

Rapid evidence checks are based on a simplified review method and may not be entirely exhaustive, but aim to provide a balanced assessment of what is already known about a specific problem or issue. This brief has not been peer-reviewed and should not be a substitute for individual clinical judgement, nor is it an endorsed position of NSW Health.

Select international medical college advice on COVID-19

Rapid review question

What advice is being provided by international medical colleges regarding COVID-19?

In brief

- Detailed advice is provided Faculty of Intensive Care Medicine jointly with Intensive Care Society and Royal College of Anaesthetists; Royal College of Obstetricians and Gynaecologists (particularly new advice on pregnant staff). The Royal College of Surgeons provides high level principles.
- The NHS has published a wide range of advice <https://www.england.nhs.uk/coronavirus/>

Background

The COVID-19 pandemic is rapidly changing situation. A rapid review of the key international medical college websites was conducted on 22 March 2020.

Methods

The Academy of Medical Royal Colleges website provided a master list of colleges in the UK (<https://www.aomrc.org.uk/covid-19/>). Websites for each college were accessed and reviewed for key information on COVID-19.

Additional searches were made of the UK's NICE COVID-19 specific site; and select colleges in Canada and the US. NICE COVID-19 specific guidelines are noted (Appendix 4)

Results

NON SURGICAL COLLEGES

| International College | Advice on website |
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| Faculty of Intensive Care Medicine jointly with Intensive Care Society and Royal College of Anaesthetists, | <ul style="list-style-type: none">• Detailed guidance and checklists on:<ul style="list-style-type: none">○ Airway management (see appendix 1)○ Obstetric anaesthesia (advice on PPE to be worn when managing pregnant women with known or suspected COVID-19; management of pregnant women with known or suspected COVID-19) |

| International College | Advice on website |
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| <p>Detailed guidance</p> | <ul style="list-style-type: none"> ○ Critical care -operational and clinical guidance (bulleted below) <p>Conservation of oxygen</p> <ul style="list-style-type: none"> • Avoid hyperoxia in patients receiving supplemental oxygen. • Generally aim for SpO2 92-96%, although the target may be lower in some patient groups. • Avoid high flow oxygen delivery devices (see below). • Eliminate waste by ensuring oxygen flowmeters are switched off when not attached to patients. <p>High Flow oxygen delivery devices</p> <ul style="list-style-type: none"> • High Flow Nasal Oxygen or similar devices should be avoided. There is no survival benefit compared to conventional oxygen therapy, and the risk of environmental viral contamination may be higher. <p>Non-invasive Ventilation devices</p> <ul style="list-style-type: none"> • Use of CPAP or NIV should be confined to short periods using a well-fitting interface (full face mask or helmet) as a bridge to invasive mechanical ventilation. • For some patients, NIV will form the appropriate ceiling of care. In these cases, due to the risk of environmental viral contamination, it is preferable to deliver NIV in an isolated environment (negative or neutral pressure room). • Use of NIV following extubation in the recovering patient should be informed by repeat testing of COVID-19 status. • If possible, an antimicrobial filter should be located on the expiratory limb of any NIV device. <p>Location</p> <ul style="list-style-type: none"> • Negative pressure or neutral pressure room facilities are often limited in number. It may be necessary to cohort ventilated patients in areas on units and wards. • Single occupancy rooms could be reserved for those receiving NIV (as above) or for non-COVID-19 patients, or for those with suppressed or compromised immune systems. <p>Endotracheal intubation</p> <ul style="list-style-type: none"> • Follow intubation guidance. • Intubation should be performed by a skilled operator wearing appropriate PPE for an aerosol-generating procedure (latest recommendations here). • Development of MERIT (see above) with appropriate portable equipment, PPE and protocols is advised. <p>Sedation</p> <ul style="list-style-type: none"> • Follow established protocols for sedating critically ill patients with hypnotic infusions. • For patients ventilated on an anaesthetic machine, low dose (MAC 0.2-0.5) inhalational anaesthesia may be used to maintain sedation with a volatile agent in a low-flow (circle) system. <p>Ventilation</p> |

