Official websites use .gov A .gov website belongs to an official government organization in the United States. Secure .gov websites use HTTPS A lock ( ) or https:// means you've safely connected to the .gov website. Share sensitive information only on official, secure websites. COVID-19 Overview and Infection Prevention and Control Priorities in non-US Healthcare Settings [PPT – 5 MB] This overview was created for healthcare workers in non-U.S. healthcare settings and government officials at ministries of health working on the Coronavirus Disease 2019 (COVID-19) response. The information in this document draws from the Centers for Disease Control and Prevention (CDC) and World Health Organization (WHO) guidance documents and Infection Prevention and Control (IPC) priorities for the response to COVID-19 in healthcare settings and includes information that can be used in non-U.S. contexts. This overview is organized by first presenting a background on coronaviruses. It then briefly describes the emergence, transmission, symptoms, prevention, and treatment of COVID-19. The rest of the document reviews COVID-19 IPC priorities, in non-U.S. healthcare settings. Coronaviruses are a large family of viruses that can cause illness in animals or humans. In humans there are several known coronaviruses that cause respiratory infections. These coronaviruses range from the common cold to more severe diseases such as severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS), and COVID-19. COVID-19 was identified in Wuhan, China in December 2019. COVID-19 is caused by the virus severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), a new virus in humans causing respiratory illness which can be spread from person-to-person. Early in the outbreak, many patients were reported to have a link to a large seafood and live animal market; however, later cases with no link to the market confirmed person-to-person transmission of the disease. Additionally, travel-related exportation of cases occurred. There are three main ways that COVID-19 can spread: The droplets that contain the SARS-CoV-2 virus are released when someone with COVID-19 sneezes, coughs, or talks. Infectious droplets can land in

the mouths or noses of people who are nearby or possibly be inhaled into the lungs. A physical distance of at least 1 meter (3 ft) between persons is recommended by the WHO to avoid infection,1 whereas CDC recommends maintaining a physical distance of at least 1.8 meters (6ft) between persons. Respiratory droplets can land on hands, objects, or surfaces around the person when they cough or talk, and people can then become infected with COVID-19 from touching hands, objects or surfaces with droplets and then touching their eyes, nose, or mouth. Additionally, transmission can occur from those with mild symptoms or from those who do not feel ill. There are certain circumstances that can increase the risk of infection for COVID-19 such as poorly ventilated space. In indoor spaces with poor ventilation, the concentration of virus particles is often higher than outdoors.2,3 Other factors that are associated with increased COVID-19 risk include prolonged exposure to those infected with COVID-19, close contact with infected persons, and any other activity that leads to exposure to a greater amount of respiratory droplets and particles. A wide range of symptoms for COVID-19 have been reported.4 These symptoms include: The estimated incubation period is between 2 and 14 days with a median of 5 days. It is important to note that some people become infected and do not develop any symptoms or feel ill. COVID-19 is a relatively new disease; therefore, additional risk factors for severe COVID-19 may continue to be identified. In some cases, people who get COVID-19 can develop severe complications, including difficulty breathing, causing a need for hospitalization and intensive care. 5 These severe complications often lead to death. The risk of severe disease increases steadily as people age. Additionally, those of all ages with underlying medical conditions, including but not limited to heart disease, diabetes or lung disease, are at higher risk to develop severe COVID-19 compared to those without these conditions.5 Those at higher risk for severe illness should be prioritized for vaccination.6 COVID-19 can be prevented through pharmaceutical (i.e., vaccination) and non-pharmaceutical interventions (e.g., masking, physical distancing, hand

