



**Islamic Republic of Afghanistan  
Ministry of Public Health  
Directorate of Pharmaceutical Services**

**CORONAVIRUS, COVID-19 INFECTION:**

**Part-II: Guidance and Prevention Strategies for Retail Pharmacy Workforce**

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## ACRONYMS

COVID-19	Coronavirus disease identified in 2019
DPE	Directorate of Pharmaceutical Enterprise
DPS	Directorate of Pharmaceutical Services
EU	European Union
FIP	International Pharmaceutical Federation
HCoV	human coronaviruses
MERS-CoV	Middle East Respiratory Syndrome Coronavirus
ml	milliliter
MoPH	Ministry of Public Health
NIOSH	US National Institute for Occupational Safety and Health
NMHRA	National Medicine and Health Product Regulatory Authority
SARS-CoV-2	Severe Acute Respiratory Syndrome coronavirus 2
WHO	World Health Organization

## Preface

Coronaviruses are a large family of viruses, ranging from the common cold virus to SARS. These viruses were discovered in 1965 and continued to be studied until the mid-1980s. Although coronaviruses are more common in animals, five of them affect the human respiratory system. In 2003, the virus caused Severe Acute Respiratory Syndrome (SARS) in Asian countries, infecting about 8,000 people out of which 800 were died (10% deaths). In 2012, another strain of this virus spread and caused Middle East Respiratory Syndrome (MERS), in which 2,494 people became infected, of whom 780 died in Saudi Arabia alone (37% deaths).

The Office of the World Health Organization (WHO) in China, on December 31, 2019 reported the prevalence of pneumonia cases with unknown causes. Subsequently, China identified the spread of a new type of coronavirus, the first case was announced on January 7, 2020. The outbreak of the new coronavirus (COVID-19) in Wuhan, Hubei, has become a major global concern and has spread to most countries. The spread of the virus in Iran, given the proximity and contact of Afghans with the country and the extent of travel, has caused serious concern in Afghanistan. The first positive case of COVID-19 was confirmed in Herat on February 24, 2020 in a patient who had recently returned from Qom city, Iran, raised concerns in Afghanistan and called for serious attention from all health workers. In most countries, the first victims of the epidemic are health workers who are in contact with the sick and the first to prevent the spread of the virus. Therefore, the preventive and control strategies mentioned in these guidelines should be strictly considered, especially by the retail and community pharmacist.

In Afghanistan currently there are more than 14000 private retail pharmacy outlets where pharmacists are servicing as frontline healthcare professionals. Hence, the Directorate of Pharmaceutical Services (DPS) in coordination with the relevant committee developed these guidelines and strategies under the title “Part-II: Guidance and Prevention Strategies for Retail Pharmacy Workforce” to provide relevant information and guidance on the COVID-19 pandemic for pharmacists and the pharmacy workforce of retail pharmacies and the pharmacy outlets. (part-II in a separate document includes guidance and preventive strategies for retail pharmacy outlets).

Hence, the recommendations of these guidelines are expected to be adhered by all retail pharmacies and the pharmacy outlets throughout the country. The adherence is expected to be monitored by the relevant entities such as NMHRA and the Directorate of Pharmaceutical Enterprise.

## 1. Source of coronavirus

The source of the infection were originally animals, but now the infection is transmitted from human to human. Transmission can occur when patients are symptomatic, but also before any symptoms appear, and even from asymptomatic patients.

## 2. Symptoms of COVID-19

The COVID-19 virus affects different people in different ways. COVID-19 is a respiratory disease and most infected people will develop mild to moderate symptoms and recover without requiring special treatment. People who have underlying medical conditions and those over 60 years old have a higher risk of developing severe disease and death.

Common symptoms include:

- fever
- tiredness
- dry cough.

Other symptoms include:

- shortness of breath
- aches and pains
- sore throat
- and very few people will report diarrhea, nausea or a runny nose.

People with mild symptoms who are otherwise healthy should self-isolate and contact their medical provider or a COVID-19 information line for advice on testing and referral.

People with fever, cough or difficulty breathing should call their doctor and seek medical attention.

## 3. Modes of transmission and incubation period of COVID-19

The transmission of COVID-19 can occur as follows:

1. Most often, COVID-19 is spread from person to person among close contacts.
2. Person-to-person spread occurs mainly via respiratory droplets produced when an infected person speaks, coughs or sneezes.
3. These droplets can land in the mouths, noses or eyes of people who are nearby or possibly be inhaled into the lungs.
4. When a person touches a surface or object that has the virus on it and then touches their own mouth, nose or eyes.
5. Transmission can occur when patients are symptomatic, but also before any symptoms appear, and even from asymptomatic patients.
6. Patients may remain contagious up to two weeks after the remission of symptoms.
7. In pregnant women, intrauterine or perinatal transmission has not been identified.
8. In breastfeeding women, the virus has not been detected in breast milk. The World Health Organization presently states that mothers with COVID-19 can breastfeed.
9. Regarding the possibility of reinfection, 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.
10. The median incubation period is estimated at 5.1 days. This suggests that the 14-day quarantine period recommended by the WHO is reasonable. 97.5% of people who develop symptoms will do so within 11.5 days of exposure.



## 4. Responsibilities and role of retail pharmacy (Community pharmacy)

Retail pharmacy is the most basic pharmaceutical care unit. Compared with a medical institution, it has features of a large number (currently there are more than 1400 retail pharmacies in Afghanistan), wide-coverage, and high convenience. When the epidemic comes, the pharmacy takes the crucial responsibility of protecting the people's health in the grass-roots community.

