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memo

Date	April 6, 2020
To	Physicians and Staff (ICU, HAU, In-Patient non-COVID and COVID-19 care sites, Emergency)
From	Dr Ronald Chapman, VP Medicine and NH EOC Task Group Lead Beth Ann Derksen, Executive Lead, Critical Care Service Network Dr. MJ Slabbert, Medical Lead, Critical Care Service Network Dana Cole, Regional Director, Pharmacy Services – Co-Chair of NH COVID-19 Therapeutics & Treatment Committee
CC	Penny Anguish, NI Chief Operating Officer; Angela De Smit, NE Chief Operating Officer, Ciro Panessa, NW Chief Operating Officer, Northern Health Medical Directors, NH EOC
Re:	**Novel coronavirus (COVID-19) – Intubation Procedure for Suspected or Confirmed COVID-19 Patients and Provincial Guidelines for Initiating CPR for Suspected on Confirmed COVID-19 Patients**

Additional NH clinical guidance for the intubation procedure for patients presenting and being treated for respiratory failure with suspected or confirmed COVID-19. For more information please visit BCCDC and refer to the BCCDC Guidance for the initiation of Cardio-Pulmonary Resuscitation - suspected or confirmed COVID-19 patients.

Background:

- Provincial Critical Care Working Group continues to work with Health Authority (HA) Critical Care Leads to develop clinical guidance for patient in need of intubation or resuscitation.
- The provincial guidance is endorsed by BCCDC and recommended for HA guidance and standardization based on best-available evidence

New Clinical Guidance:

- Patients with increasing COVID-19 symptomology should be considered for ICU management admission
- Patients with respiratory failure can deteriorate quickly and should be intubated early to prevent a rushed and uncontrolled intubation.
- Health Care Workers (HCWs) must follow **contact and aerosol precautions** when Aerosol Generating Medical Procedures (AGMPs) are occurring. These include:
  - o Intubation and/or CPR
  - o Bronchoscopy
  - o Nebulization therapy, non-invasive ventilation, and open endotracheal tube suction
  - o BiPAP/CPAP, HFNO (Optiflow)
- Applicable for all Health Care Workers

For more information, please contact:

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NH Regional Critical Care Intubation Algorithm
And Guiding Principles
for Novel Coronavirus (COVID-19): Updated April 2, 2020

GOAL: to provide guidance to physicians and staff on the intubation of COVID-19 confirmed or suspected patients in respiratory distress

Guiding Principle: Airway management should be done by the most experienced providers who regularly perform these procedures and are well trained in PPE with a standardised approach.

A dedicated intubation room with negative pressure (if available) should be identified for the intubation of COVID-19 confirmed or suspected patients in respiratory distress

Intubation Procedure

OUTSIDE INTUBATION ROOM (TEAM BRIEFING AND PREPARATION)

1. Identify roles: Physician (intubator), RT, Nurse Outside room backup #1, RT/RN in PPE
2. Names must be written on visor/gown. (Max 3 in room)
3. Equipment check
4. Drugs drawn up (*See checklist)*, Arrange a timer for paralysis
5. PPE –SUPERVISED, *(see separate laminate card)*
6. Discuss plan AND backup plan if unable to intubate (and readying necessary equipment)
7. SALIENT REMINDERS **(TO BE VERBALIZED**)
   - NO bagging – if absolutely needed, 2 handed technique, small volumes
   - We will tolerate hypoxemia!
   - NO SUCTIONING – consider if only necessary (eg. Unable to see glottis opening)
   - NO TOUCHING IN ROOM – as little as possible with fomite adherence
   - COMMUNICATION – closed loop, orders are repeated back and confirmed when completed, plan for communicating with outside runner
   - Central line needed? CONSIDER FEMOREAL. Ask for Kit *(see checklist*)
   - Questions/concerns?

INSIDE INTUBATION ROOM (PROCEDURE)

1. Monitors (End Tidal CO2, Oximetry, BP, ECG), VIRAL FILTER, ensure adequate IV access
2. If cardiac arrest, secure airway BEFORE CPR
3. Pre-oxygenation options – nasal prongs (max 6L/min), or non-rebreathe mask Consider using BVM as face mask ventilation with NO BAGGING and 2 hand technique
   - Reverse Trendelenburg (sat up) at 20-30 degrees (will improve apnea time)
4. Timer from when paralytics are given (Wait 60 seconds to ensure full paralysis)
5. Video laryngoscopy intubation as first attempt +/- bougie, IGEL(SGA) as second attempt
   - Rescue: Call for help if SGA effective,
   - Consider Ambu-scope (Can be put through IGEL with #6 ETT)
   - Front of neck airway
6. Immediate tracheal cuff inflation BEFORE ventilation

POST INTUBATION

1. Confirmation with CO_2, chest rise, Lung auscultation, consider disposable stethoscope
2. Ventilator settings (ARDSnet) + Analgesia/sedation
3. Nasogastric or orogastric tube placement
4. When changing ventilators (e.g. Transport), clamp ETT in between exchanges
5. Tape endotracheal tube/ventilator connection, check cuff inflation

SET-UP FOR INTUBATION ROOM EQUIPMENT CHECKLIST

- Video laryngoscope VL (Mac 4 as *default* blade)
- Size 7 and 8 Evac loaded with VL stylet + regular stylet, with 10 CC syringe
- Viral filter, ETT tie
- Water soluble lubricant (Muco)
- OPA (7 and 8), Bougie
- BVM set with tubing
- In-line suction and Yankauer suction
- Orogastric/nasogastric tube
- ETCO2 monitor
- Disposable stethoscope

INSIDE ROOM MEDICATION CHECKLIST

To be taken into the room by the team

- ketamine 200 mg
- rocuronium 200 mg
- phenylephrine diluted to 100 mcg/mL in 20 mL syringe
- Sedation infusion bag (propofol or midazolam)
- *Consider*: EPINEPHrine pre-filled syringe/atropine pre-filled syringe/norepinephrine infusion bag

OUTSIDE ROOM EQUIPMENT CHECKLIST

- Laryngoscope blades (varying sizes)
- SGA (IGEL)
- Ambu scope (checked)
- ETT/SGA/VL/DL blades varying sizes
- FONA – bougie/scalpel #10/6.0 ETT

(Need to ask for Cricothyroidotomy kit if preferred)

- PPE equipment on this cart

CENTRAL LINE CHECKLIST

- Triple lumen IV kit
- 2 prep sticks, sterile gloves
- 2 sterile saline syringes
- 3 one way valve connectors

Consider

- Ultrasound Machine with probe cover and plastic machine cover