COVID-19 guidance for anaesthesia and perioperative care providers

The following table is intended as interim guidance for anaesthesia and perioperative care providers, largely derived from recommendations released by the Department of Anaesthesiology and Pain Medicine at the University of Toronto, and supported by a useful review published by Wax et al.

Routine Care for Patients with Suspected or Confirmed COVID-19
At a minimum, use **droplet and contact precautions** for suspected or confirmed cases of the 2019-nCoV. Some jurisdictions are recommending routine use of **airborne, droplet and contact precautions** (including an isolation room appropriate for airborne infection isolation) for suspected or confirmed cases of the 2019-nCoV. However, triage for airborne precautions and isolation rooms will necessarily be based on level of suspicion, and types of procedures provided, and available facilities. All healthcare providers should be **trained in infection control and prevention strategies, and in procedures for donning and doffing personal protective equipment (PPE).** Healthcare **facilities should provide healthcare workers with adequate PPE isolation** facilities to meet the requirements for airborne, droplet and contact precautions. Practice appropriate hand hygiene before and after all procedures. Patient rooms with suspected or confirmed COVID-19 **should be labelled with a sign,** so that all healthcare workers and support staff are aware of the risk before entering the area.
High Risk Procedures – Intubation and other Aerosol-generating medical procedures (AGMP)*
1. Protecting healthcare providers is the first priority, as you are the primary line of defense for this patient, and upcoming patients. 2. Ensure adequate time for reviewing the intubation plan, and for donning PPE. Preferably prepare a checklist to guide the procedure. 3. Enhanced PPE is required for AGMPs. A fit-tested N95 respirator (or powered air purifying respirator (PAPR) device, if one is adequately trained to use), face shield, gown, and double gloves (preferably long gloves). 4. Minimize the number of staff in the room to the number required to provide safe intubation. 5. Preferably, the most experienced anaesthesiologist should perform the intubation. 6. Before the procedure begins, ensure all equipment is ready: standard monitoring equipment, i.v. access, drugs. Ensure ventilator and suction equipment is functional. 7. Avoid awake fiberoptic intubation (due to risk of coughing and aerosols). Consider videolaryngoscopy to minimize close exposure between anaesthesiologist and patient respiratory aerosols. 8. Plan for rapid sequence induction (RSI). RSI may need to be modified to ultra-rapid, if patient has very high alveolar-arterial gradient and is unable to tolerate a short period of apnoea, or has a contraindication to neuromuscular blockade. 9. If manual ventilation is required, apply small tidal volumes only. 10. Five minutes of preoxygenation with oxygen 100% and RSI in order to avoid manual ventilation and potential aerosolization of infectious respiratory droplets. 11. Ensure high efficiency hydrophobic filter placed between facemask and breathing circuit or between facemask and Laerdal bag.

12. Intubate and confirm correct position of tracheal tube.
13. Institute mechanical ventilation and stabilize patient.
14. The use of high-flow nasal oxygenation and mask CPAP or BiPAP should be avoided due to greater risk of aerosol generation.
15. All airway equipment must be decontaminated and disinfected according to appropriate hospital and manufacturer policies.
16. Ensure all dirty equipment is placed in a bin that is appropriately labelled for the support staff who collect and process the equipment.
17. Remove outer gloves before touching any spaces that may be touched by others.
18. Doff equipment within an area designated for doffing dirty PPE.
19. After removing protective equipment, avoid touching hair or face before washing hands.
20. Practice hand hygiene before and after all procedures.

*aerosol generating procedures include intubation, extubation, bronchoscopy, airway suction, high frequency oscillatory ventilation, tracheostomy, chest physiotherapy, nebulizer treatment. These procedures should be performed in the COVID-19 patient only when the benefits outweigh the risks, and when adequate PPE and staff preparation is available.

Further resources available at www.wfsahq.org on 09/04/2020

Guidance on COVID-19 and anaesthesia

- APSF - Perioperative Considerations for the 2019 Novel Coronavirus (COVID-19)
- ASA - Coronavirus (2019-nCoV)
- SASA - South African Society of Anaesthesiologists COVID-19 resource page
- Anesthesia & Analgesia - COVID-19 collection
- APSF,ASA,AAAA & AANA - The Use of Personal Protective Equipment by Anesthesia Professionals during the COVID-19 Pandemic
- WFSA - ATOTW 421: Perioperative management of suspected/ confirmed cases of COVID-19
- Canadian Journal of Anesthesia/Journal canadien d'anesthésie - COVID-19 topical collection

Guidance on Airway Management

- SIAARTI - Covid 19 - Airway Management
- Prince of Wales, Hong Kong - Covid- 19 Principles of airway management (Available in English, French, Spanish, Portuguese, Dutch, Chinese, Japanese, Italian, German)
- UCSF - Ventilator management pocket reference

Guidance on Obstetric Anaesthesia

- Society for Obstetrics Anesthesia & Perinatology (SOAP) - Intermin considerations for obstetric Anaesthesia Care related to COVID-19
- Royal College of Obstetricians & Gynaecologists - Coronavirus (COVID-19) Infection in Pregnancy: Information for healthcare professionals
- RCoA, The Faculty of Intensive Care Medicine, the Intensive Care Society and the Association of Anaesthetists. - Obstetric anaesthesia guidance

Guidance for Low Resource Settings

- Annals of Surgery - COVID-19 preparedness within the surgical, obstetric and anesthetic ecosystem in Sub Saharan Africa
- University of Tasmania - Oxygen therapy with Limited Resources
- African Federation of Emergency Services - Emergency Care of COVID-19 in Adults in Low Resource Settings
- Vital Anaesthesia Simulation Training (VAST) - COVID-19 Simulation Resources

Ressources en français

- The SFAR (Société Française d'Anesthésie Réanimation (SFAR) – Informations générales sur COVID-19
- Société de Réanimation de Langue Française (SRLF) Lignes directrices et informations
- Gouvernement français - Informations Générales
- CARO - Prise en charge AR pa.ente COVID + ou suspecte en maternité

Recursos en español

- Sociedad Española de Anestesiología, Reanimación y Terapéutica del Dolor (SEDAR) - Portal de información sobre coronavirus
- Ministerio de Salud Español - Documentos técnicos para profesionales
- Asociación de anestesiólogos - Información esencial
- CLASA - Guías para manejo de pacientes con COVID-19.
- SCARE - AnestesiaR pone a disposición información científica sobre anestesia y COVID-19
- SCARE - ¿Qué recomendaciones hay que seguir con pacientes que tengan una infección respiratoria aguda severa?
- SCARE - Propuesta para manejo practico de la via aerea en pacientes con COVID
- SCARE - Anestesia y Analgesia en la gestante con sospecha o diagnóstico de COVID-19
- Sociedad Ecuatoriana de Anestesiología - Check list de seguridad para el manejo perioperatorio covid positivo
- FUS & UIS - Aproximacion practica via aerea en pacientes pandemia COVID19

Recursos em Português

- SBA - Recomendações Coronavírus

Coronavirus - General Information

- WHO - Coronavirus disease (COVID-19) outbreak
- WHO - Novel coronavirus (2019-nCoV)
- WHO - Emerging respiratory viruses, including nCov: methods for detection, prevention, response and control
- WHO - Online training as a weapon to fight the new coronavirus
- CDC - Information for Healthcare Professionals
- MSF - MSF update on novel coronavirus outbreak
- WHO - Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19)