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

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INTRODUCTION

SCOPE AND PURPOSE

This document provides UN duty stations with guidance on the management of COVID-19 cases. This includes **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. The document provides further information on environmental cleaning and disinfection and handling of human remains. 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 symptomatic 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[1].

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 and increased mortality are age >60 years (increasing with age), hypertension, diabetes, cardiovascular disease, chronic lung disease, cerebrovascular disease, chronic kidney diseases, immunosuppression and cancer. Smoking is also a risk factor for severe disease[2]. A recent US CDC report suggests that pregnant women may be at increased risk for severe COVID-19 illness. For more information, see https://www.cdc.gov/mmwr/volumes/69/wr/mm6925a1.htm

[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.

[2] WHO Scientific Brief: Smoking and COVID-19. Available at: https://www.who.int/news-room/commentaries/detail/smoking-and-covid-19 Accessed 31 May 2020

The experience of several countries was that mortality was highest amongst 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 and few deaths have been reported.

Based on current information and studies, WHO estimates that **in a general population**, about **15% of COVID-19 cases will be severe** (requiring hospitalization and oxygen), and **5% of COVID-19 cases will be critical** (requiring ventilation), requiring significant health capacity and critical-care infrastructure. This reflects a higher level of severity compared to influenza and is likely due to the fact that many mild cases are not diagnosed.

It should be noted that the severity of cases and the case-fatality rate differ by age. **For the UN**, the case fatality rate in our UN personnel population **will vary according to the age-profile and underlying medical comorbidities of our workforce.**

ISOLATION AT HOME

All UN personnel should be made aware of the general COVID-19 precaution measures to take (Annex 1).

If an individual becomes symptomatic, where inpatient facilities do not exist for all COVID-19 patients, **for mild to moderate cases of COVID-19, such individuals should stay at home and be "isolated", i.e. separate themselves** from others in the household. They should wear a medical mask when in the same room (or vehicle) as other people and when presenting to health care settings. For more information on home-based care, see https://www.who.int/publications/i/item/home-care-for-patients-with-suspected-novel-coronavirus-(ncov)-infection-presenting-with-mild-symptoms-and-management-of-contacts

Cleaning and disinfection of frequently touched surfaces is also important[3]. WHO guidance on home care for patients with suspected COVID-19 who present with mild symptoms and when managing their contacts is available[4].

Isolation of patients can be discontinued for symptomatic patients 10 days after symptom onset plus at least 3 days without symptoms (without fever and respiratory symptoms).

For asymptomatic patients, isolation can be stopped 10 days after positive test[5].

ISOLATION IN A HEALTH CARE SETTING

WHO has developed a practical manual on how to set up and manage a severe acute respiratory infection (SARI) treatment centre and a SARI screening facility in health care facilities. Please see document here https://www.who.int/publications-detail/severe-acute-respiratory-infections-treatment-centre The following section however, is focused solely on how to establish a COVID-19 screening facility in your health-care facility/ies.

[3] WHO Guideline on Cleaning and disinfection of environmental surfaces in the context of COVID-19. Available at: https://www.who.int/publications-detail/cleaning-and-disinfection-of-environmental-surfaces-inthe-context-of-covid-19 Accessed 31 May 2020.

[4] https://www.who.int/publications/i/item/home-care-for-patients-with-suspected-novel-coronavirus-(ncov)-infection-presenting-with-mild-symptoms-and-management-of-contacts

[5] https://www.who.int/publications-detail/clinical-management-of-covid-19

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

SCREENING AND TRIAGE STATION

This section provides you general principles on screening and triage of suspect COVID-19 patients. Detailed technical information on how to configure your triage area is available at: https://www.paho.org/en/documents/technical-recommendations-configuration-triage-area-patients-respiratory-symptoms Specific information on management of suspect patients are available at https://www.who.int/publications/i/item/clinical-management-of-covid-19

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 a t 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 (or N-95 mask if available/preferred) when screening patients** at the triage station if they are closer than 1-2 meters from the patients. A plexiglass window/physical barrier may be used depending on the personnel's role. Ensure to have alcohol-based hand rub (ABHR) or soap and water handwashing stations readily available at this station.

