BC Emergency Health Services Infection Prevention and Control Recommendations for COVID-19

BCEHS COVID-19 Response

UPDATE: July 13, 2021

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1. Introduction

This document provides guidance for British Columbia Emergency Health Services (BCEHS) in infection prevention and control (IPAC), including management of suspected or confirmed cases of COVID-19 and measures to prevent the transmission of COVID-19 in out-of-hospital care settings (formally referred to as pre-hospital care).

Out-of-hospital care involves acute emergency patient assessment and care delivered in a variety of settings. Paramedic services are also rendered through prescheduled client visits and community events.

BCEHS staff should seek assistance from the IPAC teams within BCEHS or the Provincial Health Services Authority (PHSA) as needed to operationalize these recommendations, in consultation with patient care delivery, patient care communications and planning and clinical and medical programs.

For COVID-19 variants of concern, recommendations for IPAC measures remain the same and should be strictly followed and reinforced.

This guidance is based on current available scientific evidence about this disease. It is expected that IPAC recommendations (particularly recommendations related to respiratory protection) will change as the pandemic evolves.

See the BC Centre for Disease Control’s (BCCDC) website for the most up-to-date information on COVID-19, including the spread, symptoms and applicable public health measures.

2. Infection Prevention and Control for COVID-19

Infection prevention and exposure control measures help create a safe environment for paramedics and patients. The diagram below describes the hierarchy of measures that can be taken to reduce the transmission of COVID-19. Control measures at the top are more effective and protective than those at the bottom. By implementing a combination of measures at each level as described in this document, the risk of COVID-19 transmission is substantially reduced.
**Routine Practices**

*Routine practices* are IPAC practices that should be in place at *all* times to protect paramedics and patients from acquiring infections such as COVID-19. Routine practices are based on the premise that all patients are potentially infectious, even when asymptomatic. Therefore, the same standards of practice should be used routinely with all patients to prevent exposure to blood, body fluids, secretions, excretions, mucous membranes, non-intact skin or soiled items to prevent the spread of microorganisms. The consistent and appropriate use of routine practices by all paramedics for all patient encounters will lessen microbial transmission.

Routine practices include the following:

2. Hand hygiene.
3. Personal protective equipment (PPE).
4. Sharps safety.
5. Patient accommodation and transport considerations.
6. Routine cleaning and disinfection of equipment.
7. Environmental control – routine vehicle cleaning and disinfection.
Call Screening for 9-1-1 Dispatchers:

Dispatchers should:

- Use the International Medical Priority Dispatch tool to conduct a general influenza-like illness (ILI) screen. See appendix B for the SIREN COVID-19 screening tool.
- Question callers to determine if there is anyone at the incident location who may have respiratory symptoms consistent with COVID-19.
- Flag as ILI.
- Communicate risk to paramedics prior to arrival at the incident location.
- Assign the appropriate paramedic team to the call.
- Where possible, secondary triage should be used to reduce dispatching of ambulances.

Both paramedics should don contact and droplet* PPE when the 9-1-1 screen identifies any of the following:

- A patient is suspected or confirmed to have COVID-19.
- A patient is in cardiac arrest or unconscious.
- Excessive bodily fluids reported.
- Aerosol generating medical procedure (AGMP) requirements.
- Patient living in a long-term care or seniors’ assisted living facility.

*BCEHS contact and droplet PPE includes respirator, eye protection, gown and gloves. See PPE section for more information.

In conjunction with the measures below, paramedics should complete the BCEHS COVID-19 point-of-care risk assessment for every emergency call’s situation regarding the physical setting and location (e.g., in the home, on the street/road, in the ambulance, travel history).

3. Environmental Measures

Ventilation and Physical Barriers

Physical barriers between paramedics and patients in vehicles should be installed (e.g., slider windows).

Optimize ventilation:

- Creating a negative pressure in the patient compartment during transport:
  - Ambulances with built-in slider window: The patient compartment fan runs on low when the engine is on. These units can be manually set to high to increase negative pressure in the patient compartment and to pull air from the cab.
  - Ambulances without a slider window or that had the slider windows installed after March 2020 will need to manually turn on the patient compartment exhaust fan.
• Creating a **positive pressure in the ambulance cab** during transport:
  - Close all windows in the ambulance cab.
  - Set your cab environmental controls to pull air from the outside (do not use the recirculating mode – A/C max).
  - Set the fan level to low (or higher) according to your comfort.

