

Obstetric COVID GA

General intubation principles

Safe – for staff and patient.

Accurate – avoiding unreliable, unfamiliar or repeated techniques.

Swift – timely, without rush or delay.

Prepare! Prepare! Prepare!

GA Caesarean Section Guide for suspected or confirmed COVID mothers

Prepare team

Confirm Case Urgency

PPE to include FFP3 mask for all T2 theatre staff

Airway Roles

1st Anaesthetist
(intubator)

- most experienced
- wear 2 pairs of gloves

2nd Anaesthetist
(drugs & monitor)

ODP
(cricoid pressure & equipment)
- wear 2 pairs of gloves

Other Team

Midwife
Obstetrics
Theatre scrub
Theatre runner
Neonatology
PPE monitor (outside)

Clean Runner*2
(outside)

WHO Checklist

Prepare equipment

Airway

Machine checked
Suction
- consider in-line
ET tubes - 7 & 6mm
Bougie / Stylet
2 laryngoscopes
- CMAC (*standard blade*)
- Mac 4
2nd Gen SAD
Guedel
Self-inflating bag

Monitoring

SpO₂ / BP / ECG / ETCO₂

Drugs

Thiopentone 5 mg/kg
Rocuronium 1mg/kg
? opioid co-induction

Antibiotics
Vasopressors
Vagolytic
TXA

Uterotonics
AVOID carbopost in resp compromise

Sugammadex
(16mg/kg available in clean area)

Prepare patient

Large bore IV
IV fluid running

Optimal position

Airway assessment
Left lateral tilt
25 degrees head-up
Identify cricoid

Non-intubating team step away from patient

Preoxygenation

NO HFNO / nasal spec
NO Water's circuit
ENSURE TIGHT SEAL

O₂ 15l/min
Tight fitting facemask via circle system

3 mins or 8 vital capacity breaths
TARGET ETO₂ ≥ 90%

If patient desaturates during apnoea consider gentle 2-person facemask ventilation with guedel

REMEMBER - soiled airway equipment is HIGH RISK

Plan for difficulty

Strategy

CONSIDER:
On intubation failure - can I wake patient up?

Plan A

RSI - CMAC
or preferred laryngoscope

Plan B

SAD

Plan C

2-Person Facemask
- Guedel airway
- Ensure tight seal

Plan D

Front of Neck Airway

Need help

CALL 2222

'Anaesthetic emergency team'

Ventilation Plan

DON'T ventilate

Connect HME filter
Inflate ETT cuff
Remove 2nd gloves
Ventilate

Determine ETT position without auscultation

use chest expansion & ETCO₂

Maintain Anaesthesia

Sevoflurane +/- N₂O
Titrate opioid

Ventilation

Aim O₂ Sats >94%
Tidal Volume: 6ml/kg ideal body weight
PEEP 5-10cmH₂O initially

Post-op Plan

Escalation

Patients with respiratory compromise

If PaO₂ ≤10kPa or SpO₂ ≤94% on FIO₂ 40% with PEEP 5cmH₂O

Discuss with ICU consultant (bleep 5490)

