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# Emergency Intubation Checklist for COVID-19

Version 1 27/3/2020 ED COVID-19 Response Team

PPE and Team Preparation	Prepare for Difficulty	Prepare Equipment	Induction and Intubation	Post Intubation & Safety
Outside Room		Inside Room		
<ul> <li>❑ Hand Hygiene</li> <li>❑ PPE:</li> <li>❑ Overhood</li> <li>❑ Gown</li> <li>❑ N95 Mask</li> <li>❑ Protective Eyewear</li> <li>❑ 1<sup>st</sup> set of gloves</li> <li>❑ 2<sup>nd</sup> set of gloves</li> <li>❑ Buddy PPE Check</li> <li>❑ Allocate Roles &amp; Label</li> <li>❑ Lead Intubator</li> <li>❑ Airway Assistant</li> <li>❑ Medical Team Leader</li> <li>❑ Runner</li> <li>Team Huddle</li> <li>❑ Case Synthesis</li> <li>❑ Goals of Care?</li> <li>❑ Any comorbidities?</li> <li>❑ Other considerations?</li> <li>❑ Drugs &amp; Doses</li> </ul>	<ul> <li>Airway Plan</li> <li>Plan A:         <ul> <li>mRSI with Video</li> <li>Laryngoscope and most senior intubator</li> <li>Use 30 second drills</li> </ul> </li> <li>Difficult or Failed</li> <li>Intubation</li> <li>Plan B/C:         <ul> <li>Tight 2 handed BVM assembled as below &amp; then LMA</li> <li>Image: A state of the second drills</li> </ul> </li> <li>Plan D:             <ul> <li>FONA - Scalpel, Finger, Bougie + Size 6 ETT</li> <li>Do not ventilate during FONA attempt</li> <li>Safety Check</li> </ul> </li> </ul>	<ul> <li>Apply monitoring <ul> <li>ECG, BP, SpO<sub>2</sub>, EtCO<sub>2</sub></li> </ul> </li> <li>Equipment <ul> <li>Kit Dump Done</li> </ul> </li> <li>Suction within reach</li> <li>Place bluey behind patient's head</li> <li>IV access x2 &amp; Flush</li> <li>Giving set connected</li> <li>Drugs available in room</li> <li>Optimise for Intubation <ul> <li>Position with ramp</li> <li>Hemodynamics: Use <ul> <li>inotropes early and limit fluids</li> </ul> </li> <li>Set up Ventilator <ul> <li>Mode PCV+</li> <li>100% FiO<sub>2</sub></li> <li>PEEP 10-15cmH<sub>2</sub>O</li> <li>Prinsp 20-25cmH<sub>2</sub>O</li> <li>Resp Rate of 20/min</li> </ul> </li> <li>Yellow bin adjacent to <ul> <li>airway assistant</li> <li>Turn off facemask O2 and discard mask</li> <li>Pre-oxygenation: BVM, tight seal, 2 handed grip for 3min</li> <li>Avoid PPV but if ventilation</li> </ul> </li> </ul></li></ul>	<ul> <li>Final Checks (overleaf)</li> <li>Induction &amp; Paralysis (45 - 60 sec)</li> <li>Disconnect BVM above HME Filter</li> <li>Intubate</li> <li>Inflate cuff</li> <li>Connect HME Filter</li> <li>Reconnect BVM and start ventilation</li> <li>Confirm tube placement with EtCO2</li> <li>Secure ETT</li> <li>To connect to ventilator follow Safe Circuit Protocol (overleaf)</li> <li>Sedation</li> </ul>	<ul> <li>Place blade in bag and seal</li> <li>Dispose of all consumables</li> <li>Discard outer glove (all)</li> <li>Ventilation <ul> <li>FiO2: Titrate to Sats &gt; 90%</li> <li>Titrate PEEP &amp; Pinsp to TV</li> <li>Gml/kg ideal body weight</li> </ul> </li> <li>If circuit break required follow safe circuit protocol</li> <li>Considerations <ul> <li>Extubation is HIGH RISK</li> <li>Minimise cough using neuromuscular blockade</li> </ul> </li> <li>Meticulous PPE Removal in Doffing Area with buddy</li> <li>Remove gown and gloves</li> <li>Hand Hygiene <ul> <li>Remove N95 mask</li> <li>Remove overhood</li> <li>DO NOT TOUCH FACE</li> <li>Hand Hygiene</li> </ul> </li> <li>Debrief</li> </ul>



# **Emergency Intubation Checklist for COVID-19**

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## **Inside Room - Finals Checks**

Monitoring
 Connected and Checked
 2 minute cycles NIBP

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❑Clear plan
❑Verbalised to Team

Pre-oxygenation
 BVM connected to 15L 0<sub>2</sub> 3min
 Tight 2 handed grip
 Do not bag unless absolutely necessary (Sats <80%)</li>

