

UN MODEL OF CARE (MOC) CHECKLIST FOR UN DUTY STATIONS IN RESPONSE TO COVID19+ PANDEMIC

Note the key elements of a MOC for UN health facilities tasked with responding to the COVID- 19 Pandemic. These include:

1. Containing spread of COVID 19 + cases in duty stations
Follow guidance with the assistance of materials provided on how to:
 - a. Manage first positive case in UN community
 - b. Assist staff and dependants set up home care essential supplies
 - c. Prepare screening and isolation ward
 - d. Review reporting procedures for confirmed or suspected COVID19 cases
 - e. Trace, quarantine and monitor contact cases in coordination with local health authorities following WHO and UN guidelines
2. Provide access to COVID-19 testing
 - a. Identify local source of COVID 19 testing if available
 - b. Define SOP to access COVID 19 testing locally if available
 - c. If available, define type of test (Rapid test IGM/ IGG vs PCR) and purpose: contain, treat, isolate or clear for return to work
 - d. Define protocol for testing UN HCW (in case of illness or to define immunity)
3. Provide In-home care to the greatest extent that is clinically safe (for patient, caregivers and other occupants):
 - a. Review with staff and dependents hand hygiene measures (cough etiquette, maintaining 1-2-meter distancing) as well as use of medical mask. Review guidance
 - b. Train staff and dependents in the use of thermometers, pulse oximeters and personal protective equipment (PPE) together with strict adherence to hand hygiene
 - c. Monitor (passive and active) patients at home, identify those at risk of requiring higher level of care to allow time for hospitalization and/or medevac
 - d. Provide psychological support to staff and dependents under isolation or quarantine.
4. Access to step-up care as clinically indicated (on site and by medevac) by both the disease manifestation and the risk profile of the individual. (see attached matrix)

Noting the present restrictions on air travel and border crossings due the pandemic, as well as the limited access to ICU/high level of care facilities worldwide, medical evacuation capacity will be limited independent of a patient's diagnosis (COVID19+ or other). UN health care providers should therefore plan accordingly and submit requests for evacuation only when there is a clinical indication the patient's condition will not be able to be managed locally.

Triage algorithm by:

1. Symptoms severity (mild, moderate, severe, critical). *Recommend use of WHO Global COVID-19 Clinical Platform Module 1 to standardize intake data (see reference 1)*
2. Risk Categories *¹

¹ * Risk factors: age >60, underlying co-morbidities e.g. diabetes, cardiovascular and chronic lung disease, cancer and immunocompromised individuals

3. Disposition:
 - (a) Home with/without extra support (oxygen, pulse oximetry, etc...
 - (b) Intermediate satellite holding unit for monitor and easy move to UN Level 1 facility
 - (c) UN Level 2 facility or Higher level of care or Severe Acute Respiratory Infection (SARI) facility

5. Following this model of care and current information on the clinical course of patients with confirmed COVID19 we predict that
 - 40% of confirmed cases will have mild disease, requiring minimal care; these patients would be managed/treated at home.

 - 40% will have moderate disease and by our model of care will require evaluation and either holding in an isolation ward or monitoring at home, depending on the severity of symptoms

 - 20% will have either severe (15%) or critical disease (5%) requiring intensive care support initially and medical evacuation.

6. When multiple patients are at a threshold status for medical evacuation, healthcare managers and providers will establish a priority list for medevac based on clinical factors, such as onset of illness, trend of clinical status, risk factors, etc. Will need to maintain regular communication with receiving hospitals when identified as well as medical evacuation provider. Medical evacuation criteria will include critical patient data on overall status, vital signs, oxygenation, ventilatory requirement, etc... *Consider early movement of patients with mild illness and multiple risk factors**.

7. In trying to estimate the potential need for medical evacuation, Healthcare managers should review the demographics of their population, looking specifically at age as well as the prevalence of risk factors. Individuals identified as "at risk" should be instructed to review the general prevention measures as well as their home confinement preparations and consider if possible, moving to a location with better access to intensive care facilities.

