Epidemiological Update
Novel coronavirus (2019-nCoV)

5 February 2020

Global Situation Summary

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 (2019-nCoV) 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.

Between 31 December 2019 and 4 February 2020, a total of 20,630 laboratory-confirmed cases of 2019-nCoV cases have been reported in 24 countries, though majority of the cases continue to be reported from China (99%). A total of 425 deaths have been reported of which only 1 was reported from outside China – in the Philippines. Infections with 2019-nCoV, are being reported from a growing number of international destinations since the last Epidemiological update[i], most of them associated with travel from Wuhan, China. As of 4 February, 23 countries reported a total 159 confirmed cases of which 24 cases did not have travel history to China: Malaysia (1), Viet Nam (2), Japan (3), Germany (8), United States of America (2), United Kingdom (1), Thailand (1), France (1), Spain (1), and Republic of Korea (4) but are close contacts of confirmed case of 2019-nCoV or Chinese tourists of Wuhan.

Situation in the Region of the Americas

On 21 January 2020, the first case of 2019-nCoV 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 (2019-nCoV) in Toronto, Ontario Province. Since 21 January to 4 February, there have been reported 15 confirmed cases of novel coronavirus in the Region of the Americas – eleven (11) in the United States of America and four (4) in Canada.

Between 21 January and 2 February 2020, 11 cases in the United States of America were reported from five (5) states – Arizona, California, Illinois, Massachusetts, and Washington. Of the total cases, nine (9) had a history of travel to Wuhan, China. On 30 January 2020, the U.S. Centers for Disease Control and Prevention (CDC) confirmed that the 2019-nCoV has spread

[i] Pan American Health Organization / World Health Organization. Epidemiological Update: Novel Coronavirus (2019 nCoV). 27 January 2020, Washington, D.C.: PAHO/WHO; 2020

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person to person in the United States of America, representing the first instance of human to human spread in the Region. A second instance of human to human spread in the United States was reported on 3 February 2020 in a patient from California who was a close household contact of another patient in California.

In Canada, the 4 confirmed cases were reported from two (2) provinces – Ontario (3) and British Colombia (1). Out of the four (4) cases, three had a travel history to China and for one the site of infection is currently under investigation. Canada is the second country within the Region to report confirmed cases (following United States of America).

What is known about Novel coronavirus (2019-nCoV) to date?

Uncertainty continues about the novel coronavirus (2019-nCoV), a new beta coronavirus, that has not been previously identified infecting humans and, therefore, the natural history is yet to be determined, including reservoir, host factors, environmental aspects, infectiveness period, virulence, transmission mode and source of transmission.

As with other respiratory illnesses, infection with 2019-nCoV can cause mild symptoms including a fever, runny nose, sore throat, cough, and runny nose, and fever. It can be more severe for some persons and can lead to pneumonia or breathing difficulties. In more severe cases, infection can cause pneumonia, severe acute respiratory syndrome, and kidney failure. More rarely, the disease can be fatal. Older people, and people with pre-existing medical conditions (such as, diabetes and heart disease) appear to be more vulnerable to becoming severely ill with the virus.

According to available information, current estimates of the incubation period range from 2-11 days. Based on information from other coronavirus diseases, such as MERS-CoV and SARS-CoV, the incubation period of 2019-nCoV could be up to 14 days which supports using 14 days as part of an operational definition criteria for contact tracing and monitoring. Current evidence suggests that human-to-human spread is happening, including among healthcare workers caring for patients ill with 2019-nCoV which would be consistent with what is known about other similar pathogens. Based on currently available information, the people who have symptoms are most likely to spread the virus.

During previous outbreaks due to other coronavirus (Middle East Respiratory Syndrome (MERS-Cov) and the Severe Acute Respiratory Syndrome (SARS-Cov), human to human transmission occurred through droplets, contact and fomites, suggesting that the transmission route of the 2019-nCoV could be similar. Therefore, control measures taken for SARS-Cov and MERS-Cov can guide the response against this new pathogen. PAHO/WHO has developed guidance (see sections of infection, prevention and control in this document) for health care settings as well for home health care.

Risk assessment for the Americas

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

Many countries within the Region of the Americas are enhancing preparedness measures to detect and control 2019-nCoV, and there are 29 National Influenza Centers (NICs) and molecular diagnostic platforms implemented in 32 countries. At Regional level, the overall risk is assessed as High due to the high level of concern given the spread of cases to 23 countries and human-to-human transmission; a large number of travelers into and out of China, connecting China to 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 . As of 29 January, most of the cases diagnosed outside of China have presented mild to moderate symptoms.

