

PEAR VS. THE PANDEMIC

SUPPORTING OUR PHARMACY STAKEHOLDERS DURING THE COVID-19 CRISIS

PROTECTION IN THE AGE OF COVID-19

Community pharmacists, as front-line healthcare providers, have a critical role to play in ensuring the health and safety of Canadians during the COVID-19 pandemic. In addition to providing continuity of care for patients with chronic diseases such as diabetes and hypertension, pharmacists are responsible for taking measures to reduce the spread of COVID-19 amongst colleagues, patients, and family members. This document focuses on some key questions related to the transmission of COVID-19, as well as the use of personal protective equipment (PPE) both in the community and in the pharmacy setting.

OBJECTIVES:

This document will address the following four questions:

- 1 What is known about how COVID-19 is transmitted?
- 2 How long does COVID-19 remain viable on surfaces or in the air?
- 3 Who should wear masks, and how should they be used?
- 4 Is there value in wearing gloves in the pharmacy?



1 TRANSMISSION OF COVID-19

It is believed that the most likely way the COVID-19 virus is transmitted is through respiratory droplets from an infected person coming into contact with mucosa in the eyes, nose, or mouth of another person. This can occur when an individual has close, unprotected contact with an infected person who coughs or sneezes OR when a person touches a surface that an infected person has coughed or sneezed on and then touches his/her eyes, nose, or mouth.¹ The virus has been demonstrated to be spread by those who are asymptomatic, symptomatic, or have mild symptoms.^{2,3}

Although airborne spread (i.e., via aerosols or very small particles that can be spread via exhalation, such as through talking or breathing)⁴ is a theoretical concern, it has not been documented for COVID-19.⁴ This is most likely to be a concern in a hospital setting during aerosol-generating procedures, such as intubation or suctioning. Fomite spread (i.e., through contaminated surfaces) is also possible but has not been documented. The virus has been detected in stool and blood, but it is not clear whether transmission can occur via these routes. Also, there has been no documented infectious spread amongst domestic animals and humans.⁵

The incubation period of a virus is the time between infection and onset of symptoms. Knowledge of the incubation period of COVID-19 has helped to inform quarantine and self-isolation time frames. In a US pooled analysis of 181 COVID-19 cases outside of Hubei, China, reported between January 4, 2020, and February 24, 2020, researchers estimated that the median incubation period was 5.1 days, with most people (97.5%) who will develop symptoms, manifesting them by 11.5 days. However, there is some evidence of transmission by people with mild symptoms or no symptoms, and the time from exposure to onset of infectiousness might be shorter than 5.1 days.⁶

The authors of this analysis suggest that while most individuals will show symptoms before 14 days, there is likely to be a small number of people who may not show symptoms until 14 days or later after exposure. They also noted that their study was limited to reported cases that were likely more severe or involved patients who were hospitalized, and suggested that there may be a different incubation time in mild cases.⁶

What does this mean for patient care?

The safest approach is to assume everyone could be infected with COVID-19 and take the proper precautions, always. That means that hand hygiene and physical distancing (staying at least two metres from others) are the most important measures to take, routinely. If you are required to give vaccinations, administer medications, or maintain a close distance from a patient for other reasons in the pharmacy, you may consider wearing a surgical mask and gloves, along with frequent handwashing.

2 STABILITY OF COVID-19 ON SURFACES AND IN THE AIR

A letter published in the *New England Journal of Medicine* summarized an experiment conducted by a team of scientists from several US sites, including the National Institute of Allergy and Infectious Diseases (NIAID) and the US Centers for Disease Control and Prevention (CDC), to assess the stability of the SARS-CoV-2 virus (COVID-19) on surfaces and in the air, compared to the previous SARS-CoV-1 virus, in experimental environments.⁷

The authors summarized that the SARS-CoV-2 virus was detected for up to three hours in an aerosol environment, up to three days on plastic and stainless steel, up to four hours on copper, and up to one day on cardboard. It is important to note that in all of these environments, there was an exponential decay in virus titre over time, which means that the virus becomes less likely to cause infection over time.⁷ Also, this was an

experimental environment and factors in real life, such as temperature and humidity, may affect whether the presence of the virus in these environments leads to transmission of disease.

Although in this study, the virus did remain viable in these different environments, transmission via respiratory droplets spread from person to person amongst close contacts is most commonly the cause in reported cases.⁸

What does this mean for patient care?

Advise patients who have respiratory symptoms or fever, or who have been advised to quarantine or isolate, not to come to the pharmacy. If they require medication, they should send someone on their behalf or arrange for medication delivery, if you offer it.

