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Social distancing and the use of PPE by community pharmacy personnel: Does evidence support these measures?

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ABSTRACT

Community pharmacists are one of the most accessible healthcare professionals and are often served as the first point of contact when it comes to minor ailments and health advice. As such, community pharmacists can play a vital role in a country's response to various preventative and public health measures amid the COVID-19 pandemic. Given the essential nature of community pharmacy as a health service, community pharmacies are unlikely to shut down in any foreseeable lockdown scenario. It is therefore important to assess the preventative measure directives for community pharmacies that are in place to safeguard community pharmacy personnel from SARS-CoV-2 in the various parts of the world. Upon reviewing the recommendations of 15 selected countries across five continents (Asia, Europe, Oceania, North America, and Africa) on social distancing and the use of personal protective equipment (PPE) in community pharmacies, we found inconsistencies in the recommended social distance to be practiced within the community pharmacies. There were also varying recommendations on the use of PPE by the pharmacy personnel. Despite the differences in the recommendations, maintaining recommended social distance and the wearing of appropriate PPE is of utmost importance for healthcare workers, including community pharmacy personnel dealing with day-to-day patient care activities, though full PPE should be worn when dealing with suspected COVID-19 patients.

Introduction

The novel coronavirus disease 2019 (COVID-19) is the biggest immediate public health challenge facing our world currently. At the time of writing, nearly 3 million people have a documented positive test for the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and over 150,000 have lost their lives. Community pharmacists are one of the most accessible healthcare professionals and are often served as the first point of contact when it comes to minor ailments and health advice. As such, community pharmacists can play a vital role in a country’s response to various preventative and public health measures. At the same time, community pharmacy personnel should practice general precautions and put in place the necessary preventative measures to ensure their wellbeing and safety.

Given the essential nature of community pharmacy as a health service, community pharmacies are unlikely to shut down in any foreseeable lockdown scenario. As community pharmacies are considered as the first point of call for cold and flu symptoms, community pharmacy personnel are likely to encounter symptomatic or asymptomatic (including carer of a symptomatic patient) carrier of SARS-CoV-2 and thus at high risk to get infected. Since infected individuals may not show symptoms at least during the incubation period, there is an increasing probability of further transmission of SARS-CoV-2 to the general public visiting pharmacies. Therefore, social distancing and the proper use of personal protective equipment (PPE) are essential in community pharmacy practices.

The front-line role of community pharmacies/pharmacists is likely to expand further in the coming days as the COVID-19 situation worsens. For example, the New York state government is planning to allow independent pharmacists (more than 5000 pharmacies) to conduct diagnostic COVID-19 tests. It is therefore important to assess the preventative measure directives for community pharmacies in terms of social distancing rule and use of PPE that are in place to safeguard community pharmacy personnel from COVID-19 in the various parts of the world. These measures will not only provide reassurance to community pharmacy personnel to carry out their professional duties...
maintain recommended social distance) with the patients. Canada left 19 patients or performing activities requiring close contact (unable to gloves or aprons/gowns), except when dealing with suspected COVID-19 pharmacy personnel (Table 1). While the United States adopted a uni-

United Kingdom22 Turkey21 South Africa19 No mention of social distance Pharmacy personnel should be provided with PPE (N95 or equivalent respirators, facemasks, and non-sterile gloves).

Poland18 Philippines17 Malaysia14 New Zealand15 Spain13 Turkey12 United Kingdom22 United States21,24

≥ 1.5 m ≥ 1 m ≥ 2 m ≥ 1 m ≥ 1 m ≥ 1 m ≥ 1 m ≥ 1 m ≥ 1 m ≥ 1 m ≥ 1 m

PPE such as surgical mask should be considered when providing essential services requiring direct patient contact, dispensing and handling prescriptions, cash and other paperwork. Additional PPE (gowns, gloves, protective eye wears) are recommended when dealing with a confirmed or suspected COVID-19 patient.

No mention of PPE for pharmacy personnel.

Pharmacy personnel in frequent or close contact with patients who may or may not be infected should carefully assess the need for droplet protection PPE (disposable surgical/procedure mask, a full-length, long-sleeved gown, disposable gloves and eye protection such as a face shield or goggles) on a case-by-case basis.

PPE are not recommended for pharmacy personnel involved in routine activities without close contact with patients.

Other situations where pharmacy staff should consider the use of PPE include cleaning/disinfecting pharmacy areas. PPE (masks, apron, gloves) are recommended if patient contact lasting 15 minutes or more and a safe distance of over 1 m cannot be maintained.

FFP2/N95 mask is required when dealing with patients with suspected COVID-19 symptoms.

PPE are not recommended for performing routine work in community pharmacy settings.

PPE should be reserved when pharmacy personnel are required to have significant close physical contact with a person with confirmed or suspect COVID-19.

PPE are recommended when performing any services that require direct contact with patients.

PPE are not recommended when dealing with asymptomatic patients.

A mask is required when in contact with patients.

Disposable gloves are recommended within the community pharmacy.

Droplet protection PPE (water-resistant face mask, splash goggles/face shield, gown, and gloves) are recommended for pharmacy staff who are at risk of exposure or contact to possibly infected patients.

N95 face masks for routine community pharmacy activities are not recommended.

