EMCrit Call/Response Intubation Checklist

**Plan**
- HOp Killers-Hemodynamics, Ox, pH
- RSI · Awake · DSI · RSA · ICP/Vascular
- Induction Agent/Muscle Relaxant
- Push-Dose Pressors
- Failed Airway Plan Verbalized
- Cric-Con Evaluation (± Mark/Inject)
- Post-Intubation Sedation

**Patient Prep**
- Denitrogenation
- Oxygenated (Consider CPAP)
- Look in Mouth · Dentures
- Positioning
  - (Face Parallel, Ears/Notch, 30° Head-Up, Collar Plan)
- Monitors (Pulse Ox Visible)
- Reliable Access
- Nasal Prongs for ApOx
- ± Gastric Tube

**Equipment**
- **Table**
  - BVM (± PEEP Valve) on Oxygen
  - Waveform Capnograph on BVM & Tested
  - Video Laryngoscope
- Intubation Equipment
  - (Tube, 2xBend Styler, 2 Syringes, Back-Up Laryngoscope, OPA, Tube-Securing Device)
- Failed Airway Equipment at Bedside
  - (At minimum: Bougie, SGA, Scalpel)

**Team**
- Roles Assigned for Each Stage of Failed Airway Plan
- Pulse Ox Watcher/Reoxygenation Role Assigned
- ELM/Head Elev. Assistant Briefed

This checklist is for informational purposes only. ALL information must be vetted with your clinical judgment, pharmacy, and hospital committees/regulations.

**Awake Intubation**
- Glycopyrrolate 0.2 mg IV & Ondansetron 4mg IV (give as early as possible)
- Suction mouth and then pad dry with gauze
- Nebulized Lidocaine 4% 5ml @ 6 lpm
- Atomized Lidocaine 4% 3ml sprayed into posterior oropharynx
- Viscous Lidocaine lollipop 2%, place on tongue depressor
- Preoxygenate
- Position
- Restrain arms
- Switch to nasal cannula at 15 lpm
- Sedate with aliquots of Ketamine (10-20 mg) or 1-2 ml Ketamine-Heavy Ketofol (75 mg Ketamine, 25 mg propofol in the same syringe)
- Atomized Lidocaine 4% 3ml sprayed through cords
- Intubate awake or place bougie, then sedate/paralyze

**Pretreatment**
- 3-5 minutes prior to intubation
- Lidocaine 1.5 mg/kg for High-ICP/Vascular with elevated BP
- Fentanyl 3 mcg/kg for High-ICP/Vascular with elevated BP
- Scopolamine 0.4 mg for amnesia in hypotensive pt intubation

**Intubation Meds**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Normotensive Dose (70 kg Ps)</th>
<th>Hypotensive Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ketamine</td>
<td>2 mg/kg</td>
<td>140 mg</td>
</tr>
<tr>
<td>Ketofol</td>
<td>0.2 mg/ml</td>
<td>14 ml</td>
</tr>
<tr>
<td>Etomidate</td>
<td>0.3 mg/kg</td>
<td>20 mg</td>
</tr>
<tr>
<td>Propofol</td>
<td>1.5-3 mg/kg</td>
<td>150 mg</td>
</tr>
<tr>
<td>Succinylcholine</td>
<td>1.5-2 mg/kg</td>
<td>140 mg</td>
</tr>
<tr>
<td>Rocuronium</td>
<td>1.2 mg/kg</td>
<td>80 mg</td>
</tr>
<tr>
<td>Vecuronium</td>
<td>0.3 mg/kg</td>
<td>20 mg</td>
</tr>
</tbody>
</table>

**Cric-Con**
- In a 10 ml syringe, add 9 ml NS
- Sedate with aliquots of Ketamine (10-20 mg) or 1-2 ml Ketamine-Heavy Ketofol (75 mg Ketamine, 25 mg propofol in the same syringe)
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**Push-Dose Epi**
- All Airways: Discuss/Feel/See Kit (5)
- In a 10 ml syringe, add 9 ml NS

**Low pH Tube**
- Females: 3.5, 7.5 ET Max, inflate 4 ml, 18 cm to tip
- Males: 4.5, 8.5 ET Max, inflate 5 ml, 20 cm to tip

**Initial Post-Intubation Analgo-Sedation**
- Fentanyl 2 mcg/kg bolus then 1 mcg/kg/hr
- Midazolam 0.05 mg/kg bolus then 0.025 mg/kg/hr
- Propofol 0.5 mg/kg bolus then 20 mcg/kg/min
- Ketamine 1 mg/kg bolus then 0.5 mg/kg/hr
- Titrate to calm, spontaneously-breathing patient

**Infot**
- Go to emcrit.org/airway

**Initial Vent**
- Assists Control/Volume Mode
- Place on Vent (SIMV-Volume, VT 550, FiO2 100%, IFR 30 lpm, PS 10, PEEP 5, RR 0)
- Place on ETCO2
- RSA or Vent as Bag (Change RR to 16)
- Change Vent to (IFR 60 lpm, RR 30, VT 8 ml/kg, FiO2 40%)
- Confirm same ETCO2 and send ABG

