Emergency Department Intubation Checklist

- Consider the indication for intubation
- Is non-invasive ventilation (CPAP/BiPAP) an option?
- Is the patient DNI status?
- Has patient/family consented, if applicable?

- Preoxygenate with high-flow oxygen
- At least 3 min or 8 deep breaths if possible, consider NIV if profound hypoxia

- Difficult laryngoscopy
- Look externally, Evaluate 3-3-2 rule, Mallampati score, Obstruction, Neck Mobility

- Difficult BVM
- Beard, Obese, No teeth, Elderly, Sleep Apnea / Snoring

- Difficult extraglottic device
- Restricted mouth opening, Obstruction, Distorted airway, Stiff lungs or c-spine Surgery, Hematoma, Obesity, Radiation distortion or other deformity, Tumor*

- Difficult cricothyrotomy
- If suspected difficult airway and time allows, consider awake technique and/or call for help
  - see awake intubation checklist on page 2

- Check for dentures
- Dentures in for bag-valve-mask, out for laryngoscopy

- Position patient
- Auditory meatus to suprasternal notch (sheets under neck / occiput / shoulders)

- Monitoring equipment
- ECG
- Pulse oximetry
- Blood pressure
- Continuous end-tidal capnography - verify function with test breath

- IV access
- Two lines preferable

- Nasal cannula
- 5 liters per minute to augment preoxygenation, then
  - 15 liters per minute post-induction to facilitate apneic oxygenation

- Equipment
  - Use Broselow tape for sizes in pediatrics
  - Gum elastic bougie
  - LMA with lubricant and syringe
  - Difficult airway equipment
  - Cricothyrotomy tools / video laryngoscope / optical stylet
  - Fiberoptic scope / Magill forceps if suspected foreign body

- Difficult airway and time allows, consider awake technique and/or call for help
  - see awake intubation checklist on page 2

- Drugs
  - Pretreatment agents, if applicable
  - Give as bolus 3 minutes prior to induction, except for fentanyl, which should be the final pretreatment agent, and should be given over 30-60 seconds.
  - 3 mcg/kg TBW if high BP a concern (aneurysms, dissections, high ICP, severe CAD)
  - 1.5 mg/kg TBW for reactive airways or increased ICP
  - 0.02 mg/kg IV or IM (min 0.1 mg, max 1 mg)
    - For infants, especially if receiving succinylcholine
  - Etomidate 0.3 mg/kg TBW
  - Propofol 1.5 - 3 mg/kg IBW+(.4)(TBW)
  - Ketamine 2 mg/kg IV or 4 mg/kg IM IBW
  - Midazolam 0.2 - 0.3 mg/kg TBW
  - Thiopental 3 - 6 mg/kg TBW
  - Succinylcholine 2 mg/kg IV 4 mg/kg IM TBW
  - Rocuronium 1.2 mg/kg TBW
  - Vecuronium 0.3 mg/kg IBW if Roc unavailable
  - Phenylephrine
    - For post-intubation hypotension
    - 100 mcg IV push as needed

Contraindications to succinylcholine
- History of malignant hyperthermia
- Burn or crush injury > 5 days old
- Stroke or spinal cord injury > 5 days old
- MS, ALS, or inherited myopathy
- Known hyperkalemia (absolute)
- Renal failure (relative)
- Suspected hyperkalemia (relative)
### Emergency Department Intubation Checklist (page 2)

- **Personnel**
- **Post-intubation settings discussed**
- **RSI or Awake Technique**
- **Verify tube placement**
- **Secure ETT**
- **Portable chest radiograph**
- **Opioid then sedative boluses/drips**
- **Head of bed to 30-45 degrees, higher if very obese**
- **Orogastric or nasogastric tube**
- **Adjust ETT cuff pressure**
- **In-line heat-moisture exchanger**
- **In-line suction**
- **Blood gas within 30 minutes post-intubation**
- **Foley catheter**
- **Watch for post-intubation complications**
- **Verify that airway equipment is ready for the next patient**

### Awake Technique

Favored in patients who require intubation less urgently, have more difficult airway features, and are not high risk for vomiting

- **Glycopyrrolate** 0.2 mg or Atropine 0.01 mg/kg glyco preferred, ideally given 15 min prior to next step
- **Suction** then pad dry mouth with gauze
- **Nebulized Lidocaine** without epi @ 5 lpm ideally 4 cc of 4% lidocaine but can also use 8 cc of 2% lidocaine
- **Atomized Lidocaine** sprayed to oropharynx especially if unable to give full dose of nebulized lidocaine
- **Viscous Lidocaine** lollipop 2% viscous lido on tongue depressor
- **Preoxygenate** 
- **Position** 
- **Restrain prn** 
- **Switch to nasal cannula**
- **Lightly sedate** with Versed 2-4 mg or Ketamine 20 mg aliquots q 2 min
- **Intubate awake** or place bougie, then paralyze, then pass tube

### Incremental FiO2 / PEEP Chart for Oxygenation

<table>
<thead>
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<th>FiO2</th>
<th>0.3</th>
<th>0.4</th>
<th>0.4</th>
<th>0.5</th>
<th>0.5</th>
<th>0.6</th>
<th>0.7</th>
<th>0.7</th>
<th>0.8</th>
<th>0.9</th>
<th>0.9</th>
<th>1.0</th>
<th>1.0</th>
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</thead>
<tbody>
<tr>
<td>PEEP (cmH2O)</td>
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<td>6</td>
<td>8</td>
<td>8</td>
<td>10</td>
<td>10</td>
<td>12</td>
<td>14</td>
<td>14</td>
<td>16</td>
<td>18</td>
<td>18</td>
<td>20</td>
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</tbody>
</table>

Consider effects of decreased preload as PEEP is augmented

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