COVID-19: GUIDE ON HOME-BASED CARE, SCREENING & ISOLATION WARD SET UP
April 2020

INTRODUCTION

SCOPE AND PURPOSE

This document provides UN duty stations with guidance on home-based care, how to screen and triage suspect cases of COVID-19, and how to set up an isolation ward for patients who cannot be cared for in their homes. The decision to get set up a screening protocol and isolation ward should be taken after consultation and in coordination with senior management, WHO country office, and local health authorities. For any questions on this document, contact dos-dhmosh-public-health@un.org

DISEASE SEVERITY / PLANNING ASSUMPTIONS

A study of the Chinese Center for Disease Control and Prevention of 44,500 confirmed infections showed that

- 40% of confirmed cases reported mild disease -- i.e. treatment is symptomatic and can be managed at home, and does not require inpatient care;
- 40% of confirmed cases reported moderate disease -- i.e. can be managed either at home, or as inpatient;
- 15% of confirmed cases reported severe disease – i.e. requires oxygen therapy, has dyspnea, hypoxia, or >50 percent lung involvement on imaging within 24 to 48 hours;
- 5% of confirmed cases reported critical disease – i.e. requires mechanical ventilation, has respiratory failure, shock, or multiorgan dysfunction.

This study had an overall 2.3% case fatality rate; no deaths were reported among noncritical cases. It should be noted that the proportion of severe or fatal infections may vary by location and age. This may be due to distinct demographics of infection.

In terms of the impact of age on severity, to date, most of the fatal cases have occurred in patients with advanced age or underlying medical comorbidities. Known risk factors for severe COVID-19 are age >60 years, hypertension, diabetes, cardiovascular disease, chronic lung disease, cancer and immunocompromising conditions. The experience of several countries was that mortality was highest among older individuals, e.g. in China 80% of deaths occurring in those aged ≥65 years.

Symptomatic infection in children appears to be uncommon; when it occurs, it is usually mild, although severe cases have been reported. Pregnancy is not considered high risk for severe diseases however this is based on data from a limited number of patients.

Based on current information and studies, WHO estimates that in a general population, about 15% of COVID-19 cases will be severe, and 5% of COVID-19 cases will be critical requiring significant health

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1 As an example, in Italy, 12 percent of all detected COVID-19 cases and 16 percent of all hospitalized patients were admitted to the intensive care unit; the estimated case fatality rate was 5.8 percent in mid-March. In contrast, the estimated case fatality rate in mid-March in South Korea was 0.9 percent. This may be related to distinct demographics of infection; in Italy, the median age of patients with infection was 64 years, whereas in Korea the median age was in the 40s.
capacity and critical-care infrastructure including ability to provide ventilatory support. This reflects a higher level of severity compared to seasonal influenza, and is likely due to the fact that many mild cases are not diagnosed.

For the UN workforce, however, it should be noted that the severity of cases, and the case-fatality rate differs by age segment, and therefore case fatality rate in our UN personnel population will vary according to the age-profile of our workforce, as shown below.

![Data from three countries show that older populations are at greater risk.](image)

**HOME-BASED CARE**

All UN personnel should be made aware of the general COVID-19 precaution measures to take (Annex 1). For mild to moderate cases of COVID-19, if inpatient capacity is limited then such individuals should stay at home and try to separate themselves from other people and animals in the household. They should wear a medical facemask when in the same room (or vehicle) as other people and when presenting to health care settings. Cleaning and disinfection of frequently touched surfaces is also important. WHO guidance on home care for patients with suspected COVID-19 who present with mild symptoms and when managing their contacts is available.

Regarding when to discontinue home isolation:

**When a test-based strategy is used, patients may discontinue home isolation when** there are negative results of a COVID-19 PCR test from at least two consecutive nasopharyngeal swab specimens collected ≥24 hours apart (total of two negative specimens)

**Where tests are not available, a non-test-based strategy should be used** and isolation can be discontinued after 14 days from symptom resolution.

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IN A HEALTH CARE SETTING

SCREENING AND TRIAGE STATION

Screening patients before they come to your health facility can help identify patients who require additional infection control precautions. This should be preferably done by phone before the patient presents in person to your facility.

A 24/7 COVID-19 telephone hotline should be set up to refer patients to the appropriate destination for clinical assessment and/or testing as per local protocol. This number should be disseminated to all UN personnel for this purpose.

