

<b>Prerequisites</b>	
<input type="checkbox"/> Are O <sub>2</sub> and ventilation stable enough to allow time for the pause?	<input type="checkbox"/> Name tags on
<input type="checkbox"/> Are Goals of Care R1 or R2?	
<input type="checkbox"/> Names, roles, ready for pause: <input type="checkbox"/> Primary Intubator <input type="checkbox"/> Manual Ventilation/ELM <sup>1</sup> <input type="checkbox"/> C-spine	<input type="checkbox"/> Minimize personnel in room: <ul style="list-style-type: none"> <li>• Experienced provider intubating, Drugs RN/MD, RT</li> </ul> <input type="checkbox"/> Outside room support: <ul style="list-style-type: none"> <li>• Recorder, PPE monitor, Runner RT, Backup intubator</li> </ul>
<input type="checkbox"/> Back-up Intubator <sup>2</sup> <input type="checkbox"/> Equipment RT <input type="checkbox"/> Meds RN	
<input type="checkbox"/> Is everyone wearing PPE?	<input type="checkbox"/> Full PPE: N95 respirator, goggles +/- face shield, gown, gloves

<b>Patient</b>	
<input type="checkbox"/> Predicted difficulties / mitigation strategies?	<i>Anatomic and physiologic</i>
<input type="checkbox"/> Cricothyroid membrane identified?	<i>Consider marking</i>
<input type="checkbox"/> Position optimal?	<i>Patient and Intubator</i>
<input type="checkbox"/> Oxygenation maximized	<i>Nasal Prongs</i>
<input type="checkbox"/> Read out current vitals:	<i>Monitor alarms on</i>
<input type="checkbox"/> Who will read out SpO <sub>2</sub> ?	<input type="checkbox"/> Consider troop pillow
<input type="checkbox"/> Threshold for action:	<input type="checkbox"/> 5Lpm O <sub>2</sub> nasal prongs (up to 15 Lpm O <sub>2</sub> as necessary)
<input type="checkbox"/> Who will record the time?	+ tight seal BVM (15 Lpm O <sub>2</sub> )
<input type="checkbox"/> Threshold for action:	+ PEEP valve @ 5 cmH <sub>2</sub> O
	<input type="checkbox"/> 2 person-2 handed manual ventilation only if O <sub>2</sub> delivery is failing (Recommended threshold: SpO <sub>2</sub> <70%)