Retail pharmacies have the shared responsibility of:

- Ensuring adequate storage and supply of appropriate stocks of pharmaceutical products and devices, such as medicines, masks, handrubs, disinfectants etc.
- Informing and educating the public
- Counselling
- Referring
- Promoting disease prevention
- Promoting infection control
- Preparing magisterial products, including hand sanitizers (for detailed information on how to prepare handrub formulations, including calculation and formulation methods and a step-by-step guide for local producers, refer to the WHO's Guide to Local Production in annex 2)

The document is also available at: [https://www.who.int/gpsc/5may/Guide to Local Production.pdf](https://www.who.int/gpsc/5may/Guide_to_Local_Production.pdf)

Under the situation of the COVID-19 epidemic, the staff of retail pharmacy are always at the front line, not only providing the public with drugs and protective supplies, patient consultation, publicity, and education, but also facing many risks. In order to minimize the risks, full staff training should be performed on epidemic prevention and control by referring to national guidelines, which can be in the form of, but not limited to, TV, radio broadcasts, MoPH publications etc.

### 4.1. Training contents include:

- Disease knowledge and epidemic distribution (see heading 1,2 and 3 for what is SARS-CoV-2, symptoms and modes of transmission)
- Workplace disinfection process (see annex 7 Sterilization Management at Retail Pharmacies)
- Personal protection knowledge (see heading 4.2 below for Whole Process Protection of Staff)
- Infection prevention and control
- Waste management (see heading 4.6 below for waste management)
- Suspected case identification (see annex 5 for retail pharmacy interventions)
- Information reporting process
- Mental health education

### 4.2. Whole Process Protection of Staff

#### 4.2.1. Preparation for work

- Correctly wear disposable medical masks on the way to work (see annex 8 for using mask)
- Try to commute by walking, cycling or private car and avoid public transportation
- Do not communicate with irrelevant persons to reduce the possibility of droplet transmission
- Minimal touch to public facilities
- Avoid touching the nose, mouth, or eyes with unsterilized sites to avoid infection with viruses
- Perform proper hand hygiene after arriving
- Use 75% alcohol or disinfectant wipes to wipe keys, mobile phones and other items in time
- Change personal clothing.

#### 4.2.2. During the work

- Wear work clothes throughout the work with a closed neckline
- Wear a disposable round hat, medical-surgical mask, and gloves
- Keep a distance of more than 1 m from others (1.5 meters in heavily infected areas)
- Raise awareness of frequent handwashing

### **4.2.3. End of work**

- Remove the mask before entering home and place it in a prepared and sealable plastic bag or trash
- Clean hands immediately after entering the house, sterilize door handles, keys, mobile phones, and other items, and hang clothes to a ventilated place. It is recommended to have contact with family members after a shower.

In addition to the COVID-19-related roles, pharmacies provide an essential public service to the whole population through the supply of medicines and pharmaceutical care. Ensuring the continuity of these services is essential. For retail pharmacy contingency plans see annex 3 and for retail pharmacy procedures see annex 4 and for risk and management of infection exposure see annex 9.

## **4.3. Pharmacy operations and facilities: ensuring safety for all and continuity of service**

### **4.3.1. Opening hours**

In case a pharmacy cannot assure its normal opening hours due to non-availability of staff because of COVID-19, the new opening hours should be communicated to the public in a visible place at least outside the pharmacy. The new opening times need to assure minimal service to the community in terms of medicines supply.

### **4.3.2. Temporary Retail Pharmacy Closures**

If your pharmacy needs to close temporarily due to staff shortage, illness or other circumstances, please complete the NMHRA Notification Form for Temporary Closures and submit it to NMHRA. This will assist NMHRA in monitoring the number of temporary closures and to address the issue and mitigate the potential impact on patients.

### **4.3.3. Patient/customer service**

In order to assure the continuity of the supply of medicines and services to communities where there is only one pharmacy in a certain radius (i.e. in remote areas), contact with patients/customers should be minimised by dispensing medicines through a small window on the façade or door, like those often used for night services.

A plastic shield to be put in front of the dispensing area, or marks placed on the ground to indicate the 1-2m distance between customers and staff. In case neither of these measures is possible, patients/customers should not enter the pharmacy and pharmacists are advised to use appropriate individual protective equipment, including masks and goggles, where needed.

Pharmacies in general are also advised to dispense medicines through this window whenever this may be necessary to minimise contact while ensuring continuity of service.

In order to avoid concentration of people inside the pharmacy, patients and customers should be asked to wait their turn outside the pharmacy. In any case, patients/customers should keep a distance of 1–2 metres between them while waiting in the queue.

### **4.3.4. Medicines supply**

During the pandemic, pharmacies should prioritise the dispensing of medicines and medical devices over non-essential products.

When appropriate, the supply of medicines to pharmacies should be done without anyone external to the pharmacy staff entering the pharmacy (or at least the non-public areas of the pharmacy). Additionally, the cases used by wholesale distributors for the delivery of medicines should be cleaned and disinfected (see annex 1 for list of disinfectant) before they are taken inside the pharmacy facilities.

## **4.4. Ensuring stock and access to key medicines, equipment and facilities**

Aiming at the prevention and disease control of COVID-19, pharmacies should guarantee the supply of medicines, including those used for disease prevention, diagnosis and treatment, as well as for supplying medical support teams.

#### **4.5. Patient isolation and referral**

If you suspect that someone may have COVID-19, encourage and support him or her to stay home in quarantine or to seek immediate appropriate medical treatment in a suitable healthcare facility if symptoms are or become strong. The WHO does not advise families or communities to care for individuals with symptoms of SARS-CoV-2 at home except in the circumstances. See annex 6 for patient isolation and referral.