| International College | Advice on website |
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| | <ul style="list-style-type: none"> • Ensure use of an antimicrobial filter within the circuit or placed on the expiratory limb or ventilator exhaust. Note that filters represent an airflow obstruction risk when saturated and routine exchange is advised. • Use in-line suction catheters where possible. • Avoid inadvertent ventilator circuit disconnections by ensuring all connections are 'tight.' • Manual ventilation, or 'hand-bagging' is not advised. • Ensure the endotracheal tube is clamped during any planned circuit disconnection, eg switching between ventilators, replacing the antimicrobial filter, or inserting a bronchoscope into the tube. <p>Management of Acute respiratory distress syndrome (ARDS)</p> <ul style="list-style-type: none"> • Follow established management guidelines including: • lung protective ventilation • conservative fluid management strategy • neuromuscular blockade • lung recruiting manoeuvres and ventilator modes (eg APRV). <p>Prone positioning</p> <ul style="list-style-type: none"> • Recent experience with COVID-19 in Italy suggests a beneficial response to prone positioning. • Utilising prone positioning to improve oxygenation is advised in patients failing conventional supine ventilation. • Development of a 'proning team' is advised to improve efficiency. <p>Aerosol-generating procedures</p> <ul style="list-style-type: none"> • AGPs such as intubation, facemask ventilation, circuit disconnection, bronchoscopy and physiotherapy may increase the risk of environmental viral contamination. Please see the PHE website for guidance on appropriate PPE. • Nebulisers should be confined to use within a closed ventilator circuit. <p>Corticosteroids</p> <ul style="list-style-type: none"> • Routine high-dose corticosteroid use in COVID-19 is not advised. • High-dose steroids appear to be associated with a worse outcome and prolonged viral shedding in patients with coronaviruses. • Low-dose steroids may be considered as part of a clinical trial. <p>Cardiac arrest</p> <ul style="list-style-type: none"> • Appropriate PPE must be worn as with aerosol-generating procedures. Facemask ventilation should be avoided where possible. • Compression-only CPR is advised until airway-experienced personnel are available. • Use of an automated chest compression device may be used. • Early intubation by an experienced operator is advised. |

| International College | Advice on website |
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| | <p>Extracorporeal membrane oxygenation (ECMO)</p> <ul style="list-style-type: none"> Follow established guidance and thresholds for referral to ECMO network. Trials of PEEP recruitment, recruiting ventilator modes, eg APRV, and proning will be necessary prior to consideration for mechanical support. <p>Patients receiving home mechanical ventilation</p> <ul style="list-style-type: none"> It may be necessary to quarantine the home ventilator and dispose of any consumable components. To avoid aerosol generation and prevent droplet spread and minimise exhaled leak dispersion, a well-fitting facemask is advised. Change the circuit if switching from a vented mask to a non-vented mask and an exhalation port. Include an expiratory antimicrobial filter. If long-term tracheostomy ventilation, the tracheostomy tube should be exchanged for a cuffed tube to reduce leak dispersion. Patients should preferably be ventilated in an isolation room (as in NIV above). Employ a low threshold for conversion to invasive mechanical ventilation where appropriate. Cough assist devices should be avoided. Escalation of care discussion which may be now different from advanced directive. <p>DNAR status and ceilings of care</p> <ul style="list-style-type: none"> Routine practice should include discussion and documentation of DNAR status and appropriate limits of effective therapy, on admission to the hospital. <p>Wellbeing</p> <ul style="list-style-type: none"> Please try and ensure all team members are sufficiently rested, supported and have adequate breaks from clinical duty. <p>https://icmanaesthesiacovid-19.org/clinical-guidance</p> |
| Faculty of Occupational Medicine | <ul style="list-style-type: none"> Links to government advice |
| Faculty of Pharmaceutical Medicine | <ul style="list-style-type: none"> No specific advice |
| Faculty of Public Health | <ul style="list-style-type: none"> No specific advice |
| Faculty of Sexual and Reproductive Healthcare | <ul style="list-style-type: none"> Provides list of essential services during COVID-19 outbreak (clear information about where and how to access services; emergency contraception; support existing continued use of long-acting reversible contraception (LARC); contraception for vulnerable groups; abortion care; sexual assault care; extending the use of online contraception services |