For individuals that physically come to the UN health facility, you should set up a triage station at the entrance of your health facility, i.e. outside of your waiting area, so as to screen patients. This enables you to immediately segregate patients with COVID-19 symptoms from the non-symptomatic patients, and limits potential spreading infection throughout the health facility. Signage should be displayed at this station instructing patients with symptoms to inform reception staff immediately on their arrival.

UN personnel involved in triage or screening at the points of entry should wear a medical mask when screening patients at the triage station. Ensure to have alcohol-based hand rub or soap and water handwashing stations readily available at this station.

Any individual that fits the WHO case definition\(^3\) of a suspect case should be immediately advised to wear a surgical mask, and then triaged to a separate waiting and assessment area immediately. The WHO case definition of a suspect case is living and dynamic, be sure to check [https://apps.who.int/iris/bitstream/handle/10665/331506/WHO-2019-nCoV-SurveillanceGuidance-2020.6-eng.pdf](https://apps.who.int/iris/bitstream/handle/10665/331506/WHO-2019-nCoV-SurveillanceGuidance-2020.6-eng.pdf) for the latest case definitions.

No UN personnel should be allowed to enter the UN health facility without having first passed the triage area. Sample layouts of the triage and screening areas can be found in [https://www.who.int/publications-detail/severe-acute-respiratory-infections-treatment-centre](https://www.who.int/publications-detail/severe-acute-respiratory-infections-treatment-centre).

WAITING AREA

Within your waiting area, set up a well-defined and separate waiting area for COVID-19 suspect cases. This separate area should be designated at least 6 feet away from your regular waiting area. In your waiting area/s, post information like posters and flyers, reminding patients and visitors to practice good respiratory and hand hygiene. Patients should be instructed to stay in this waiting area and not visit other parts of your facility.

Ensure to follow the steps on “Management of a Suspect COVID-19 Case: Brief Guidelines for UN Medical Staff” by DHMOSH when evaluating patients for COVID-19. This is available at [https://hr.un.org/sites/hr.un.org/files/Coronavirus_SuspectCaseGuide_DHMOSHPH_2020-03-04_0.pdf](https://hr.un.org/sites/hr.un.org/files/Coronavirus_SuspectCaseGuide_DHMOSHPH_2020-03-04_0.pdf). There is a helpful algorithm on the last page to assist you in your decision-making.

INFECTION CONTROL FOR SUSPECT/CONFIRMED CASES

Infection control to limit transmission is an essential component of care in suspect/confirmed cases. All suspect cases should be advised to wear a surgical mask to contain their respiratory secretions prior to seeking medical attention. All UN health care workers should be reminded of WHO’s “5 Moments for Hand Hygiene” per below figure.

![Image of 5 Moments for Hand Hygiene](image)

**Single Room**

Where possible, place any suspect/confirmed COVID-19 patients in a single room with a closed door and dedicated bathroom. In an escalating situation however, there may be lack of single rooms/isolation facilities. Where single/isolation rooms are in short supply, and cohorting is not possible, prioritise patients who have excessive cough and sputum production for single/isolation room placement. Note that if resources allow, an airborne infection isolation room (i.e., a single-patient negative pressure room) should ideally be made available for patients undergoing aerosol-generating procedures.

**Cohorting Patients**

If a single/isolation room is not available, you can cohort confirmed respiratory infected patients with other patients confirmed to have COVID-19.

Ensure suspect and confirmed cases are kept physically separated. A 2-meter distance should be maintained by all times between all patients in an isolation facility. Use privacy curtains between beds to minimize opportunities for close contact. Where possible, a designated self-contained area should be used for the treatment and care of patients with COVID-19.

This area should:

- Include a reception area that is separate from the rest of the health facility and should, if feasible, have a separate entrance/exit from the rest of the building.

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*Aerosol-generating procedures include tracheal intubation, noninvasive ventilation, tracheotomy, CPR, manual ventilation before intubation, upper endoscopy, and bronchoscopy. Nasopharyngeal or oropharyngeal specimen collection is not considered an aerosol-generating procedure.*
Not be used as a hallway by other patients, visitors, or staff, including patients being transferred, staff going for meal breaks, and staff and visitors entering and exiting the building;  
Be separated from non-segregated areas by closed doors; and  
Have signage displaying warning of the segregated area to control entry.

