# Epidemiological Update
# Novel coronavirus (2019-nCoV)

**27 January 2020**

## Situation Summary

Since the Epidemiological Update on the new coronavirus (2019-nCoV) published on January 20, 2020 (available at: https://bit.ly/36u8Wnx),a total of 2,801cases of novel coronavirus (2019-nCoV) infections, including 80 deaths (CFR: 2.9%), were reported globally as of January 27, 2020. Of the 2,800 confirmed cases reported, 99% (2,761, cases) were reported from China, including Hong Kong SAR (8 confirmed cases), Macau SAR (5 confirmed cases) and Taiwan (4 confirmed cases). While cases of 2019-nCoV infection were reported in 30 provinces and three special administrative regions of PR China, 51% (n=1,423) of them were noted in Hubei Province, where health care workers were affected, and human-to-human transmission resulted in fourth generation cases. Additionally, as of the same date, 39 individuals with laboratory confirmed 2019-nCoV infection were identified in 11 countries including Australia (n=4), Canada (n=2) France (n=3), Japan (n=4), Nepal (n=1), Malaysia (n=4), the Republic of Korea (n=3), Singapore (n=3), Thailand (n=8), the United States of America (n=5), and Viet Nam (n=2)). As of date, at least Fifty (50) of the cases detected outside of Mainland China had travel history to Wuhan City, and one in Viet Nam, had no travel history but was in contact with a confirmed case (his father with travel history to Wuhan), resulting from human to human transmission within a family.

**Public health response and risk assessment for the Americas**

To date, there have been seven (7) confirmed cases of novel coronavirus in the Region of the Americas – five (5) in the United States of America and two (2) in Canada. The five cases in the United States of America were reported from the states of Washington (1), California (2), Arizona (1) and Illinois between 21 – 26 January 2020. All five cases had recent travel history to Wuhan City, Hubei Province in China. In Canada, two (2) presumptive confirmed cases were reported by the Toronto Public Health Agency, province of Ontario between 25 – 27 January 2020. Both individuals had recent travel history to Wuhan and are close contacts.

Uncertainty continues about the 2019 Novel Coronavirus (2019-nCoV), a new betacoronavirus, that has not been previously identified infecting humans and, therefore, the natural history is yet to be determined, including reservoir, host factors, environmental aspects, incubation and infectiveness period, transmission routes, clinical manifestations it may cause, the severity of the disease and the specific control measures.

At Regional level, there is increasing concern of international spread of the event to other countries since confirmed cases have been reported in travelers from 11 countries: Australia

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(4 cases), Canada (2 cases), France (3 cases), Japan (4 cases), Malaysia (4 cases), Nepal (1 case), Republic of Korea (3 cases), Singapore (4 cases), Thailand (8 cases), Viet Nam (2 cases), United States of America (5 cases) and outside of mainland China (Hong Kong SAR (8 cases), Macau SAR (5 cases) and Taiwan (4 cases) and the number of countries reporting alerts related to 2019-nCoV has increased. As of 27 January 2020, a total of 2,744 confirmed cases, including 80 deaths have been reported in Mainland China.

Current evidence suggests that person-to-person spread is happening, including among healthcare workers caring for patients ill of 2019-nCoV which would be consistent with what is known about other similar pathogens. During previous outbreaks due to other coronavirus (Middle-East Respiratory Syndrome (MERS) and the Severe Acute Respiratory Syndrome (SARS), 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 and MERS 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 homes of people who could be infected with 2019-nCoV.

## 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 health workers have access to up-to-date information on this 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 interim guidance (Available at https://bit.ly/2RxBckZ) to provide orientation regarding 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 may be revised as new information accumulates.

These case definitions for surveillance include two groups of people:

1) 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 or,
    - an occupation as health care worker in an environment caring for SARI patients of unknown etiology.

2) A person with acute respiratory illness of any degree of severity who, within 14 days before onset of illness, had a close physical contact with a confirmed case of 2019-nCoV infection, exposure to a healthcare facility in a country where hospital-associated 2019-nCoV infections have been reported, or visited/worked in a live animal market in China.

In the Americas, surveillance of Influenza and Other Respiratory Viruses is well established. In particular, building on the momentum generated by the influenza pandemic associated with influenza A(H1N1)pdm09 virus, surveillance of Severe Acute Respiratory Infections (SARI) in the Americas was stepped up and its geographical scope expanded, and strengthen the network of National Influenza Centers (NICs). At present, all NICs in the Americas have staff certified by the International Air Transport Association (IATA) for the shipment of samples. In the context of the emergence of 2019-nCoV, the SARInet network constitute a foundation of national and regional, surveillance efforts highlighting the roles of NICS for laboratory diagnosis.