Any individual that fits the WHO case definition[6] of a suspect case should be immediately advised to wear a medical mask, and then triaged to a separate waiting and assessment area immediately.

No UN personnel should be allowed to enter the UN health facility without having first passed the triage area. A sample layout of the triage area is available at https://www.paho.org/en/documents/technical-recommendations-configuration-triage-area-patients-respiratory-symptoms

WAITING AREA

Within your waiting area, set up a **dedicated, well-ventilated and separate waiting area for COVID-19 suspect cases.** This separate area should be designated at least 1-2 meters 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.

[6] https://www.who.int/publications/i/item/who-2019-nCoV-surveillanceguidance-2020.7

INFECTION PREVENTION AND CONTROL IN HEALTH CARE SETTINGS

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.

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, prioritize patients who have high-risk conditions, as well as those with 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[7].

COHORTING PATIENTS

If a single/isolation room is not available, you can **cohort lab-confirmed COVID-19 with other lab-confirmed cases together. Suspect cases should be kept as a separate cohort.** A 1 - 2 meters distance should be maintained at 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;
- 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;

[7] Aerosol-generating procedures include tracheal intubation, non-invasive ventilation, tracheotomy, CPR, manual ventilation before intubation, upper endoscopy, and bronchoscopy. Nasopharyngeal or oropharyngeal specimen collection is not considered an aerosol-generating procedure.

- 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. 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.

WHO provides more operational information on COVID-19 case management in health facilities vs. community at https://apps.who.int/iris/bitstream/handle/10665/331492/WHO-2019-nCoV-HCF_operations-2020.1-eng.pdf

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 ensure they are wearing a medical mask as source control, plan the move ahead, and ensure all staff and visitors who come into direct contact with the patient should wear appropriate PPE required for the care of a COVID-19 patient.

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 SETTINGS

With regards to **PPE for healthcare workers** caring for a suspect/confirmed COVID-19 case, the WHO recommends[8] standard, contact, and droplet precautions (i.e. gown, gloves, and 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 with each use!**) is warranted during aerosol-generating procedures.

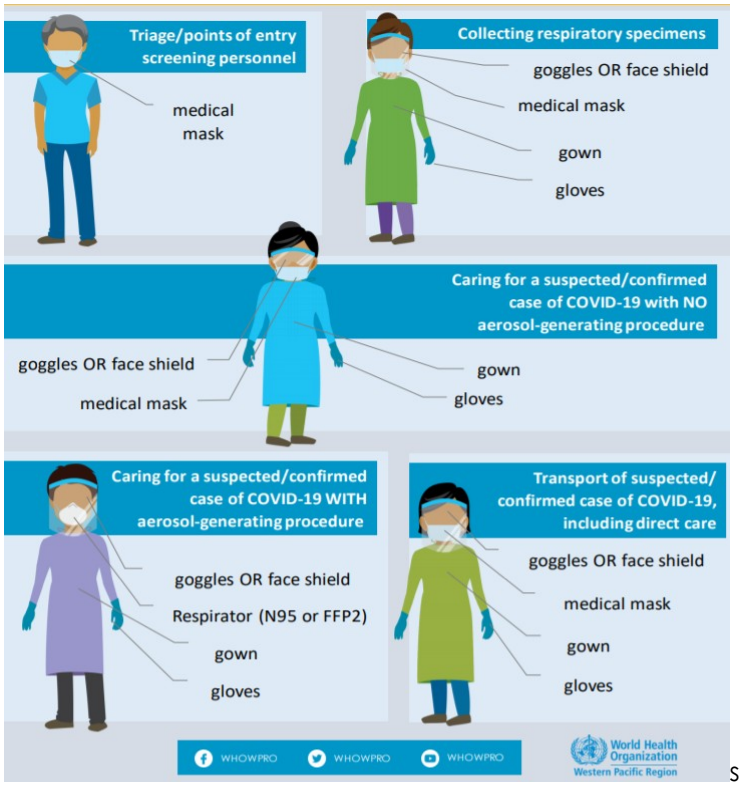
Due to the desire for a more conservative approach, the UN Medical Directors is recommending that airborne precautions (i.e. use of an N-95 mask) should be implemented at all times when caring for a suspect/confirmed case. All healthcare staff who wears an N-95 mask should be fit-tested to ensure an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

PPE should be changed between use and for each different patient. If utilizing single-use PPE,

[8] https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected-20200125

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[9] of the minimum needed PPE by health care activities** conducted, see figure below.



