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**FIP HEALTH ADVISORY**

**COVID-19:  
FREQUENTLY ASKED QUESTIONS  
AND MYTH BUSTING**

# COVID-19: FREQUENTLY ASKED QUESTIONS AND MYTH BUSTING

*FIP will update this interim guidance as more information becomes available.*

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## Purpose of this document

Since December 2019, an outbreak of a new human coronavirus — severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) — has spread to many countries, causing millions of cases and hundreds of thousands of deaths. COVID-19 is the disease caused by this new virus. The virus is easily transmitted in the community via respiratory droplets, direct contact with an infected individual or surfaces that have been contaminated. While most people who are infected only experience mild to moderate symptoms that can be managed, up to 20% of infected individuals develop more severe illness requiring hospital treatment. Individuals at higher risk of severe illness are older adults, people with underlying conditions and those with acquired or congenital immunodeficiency. The large number of COVID-19 patients requiring hospital care (including intensive care) has placed significant burden on health systems and healthcare professionals all over the world. It has led most countries to implement exceptional measures to contain the spread of the virus, including extensive lockdowns, emergency protocols and social distancing measures. All health professions, including pharmacists, are called on to play a crucial role in managing and controlling this pandemic.

The purpose of this document is to provide answers to questions that may be frequently asked by members of the public, patients or pharmacists and other members of the pharmacy workforce. The document also addresses a few common myths and misconceptions about COVID-19 and ways to prevent or treat it.

As the World Health Organization Director-General, Dr Tedros Adhanom Ghebreyesus, has said: “We’re not just fighting an epidemic; we’re fighting an infodemic”. An infodemic is an over-abundance of information, some accurate and some not that makes it hard for people to find trustworthy sources and reliable guidance when they need it. Pharmacists play an invaluable role by providing reliable and evidence-based information and advice to the public. This document may be useful in informing this role.

## Questions on the virus and disease transmission

### What is a novel coronavirus?

A novel coronavirus is one that has not been previously identified. SARS-CoV-2 is not the same as the [coronaviruses that commonly circulate among humans](#) and cause mild illness, like the common cold. A diagnosis with coronavirus 229E, NL63, OC43, or HKU1 is not the same as a SARS-CoV-2 diagnosis. These are different viruses and patients with SARS-CoV-2 will be evaluated and cared for differently than patients with common coronavirus diagnosis. (1)

### What is the source of SARS-CoV-2?

Public health officials and partners are working hard to identify the source of SARS-CoV-2. Coronaviruses are a large family of viruses, some causing illness in people and others found in animals, including camels, cats and bats. Analysis of the genetic tree of this virus is ongoing to determine its specific source. Bats have been suspected due to the high resemblance between SARS-CoV-2 and other coronaviruses commonly found in certain bat species. SARS-CoV, the coronavirus that emerged to infect people in 2003, came from civet cats, whereas MERS-CoV, which causes Middle East respiratory syndrome, came from camels. (1)

### How does the virus spread?

This virus probably originally emerged from an animal source but is now spreading between humans. Most often, spread from person to person happens among close contacts (within 6 feet/1.8 metres) and mainly via respiratory droplets produced when an infected person coughs or sneezes, similar to how influenza and other respiratory pathogens spread. These droplets can land in the mouths, noses or eyes of people who are nearby or possibly be inhaled into the lungs. Infection can also occur if a person touches an infected surface and then touches his or her eyes, nose or mouth.

### **Can COVID-19 be caught from a person showing no symptoms?**

Transmission of SARS-CoV-2 from asymptomatic and pre-symptomatic individuals (or individuals within the incubation period) has been described. However, the extent to which this occurs remains unknown. Large-scale serologic screening might provide a better sense of the scope of asymptomatic infections and inform epidemiologic analysis. (2)

### **Can a pregnant woman transmit the virus to the foetus?**

Minimal information is available regarding COVID-19 during pregnancy. Intrauterine or perinatal transmission has not been identified. In two reports including a total of 18 pregnant women with suspected or confirmed COVID-19 pneumonia, there was no laboratory evidence of transmission of the virus to the neonate. However, two neonatal cases of infection have been documented. In one case, the diagnosis was made at day 17 of life after close contact with the infant's mother and a maternity nurse who were both infected. The other case was diagnosed 36 hours after birth; the source and time of transmission in that case were unclear. (3)

### **Can the virus be transmitted from mother to child via breastfeeding?**

In limited studies on women with COVID-19 or another coronavirus infection, severe acute respiratory syndrome, the viruses were not detected in breast milk. However, it is not known whether mothers with COVID-19 can transmit the virus via breast milk. Breast milk provides protection against many illnesses. There are rare exceptions when breastfeeding or feeding expressed breast milk is not recommended. The US CDC recommends that a mother with influenza continue breastfeeding or feeding expressed breast milk to her infant while taking precautions to avoid spreading the virus to her infant. Given low rates of transmission of respiratory viruses through breast milk, the World Health Organization states that mothers with COVID-19 can breastfeed. (4)

### **Do air conditioning systems contribute to the dissemination of COVID-19?**

With regards to the role of air conditioning systems in the dissemination of the virus in closed spaces, the evidence is limited.

