

Epidemiological Update Novel coronavirus (COVID-19)

28 February 2020

Context

On 31 December 2019, Wuhan Municipality in Hubei Province, People's Republic of China reported a cluster of pneumonia cases with unknown etiology. On 30 January 2020, with more than 9,700 confirmed cases in China and 106 confirmed cases in 19 other countries, the World Health Organization (WHO) Director General declared the outbreak a public health emergency of international concern (PHEIC). On 11 February, WHO named the disease, COVID-19, short for "coronavirus disease 2019." On the same day, the International Committee on Taxonomy of Viruses (ICTV) announced "severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)" as the name of the new virus which causes COVID-19.

Global Situation Summary

Since the Pan American Health Organization / World Health Organization (PAHO/WHO) epidemiological update on novel coronavirus published on 14 February 2020 – and as of 28 February 2020, an additional 34,562 cases of COVID-19 have been reported worldwide including 1,475 additional deaths. Twenty-five new countries reported COVID-19 cases for the first time.

Between 31 December 2019 and 28 February 2020, a total of 83,631 laboratory-confirmed cases of COVID-19 including 2,858 deaths have been reported from 51 countries. Most of the cases (94%) and deaths (98%) are in China and within China; Hubei Province has accounted for the majority of cases (83%) and of deaths (96%). The number of reported cases in China and potentially in other countries is most likely an underestimation, considering testing capacity, criteria, and the scope of the case definition, along with the occurrence of mild and asymptomatic cases. Based on findings from a WHO-China Joint Mission as of 25 February, the epidemic peaked and plateaued between 23 January and 2 February in China and has been declining steadily since then. However, while still a small percentage, an increasing proportion of cases are now being reported outside of China.

Outside China, 50 countries in all 6 WHO Regions have reported confirmed cases: the Western-Pacific Region (8 countries, excluding China), South-East Region (4 countries), the Region of the Americas (4 countries), the European Region (22 countries), the Eastern Mediterranean Region (10 countries), and the African Region (2 countries). Additionally, there have been 705 cases, including 4 deaths, associated with the Diamond Princess cruise ship. Most of the cases reported in the Eastern Mediterranean Region and European Region have travel history to the Islamic Republic of Iran and Italy respectively.

Suggested citation: Pan American Health Organization / World Health Organization. Epidemiological Update: Novel coronavirus (COVID-19). 28 February 2020, Washington, D.C.: PAHO/WHO; 2020

Situation in the Region of the Americas

Since the last update, two new countries in the region of the Americas reported COVID-19 cases for the first time – Brazil (1) and Mexico (2) – all 3 cases had travel history to Lombardy, Italy before onset of symptoms. Between 21 January and 28 February, a total of 33 confirmed cases of COVID-19 have been reported in four (4) countries of the Region of the Americas – the United States of America (15), Canada (15, including one presumptive confirmed), Brazil (1), and Mexico (2).

United States of America

The first confirmed case in the United States was reported on 21 January 2020. As of 28 February, there have been a total of 459 Persons Under Investigation (PUI) who were detected and tested in the United States since 21 January, including 15 confirmed cases of COVID-19 in 6 states (Arizona, California, Illinois, Massachusetts, Washington, and Wisconsin). Of the 15 confirmed cases, 12 were travel-related and 3 were due to person-to-person transmission. One of these cases, in California state, had no known source of infection or contact with a known COVID-19 case, indicating possible community spread. Additionally, there have been 3 persons repatriated from Wuhan, China, and 44 persons repatriated from the Diamond Princess Cruise Ship, who have tested positive for COVID-19 by the US Centers for Disease Control and Prevention (US CDC).