A detailed table with WHO recommendations on type of PPE to be used for which activity is also available.[10] UN offices should review WHO's PPE recommendations[11] and determine the amount of PPE required by your office/duty station.

ENVIRONMENTAL CLEANING AND 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 are appropriate for COVID-19 virus[12].** Linens and bedding should also be cleaned/washed regularly.

In a health care setting, patient isolations rooms, cohort areas and clinical rooms must be cleaned and disinfected regularly. 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 is important for "frequently touched" surfaces

[9] https://iris.wpro.who.int/bitstream/handle/10665.1/14482/COVID-19-022020.pdf
[10] https://apps.who.int/iris/bitstream/handle/10665/331215/WHO-2019-nCov-IPCPPE_use-2020.1-eng.pdf
[11] https://www.who.int/publications/i/item/rational-use-of-personal-protective-equipment-for-coronavirus-disease-(covid-19)-and-considerations-during-severe-shortages
[12] https://www.who.int/publications-detail/severe-acute-respiratory-infections-treatment-centre

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.

Several practices are **not recommended** including: spraying or fogging (also known as fumigation or misting) of indoor spaces, spraying or fumigation of outdoor spaces (e.g. streets, sidewalks, walkways or marketplaces) and spraying individuals with disinfectants (e.g. tunnel, cabinet or chamber).

Please see WHO guidance on full details of Environmental Cleaning and Disinfection at: https://www.who.int/publications-detail/cleaning-and-disinfection-of-environmental-surfaces-inthe-context-of-covid-19 including recommendations for frequency of cleaning and disinfection.

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 medical mask if they will be within 1-2 meters of the patient.
- All ambulance staff should be trained on how to put on and take off additional PPE according to the specific situation/interaction with the patient. This may include combination of PPE such as medical mask, particulate respiratory, gown, eye protection (goggles/face shield) and gloves depending on if they have direct contact with the patient or not. They should also be knowledgeable about when and how to perform hand hygiene.

More information on Emergency Medical Service (EMS) preparedness and transport of patients is available at https://iris.paho.org/handle/10665.2/52137

MANAGEMENT OF THE HUMAN REMAINS

Handling of deceased bodies infected by COVID-19 is different from that of pathogens causing viral haemorrhagic fever e.g. Ebola virus disease. Until more is known about COVID-19 the WHO recommends those who are managing human remains to use standard and contact and droplet precautions.

Where the deceased was known or suspected to have been infected with COVID-19, the body does not need to be packed in a body bad unless there is excessive leakage of bodily fluids. If body bags are used see: https://www.who.int/publications-detail/severe-acute-respiratory-infections-treatment-centre for body bag procurement specifications. There is no need to disinfect the body before transfer to the mortuary area and no special transport equipment or vehicle is

required.

In order to avoid aerosol production is it not recommended to spray the body. Embalming is not recommended to avoid excessive manipulation of the body.

Details on autopsy (if performed) and engineering and environmental controls during autopsy are available in the WHO document referenced below.

Cleaning and disinfection procedures should be followed the same as for a room that had a live COVID-19 patient.

For more information, see

- https://apps.who.int/iris/bitstream/handle/10665/112656/9789241507134_eng.pdf?sequence=1
- https://www.who.int/publications/i/item/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected-20200125

- https://www.who.int/publications/i/item/infection-prevention-and-control-for-the-safe-management-of-a-dead-body-in-the-context-of-covid-19-interim-guidance for more information.

Information on ICD mortality codes for COVID-19 deaths is available here: https://www.who.int/publications/i/item/WHO-2019-nCoV-mortality-reporting-2020-1

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For any questions on this document, 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 – 2 meters (3 – 6 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 you 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 terms of the wearing of cloth masks, WHO recommends that people always consult local authorities on recommended practices in their area. If there is widespread community transmission, and especially in settings where physical distancing cannot be maintained, governments should encourage the general public to wear a fabric mask. WHO also provides details on the composition of a fabric mask and how to safely wear one at https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/when-and-how-to-use-masks