However, the European Centre for Disease Prevention and Control has issued a document on this subject with the following conclusions:

- There is currently no evidence of human infection with SARS-CoV-2 caused by infectious aerosols distributed through the ventilation system ducts of heating, ventilation and air conditioning (HVAC). The risk is rated as very low.
- Well-maintained HVAC systems, including air-conditioning units, securely filter large droplets containing SARS-CoV-2. It is possible for COVID-19 aerosols (small droplets and droplet nuclei) to spread through HVAC systems within a building or vehicle and stand-alone air-conditioning units if air is recirculated.
- Air flow generated by air-conditioning units may facilitate the spread of droplets excreted by infected people over longer distances within indoor spaces.
- HVAC systems may have a complementary role in decreasing transmission in indoor spaces by increasing the rate of air change, decreasing recirculation of air and increasing the use of outdoor air.

### **Is SARS-CoV-2 the same as MERS-CoV or SARS-CoV?**

No. Coronaviruses are a large family of viruses. Some cause illness in people whereas others circulate among animals, including camels, cats and bats. The recently emerged SARS-CoV-2 is not the same as the coronaviruses that cause MERS or SARS. However, genetic analyses suggest it emerged from a virus related to the one that caused SARS. There are ongoing investigations to learn more. This is a rapidly evolving situation and information will be updated as it becomes available. (1)

### **What can I do to protect myself from infection?**

Usual hygiene measures to prevent infections spreading should be followed: regular hand washing, covering the mouth and nose when coughing, sneezing into a flexed elbow or a disposable paper tissue, and thoroughly cooking meat and eggs. Avoid close contact with other individuals from outside your household in indoor or outdoor spaces, especially those showing symptoms of respiratory illness such as coughing and sneezing. (5)

**Can people who recover from COVID-19 be infected again?**

The immune response to COVID-19 is not yet understood. Patients with MERS-CoV infection are unlikely to be re-infected shortly after they recover, but it is not yet known whether similar immune protection will be observed for patients with COVID-19. (6)

**Will COVID-19 go away on its own in warmer weather?**

For the novel coronavirus SARS-CoV-2, there is reason to expect that, like other betacoronaviruses, it may transmit somewhat more efficiently in winter than summer, although the mechanism(s) responsible are unknown. The difference is expected to be modest, and not enough to stop transmission on its own. Based on the analogy of pandemic flu, it is expected that SARS-CoV-2, as a virus new to humans, will face less immunity and thus transmit more readily even outside the winter season. Changing seasons and school vacation may help, but are unlikely to stop transmission. Urgent for effective policy is to determine if children are important transmitters, in which case school closures may help slow transmission, or not, in which case resources would be wasted in such closures. (7)

**Is it safe to receive a letter or a package from any area where COVID-19 has been reported?**

Yes. The likelihood of an infected person contaminating commercial goods is low and the risk of catching the virus that causes COVID-19 from a package that has been moved, travelled, and exposed to different conditions and temperature is also low. (8)

**Can COVID-19 be transmitted via mosquito bites?**

No. SARS-CoV-2 is a respiratory virus which spreads primarily through droplets generated when an infected person coughs or sneezes, or through droplets of saliva or discharge from the nose. There is so far no evidence that it could be transmitted by mosquitos. (8)

**Are medical masks effective in protecting me from infection?**

Wearing a medical mask is one of a number of prevention measures to limit spread of certain respiratory diseases, including COVID-19, in affected areas. However, the use of a mask alone is insufficient to provide an adequate level of protection and other equally relevant measures should be adopted, including adequate hand hygiene, social distancing and disinfection of surfaces. (9)

**Is wearing rubber/latex gloves while out in public effective in preventing the new coronavirus infection?**

No. Regularly washing your bare hands offers more protection against catching COVID-19 than wearing rubber gloves. You can still pick up COVID-19 contamination on rubber gloves. If you then touch your face (mouth, nose or eyes), you may be infected. (10)

**What is the minimum viral load that causes infection?**

At this time, the minimum viral load needed to cause infection is unknown. However, as with many other viral illnesses, it is believed that higher viral loads are associated with more severe symptoms and worse outcomes.