Canada

The first confirmed case in Canada was reported on 25 January 2020. As of 28 February, there have been 15 confirmed cases of COVID-19 (including one presumptive confirmed) reported in Canada, in Ontario (7), British Columbia (7), and Quebec (1) provinces. Among the confirmed cases, the site of transmission for 2 cases is under investigation, 2 were due to person-to-person spread amongst close contacts of confirmed cases, 3 were exposed in Iran, and the remaining 8 had travel history to China. None of the repatriated persons from Wuhan, China, or Diamond Princess cruise ship have tested positive once arriving in Canada.

Brazil

The first confirmed case in Brazil was reported on 26 February 2020. This case is in a 61-year-old male resident of São Paulo Municipality, São Paulo State, with travel history to the Lombardy Region of Italy and who had mild symptoms. The case reported no known contact with a suspected case of COVID-19. Additionally, according to the Brazil Ministry of Health (MoH) as of 28 February, there are a total of 182 suspected cases under investigation, in 16 federal units.

Mexico

The first confirmed cases in Mexico were reported on 28 February 2020 – one case each from Mexico City and Sinaloa State. Both cases had travel history to Lombardy Region in Italy before onset of symptoms. This is an evolving situation and further information is pending.

Risk assessment for the Americas

The 4 countries with confirmed cases in the Region of the Americas have strong preparedness and response capacities. All countries within the Region of the Americas have enhanced preparedness measures to detect and control COVID-19; to date, there are 29 National Influenza Centers (NICs) in 32 countries, and 32 countries with molecular diagnostic platforms.

However, given the rapid increase of international spread of cases to 50 other countries with human-to-human transmission reported in at least 18 of those countries, and large clusters reported in at least 4 countries (Japan, Iran, Italy and the Republic of Korea); a large number of travelers originating from countries where confirmed cases were reported and likely community transmission described (e.g., Iran, Italy); the unknown role and magnitude of asymptomatic cases; difficulty in identifying cases due to non-specific symptoms and possibility of co-circulation of other respiratory pathogens (e.g., influenza, respiratory syncytial virus [RSV]) hence potential for undetected transmission; delays in confirmation due to limited testing capacity in some countries; and potential major stresses impacting the health care systems of some affected and potentially affected countries in the future; the overall risk is assessed as very high at both the Regional and Global levels.

Guidance and recommendations for national authorities

Based in what it is currently known about COVID-19 in terms of epidemiology, natural history of the infection in humans, as well as control measures – and considering the epidemiological and clinical features of other coronaviruses, such as severe acute respiratory syndrome – coronavirus (SARS-CoV) and Middle East respiratory syndrome – coronavirus (MERS-CoV) – indicates that essential public health functions, defined as core capacities in Annex 1 of the International Health Regulations (IHR), and further detailed in the tool used by States Parties to present their IHR Annual Report to the World Health Assembly, constitute the foundations for building upon readiness to contain onward transmission of the COVID-19 following the importation of one or more cases.

Due to the increased importation of cases of COVID-19 and new countries outside China reporting sustained local transmission of cases (Japan, Iran, Italy and the Republic of Korea), PAHO/WHO recommends that Member States, strengthen surveillance activities to early detect suspect case(s) of COVID-19, detect unusual respiratory events, ensure that health workers have access to up-to-date information on this disease, are familiar with the principles and procedures for managing COVID-19 infections, and are trained to consult a patient's travel history to link this information with clinical data.

1. Surveillance and reporting

The WHO updated the interim guidance for Global Surveillance for COVID-19 disease caused by human infection with novel coronavirus (COVID-19) on **27 February** and it is available at: https://bit.ly/3b4RHwy

The case definition for suspect case has changed since the 31 January update and now includes three groups of people:

 A patient with acute respiratory illness (fever and at least one sign/symptom of respiratory disease (e.g., cough, shortness breath), AND with no other etiology that fully explains the clinical presentation AND a history of travel to or residence in a country/area or territory reporting local transmission (See situation report) of COVID-19 disease during the 14 days prior to symptom onset; OR

(2) A patient with any acute respiratory illness **AND** having been in <u>contact</u> with a confirmed or probable COVID-19 case (see definition of contact) in the last 14 days prior to symptom onset;

OR

(3) A patient with severe acute respiratory infection (fever and at least one sign/symptom of respiratory disease (e.g., cough, shortness breath) **AND** requiring hospitalization **AND** with no other etiology that fully explains the clinical presentation.