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| International College | Advice on website |
| | <ul style="list-style-type: none"> • Outlines services suitable for telemedicine or changed (repeat contraception; abortion counselling; LARC counselling; routine LARC removals) |
| Royal College of Anaesthetists (see Intensive care) | SEE above Intensive Care |
| Royal College of Emergency Medicine | <ul style="list-style-type: none"> • Links to government resources |
| Royal College of General Practitioners | <ul style="list-style-type: none"> • Links to government resources • Brief case definition; symptomatic patients; testing; telephone triage and online counselling; symptomatic patients in surgeries; patients with viral symptoms who do not meet case definition; PPE; home visits <p>https://www.rcgp.org.uk/-/media/Files/Policy/A-Z-policy/2020/covid19/RCGP-GP-guidance-march-2020.ashx?la=en</p> |
| Royal College of Obstetricians and Gynaecologists Pregnant staff guidance | <ul style="list-style-type: none"> • Detailed guidance and flow charts (see appendix 2) • New advice for pregnant women who are working in the NHS and other work settings published 21 March <ul style="list-style-type: none"> ○ Women who are less than 28 weeks pregnant should practise social distancing but can continue working in a patient-facing role, provided the necessary precautions are taken ○ Women who are more than 28 weeks pregnant, or have underlying health conditions, should avoid direct patient contact <p>https://www.rcog.org.uk/globalassets/documents/guidelines/2020-03-21-covid19-pregnancy-guidance-2118.pdf</p> |
| Royal College of Ophthalmologists | <p>Key actions</p> <ul style="list-style-type: none"> • Ensuring systems in place to identify and prevent arrival or entry to clinic of high risk and symptomatic patients • Planning and implementing emergency response for service maintenance, including: <ul style="list-style-type: none"> ○ Cancel/defer elective surgery and non urgent outpatient attendances ○ Deflect non serious unplanned attendances ○ Establish communications with patients ○ Defer or rebook low risk and non urgent ○ Support identification and implementation of telephone and video consultations ○ Organising tiers of staff and cross cover as gaps emerge when staff are off <p>https://rcophth.ac.uk/2020/03/covid-19-update-and-resources-for-ophthalmologists/</p> |
| Royal College of Paediatrics and Child Health | <ul style="list-style-type: none"> • No specific guidance |
| Royal College of Pathologists | <ul style="list-style-type: none"> • Advice of redeployment of pathologists |

| International College | Advice on website |
|---------------------------------------|--|
| | <ul style="list-style-type: none"> Transmission precautions – guidance for care of deceased https://www.rcpath.org/uploads/assets/0b7d77fa-b385-4c60-b47dde930477494b/G200-TBPs-Guidance-for-care-of-deceased-during-COVID-19-pandemic.pdf |
| Royal College of Physicians of London | <ul style="list-style-type: none"> Links to government resources |
| Royal College of Psychiatrists | <ul style="list-style-type: none"> Guidance on remote consultations, patient engagement, PPE; workforce https://www.rcpsych.ac.uk/about-us/responding-to-covid-19/guidance-for-clinicians |
| Royal College of Radiologists | <ul style="list-style-type: none"> Position statements on CT; clinical oncology; https://www.rcr.ac.uk/college/coronavirus-covid-19-what-rcr-doing |
| | |

SURGERY- ASSOCIATED COLLEGES

| International College | Advice on website |
|--|--|
| <p>Royal College of Surgeons (jointly UK and Ireland for COVID-19 information)</p> | <ul style="list-style-type: none"> • https://www.rcseng.ac.uk/coronavirus/ • Four key priorities, in order of importance: <ul style="list-style-type: none"> ○ Maintain emergency surgery capabilities including rotating rosters within specialties and then moving to general groups if/when workforce is depleted ○ Protect and preserve the surgical workforce ○ Fulfil alternate surgical roles ○ Fulfil alternate non-surgical roles |
| <p>NHS Guidance, in partnership with Surgical Societies</p> | <ul style="list-style-type: none"> • Categories of patients to consider when making local arrangements for surgical patients: <ul style="list-style-type: none"> ○ Obligatory inpatients: Continue to require admission and surgical management, eg postoperative patients. We must expedite treatment to avoid preoperative delay and expedite rehabilitation to minimise length of stay. ○ Non-operative: ○ Inpatient management: Patients with conditions that can reasonably be managed either operatively or non-operatively, eg biliary colic. We must consider nonoperative care if that avoids admission. ○ Day cases: Surgery can be safely undertaken for a large number of conditions. Provision for day case surgery must be made. ○ Clinics: Outpatient attendances should be kept to a safe minimum. • https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/03/specialty-guide-surgery-and-coronavirus-v1-16-march-2020.pdf |
| <p>American College of Surgeons</p> | <p>For non-emergent surgery triage:</p> <ul style="list-style-type: none"> • Consider both their patients’ medical needs, and their logistical capability to meet those needs, in real time. • Medical need for a given procedure should be established by a surgeon with direct expertise in the relevant field. • Logistical feasibility for procedure should be determined by administrative personnel with an understanding of hospital and community limitations, taking into consideration facility resources (beds, staff, equipment, supplies, etc.) and safety. • Cases should be determined with a mix of the above three together with context of overall COVID-19 situation. • The risk to the patient should include an aggregate assessment of the real risk of proceeding and the real risk of delay. • *See below acuity scale table. • https://www.facs.org/about-acscovid-19/information-for-surgeons/triage <p>For elective procedures:</p> <ul style="list-style-type: none"> • Review all scheduled elective procedures with a plan to minimise and postpone elective surgery, endoscopies and |