In order to continuously monitor the outbreak of 2019-nCoV, conduct comprehensive risk assessment and provide evidence-based guidance to Member States, WHO requests Member States to engage in global surveillance and provide under the IHR (2005) the information below:

- **Countries with limited importation or person to person transmission:**

Countries with limited importation or person-to-person transmission of 2019-nCoV should enhance early warning to detect cases.

Report to WHO within 24hours after confirmation of the case the information laid down in the case report form and template excel spreadsheet in the following guidance document: https://bit.ly/37yl48j.

- **Countries with extensive importation or person-to-person transmission**

Report daily aggregated data:

- By Province/District/Area, the number of confirmed and probable cases by date of illness onset
- Number of confirmed and probable cases by age-group (for instance 0-4, 5-14, 15-24, 25-59, 60 and above) and sex
- Number of severe, critical (ICU admission), deaths for confirmed and probable cases
- Number of contacts under follow-up and number of contacts who have completed follow-up

- Total number of laboratory tests conducted and that are positive for 2019-nCoV
- Total number of hospitalized cases

**2. - Laboratory**

To operationalize the guidance for laboratory diagnosis published by the WHO Secretariat, PASB is supporting NICs and other laboratories responsible for surveillance of Influenza and Other Respiratory Viruses in the Americas in implementing the methodology for the molecular diagnosis of 2019-nCoV infection, which can be conducted in Biological Safety Level 2 (BSL-2) laboratories.
The Caribbean Public Health Agency (CARPHA) serves as NIC for countries and territories in the Caribbean sub-region with no such capacity. Other States Parties without a NIC, or a laboratory responsible for surveillance of Influenza and Other Respiratory Viruses, should, through PASB, refer samples for 2019-nCoV testing to the Centers for Disease Control and Prevention (CDC), United States of America.
The collection of cases of pneumonia or unusual severe acute respiratory infections (SARI) should be strengthened, ensuring adequate collection and timely delivery of samples to the NICs or National Laboratories in charge of surveillance and detection of respiratory viruses.
PAHO has distributed the Provisional Guide to Laboratory Tests for Human Cases of Infection by novel coronavirus, 2019-nCoV (WHO, 2020) to NICs and National and Reference Laboratories, (Available in Spanish at: https://bit.ly/2u9zDjV).

**• Sampling**

Samples should be collected by trained personnel considering all biosafety instructions and appropriate personal protection equipment for respiratory viruses.
The recommended samples are those of the lower respiratory tract, including sputum, bronchoalveolar lavage and tracheal aspirate (when possible according to medical criteria). However, when it is not possible to take these samples, those of the upper respiratory tract are also useful. In general, it is recommended to take a nasopharyngeal swab combined with an oropharyngeal swab (swabs should be placed and transported in the same tube with viral transport medium). Although sampling of asymptomatic contacts is not recommended routinely, if it is considered necessary in accordance with the guidelines adopted by the country, sampling of the upper respiratory tract can be considered.

**• Laboratory algorithm**

Laboratories should continue to use the influenza algorithm recommended by PAHO for routine influenza surveillance and cases of SARI and unusual SARI
The tests for 2019-nCoV **should be considered only for patients that fit the case definition**, once influenza and avian influenza have been ruled out.
Different detection protocols are available for the molecular diagnostic of the new coronavirus (2019-nCoV). Countries can decide to implement the best protocol based on the availability of reagents and controls. Please contact the PAHO Regional Office for further information.

**• Sample submission**

The samples should be kept refrigerated (4-8 ° C) and sent to the laboratory (National Influenza Center, National Public Health Laboratory or international Reference Laboratories) where they will be processed within the first 24-72 hours after they have been received. If they cannot be sent within this period, it is recommended to freeze at -70 -80 ° C until shipment, guaranteeing the cold chain. Sending suspicious samples to reference laboratories or collaborating centers outside the country and by air must ensure compliance with all international standards (IATA) for Category B Biological Substances.
Please consult the PAHO regional office before sending suspected 2019-nCoV clinical samples to the reference laboratory in the Americas (**CDC**, Atlanta, Division of Gastrointestinal and Non-Influenza Respiratory Virus)

**3. - Infection Prevention and Control**

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

- Early recognition and control of the possible source of infection in the healthcare facility.
- Application of standard precautions for all patients:
    - hand hygiene
    - 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 and hospital devices
- Empirical implementation of additional precautions according to transmission mechanism:
    - droplet and contact precautions against suspicious cases
    - contact and aerosol precautions in case of aerosol generating procedures, such as tracheal intubation, non-invasive ventilation, tracheostomy, cardiopulmonary resuscitation, manual ventilation before intubation and bronchoscopy for suspected cases, and necropsies.
- Administrative control:
    - establishment of infrastructure 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
    - cleanliness of the hospital environment
    - separation of at least 1-meter distance between patients

(Guidance available at: https://bit.ly/3106iVn)

**4. – Clinical management and organization of health services**

There is no specific treatment for 2019-nCoV infection, the clinical management of patients for whom 2019-nCoV infection is being considered, or is confirmed by laboratory testing, revolves around the administration of supportive treatment and the implementation of IPC measures: standard and transmission-based precautions by healthcare workers. Therefore, considering the documented nosocomial amplification of SARS-CoV and MERS-CoV infections - for instance in relation to aerosol-generating diagnostic procedures -, access to personal protective equipment (PPE) should be guaranteed. Any occurrence of SARI among health care workers warrants immediate investigation.