Gloves are recommended when pharmacy personnel need to touch the patient, prepare/compound products, or handle any potentially contaminated material. Disposable or reusable gloves are recommended during the disinfection of high-touch surfaces.

Disposable or reusable gloves are recommended during the process of regular cleaning. Gowns should be worn for collection of diagnostic respiratory specimens (i.e. point-of-care testing required a nasal or nasopharyngeal swab).

Abbreviation: PPE = Personal protective equipment; COVID-19 = novel coronavirus disease 2019.

optimally to serve the local communities but will also provide useful information for countries that are yet to issue preventative measure directives for the operation of community pharmacies amid COVID-19 pandemic.

Table 1

| Country       | Recommended social distance | Summary of recommendations on the use of PPE |
|---------------|-----------------------------|---------------------------------------------|
| Australia⁸    | ≥ 1.5 m                     | PPE such as surgical mask should be considered when providing essential services requiring direct patient contact, dispensing and handling prescriptions, cash and other paperwork. Additional PPE (gowns, gloves, protective eye wears) are recommended when dealing with a confirmed or suspected COVID-19 patient. |
| Belgium¹⁰     | ≥ 1 m                       | No mention of PPE for pharmacy personnel. |
| Canada¹       | ≥ 2 m                       | Pharmacy personnel in frequent or close contact with patients who may or may not be infected should carefully assess the need for droplet protection PPE (disposable surgical/procedure mask, a full-length, long-sleeved gown, disposable gloves and eye protection such as a face shield or goggles) on a case-by-case basis. |
| France⁴        | ≥ 1 m                       | PPE are not recommended for pharmacy personnel involved in routine activities without close contact with patients. |
| Ireland¹³      | ≥ 1 m                       | Other situations where pharmacy staff should consider the use of PPE include cleaning/disinfecting pharmacy areas. PPE (masks, apron, gloves) are recommended if patient contact lasting 15 minutes or more and a safe distance of over 1 m cannot be maintained. |
| Malaysia¹⁴     | ≥ 1 m                       | FFP2/N95 mask is required when dealing with patients with suspected COVID-19 symptoms. |
| New Zealand¹⁵  | ≥ 2 m                       | PPE are not recommended for performing routine work in community pharmacy settings. |
| Pakistan¹⁶     | ≥ 1 m                       | PPE should be reserved when pharmacy personnel are required to have significant close physical contact with a person with confirmed or suspect COVID-19. |
| Poland¹⁸       | ≥ 1 m                       | Disposable gloves are recommended within the community pharmacy. |
| South Africa¹⁹ | No mention of social distance | ∆PPE are recommended when dealing with asymptomatic patients. |
| Spain¹³        | ≥ 1 m                       | A mask is required when in contact with patients. |
| Turkey¹²       | ≥ 1 m                       | Disposable gloves are recommended during the process of regular cleaning. |
| United Kingdom²² | ≥ 2 m                     | Gloves are recommended when touching surfaces that could be contaminated like doorbells, knockers, gates, and cash. |
| United States²¹,²⁴ | ≥ 1.8 m                 | PPE are recommended when dealing with asymptomatic patients. |

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Does evidence support these recommendations?

Since WHO’s recommendation is to keep a distance of 1 m from others, it is not surprising that most countries adopted the same social distance in the community pharmacy setting. The purpose of social distancing is to avoid contact with respiratory droplets. The one-meter recommendation probably originates with work done in the 1930s by William Wells, who found that respiratory droplets tend to land within three feet when expelled.¹ Nevertheless, a distance of 1 m may not be enough, since a 2003 study on the transmission of severe acute respiratory syndrome reported that 90% of the individuals who become infected were seated more than 1 m away from the index patient.² Such finding suggested that viruses may spread as an airborne aerosol and challenges the traditional belief where the virus is transmitted only through droplets that are coughed or sneezed out.

The evidence from preliminary studies and field reports have indicated the possibility for SARS-CoV-2 to spread in aerosols. To exemplify, during the peak of the COVID-19 outbreak in Wuhan, China in February and March 2020, researchers at Wuhan University set up aerosol traps in and around two government-designated COVID-19 hospitals which were exclusively used for the treatment of COVID-19 patients during the outbreak and public areas in Wuhan including busy
Contact for people who are sick and being the place for patients with non-communicable diseases including hypertension and diabetes who are at high risk of being infected with COVID-19 to get their routine medicine supply.

Conclusion

Though a difference among countries with regards to recommended social distance in community pharmacy, it must be stressed that the recommended distance is the minimum distance that should be followed, and measures should be taken to increase the social distance as far as possible to avoid transmission of SARS-CoV-2. However, the currently recommended social distance might need to be updated in accordance with current findings with SARS-CoV-2. Also, considering the potential for SARS-CoV-2 to aerosolize, pharmacy personnel should be protected at least with medical-grade face mask, along with other PPE if necessary, to deal with day-to-day patient care activities, though full PPE should be worn when dealing with suspected COVID-19 patients. Therefore, the distribution of local PPE resources should take into consideration the need for community pharmacy personnel, who may be neglected due to false assumptions for low risk of transmission. The last thing we may want to see is for community pharmacies to become a source of transmission of SARS-CoV-2.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.sapharm.2020.04.033.

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