hygiene). All of these preventative measures are important to protect individuals from acquiring and transmitting the SARS-CoV-2 virus and should be done in conjunction with one another. Getting vaccinated is a preventative measure that people can take to avoid getting sick with COVID-19 and to avoid infecting others. While safe and effective vaccines are a great tool for prevention, it is important to continue other preventative actions such as wearing masks, performing hand hygiene, physically distancing from others, and avoiding crowded spaces and spaces with poor ventilation.7 There are several vaccine candidates, and many have been listed under WHO's emergency use. Wearing masks is another important preventative action for COVID-19 that should continue to be performed. When selecting a mask, there are many factors to consider.8 Masks should It is also important to choose and wear the proper type of mask based on your setting. For example, in a community setting, cloth masks should be worn, whereas during aerosol generating procedures in a healthcare setting, should be worn. Even with the introduction of vaccinations as a tool for prevention against COVID-19 and the proper use of masks, CDC recommends the following key COVID-19 preventative activities: 7— avoiding crowded spaces or spaces that have poor ventilation or wear a mask in these spaces; performing proper hand hygiene; keeping high touch surfaces clean; monitoring symptoms; and getting tested if ill. Infection prevention and control (IPC) is the practice of preventing or stopping the spread of infections from the delivery of healthcare services in facilities like hospitals, outpatient clinics, dialysis centers, long-term care facilities, or traditional practitioners. IPC is a critical part of health system strengthening and must be a priority to protect patients and healthcare workers. In the context of COVID-19, the IPC goal is to support the maintenance of essential healthcare services by containing and preventing COVID-19 transmission within healthcare facilities to keep patients and healthcare workers healthy and safe. As safe and effective COVID-19 vaccines continue to be delivered, there are certain recommendations and principles that should be implemented and

considered for vaccine administration. Consultations and consensus between WHO, the United Nations Children's Fund (UNICEF), and the ad hoc WHO COVID-19 IPC Guidance Development Group have led to the development of a document that outlines key IPC principles and recommended proper precautions for safe administration of COVID-19 vaccines. Consult the Infection prevention and control (IPC) principles and procedures for COVID-19 vaccination activities document when preparing for vaccine deployment. 10 The key IPC principles for COVID-19 vaccine deployment set out in the document include: Standard precautions are a set of practices that apply to the care of patients in all healthcare settings at all times. Standard precautions remain the cornerstone of infection prevention and control. Application of these precautions depends on the nature of the healthcare worker-patient interaction and the anticipated exposure to a known infectious agent. Standard precautions include: Transmission-based precautions are a set of practices specific for patients with known or suspected infectious agents that require additional control measures to prevent transmission. These precautions are used in addition to standard precautions. Current WHO guidance for healthcare workers caring for suspected or confirmed COVID-19 patients recommends the use of contact and droplet precautions in addition to standard precautions unless an aerosol generated procedure is being performed, in which case airborne precautions are needed.1 Disposable or dedicated patient care equipment, such as stethoscopes, blood pressure cuffs, should be used. If equipment needs to be shared among patients, it should be cleaned and disinfected between use for each patient using products containing ethyl alcohol of at least 70%. Also, adequately ventilated single rooms or wards are suggested. For general ward rooms with natural ventilation, adequate ventilation for COVID-19 patients is considered to be 60 L/s per patient. When single rooms are not available, suspected COVID-19 patients should be grouped together with beds at least 1 meter (3ft) apart based on WHO's recommendations, although some member states, including the United States, have recommended maintaining greater

distances whenever possible. COVID-19 isolation rooms or wards should have dedicated bathrooms, which should be cleaned and disinfected at least twice daily. Additionally, healthcare facilities can also consider designating healthcare workers to care for patients with COVID-19 and restricting the number of visitors allowed in the facility. Transportation of patients with COVID-19 should be avoided unless medically necessary. If transportation is deemed medically necessary, a mask should be placed on the suspected or confirmed COVID-19 patient. Healthcare workers should also wear the appropriate PPE when transporting patients. Contact and droplet precaution PPE are recommended for healthcare workers before entering the room of suspected or confirmed COVID-19 patients. Healthcare workers should be trained on the correct use of PPE, including how to put it on and remove it. Extended use and re-use of certain PPE items such as masks and gowns can be considered when there are supply shortages. Healthcare workers should: There is a higher risk of self-contamination when removing PPE. Please see instructions for putting on and removing PPE [2.9 MB, 3 pages] for guidance. For healthcare workers performing any of the following aerosol generating procedures on patients with COVID-19, it is recommended that a fitted respirator mask (surgical N95 respirators, FFP2 or equivalent) is used as opposed to surgical/medical masks. In addition to wearing a fitted respirator mask, healthcare workers should also wear appropriate PPE, including gloves, a gown and eye protection. Although there is a difference in determination on which procedures generate infectious aerosol, the current WHO list of Aerosol Generating Procedures includes:1 To receive email updates about COVID-19, enter your email address:

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