#### **4.6. Waste Management**

The staff should do a good job in the disposal and recycling of protective equipment to effectively avoid secondary pollution. It is recommended to add a special container to collect discarded masks/gloves, throw discarded masks/gloves directly into garbage bags, spray and sterilize with 500mg/L chlorine-containing disinfectant, seal them in sealed bags and discard when there is no disinfectant. The sealed bags and garbage bags should be marked with "discarded masks/gloves"

#### **4.7. Prevention of Legal Risks for Retail Pharmacy**

With the outbreak of COVID-19, the retail pharmacy providing pharmaceutical care and epidemic prevention materials to the society should be subject to the supervision of NMHRA and local departments. The staff should ensure professional behaviors not be affected by the epidemic situation and avoid relevant legal risks.

#### **4.8. Prevention on Quality Risk of Epidemic Prevention Materials**

The retail pharmacy provides the public with safe and reliable epidemic prevention and control items.

- All epidemic prevention materials must have full qualifications of production and business, and the inspection reports must show a qualified result;
- Epidemic prevention materials must not be shoddy because of a shortage of supplies.

#### **4.9. Prevention on Market Order Risk**

In the process of epidemic prevention and control, the government should play a regulatory role, and retail pharmacy must abide by the government's management.

- Should not control market prices
- Mark the price clearly;
- The price is reasonable, and appropriate profits are earned
- Publish the commodity price and price increase information regularly
- Do not hoard at a huge number of scarce goods to cause market shortages
- If it is really necessary to increase the price, legal evidence must be retained
- Firmly and promptly implement the price of local government intervention.



## ANNEX 1: Viability of SARS-CoV-2 on aerosols and different surfaces, and list of disinfectants for commonly contaminated objects

Type of surface / aerosol	Viability	Half-life
Aerosols	Up to 3 hours	1.1-1.2 hours
Stainless steel	Up to 48-72 hours	5.6 hours
Cardboard/paper	Up to 24 hours	3.46 hours
Plastic	Up to 72 hours	6.8 hours
Copper	Up to 4 hours	0.7 hours

Source: (Neeltje van Doremalen, 2020)

The following list was compiled by the Chinese Pharmaceutical Association. For more details, consult the original document (in English), available on the FIP dedicated webpage. (Chinese Pharmaceutical Association, 2020)

Object for disinfection	Type of disinfectant	Consumables
Environmental object surface	Chlorine-containing disinfectant (1000mg/L), chlorine dioxide (500mg/L), 75% alcohol	Disposable absorbent material
Hands	Alcohol-containing quick-drying hand disinfectant, chlorine-containing disinfectant, hydrogen peroxide,	
Skin	0.5% iodine-based disinfectant, hydrogen peroxide	
Mucosa	0.05% iodine-based disinfectant	
Indoor air	Chlorine dioxide, hydrogen peroxide	
Pollutant	Chlorine-containing disinfectant (5000-20000mg/L), disinfectant powder or bleach powder containing water absorption	
Textiles such as clothes, bedding	Chlorine-containing disinfectant (500mg/L, ethylene oxide	
Prescriptions	Ethylene oxide	

## ANNEX 2: WHO guide to local production of handrub formulations

*Source: Guide to Local Production: WHO-recommended Handrub Formulations* (World Health Organization, 2010)

### Materials required (small volume production)

REAGENTS FOR FORMULATION 1:	REAGENTS FOR FORMULATION 2:
<ul style="list-style-type: none"> <li>• Ethanol 96%</li> <li>• Hydrogen peroxide 3%</li> <li>• Glycerol 98%</li> <li>• Sterile distilled or boiled cold water</li> </ul>	<ul style="list-style-type: none"> <li>• Isopropyl alcohol 99.8%</li> <li>• Hydrogen peroxide 3%</li> <li>• Glycerol 98%</li> <li>• Sterile distilled or boiled cold water</li> </ul>

- 10-litre glass or plastic bottles with screw-threaded stoppers (1), or
- 50-litre plastic tanks (preferably in polypropylene or high density polyethylene, translucent so as to see the liquid level) (2), or
- Stainless steel tanks with a capacity of 80–100 liters (for mixing without overflowing) (3, 4)
- Wooden, plastic or metal paddles for mixing (5)
- Measuring cylinders and measuring jugs (6, 7)
- Plastic or metal funnel
- 100 ml plastic bottles with leak-proof tops (8)
- 500 ml glass or plastic bottles with screw tops (8)
- An alcohol meter: the temperature scale is at the bottom and the ethanol concentration (percentage v/v) at the top (9, 10, 11)

### NOTE

- Glycerol: used as humectant, but other emollients may be used for skin care, provided that they are cheap, widely available and miscible in water and alcohol and do not add to toxicity or promote allergy.
- Hydrogen peroxide: used to inactivate contaminating bacterial spores in the solution and is not an active substance for hand antisepsis.
- Any further additive to both formulations should be clearly labelled and be non-toxic in case of accidental ingestion.
- A colorant may be added to allow differentiation from other fluids, but should not add to toxicity, promote allergy, or interfere with antimicrobial properties. The addition of perfumes or dyes is not recommended due to risk of allergic reactions.



**METHOD: 10-LITRE PREPARATIONS** (If lower or higher volumes are produced, adjust the proportion of the reagents to the desired volume accordingly)

Ten-litre glass or plastic bottles with screw-threaded stoppers are suitable.

**Recommended amounts of products:**

FORMULATION 1	FORMULATION 2
<ul style="list-style-type: none"> <li>Ethanol 96%: 8333 ml</li> <li>Hydrogen peroxide 3%: 417 ml</li> <li>Glycerol 98%: 145 ml</li> </ul>	<ul style="list-style-type: none"> <li>Isopropyl alcohol 99.8%: 7515 ml</li> <li>Hydrogen peroxide 3%: 417 ml</li> <li>Glycerol 98%: 145 ml</li> </ul>

**Step-by-step preparation:**



1. The alcohol for the formula to be used is poured into the large bottle or tank up to the graduated mark.



4. The bottle/tank is then topped up to the 10-litre mark with sterile distilled or cold boiled water.

5. The lid or the screw cap is placed on the tank/bottle as soon as possible after preparation, in order to prevent evaporation.