Ventilation must be optimized when transporting a suspected COVID-19 or ILI patient when an AGMP is being performed.

Refer to BCEHS safety update on creating a positive pressure environment in the cab.

**Cleaning and Disinfection of Vehicle and Equipment**

The SARS-CoV-2 virus has a lipid envelope and a wide range of disinfectants are effective in deactivating this virus. Cleaning and disinfection of the ambulance or aircraft and equipment is vital as this virus can live on different surfaces from a few hours to several days, depending on the type of surface and environmental conditions.

After every call, **routine** cleaning and disinfection of ambulance or aircraft and all used equipment should be performed per the BCEHS IPAC 100 cleaning and disinfection policy, utilizing approved BCEHS products (e.g., accelerated hydrogen peroxide [AHP]). See below table for a summary of routine post-transport cleaning.

Reusable equipment should be cleaned and disinfected before use on another patient as per BCEHS IPAC 100.3: Routine post transport cleaning of ambulance and equipment procedure.

If an AGMP has been performed, **post-transport ventilation** must be performed prior to routine post-transport clean.
  - Ensure the vehicle is parked in a well-ventilated area. Opening all doors and windows ensures the maximum amount of outdoor air is introduced to facilitate particulate dilution within the vehicle.
  - Leave exhaust fans on HIGH.
  - Routine post-transport cleaning and disinfection of all used equipment and touched surfaces in the vehicle can begin once the patient compartment has vented for 20 minutes.
  - Ensure staff DO NOT re-enter the vehicle during ventilation time.
Summary Table of Post-Transport Cleaning and Disinfection for BCEHS:

<table>
<thead>
<tr>
<th>Post-Transport Cleaning and Disinfection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency</strong></td>
</tr>
<tr>
<td>• After every call.</td>
</tr>
<tr>
<td>• For reusable equipment, between each patient.</td>
</tr>
<tr>
<td><strong>Surfaces to clean &amp; disinfect</strong></td>
</tr>
<tr>
<td>• All exposed surfaces (not required behind the plexiglass if the plexiglass was closed during patient transport).</td>
</tr>
<tr>
<td>• All reusable equipment used on the patient.</td>
</tr>
<tr>
<td>• All touch points.</td>
</tr>
<tr>
<td><strong>Materials needed</strong></td>
</tr>
<tr>
<td>• Approved BCEHS disinfectant wipes.</td>
</tr>
<tr>
<td>• PPE: Gloves are the minimum PPE required for cleaning and disinfection of the ambulance or aircraft.</td>
</tr>
<tr>
<td>• Additional PPE may be required based on product risk assessment.</td>
</tr>
<tr>
<td><strong>Process</strong></td>
</tr>
<tr>
<td>• If an AGMP has been performed, perform post-transport ventilation before routine post-transport cleaning and disinfection.</td>
</tr>
<tr>
<td>• The wipes supplied by BCEHS contain both a cleaning and disinfecting agent.</td>
</tr>
<tr>
<td>• Two wipes are required if there is visible soil; one to remove visible soil and second wipe to disinfect.</td>
</tr>
<tr>
<td>• Work from the back of the patient compartment, in a systemic process top to bottom.</td>
</tr>
<tr>
<td>• Apply firm pressure. Allow sufficient wet contact time to kill microorganisms as identified in the manufacturer’s instructions.</td>
</tr>
</tbody>
</table>

Note: If AHP product is not available, an alternative cleaner and disinfectant product which is effective against enveloped viruses must be approved by the BCEHS IPAC team and Workplace Health. **Bleach** is not required for routine COVID-19 disinfection.

Cleaning and Disinfection of Stations/Annexes During COVID-19:

- A general cleaning and disinfection of the station should occur at least once per day.
  - **General surface cleaning** is used to clean and disinfect most surfaces (e.g., countertops, tables, fixed barriers, chairs, etc.). Floors are to be cleaned with a fresh floor cleaning solution.
- High-touch surfaces should be cleaned and disinfected twice per day.
  - **High-touch point cleaning** is for all surfaces that are commonly touched (e.g., doorknobs, light switches, handles, etc.).
- Additional cleaning and disinfection can be performed depending on the number of staff at the station.