**Can pets spread COVID-19?**

At this time, there is no evidence that animals play a significant role in spreading the virus that causes COVID-19. Based on the limited information available to date, the risk of animals spreading COVID-19 to people is considered to be low. A small number of pets have been reported to be infected with the virus that causes COVID-19, mostly after contact with people with COVID-19. (11)

**I have travelled to a country with a high number of cases of COVID-19. What should I do?**

The risk of exposure to COVID-19 is believed to be highest for those people who have travelled to countries or regions with a high number of confirmed cases of COVID-19.

If you have travelled to any of these countries in the past 14 days you should monitor for symptoms, practise social distancing — avoid crowds and small gatherings in enclosed spaces, and keep a distance of 1-2 metres between yourself and others.

If you develop symptoms, you must immediately isolate yourself and seek medical care. You should call your doctor or your local emergency department. Tell the person you call where you have been. If you have symptoms you should not go to work, school, university, childcare facilities, gyms or public areas, and you should not use public transport, taxis or ride-sharing services. If you need to seek medical care, wear a surgical mask if available.

**What is the mean duration from onset to recovery?**

The median incubation period is 5.1 days with development of symptoms within 11.5 days of exposure, for those who will develop symptoms. For mild cases, recovery takes approximately two weeks. Severe or critical cases of COVID-19 can take three to six weeks for recovery. Altogether, the total duration of disease can range from approximately two to eight weeks.

**Will the virus mutate, and how will that impact treatment options?**

It is certain that the coronavirus will mutate. Based on experience with the influenza virus, genetic shifts are less worrisome than genetic drifts, but all mutations should be considered when predicting the future of SARS-CoV-2. Currently, it is uncertain how mutations will impact the virulence of this virus. There is hope that the development of vaccines will provide protection against the current and future strains.

**Does COVID-19 produce any sequelae in patients?**

At this time, complications associated with the illness have been identified but long-term sequelae are unknown. Complications associated with severe illness include: acute respiratory distress syndrome (ARDS), arrhythmias, acute cardiac injury, shock, pulmonary embolism, stroke, and Guillain-Barre syndrome. The WHO reports recovery times of about two weeks for mild infections and three to six weeks for severe infections.

**Why are paediatric cases less severe compared with the disease in adults?**

At this time, information on paediatric patients and COVID-19 is limited. Children appear not to be at higher risk for the illness, but this does not necessarily mean they are at lower risk either. Symptoms in children tend to be milder than in adults, thus cases may be underdiagnosed. Like adults, it is important for children to practise social distancing and appropriate hygiene in order to prevent the spread of the coronavirus. It is also important to limit time spent with higher risk populations, such as grandparents.

**If a person has no symptoms but tests positive for COVID-19, what could be risk for other people living in the same home?**

Even if asymptomatic, a person who has been positively diagnosed is contagious, which puts others in the same house at risk. In order to minimise the risk of spread to others, the infected persons should self-isolate in one room of the home. In addition, disinfection of surfaces and objects used or touched by the patient and face/hand hygiene are strongly recommended.

## Questions on therapeutic options and vaccines

**Do vaccines against pneumonia protect you against COVID-19?**

No. Vaccines against pneumonia, such as pneumococcal vaccine (PV) and Haemophilus influenzae type B (Hib) vaccine, do not provide protection against COVID-19. The virus is so new and different that it needs its own vaccine. Researchers are trying to develop one and the WHO is supporting their efforts. Although PV and Hib are not effective against COVID-19, vaccination against respiratory illnesses is highly recommended. (8)

**Are antibiotics effective in treating COVID-19?**

No. Antibiotics do not work against viruses; they only work on bacterial infections. COVID-19 is caused by a virus and, therefore, antibiotics should not be used as a means of prevention or treatment. However, if you are tested positive for COVID-19, you may receive antibiotics because bacterial co-infection is possible. (8)

**Should the treatment with ACEi or ARBs be discontinued due to an increased risk of COVID-19 severity?**

There is no evidence to support the assertion that treatment with ACE inhibitors (ACEi) or angiotensin receptor blockers (ARB) could predispose individuals to adverse outcomes should they become infected with COVID-19. Various scientific and professional societies have stated that patients should continue their treatment with ACEis and ARBs unless specifically advised to stop by their medical team. (12)

**Is it safe to use NSAIDs including ibuprofen to manage fever and pain in COVID-19 patients?**

There is currently no conclusive evidence to establish a direct association between the use of non-steroidal anti-inflammatory medicines (including ibuprofen) and increased risk of infection or severity of disease. (13)

**Will the use of salbutamol and other beta-agonists medicines help relieve or reduce respiratory distress in mild cases?**

For patients with mild cases of coronavirus, characterised generally by fever, cough, and/or myalgia without dyspnoea, home management is appropriate. Since mild cases typically do not feature respiratory distress, management is largely focused on symptomatic treatment. For those cases that feature respiratory distress, hospitalisation and treatments to assist ventilation may be required.