Review Obs ICU stabilisation guide

Extubation

Take your time – HIGH risk of aerosol contamination

Reduce theatre staff to minimum

Reduce vomiting risk

- Give high dose antiemetics
- N₂O washout

Pre-extubation suction if in-line suction used

Recover patient in theatre until awake

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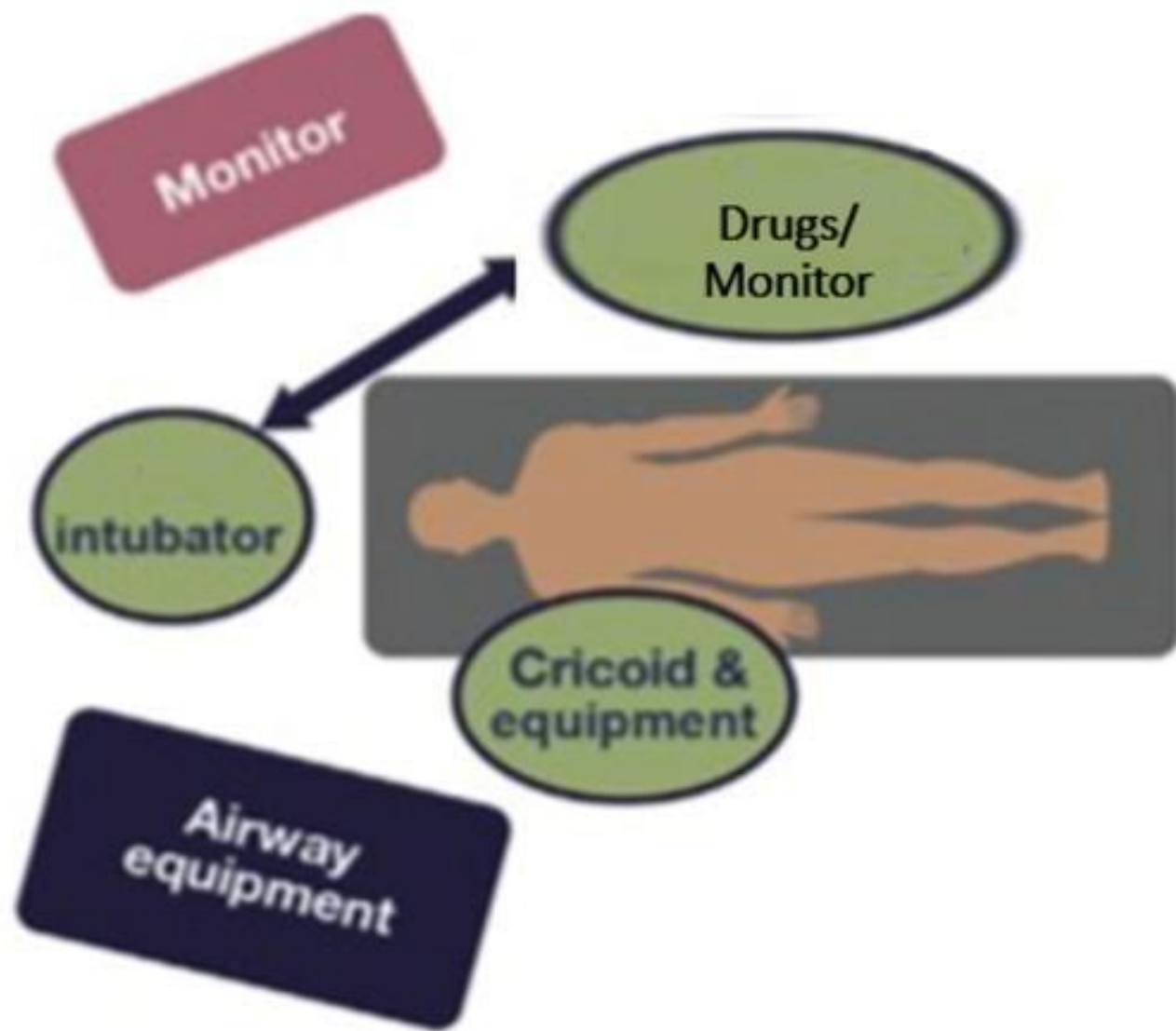
WHO Checklist

Intubation carries the highest risk of viral droplet transmission. Only the intubating team should be in theatre for intubation.

Scrub team should set up trays prior to intubation.

Theatre team should wait in scrub area in PPE until intubation is complete.

Inside



Outside



Remove all ID badges, pens, mobile phones, keys

Donn PPE including FFP3 mask



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(16mg/kg available in clean area)