| International College | Advice on website |
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| | <p>invasive procedures until after health care infrastructure can support.</p> <ul style="list-style-type: none"> • Minimise use of essential items including ICU beds, PPE, terminal cleaning supplies, and ventilators. • Shift elective urgent inpatient diagnostic and surgical procedures to outpatient settings, when feasible. • https://www.facs.org/about-acscovid-19/information-for-surgeons/elective-surgery • Centers for Medicare & Medicaid Services (CMS) announced that all elective surgeries, non-essential medical, surgical, and dental procedures be delayed during the 2019 Novel Coronavirus (COVID-19) outbreak. |
| <p>The Royal College of Physicians and Surgeons of Canada</p> | <ul style="list-style-type: none"> • http://www.royalcollege.ca/rcsite/documents/about/covid-19-resources-health-professionals-e • No specific advice regarding triage of patients. |
| <p>NHS Guidance</p> | <p>Wide ranging advice https://www.england.nhs.uk/coronavirus/</p> |

Appendix 1: Guidance from Faculty of Intensive Care Medicine UK

COVID-19 Airway management principles SAS

- Safe for patient and staff
- Accurate – avoiding unreliable, unfamiliar or repeated techniques
- Swift – timely, without rush or delay



Figure 5. Checklists. (a) Adapted from [20] with permission (b) from [26]

