WINDSOR REGIONAL HOSPITAL
OUTSTANDING CARE – NO EXCEPTIONS!

1.01· Code Blue COVID

Code Blue COVID-19

What is a Code Blue COVID-19?

Code Blue COVID is defined as resuscitation, performed by a team equipped to perform with personal protective equipment for airborne diseases, in a the context of treating all patients experiencing cardiac arrest or severe cardio-respiratory failure as a high risk for suspected, or confirmed Coronavirus Disease 2019 (COVID-19) infection.

This document represents a proposed modification to the current standard code blue protocol.

General Principles

- High-risk procedures performed may expose staff to a high viral burden and must be avoided as much as possible.
- However, in situations where such procedures are unavoidable (e.g., intubation of a patient in respiratory distress, cardiopulmonary resuscitation during cardiac arrest), staff should follow the additional level of precautions outlined in this document.
- The goal is to provide quality of care for patients in the timeliest manner, whilst ensuring appropriate protection of the health care team.
- Code Blue should therefore be performed in an AIIR when possible, by a competent physician, with minimum number of staff, time-exposure minimization, and strict adherence to infection control measures.

This document represents our current best level of knowledge but will be modified on an ongoing basis as new information becomes available.

COVID-19 Code Blue Special activation Team & Roles

CODE Responder Team

1. Airway expert physician (ED/ICU/Anesthesia if available)
2. Physician team lead
3. One respiratory therapist (RT or AA) to assist with intubation and ventilation
4. Critical Care Medication Nurse to administer medications and energy and update code blue team leader regarding changes in rhythm
5. RN (ER/2nd Critical Care RN) first responder in PPE in anteroom (if applicable)

Additional Team Members during Code

6. First responders unit level staff x2
7. Additional RT in PPE anteroom
8. 4Med/4North nurse – documentation

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Activation Process

It is extremely important to try to avoid high-risk situations (e.g., emergency intubation, cardiac arrest). We will therefore follow the principles of 1) patient identification; patient and team preparation; early trigger for more aggressive interventions; 2) modified activation process.

1) Identification, preparation and trigger

A. **IDENTIFY**

- All code blue patients will be treated as enhanced precautions as outlined in this document, but additional early intervention for known or suspected COVID patient can prevent high risk intubation.
- Patients with suspected, probable or confirmed COVID-19 infection will be identified with the assistance of IPAC and the **enhanced, droplet and contact precautions and COVID-19 signs** will be affixed at the door.
- A master list with the room location of all patients with suspected, probable or confirmed COVID-19 infection will be completed daily and shared with key stakeholders (e.g., members of code blue team, respiratory therapists, CCOT, etc.)
- Members of the code blue team (ED MD on call, ICU Nurse(s),Respiratory Therapist(s) and, if possible, Anesthesia on call) will huddle at each shift change to 1) familiarize with the other members of the team, 2) review and discuss specific procedures and deviations from standard code blue (see CODE BLUE COVID Huddle Checklist).

B. **PREPARE**

For all patients with suspected, probable or confirmed COVID-19 infection and requiring oxygen supplementation:

- **Intravenous line or saline lock must be in situ at all times** (minimum single 20 G IV)
- **Practice Transfer of Accountability (TOA) to maximize effective communication in case of code blue**

C. **TRIGGER FOR EARLY INTERVENTION**

- The **Critical Care Outreach Team (CCOT)** will be notified for every patient with suspected, probable or confirmed COVID-19 infection: requiring 5L/min or demonstrating signs of clinical deterioration or respiratory distress/fatigue.

2. **Modified activation process**

- After assessing for patient pulse, call code blue as per your unit policy
- Staff to don appropriate PPE N95 mask, face protection, gown, and gloves BEFORE starting chest compressions. CPR is an Aerosol Generating Medical Procedure (AGMP) and requires full PPE as described in this document.
- **Do not insert an oral airway, do not use ambu-bag/bag valve mask. There will be no manual ventilation until the code team arrives**. Apply non-rebreather to deliver 100% O2, apply surgical mask to patient over non-rebreather.
- If there are any other patients in the room they must be removed from room.

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- The second responder enters the room/scene (in full PPE) to assist with attaching AED (OUE only) and **compressions only.**

Code Blue

Resuscitation of the cardiac arrest must occur as soon as possible. The urgency to resuscitate **must be balanced *with the need for staff to meticulously don the appropriate Personal Protection Equipment (PPE)***, a procedure which takes minutes. **Staff safety remains a critical priority.**

1. WHERE

All efforts for early identification and controlled intubation should be maintained, this protocol is for emergency intubation in a patient room.

At this time all code blue calls should be treated as a high-risk procedure and requires enhanced PPE, such as N95 and face shield.

2. ROLE AND RESPONSIBILITIES OF FIRST RESPONDER(S)

A. CALL FOR HELP

1A. If healthcare provider recognizes that the patient is in code blue, have someone to code blue and identifying the location.