Safety plans should be adhered to at the station: [Safety Plans (phsa.ca)](https://www.phsa.ca)

Station Document: [Station/annexes cleaning and disinfection](https://www.phsa.ca)

Station Record: [Station cleaning and disinfection record](https://www.phsa.ca)
4. Administrative Measures

Patient Screening and Source Control

Paramedics should conduct a point-of-care risk assessment. Refer to the BCEHS handbook or BCEHS COVID-19 point-of-care risk assessment.

Paramedics should conduct a COVID-19 screen using the BCCDC tool that is captured in the Siren PCR (see appendix B).

Personnel and Safety Measures for Screening

- The number of responding personnel should be limited to those individuals necessary for patient assessment and care.
- Only the number of paramedics required for safe care should be within two metres of the patient (usually one person).
- Other personnel should remain further than two metres from patient or their family members.
- Ask occupants around the patient to leave the room, if possible.
  - If they need to stay (e.g., parent, translation support), they should be instructed to clean their hands and be provided with a medical mask.
- The patient should be given alcohol-based hand rub (ABHR) to clean their hands and provided with a medical mask to wear, if tolerated, as the attending paramedic screens the patient for COVID-19.

Screening Results and Actions

- If no COVID-19 risk is indicated or assessed -> Paramedics can wear a medical mask (e.g., procedure or surgical mask) and face shield.
- If COVID-19 risk is indicated or assessed -> Both paramedics must implement contact and droplet precautions and add a gown to their current PPE.
- If patient is unsure of their status, (e.g., communication barrier, dementia) or if the paramedic is unsure of risk assessment level -> Both paramedics must implement contact and droplet precautions and add a gown to their current PPE.
- If patient has respiratory symptoms -> Ask patient to wear a medical mask (if tolerated and feasible). If a medical mask is not tolerated or is not feasible, the patient with should be provided with tissues and encouraged to use the tissues or cough/sneeze into their arm or shoulder and should be assisted to perform hand hygiene.

Transportation and Physical Distancing

During transport:

- Limit the number of providers in the patient compartment to essential personnel only to minimize possible exposure.
Avoid opening cupboards and compartments unless essential. If equipment is likely to be required, remove from the cupboard prior to loading patient.

Isolate the driver from the patient compartment and keep pass-through door tightly closed.

**Attending Crew Member:** The attending crew member should remain in contact and droplet precaution PPE (identified in section 6) for transport.

**Driver:** When at least two metres away from the patient, driver should doff and don PPE as follows:

<table>
<thead>
<tr>
<th>PPE for driver during patient transport</th>
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</thead>
<tbody>
<tr>
<td>Doffing after patient is placed in ambulance</td>
</tr>
<tr>
<td>1. Remove gloves and dispose.</td>
</tr>
<tr>
<td>3. Remove face shield and store for cleaning and disinfection after patient care activity is complete.</td>
</tr>
<tr>
<td>5. Medical mask, if worn, must be kept on.</td>
</tr>
<tr>
<td>6. If N95 respirator or EHFR is worn:</td>
</tr>
<tr>
<td>a. Keep on if an AGMP is going to be performed while transporting the patient.</td>
</tr>
<tr>
<td>b. If no AGMP is being performed, hands must be cleaned and the N95 respirator or EHFR removed, dispose of medical mask covering the port.</td>
</tr>
<tr>
<td>7. Don a clean medical mask.</td>
</tr>
<tr>
<td>8. Clean hands before entering the cab.</td>
</tr>
</tbody>
</table>

Face shields must be cleaned and disinfected prior to donning. See BCEHS extended use and reuse of face shields during the COVID-19 pandemic.

Patients should be offered hand hygiene prior to entering the ambulance or aircraft and should wear a medical mask, if tolerated, during transport.

**Discourage family members accompanying the patient in the ambulance.** If this cannot be avoided (e.g., they are required due to a language barrier), limit to one family member (a child may be accompanied by one parent/guardian/family member).

- Accompanying family members shall be screened for signs and symptoms of illness, including COVID-19, prior to entering the ambulance.
- Family members with signs or symptoms of illness, as well as those in self-isolation or quarantine in accordance with public health directives, shall not be permitted to accompany patients.
- Offer accompanying family member hand hygiene and a medical mask.
• Upon arrival at the facility, instruct the family member to remain in the emergency department with the patient.

Notify the receiving facility that a patient with suspected COVID-19 is being transported to the facility and provide estimated time of arrival.

