

Epidemiological Update Novel coronavirus (COVID-19)

14 February 2020

Context

On 31 December 2019, Wuhan Municipality in Hubei Province, China reported a cluster of pneumonia cases with unknown etiology. By the 9th of January 2020, the Chinese Center for Disease Control and Prevention identified a novel coronavirus COVID-19 as the causative agent of this outbreak. 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), accepting the advices of the International Health Regulations (IHR) Emergency Committee. On 11 February, following the World Health Organization (WHO) best practices for naming of new human infectious diseases, WHO has named the disease, COVID-19, short for "coronavirus disease 2019."

Global Situation Summary

Between 31 December 2019 and 14 February 2020, a total of 49,070 laboratory-confirmed cases of COVID-19 cases have been reported worldwide, though majority of the cases continue to be reported from China (99%). In China, health care workers account for 1, 716 confirmed cases of COVID-19 including six deaths. Of the total 1,383 deaths reported to date, 1,381 are from China (1 in Hong Kong SAR) and the remaining two are from the Philippines (1) and Japan. Outside China, 25 countries reported a total of 523 confirmed cases of which at least 170 had a travel history to China and 218 are related to outbreak on a Cruise Ship. The latest country to confirm a COVID-19 case outside of China is Egypt.

On 12 February 2020, China announced that the case definition for confirmed cases in Hubei Province (only) would be changed to include clinically diagnosed cases as well. Between 12 and 13 February, Hubei Province reported 16,427 clinically diagnosed cases. WHO has formally requested additional information on the clinically diagnosed cases and will continue to report on both.

Situation in the Region of the Americas

On 21 January 2020, the first case of COVID-19 imported into the region of the Americas was identified in the United States of America in the state of Washington. A few days later, on 25 January, Canada reported their first confirmed case of novel coronavirus COVID-19 in Toronto, Ontario Province. Since then and to date, there have been twenty-two (22)

Suggested citation: Pan American Health Organization / World Health Organization. Epidemiological Update: Novel coronavirus (COVID-19). 14 February 2020, Washington, D.C.: PAHO/WHO; 2020

confirmed cases of novel coronavirus in the Region of the Americas – fifteen (15) in the United States of America and seven (7) in Canada.

The 15 cases in the United States of America were reported from six (6) states – Arizona, California, Illinois, Massachusetts, Texas and Washington between 21 January and 13 February 2020. Of the total cases, thirteen (13) had a history of travel to China and two (2) were among close house-hold contacts of previously confirmed cases. The latest two cases with travel history to China were among federally quarantined individuals in the states of Texas and California.

In Canada, the seven (7) confirmed cases were reported from two (2) provinces – Ontario (3) and British Colombia (4). Of 7 cases, six had a travel history to China and one is currently under investigation regarding the site of transmission. Canada is the second country within the Region to report a confirmed case (following USA).

Risk assessment for the Americas

At Regional level, there is increasing concern of international spread of the event to other countries since confirmed cases have been reported in travelers and their close contacts from 23 countries including two countries in the region of the Americas.

Countries within the Region of the Americas are enhancing preparedness measures to detect and control COVID-19, and there are 29 National Influenza Centers (NICs) in 32 countries, and 32 countries with molecular diagnostic platforms.

At regional level, the overall risk is assessed as High because of the high level of concern given the spread of cases and human to human transmission; a large number of travelers into and out of China, connecting China to all parts of the world, there are many uncertainties regarding the epidemiology of international spread; there are challenges to diagnose cases due to nonspecific symptoms and possibility of co-circulation of other respiratory pathogens (e.g. influenza, RSV) hence potential of undetected transmission.

In the event of a COVID-19 introduction in the region the impact on health services is expected to be high, given that hospitals might quickly get overloaded with patients in need of isolation and in ICU. In addition, it is expected that essential supplies such as face masks, respirators, gloves and surgical gowns are needed in important quantities generating stress on stock and supply chain procedures.

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 also considering the epidemiological and clinical features of other coronaviruses, such as SARS-CoV and MERS-CoV – indicates that essential public health functions, defined as core capacities in Annex 1 of the 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 importation of cases of COVID-19, the 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, and 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 interim guidance for COVID-19 surveillance is available at: https://bit.ly/3b4RHwy

The case definition for suspect case include two groups of people:

- (1) A person with severe acute respiratory infection (SARI) with no other etiology that fully explains the clinical presentation **AND** a history of travel to or lived in China in the 14 days prior to symptom onset,
- (2) A person with any acute respiratory illness who, during 14 days before onset of illness, had contact with a confirmed or probable case of COVID-19 infection, or worked in or attended a health care facility where patients with confirmed or probable COVID-19 infections were treated.

WHO requests that national authorities report through the IHR National Focal Point probable and confirmed cases of COVID-19 infection within 24 hours of identification, by providing the minimum data set outlined in the interim case reporting form for COVID-19 of confirmed and probable cases. The interim case reporting form is available at: https://bit.ly/2SmVcHn

2. Laboratory

Samples should be collected by trained personnel and considering all biosafety instructions including the use of personal protective equipment appropriate for respiratory viruses. PAHO has recently published on 1st 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/2Up7rEJ

WHO have made available some molecular diagnostic protocol for laboratory testing and an updated of the interim guidance for Laboratory testing for COVID-19 in suspected human cases is available at: https://bit.ly/31PdtiO

3. Infection Prevention and Control

The human-to-human transmission of COVID-19 was documented, with nosocomial transmission and implications on the amplification of the disease in healthcare facilities. Possible routes of transmission of COVID-19 include direct contact, droplet, and airborne (aerosol) transmission.

