

## Introduction

### 1.1. Purpose

Resuscitation of patients with COVID-19 presents a high risk of virus transmission to healthcare workers. Updating existing procedures is essential to protect health care workers from aerosolized transmission. It is recognized that intubation, bag mask ventilation and chest compressions are aerosol generating medical procedures (AGMP) and require airborne personal protective equipment (PPE). This requires adjustment to the CODE BLUE protocols to include a COVID risk assessment, PPE for first responders and full airborne PPE precautions before initiating aerosolizing procedures.

### 1.2. Scope

This policy applies to all C&W staff.

## Policy

All patients to have clear designation of the required level of PPE based on risk assessment and testing status for COVID-19 in their chart

IF CPR appropriate, **EARLY consult and escalation of care for COVID-19 positive or presumed positive and clinical deterioration. However, most adult code blue victims at BCW are sudden/unexpected.**

Standard ACLS protocols may need to be modified due to the risk of infection to first responders and members of the Adult Code Blue Team.

### 2.1 Assessment: Modification for First Responders (usually 3 nurses)

#### **QUICKLY PERFORM A RISK ASSESSMENT IN RELATION TO COVID-19:**

1. If the victim is an **in-patient**
  - PPE precautions will be identified by Additional Precaution (Droplet and Contact and/or Airborne) signs on the door of their room
  - Obtain relevant information from their primary care nurse or medical chart.
2. If the victim is **not an in-patient**
  - If the victim is conscious, ask them relevant questions about respiratory symptoms, fever, cough, malaise, contact with other known carriers of the COVID-19 virus.
  - Obtain a collateral history from family or associates.
  - Determine if Additional Precautions PPE (Droplet and Contact and/or airborne) required.
3. If victim is unconscious, not an in-patient, and no collateral history available **then assume they are high risk for COVID-19.**

### 2.2 Recommendations for First Responders

If the victim is deemed low risk for COVID-19 then proceed with all standard ACLS and Adult Code Blue protocols (including external chest compressions and use of defibrillator in AED mode if indicated).

### 2.3 If victim is deemed high risk (or known to have) COVID-19

- Where possible isolate the victim in a separate room
- All first responders don, at a minimum, Droplet and Contact PPE (a surgical face mask, eye protection, non-sterile gloves and a gown) before entering the room (or approaching the victim if in a corridor/ clinical area).
- Minimize the number of people in the room with the victim
- Determine responsiveness and check for pulse.
- Call for help (push STAFF ASSIST button) and initiate an Adult Code Blue call.
- Obtain the crash cart, but leave the cart outside the room if the victim is conscious (to minimize the risk of contaminating the entire cart as it may not be required).
- For clarity, only bring the crash cart into the room if the victim is unconscious.

### 2.4 If victim is deemed high risk for COVID-19 and is conscious

- Administer oxygen via face mask at 4L/min (higher oxygen flows risk aerosolization)
- Apply monitors (pulse oximeter, BP cuff), check vital signs, then step back from the victim and await the arrival of the Adult Code Blue Team

### 2.5 If victim is deemed high risk for COVID-19 and is unconscious

- Chest compressions and Bag-mask-ventilation can only be carried out by personnel wearing Airborne PPE (N95 mask) in addition to Droplet & Contact PPE as these are AGMPs<sup>2</sup>
- **The priority is early defibrillation<sup>2</sup>.**
- Bring the crash cart into the room.
- Place a surgical facemask over the victim's mouth and nose.
- Apply the defib pads and use the defibrillator in AED mode as soon as possible.
- Do not wait for the Code Blue Team to arrive before administering a shock if advised by the AED.
- If there is any suspicion of narcotic overdose then administer naloxone as per policy.
- If the first responders have immediate access to airborne PPE (N95 masks), and there are enough personnel present, then 2 people should don Droplet and Contact and Airborne PPE (N95 mask, eye protection, gown and gloves) in preparation for performing chest compressions.
- Do not delay defibrillation by donning airborne PPE (N95 mask). Defibrillation comes first as this could potentially obviate the need for airway management.
- Only if there are enough people present and airborne PPE (N95 mask) are immediately available should chest compression be carried out after defibrillation / AED has been utilized.
- Once the AED has been activated and a shock has been delivered (if indicated) then, if no airborne PPE (N95 mask) available, step outside the room (or away from the victim) and await the arrival of the Adult Code Blue Team.