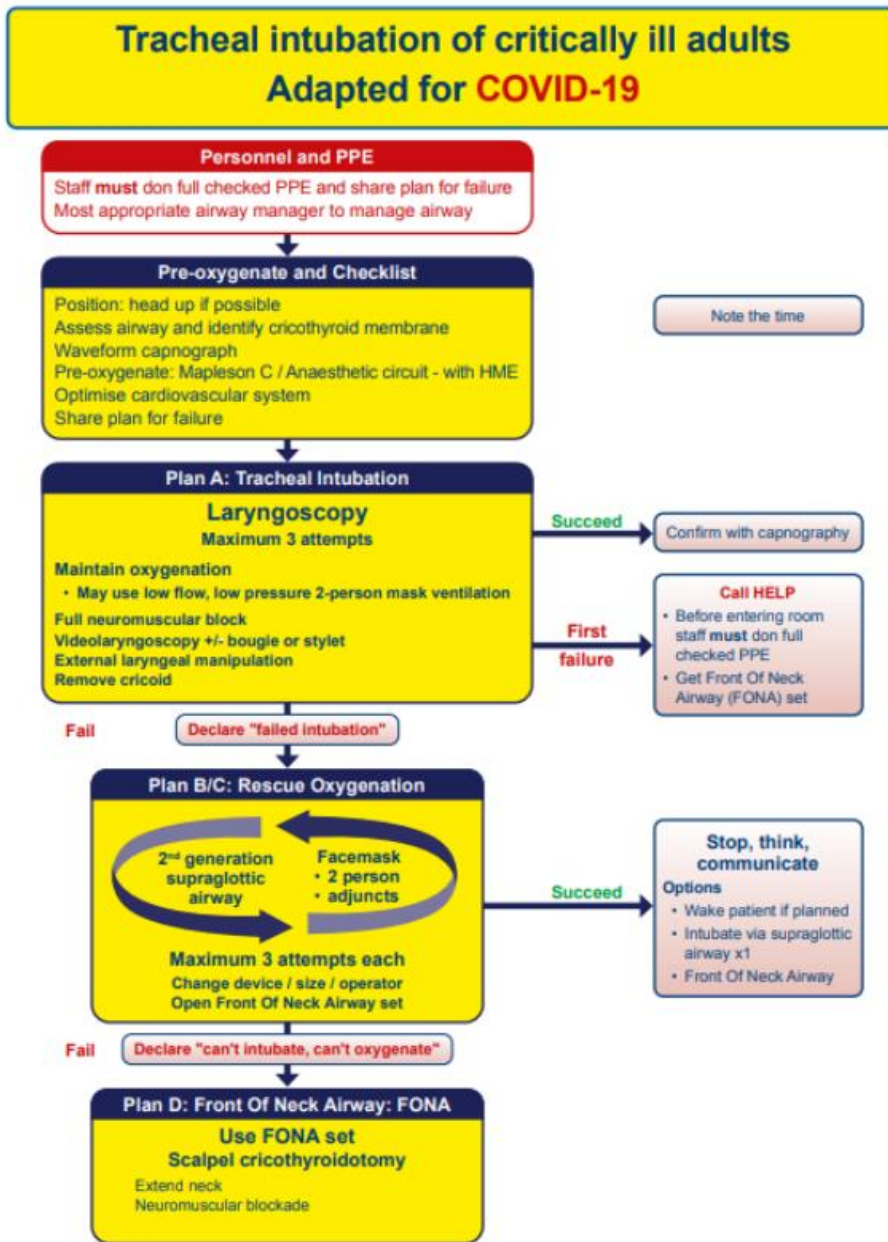
Emergency tracheal intubation checklist COVID-19

| Personal Protective Equipment | Prepare Equipment | Prepare for Difficulty | In the Room | Post-procedure and Safety |
|--|---|--|--|--|
| OUTSIDE ROOM | | INSIDE ROOM | | |
| <p>PPE – be thorough, don't rush</p> <ul style="list-style-type: none"> Wash hands Put on PPE Long sleeved gown FFP3 mask Gloves Eyewear Wipeable shoes if in hospital <p>Check fully by buddy with checklist</p> <p>Names on visors</p> <p>Allocate roles:</p> <ul style="list-style-type: none"> Team leader and intubator Child face and intubator's assistant Drugs, monitor, timer Brunner (outside) FONA <p>How do we contact further help if required?</p> | <p>Check kit</p> <ul style="list-style-type: none"> BMV or Mapleson C with HME attached Guafel Working suction Videoendoscope Bougie/lytel Two tracheal tubes, ties and syringe 2nd generation SGA siFOVA set <p>Do you have all the drugs required?</p> <ul style="list-style-type: none"> Relaxant Videopressor Haemostatic sedation <p>Weight?</p> <p>Allergies?</p> | <p>If the airway is difficult, could we wake the patient up?</p> <p>What is the plan for a difficult intubation?</p> <ul style="list-style-type: none"> Plan A: RSI Plan B/C: 2-handed 2-person BMV & 2nd generation SGA <p>Plan D: e.g. Front of neck airway: scalpel bougie tube</p> <p>Confirm agreed plan</p> <p>Does anyone have any concerns?</p> | <p>Airway assessment</p> <ul style="list-style-type: none"> Identify CTM BRACCOA <p>Apply monitors</p> <ul style="list-style-type: none"> Distal aorticography SpO₂ probe ESCC Blood pressure <p>Checked IV access (x2)</p> <p>Optimise position</p> <ul style="list-style-type: none"> Consider opening or reverse Trendelenburg <p>Optimal preoxygenation</p> <ul style="list-style-type: none"> 10 mins ETCO₂ > 85% SpO₂ > 95% <p>Optimise patient condition be optimised any further before intubation?</p> <ul style="list-style-type: none"> Fast/pressor increase Apply NGT Delayed sequence induction? | <p>Airway management</p> <ul style="list-style-type: none"> Establish ventilation after cuff inflation Check waveform capnography Clamp tracheal tube before each disconnection Avoid unnecessary disconnections <p>Other</p> <ul style="list-style-type: none"> Insert NGT Consider deep tracheal airt sample <p>Careful equipment disposal</p> <p>Decontamination of reusable</p> <ul style="list-style-type: none"> Remove PPE Cleaned by buddy Use checklist Meticulous disposal Wash hands |

