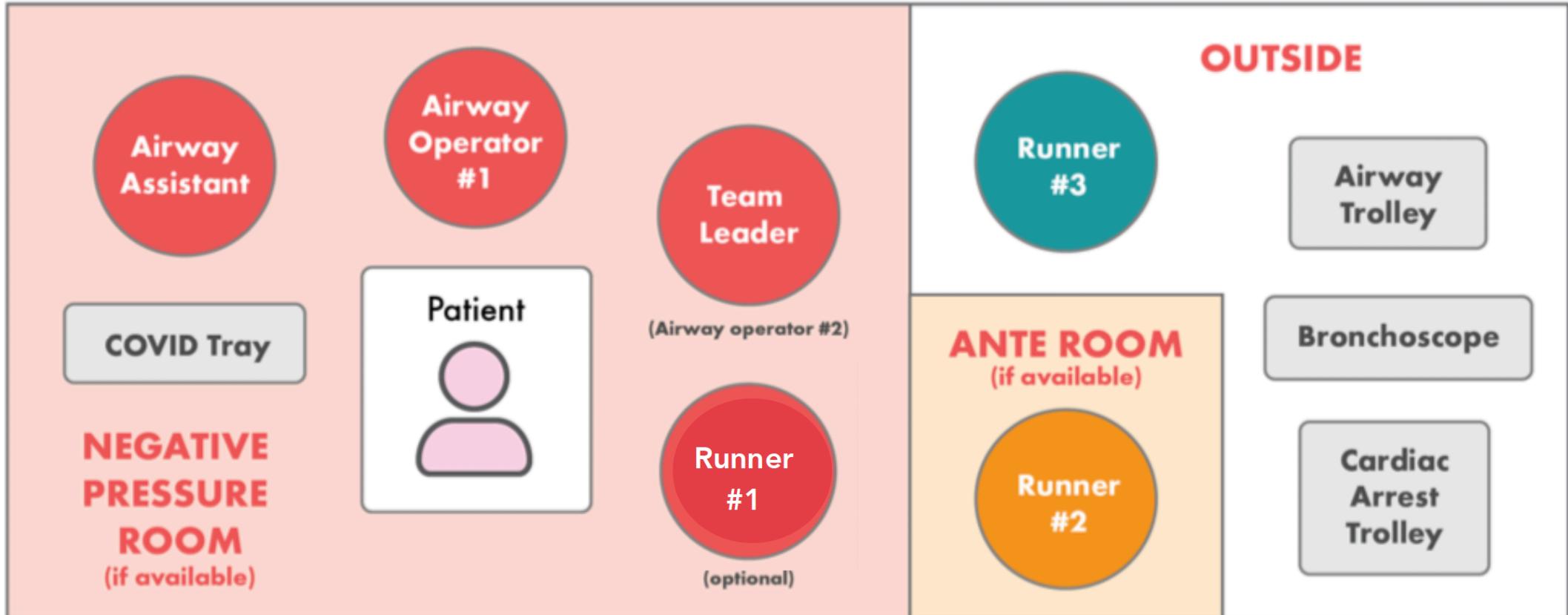


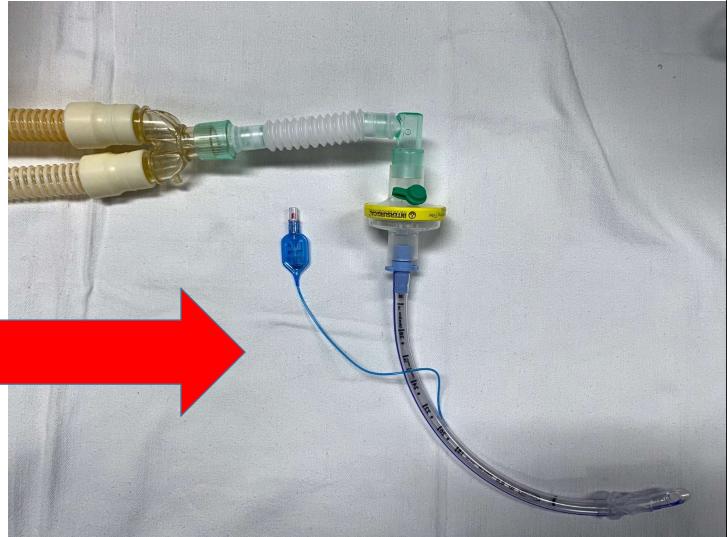
# Positioning



High risk patient and high risk AGP

\*\*\*Prior to entering Intubation room (NPR if available), don AGP PPE with spotter\*\*\*