2. Hydrogen peroxide is added using a measuring cylinder.



6. The solution is mixed by shaking gently where appropriate or by using a paddle.



3. Glycerol is added using a measuring cylinder. As glycerol is very viscous and sticks to the wall of the measuring cylinder, it should be rinsed with some sterile distilled or cold boiled water and then emptied into the bottle/tank.



7. Immediately divide the solution into its final containers (e.g. 500 or 100 ml plastic bottles), and place the bottles in quarantine for 72 hours before use. This allows time for any spores present in the alcohol or the new/reused bottles to be destroyed.

## Final products

FORMULATION 1	FORMULATION 2
Final concentrations: <ul style="list-style-type: none"> <li>Ethanol 80% (v/v),</li> <li>Glycerol 1.45% (v/v),</li> <li>Hydrogen peroxide 0.125% (v/v)</li> </ul>	Final concentrations: <ul style="list-style-type: none"> <li>Isopropyl alcohol 75% (v/v)</li> <li>Glycerol 1.45% (v/v),</li> <li>Hydrogen peroxide 0.125% (v/v)</li> </ul>

## Quality control

1. Pre-production analysis should be carried out every time an analysis certificate is not available to guarantee the titration of alcohol (i.e. local production). Verify the alcohol concentration with the alcohol meter and make the necessary adjustments in volume in the preparation formulation to obtain the final recommended concentration.



2. Post-production analysis is mandatory if either ethanol or an isopropanol solution is used. Use the alcohol meter to control the alcohol concentration of the final use solution. The accepted limits should be fixed to  $\pm 5\%$  of the target concentration (75%–85% for ethanol).



3. The alcohol meter shown in this information pamphlet is for use with ethanol; if used to control an isopropanol solution, a 75% solution will show 77% ( $\pm 1\%$ ) on the scale at 25°C.

## General information

Labelling should be in accordance with national guidelines and should include the following:

- Name of institution
- WHO-recommended handrub formulation
- For external use only
- Avoid contact with eyes
- Keep out of the reach of children
- Date of production and batch number
- Use: Apply a palmful of alcohol-based handrub and cover all surfaces of the hands. Rub hands until dry
- Composition: ethanol or isopropanol, glycerol and hydrogen peroxide
- Flammable: keep away from flame and heat

## Production and storage facilities:

- Production and storage facilities should ideally be air- conditioned or cool rooms. No naked flames or smoking should be permitted in these areas.
- WHO-recommended handrub formulations should not be produced in quantities exceeding 50 litres locally or in central pharmacies lacking specialised air conditioning and ventilation.
- Since undiluted ethanol is highly flammable and may ignite at temperatures as low as 10°C, production facilities should directly dilute it to the above-mentioned concentration. The flashpoints of ethanol 80% (v/v) and of isopropyl alcohol 75% (v/v) are 17.5°C and 19°C, respectively.
- National safety guidelines and local legal requirements must be adhered to the storage of ingredients and the final product.

### **ANNEX 3: Retail pharmacy contingency plans**

The following measures should be considered by the pharmacy management:

1. Develop emergency plans and workflow
2. Carry out full staff training (see below)
3. Focus on the health status of all pharmacy staff
4. Protect pharmacy personnel
5. Strengthen pharmacists' infection monitoring
6. Ensure adequate cleaning and disinfection management
7. Implement patient triage and counselling procedures
8. Strengthen patient education
9. Strengthen infection exposure management
10. Strengthen medical waste management

It is recommended that the entire pharmacy team be trained in:

- Technical and scientific information on COVID-19, in particular, on the symptoms, incubation period and modes of transmission of the virus;
- Epidemiological information on affected areas;
- Prevention measures including on disinfectants and proper hand hygiene;
- How to proceed in a suspected case, including strategies that each pharmacy should implement;
- Materials available to support the intervention (information brochures, intervention flow charts and accurate information websites).



## ANNEX 4: Retail pharmacy procedures

### Public area

1. Access to products for self-selection by customers should be restricted to avoid multiple people touching these products. They should be accessed only by pharmacy personnel.

### Notice to patients /customers

Place a notice at the entrance of the pharmacy with the main recommendations that patients/customers must adopt before entering, such as:

1. Disinfect your hands when entering the pharmacy (the pharmacies must provide easy accessible handrubs to the customers at the entrance to the pharmacy);
2. Make sure you keep a distance of 1–2 metres between you and other customers and anyone on the pharmacy staff;
3. Do not walk outside the floor markings, if any;
4. If you sneeze or cough, cover your nose and mouth with a handkerchief (which you should discard in a suitable container provided by the pharmacy and not reuse it) or with a flexed elbow;
5. Avoid shaking hands and close contacts while in the pharmacy; Prepare in advance the prescriptions you need to fill.

### At the counter

1. Whenever possible, allocate one employee per station or location at the counter and avoid swaps.
2. Keep only essential objects at the counter.
3. Wipe and disinfect the counter after each customer/patient.
4. Have an alcohol-based solution at hand to disinfect hands after attending to each patient/customer.
5. Where possible, encourage patients to order their medicines through the pharmacy's webpage and delivered to their home or workplace.
6. A **plastic shield** to be put in front of the dispensing area.

### Social distancing

1. Limit the number of patients/customers entering the pharmacy at any one time.
2. Keep a distance of at least 1 metre (preferably more) when attending to a patient.
3. If necessary, a tray may be used to collect prescriptions, hand over medicines and process any payment in order keep this distance.
4. Advise patients to keep a distance of at least 1 metre between them while waiting, and use marking tape on the floor to indicate where they should stand.

### Visiting a pharmacy

1. Advise patients/customers to avoid long stays in the pharmacy.
2. Advise patients/customers to avoid visiting the pharmacy if they are elderly or have co-morbidities. Whenever possible, such patients should ask a family member, a friend or a neighbour to go to the pharmacy instead of them.