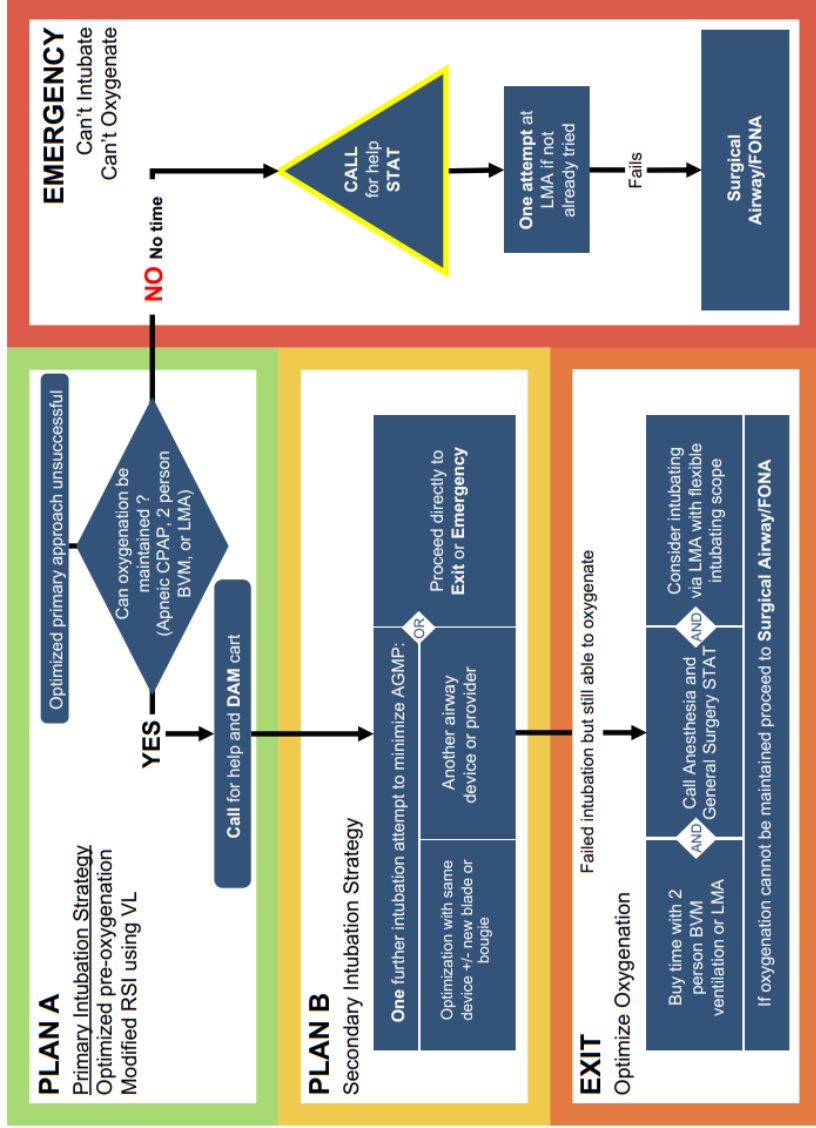
<b>Drugs</b>	
<input type="checkbox"/> Functional IV/IO?	<i>Fluids, pressors, bicarbonate</i>
<input type="checkbox"/> Pretreatments required?	
<input type="checkbox"/> Estimated patient weight:	<input type="checkbox"/> If no contraindications, use Modified RSI: <ul style="list-style-type: none"> <li><input type="checkbox"/> Rocuronium 1.2-1.6 mg/kg (ideal body weight)</li> <li><input type="checkbox"/> Succinylcholine 1.5-2 mg/kg (total body weight)</li> </ul>
<input type="checkbox"/> Drugs and doses:	
<input type="checkbox"/> Post-intubation drugs	<i>Sedation, analgesia</i>

<b>Respiratory</b>	
<input type="checkbox"/> Bagger, PEEP valve, oral airway and suction ready?	<input type="checkbox"/> Video laryngoscopy recommended
<input type="checkbox"/> What sizes laryngoscope and ETT prepared?	
<input type="checkbox"/> Where is the DAM <sup>3</sup> cart?	Lung protective strategy: Vt 6-8 mL/kg IBW, Pplat < 30 cmH <sub>2</sub> O, optimal PEEP
<input type="checkbox"/> End tidal CO <sub>2</sub> ready?	
<input type="checkbox"/> Critical ventilation considerations:	

<b>Plan</b>		
Please verbalize:		
<input type="checkbox"/> <b>Plan A</b>	<input type="checkbox"/> <b>When to call back up<sup>2</sup></b>	<input type="checkbox"/> <b>Exit Plan</b>
<input type="checkbox"/> <b>Plan B</b>		<input type="checkbox"/> <b>Emergency Plan</b>

<b>Reminders</b>
<input type="checkbox"/> Cuff up before bagging
<input type="checkbox"/> Confirm ETT with End Tidal CO <sub>2</sub>
<input type="checkbox"/> Clamp ETT for planned disconnections
<input type="checkbox"/> Maintain Droplet Contact + N95 isolation