Post-intubation planningOngoing sedation and paralysis

## Safe Circuit Protocol

#### 1. Paralysis

2. Ventilator 2.1 Settings 2.2 Standby or Turn Off

#### 3. ETT 3.1 Clamp applied

4. Circuit 4.1 Break circuit above HME filter 4.2 Remove everything above ETT

5. Connect to ETT in following order

- 5.1 Inline suction 5.2 HME filter 5.3 EtCO<sub>2</sub> sensor
- 6. Connect ventilator circuit
- 7. Unclamp ETT
- 8. Discard outer gloves (airway assistant)
- 9. Start Ventilator











### Emergency Intubation Role Allocation & Timeline for COVID-19

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Lead Intubator Most experienced Intubator 1<sup>st</sup> attempt pass Medical Team Leader Anaesthetics/ ICU/ ED Doctor Patient and situation optimisation Airway Assistant Anaesthetics/ ICU/ ED Nurse/ Tech Monitoring and equipment

Runner OT/ ICU/ ED Nurse Team support, scribe & PPE vigilance

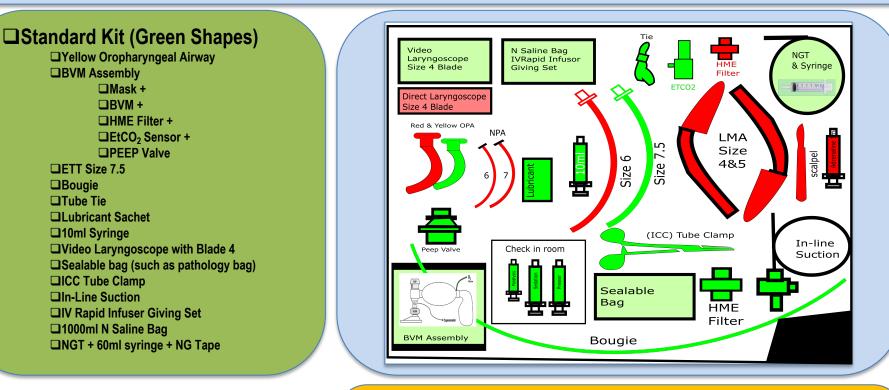
PPE – Overhood, Gown, N95 mask with protective eye wear, 1st Set of gloves, 2nd Set of gloves and perform buddy check

Team Huddle and Case Synthesis							
Safety Check to ensure competence and confidence							
Airway plan							
Set up ventilator with Ideal Body Weight ARDS settings	IV access x2 & flush lines Attach rapid infusion giving set	Apply and check monitoring Performs Kit dump of equipment	Set up equipment transfer table Draw up intubation drugs and prepare post intubation sedation & syringe drivers Have adrenaline ready in case patient arrests				
BVM assembly completed and attached to high flow O2	Optimise patient for intubation	Suction within reach Bluey behind patient's head					
Apply BVM with tight 2 handed grip with 15L O <sub>2</sub> for 3 min – minimise ventilation	Pre intubation Final Check	Place sealable bag on CMAC tower tray					
	Induction and Paralysis		NO equipment should be passed directly between runner & team				
Intubation with Bougie – 30 sec drills			Place any equipment needed on transfer table and team can pick it up from the table. Begin documentation. If LMA inserted – contact Anaesthetics on #6311 for 'COVID Tube Exchange'				
If failed – BVM with tight 2 handed grip – low volume ventilation	Open difficult airway box and populate kit dump						
Move to Front Of Neck Access (FONA) position	Insert LMA	Move to FONA assistant position					
If cannot oxygenate through LMA – perform FONA			"				
Confirm tube placement w	ith EtCO <sub>2</sub>	Tie in ETT	Monitor for any breaches in PPE or				
Liaise with Airway assistant for safe circuit connection	Ensure safe circuit connection Stop team if not being safe	Liaise with Lead Intubator for safe circuit connection	procedures. STOP team if breaching PPE				
		Discard Outer Gloves	STOP team if breaching procedures				
Insert NGT		Start Ventilation					
Bag CMAC Blade Dispose of Dirty Consumables							
Discard outer gloves							
Meticulous PPE removal							
Debrief							



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## **Equipment and Considerations**



### Difficult Kit (Red Shapes)

Red Oropharyngeal Airway
 Nasopharyngeal Airways Size 6 and Size 7
 Direct Laryngoscope with Blade 4
 2<sup>nd</sup> HME Filter
 Scalpel
 ETT Size 6.0
 LMA Size 4 and Size 5

## Considerations for Runner

□Cannulation and blood letting equipment
 □Paralysis – Rocuronium 1.5mg/kg
 □Sedation – Ketamine 0.5 – 2mg/kg
 □Pressor – Metaraminol 0.5mg/ml
 □Arrest – Adrenaline 1mg/10ml
 □Syringe driver or drivers (maximum 2)
 □Sedation is strongly suggested to be Morphine 50mg + Midazolam 50mg in 50ml of N Saline (1 syringe driver)
 □2<sup>nd</sup> syringe driver for inotropes / other infusions if needed