Set up and check all equipment and drugs prior to GA/intubation

Prepare patient

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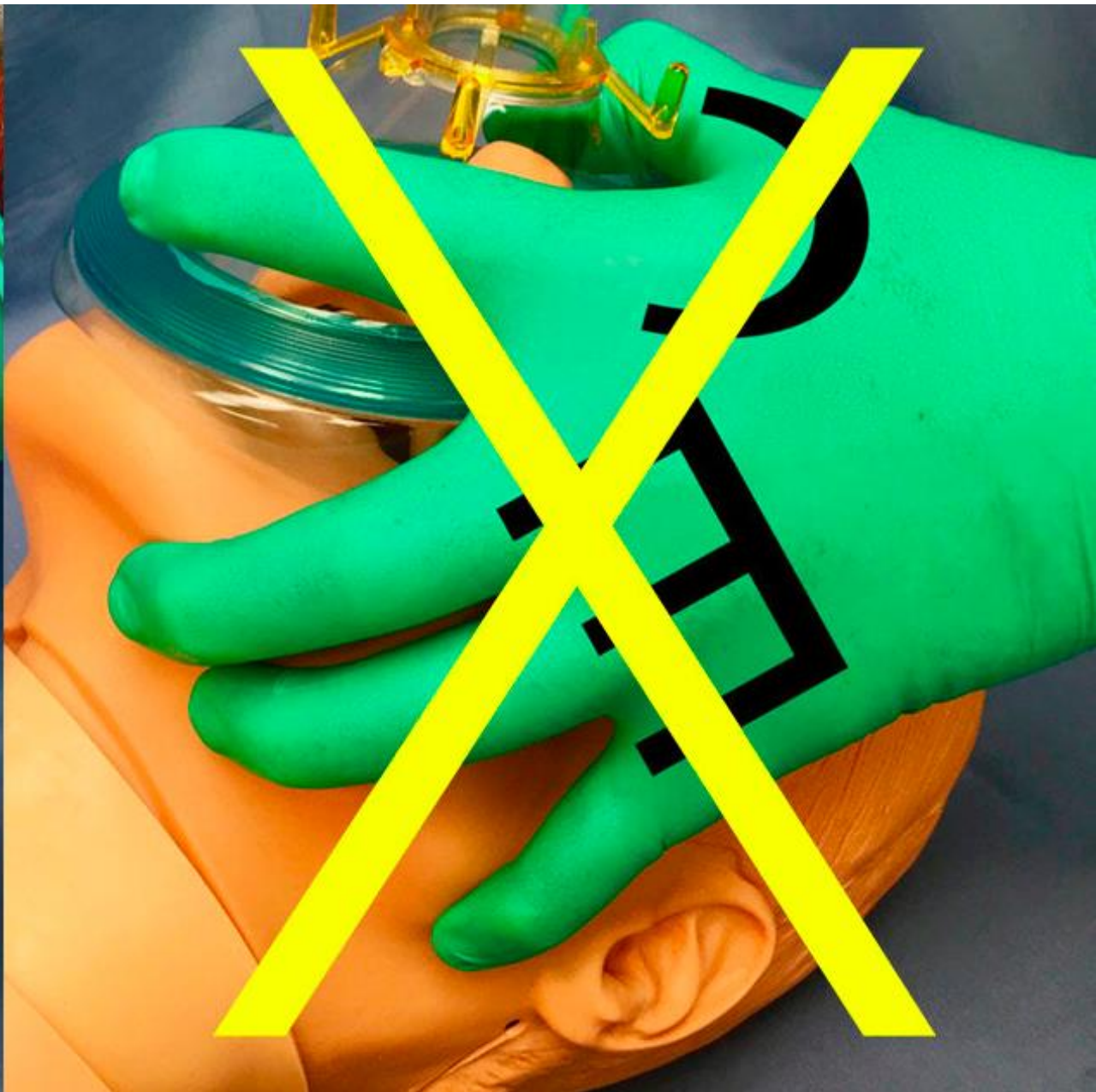