In circumstances where dedicated emergency medical vehicles are not available to facilitate transport (e.g., remote or isolated communities), further consideration of interim measures may be required.

5. Personal Measures

Staying Home When Sick

Before each shift, staff must self-screen for symptoms of COVID-19 in accordance with employer COVID-19 safety plans. Follow the safety measures outlined in the BCCDC COVID-19 health-care worker self-check and safety checklist, including self-isolating at home if sick.

BCEHS staff must complete the PHSA screening tool: BC COVID-19 (thrive.health).

Hand Hygiene

• Hand hygiene remains the best way to prevent the spread of COVID-19.
• Paramedics are required to clean hands, using either ABHR (70-90%) or soap and water when hands are visibly soiled. Refer to the BCEHS poster or the BCCDC website for a poster on how to perform hand hygiene.
• Paramedics must adhere to the four moments of hand hygiene when providing care:
  o Moment 1 - BEFORE patient/patient zone contact (e.g., before entering the patients’ home or before donning gloves).
  o Moment 2 - BEFORE aseptic/clean procedure (e.g., before initiating an IV, before checking blood glucose level).
  o Moment 3 - AFTER body fluid exposure (e.g., after wound care or after suctioning). After any of these activities, you must remove your gloves and perform hand hygiene before moving on to the next activity.
  o Moment 4 - AFTER patient or patient zone contact (e.g., after handing over care at the patients’ destination).
• In addition, staff must clean their hands:
  o At the beginning of the shift and end of each shift.
  o Before entering the station or the office.
  o After leaving the station or office.
  o Before entering and after exiting the ambulance or aircraft.
  o Before and after eating or drinking.
  o Before, during and after PPE removal.
Before and after using shared equipment or devices.
- When hands are visibly soiled.
- Any other time hands are potentially contaminated.

- BCEHS 4 moments of hand hygiene poster
- BCEHS hand hygiene video
- BCEHS 4 moments of hand hygiene

Uniforms

- Wear your regular clothes and shoes to the station and change into your uniform and work boots for your shift.
- At the end of your shift, change back into your regular clothes and shoes.
- Boots should be left at your place of work.
  - At the station, do not store boots on the top of your locker.
  - If you must bring work boots home, place them in a plastic bag and leave them in an area of your home such as a garage or hallway. Do not bring into your main living area.

- BCEHS guidelines for boot decontamination
- Cleaning of contaminated uniforms factsheet
- BCEHS procedure - PPE and grooming during COVID-19 pandemic

6. Personal Protective Equipment

Out-of-hospital care is delivered in a variety of locations and under a variety of situations (e.g., on the street, in the home, in the ambulance). Some locations may be unsanitary, uncontrolled and/or within cramped environments and not amenable to risk assessment for identifying the type of PPE required and/or application of barriers other than PPE (e.g., two metre distance). As a result, BCEHS paramedics utilize PPE differently than health-care workers in acute or long-term care settings.

At the time of writing, the required baseline PPE for the scene assessment is:
- N95 respirator/ elastomeric half facepiece respirator (EHFR), with exhalation valve covered with a medical mask
- Face shield
- Gloves

Please refer to your local policies for required PPE and updates.

If no COVID-19/ILI risk is indicated or assessed by PCRA, paramedics wearing an N95 respirator or EHFR may keep the respirator in place until they return to the ambulance or aircraft to doff in a clean and controlled environment.
If they must remove the EHFR or N95 respirator during the patient care event to wear a medical mask, they must:

1. Move at least two metres away from the patient and any family members.
2. Doff gloves and dispose.
3. Clean hands.
4. Doff face shield and dispose.
5. Clean hands.
6. Doff EHFR. Dispose of medical mask covering the port and place in a clean area to clean and disinfect as per standards of practice (SOP).
7. Clean hands.
8. Don medical mask.
9. Don face shield.
10. Don gloves.

**If COVID-19/ILI risk is indicated or assessed by PCRA,** contact and droplet precautions should be initiated when within two metres of the patient.