**Is there any treatment that can help boost the production of immunoglobulins?**

Evidence has shown that as a patient recovers from the coronavirus they develop the IgG antibody which provides long-term immunity for that individual. New studies suggest that treatment with intravenous immunoglobulin (IVIg) from a recovered patient may boost the immune response in newly infected patients. Combination therapy of IVIg and antiviral medicines may be an appropriate treatment until other treatment options, such as vaccines, are available. IVIg therapy is thought to be the most efficacious if the antibodies are pulled from a recovered patient from the same city or nearby area, which should be kept in mind when considering this therapy. For more information: [www.ncbi.nlm.nih.gov/pubmed/32218340](http://www.ncbi.nlm.nih.gov/pubmed/32218340)

**How is data on ongoing clinical trials on use of antivirals being captured?**

More than 600 clinical trials are under way for COVID-19 treatment options. Several of these clinical trials are capturing the efficacy of antiviral treatments through various outcomes, including the recovery time, cough remission time, need for oxygen therapy, intensive care unit transfer after therapy, mortality rate and more. Overall, studies are attempting to capture the potential benefits of these therapies, as well as any risks associated with these therapies.

**Are there guidelines on the shortage of medicines due to COVID 19?**

At this time, guidance to address medicine shortages does not exist. Existing helpful resources include those from the American Society of Health-System Pharmacists, available at [www.ashp.org/Drug-Shortages/Shortage-Resources](http://www.ashp.org/Drug-Shortages/Shortage-Resources).

### **Are there guidelines on medicine interactions for COVID-19?**

The University of Liverpool has released a resource identifying potential medicine-medicine interactions with experimental COVID-19 therapies. To view this resource, click [here](#).

### **Can metformin be used in COVID-19 management?**

A recent study (14) found a potentially lethal medicine interaction between metformin, and the two medicines being used for COVID-19, hydroxychloroquine and chloroquine. The combination of medicines resulted in central nervous system damage after cardiac arrest, which resulted in the death of 30-40% of rats. However, the toxicity observed may be transferable to humans and this potential medicine-medicine interaction should be considered when administering COVID-19 treatment.

### **In hospital practice, it is recommended to bundle medication and extend dosing intervals to reduce nurse exposure?**

Dosing frequency of medications may be dependent on the indication, route of administration, kidney/liver function, and other patient specific conditions. If a patient is on a medication(s) that are no longer necessary or beneficial, removal of this medication should always be considered. If a patient is able to switch from multiple doses a day to daily dosing while maintaining clinical efficacy, this switch could be considered in order to minimise nurse exposure to infected patients. However, there is no general recommendation to de-escalate or adjust the dosing frequency of medications.

### **Is there a higher risk for patients on ART treatment?**

At this time, there is limited information about the risk of COVID-19 in those with HIV. For HIV patients currently on effective ART therapy, there is not an increased risk of infection. Those patients living with HIV who are not on ART therapy, may be at increased risk of infection. In general, individuals with immunocompromised systems tend to possess a greater risk of severe infection. Individuals with HIV should protect themselves by following social distancing and hygiene recommendations, maintaining adequate nutrition, and continuing to take any prescribed HIV medicines as usual.

For more information:

[www.who.int/news-room/q-a-detail/q-a-on-covid-19-hiv-and-antiretrovirals](http://www.who.int/news-room/q-a-detail/q-a-on-covid-19-hiv-and-antiretrovirals)

[www.avert.org/coronavirus/covid19-HIV](http://www.avert.org/coronavirus/covid19-HIV)

### **Can the clinical research from MERS approved medicines be applied to COVID-19?**

Both MERS and COVID-19 are caused by a type of coronavirus and share similarities in their presentation. Treatment for MERS is largely supportive, and no medicines were ever specifically approved to treat the disease. Previous research with MERS may provide a starting point when thinking about treatment options.

### **Can multivitamins and immuno-boosters help in protecting individuals from the virus?**

There is no evidence that any of these strategies will supercharge immunity. While it is true that our physiology requires vitamins and minerals (such as vitamins A, C and zinc) to function normally, higher doses have not been shown to make the system function better. Every part of the body, including the immune system, functions better when protected from environmental assaults and bolstered by healthy-living strategies such as the following:

- Not smoking;
- Eating a diet high in fruits and vegetables;
- Exercising regularly;
- Maintaining a healthy weight;
- Avoiding drinking alcohol, or drinking only in moderation;
- Getting adequate sleep;
- Taking steps to avoid infection, such as washing hands frequently and cooking meats thoroughly;
- Trying to minimise stress. (15)

## Should vitamin C and Zinc be used to prevent COVID-19?

In the setting of COVID-19, vitamins and supplements play a role in nutrition for those who are facing food insecurity or inadequate food intake, with the exception of vitamin D. Vitamin D may be particularly important due to decreased sun exposure during this time. Although there is some evidence for the use of zinc or vitamin C for other respiratory tract infections, there is little evidence of their role in COVID-19.