### Recommendations for pharmaceutical services and activities in the pharmacy

1. When performing point-of-care tests (e.g., measurement of blood pressure, cholesterol, glycaemia, pregnancy tests), administering vaccines or injectables, or providing any other services that require direct contact with a patient, additional protective measures, such as the use of a mask and gloves, should be taken.
2. These services may need to be restricted or interrupted if they could pose a risk to the health of the team (e.g., if the patient has symptoms of respiratory infection).

### Recommendations for the pharmacy team

1. To ensure continuity of pharmacy activities, whenever possible divide the team into shifts (for example, morning and afternoon), with a brief closure of the pharmacy between them to disinfect the entire pharmacy, ensuring that the members of each shift do not have contact with each other at shift changes.
2. Employees with conditions that compromise their immune system should use masks and preferably perform back office tasks. Hand hygiene measures should be reinforced.
3. Employees should change coats more often.
4. Wearing accessories, such as bracelets, watches and rings, should be avoided.

5. Whenever it is necessary to put on a mask, hygiene and disinfection of the hands should be performed before and after.

## ANNEX 5: Retail pharmacy interventions

CRITERIA	INTERVENTION	
<ul style="list-style-type: none"> <li>No symptoms (cough, fever or breathing difficulties)</li> </ul> <b>AND</b> <ul style="list-style-type: none"> <li>No known recent contact with confirmed or suspected cases of COVID-19 <b>and</b> no recent travel history to affected areas</li> </ul>	<ul style="list-style-type: none"> <li>Offer reassurance</li> <li>Highlight preventive measures</li> <li>Recommend social distancing, home confinement and avoidance of non-essential travelling (domestic and international) whenever possible</li> </ul>	<ul style="list-style-type: none"> <li>Provide evidence-based information and advice (oral and/or written)</li> </ul>
<ul style="list-style-type: none"> <li>Symptoms (cough, fever or breathing difficulties)</li> </ul> <b>AND</b> <ul style="list-style-type: none"> <li>No known recent contact with confirmed or suspected cases of COVID-19 <b>and</b> no recent travel history to affected areas</li> </ul>	<ul style="list-style-type: none"> <li>Offer reassurance</li> <li>Inform that risk of COVID-19 may exist</li> <li>Whenever possible, isolate the patient in a separate room</li> <li>Do not physically examine the patient</li> <li>Take self-protective measures, including the use of an appropriate respirator, gloves and goggles</li> <li>Highlight measures to prevent further transmission, including the use of a face mask by the patient</li> </ul>	<ul style="list-style-type: none"> <li>Recommend strict social distancing (including from family and close relations), home quarantine and avoidance of all travelling (domestic and international) for at least 14 days</li> <li>For individuals in high-risk groups, advise contacting the emergency number or hotline or the appropriate healthcare facility for testing and follow-up care and treatment.</li> <li>Provide evidence-based information and advice (oral and/or written)</li> <li>Disinfect any potentially contaminated areas and surfaces</li> </ul>
<ul style="list-style-type: none"> <li>No symptoms (cough, fever or breathing difficulties)</li> </ul> <b>AND</b> <ul style="list-style-type: none"> <li>Known recent contact with confirmed or suspected cases of COVID-19 <b>and/or</b> recent travel history to affected areas</li> </ul>	<ul style="list-style-type: none"> <li>Offer reassurance</li> <li>Inform that risk of COVID-19 may exist</li> <li>Recommend social distancing, home quarantine and avoidance of non-essential travelling (domestic and international) for at least 14 days</li> <li>Recommend tracing contacts history</li> </ul>	<ul style="list-style-type: none"> <li>In case symptoms appear in the 14 days following contact with confirmed or suspected case, contact the emergency number or hotline and follow the appropriate instructions</li> <li>Provide evidence-based information and advice (oral and/or written)</li> </ul>
<ul style="list-style-type: none"> <li>Symptoms (cough, fever or breathing difficulties)</li> </ul> <b>AND</b> <ul style="list-style-type: none"> <li>Known recent contact with confirmed or suspected cases of COVID-19 <b>and/or</b> recent travel history to affected areas</li> </ul>	<ul style="list-style-type: none"> <li>Offer reassurance</li> <li>Inform that risk of COVID-19 may exist</li> <li>Whenever possible, isolate the patient in a separate room</li> <li>Do not physically examine the patient</li> <li>Reinforce self-protective measures, including the use of an appropriate respirator, gloves and goggles</li> <li>Highlight measures to prevent further transmission, including the use of a face mask by the patient</li> </ul>	<ul style="list-style-type: none"> <li>Recommend strict social distancing (including from family and close relations), home quarantine and avoidance of all travelling (domestic and international) for at least 14 days</li> <li>For individuals of higher-risk groups, advise contacting the emergency number or hotline or the appropriate healthcare facility for testing and follow-up care and treatment</li> <li>Provide evidence-based information and advice (oral and/or written)</li> <li>Disinfect any potentially contaminated areas and surfaces</li> </ul>

## **ANNEX 6: Patient isolation and referral**

1. Become familiar with the protocols for isolation and referral of suspected cases of COVID-19 developed by the national, regional or local health authorities. Follow these procedures and collaborate in their implementation. (see annex 10 for more guidelines and protocols developed by MoPH on COVID-19)
2. Whenever possible, isolate the suspected case in a separate room in the pharmacy and immediately call the appropriate emergency services or COVID-19 hotline.
3. The isolation room at the pharmacy should ideally have a private bathroom and the minimum furniture and objects required for the person's comfort while waiting, in order to avoid the need to decontaminate unnecessary items.
4. While in isolation, patients should be asked to wear a medical mask.
5. During isolation, only one member of the pharmacy personnel should have contact with the patient, wearing the appropriate personal protection equipment (mask, gloves and goggles).
6. Once the suspected case has been transferred to a healthcare facility or their home for quarantine, the isolation room and any potentially contaminated areas, such as toilets, should be cleaned and disinfected.