It is important to clean all surfaces, particularly those that are “high touch” such as door handles, countertops, credit card pin pads and scanners, faucet handles, light switches, and cart handles frequently with disinfectant cleansers. Health Canada has a list of approved cleaners that you can check at <https://www.canada.ca/en/health-canada/services/drugs-health-products/disinfectants/covid-19/list.html#tbl1>. A product that both cleans and disinfects would be a good choice to remove dirt and impurities and also to kill pathogens. Avoid shaking clothes or other items, dusting, or sweeping to prevent dispersing virus particles.⁹

3 PROPER USE OF MASKS

There has been much debate about whether the use of masks is necessary for the general public. Masks continue to be in short supply and are of greatest need by front-line healthcare professionals caring for hospitalized people with COVID-19.¹⁰

There are three types of masks that Canadians may have access to:¹¹

- N95 masks are medical devices that have been designed to reduce the risk of inhaling

hazardous airborne particles and aerosols. For effective use, they must be professionally fitted to ensure a proper seal.

- Nonmedical grade N95 masks are considered commercial grade, and the difference between these and medical grade is that the commercial grade masks are not tested for fluid resistance.
- Surgical/medical/procedural masks are typically used in surgery and other medical procedures to prevent the transfer of micro-organisms, body fluids, and particulate material.

The Canadian government has advised Canadians to wear nonmedical masks when going to areas where physical distancing may be difficult to maintain, such as grocery stores and pharmacies. They note that this is to prevent spreading droplets to another person, rather than protecting the person wearing the mask.¹¹ Masks may be a way to minimize touching of the mouth or nose, which can subsequently prevent infection if effective; however, adjusting a mask or touching it frequently for other reasons may lead to more potential contact of hands with mucous membranes of the eyes, nose, or mouth.

The CDC has provided a similar statement for the general public that recommends “wearing cloth face coverings in public settings where other social distancing measures are difficult to maintain (e.g., grocery stores and pharmacies) **especially** in areas of significant community-based transmission.”¹²

These recommendations are to address the concern over spread of COVID-19 by infected individuals who are asymptomatic or pre-symptomatic. People are still advised to practise physical distancing and hand hygiene, and to refrain from using N95 or surgical masks that are reserved for healthcare workers.^{11,12}

Pharmacists who have enforced physical distancing processes in the pharmacy may not need to wear a mask. However, when procedures such as administering a vaccine or helping a patient administer a subcutaneous

medication are necessary, it may be advised to wear a mask if available. If wearing a mask, it is important to understand how to put on the mask properly, and subsequently, how to remove it to minimize spread of respiratory droplets. A surgical/medical/procedural mask would be the most appropriate option.

Here are some key steps for using a face mask when providing patient care:¹⁰

- Wash your hands with warm, soapy water for at least 20 seconds. If this is not available, clean your hands with an alcohol-based hand rub.
- Place the mask over your mouth and nose, and make sure you have eliminated or minimized gaps between your face and the mask. Hold the mask by the elastics or ties rather than the front part of the mask.
- While wearing the mask, avoid touching it. If you are compelled to touch the mask, promptly clean your hands with soap and water or an alcohol-based hand rub before continuing to provide care.
- If the mask becomes damp or is soiled, remove it, and discard it.
- To remove the mask, do not touch the front part of the mask; instead touch the elastic or strings. Throw the mask immediately into a garbage bin with a lid that is ideally “hands-free” (and ideally dedicated for PPE) that is situated close to where you provide care.
- Wash your hands with soap and water or clean them with an alcohol-based rub after removing the mask.

Health Canada cautions that homemade masks may consist of various materials, with different types of fits, and it is not known if they can effectively protect against COVID-19.¹³

What does this mean for patient care?

Continue to maintain a physical distance of at least two metres from patients, but if you need to get close and want to wear a mask, be sure to use it carefully. Masks can provide a false sense of security and may cause you to touch your face more often, so continue to wash your

hands frequently – before, during wear, and after taking off the mask.

4 GLOVE USE IN THE PHARMACY

For most pharmacists, gloves are not necessary for routine care as long as physical distancing is observed, hand hygiene is being performed frequently, and surfaces are cleaned regularly. If pharmacists want to wear gloves when coming into close contact with patients to administer vaccines or other medications, it is advised that nonsterile, disposable gloves should be used. It is not necessary to double up gloves, and they should be changed if they become torn or heavily contaminated. To remove gloves, avoid touching the outer surface of the gloves with bare hands. When gloves are removed, dispose of them immediately in a dedicated garbage bin with a “hands-free” lid that is in close proximity to the consultation area. After removing gloves, hands should be washed with warm, soapy water for 20 seconds, or they should be cleaned by using an alcohol-based hand rub.¹⁴

What does this mean for patient care?

Like masks, gloves can provide a false sense of security, and it is very important to ensure that the gloved hands do not come into contact with the face. If wearing a mask and gloves, put the mask on first, then gloves, and remove them in the opposite order: gloves first, then mask.¹⁵

For more guidance for pharmacists visit:
<https://www.fip.org/files/content/priority-areas/coronavirus/Coronavirus-guidance-update-ENGLISH.pdf>

Information provided by Rosemarie Patodia, BScPhm, BCGP, and reviewed by Tom Smiley, BScPhm, PharmD, CTE.

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