WHO requests that national authorities report through their respective IHR National Focal Points probable and confirmed cases of COVID-19 infection within 48 hours of identification, by providing the minimum data set outlined in the "Revised case reporting form for 2019 Novel Coronavirus of confirmed and probable cases," through the IHR National Focal Point and the WHO IHR Regional Contact Point of the appropriate WHO Regional Office. A template for the revised line listing in Excel format with the data dictionary, which suggests the name of the variables and their specifications is available. If the outcome of the patient is not yet available at first reporting an update of the report should be provided as soon as the outcome is available, at the latest within 30 days of the first report. Case-based reporting is requested as long as feasible for the country. When it is not feasible to report case-based data, countries are requested to provide daily and weekly aggregated data.

2. Laboratory

Laboratories should continue to use the influenza laboratory algorithm recommended by PAHO for both routine surveillance of acute respiratory infection (ARI) and severe acute respiratory infection (SARI) as well as unusual cases. If influenza is detected, the corresponding typing and report must be continued. Although the co-detection of influenza (or other respiratory viruses) with SARS-CoV-2 is biologically possible, this is an unlikely event. Therefore, if a positive test result is obtained for another virus that explains the clinical picture, it is not necessary to continue to test the sample for SARS-CoV-2.

Samples should be collected by trained personnel and applying all biosafety instructions including the use of personal protective equipment appropriate for respiratory viruses. PAHO has recently published on 1_{st} of February 2020 a Laboratory Guidelines for Detection and Diagnosis of the Novel Coronavirus (COVID-19). Information on specimen collection and proper shipment; laboratory testing including a testing algorithm; and reporting of cases and test results can be found in this interim guidance. The guidance is available at: https://bit.ly/2vsrkRb.

WHO has made available, molecular diagnostic protocol for laboratory testing and an updated interim guidance for laboratory testing for COVID-19 in suspected human cases, available at: https://bit.ly/31PdtiO

3. Infection Prevention and Control

On 27 February, WHO published <u>COVID-19 guidance for businesses and employers</u>, which outlines simple ways to prevent the spread of the virus, things to consider when employees travel, and how to get your business ready in case COVID-19 arrives in your community.

Sustained human-to-human transmission of COVID-19 along with nosocomial transmission has now been documented in China and some countries outside China. Possible routes of transmission of COVID-19 include direct contact, droplet, and airborne (aerosol) transmission.

The following guidance on infection prevention and control is available:

- i. Presentation: Infection Prevention and Control and novel coronavirus (COVID-19): standard precautions and use of personal protective equipment, PAHO, 20 February 2020, available at: https://bit.lv/32zz004
- ii. Requirements and technical specifications of personal protective equipment (PPE) for the novel coronavirus (2019-ncov) in healthcare settings, PAHO 19 February 2020, available at: https://bit.ly/2weRln8
- iii. Advice on the use of masks in the community, during home care and in health care settings in the context of the novel coronavirus (COVID-19) outbreak, WHO, 29 January 2020, available at: https://bit.lv/2T6KDZw
- iv. Infection prevention and control during health care when novel coronavirus (COVID-19) infection is suspected, WHO Interim guidance, 25 January 2020, available at: https://bit.ly/31syVuw
- v. Home care for patients with suspected novel coronavirus (COVID-19) infection presenting with mild symptoms and management of contacts, WHO Interim guidance, 4 February 2020, available at: https://bit.ly/2v3iG72

4. Clinical management

To date, there is no specific drug or vaccine recommended to prevent or treat the novel coronavirus. Some specific treatments such as antivirals are under investigation and are being tested through clinical trials. The use of antivirals has also been reported in published case series of hospitalized patients with COVID-19 (reference). Those infected with COVID-2019 should receive appropriate care to relieve and treat symptoms, and those with severe illness should receive optimized supportive care.

