

## FREQUENTLY ASKED QUESTIONS

# (ARCHIVED) First Responders and COVID-19

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### ARCHIVED DOCUMENT

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## Introduction

These frequently asked questions and answers are intended to support first responders providing direct care to patients with known or suspected SARS-CoV-2 infection.

First responders are those who, in the early stages of an emergency, are responsible for the protection and preservation of life, property, evidence and the environment. They include police officers, firefighters, military personnel, paramedics, medical evacuation pilots, dispatchers, nurses, doctors, emergency medical technicians and emergency managers and may include those who act in a volunteer position.<sup>1</sup>

This document should be used in addition to – but not as a replacement for – the advice, guidance, recommendations, directives or other direction of provincial Ministries and local public health units. Please refer to the Ministry of Health’s website for the most up to date guidance.

## Modes of Transmission

### Q1. What is the current evidence on the main mode of transmission of SARS-CoV-2?

Current evidence suggests that the main mode of transmission of SARS-CoV-2 is at short range through unprotected close contact and exposure to respiratory particles that range in size from large droplets, which fall quickly to the ground, to smaller droplets, also known as aerosols, which can remain suspended in the air.<sup>2</sup>

The majority of cases have been linked to person-to-person transmission through close direct contact to someone with respiratory symptoms or transmission through an index case who was subsequently tested positive for COVID-19 and/or has developed mild symptoms.<sup>2</sup>

New variants of concern (VOC) of the SARS-CoV-2 virus have been circulating in Ontario. Other variants have been identified in various parts of the world. Current evidence points to overall increased transmissibility to varying degrees, but shows no indication that these variants of concern are transmitted in fundamentally different modes from other variants of the virus. At this time there are no changes to current IPAC measures for variants of concern. However, higher transmissibility suggests that

for a given exposure there is a greater likelihood of infection, and hence the utmost importance for adherence to current IPAC measures. Guidance may change as evidence evolves.<sup>3</sup>

Transmission over longer distances (greater than 2m) is less common, but possible under certain conditions such as prolonged exposure in a poorly ventilated space. Under these conditions, inhalation of small particle respiratory droplets and aerosols can occur at longer ranges.

## Personal Protective Equipment

**Q2. Given the new information on transmission of the SARS-CoV-2 virus, has there been a change in the personal protective equipment (PPE) required by first responders?**

Our understanding of how transmission occurs has evolved<sup>2</sup> and the relative contribution of droplets and aerosols continues to be studied. This has not necessitated a change in infection control measures,<sup>2-5</sup> but highlights the importance of incorporating multiple infection control layers to mitigate transmission. A jurisdictional scan of select public health organizations showed that recommendations varied among organizations, and not all had specific guidance for first responders at the time of this review.

### Summary of PPE Selection Recommendations<sup>5</sup>

**Perform a point-of-care risk assessment to inform the selection of PPE.**

Activity	Type of PPE
Manual ventilation, Intubation, and other aerosol generating medical procedures (AGMP)	<ul style="list-style-type: none"><li>• N95 respirators fit-tested, seal-checked</li><li>• Gown</li><li>• Gloves</li><li>• Eye protection (goggles or face shield)</li></ul>
Mask and oxygen therapy	<ul style="list-style-type: none"><li>• Medical mask</li><li>• Gown</li><li>• Gloves</li><li>• Eye protection (goggles or face shield)</li></ul>
Chest compressions	<ul style="list-style-type: none"><li>• Medical mask</li><li>• Gown</li><li>• Gloves</li><li>• Eye protection (goggles or face shield)</li></ul>
Hemorrhage application of pressure for a bleed	<ul style="list-style-type: none"><li>• Medical mask</li><li>• Gown</li><li>• Gloves</li><li>• Eye protection (goggles or face shield)</li></ul>

Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario). IPAC recommendations for use of personal protective equipment for care of individuals with suspect or confirmed COVID-19 [Internet]. 6<sup>th</sup> revision. Toronto, ON: Queen's Printer for Ontario; 2021 [cited 2021 Jul 12] Available from: <https://www.publichealthontario.ca/-/media/documents/ncov/updated-ipac-measures-covid-19.pdf?la=en>

## Cleaning and Disinfection

### **Q3. What is the process for the cleaning and disinfection of a first responder's vehicle?**

After every call, routine post-call cleaning and disinfection of all patient care equipment used and surfaces touched is to be conducted using a hospital disinfectant (low-level disinfectant with a drug identification number [DIN]) and following organizational procedures.<sup>6-7</sup> If the patient presented with acute respiratory illness and/or is a suspected/confirmed case of COVID-19, clean and disinfect the vehicle following Droplet/Contact precautions, wearing a gown, gloves, medical mask and eye protection.<sup>6</sup>

## Vaccination

### **Q4. How effective are the vaccines approved by Health Canada against the COVID-19 variants of concern (VOC)?**

When fully vaccinated, vaccine effectiveness against the dominant variants circulating in Canada is 94-95% after two doses of an mRNA vaccine and 82% after two doses of a vector-based vaccine.<sup>8</sup> Evidence on the effectiveness of Health Canada approved vaccines is evolving. Vaccine effectiveness varies somewhat among the different VOCs and vaccine types, with mRNA vaccines showing higher rates of effectiveness against VOC compared to vector-based vaccines<sup>9</sup>

Vaccine effectiveness for the Health Canada approved vaccines for the variants of concern ranges from 60% (viral-vector vaccines) to 75-88% (mRNA vaccines). All vaccines prevent 70-90% of serious health complications and hospitalizations.<sup>9</sup>

### **Q5. Once I am fully vaccinated, do I still need to follow masking and physical distancing protocols?**

Most jurisdictions have maintained public health measures for vaccinated cases (e.g. physical distancing, masking), due to the uncertainty around the vaccine effectiveness in sub-populations (e.g., elderly, immune suppressed) and against the emerging VOC with immune escape potential.<sup>10</sup> Current evidence suggests that vaccinated individuals who become infected with SARS-CoV-2 have lower viral loads, reduced duration of infectiousness and reduced risk of transmission to household members, including some limited evidence for variants of concern (VOC) (alpha B.1.1.7) and beta (B.1.351).<sup>10</sup>

Breakthrough cases have still been identified in fully vaccinated individuals, and the risk of onward transmission of infection from vaccinated individuals remains unclear.

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## Additional Resources

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