## ANNEX 7: Sterilization Management at Retail Pharmacies

**Table 1:** Common sterilization methods for retail pharmacy

Classification	Example	Sterilization methods*
Surface of items in public area	phone, computer keyboard, mouse, stationery, cash register, balance, table and chair, door handle, etc.	wipe the surface for sterilization with 75% alcohol
Medical instrument **	forehead thermometer, ear thermometer, etc.	wipe for sterilization with 75% alcohol after each use, and sterilize immediately if there is contamination
Large facilities	surfaces of large facilities such as air conditioners, shelves, counters, refrigerators, lockers, etc.	Wipe for sterilization with 500 mg/L chlorine-containing disinfectant once a day
Work clothes	work clothes, work pants, etc.	Sterilize twice a week (replace immediately when contaminated) by hot washing method, sterilize at 75°C for more than 30min or at 80°C for more than 10mins (the sterilization time can be extended according to the degree of dirt); Or with clothing disinfectant (250-500 mg/L chlorine-containing disinfectant can be used for white clothes) for 30 min, rinse with water repeatedly
Cleaning utensils	mop, rag, etc.	Should be dedicated to the special area, rinse with water after each use, soak and sterilize with 500 mg/L chlorine-containing disinfectant for 30min, rinse again with water and then dry

\* The disinfectants and consumables used should meet the management requirements of the National Health Commission of the People's Republic of China.

\*\* It is recommended that retail pharmacy during the epidemic should not provide services such as measuring blood pressure and blood sugar.

**Table 2:** Environmental sterilization methods for retail pharmacy

Classification	Example	Sterilization methods
Daily air sterilization	Strengthen air circulation	Window ventilation or mechanical ventilation for more than 30min twice a day
	Air sterilization	Circulating air sterilization equipment is used when poor air quality, no good ventilation, or when people are in the room
		When no air sterilization equipment, according to the "Specifications of cleaning and disinfecting for central air conditioning ventilation system in public buildings" (WS/T396-2012), regularly clean and sterilize the air conditioning and ventilation systems
	UV sterilization	Periodic UV sterilization for more than 30min once or twice a day when no one is in the room
	Spray sterilization	When no air sterilization equipment, 500 mg/L chlorine-containing disinfectant is sprayed to sterilize, the spray volume is 20-30 mL/m <sup>3</sup> , doors and windows should be closed during sterilization, ventilation should be done for more than 1h after sterilization
Sterilization of floors, walls, elevators, etc.	When there are visible pollutants, first use disposable absorbent materials to completely remove the pollutants before sterilization	
	<ul style="list-style-type: none"> <li>When there are no obvious pollutants, 500-1000 mg/L chlorine-containing disinfectant should be sprayed or wiped to sterilize, once or twice a day</li> <li>The ground is sterilized first by spraying or wiping from outside to inside, and the spray volume is 200-300 mL/m<sup>2</sup>. After the indoor sterilization is completed, the spraying is repeated from inside to outside again</li> </ul>	
Precautions	<ul style="list-style-type: none"> <li>Read the instructions carefully before use, and choose the sterilization method and time, and disinfectant concentration based on the actual use</li> <li>Pay attention to personal protection when preparing for use, wear gloves and goggles as the disinfectant is toxic and irritating</li> <li>Scrub with water after sterilization to prevent damage to the items due to the causticity of disinfectants</li> <li>Cleaning tools, including mops and rags, should be dedicated to the special area, and reusable items soaked and disinfected with chlorine-containing disinfectant should be rinsed with water and kept dried</li> <li>Chlorhexidine does not inactivate SARS-CoV-2</li> </ul>	

### Disinfectants Reserve Management

- Disinfectants should be stored in a special area, sealed, protected from light, ventilated, shaded, no vibration, and impact. It should be kept away from fire, heat sources, equipment that easily generates sparks, and should be kept out of the reach of children.
- Avoid using glass containers for storage, pay attention to whether the containers are damaged, and provide emergency equipment and containers for leakage.
- Alcohol and chlorine-containing disinfectants must be stored separately.
- Alcohol should be stored in a place equipped with firefighting equipment and facilities (such as sand, dry chemical fire extinguishers, spades, buckets, etc.).

## ANNEX 8: How to put on, use, take off and dispose of a mask

1. Before touching the mask, clean hands with an alcohol-based hand rub or soap and water.
2. Before putting on the mask, inspect it for tears and holes.
3. Orient which side is the top side (generally where the metal strip or stiff edge is).
4. Ensure the proper side of the mask (usually the colored side) faces outwards.
5. Place the mask onto your face. Pinch the metal strip or stiff edge of the mask so it molds to the shape of your nose.
6. Ensure the mask covers your mouth and chin.
7. After use, take off the mask; remove the elastic loops from behind the ears while keeping the mask away from your face and clothes. Avoid touching potentially contaminated surfaces of the mask.
8. Discard the mask in a closed bin immediately after use.
9. Perform hand hygiene after touching or discarding the mask. Use alcohol-based hand rub or, if they are visibly soiled, wash your hands with soap and water (World Health Organization, 2020). Also wash your face if possible.