(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, health care facilities where isolation capacity is present should be identified, their existence communicated to all public and private health care facilities, and the flow defined for the referral and transport of patients to facilities with isolation capacity. The identification of health care 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 hospital-specific contingency plans could be considered, especially observe 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 health 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, travelled. To this effect, there are guidance documents available published by the European Centre for Disease Prevention and Control (ECDC);

  Part1: https://bit.ly/2RYgmdH

  Part2: https://bit.ly/2O7NQFk

- Procedures and tools for accessing and managing contacts-related information, also considering accessing Advance Passenger Information (API) and Passenger Name Record (PNR) when aircrafts are involved;
- Procedures for informing counterparts in other States Parties should 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.

**5.- International travelers**

PAHO / WHO does not recommend any evaluation at the points of entry regarding this event, nor any restrictions on travel or commerce. PAHO / WHO closely monitors the evolving epidemiological situation and will provide more detailed guidance when available.

Any intervention aiming at identifying individuals with suspected 2019-nCoV infection at points of entry should be carefully pondered considering the following:

- In the context of an acute public health event, the effectiveness of exit screening measures is greater with respect to entry screening measures. Exit screening measures are currently being implemented by Chinese authorities in selected points of exit;

- Exclusive, or over-reliance, on entry screening for the detection of cases is not warranted. Any entry screening measure should be framed in the context of a multi-layered surveillance scheme, being health care facilities its cornerstone, and, to the extent possible, be leveraging resources already present at points of entry. As for the modality for conducting entry screening – for example, completion of an "Health declaration", temperature screening, interviews, medical examination, a combination of some, or all, of the above – it is critical to consider that infected individuals may travel while asymptomatic, and that, not necessarily, travelers might provide truthful information.

- In order to target any entry screening measure, the following elements should be considered: (i) the evolving epidemiological situation worldwide; and (ii) the analysis of the volume and pattern of international connections with areas and airports where 2019-nCoV human to human transmission is ongoing. Therefore, any decision making process concerning the adoption and implementation of entry screening should involve multiple governmental institutions (Ministry of Health, Ministry of Foreign Affairs, Ministry of Tourism, Ministry of Transport, Ministry of Education, Ministry of Commerce, Intelligence Services, Migration Authority, Custom Authority, National Civil Aviation Authority), and entities in the private sector (conveyances operators (e.g. airlines), airport and ports operators, tour operators, enterprises with commercial interests in areas where human-to-human is ongoing).

In line with the above-mentioned advice by the PAHO/ WHO Secretariat, it is worthwhile recalling that any entry screening measure that countries and territories might already be implementing, or consider adopting, should be shaped in the context of a multi-layered surveillance scheme, and be as operationally targeted as possible. At present, the review of multi-sectoral response arrangements to acute public health events at, or involving, points of entry is warranted. To this effect, there are guidance documents available published by the WHO Secretariat.

At present, national health authorities, in close collaboration travel medicine clinics and relevant public and private entities operating at points of entry, should continue providing arriving and departing travelers with information promoting (i) Health care seeking behavior before, during, and after an international travel; (ii) Measures to reduce the overall risk of acute respiratory infections during travel, such as observing respiratory hygiene, cough-etiquette, frequent handwashing; and (iii) For travelers to PR China specifically, avoidance of contact with individuals with acute respiratory diseases, as well as with places where farm or wild animals, alive or dead, are present.

Nevertheless, due to the rapidly evolving nature of 2019-nCoV spread, national health authorities should have mechanisms in place to swiftly adjust and disseminate updated advice to international travelers, which may require close consultation and coordination with other government sectors, such as Ministry of Interior, Ministry of Foreign Affairs, Ministry of Transport, as well as, pursuant to Article 24 and Annex 4 of the IHR, with conveyance operators

Also taking into account the recent celebrations of the Chinese New Year on January 25, 2020, which, in addition to significant internal displacements to China, could also imply variations in the flow of international travelers to and from China, it is convenient for national authorities to conduct an analysis historical of the flows of travelers and means of transport coming from China, identifying the available sources of information, such as the National Civil Aviation Authority, the Ministry of Tourism. While the accuracy of this exercise could be limited, it is considered that access, management, and familiarization with this type of data and information are critical for the evaluation of any type of public health risk.

## Sources of Information


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