Guidance and recommendations for national authorities

Based in what it is currently known about 2019-nCoV 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 2019-nCoV following the importation of one or more cases.

Due to the importation of cases of 2019-nCoV, the PAHO/WHO recommends that Member States, strengthen surveillance activities to early detect suspect case(s) of 2019-nCoV, detect unusual respiratory events, ensure that healthcare workers have access to up-to-date information on the disease, and are familiar with the principles and procedures for managing 2019-nCoV infections and are trained to consult a patient's travel history to link this information with clinical data.

1. Surveillance

WHO has released an updated the interim guidance (Available at https://bit.ly/3b4RHwy) to provide orientation on which people should be investigated and tested for 2019-nCoV. With respect to this interim guidance, it is important to avoid overburdening respiratory disease surveillance systems and targeting laboratory testing.

The case definitions are based on the current information available and might be revised as new information accumulates. Countries may need to adapt case definitions depending on their own epidemiologic situation.

The case definitions for suspected case include two groups of people:

- 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.
- A person with any acute respiratory illness who, during 14 days before onset of illness, had contact with a confirmed or probable case of 2019-nCoV infection, or worked in

or attended a health care facility where patients with confirmed or probable 2019-nCoV infections were being treated.

Recommendations for reporting data to PAHO/WHO:

WHO requests that national authorities report through the IHR National Focal Point probable and confirmed cases of 2019-nCoV infection within 24 hours of identification, by providing the minimum data set outlined in the Interim case reporting form for 2019 novel coronavirus of confirmed and probable cases, available at: https://bit.ly/2OqWajo

2. Laboratory

Coronaviruses are a group of highly diverse RNA virus in the Coronaviridae family that are divided in 4 genera: alpha, beta, gamma and delta that cause disease varying from mild to severe clinical manifestations in human and animals. There are endemic human coronavirus as the alphacoronavirus 229E and NL63 and betacoronaviruses OC43 and HKU1 that can cause influenza-like illness (ILI) or pneumonia in humans. However, two zoonotic coronaviruses have emerged causing severe disease in humans: severe acute respiratory syndrome coronavirus (SARS-CoV) in 2002-2003 and Middle East respiratory syndrome coronavirus (MERS-CoV).

In January 2020, the etiologic agent responsible for a cluster of severe pneumonia cases in Wuhan, China was identified as being a novel Betacoronavirus, but it is distinct from SARS-CoV and MERS-CoV. The complete genome sequence of this new agent has been released and different detection protocols have been developed but not fully validated yet. However, in light of the possible introduction of a suspected case related to 2019-nCoV in the Americas region, the Pan American Health Organization / World Health Organization (PAHO/WHO) recommends to Member States to ensure their timely identification, the shipping of samples to National and reference laboratories and the implementation of the molecular detection protocol for 2019-nCoV, according to the laboratory capacity.

On 17 January 2020, WHO has published an updated of the interim guidance for 2019 novel coronavirus (2019-nCoV) Laboratory testing in suspected cases. Available at: https://bit.ly/2RZf577

On 1 February 2020, PAHO has published Laboratory Guidelines for Detection and Diagnosis of the Novel Coronavirus (2019-nCoV). Information on specimen collection and proper shipment; laboratory testing including a testing algorithm; and considerations to strengthen the laboratory response capacity for 2019-nCoV in the Americas, can be found in this interim guidance. The guidance is available at: https://bit.ly/2Up7rEJ

3. Infection Prevention and Control

The human-to-human transmission of 2019-nCoV was documented, with nosocomial transmission and implications on the amplification of the disease in healthcare facilities. Any occurrence of SARI among health care workers warrants immediate investigation.

At the level of infection prevention and control (IPC), the following measures are

recommended:

- Early recognition of signs and symptoms of severe acute respiratory illness of unknown etiology and control of the possible source of infection in the healthcare facilities.