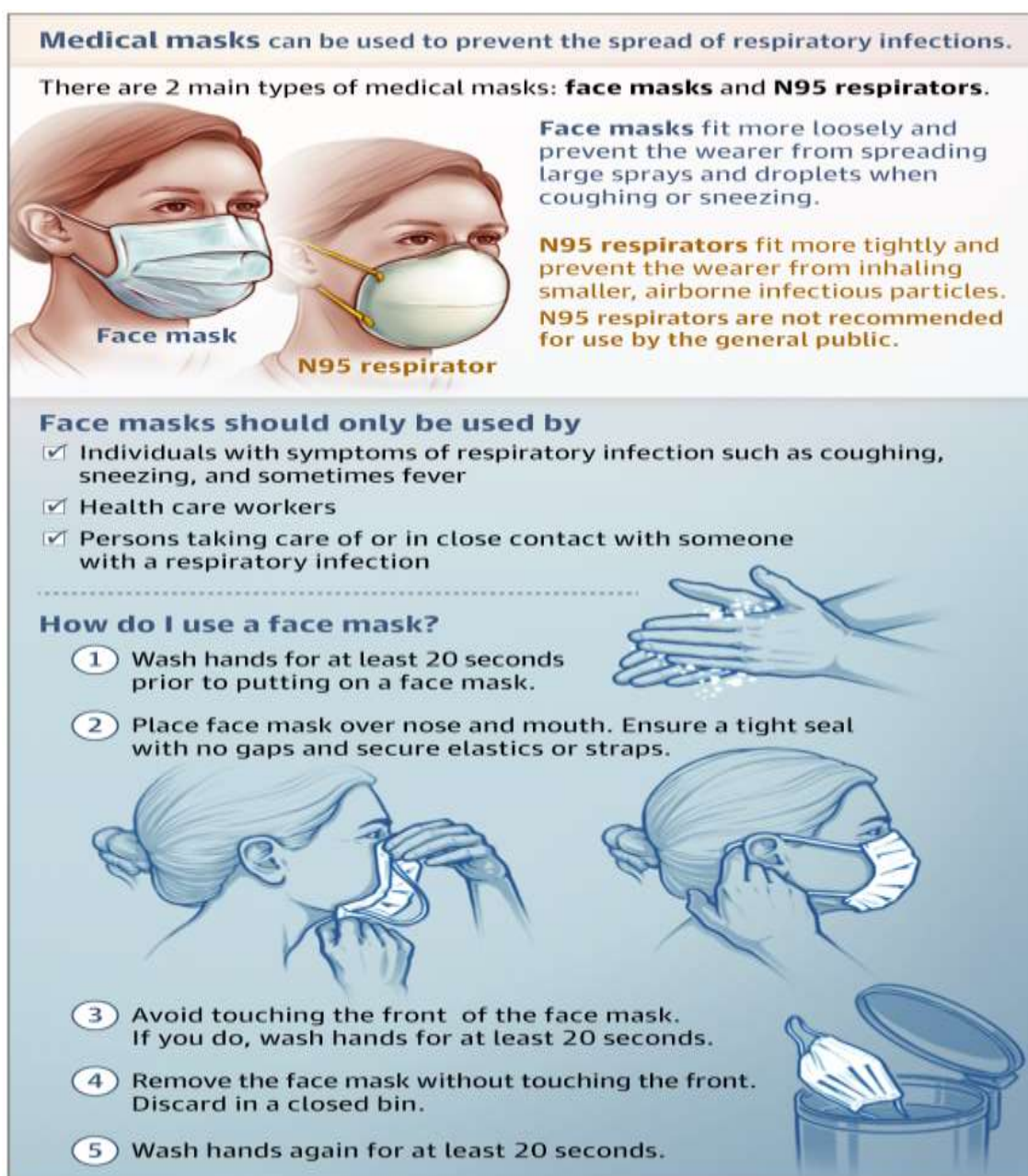


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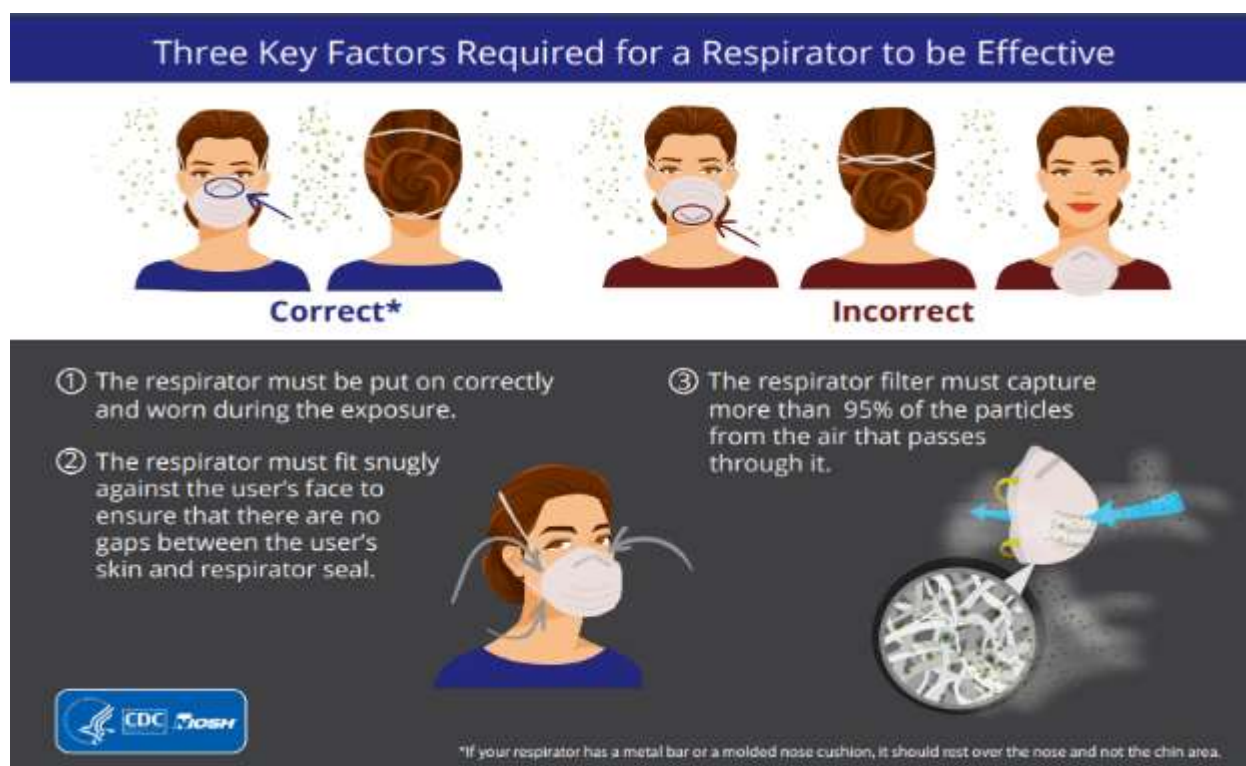