Any occurrence of severe acute respiratory illness (SARI) among health care workers warrants immediate investigation.

The following measures for infection prevention and control (IPC) are recommended:

- Early recognition of signs and symptoms of SARI of unknown etiology in healthcare facilities through a triage system and prompt isolation of suspected or confirmed case of COVID-19
- Implementation of standard precautions for all patients:
 - Hand hygiene before and after touching the patient, whenever touching patients' surroundings or after contact with body fluids
 - o Use of personal protective equipment, according to risk assessment
 - o Respiratory hygiene (or cough etiquette)
 - Safe disposal of sharps
 - o Adequate management of the environment and hospital waste
 - Sterilization and disinfection of medical devices
- Implementation of transmission-based precautions:
 - For any suspected or confirmed cases of COVID-19: standard + contact + droplet precautions
 - For any suspected or confirmed cases of COVID-19 and aerosol-generating procedure (AGP): standard + contact + airborne precautions

The use of personal protective equipment (PPE) by healthcare workers requires a risk evaluation of the level of care. Table 1 shows the use of PPE according to the following levels of care:

Triage

- Collection of specimens for laboratory diagnosis
- Suspected or confirmed case of COVID-19 requiring healthcare facility admission and NO AGP
- Suspected or confirmed case of COVID-19 requiring healthcare facility admission and AGP

ⁱ Aerosol-generating procedures (AGP): it includes the following procedures: positive pressure ventilation (BiPAP and CPAP), endotracheal intubation, airway suction, high frequency oscillatory ventilation, tracheostomy, chest physiotherapy, nebulizer treatment, sputum induction, and bronchoscopy.

Table 1. Use of personal protective equipment (PPE) according to level of care.

Level of case	Hand hygiene	Gown	Medical mask	Respirator (N95 or FFP2)	Goggle (eye protection) OR Face shield (facial protection)	Gloves
Triage	X		Χ			
Collection of specimens for laboratory diagnosis	X	X		X	X	X
Suspected or confirmed case of COVID-19 requiring healthcare facility admission and NO aerosol-generating procedure	x	x	x		X	X
Suspected or confirmed case of COVID-19 requiring healthcare facility admission and <u>WITH</u> aerosol-generating procedure	Х	Х		Х	X	X

Administrative control:

- Establishment of infrastructures (triage area and isolation units) and sustainable infection prevention and control (IPC) activities
- Training and education of healthcare workers
- Development and implementation of guidelines on early recognition of acute respiratory infection potentially due to COVID-19
- o Rapid access to laboratory tests for identification of the etiological agent
- o Overcrowding prevention, especially in emergency services
- Provision of specific waiting areas for symptomatic patients (triage area) and adequate disposition of hospitalized patients that promote an adequate patient-personal healthcare ratio
- Environmental and engineering control:
 - o Adequate environmental ventilation in areas within healthcare facilities
 - o Cleaning of the hospital environment
 - o Bed separation of at least 1-meter between patients

Guidance available at:

- 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 https://bit.ly/2v0kCkV
- ii. Infection prevention and control during health care when novel coronavirus (COVID-19) infection is suspected https://bit.ly/31syVuw
- iii. Home care for patients with suspected novel coronavirus (COVID-19) infection presenting with mild symptoms and management of contacts https://bit.ly/2v3iG72

4. Clinical management

Currently, there is no specific treatment for COVID-19, such as antivirals, glucocorticoids or immunotherapy. There have been anecdotal reports on the use of these agents; however, its efficacy and safety are yet to be determined.

Early recognition of suspected patients allows for timely initiation of infection prevention and control (IPC) and early identification of those with severe manifestations allows for immediate optimized supportive care treatments (oxygen, antibiotics, hydration & fever/pain relief) and safe, rapid admission or referral to healthcare facilities for provision of care according to institutional or national protocols.

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

Guidance available at: https://bit.ly/36AvKC6

5. Organization of health services

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

The checklist is available (in Spanish) at: https://bit.ly/31Tq4T5

6. International traffic

On 30 January 2020, the 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 and issued Temporary Recommendations.

In line with provisions of Article 43 of the International Health Regulations (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 13 February 2020, the number of States Parties that provided to WHO official reports on additional health measures has increased by eight States Parties, including two in the Americas, since the last announcement published on 6 February. This brings the total number to 28 States Parties; one report was received from an incorporated territory of a State Party.

Virtually all 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.

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
- 3. WHO. Novel Coronavirus (COVID-19). Situation Report 25. https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200214-sitrep-25-covid-19.pdf?sfvrsn=61dda7d 2
- 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:
 <a href="coronavirus-disease-covid-19<emid=4206&lang=es">coronavirus-disease-covid-19<emid=4206&lang=es
- 16. WHO COVID-19 resource webpage: https://www.who.int/emergencies/diseases/novel-coronavirus-2019