**Contact and Droplet Precautions**

- BCEHS contact and droplet PPE includes respirator, eye protection, gown and gloves. See below for details on each piece of PPE.
- BCEHS personnel wear an N95 respirator or EHFR with the exhalation valve covered with a medical mask when providing direct care for all respiratory illnesses regardless of whether it is droplet or airborne transmitted.
- Appropriate eye protection should be worn (e.g., face shields).
- **ALWAYS** perform hand hygiene before and after removing PPE and after leaving the patient’s location or area.
- All personnel should avoid touching their face while working and adjusting PPE. If adjustment is required, remove gloves and clean your hands before you touch your face.
When at least two metres away from patient, don and doff as follows:

<table>
<thead>
<tr>
<th>Donning and doffing order for BCEHS contact and droplet precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Donning</strong></td>
</tr>
<tr>
<td>1. Clean hands.</td>
</tr>
<tr>
<td>2. Don gown.</td>
</tr>
<tr>
<td>3. Don fit tested N95 respirator or EHFR, ensure exhalation</td>
</tr>
<tr>
<td>valve is covered with a medical mask.</td>
</tr>
<tr>
<td>4. Don face shield.</td>
</tr>
<tr>
<td>5. Don gloves. Ensure they are over the cuff of the gown.</td>
</tr>
</tbody>
</table>

Doffing PPE:
It is important to doff PPE in such a manner that prevents self-contamination or cross contamination of other persons and surfaces. All used PPE must be considered contaminated so must be kept away from your skin and mucous membranes when being removed.

All disposable PPE is placed directly into a waste receptacle as soon as it is removed. Type of waste receptacle will be dependent on type of exposure. For infectious organisms, this is a regular waste receptacle.

### 6.1 Gloves
- Only wear gloves for direct patient care activities or cleaning and disinfection of the patient care area/equipment used.
- Hand hygiene must always be performed before donning gloves and after doffing gloves.
- Change gloves and clean hands when patient care activities dictate (e.g., IV insertion).
- Gloves must be changed immediately after each patient and/or after completing a medical task even on the same patient (remembering the importance of performing hand hygiene before donning and after doffing).
- ABHR or soap and water should never be used on gloves to replace hand hygiene. Gloves must be removed and hands cleaned. New gloves must be donned if task/procedure dictates.
- Discard gloves in a waste receptacle immediately after removal to prevent self-contamination or contamination to others.
- Double gloves are not required.
- BCEHS glove factsheet.
- How to remove gloves.

6.2 Gowns
- Gowns must be worn for all ILI/COVID-19 calls.
- Gowns must be worn when splash of blood and body fluids is anticipated.

6.3 Medical Mask
- Medical masks, also referred to as procedure or surgical masks, must be rated as per North American standards (American Society for Testing and Materials [ASTM]).
- All escorts or family members travelling in BCEHS ambulances, aircraft and vehicles must wear a medical grade mask and continue to do so when they enter health-care facilities.
- Patients must also wear a medical mask (if tolerated) when in BCEHS care and transport.
- As per the Ministry of Health mask use in health-care facilities policy, paramedics, dispatchers and staff are required to wear a medical mask in situations where two metres of physical distance cannot be maintained from others. Such environments include, but are not limited to:
  - When driving or sitting in an ambulance cab.
  - Ambulance stations when staff are moving around the facility and/or cannot maintain safe distancing.
  - Office and administrative spaces when other physical controls are not possible and/or staff need to be moving around outside of their safe workspace.
- Medical masks must be worn for all patient contacts when COVID-19/ILI has been assessed and no risk is identified.
- Medical masks should not be re-worn once removed. Change your mask if it becomes wet, soiled or damaged.
- BCEHS masking policy FAQ.
- PHSA masking policy.

6.4 Respirators
- Respirators (e.g., N95, EHFR) must be worn for droplet and airborne precautions.
- Respirators must be fit tested to the user.
There is no indication for use of powered air-purifying respirators in the care of patients with suspected or confirmed COVID-19.

Note: Respiratory protective equipment may restrict communication with patient groups and other ways of communicating to meet their needs should be considered (e.g., voice-to-text apps to display conversation). Non-verbal facial cues are reduced making emotions difficult to convey.

6.4.1 N95 Respirators

A foundational concept in IPAC practice is that disposable respirators should not be re-worn. However, jurisdictional guidance and facility IPAC policies on PPE use should be followed. Any such policies should be continually revisited.

- Extended use is favoured over reuse; it involves less physical contact of the respirator and, therefore, less risk of contact transmission as well as maintaining the integrity of the N95 respirator seal to the user’s face.
- Extended wear - doffing of N95 respirator, safe storage or disposal.
- N95 with exhalation valve are not to be used.