**AirQs**
- Females: 3.5, 7.5 ET Max, inflate 4 ml, 18 cm to tip
- Males: 4.5, 8.5 ET Max, inflate 5 ml, 20 cm to tip

**Sux Contra**
- Malignant Hyperthermia History
- Strokes with hemiparesis > 72 hours old
- ICU Stay > 2 weeks
- Burns/tramua > 72 hours old
- NMJ Disease
- Myopathies/Muscular Dystrophies
- Preexisting Hyperkalemia or Strong suspicion

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Do you have a table?
- All equipment must be on a procedure table, not on the bed or on the patient.

Is there a BVM hooked up to oxygen set to maximal flow?
- Is there a PEEP valve if saturation on high-fIO2 is <95%?

Is waveform capnograph prepared?
- Tested by blowing and hook it up to The BVM. Qualitative Should be within eyesight (Leave it in Its package)

Is the video laryngoscope set up?
- All intubations should be performed with a video device if CMAC (decide if resident wants to look at screen), otherwise should be present at bedside

Is intubation equipment prepared and ready?
- Two functional laryngoscopes—sized and checked, properly sized oral airway, ETT tube with stylet bent at both ends in hockey stick configuration, with syringe attached—balloon checked, 2nd tube in package within eyesight, Extra 10 ml syringe, Tube-Securing Device

Is failed airway equipment prepared and ready?
- All equipment necessary to effect the failed airway plan must be at the bedside. Usually this consists of 2 NPAs, a bougie, an appropriate sized AirQ ILA, surgitube and a scalpel all still in their packages.

Is the suction equipment prepared?
- 2 suctions turned on, one at intubator’s right hand–Listen to each. Pull on tubing to make sure it is attached to the off-centered attachment. Ask intubator to verbalize that if suction is needed, they will need to put their finger over the hole

Are the peri-intubation medications ready?
- Full possible dose of induction agent with dose/ml labeling
- Full possible dose of muscle relaxant with dose/ml labeling
- If pt has potential for BP decrease, push-dose pressors should be drawn up and at bedside in a syringe marked with dose/ml labeling

What is the plan for unexpected difficult or failed airway?
- The team must verbalize the entire progression of the failed airway plan including who will perform each step
- Would this patient benefit from the presence of a 2nd ED Attending or a consultant?

Can the cricothyroid membrane be palpated?
- Consider marking, consider ultrasound-guided marking, consider pre-intubation prep with lidocaine 2% with epinephrine

What is the plan for post-intubation sedation?
- A plan for an analgesic and a sedative should be verbalized and preparation should start during the intubation preparations if there are available personnel

Have we denitrogenated?
- 8 breaths on maximal flow NRB or 3 minutes of tidal volume breathing.
- Do not remove the NRB/Mask until pt is apneic

Have we preoxygenated?
- Sat ≥ 95% on NRB or switch to CPAP Preox. Should achieve a saturation of ≥ 95% or you max out on PEEP 15 cm/H20

Monitors?
- Is the patient hooked up to BP set to cycle q1 minute, EKG, and a pulse ox visible to resus leader & intubator or a pulse ox watcher assigned?

Is the patient positioned adequately?
- Ear to sternal notch and face plane parallel to ceiling unless spinal precautions
- If spinal precautions, have plan for collar removal and inline stabilization
- Is the head of bed at 30’ or in Reverse-Trendelenberg?

Is there reliable access?
- At least one, preferably two. If there is any doubt, place IO

Is the patient prepared for ApOx (NoDESAT)?
- Is a nasal cannula on the patient for apneic oxygenation?
- Is a plan verbalized for who will remove the patient’s NRB from O2 port and switch to NC @15 lpm after meds are pushed or is NC on a separate oxygen cylinder?

Would the patient benefit from pre-intubation NGT?

RSI or Awake? · DSI? · RSA? · ICP/Vascular?
- Consider performing awake intubation in patients predicted to be difficult airway/reoxygenation and will allow 5-10 minutes preparatory time
- Consider Delayed Sequence Intubation in patients not tolerating preoxygenation/denitrogenation/preparatory positioning or procedures
- Consider Rapid Sequence Airway (Induce patient and immed. place SGA) in patients who will need to be bagged during apneic period
- Consider an ICP/Vascular intubation in normotensive/hypertensive patients at risk from an increase in sympathetic tone/MAP

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Instructions for Use

Print the next 2 pages on both sides of 1 sheet of paper
Fold at the dotted line
Use only the above the fold portion in the peri-intubation
The 2nd page includes explanations of the checklist for students, residents, and when training with the checklist
Below the fold are some reference items
Send me comments and ideas for improvement

Thanks,
Scott