Where your health facility can no longer manage patients with mild/moderate disease, patients who are not at high risk for severe disease (i.e. under 60 years of age, no co-morbid diseases) can be isolated in community facilities (e.g. building, tent, temporary structures) with access to rapid health advice (i.e. via dedicated hotline, or telemedicine), or even at home according to WHO guidance. If the patient develops symptoms that may correspond to severe disease or complications, ensure rapid referral to hospital.

Depending on local testing strategy and capacity, mild and moderate patients may not be tested, and simply advised to self-isolate in either a cohorted community facility or at home.


Other IPC Considerations

Assigning a dedicated team of staff to care for patients in isolation/cohort rooms/areas is an additional infection control measure. This should be implemented whenever there are sufficient levels of staff available (so as not to have a negative impact on non-affected patients’ care). Ensure that UN health care workers have a rotational shift to ensure proper rest and recovery time.

Limit the movement of patients within the health facility to reduce potential infection throughout the health facility. If the patient needs to be moved, plan the move ahead, all staff and visitors who come into direct contact with the patient should wear appropriate PPE.

Perform regular environmental cleaning and disinfection. Maintain good ventilation, if possible, open doors and windows. Limit the number of visits per patient. All visitors should wear the required PPE and their visits should be recorded.

PERSONAL PROTECTIVE EQUIPMENT (PPE) IN HEALTH CARE SETTING

With regards to PPE for healthcare workers caring for a suspect/confirmed COVID-19 case, the WHO recommends standard, contact, and droplet precautions (i.e. gown, gloves, and medical mask) with eye (e.g. goggles) or face protection. Note that boots and coverall suits are not required.

WHO recommends that the addition of airborne precautions (i.e. using a particular respirator such as an N-95 – do a seal check!) is warranted during aerosol-generating procedures.

Due to the desire for a more conservative approach, the UN Medical Directors is recommending that an N-95 mask should be used at all times when caring for a suspect/confirmed case. All healthcare staff who wear an N-95 mask should be fit-tested to ensure an adequate seal/fit according to the manufacturer’s guidance. Ensure to conduct a fit check (according to the manufacturers’ guidance) every time an N-95 is donned to ensure an adequate seal has been achieved.

Additionally a negative pressure room with 12 air exchanges per hour or 160l/s for natural ventilation should be utilized whenever possible as part of airborne isolation.

PPE should be changed between use and for each different patient. If utilizing single-use PPE, dispose in a waste bin with a lid and wash your hands thoroughly. Anything single-use should not be reused or sterilized.

For a WHO summary of the minimum needed PPE by health care activities being conducted, see figure below.

A detailed table with WHO recommendations on type of PPE to be used for which activity is also available. UN offices should review WHO’s PPE recommendations and determine the amount of PPE required by your office/duty station.

ENVIRONMENTAL DISINFECTION

It is unknown how long SARS-CoV-2 can persist on surfaces; other coronaviruses have been tested and may survive on inanimate surfaces for up to six to nine days without disinfection. To help reduce
the spread of COVID-19 virus, environmental infection control procedures should also be implemented. According to the WHO, routine cleaning and disinfection procedures should be followed for COVID-19 virus.

In a health care setting, patient isolations rooms, cohort areas and clinical rooms must be decontaminated at least daily. Clinical rooms should also be cleaned and disinfected after clinical sessions for patients with suspected/known pandemic COVID-19.

An increased frequency of cleaning and disinfection should be incorporated into the environmental decontamination schedules for areas where there may be higher environmental contamination rates and "frequently touched" surfaces should be cleaned at least twice daily and when known to be contaminated with secretions, excretions or body fluids.

Domestic/cleaning staff performing environmental cleaning and disinfection should be allocated to specific area(s) and not be moved between COVID-19 and non-COVID19 care areas; and be trained in which personal protective equipment (PPE) to use and the correct methods of wearing, removing and disposing of PPE.

CARE IN UN HEALTH CARE FACILITY (IF AVAILABLE)

A step-by-step guide for the UN health care worker on how to identify and manage a suspect case is found at https://hr.un.org/sites/hr.un.org/files/Coronavirus_SuspectCaseGuide_DHMOSHPH_2020-03-04_0.