Note: If breathing becomes difficult, this indicates a saturated filter of moisture/particulates and should be changed to a new respirator. Paramedics are instructed to change their N95 respirator when it becomes difficult to breathe, indicating a saturated filter, or if the respirator becomes moist/wet/soiled (e.g., splash or spray with blood or body fluids).

6.4.2 Elastomeric Half Face Respirators (EHFR)

The Public Health Agency of Canada\(^ {13}\) and WHO\(^ {12}\) state respirators with unfiltered exhalation valves should not be used as the exhalation valve can allow virus particulates to pass through the exhalation valve opening. This makes the mask ineffective at preventing the spread of COVID-19 or any other respiratory virus.

In the context of the COVID-19 pandemic, IPAC recommends the use of a medical mask\(^ {14}\) to cover the exhalation valve. This recommendation is continually revisited.

- Refer to the BCEHS guideline on use, cleaning, maintenance and storage of elastomeric half face respirators during the COVID-19 pandemic.
- The EHFR will be dedicated to the paramedic.
- The EHFR must be cleaned and disinfected between use and stored as per guidelines between uses.
- The EHFR has an unfiltered exhalation valve and should not be used when sterility is required and a N95 must be used.\(^ {14}\) Such procedures may include, but are not exclusive of:
  - When retrieving a patient from an OR (sterility has to be maintained).
  - When transferring a ‘surgically open’ patient.
  - During arterial lines or central line access procedures.
- To align with the Ministry of Health mask use in health-care facilities policy, the exhalation valve of the EHFR must be covered by a medical mask when worn.
6.5 Eye Protection

- BCEHS supplies paramedics with face shields to protect the eyes and face of the paramedic.
- Safety glasses and prescription glasses are not considered adequate eye protection against droplets and splashes. \(^{(11)}\)
- Eye protection should not be touched when worn. If adjustments need to be made, ensure you are two metres away from the patient, remove gloves, clean hands, adjust eye protection, clean hands and don fresh gloves.

6.5.1 Face Shields

A foundational concept in IPAC practice is that disposable and single use products should not be re-worn. However, jurisdictional guidance and facility IPAC policies on PPE use should be followed. Any such policies should be continually revisited.

Benefits of wearing a full-face shield include coverage of the whole face, protection of an extended-wear medical mask or respirator from contamination and prevention of direct contact with the face near mucous membranes. \(^{(10,15)}\)

Refer to the BCEHS extended use and reuse of face shields during the COVID-19 pandemic. Extended wear - doffing, cleaning and safe storage of face shields video.

6.6 Additional PPE

Wearing extra PPE can affect the fit of PPE and complicates the doffing process, increasing the risk of self-contamination. There are no recommendations for double gloving, head covers or shoe covers for providing care to suspect or confirmed COVID-19 patients.
- For BCEHS, there is no indication for use of headcovers, even if undertaking an AGMP, in the care of patients with suspected or confirmed COVID-19.
- For BCEHS, there is no indication for the use of shoe covers in the care of patients with suspected or confirmed COVID-19.

See BCEHS PPE fact and fiction poster.

7. Aerosol Generating Medical Procedures (AGMPs)

Avoid non-indicated uses of AGMPs. Examples of AGMPS include nebulized Ventolin, intubation, bag valve mask (BVM ventilation), SGA insertion, continuous positive airway pressure (CPAP), OptiFlow, and high-flow nasal cannulas. See BCCDC’s website for more information on AGMPs.
If AGMP is required, consult with CliniCall for risk assessment. Cell and landline: 1-833-829-4099 or 604-829-4099 or SAT phone: 001-604-829-4099

- If AGMP is performed, initiate airborne precautions (e.g., N95 or equivalent).
- Create a negative pressure environment in the patient compartment of ambulance and set the rear exhaust fans in the patient compartment to HIGH in order to maximize air extraction (engineering control).
- If AGMP is performed, patients should be transported with full ventilation as available in style of ambulance. Full ventilation may include but not be limited to all windows closed and interior ventilation system and exhaust fan on.
- If high concentration oxygen and/or positive pressure ventilation are required, appropriate oxygen delivery system should be filtered with an antimicrobial, hydrophobic filter.
- Transitioning a patient with an AGMP into a facility could present a risk contamination.
  - Contact the receiving facility prior to arrival to discuss their procedure for the safe transition of care.
- Once the patient is removed from the ambulance or aircraft, it must be vented for 20 minutes prior to cleaning and disinfection. See BCEHS post transport ventilation of ambulance after transporting a patient on airborne precaution procedure.