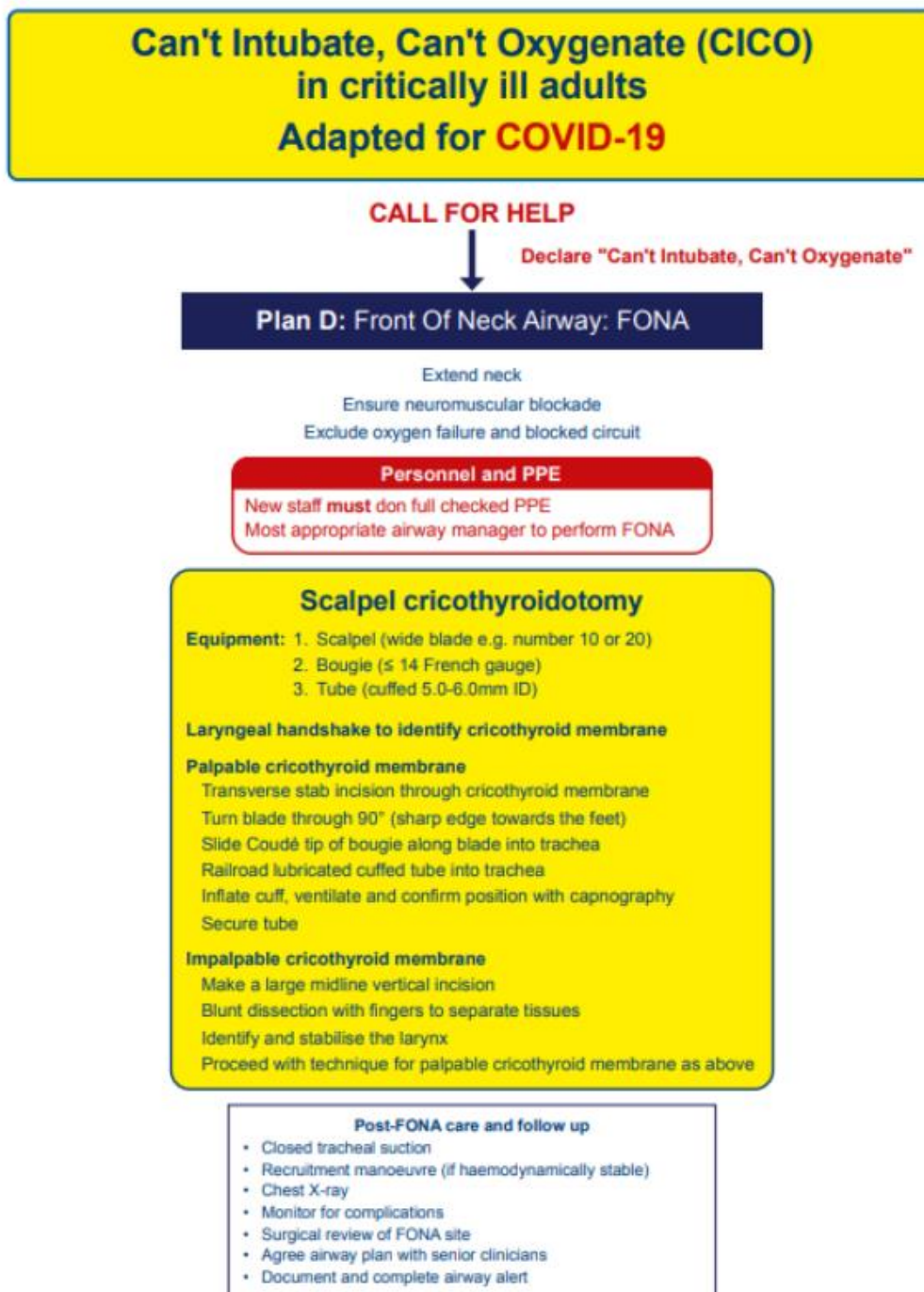
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Figure 6. Cognitive aids for use when managing unexpected difficulty when intubating a patient with COVID-19. (a) and (b) Highly adapted from [20] with permission (c) from [27] with permission.

a



b



This flowchart forms part of the 2020 COVID-19 Airway Guideline for tracheal intubation. Refer to the full document for further details.