Image credits: Ronald Shaffer, PhD; Jaclyn Krah Cichowicz, MA; Ginger Chew, ScD; and LCDR Joy Hsu, MD, MS. CDCs, 2018.  
<https://blogs.cdc.gov/niosh-science-blog/2018/01/04/respirators-public-use/>

## ANNEX 9: Risk and management of infection exposure

	Level of Risk	PPE in different infectious exposure positions
High-risk	Pharmacy services in the fever clinic or isolation wards. Exposure to aerosols and body fluids (including blood) of the suspected or confirmed patients with the 2019-nCoV infection.	Gowns, coveralls, fluid-resistant and impermeable gowns and coveralls, medical protective masks, disposable work caps, goggles / face shields, respirators, double gloves, boots/ shoe covers, and hand hygiene.
Moderate-risk	Direct contact with patients, such as physical examination when providing pharmaceutical care, patient's body fluid (including blood) contact and transfer.	Coveralls and gowns, medical protective masks, disposable work caps, goggles / face shields, gloves, and hand hygiene.
Low-risk	Indirect contact with patients, such as dispensing, medication consultations, pharmacy clinics, pharmaceutical care, drug delivery in wards, pharmacy intravenous admixture, management of drug, and etc.	Coveralls or gowns, medical surgical masks, disposable work caps, and hand hygiene.

Pharmacists should follow the PPE donning/doffing protocol strictly. Avoid leaving the contaminated area on PPE to prevent cross-infection in different work zones.

**ANNEX 10: Guidelines and protocols developed by MoPH on COVID-19:**

For other guidelines on COVID-19 developed by MoPH, visit MoPH website using the following link:

<https://moph.gov.af/dr/%D8%B1%D9%87%D9%86%D9%85%D9%88%D8%AF-%D9%87%D8%A7%DB%8C-%D9%88%D8%B2%D8%A7%D8%B1%D8%AA-%D8%B5%D8%AD%D8%AA-%D8%B9%D8%A7%D9%85%D9%87>

**A. Preventive guidelines:**

لینک های داونلود	رهنمود ها	شماره
<a href="#">برای داونلود اینجا کلیک کنید</a>	تعریف واقعه برای سرویلانس - ویروس جدید کرونا	1
<a href="#">برای داونلود اینجا کلیک کنید</a>	رهنمود سکریننگ	2
<a href="#">برای داونلود اینجا کلیک کنید</a>	چک لیست نظارتی از مراکز صحت	3
<a href="#">برای داونلود اینجا کلیک کنید</a>	رهنمود وقایه از انتان در مراکز صحت و شفاخانه ها	4
<a href="#">برای داونلود اینجا کلیک کنید</a>	رهنمود اتمامات برای جنازه مریضانی که از سبب کرونا فوت کرده	5
<a href="#">برای داونلود اینجا کلیک کنید</a>	استفاده درست از وسایل محافظت شخصی پی پی ای	6
<a href="#">برای داونلود اینجا کلیک کنید</a>	رهنمود تهیه و استفاده مواد ضد عفونی	7
<a href="#">برای داونلود اینجا کلیک کنید</a>	رهنمود تغذی در جریان شیوع ویروس کرونا	8
<a href="#">برای داونلود اینجا کلیک کنید</a>	رهنمود قیود گشت و گذار در شهر ها	9
<a href="#">برای داونلود اینجا کلیک کنید</a>	رهنمود برای موسسات دولتی و غیر دولتی	10
<a href="#">برای داونلود اینجا کلیک کنید</a>	رهنمود برای ایستگاه های بس ها	11
<a href="#">برای داونلود اینجا کلیک کنید</a>	رهنمود قرنطین خانگی	12

**B. Therapeutic guidelines and protocols:**

لینک های داونلود	رهنمود ها و پروتوکول ها	شماره
<a href="#">برای داونلود اینجا کلیک کنید</a>	رهنمود مراقبت های تسکینی	1
<a href="#">برای داونلود اینجا کلیک کنید</a>	رهنمود مدیریت واقعه ویروس کرونا	2
<a href="#">برای داونلود اینجا کلیک کنید</a>	رهنمود عملیاتی برای مدیریت واقعه کوید-۱۹	3
<a href="#">برای داونلود اینجا کلیک کنید</a>	پروتوکول استفاده منطقی وسایل محافظت شخصی برای کرونا ویروس_ حمل ۱۳۹۹	4
<a href="#">برای داونلود اینجا کلیک کنید</a>	SOP for Crono Virus Sampling Dari 26 Jan 2020	5
<a href="#">برای داونلود اینجا کلیک کنید</a>	Septic Shock protocol	6
<a href="#">برای داونلود اینجا کلیک کنید</a>	SARI Protocol	7
<a href="#">برای داونلود اینجا کلیک کنید</a>	ARDS protocol	8



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## Validity

This document is prepared based on commonly accepted evidence using international references with regards to the nomenclature of the virus and the disease on 12 February 2020, and updated on April 16, 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 DPS 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. In case of any question and/or comment, please contact us through following addresses.



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