Application of timely, effective, and safe supportive therapies is the cornerstone of therapy for patients that develop severe manifestations of COVID-19.

Guidance for clinical management of severe acute respiratory infection when COVID-19 is suspected is available at: https://bit.ly/36AvKC6

In addition, WHO published a rapid advice note (available at: https://bit.ly/2wWQ7gN) to meet the need for recommendations on the safe home care for patients with suspected novel coronavirus (2019-nCoV) infection presenting with mild symptoms and public health measures.

5. Organization of health services

To enhance health services preparedness at country level, the following readiness checklist for response to COVID-19 in hospitals has been developed. The purpose of this tool is to support countries to verify in designated hospitals, the status of enlistment for the response to COVID-19 and identify immediate and priority actions to respond efficiently and in a timely manner to the emergency. The tool is based on the WHO influenza pandemic (2009) preparedness list and other hospital readiness documents. It also includes improvements generated as a result of the experiences in the countries of the region following the 2009 influenza pandemic.

The Hospital Readiness <u>checklist</u> and associated <u>guidance</u> are both available on PAHO's website.

6. International traffic

On 30 January 2020, the WHO Director-General determined that the outbreak of COVID-2019, currently primarily affecting the People's Republic of China, constitutes a Public Health Emergency of International Concern (PHEIC) and issued Temporary Recommendations.

In line with provisions of Article 43 of the IHR, additional health measures that significantly interfere with international traffic and implemented by States Parties in relation to this event are being published by the WHO Secretariat in the secure Event Information Site for National IHR Focal Points.

As of 27 February 2020, the number of States Parties that provided to WHO official reports on additional health measures has increased by seven since the last announcement published on 21 February, with an additional eight countries providing updates to their previously implemented measures. This brings the total number States Parties that reported on additional health measures that significantly interfere with international traffic to 41, including 12 from the region of the Americas. Eleven of all 41 States Parties are reporting additional measurers that significantly interfere with international traffic against areas other than mainland China: Georgia, Hong Kong Special Administrative Region (SAR) of China, Japan, Kazakhstan, the Kingdom of Saudi Arabia, Kyrgyzstan, Kuwait, New Zealand, Republic of Marshall Islands, Singapore, and Turkey.

Virtually all IHR States Parties in the Americas have implemented complementary measures involving points of entry and international travelers. Examples of complementary measures include: entry screening, public health observation, risk communication. WHO advice related to international traffic is available at: https://bit.ly/380FCXg.

7. Risk Communication

Risk communication is a core public health intervention in any disease outbreak and health emergency. As such, WHO created guidance for countries to implement effective risk communication and community engagement (RCCE) strategies which will help protect the public's health in the early response to COVID-19. This document includes recommended RCCE goals and actions for countries preparing for COVID-19 cases and for countries that have confirmed COVID-19 cases.

In addition, a COVID-19 risk communication package for healthcare facilities which provides healthcare workers (HCWs) and healthcare facility management with the information, procedures, and tools required to safely and effectively work has also been <u>published</u>. The package contains a series of simplified messages and reminders based on WHO's more indepth technical guidance on infection prevention and control in healthcare facilities in the context of COVID-19.