Patients with risk factors are 4 times (28 % vs 7%) more likely to require hospitalization than those without risk factors. Among hospitalized patients, patients with risk factors were over 5 times (14% vs 2.5%) more likely to require ICU support than those patients without risk factors. https://www.cdc.gov/mmwr/volumes/69/wr/mm6913e2.htm?s_cid=mm6913e2_w

8. The rate at which these cases will present over time will depend on the effective implementation of containment measures. At the peak of the epidemic in Hubei province, over a 14-day period, active cases of COVID 19 presented at a rate of 100 cases per a population of 100,000, (1 case per 1000 individuals over 14 days). <https://www.ecdc.europa.eu/sites/default/files/documents/RRA-seventh-update-Outbreak-of-coronavirus-disease-COVID-19.pdf>

9. When confirmed cases begin appearing at a duty station, if transmission is not contained, we would expect that 20% of symptomatic cases will require medical evacuation. Using the Hubei scenario at its peak, we would expect to see a new case requiring care per 1000 individuals every 2 weeks. After 6 weeks, we will have seen 3 cases /1000 individuals, one of which would require medical evacuation, after 8 weeks, we would be at 3-4 cases/1000, one

of which would require evacuation. If the transmission remains unabated, ICU facilities will become saturated and with staff fatigue, medical requests will increase.

10. Recognizing the complexity and intensity of the work required to care for patients infected with COVID 19, it is paramount that all infection prevention and control measures be strictly followed to minimize exposure for staff and especially health care workers. Psychological support and adequate rest periods should be provided to all healthcare staff. For details click [https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-\(ncov\)-infection-is-suspected](https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected).

And <https://www.cdc.gov/coronavirus/2019-ncov/infection-control/control-recommendations.html>

CLINICAL DECISION MATRIX FOR UN DUTY STATIONS IN EVALUATING AND TREATING ACUTE RESPIRATORY ILLNESS DURING COVID 19 PANDEMIC

Clinical severity category	Defining Symptoms	Defining Signs	UN recommended treatment centre	Threshold clinical signs to escalate to next	Needed level of equipment	Needed manpower expertise	Disposition
Mild (by WHO + CCDC) day ^{oo} 1 of illness (5 days av post exposure)	Upper respiratory tract symptoms, Fever, cough, myalgias, headache, nausea anosmia, anorexia, etc.	Temp over 37.5 - 38°C	Phone contact with COVID 19 Medical hotline or personal physician	Worsening symptoms: dyspnea, higher temp.	Supplies for self-isolation, paracetamol, thermometer, pulse oximeter, medical masks	Family care giver, access to provider via phone/ Telehealth	Maintain at home, monitor temp and O2, close f/u if risk factors* if multiple pts, set priority list ^o for MEDEVAC
Moderate (CCDC) Day 5 of illness	Fever, cough, shortness of breath	Fever, labored breathing (Respirations 20-25/min) early pneumonia on CXR	Screening center isolated from clinic/hospital facility (level 1)	Pulse ox SO<93 % at rest Respirations greater than 30/min at rest	PPE, isolation room or ward, Pulse oximeter, Vital sign equipment, access to CXR, lab services	Nursing staff with triage skills with physician back up	Isolation room or home with O2, <i>if risk factors*</i> , <i>test for COVID 19**</i> , plan early MEDEVAC to Level 2 or higher level of care
Severe (by WHO + CCDC) Day 7 to 10 of illness	Fever, worsening SOB, severe fatigue, decreased mental acuity	CXR shows bilateral pneumonia, low lymphocyte count	Isolation ward of UN clinic/ hospital (level 2), on oxygen (nasal cannula)	Severe respiratory distress with severe hypoxia refractory to oxygen therapy Pulse ox SO<90%	Oxygen, intravenous access, pulse oximeter monitoring, cardiac monitoring, resuscitation/intubation equipment, ventilator COVID 19 Test	Physician with RSI/ARDS treatment skills and nursing staff	Hospitalisation in isolation unit prior to MEDEVAC to SARI treatment facility
Critical (by WHO + CCDC)	Shortness of breath, obtundation, loss of consciousness	ARDS, sepsis and septic shock severe hypoxia on oxygen, deteriorating vital signs, decrease renal function/output	ICU unit dedicated to covid 19 + cases SARI Treatment Center	Worsening hypoxia and deteriorating vital signs despite intubation and PEEP	Oxygen, Ventilator, ICU monitoring, cardiac defibrillator, all the above	ICU staff and resp therapist /technician	MEDEVAC TO SARI Treatment facility

* Risk factors: age >60, underlying co-morbidities e.g. diabetes, cardiovascular and chronic lung disease, cancer and immunocompromised individuals.

