td>Stylet &amp; Securing</td>
<td>device/tape for ET tube</td>
</tr>
<tr>
<td>Surgical</td>
<td>airway equip. (#10 scalpel, Bougie, 6.0 ET tube)</td>
</tr>
</tbody>
</table>

*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

**PLAN B**
Reposition?
New approach? (eg.: Bougie, new blade, new drugs)

**Plan C**
Switch providers +/- new approach
Prepare for possible surgical airway

Ventilate
Regroup

Ventilate
Regroup
**PREPARE**

Assess, Adjust, pay Attention

**ASSESS**
Periodically **ASSESS** 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 **attention** to:
**O2 Sat, BP, HR, CO2, need for/quality of CPR**
and call out any concerns
Once intubation is complete, DO NOT LEAVE THE ROOM!

Continue to monitor closely and go through POST-INTUBATION Checklist

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)