For more information:

[www.hsph.harvard.edu/nutritionsource/2020/04/01/ask-the-expert-the-role-of-diet-and-nutritional-supplements-during-covid-19/](http://www.hsph.harvard.edu/nutritionsource/2020/04/01/ask-the-expert-the-role-of-diet-and-nutritional-supplements-during-covid-19/)

## Questions on symptoms, diagnosis and testing

### If sneezing is not typically a symptom, why is it commonly referred to in relation to disease dissemination?

According to both the US CDC and the WHO, sneezing is not necessarily considered a typical symptom of the coronavirus, but it may accompany other nasal symptoms such as congestion and rhinorrhoea. Sneezing etiquette is important because respiratory droplets can be spread through uncovered sneezes.

### Why do some infected patients show negative results on testing kits?

Some kits are not as sensitive as others, and results can depend on factors such as how long a person has been infected, the viral load, and the diagnostic technique. Current methods of diagnostic testing have low sensitivity, which means the test is likely to produce a negative result when a patient may be infected (i.e. a false negative). Diagnostic techniques, all based on polymerase chain reaction (PCR) or reverse transcription polymerase reaction (RT-PCR), target different parts of the viral genome and are not analytically equivalent.

For more information:

[www.cdc.gov/coronavirus/2019-ncov/lab/resources/antibody-tests-guidelines.html](http://www.cdc.gov/coronavirus/2019-ncov/lab/resources/antibody-tests-guidelines.html)  
[www.livescience.com/covid19-coronavirus-tests-false-negatives.html](http://www.livescience.com/covid19-coronavirus-tests-false-negatives.html)

### I have fever and cough. Could it be the novel coronavirus?

If you have been in close contact with a confirmed case of COVID-19, you may need to be followed up and tested. The symptoms of COVID-19 are not specific to this disease and can be similar to those of seasonal influenza or other conditions. However, if you experience any of the symptoms, you are advised to self-isolate at home and follow the directions of your national health authority. If you are older than 65 years of age or have other conditions such as cardiovascular diseases, diabetes, chronic respiratory diseases, cancer or other conditions (congenital or acquired) that might compromise your immune response, you may be at higher risk of developing more severe forms of COVID-19, and ought to seek appropriate medical care.

### What should be done as immediate actions when severe symptoms suddenly appear?

Severe symptoms in the context of COVID-19 may present as severe pneumonia, acute respiratory distress syndrome (ARDS), or even sepsis or septic shock. The WHO has provided guidelines for clinical management for each of these scenarios, which should be utilised if a patient presents with severe symptoms. This guide can be found here: [www.who.int/docs/default-source/coronaviruse/clinical-management-of-novel-cov.pdf](http://www.who.int/docs/default-source/coronaviruse/clinical-management-of-novel-cov.pdf).

### Patients often report a loss of taste and/or smell. Are these symptoms of COVID-19?

According to Harvard Medical School, loss of smell and inability to taste (anosmia) may be neurological symptoms caused by COVID-19 effects on brain function. Although these symptoms may not be the most common, they may be helpful when identifying and diagnosing patients with coronavirus. For more information:

[www.health.harvard.edu/diseases-and-conditions/covid-19-basics](http://www.health.harvard.edu/diseases-and-conditions/covid-19-basics)

**How effective are thermal scanners in detecting people infected with the new coronavirus?**

Thermal scanners are effective in detecting people who have a fever (i.e. have a higher than normal body temperature). However, they cannot detect people who are infected, but do not yet have a fever. This is because it takes between two and 10 days before people who are infected become sick and develop a fever. (8) More information on non-contact temperature assessment devices during the COVID-19 pandemic can be found [here](#).