## Staged transition from Mask-Filter-Circuit to ETT-Filter-Circuit



3



## Mask-Filter-Circuit

Pre-oxygenation 5 minutes  
Two handed grip  
Well fitted face mask

4



## Disconnect Y-adapter

Induction drugs administered  
- 30-60 seconds pause  
- mask tightly on  
Disconnect circuit from filter  
apparatus at Y adapter.  
This isolates fresh gas flow from  
viral filter

5



## Disconnect Filter Apparatus

Place in dirty equipment tray  
- Mayo table by bed

6



## Intubation

Video laryngoscopy  
Syringe pre-attached

7



## Inflate Cuff

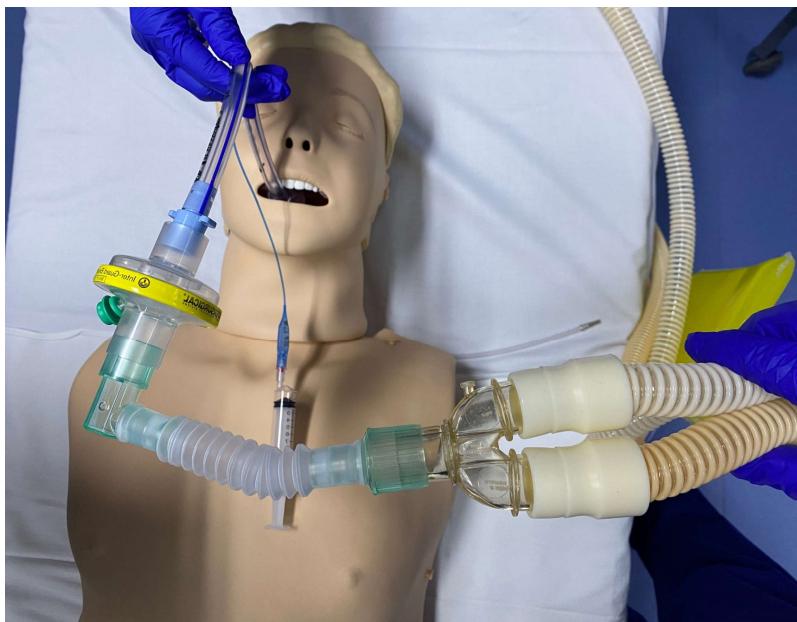
10ml air

8



## Re-attach Filter Apparatus

9



## Re-attach Circuit

Test ventilation to assess capnography and confirm tube placement

Switch to ventilator

10



**SAFE AIRWAY SOCIETY**

# COVID-19 AIRWAY MANAGEMENT

1. Intensive training
2. Early intervention

3. Meticulous planning
4. Vigilant infection control

5. Efficient airway management
6. Clear communication

## USE A 'BUDDY CHECK' FOR CORRECT PPE FITTING

### 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 ETCO<sub>2</sub> 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, Vice-grip and PEEP for full 5 minutes.  
Ensure a square ETCO<sub>2</sub> 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).  
Careful 2-person ventilation with Vice-grip and PEEP during onset of NMB.  
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.



SAFE AIRWAY SOCIETY

# COVID-19 AIRWAY MANAGEMENT

## Adapted Vortex Algorithm for COVID-19 patients



### MANIPULATIONS:

- HEAD & NECK
- LARYNX
- DEVICE



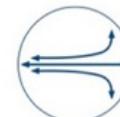
### ADJUNCTS



### SIZE / TYPE



### MUSCLE TONE



### SUCTION

IN-LINE, IF ETT IN SITU

**Correct sizing critical to minimising aerosolization**

#### ETT

Use VL screen  
i.e. indirect view

#### SGA

2nd Generation

#### Face-Mask

2-handed  
Small TV  
Use PEEP

**Can't Intubate, Can't Oxygenate**  
SCALPEL-BOUGIE TECHNIQUE



## Risk Factor

## Protective strategy

Aerosolization with dyspnoea/coughing

- Full PPE before entering intubation room
- Minimise time between removal of patient's PPE and application of well sealed FM
- Profound paralysis before instrumenting airway

Inadequate Facemask seal during pre-oxygenation

- Well-fitting mask
- Vice grip
- Manual ventilation device with collapsible bag (to maximise ability to identify leaks)
- ETO<sub>2</sub> to clarify end point of adequate PreOx as early as possible
- Delayed sequence intubation in combative patient

Positive pressure ventilation with inadequate seal

- Good seal
  - FM - as above
  - SGA - appropriate size, adequate depth of insertion
  - ETT - confirm cuff below cords, check cuff manometry, meticulous positioning of ETT
- Airway manometry to minimise ventilation pressures
- Minimise ventilation pressures
  - Paralysis
  - 45-degree head elevation
  - Oropharyngeal airway

High gas flows

- Avoid HFNO, nebulisers and airway suction with an open system