

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 Stylet, 2 Syringes, Back-Up Laryngoscope, OPA, Tube-Securing Device)
Failed Airway Equipment at Bedside
(At minimum: Bougie, SGA, Scalpel)
Suction x 2

Team

Roles Assigned for Each Stage of Failed Airway Plan
Pulse Ox Watcher/Reoxygenation Role Assigned
ELM/Head Elev. Assistant Briefed
Team is all in PPE

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Fold and use only this side during Checklist Procedure

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 (alternatively Remifentanyl 3 mcg/kg)
 - **Scopolamine** 0.4 mg for amnesia in hypotensive pt intubation

Info

Go to
emcrit.org/
airway


Initial Post-Intubation Analgo-Sedation

- **Fentanyl** 2 mcg/kg bolus then 1 mcg/kg/hr
- or
- **Hydromorphone** 0.5-1 mg bolus then repeat q 10 minutes until analgesia

and

- **Midazolam** 0.05 mg/kg bolus then 0.025 mg/kg/hr
- or
- **Propofol** 0.5 mg/kg bolus then 20 mcg/kg/min
- or
- **Ketamine** 1 mg/kg bolus then 0.5 mg/kg/hr

Titrate to calm, spontaneously-breathing patient

Cric-Con

- **All Airways:** Discuss/Feel/See Kit (5)
- **Diff. but Stable:** Mark/Kit to Bedside/US (4)
- **Diff. & Hypoxic:** Inject / Prep / Open Kit / Scalpel in Hand (3)

Push-Dose Epi

- In a 10 ml syringe, add 9 ml NS
- Into this syringe draw up 1 ml of **Cardiac-Arrest (1:10000) Epinephrine**
- Shake Syringe Hard
- Label "Epinephrine 10 mcg/ml"
- Dose 0.5-2 ml (5-20 mcg) q 1-5 min
- Throw away at end of shift if unused

Intubation Meds

Drug	Normotensive Dose	Normotensive Dose (70 kg Pt)	Hypotensive Dose
Ketamine	2 mg/kg	140 mg	0.5 mg/kg
Ketofol (100 mg ketamine, 100 mg propofol to make 20 ml)	0.2 ml/kg	14 ml	
Etomidate	0.3 mg/kg	20 mg	10 mg
Propofol	1.5-3 mg/kg	150 mg	15 mg
Succinylcholine	1.5-2 mg/kg	140 mg	2 mg/kg
Rocuronium	1.2 mg/kg	80 mg	1.6 mg/kg
Vecuronium	0.3 mg/kg	20 mg	



Sux Contra

- Malignant Hyperthermia History
- Strokes with hemiparesis > 72 hours old
- ICU Stay > 2 weeks
- Burns/trauma > 72 hours old
- NMJ Disease
- Myopathies/Muscular Dystrophies
- Preexisting Hyperkalemia or Strong suspicion
- Guillain-Barre

Initial Vent

- Assist Control/Volume Mode
- Vt 8 ml/kg IBW
- RR 16 (10 in asthma/copd)
- IFR 60 l/min
- PEEP 5 (0 in asthma/copd)
- FIO2 40%

Low pH Tube

- 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

Plan

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

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

Patient

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 $\geq 95\%$ on NRB or switch to CPAP Preox. Should achieve a saturation of $\geq 95\%$ or you max out on PEEP 15 cm/H2O

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?

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, surglube and a scalpel all still in their packages.

Is the suction equipment prepared?

- 2 suction 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

Equipment

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