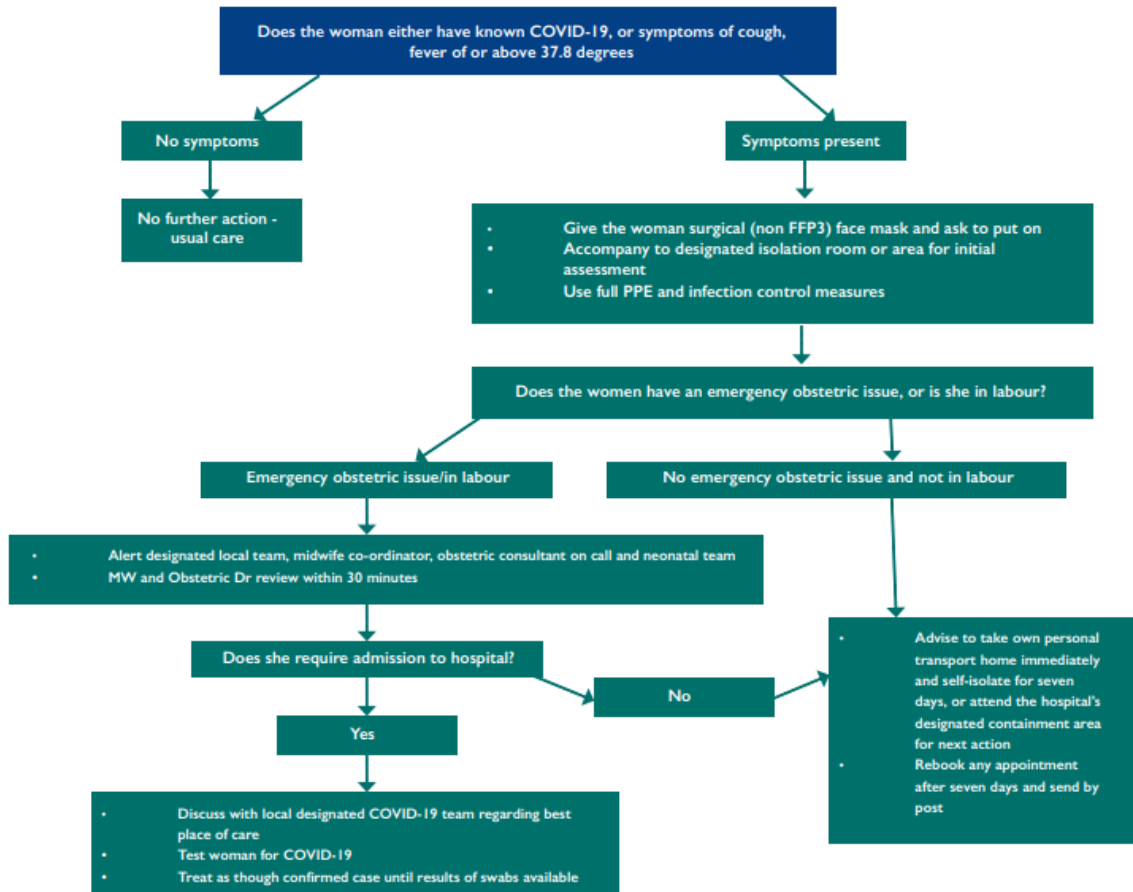
Summary for emergency tracheal intubation of COVID 19 patient