**Is it true that blood groups have different degrees of contamination?**

Although the evidence is limited, researchers have observed that people of blood group A have a significantly higher risk for acquiring coronavirus compared with non-A blood groups. Additionally, blood group O patients have a significantly lower risk of contracting the coronavirus compared to non-O blood groups. For more information: [www.medrxiv.org/content/10.1101/2020.03.11.20031096v2](http://www.medrxiv.org/content/10.1101/2020.03.11.20031096v2)

## **Questions on infection prevention and control**

**What is the best preventive measure against COVID-19 for community or hospital pharmacies?**

The best preventive measures against COVID-19 include cleaning/disinfection techniques, hand/face hygiene, appropriate personal protective equipment (PPE) usage, and social distancing. The US CDC recommends cleaning and disinfecting high-touch surfaces with approved disinfectants or diluted bleach solutions. The WHO recommends cleaning your hands often with soap and water, or an alcohol-based hand rub. Individuals should practise proper cough/sneeze hygiene and should avoid touching their eyes, nose and mouth. Due to increased exposure risk, proper PPE for healthcare professionals, which includes gloves, masks, goggles, gowns, and/or face shields, should be used. Lastly, maintaining a safe distance (at least 1-2 metres) from other individuals (including patients and staff members) reduces the risk of disease spread. Contact time with patients/customers should be minimised to less than 10 minutes. If you are feeling unwell or displaying symptoms of coronavirus, stay at home and maintain your distance from other household members.

**If a patient is potentially contagious for 14 days after symptoms have resolved, should they remain isolated for that time?**

Patients are still considered to be potentially contagious for 14 days after symptoms resolve. This means that these individuals still have the ability to spread the virus through close contact with others or dispersion of respiratory droplets through coughing or sneezing. Having a patient remain in isolation would significantly decrease the risk of further spread. Alternatively, there is evidence that the use of approved masks by infected persons can prevent disease transmission; if a recovering patient properly uses a mask, they may be able to resume daily activities, however social distancing (1-2 metres) from other individuals is highly encouraged.

**Can FFP2/N95 masks be used more than once, or should they be discarded after a single use?**

The US CDC and National Institute for Occupational Safety and Health do not formally recommend the decontamination and reuse of N95 respirators, however given the scarcity of PPE in some settings, they provide potential strategies for re-use. The CDC and NIOSH recommend mask rotation and decontamination methods. The coronavirus can only remain viable on a surface for 72 hours, so the strategy of mask rotation requires each individual to have a set number of N95 masks (at least five). The individual will rotate the mask used each day, allowing them to dry for at least 72 hours in a clean, breathable container (i.e. paper bag), where the masks do not touch each other. The CDC and NIOSH examined four methods for mask decontamination: vaporised hydrogen peroxide (VHP), 70 degree Celsius dry heat, ultraviolet light, and moist heat. The CDC does not recommend the heat methods for decontamination. ([www.sages.org/n-95-re-use-instructions/](http://www.sages.org/n-95-re-use-instructions/)). According to a National Institutes of Health study, N95 respirators can be effectively decontaminated and maintain functional integrity. This study examined four methods for decontaminating the respirators: VHP, 70-degree Celsius dry heat, ultraviolet light, and 70% ethanol spray. All four methods effectively eliminated detectable viable viruses. However, the ethanol spray was later shown to compromise the integrity of the mask, and the UV and heat-treated respirators were shown to have fit and seal issues. Therefore,

these three methods are not recommended. The most effective method for decontamination is the 10-minute VHP-treatment, which is shown to decontaminate the respirator while maintaining functionality. Additionally, masks treated in this manner could be re-used up to three times. For more information:

[www.nih.gov/news-events/news-releases/nih-study-validates-decontamination-methods-re-use-n95-respirators](http://www.nih.gov/news-events/news-releases/nih-study-validates-decontamination-methods-re-use-n95-respirators)

<https://www.unmc.edu/news.cfm?match=25283>

### What advice would you give pharmacists in resource constrained areas without access to medical masks?

Pharmacy staff are considered to be at medium risk of exposure, given their frequent and/or close contact with other individuals. Pharmacy staff should wear protective equipment such as masks, gloves and gowns when able. In the case of a shortage or scarcity of PPE, priority should be given to healthcare professionals and people at higher risk of severe forms of the disease in terms of access to masks and other PPE. In this case, pharmacists or other healthcare professionals can make their own masks, if able. There is not enough evidence to know how effective self-made masks are. Nonetheless, the US CDC recommends wearing a homemade cloth mask in public settings. When making a mask, consideration should be given to several factors affecting its effectiveness, including: number of layers of fabric/tissue, breathability of material used, water repellence/hydrophobic qualities, shape of the mask and fit of the mask. Using a visor and maintaining safe distances with patients while reducing close contact time to a maximum of 10 minutes are also measures that could be taken. In addition, it is important to remember that wearing a mask might prevent an infectious person from spreading the illness, but it might not protect a healthy individual from contracting the illness via respiratory droplets. For more help on how to make a mask, visit:

[www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/diy-cloth-face-coverings.html](http://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/diy-cloth-face-coverings.html) and

[https://apps.who.int/iris/bitstream/handle/10665/332293/WHO-2019-nCov-IPC\\_Masks-2020.4-eng.pdf?sequence=1&isAllowed=y](https://apps.who.int/iris/bitstream/handle/10665/332293/WHO-2019-nCov-IPC_Masks-2020.4-eng.pdf?sequence=1&isAllowed=y).