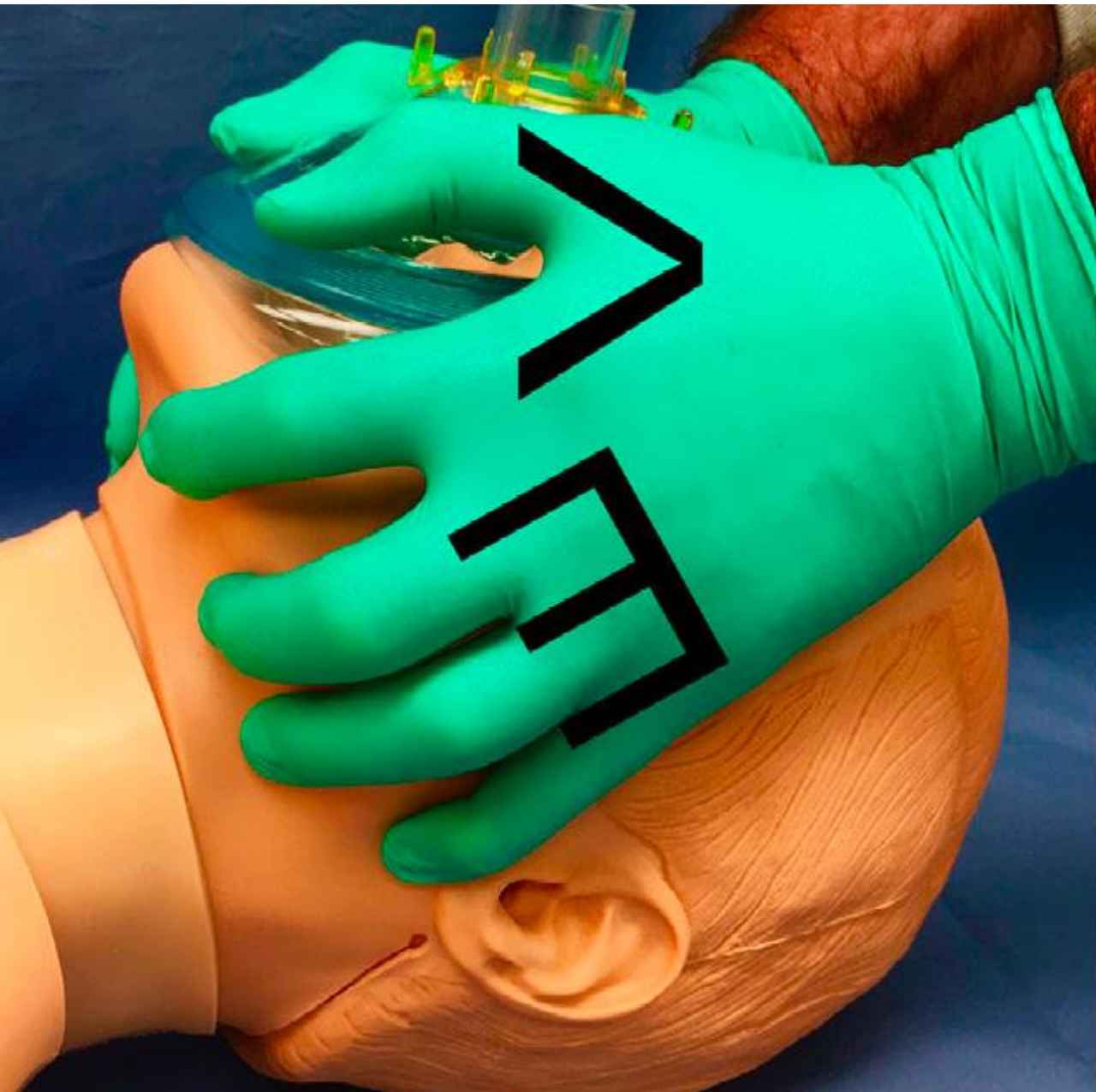
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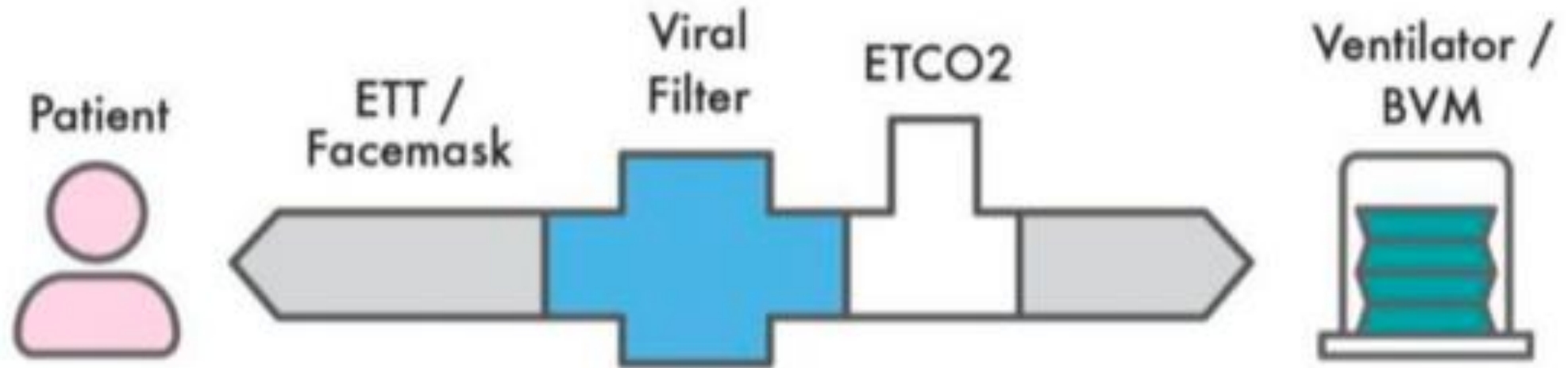
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2 HANDS
VICE GRIP