- Application of standard precautions for all patients:
    - hand hygiene before and after touching the patient, whenever touching patients 'surroundings' or after contact with body fluids
    - use of personal protective equipment, according to risk assessment respiratory hygiene (or cough etiquette)
    - safe disposal of sharps
    - adequate management of the environment and hospital waste sterilization and disinfection of medical devices

- Application of transmission-based precautions:
    - For suspected and confirmed cases of 2019-nCoV: standard, contact and droplet precautions.
    - In case of aerosol-generating procedures[ii] for suspected and confirmed cases of 2019-nCoV: standard, contact, and airborne precautions.

- 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 2019-nCoV
    - rapid access to laboratory tests for identification of the etiological agent
    - 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:
    - adequate environmental ventilation in areas within health facilities
    - cleaning of the hospital environment
    - bed separation of at least 1-meter between patients

Guidance available at:

[ii] aerosol generating procedures, such as tracheal intubation, non-invasive ventilation, tracheostomy, cardiopulmonary resuscitation, manual ventilation before intubation and bronchoscopy for suspected cases, and necropsies

i. Advice on the use of masks in the community, during home care and in health care settings in the context of the novel coronavirus (2019-nCoV) outbreak https://bit.ly/2v0kCkV

ii. Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected https://bit.ly/31syVuw

iii. Home care for patients with suspected novel coronavirus (2019-nCoV) infection presenting with mild symptoms and management of contacts https://bit.ly/2v3iGZ2

4. Clinical management and organization of health services

Now, there is no specific treatment for 2019-nCoV infection, including the use of antivirals, such as oseltamivir. The management of suspected or confirmed cases of 2019-nCoV involves early recognition of signs and symptoms of unusual severe acute respiratory illness, isolation of the case according to IPC practices, early supportive therapy and monitoring, collection of specimens for laboratory diagnosis, management of respiratory failure, management of septic shock and prevention of complications.

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

Isolation: Individuals for whom 2019-nCoV infection is suspected, or is confirmed by laboratory testing, should be placed in an individual room. Therefore, healthcare facilities with isolation capacity should be identified, and their existence communicated to all public and private healthcare facilities, and the flow defined for the referral and transport of patients to facilities with isolation capacity. The identification of healthcare facilities with isolation capacity, and where patients should be referred to, should also contemplate the delivery of intensive care in one or more of those facilities. The revision of healthcare facilities -specific contingency plans could be considered, especially compliance to triage procedures. Similarly, at present, it would be prudent to review legal provisions to identify any loophole that might hinder the ability of authorities to apply containment measures within healthcare facilities.

Contact tracing: Contact tracing - encompassing the identification and health follow-up of contacts of individuals for whom 2019-nCoV infection is being considered or is confirmed by laboratory testing - constitutes a critical measure to minimize the opportunities for onward transmission. Aspects that should be contemplated while defining the implementation of contact tracing measures include:

- Modalities for conducting the follow-up of contacts, bearing in mind that, according to the information currently available, 2019-nCoV can only be transmitted by symptomatic individuals.

- Approach for the identification of contacts related to conveyances where individuals for whom 2019-nCoV infection is being considered or is confirmed by laboratory testing.

- Procedures and tools for accessing and managing contacts-related information, including Advance Passenger Information (API) and Passenger Name Record (PNR).

- Procedures for informing counterparts in other States Parties when contact tracing measures have international ramifications.

- At present, it would be prudent to review legal provisions to identify any loophole that might hinder the ability of authorities to implement contact tracing measures.

For further information, please refer to guidance documents published by the European Centre for Disease Prevention and Control (ECDC): Part 1: https://bit.ly/2RYgmdH and Part 2: https://bit.ly/2O7NQFk

5. International travelers

The second meeting of the Emergency Committee convened by the WHO Director-General under the International Health Regulations (IHR) (2005) regarding the outbreak of novel coronavirus 2019 in the People's Republic of China, with exportations to other countries, took place on Thursday, 30 January 2020. The Committee's advised the Director-General, on the determination of a Public Health Emergency of International Concern (PHEIC). The Committee believes that it is still possible to interrupt virus spread, provided that countries put in place strong measures to detect disease early, isolate and treat cases, trace contacts, and promote social distancing measures commensurate with the risk.

Public health authorities should provide to traveler's information to reduce the general risk of acute respiratory infections, via health practitioners, travel health clinics, travel agencies, conveyance operators and at points of entry.

PAHO / WHO closely monitors the evolving epidemiological situation and will provide more detailed guidance when available.

WHO advice related to international traffic is available at: https://bit.ly/380FCXg

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