## COVID-19 Airway Management

### Planning
- Intervene early - aim to avoid emergency intubation.
- Negative Pressure room or Normal pressure with strict door policy.
- Senior clinician involvement - Is Anaesthetist needed?
- Early airway assessment documented by senior clinician.

### Prepare
- Assemble 5-6 person Airway Team (see reverse).
- Use COVID-19 Intubation Tray (see reverse).
- Ensure Viral Filter and ETCO2 in ventilation circuit.
- Share Airway Strategy. Use a dedicated COVID intubation checklist.

### PPE
- Hand Hygiene (HH).
- Donning: HH > Gown > Mask > Eye-protection > Hat > HH > Gloves.
- Spotter to perform "Buddy Check" to ensure correct PPE fit.
- Airway operator to consider double gloves.

### Pre-Ox
- 45 degree head up position.
- Pre-oxygenate with Face Mask using 2 hands for full 5 minutes.
- Ensure a square ETCO2 waveform, to be confident of no leaks.
- Avoid Apnoeic Oxygenation techniques due to aerosolization risk.

### Perform
- Use VL; use the screen (indirect view) to maximise operator distance from airway.
- Modified RSI technique (1.5mg/kg IBW Roc OR 1.5mg/kg TBW Sux).
- No ventilation prior to intubation unless for rescue oxygenation.
- Wait 60 seconds for paralysis to take effect - avoid triggering cough.

### Post-ETT
- Inflate cuff BEFORE initiating ventilation and monitor cuff pressures to minimise leak.
- Remove outer gloves (if on), dispose of airway equipment in sealed bag.
- Doffing: Gloves > Gown > HH > Hat > Eye Protection > Mask > HH. Use a Spotter.
- Debrief and share lessons.

#### Awake Intubation
- Risk of aerosolization. Involve Senior Anaesthetist if this airway technique is indicated.

#### Connection / Disconnection
- Apply the viral filter directly to the ETT.
- Only disconnect the circuit on the ventilator side of the viral filter.

#### CICO Rescue
- Scalpel-bougie technique to avoid aerosolization.
**COVID-19 AIRWAY MANAGEMENT**

**Team Members**

- Airway Assistant
- **Airway Operator #1**
- **Team Leader**
- **Runner #1** (optional)
- **Runner #2**
- **Runner #3**

**OUTSIDE**
- Airway Trolley
- Bronchoscope
- Cardiac Arrest Trolley

**ANTE ROOM** (if available)
- In-line suction

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**COVID Intubation Tray**

- Macintosh VL blade
- Hyperangulated VL blade (if available)
- Macintosh direct laryngoscope
- **SGA (2nd generation)**
- **ETT (appropriate size range)**
- **Bougie / Stylet**
- **10 mL syringe**
- **Tube tie**
- **Lubricant sachet**
- **Viral filter**
- **ETCO2**
- **NG tube (large bore)**
- **OPA + NPA**
- **Scalpel + bougie CICO kit**
- **In-line suction**

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**Circuit Setup**

- **Patient**
- **ETT / Facemask**
- **Viral Filter**
- **ETCO2**
- **Ventilator / BVM**

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**Collaboration between Safe Airway Society + RNS ASCAR**

@SafeAirway + @Rnsascar

v1.1 March 2020
## COVID-19 Emergency Intubation Checklist

### CHECK BEFORE ENTERING ROOM

<table>
<thead>
<tr>
<th>Team</th>
<th>Patient</th>
<th>Drugs</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Anaesthesia</td>
<td>ECG, BP, Sats</td>
<td>RSI drugs drawn up, doses chosen</td>
</tr>
<tr>
<td></td>
<td>contacted if difficulty anticipated</td>
<td>Pre-oxygenation (&lt;ul&gt;&lt;li&gt;FIO2 100%&lt;/li&gt;&lt;li&gt;Sitting position 45°&lt;/li&gt;&lt;/ul&gt;)</td>
<td>Rescue drugs (&lt;ul&gt;&lt;li&gt;Metaraminol&lt;/li&gt;&lt;li&gt;Sugammadex&lt;/li&gt;&lt;/ul&gt;)</td>
</tr>
<tr>
<td></td>
<td>Team introduced:</td>
<td>IV access x 2</td>
<td>Post intubation sedation plan</td>
</tr>
<tr>
<td></td>
<td>▪ Airway Operator</td>
<td>▪ 1L fluid on pump set</td>
<td>Drug C/I or allergies?</td>
</tr>
<tr>
<td></td>
<td>▪ Airway Assistant</td>
<td>▪ Haemodynamics optimised</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Team Leader/Drugs</td>
<td>▪ Fluid bolus</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ In-room Runner: optional</td>
<td>▪ Pressor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Door Runner</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Outside room Runner</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Problems</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>anticipated?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Problems anticipated? | ECG, BP, Sats | Pre-oxygenation | IV access x 2 | Haemodynamics optimised | Fluid bolus | Pressor | RSI drugs drawn up, doses chosen | Rescue drugs | Post intubation sedation plan | Drug C/I or allergies? |

### FINAL CHECK IN ROOM

<table>
<thead>
<tr>
<th>Patient position optimal</th>
<th>Fluid runs easily</th>
<th>Suction working</th>
<th>Facemask with viral filter connected</th>
<th>ETCO2 trace</th>
<th>O2 running at 15L.min⁻¹</th>
<th>Oropharyngeal/nasal airways</th>
<th>Airway plans:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>▪ Plan A: Videolaryngoscopy with bougie/stylet</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>▪ Plan B: Supraglottic airway</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>▪ Plan C: Vice grip, 2-person +/- Guedel/NPA</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>▪ Plan D: Scalpel/bougie/tube</td>
</tr>
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COVID-19 Emergency Intubation Checklist

CHECK BEFORE ENTERING ROOM

Team
- Anaesthesia contacted if difficulty anticipated
- Team introduced:
  - Airway Operator
  - Airway Assistant
  - Team Leader/Drugs
  - In-room Runner: optional
  - Door Runner
  - Outside room Runner
- Problems anticipated?

Patient
- ECG, BP, Sats
- Pre-oxygenation
  - FiO2 100%
  - Sitting position 45°
- IV access x 2
  - 1L fluid on pump set
- Haemodynamics optimised
  - Fluid bolus
  - Pressor

Drugs
- RSI drugs drawn up, doses chosen
- Rescue drugs
  - Metaraminol
  - Sugammadex
- Post intubation sedation plan
- Drug C/1 or allergies?

Equipment
- 2 Laryngoscopes (tested)
- Tube chosen; cuff tested
- Bougie/stylet
- 10ml syringe
- Tube tie
- Lubricant
- Supraglottic airway sized to pt
- Scalpel + bougie CICO kit
- Airway trolley/bronchoscope outside room
- ETCO2
- Viral filter

FINAL CHECK IN ROOM

- Patient position optimal
- Fluid runs easily
- Suction working
- Facemask with viral filter connected
- ETCO2 trace
- O2 running at 15L.min⁻¹
- Oropharyngeal/nasal airways

Airway plans:
- Plan A: Videolaryngoscopy with bougie/stylet
- Plan B: Supraglottic airway
- Plan C: Vice grip, 2-person +/- Guedel/NPA
- Plan D: Scalpel/bougie/tube
# COVID-19 Airway Management

## 1. Intensive training
- Early intervention

## 3. Meticulous planning
- Vigilant infection control

## 5. Efficient airway management
- Clear communication

### Use a 'Buddy Check' for Correct PPE Fitting

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