Ensure correct position of HME filter



Plan for difficulty

Strategy

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or preferred laryngoscope

Plan B

SAD

Plan C

- 2-Person Facemask
- *Guedel airway*
 - *Ensure tight seal*

Plan D

Front of Neck
Airway

Need help

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'Anaesthetic emergency team'



Soiled equipment

- Discuss with ODP how you are going to manage soiled equipment during/following intubation i.e. placing equipment directly back into airway trolley

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Pre-extubation
suction if in-line
suction used

Recover patient in
theatre until awake

Pitfalls and Troubleshooting

Be aware of moments of infection risk during GA

A 2012 systematic review of infection risk to healthcare workers [9], based on limited literature ranked airway procedures in descending order of risk as

- ➔ 1. Tracheal intubation
- 2. Tracheostomy (and presumed for emergency front-of-neck airway (eFONA))
- 3. Non-invasive ventilation (NIV)

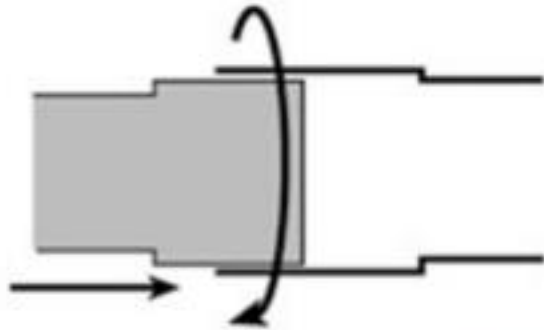
- ➔ 4. Mask ventilation

Other potentially aerosol-generating procedures include

- ➔ • Disconnection of ventilatory circuits during use
- ➔ • Extubation
- Cardiopulmonary resuscitation (before tracheal intubation)
- Bronchoscopy
- ➔ • Tracheal suction without a 'closed in-line system.'

'Tight Connections'

- Remember, it is important with conical connectors such as those used on breathing systems, always connect with a firm push and twist. This will ensure a leak tight connection.



Pay attention
to tight push
twist
connections

Accidental Ventilator Disconnection

- Pause ventilator
- Clamp ETT
- Reconnect circuit promptly
- Continue ventilation

ETT maintenance

- Monitor cuff pressures to prevent leak
- Record and check tube depth to minimize risk of displacement
- Any tracheal suction should use “in-line closed circuit” suction system



Extubation

- 1 Check whether to extubate on theatre table or bed (see *Location Risk Assessment*)**
- 2 Prepare patient for extubation**
 - ↳ Position table/bed so that all staff are behind patient
 - ↳ Sit patient upright and place **an inco-pad on the patient's chest**
 - ↳ Begin pre-oxygenation
- 3 Prepare equipment (see *Minimum Equipment List*)**
- 4 Clear airway of secretions**
 - ↳ Careful oral suction with Yankaeur sucker
 - ↳ Tracheal suction with inline suction system ↳ Administer sugammadex
- 5 Perform final pre-extubation checks**
 - ↳ Check train-of-four > 0.9 and establish self-ventilation
 - ↳ **Check $E_tO_2 > 0.9$**
 - ↳ Fully open APL valve
- 6 Stop anaesthetic agent(s)**
- 7 Untie tube tie and maintain control of tracheal tube**
- 8 Prepare team for extubation process**
 - ↳ Check patient can obey commands
 - ↳ Deflate cuff at the point of extubation then remove tube to inco-pad
 - ↳ Apply anaesthetic facemark immediately
 - ↳ Apply Hudson mask AND surgical mask once airway confirmed and coughing subsided
- 9 Observe patient for at least five minutes prior to transfer**

Extubation equipment checklist

- Oropharyngeal airway
- Anaesthetic facemask
- Hudson mask
- Surgical facemask
- iGel
- Yankaeur sucker
- Syringe to deflate tube cuff

Airway management for cardiac arrest

- Airway procedures during cardiac arrest are high risk for viral transmission.
- The *RC(UK)* guidance states “The minimum PPE requirements to assess a patient, start chest compressions & establish monitoring of the cardiac arrest rhythm are an FFP3 facemask, eye protection, plastic apron, and gloves.”
- Avoid listening or feeling for breathing by placing your ear and cheek close to the patient’s mouth.
- In the presence of a trained airway manager early tracheal intubation with cuffed tracheal tube should be the aim.
- Before this, insertion of an SAD may enable ventilation of the lungs with less aerosol generation than face mask ventilation. Insertion of a SAD should take priority over face mask ventilation to minimise aerosol generation.