

Memorandum

Date: June 25, 2020

To: VCH/PHC Emergency Department Care Providers

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The Regional Emergency Services Program is making the following recommendations regarding the use of PPEs for CPR in patients with **unknown COVID risk** presenting to the Emergency Department in this present time of low COVID prevalence. The guidance is as follows:

- All staff should continue to wear surgical masks and eye protection as part of normal patient care in the ED.
- If a patient presents via BCEHS in cardiac arrest with CPR in progress they will continue to provide CPR and assisted ventilations through a bag valve mask, supraglottic airway, or a secured airway, and proceed directly to the appropriate resuscitation area.
- If an unknown COVID status patient arrests in the ED, the first person on the scene should begin chest compressions without donning the AGMP PPEs.
- If intubation needs to occur, the appropriate AGMPs will be donned prior to intubation.

Rationale

- There are jurisdictions such as the [UK](#) and [Ontario](#) that have determined that CPR is not an AGMP.
- Given the low prevalence of COVID in both the province (0.05% or 5/10,000) and in the VCH-PHC regional EDs (0.04% or 4/10,000)⁶, the risk of a health care worker contracting COVID infection, given an attack rate of 10% is 4/100,000. This is the same as the risk of contracting TB in an ED¹. With a mortality rate of 2%⁷, the risk of mortality

to a health care worker providing CPR on an unknown patient suffering a cardiac arrest is in the order of 1/10,000,000.

- Other comparisons including the risk of a health care worker contracting HIV from a needle stick which has a transmission risk of somewhere between 0.2/100,000 – 2.4/100,000.⁵
- There are approximately 3,000 out of hospital cardiac arrests (OHCA) in BC annually². The survival rate to discharge is 16.3% or approximately 490 British Columbians annually.
- Time-motion studies by Alberta Health Services³ suggest that it takes at least 3 minutes to put on AGMP PPEs. Stopping CPR or not instituting CPR during this time is likely to create similar survival results to those experienced in the early 2000s before quality improvement initiatives and research improved the provision of CPR in the field. The baseline survival rate prior to the standardization of good CPR was approximately 5% or 150 survivors a year.
- This means that the reduction in good quality CPR would kill approximately 1 British Columbian a day.
- Stated another way, the patient survival rate, assuming 5,000,000 British Columbians, decreases from 1/10,000 to 3/100,000, if CPR is not properly performed.
- This suggest that the risk to patients by not having proper CPR performed is >>> than the risk to health care workers of morbidity and/or mortality from potentially contracting COVID.
- A recent Circulation article suggests that even with no PPEs, it is safe for bystanders to perform CPR.⁴
- There is minimal risk in the 20-30 seconds that it takes to move a patient from the door of the ED to a resuscitation area by EHS. CPR should not stop during this time.

References

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2. BCEHS Annual Cardiac Arrest Report 2016-17 http://www.bcehs.ca/our-research-site/Documents/cardiac_arrest_annual_report_2016_2017.pdf Accessed June 22, 2020
3. Shared email from Dr. Marc Joffe, Vice President and Medical Director Cancer Control, Clinical Support Services and Provincial Clinical Excellence, Alberta Health Services. June 22, 2020.
4. COVID-19 Prevalence in OHCA
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5. Wyżgowski P, Rosiek A, Grzela T, Leksowski K. Occupational HIV risk for health care workers: risk factor and the risk of infection in the course of professional activities. *Ther Clin Risk Manag*. 2016; 12: 989–994.

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7. Wu Z, McGoogan J. Characteristics of and Important Lessons From the Coronavirus Disease 2019 (COVID-19) Outbreak in China. Summary of a Report of 72 314 Cases From the Chinese Center for Disease Control and Prevention
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