For the clinical management of severe acute respiratory infection, please see WHO recommendations at https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-(ncov)-infection-is-suspected

TRANSPORT BY AMBULANCE

A dedicated ambulance should be made available for transport of COVID-19 cases. At least two stand-by drivers should be made available.

Within the ambulances, patient segregation can be achieved by:

- Designating an ambulance/s for transfer of patients with suspected/confirmed COVID-19 for the duration of each shift;
- Transporting coughing and sneezing patients on their own whenever possible. However, if pressure upon the transport service occurs, two patients with symptoms of COVID-19 may be transferred together and should wear a surgical mask each.
- Ambulance staff should wear a surgical mask if they will be within 6 feet of the patient.

Detailed guidance on transportation of patients is available at https://www.paho.org/en/documents/recommendations-prehospital-emergency-medical-services-ems-covid-19

MANAGEMENT OF THE DEAD

Handling of deceased bodies infected by COVID-19 is different from that of pathogens causing viral haemorrhagic fever e.g. Ebola virus disease. To date there is no evidence of persons having become infected from exposure to the bodies of persons who died from COVID-19.
Review the following key points in handling human remains:

- Those who are handling the body should apply standard precautions both pre-mortuary care and at the funeral home/mortuary. This includes adherence to hand hygiene and use of appropriate PPE.
- Wrap body in cloth and transfer as soon as possible to the mortuary care. There is no need to disinfect the body nor is special transport equipment or a vehicle needed.
- Mortuary care: body bags are not necessary although they may be used for other reasons such as excessive body fluid leakage.
- Adults above the age of 60 and immunosuppressed person should not directly interact with the body.
- Details on post-mortem exam (if performed) and engineering and environmental controls during autopsy are available in the WHO document referenced below and safety procedures should be consistent with those used for autopsies of people who died from an acute respiratory illness. Autopsies should occur in well ventilated rooms with natural ventilation of 160 L/s air flow or in negative pressure rooms.
- Cleaning and disinfection procedures should be followed and are outlined in the link below.
- People who have died from COVID-19 can be buried or cremated.

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For any questions, please contact dos-dhmosh-public-health@un.org
ANNEX 1: COVID-19 PREVENTION MEASURES

GENERAL PREVENTION TIPS

The following general prevention measures are recommended to reduce the transmission of infection. They should be shared frequently with UN personnel:

- Wash your hands frequently with an alcohol-based hand rub (with at least 60% alcohol), or with soap and water.
- Maintain at least 1 meter (3 feet) distance between yourself and anyone who is coughing or sneezing. Avoid crowds (especially in poorly ventilated spaces) if possible.
- Avoid touching eyes, nose and mouth.
- Practice respiratory hygiene. This means covering your mouth and nose with your bent elbow or tissue when you cough or sneeze, then dispose of the used tissue immediately, and wash your hands after that.
- Stay home if you feel unwell. If you have fever, cough and difficulty breathing, seek medical attention and call in advance. Follow the directions of your local health authority.

IN A COMMUNITY SETTING

The above prevention tips should be emphasized. Additionally, it should be noted that for individuals without respiratory symptoms, WHO states that wearing a surgical medical mask (also known as surgical medical or procedural mask) in the community is not recommended8 nor is it evidence-based, even if COVID-19 is prevalent in the area. Wearing a mask does not decrease the importance of other general measures to prevent infection, and it may result in unnecessary cost and supply problems.

Individuals who are caring for patients with suspect or confirmed patients at home, however, should wear a tightly fitted medical mask when in the same room as that patient.

Individuals who are ill and develop an acute respiratory illness (e.g. with fever and/or respiratory symptoms) should be encouraged to stay home and away from the workplace for the duration of the illness. Medically, this is known as “isolation” (i.e. an individual who has symptoms and who stays at home until they are well). Such individual should remain in their bedroom and the door should remain closed.

Individual who are fit the WHO definition9 of a “contact” should monitor themselves for development of signs and symptoms consistent with COVID-19. In some jurisdiction, they may be advised to undergo a 14-day “quarantine” (i.e. an individual who is well with no symptoms but may have been exposed to COVID-19 and stays at home to monitor for symptoms). As soon as these symptoms develop, the individual should self-quarantine with social distancing, and call his or her health provider for a medical evaluation.

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