** COVID 19 tests: depending on availability: rapid test (IGG/IGM) vs PCR as per WHO recommendations

^o: Set Priority MEDEVAC list based on clinical factors: onset of illness, clinical status trend, risk factors, etc...

^{oo}: timeline is meant to be a guide on when to expect changes in clinical status. Onset of symptoms as well as their worsening will vary between patients

References and Resources

- ✓ WHO form for case reporting
https://www.who.int/docs/default-source/coronaviruse/who-ncov-crf.pdf?sfvrsn=84766e69_2
- ✓ The latest information from WHO can be found at <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>.
- ✓ [Recommendations to UN Personnel for Reducing the Risk of Acquiring COVID-19](#)
- ✓ Global Surveillance for human infection with COVID-19
- ✓ Rapid (RDT) and Laboratory testing for COVID-19 in suspected human cases
- ✓ Clinical management of severe acute respiratory infection when COVID-19 infection is suspected
- ✓ Home care for patients with suspected COVID-19 infection presenting with mild symptoms and management of contacts
- ✓ Infection prevention and control during health care when COVID-19 infection is suspected
- ✓ Instructions for reporting of COVID-19 cases amongst UN personnel and dependents
- ✓ WHO guidance on the management of severe SARI cases
[https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-\(ncov\)-infection-is-suspected](https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-(ncov)-infection-is-suspected)
- ✓ Set up of SARI treatment center
<https://www.who.int/publications-detail/severe-acute-respiratory-infections-treatment-centre>
- ✓ Example, WHO in house contact tracing SOP, see Annex 1

EXAMPLE ON HOW TO CONDUCT INTERNAL CONTACT TRACING by WHO

Scenario and scope:

The following standard operating procedures (SOPs) are developed to guide contact tracing within WHO in the event of a suspected or confirmed COVID-19 case among WHO personnel.

Rationale:

The SOPs outlined in this document provide procedures within the context of WHO's duty of care to protect and promote the health and wellbeing of our entire workforce. The SOPs are based upon [WHO guidelines](#) for COVID-19 surveillance and case definitions.

Objectives:

Internal SOPs for WHO Staff Health & Wellbeing Services (SHW) on COVID-19 contact tracing for workplace exposures¹ to suspected or confirmed WHO personnel cases. The objectives of the contact tracing are to rapidly detect individuals who had contact with a confirmed or suspected case from 48 hours before symptom onset and up to 14 days after their symptom onset.

Contact Tracing:

- A patient will inform SHW of their symptoms
- SHW will conduct an individual risk assessment and assess if the patient is a confirmed or suspected COVID-19 case:
 - If NO: the patient is determined not to be a case, SHW will advise the patient to remain at home and follow COVID-19 preventive measures
 - If YES: SHW will follow the patient for the duration of their illness and request the patient to provide all their workplace contacts from 48 hours before symptom onset and up to 14 days after their symptom onset.
 - SHW will monitor contacts for 14 days from the time of last exposure to the case.
 - If the contacts do not develop symptoms after 14 days, the monitoring will end.
 - If the contacts do develop symptoms,
 - SHW will refer the patient to their treating physician testing and clinical management,
 - follow the patient for the duration of their illness, and
 - request the patient to provide contacts and monitor their contacts for 14 days.
- The contact tracing will occur as illustrated in the below algorithm.

¹Exposures outside the workplace are handled by relevant local health authorities

EXAMPLE OF CONTACT TRACING ALGORITHM