8. Community Paramedicine

Community paramedicine (CP) is intended primarily for older adults (age 65+) living with chronic conditions including heart failure, chronic obstructive pulmonary disease (COPD) and diabetes, or who are at risk of falls.

- To minimize the risk to providers, patients and conserve PPE, home visits and community engagement opportunities were replaced wherever possible with virtual technology.
- CP services are offered in consultation with health authority partners and the timing will be dependent on direction from public health.
- CPs utilize the BCCDC COVID-19 screening tool. This screening tool is captured in the SIREN COVID-19 screening tool for community paramedics (see appendix B).
- Community events: Virtual platforms can be considered for wellness clinics and health promotion events. CP community activities may be offered in consultation with local health authorities for cohorted groups of six or less (e.g., schools and fire departments).

Prescheduled Client Visits

Before face-to-face visit, consultation should occur with the local health authority/public health and a pre-visit safety call/virtual visit conducted wherever possible using the BCEHS COVID-19 point-of-care risk assessment. During the pre-visit safety call, CPs must determine the need for applying additional infection prevention and control measures or cancelling/postponing the visit.
COVID-19 Testing:

As per the British Columbia Emergency Health Services SARS-CoV-2 Swabbing order of the provincial health officer, CPs are able to support COVID-19 screening activities and conduct testing. See the BCCDC lab testing page for the most up-to-date testing criteria and information on specimen collection.

- CPs must complete the Learning Hub course prior to clinical assessment - BCEHS community paramedic COVID-19 testing phase 1. After completion, clinical sign off is required.
- Phase 1 - COVID-19 screening clinics: Paramedics supporting COVID-19 screening clinics must wear BCEHS droplet and contact PPE. This may differ from the local health authority required PPE. CPs may use health authority equipment if it meets or exceeds BCEHS standards (implemented December 2020).
- Phase 2 - COVID-19 home testing (implemented March 2021): Refer to BCEHS CP procedure COVID-19 testing - providing home based testing SOG.
- Ensure the vehicle is fully stocked with PPE for contact and droplet PPE requirements: Gown > N95 respirator or EHFR with medical mask to cover the valve > face shield > gloves. Medical masks are required when contact and droplet PPE is not worn.
- Ensure the vehicle is stocked with ABHR and BCEHS approved cleaning and disinfection wipes.
- The referring organization or physician is responsible to arranging for: Testing supplies, transport containment supplies and lab access including transport of dangerous good approved packaging.

COVID-19 Immunization Clinics

As per the Emergency Medical Assistants SARS-CoV-2 Immunization order of the provincial health officer, following the completion of the COVID-19 immunization mandatory training, paramedics can administer the COVID-19 vaccine and, dependent on the licensing level, provide post-immunization monitoring.

- CPs are required to successfully compete the Learning Hub course - BCEHS community paramedic immunization curriculum and complete a clinical sign off (implemented March 26, 2021).
- PPE required for immunization clinics: Procedure mask and eye protection (e.g., face shield).
- Glove use during immunization is not routinely recommended. If the provider choses to wear gloves, they must be changed between vaccine recipients and hands cleaned after gloves are removed. (18)

Also in alignment with the order, the community paramedicine program is working with local health authorities to support immunizations of home bound patients.
9. Other Measures

Care of Deceased Persons

There can be a continuing risk of infection from the body fluids and tissue of deceased persons suspected or confirmed to have COVID-19. Paramedics should continue with contact and droplet PPE. See BCCDC guidance on handling COVID-19 suspected or positive decedents.

Waste

Waste from patients with COVID-19 should be handled using routine practices. Sharps must be placed in sharps containers as per usual practice.

Handle garbage as little as possible. Do not use bare hands to pick up bags or support bags from underneath. Clean hands after dealing with waste.