- Tracheal intubation of the patient with COVID-19 is a high-risk procedure for staff, irrespective of the clinical severity of disease.
- In severe COVID-19 it is also a high-risk procedure for the patient
- Limit staff present at tracheal intubation: one intubator, one assistant and one to administer drugs/monitor patient.
- Create a COVID-19 tracheal intubation trolley that can be used in ICU or elsewhere.
- PPE is effective and must be worn. Wear full PPE at all times. Consider double gloving. Defog goggles and/or eye wear if possible. Touch as little as possible in the room to avoid fomites.
- Intubate in a negative pressure room with >12 air changes per minute whenever possible.
- Everyone should know the plan before entering the room – use a checklist to achieve this.
- Plan how to communicate before entering the room.
- The algorithm/cognitive aid you plan to use should be displayed in or taken into the room.
- All preparations of airway equipment and drugs that can take place outside the room should do.
- Use a kit mat if available.
- The best skilled airway manager present should manage the airway to maximise the first pass success.
- Focus on safety, promptness and reliability. Aim to succeed at the first attempt because multiple attempts increase risk to sick patients and staff. Do not rush but make each attempt the best it can be.
- Use reliable techniques that work, including when difficulty is encountered. The chosen technique may differ according to local practices and equipment. With prior training and availability this is likely to include:
 - preoxygenation with a well-fitting mask and a Mapleson C ('Waters') or anaesthetic circuit, for 3-5 minutes.
 - videolaryngoscopy for tracheal intubation;
 - 2-person, 2-handed mask ventilation with a VE-grip to improve seal;
 - a second-generation supraglottic airway device (SAD) for airway rescue, also to improve seal.
- Place an HME filter between the catheter mount and the circuit at all times. Keep it dry to avoid blocking.
- Avoid aerosol-generating procedure, including high-flow nasal oxygen, non-invasive ventilation, bronchoscopy and tracheal suction unless an in-line suction system is in place.
- Full monitoring, including working continuous waveform capnography before, during and after tracheal intubation.
- Use RSI with cricoid force where a trained assistant can apply it. Take it off if it causes difficulty.
- To avoid cardiovascular collapse use ketamine 1–2 mg.kg⁻¹, rocuronium 1.2 mg.kg⁻¹ or suxamethonium 1.5 mg.kg⁻¹.
- Have a vasopressor for bolus or infusion immediately available for managing hypotension.
- Ensure full neuromuscular blockade before attempting tracheal intubation.
- Avoid face mask ventilation unless needed and use a 2- person, low flow, low pressure technique if needed.
- Intubate with a 7.0-8.0 mm ID (females) or 8.0-9.0 mm ID (males) tracheal tube with a subglottic suction port.
- Pass the cuff 1-2 cm below the cords to avoid bronchial placement. Confirming position is difficult wearing PPE.
- Inflate the tracheal tube cuff to seal the airway before starting ventilation. Note and record depth.
- Confirm tracheal intubation with continuous waveform capnography – which is present even during cardiac arrest.
- Use a standard failed tracheal intubation algorithm with a cognitive aid if difficulty arises.
- Communicate clearly: simple instructions, closed loop communication (repeat instructions back), adequate volume without shouting.
- Place a nasogastric tube after tracheal intubation is completed and ventilation established safely.
- If COVID-19 status not already confirmed take a deep tracheal aspirate for virology using closed suction.
- Discard disposable equipment safely after use. Decontaminate reusable equipment fully and according to manufacturer's instructions.
- After leaving the room ensure doffing of PPE is meticulous.
- Clean room 20 minutes after tracheal intubation (or last aerosol generating procedure).
- A visual record of tracheal intubation should be prominently visible on the patient's room.
- If airway difficulty occurs the subsequent plan should be displayed in the room and communicated between shifts.

Appendix 2: RCOG guidance

Flow chart to assess COVID-19 risk in maternity unit attendees

Derived from Royal London flowchart developed by Dr Misha Moore



Appendix 4: NICE rapid guidance

Rapid guidelines and evidence reviews

Rapid guidelines

The first 3 guidelines cover care for people receiving:

- [critical care](#)
- [kidney dialysis](#)
- [systemic anticancer treatments](#).

They're developed in collaboration with NHS England and NHS Improvement and a cross-speciality clinical group, supported by the specialist societies and royal colleges. [We're using a different approach to normal](#) in order to develop these quickly.

Rapid evidence reviews

These will look at whether certain medicines may increase the severity or length of COVID-19 illness.

We're reviewing:

- ibuprofen and other non-steroidal anti-inflammatory drugs used to reduce temperature and ease flu-like symptoms
- angiotensin converting enzyme (ACE) inhibitors used to treat high blood pressure or heart failure.

We're also working with the Medicines and Healthcare products Regulatory Agency. Together we'll facilitate rapid review of information and advice on the safety and efficacy of treatments for COVID-19.

<https://www.nice.org.uk/covid-19>