### Should people use "do-it-yourself" alcohol sanitiser in case of scarcity of industrially produced sanitiser?

Where PPE is not available staff should also implement other measures to minimise direct patient contact.

Hand hygiene is a very important component of preventing spread of the virus. So-called "Do-it-yourself" hand sanitisers (i.e. made by people without the training or appropriate conditions for producing quality products) should not be used because they do not have verified efficacy. Furthermore, the preparation method used may cause contamination of the product, and they may not be safe for use on human skin.

Given the scarcity of proper supplies in certain areas, the WHO has released recommendations on how to prepare alcohol-based handrub formulations ([www.who.int/gpsc/5may/Guide\\_to\\_Local\\_Production.pdf](http://www.who.int/gpsc/5may/Guide_to_Local_Production.pdf)) for organisations wishing to make alcohol handrub. In general, the WHO recommends handrub formulations to have an alcohol content of either 80% ethanol or 75% isopropyl alcohol. Pharmacies in many places are involved in producing hand sanitiser too, to mitigate shortages.

### Is the use of gloves recommended to prevent contagion?

The general public should not routinely use gloves. The US CDC recommends the use of gloves in two circumstances: if you're cleaning/disinfecting your home, and if you're a healthcare worker treating a suspected/confirmed COVID-19 patient. Beyond these occasions, gloves are not recommended for several reasons, including the following. Transmission of COVID-19 largely occurs through respiratory droplets, and gloves do not protect against this. In addition, gloves may provide a false sense of security because people may nonetheless touch contaminated objects and then touch their face with the gloves, possibly infecting themselves.

## Questions on community pharmacy practice and contingency plans

### **Should pharmacy services that involve touching the patient be discontinued during the pandemic?**

It is recommended that all pharmacy staff take appropriate actions to protect themselves during this pandemic and follow recommendations from national or relevant health authorities. These measures include use of PPE (gloves, gowns, masks, goggles, etc.), proper hand and face hygiene, and keeping a distance of 1-2m from customers/patients and other pharmacy staff. If possible, recommend delaying any point-of-care services that are not necessary during this time. The decision to provide point-of-care services should consider the risks and benefits of the service. For example, an elderly patient is seeking a shingles vaccine may be putting themselves at higher risk of contracting coronavirus because the service requires them to come into close contact with individuals in a public setting and compromises their immune system, which could increase their risk of coronavirus infection. If a pharmacist elects to perform point-of-care tests or services, extra precautions should be taken, which may include providing the patient with a mask or other PPE.

### **Should community pharmacists use N95/FFP2 masks, or are surgical masks sufficient?**

Respirators (i.e. N-95 or FFP2) are generally not required in the community pharmacy setting but are required by healthcare professionals involved in aerosol-generating procedures. In the community setting, appropriate PPE is recommended, which may include gloves, gowns, masks, face shields and/or goggles, in addition to other infection prevention and control measures. Anyone wearing N-95 or FFP2 should have these fit tested before use to ensure efficacy.

### **What can pharmacists do when they go home from work, in terms of isolation, cleaning and protecting their family?**

Many steps can be taken to protect your home from COVID-19 if you are a healthcare worker. Many sources recommend having disinfection supplies kept outside of your house for use to disinfect your mobile phone, car keys, house keys, car door, bike handles, and anything else you may have touched since leaving work. Next, it is recommended that you preferably leave your work attire in your workplace (such as shoes or work uniform) and that these items be washed regularly and adequately. If not possible, work attire should be changed before entering the house. Healthcare workers should proceed to the shower and wash their entire body as soon as they return from the pharmacy. Soiled work clothes should be washed in the warmest appropriate water and dried completely. Along with these cleaning steps, you should continue to maintain appropriate distance, and you may want consider isolating yourself to only select rooms within the home, in order to reduce the risk of exposing other household members.

### **Is ozone effective for disinfecting the air and/or surfaces?**

According to the International Ozone Association (IOA), while ozone is highly effective for the inactivation of many viruses, the IOA is not aware of any research and testing that has been conducted specifically on the SARS-CoV-2 coronavirus. To the best of the IOA's knowledge, peer-reviewed research has not yet been completed and therefore definitive conclusions cannot be made regarding ozone inactivation of SARS-CoV-2. (16)

### **What are the psychological interventions pharmacists can provide to the community?**

A great deal of psychological distress can be related to fear and lack of information about the disease and how to protect oneself and one's family from infection. Pharmacists and pharmacy staff can provide psychological support through reassuring and informing their community. It is also essential that pharmacists, who are among the most visible of health care providers, model optimal behaviour so that the patients and the public can see how to properly wear masks, how to properly wash hands or use hand sanitisers, and how to properly distance themselves from others. The impact of a quality and informed role model cannot be underestimated in a time of uncertainty.