<table>
<thead>
<tr>
<th>Bag colour</th>
<th>Use</th>
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<tbody>
<tr>
<td>Red</td>
<td>Tissues, organs and body parts.</td>
</tr>
<tr>
<td>Yellow</td>
<td>Suction container contents, dressings, bandages, linens that are saturated with blood or body fluids.</td>
</tr>
<tr>
<td>Black or green</td>
<td>All other dressings and sponges; PPE following use and isolation waste from patients on contact, droplet, or airborne precautions; diapers, incontinent pads, empty IV bags and tubing, catheters.</td>
</tr>
</tbody>
</table>
10. References

**Internal BCEHS References**

- BCEHS IPAC 100: Cleaning and Disinfection Policy [https://intranet.bcas.ca/policy/manuals-guidelines-sops/pdf/IPAC100.pdf](https://intranet.bcas.ca/policy/manuals-guidelines-sops/pdf/IPAC100.pdf)

**External References**


14. Centers for Disease Control (2020-08-08) PPE FAQ Available at: Personal Protective Equipment: Questions and Answers | CDC


16. BCCDC (2020-09-01) Aerosol Generating Medical Procedures (AGMP). Available at: AGMPs_requiring_N95.pdf (bccdc.ca)

17. BCCDC (2020-03-16) COVID-19 variants. Available at: COVID-19 Variants (bccdc.ca)

March 25, 2020

Dear B.C. Emergency Health Services:

As we continue to engage in our response to the COVID-19 pandemic, the added complexity of a compromised supply chain has created constraints and concerns within the health care system.

When personal protective equipment (PPE) supply is at risk of becoming depleted, prioritization of allocation must take place in order to protect health care workers and first responders, and to support continuation of patient care.

To this end, and to protect our non-paramedic first responders, I am asking that you implement your proposed First Responder Dispatching Protocol During COVID-19 Pandemic (attached).

In addition, to ensure that we maintain a safe and reliable supply for all our health care workers including paramedics, I am writing to ask that you work with paramedics to implement PPE conserving measures including:

- using one N95 respirator per shift unless the respirator is too damp, soiled, or damaged for effective droplet protection
- using one form of eye protection per shift and reuse eye protection between shifts using appropriate cleaning protocols

Your assistance in conserving our supply of N95 respirators is integral to keeping our health professionals safe and healthy as we work to manage the impact of the COVID-19 pandemic in B.C.

Sincerely,

Bonnie Henry
MD, MPH, FRCP
Provincial Health Officer

cc: Gerry Deorme, HEMBC
Appendix B – SIREN COVID-19 Screening Tool

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<th>Done By</th>
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**Have you travelled to any countries outside Canada (including the United States) within the last 14 days?**
- Yes
- No
- Unable to Obtain

**Did you provide care or have close contact with a person with COVID-19 (probable or confirmed) while they were ill (cough, fever, sneezing, or sore throat)?**
- Yes
- No
- Unable to Obtain

**Symptoms**
- Short of Breath
- Chest Pain
- Fatigue
- Confusion
- Unresponsive
- Fever/Chills
- Cough
- Headache
- Sore Throat
- Runny Nose
- Diarrhea
- Body Aches
- Nausea
- Vomiting
- Other

**How many days has the patient experienced symptoms?**
1, 2, 3

**Document patient's temperature under Vital Signs > Temp**
For COMMUNITY PARAMEDICS (CP) only, continue documenting from here on -

**Method of Assessment**

- **Telephone**
- **Face-to-face**
- **Zoom**
- **Facetime**

Has the patient been self-isolating? Self-isolation means staying home and avoiding situations where the patient could come into contact with others. If 'Yes', enter no. of days.

- Yes
- No

Does the patient live with co-habitants? If 'Yes', enter no. of co-habitants.

- Yes
- No

Are any of the co-habitants experiencing symptoms? If 'Yes', enter no. of co-habitants showing symptoms.

- Yes
- No

For each co-habitant experiencing symptoms, enter no. of days they have had symptoms for (if there are more than 3 people, enter no. of days for the more severe cases)

**Co-habitant 1**
- Days with symptoms:
  - 1
  - 2
  - 3

**Co-habitant 2**
- Days with symptoms:
  - 1
  - 2
  - 3

**Co-habitant 3**
- Days with symptoms:
  - 1
  - 2
  - 3
Appendix C – Infection Prevention and Control Posters

PPE posters
IPAC & safety information
BCEHS COVID-19 point-of-care risk assessment
Safety update – creating a positive pressure environment in the cab

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<tr>
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<tr>
<td>Last Reviewed:</td>
<td>17-May-2021</td>
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<tr>
<td>Approved By:</td>
<td>Infection Prevention Committee</td>
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<tr>
<td>Owner:</td>
<td>Janie Nichols, IPAC Coordinator</td>
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