1B. BEFORE STARTING CPR first responder to don appropriate PPE including N95 mask (if not done already). If available, use a LUCAS device apply and initiate as per manufacturer instructions.

2. Have someone to bring backboard, stool, AED (Ouellette only) and suction

3. Have a second unit nurse to don appropriate PPEs and quickly enter the room with stool until code team arrives.

4. Unit nurse (Unit clean runner) to don appropriate PPEs do not enter room and to be ready to get whatever the team inside needs, to provide support in case someone has to leave the room and to observe for breaches in protection.

5. Have someone at unit nursing station to monitor call bell for communication from patient's room.

B. INITIATE BASIC LIFE SUPPORT (BLS) PROCEDURES

- If patient has a pulse but is in respiratory distress, **PROVIDE OXYGEN** by placing **Bag Valve Mask with filter do not bag** on the patient's face (O_2 > 15 L/min – reservoir bag should remain fully inflated) or a Non-Rebreather mask with a surgical mask over non-rebreather if BVM not available.

- **Start CHEST COMPRESSIONS**, if patient is unresponsive and pulseless **NOTE: door must remain closed at all times.**
  - Continue compressions until either:

- You are relieved of compressions by a member of the code blue team or by the second healthcare provider in the room (* prioritization of early defibrillation with AED if available is still required)
- Airway manipulation is initiated by member of the code blue team.

- **DEFIBRILLATION**
  - If AED (Ouellette site) is available, turn it on, apply and connect pads to patient in anticipation of potential defibrillation

C. PATIENT HAND-OVER

- Unless unwell, has had equipment failure, or likely self-contaminated, the first responder(s) should stay in the patient room, provide appropriate hand-over/clinical information and continue to help the code blue team with the resuscitation efforts

3. BEFORE ENTERING THE PATIENT ROOM

- **Code Blue Team**

  Healthcare providers in the room should be limited to the minimum required to safely perform the resuscitation and limited to the most experienced available) trained on the required PPE. Specifically, resuscitation will be led by a competent physician based on MRP/service involved:

  a. Patients in ED will be managed/intubated by emergency medicine or critical care medicine physicians according to service primarily involved
  b. Patients in ICU will be managed/intubated by critical care medicine physicians
  c. Code Blue outside ED/ICUs will be managed by ED or Anesthetist (if available as part of code blue team) physicians and intubated by code team.

  No healthcare student (medical, respiratory therapy, nursing, etc.) should enter the room and participate in a code blue procedure.

  Team members should identify themselves, and quickly pre-brief prior to entering the room. This is to ensure all supplies and medications enter the room with the team.

  Ideal team should include the following, based on availability at that moment:

  Inside the room

  a. Code Blue Team Leader (ED)
  b. Airway expert physician (ICU/ED/Anesthesia if available)
  c. One respiratory therapist (RT) to assist with intubation and ventilation
  d. Critical Care Medication Nurse to administer medications and energy and update code blue team leader regarding changes in rhythm
  e. Nurse to do CPR (1) First responder(s)
  f. Nurse CPR (2) First responder(s)

  Outside the room

g. RN (ER/2nd Critical Care RN) responder in PPE in anteroom (if applicable)
h. RT in PPE anteroom (if applicable)

RN and RT in PPE in the anteroom should:

- observe for breaches in PPE donning and doffing
- provide support in case someone has to leave the room
- be ready to get whatever the team inside needs
- facilitate communication between team inside the room and rest of the team
- relieve personnel inside the room to minimize risk of safety breaches when fatigued

i. Nurse to assist with supply of equipment stored on the unit and activation of other team members if required by the team inside the room (e.g., anesthesiologist for difficult airway)
j. 4Med/4North nurse This person is responsible of:

- Documentation and communication with Critical Care Medication nurse
- ensuring protocol is followed correctly
- monitoring safety breaches
- regulating access to the patient's room
- correct doors opening/closing
- communicating with ICU prior to initiation of transport

PPE

Any PPE used for COVID-19 should follow the latest MOHLTC directives at the time. Current recommendations include:

1. Leave personal items (stethoscope, jewelry, clipboard, watch) outside the room
2. *Hand Hygiene*
3. *Fit-tested N95 Respirator* – Always perform seal check when putting on a N95 Respirator. Facial hair is not permitted where the respirator seals to the skin of the face and neck as it will prevent a proper respirator fit. Do not criss-cross straps
4. *Eye protection* - Full face shield, goggle as extra protection for those participating in intubation
5. Fluid-resistant, clean, non-sterile isolation gown
6. *Gloves, nitrile,*
7. *[+/- Hair bouffant caps]*
8. *Buddy System – Use buddy system to monitor for breaches in PPE donning and doffing.*

ATTENTION! Providers directly participating in intubation must wear: 1) Full droplet precaution face protector; 2) N95 mask, 3) bouffant cap, 4) goggles, 5) non-sterile Isolation gown and 5) nitrile gloves;