### **How can pharmacists fight myths spread by social media?**

Social media and the internet can spread or exaggerate false information regarding COVID-19. These myths can be combatted in several ways: (1) Consider running your own social media campaign to address the myths in the media with evidence; (2) Distribute pre-made resources addressing myths regarding the coronavirus, such as this FIP guidance document; (3) Contact the source spreading the myths about coronavirus and provide them with accurate information regarding the virus. This allows the source to then correct themselves and release accurate information. Overall, FIP encourages pharmacists to properly educate themselves, their colleagues and their community.

**Why is the role of pharmacists in the pandemic often not mentioned in the media?**

As pharmacists, we understand the importance in our role in healthcare both during and beyond this pandemic. However, those writing in the media or speaking on the news may not be informed about our role. It is likely an unintentional mistake of those in the media to forget to acknowledge the actions of pharmacy staff. Even without the proper recognition, pharmacists play a vital role in assisting COVID-19 treatment and reassuring our communities in pharmacies around the world. If possible, contact the source of any particular stories that do not acknowledge the role of pharmacists in this pandemic and provide with information and examples of pharmacists' contributions to the response.

## Myth busting

### COVID-19 only affects old people or people with pre-existing diseases

People of all ages can be infected with SARS-CoV-2 and develop COVID-19. Older people and people with pre-existing medical conditions (such as asthma, diabetes, heart disease) appear to be more vulnerable to becoming severely ill with the virus. The WHO advises people of all ages to take steps to protect themselves from the virus, for example by following good hand hygiene and good respiratory hygiene. (8)

### Contact with people from the affected countries should be avoided until we know more about the disease

Close contact with any person who has been in contact with confirmed cases of COVID-19 in the previous 14 days should be avoided, regardless of their nationality.

### This virus was developed in a laboratory

Scientists from multiple countries have published and analysed genomes of the causative agent, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), and they overwhelmingly conclude that this coronavirus originated in wildlife, like many other emerging pathogens. Conspiracy theories do nothing but create fear, rumours, and prejudice that jeopardise global collaboration in the fight against this virus. (17)

Specifically, genomic studies strongly suggest that the novel coronavirus that causes Covid-19 originated in bats, with no concrete evidence supporting the idea that it was created in a laboratory. (18) (19) (20)

### Eating garlic can help prevent COVID-19

Garlic is a healthy food that may have some antimicrobial properties. However, there is no evidence from the current outbreak that eating garlic has protected people from COVID-19. (8)

### Smoke and gas from fireworks and firecrackers prevent COVID-19

Breathing in the smoke and gas from a firework or firecracker is dangerous and does not kill SARS-CoV-2. (8)

### Spraying alcohol or chlorine all over your body can kill the new coronavirus

Spraying alcohol or chlorine all over your body will not kill viruses that have already entered your body. Spraying such substances can be harmful to mucous membranes (i.e., eyes, mouth) and clothes. Both alcohol and chlorine can be useful for disinfecting surfaces, but they need to be used under appropriate recommendations. (8)

### Applying sesame oil blocks SARS-CoV-2 from entering the body

Sesame oil does not kill SARS-CoV-2. There are some chemical disinfectants that can kill SARS-CoV-2 on surfaces. These include bleach/chlorine-based disinfectants, ether solvents, 75% ethanol, peracetic acid and chloroform. However, they have little or no impact on the virus if you put them on the skin or under your nose. It can even be dangerous to put these chemicals on your skin or under your nose. (8)

### Drinking anise seeds infusion can help prevent infection with COVID-19

Anise seeds infusion is a drink that may have some hydrating properties. However, there is no evidence from the current outbreak that drinking anise seeds infusion has protected people from COVID-19. (8)

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## Validity

This document was initially prepared based on commonly accepted evidence as of 5 February 2020. It was last updated on 14 July 2020 according to newly available evidence.

## Disclaimer

This document is based on the available evidence and the recommendations of reputable organisations such as the World Health Organization, the United States and the European Centres for Disease Control and Prevention, and others, as cited at the time of publishing. The available knowledge about COVID-19 is rapidly changing and such recommendations may change accordingly. Although FIP will strive to keep these guidelines up to date, we recommend consulting the websites of these organisations and any newly available evidence for the most recent updates.

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