### Responsibilities

ACLS RN carrying pager 4101037 will bring the newly prepared COVID-19 Code Blue cart (see separate document) to the location of the Adult Code Blue event.

When Adult Code Blue Team arrives liaise with the first responders regarding COVID-19 risk

**If the victim is deemed low risk for COVID-19 then proceed with all standard ACLS and Adult Code Blue protocols**

**If the victim is deemed high risk for COVID-19 and is conscious:**

- Don contact and droplet PPE
- Assess the likely need to perform any AGMPs (Chest compressions, Bag-mask-ventilation, Intubation).
- If this is deemed likely then administer low flow oxygen via a facemask (<4l/min) or apply a surgical mask to patient to cover their mouth and nose and quickly transport patient to a designated negative pressure isolation room (see list below) where further management can be performed after the appropriate personnel have donned the necessary airborne PPE (N95s)
- Bring the Crash Cart with the patient (unless there is one located near the destination) but leave the Crash Cart outside the negative pressure isolation room
- Send a runner/ Vocera LDR and have a Glidescope and any other necessary equipment brought to the relevant destination
- Where possible use a transport route that avoids high traffic areas.
- After initial stabilization has occurred consider the need for transfer to the appropriate adult critical care facility.

**If the victim is deemed high risk for COVID-19 and is unresponsive:**

**The priorities will focus on immediate defibrillation and the administration of IV epinephrine and naloxone if indicated**

- A designated number of the Adult Code Blue team members don Droplet and Contact and Airborne PPE (N95 mask, eye protection, gown and gloves) in anticipation of performing aerosol generating procedures (CPR, intubation)
- Wearing Droplet and Contact PPE the first responders and a subset of the Adult Code Blue team bring the crash cart into the room if not already there and ensure the defib. pads are appropriately applied to the victim's chest.
- A member of the Adult Code Blue Team should perform an assessment of the victim.
- Confirm cardiorespiratory arrest.
- Liaise with the first responders regarding the use of the defibrillator in AED mode
- Determine if a shock has been delivered.
- Check the rhythm again and administer another shock if indicated.
- Consider the immediate administration of IV epinephrine and/ or naloxone
- Code Blue Team leader should quickly determine how long the victim has been pulseless and without chest compressions and decide on the appropriate next steps.
- Ensure the required personnel are wearing the necessary Droplet and Contact and Airborne PPE (from the COVID-19 Code Blue cart) before proceeding with further resuscitative efforts including chest compressions and intubation as these are aerosol-generating procedures
- Team to consider the initiating or continuation of resuscitation if concern of futility

**If Victim is COVID-19 positive (or suspected), in cardiorespiratory arrest, and more than 20 weeks pregnant then immediately prepare for an in-situ perimortem Cesarean delivery in addition to the above steps.**

- This is not an AGMP
- Confirm Code Pink and Neonatal Resuscitation teams are called.

If resuscitative efforts are successful then arrange for transfer of the victim via a 911 call to paramedics. Inform the paramedics/911 operator that the victim is a known or suspected COVID-19 positive

If unsuccessful then liaise with the CNL and follow the care for the deceased adult policy

**Follow the recommended procedure for doffing PPE. This is the time when members are most likely to contaminate themselves**

Perform a post-event team debrief.

**List of negative pressure isolations rooms where high risk aerosol-generating procedures may be carried out in COVID-19 positive/ suspected persons**

- LDR-OR2
- LDR T2-605
- LDR T2-614
- UCC Room 1
- UCC Room 10
- Other possible locations in BCCH to be confirmed

## Compliance

All CODE BLUE team members are responsible for adhering to this policy and monitoring their activities in accordance with policy. Staff members may warn others if they observed a violation of this policy. Failures to comply with the policy will be reviewed in the CODE de-brief.

## References

- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3338532/>
- <https://www.resus.org.uk/media/statements/resuscitation-council-uk-statements-on-covid-19-coronavirus-cpr-and-resuscitation/covid-healthcare/>
- <https://www.washingtonpost.com/health/2020/03/25/coronavirus-patients-do-not-resuscitate/>

## Version History

DATE	DOCUMENT NUMBER and TITLE	ACTION TAKEN
03-Apr-2020	C-0506-11-60591 COVID-19: Adult Code Blue Events	Developed by C&W COVID-19 Working Group ; Approved by Professional Practice Director

## Disclaimer

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