- **Donning should be carried out quickly but meticulously**
- If multiple individuals arrive at the same time, **priority for donning and entering the room should be given to Code Blue team leader and ICU medication Nurse**

- Members of the team initially staying outside the room (e.g., back-up RN and RT and runner), should **help with donning (e.g. tie gowns) and assessing for breaches**

4. INSIDE PATIENT ROOM / DURING THE CODE

Equipment

Inside the room

- Code Blue COVID Bins #1 & #2 with transport defibrillator and code blue mediation tray
- RT to bring transport ventilator (if in ICU or ED)
- Glide Scope and accessories
- LUCAS device if available

Outside the room

- Responder arrest cart (brought by second responder)

- First responder continues to provide CPR (If available, use a LUCAS device apply and initiate as per manufacturer instructions.)
- The first two health care providers to enter the room should be the Code Blue Team Leader (ED MD) and the Critical Care Medication Nurse with defibrillator, medication tray, glide scope. Bin #1 & Bin #2. If other members of the code blue team are already present and properly protected, they should enter the room immediately.
- RN will immediately connect patient to defibrillator for rhythm analysis if not done already
- Defibrillation if indicated
- No equipment can leave the room until the end of the code blue and without appropriate handling

- **Modifications to ACLS**
  - **Intubate patients early and hold CPR during intubation** to minimize aerosolization of particles and optimized intubation success
  a. **Pre-oxygenation. Minimize techniques that can aerosolize droplet particles.** Definitive data regarding safety of non-invasive ventilation (CPAP/BiPAP) and High-Flow Nasal Cannula are currently lacking, and current recommendation is that they should be avoided. However, adequate pre-oxygenation is essential for both successful safe intubation and avoidance of bag-mask ventilation (another aerosol-generating procedure). NRB mask should be used
  - If possible, **don't perform manual bag-mask ventilation (BMV) before intubation.**
    - Apneic oxygenation with nasal prongs or non rebreather may be considered
    - If manual bag-mask ventilation is performed, ensure a filter is used between the mask and bag, use small tidal volumes and use a 2-person technique (to achieve tight mask seal)
  - **Avoid the patient coughing or becoming agitated during intubation** to protect staff. In most situations a rapid sequence intubation (RSI) will achieve this goal

- In the patient who is unlikely to tolerate a significant apnea (e.g. severe hypoxemia or acidosis), consider maintaining spontaneous breathing using sedation with ketamine 0.5-2 mg/kg IV and lidocaine 1.5 mg/kg IV 2-3 minutes before intubation to reduce cough at laryngoscopy
- **Consider Glidescope** as first intubation technique
- After intubation and confirmation of $ETCO_2$, and colour capnography **immediately connect patient to the resuscitation bag with filter or mechanical ventilator and inline suction catheter**
- Avoid disconnections between the ETT and resuscitation bag. If required, (e.g., air trapping): 1) clear, loud announcement; 2) disconnect after the filter (i.e., leave filter connected to ETT)
- A stethoscope may be considered if unclear about ETT placement (e.g., no view of vocal cords, no ETCO2 due to low cardiac output). Team leader, who should be less contaminated with respiratory secretions, will auscultate with stethoscope, paying attention not to contaminate face and displace the face shield.

5. **BEFORE LEAVING THE PATIENT ROOM**

- At the end of the code:
  - All **non-disposable equipment must be wiped with a hospital approved disinfectant wipe, placed into a clear biohazard bag** in the room and tied and brought to ICU for appropriate processing.
  - **Unopened disposable equipment must be wiped with a hospital approved disinfectant wipe placed into a clear biohazard bag** in the room and tied to be brought to the ICU with the patient for Noco-Spray
- **DOFFING**
  - **DO NOT RUSH.** It is **imperative** that removal of all protective equipment be done **slowly and carefully** to avoid inadvertent contamination of yourself or others
  - **Anyone who is** unwell, has had equipment failure, or likely self-contaminated should be first to doff and exit the patient room

6. <u>IF THE PATIENT NEEDS TO BE TRANSPORTED TO ANOTHER AREA</u>

Refer to transport COVID procedure for principles of transport

Recovery Phase

- All code blue should have a hot debrief immediately after the arrest to identify lessons learned. The ICU CPM is tasked with documenting recommendations and forwarding them to the unit's nursing and medical leadership to ensure follow-up on the RL6 system.
- All personnel involved in the arrest may take a "work pause" after debrief, as required. Staff may choose to change their scrubs. Having a few minutes to decompress can allow us to return to work more effectively. All personnel involved in the arrest should be reminded of their options for psychological support including the unit's leadership, Corporate Health and Safety Services, the Employee Assistance Program, and other external resources available.

- Staff who believe they have been contaminated should report to their supervisor immediately. Their supervisor should discuss with Employee Health to determine next steps and need for work modifications.
- Environmental services should be notified, if the intubation occurred in the inpatient room please close door for 45 minutes prior to cleaning room. Room cleaning should follow procedures for room cleaning as per droplet contact protocol.