Sources of Information

- 1. United States CDC. 2019 Novel Coronavirus (COVID-19) in the U.S. Situation Summary: https://www.cdc.gov/coronavirus/COVID-19/cases-in-us.html
- 2. Government of Canada. 2019 novel coronavirus: Outbreak update. https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection.html
- WHO. Novel Coronavirus(COVID-19). Situation Reports. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports/
- 4. WHO. Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (COVID-19). https://www.who.int/news-room/detail/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(COVID-19)
- 5. WHO International travel and health. WHO advice for international travel and travel and trade in relation to the outbreak of pneumonia caused by new coronavirus in China. 10 January 2020. Available at: https://www.who.int/ith/2020-0901_outbreak_of_Pneumonia_caused_by_a_new_coronavirus_in_C/en/
- WHO. Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected. Interim guidance. (WHO/COVID-19/IPC/v2020.1). Geneva, 2020. Available at: https://apps.who.int/iris/bitstream/handle/10665/330375/WHO-COVID-19-IPC-v2020.1-eng.pdf
- 7. Hui, DSC and Zumla, A. Severe Acute Respiratory Syndrome Historical, Epidemiologic; and Clinical Features. [book auth.] HW Boucher, A Zumla and DSC Hui. Emerging and Re-emerging Infectious Diseases Clinics Revew Articles. Philadelphia: Elsevier, 2019, pp. 869-889.
- 8. Drosten, C, et al. Severe acute respiratory syndrome: identification of the etiological agent. Trends Mol Med. 2003, Vol. 9, pp. 325-7.
- 9. El, Azhar, et al. The Middle East Respiratory Syndrome (MERS). [book auth.] Boucher HW, Zumla A and DSC Hui. Emerging and Re-emerging Infectious Diseases Clinics Rebiew Articles. Philadelphia: Elsevier, 2019, pp. 891-905.

- 10. de Wit, E, et al. SARS and MERS: recent insights into emerging coronaviruses. Nature Reviews Microbiology. 2016, Vol. 14, pp. 523-524.
- 11. R, Hilgenfeld and M, Peiris. From SARS to MERS: 10 years of research on highly pathogenic human coronaviruses. Antiviral Res. 2013, Vol. 100, pp. 286-95.
- 12. Organization, World Health. Laboratory testing of human suspected cases of novel coronavirus (nCoV) infection Interim guidance. WHO/COVID-19/laboratory/2020.1. [Online] January 17, 2020. https://www.who.int/health-topics/coronavirus/laboratory-diagnostics-for-novel-coronavirus.
- 13. GISAID. Newly discovered betacoronavirus, Wuhan 2019-2020. GISAID EpiFlu Global Initiative on Sharing All Influenza Data. [Online] January 2020. https://platform.gisaid.org/epi3/frontend#414223.
- 14. Corman, VM, et al. Detection of 2019 novel coronavirus (COVID-19) by real-time RT-PCR. Euro Surveill. 2020, Vol. 25, p. 2000045.
- 15. PAHO COVID-19 resource webpage: https://www.paho.org/hq/index.php?option=com_content&view=article&id=15696: coronavirus-disease-covid-19&Itemid=4206&Iang=es
- 16. WHO COVID-19 resource webpage: https://www.who.int/emergencies/diseases/novel-coronavirus-2019
- 17. Wu Z, McGoogan JM. Characteristics of and Important Lessons From the Coronavirus Disease 2019 (COVID-19) Outbreak in China: Summary of a Report of 72 314 Cases From the Chinese Center for Disease Control and Prevention. JAMA. Published online: February 24, 2020. DOI:10.1001/jama.2020.2648
- 18. Yang X, Yu Y, Xu J, et al. Clinical course and outcomes of critically ill patients with SARS-CoV-2 pneumonia in Wuhan, China: a single-centered, retrospective, observational study. The Lancet. Published online: February 24, 2020. DOI: https://doi.org/10.1016/S2213-2600(20)30079-5
- 19. Shi H, Han X, Jiang N, et al. Radiological findings from 81 patients with COVID-19 pneumonia in Wuhan, China: a descriptive study. The Lancet. Published online February 24, 2020. https://doi.org/10.1016/S1473-3099(20)30086-4
- 20. Wang D, Hu B, Hu C, et al. Clinical Characteristics of 138 Hospitalized Patients with 2019 Novel Coronavirus-Infected Pneumonia in Wuhan, China. JAMA. Published online February 7, 2020