BC Emergency Health Services

EPOS Clinical Update

02 April 2020

PREPARED FOR: EPOS Physicians and Paramedic Specialists

TITLE: EPOS Guideline for the Pandemic Approach to Out-of-Hospital Cardiac Arrest Patients

PURPOSE: To inform EPOS Physicians and Paramedic Specialists on a general approach to providing paramedics who are managing OOH cardiac arrest patients during the pandemic response.

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INTRODUCTION:

The COVID-19 pandemic currently threatening communities on a global basis is expected to infect 30-70% of affected populations. In Canada, it has been well established that community transmission is occurring and likely to be the principal source of new infection cases. There is also increasing evidence that viral spread occurs in asymptomatic and mildly symptomatic individuals. While BCEHS should continue to respond as usual to provide emergent care to cardiac arrest patients, the pandemic setting requires that every reasonable effort is also made to mitigate the exposure risk to paramedics, their fellow health care professionals, and other patients.

This guideline has been developed to reflect the best practices of other EMS jurisdictions and considers the generally dismal survival rates of OOH cardiac arrest patients. It is also assumes that all cardiac arrest patients represent an elevated risk of COVID-19 transmission. The goal of this guideline is to provide decision-making support with respect to OOH cardiac arrest patient management while minimizing the risk of unnecessary COVID-19 exposure, and protecting the health care workforce, resources, supplies and equipment. This guideline aims to maintain an acceptable standard of care for OOH cardiac arrest in the pandemic context.

RECOMMENDATIONS:

1. All cardiac arrest patients should be assumed carriers of COVID-19 with an elevated risk of transmitting the coronavirus to any individuals in the immediate vicinity. Paramedics should adhere to the established procedure for the application of personal protective

equipment (PPE) prior to directly attending to the patient.

2. Airway management for cardiac arrest patients should be performed in accordance to BCEHS Pandemic Airway Management Guidelines.

3. Transport of cardiac arrest patients who do not obtain return of spontaneous circulation (ROSC) is NOT advised.

    a. When EPOS/PS is contacted at the 15 minute mark (or earlier), CPR continuation may be advised unless the criteria for early discontinuation is met:
        I. - Unwitnessed arrest
        II. – No shocks delivered
        III. – No period of ROSC

    b. In general, transport will NOT be advised even when suspected reversible causes are identified. However, EPOS/PS may consider exceptional circumstances (e.g. severe hypothermia, certain types of poisonings, suspected massive pulmonary embolus, etc.) and may recommend rapid intra-arrest transport.

    c. In general, transport will NOT be advised for cardiac arrest patients stemming from blunt or penetrating trauma. However, EPOS/PS may consider exceptional circumstances such as penetrating trauma to the cardiac box area and/or paramedic witnessed loss of vital signs with less than 10 minutes transport time to the nearest Emergency Department (ED).

    d. If EPOS/PS recommends intra-arrest transport due to exceptional circumstances, then EPOS/PS should connect with the receiving ED to provide advance notice.

    e. If at the 30 minute mark sustained ROSC is not achieved, then discontinuation of resuscitation can be authorized by EPOS.

    f. This guideline does **not** apply to pediatric patients (17 years old and younger).

4. If sustained ROSC is obtained, then immediate transport is advised with the transport crew providing advance notice to the receiving ED.

5. If the patient re-arrests enroute, the following should be advised:

    a. If the patient becomes pulseless again enroute, the transport crew should pull over when safe and re-initiate resuscitative measures.

b. Resuscitative efforts including CPR should be continued for a minimum of 10 minutes.

c. If a minimum of 30 min of total combined resuscitation time has elapsed, then EPOS should be consulted for resuscitation discontinuation. The transport crew should coordinate with local authorities in order to facilitate direct transport of the deceased person to a morgue or designated body recovery site.

d. If ROSC is obtained within 10 min of re-initiated resuscitative efforts, then the transport crew should immediately proceed to the receiving ED.

e. If the patient re-arrests upon arrival or within close proximity to the hospital, continue CPR until assessed by the Emergency Physician.

- NOTE: EPOS Physicians cannot sign the death certificate as they do not directly attend the patient. Death certificate documentation should be done by the Coroner or the patient's general practitioner.