

T3-1: Preparation for intubation of a COVID-19 patient

Objective: Preparation of equipment and staff for intubation of a suspected COVID-19 patient. To be used in conjunction with **T2-1: Donning Personal Protective Equipment for a COVID-19 patient in theatre**

Pre-intubation

IN CLEAN ROOM

- 1 Assemble team in clean room**
 - ▷ Perform team introductions
 - ▷ Three hot-room team roles: intubator, airway assistant, drug administration/monitoring
 - ▷ Clean-room team roles: runner/donning buddy
- 2 Prepare for intubation**
 - ▷ Request COVID airway supplies trolley
 - ▷ Check *intubation equipment list*
 - ▷ Prepare airway equipment and rescue devices on a metal trolley
 - ▷ Assemble breathing system prior to intubation
 - ▷ Plan for airway difficulty and brief team (see *T3-2: Intubation of a COVID-19 patient*)
- 3 Check for patient allergies**
- 4 Remove personal items e.g. mobile phone, ID badge, keys from pockets**
- 5 Don and check PPE equipment**
- 6 Move to hot room**
 - ▷ Take ONLY the metal trolley into the hot room
 - ▷ Any additional equipment will be handed through by the runner

Intubation Equipment List

Intubation Equipment:

- Appropriately sized tracheal tube with subglottic suction
- Airtraq and screen or I-view videolaryngoscope
- Direct laryngoscope
- Bougie and stylet
- Tube tie
- Syringe
- Cuff manometer

Breathing Circuit:

- DO NOT USE High Flow Nasal Oxygenation
- Inline suction system
- Tracheal tube clamp
- Mainstream capnograph preferred; side stream on clean-side if no alternative
- If anaesthetic machine is being used:
 - HME filters at both patient and machine ends of circuit
 - DO NOT USE side-stream gas analyser where mainstream capnograph available
 - DO NOT use a Waters Circuit
- If no anaesthetic machine is available:
 - Waters Circuit with HME filter between patient and APL will be necessary
 - Place HME filters at the patient end of the circuit, and at the ventilator if possible

Drugs and IV access:

- Induction drugs for RSI
- Emergency drugs e.g. vasopressors
- Maintenance drugs and equipment e.g. propofol and pumps
- IV cannula, dressing, tourniquet with spares immediately available in clean room

Rescue Devices:

- Alternative supraglottic airways in a range of sizes
- Prepare an Aintree Intubating Catheter, an Ambu-scope Slim and a monitor in the clean room, but do not take it in to the hot room until needed at *Plan B: Secondary Intubation*
- Marker pen
- Emergency front of neck airway kit (scalpel, bougie, tube)

T3-2: Intubation of a COVID-19 patient

Objective: Intubation of a suspected COVID-19 patient minimising risk to staff. Only essential staff should enter the room with the patient. To be used in conjunction with **T2-1: Donning Personal Protective Equipment for a COVID-19 patient in theatre**

Intubation

IN HOT ROOM

- 1 Receive patient on trolley**
 - ▷ Check HME filters at both ends of breathing circuit and Yankauer sucker available
 - ▷ Check patient positioning, monitoring, and room ergonomics are suitable for intubation
 - ▷ Check landmarks for front of neck airway and mark cricothyroid membrane
- 2 Check IV access adequate and functional then connect IV fluids**
- 3 Pre-oxygenate for at least 5 minutes with tight seal on mask**
 - ▷ Consider 5cmH₂O PEEP
- 4 Apply cricoid pressure if appropriate, then give RSI drugs**
 - ▷ if hypoxia low pressure/low volume mask ventilation (two handed technique)
- 5 Turn oxygen off before removing mask**
 - ▷ Perform *Plan A: Primary intubation*
- 6 If intubation successful:**
 - ▷ Perform *post-intubation actions*
- 7 If laryngoscopy difficult:**
 - ▷ Insert iGel and ventilate
 - ▷ Perform *Plan B: Secondary Intubation*
 - ▷ If successful perform *post-intubation actions*
- 8 If cannot ventilate via iGel:**
 - ▷ Perform *Plan C: Mask ventilation*
- 9 If cannot mask ventilate:**
 - ▷ Perform *Plan D: Front of neck airway*
 - ▷ Perform *post-intubation actions*

Airway Plans

Plan A: Primary Intubation

- Laryngoscopy with Airtraq and screen or I-view videolaryngoscope preferred
- Direct laryngoscopy if this is the most familiar technique

Plan B: Secondary Intubation

- Request Ambu-scope Slim and Aintree Intubating Catheter from clean room:
 - Load Aintree Intubating Catheter on to Ambu-scope
 - Insert Aintree Intubating Catheter via iGel using Ambu-scope
 - Remove Ambu-scope and iGel; leave Aintree Intubating Catheter in trachea
 - Intubate over Aintree Intubating Catheter
 - Remove Aintree Intubating Catheter

Plan C: Mask Ventilation

- Low pressure/low volume mask ventilation
- Two-handed technique to maintain seal

Plan D: Front of Neck Airway

- Scalpel (size 10 blade)
- Bougie
- Size 6.0 tracheal tube

Post-intubation Actions

- Connect breathing circuit HME, inline suction, and mainstream capnograph
- Inflate cuff BEFORE ventilation
- Turn oxygen on
- Confirm capnography
- Secure tracheal tube with tie and note tube depth
- Start sedation/anaesthesia
- Check tracheal tube cuff pressure; must be at least 5cmH₂O above inspiratory pressure to minimise leak
- If the circuit must be disconnected occlude the tracheal tube with a clamp before detaching, and leave the filter on the patient side
- Clean anaesthetic machine and breathing circuit with 'Clinell' wipe
- Clean patient's face, neck, hair, and hands with soap and water
- DO NOT LEAVE HOT ROOM until 20 minutes have elapsed post-intubation
- Consider inserting NG tube and/or central venous access