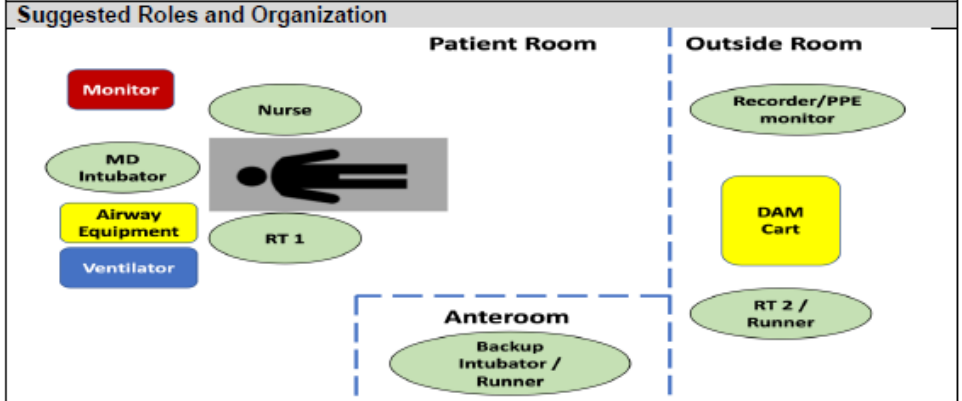
**Questions/Concerns?**  
<sup>1</sup>ELM = External laryngeal manipulation  
<sup>2</sup>Back up = i.e. 2<sup>nd</sup> MD, anaesthesia etc  
<sup>3</sup>DAM cart = Difficult Airway Management Cart



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ILI / COVID-19 Airway Management Best Practice Considerations V5. March 31, 2020

- Preparation**
1. PPE: Don full PPE including N95 respirator, goggles, face shield, gown and gloves. Proper application of PPE should be verified by an observer prior to patient contact
  2. Early airway assessment for predictors of difficulty and consultation as necessary
  3. Consider early, controlled intubation and avoid NIV, HHHFO and other AGMP as able
  4. Minimize staff exposure:
    - a. Minimize personnel in the room as able
    - b. Negative pressure room with anteroom if available (or neutral pressure room with door closed)
    - c. Ensure HMEF is between the mask and BVM at all times
  5. Intubation should be performed by most experienced practitioner to optimize first pass success
  6. Prepare necessary equipment and drugs OUTSIDE of room



- Intubation Plan**
- ✓ Optimize patient and intubator positioning; consider need for Troop pillow
  - ✓ Optimize pre-oxygenation using nasal prongs with 5L/min O<sub>2</sub> (up to 15L/min as necessary) AND tight seal BVM with 15L/min O<sub>2</sub> and PEEP valve = 5 cm H<sub>2</sub>O
  - ✓ Reserve 2 person 2 handed BVM manual ventilation for situations when non-invasive O<sub>2</sub> delivery is failing
  - ✓ Video laryngoscopy recommended as Plan A.
  - ✓ Best pharmacotherapy determined by MRHP on case-by-case basis to minimize chance of cough and aerosol generation
  - ✓ If no contraindications, Modified RSI (avoid coughing and facilitate first pass success) and leave nasal prongs with O<sub>2</sub> in place for apneic oxygenation:
    - Use higher mg/kg dose of muscle relaxants to ensure rapid onset of optimal intubating conditions (allow 1 minute for onset of adequate muscle relaxation):
      - Rocuronium 1.2-1.6 mg/kg (IBW)
      - Succinylcholine 1.5-2 mg/kg (TBW)
  - ✓ If SpO<sub>2</sub> < 70% begin 2 person 2 handed BVM manual ventilation with an OPA
  - ✓ Wait until cuff inflated post-intubation before ventilating

- Post-Intubation**
- Confirm ETT position with ETCO<sub>2</sub> and CXR
  - Closed suction system; avoid circuit disconnections and clamp ETT for planned disconnections
  - Lung protective ventilation strategy (6-8 mL/kg Vt IBW; Pplat < 30 cm H<sub>2</sub>O; Optimal PEEP)
  - Strategies for failing gas exchange: deep sedation and paralysis; permissive hypercapnia; prone positioning
  - Maintain droplet and contact isolation and PPE as per IP&C

AGMP = aerosol generating medical procedures; BVM = bag valve mask; HHHFO = heated humidified high flow oxygen (AIRVO, Optiflow); HMEF = heat moisture exchange filter; IBW = Ideal body weight; MRHP = most responsible healthcare provider; NIV = non-invasive ventilation; OPA = oropharyngeal airway; RSI = rapid sequence intubation; TBW = total body weight. This is a living document. Watch for new versions. The materials can be viewed as Level C evidence (expert consensus).