Alberta Public Health Disease Management Guidelines

Coronavirus – Novel

Alberta

Ministry of Health, Government of Alberta

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Coronavirus, Novel Public Health Disease Management Guideline

https://www.alberta.ca/notifiable-disease-guidelines.aspx

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Health and Wellness Promotion Branch

Public Health and Compliance Branch

Alberta Health

Case Definition

NOTE: Alberta Health will update this guideline as new information becomes available on the situation.

Confirmed Case

- A person with laboratory confirmation of infection with COVID-19 (formerly 2019-nCoV) which consists of:
 - positive real-time PCR on at least two specific genomic targets or a single positive target with sequencing;

AND

confirmed positive result by National Microbiology Lab (NML) by nucleic acid testing.^(A)

Probable Case

A person with clinical illness^(B) who meets the COVID-19 exposure criteria;

AND

in whom laboratory diagnosis of COVID-19 is inconclusive,^(C) not available or, negative (if specimen quality or timing is suspect) or, in whom the laboratory test for COVID-19 was positive but not confirmed by the NML.^(D)

^(A) Laboratory tests are evolving for this emerging pathogen, and laboratory testing recommendations will change accordingly as new assays are developed and validated.

^(B) Clinical illness includes: fever (over 38 degrees Celsius) and/or new onset of (or exacerbation of chronic) cough.

^(C) Inconclusive is defined as a positive test on a single real-time PCR target or a positive test with an assay that has limited performance data available.

^(D) Laboratory confirmation may not be available due to inability of acquiring samples for laboratory testing of *COVID-19*.

Person Under Investigation (PUI)

• A person^(E) with fever (over 38 degrees Celsius), and/or cough AND who meets the exposure criteria.

EXPOSURE CRITERIA:

Travel to mainland China^(F) in the 14 days^(G) before onset of illness;

OR

 Close contact^(H) with a confirmed or probable case of COVID-19 within 14 days before their illness onset;

OR

 Close contact^(H) with a person with acute respiratory illness who has been to mainland China^(F) within 14 days prior to their illness onset;

OR

 Laboratory exposure to biological material (e.g. primary clinical specimens, virus culture isolates) known to contain COVID-19.

NOTE: Factors that raise the index of suspicion^(I) should also be considered.

⁽E) Laboratory test for COVID-19 has been or is expected to be requested.

⁽F) Includes any time spent in airports in mainland China; does not include Taiwan, Hong Kong or Macau.
(G) The incubation period of COVID-19 is unknown. SARS-CoV demonstrated a prolonged incubation period (median 4-5 days; range 2-10 days) compared to other human coronavirus infections (average 2 days; typical range 12 hours to 5 days). The incubation period for MERS-CoV is approximately 5 days (range 2-14 days). Allowing for variability and recall error and to establish consistency with the World Health Organization's COVID-19 case definition, exposure history based on the prior 14 days is recommended at this time.

^(H) A close contact is defined as a person who provided care for the patient, including healthcare workers, family members or other caregivers, or who had other similar close physical contact without consistent and appropriate use of personal protective equipment OR who lived with or otherwise had close prolonged contact (within 2 metres) with a probable or confirmed case while the case was ill OR had direct contact with infectious bodily fluids of a probable or confirmed case (e.g. was coughed or sneezed on) while not wearing recommended personal protective equipment.

^(I) Other exposure scenarios not specifically mentioned here may arise and may be considered at jurisdictional discretion (e.g. history of being a patient in the same ward or facility during a nosocomial outbreak of *COVID-19*).

NOTE: There is limited evidence on the likelihood of COVID-19 presenting as a co-infection with other pathogens. At this time, the identification of one causative agent should not exclude COVID-19 where the index of suspicion may be high.

Reporting Requirements

1. Physicians

Physicians shall notify the Medical Officer of Health (MOH) (or designate) of the zone, of all <u>person under investigation (PUI)</u>, <u>probable</u> and <u>confirmed</u> cases in the prescribed form by the Fastest Means Possible (FMP).

2. Laboratories

All laboratories shall report all positive laboratory results by FMP (i.e. direct voice communication) to:

- the MOH (or designate) of the zone, and
- the Chief Medical Officer of Health (CMOH) (or designate).

3. Alberta Health Services and First Nations Inuit Health Branch

- The MOH (or designate) of the zone where the case currently resides shall notify the CMOH (or designate) of all <u>probable</u> and <u>confirmed</u> cases by FMP (i.e. direct voice communication) and include:
 - age,
 - date of birth,
 - sex, and
 - personal health number.
- The MOH (or designate) of the zone where the case currently resides shall forward the Public Health Agency of Canada's <u>Novel Coronavirus (2019-nCoV) Case Report Form</u> for all <u>probable</u> and <u>confirmed</u> cases to the CMOH (or designate) within 24 hours of initial FMP notification.
- For out-of-province and out-of-country reports, the following information should be forwarded to the CMOH (or designate) by FMP (i.e. direct voice communication):
 - name,
 - date of birth,
 - out-of-province health care number,
 - out-of-province address and phone number,
 - positive laboratory report, and
 - other relevant clinical / epidemiological information.

Epidemiology

Etiology

Human coronaviruses are enveloped, ribonucleic acid (RNA) viruses that are part of the *Coronaviridae* Family.⁽¹⁾ There are 7 known human coronaviruses at present:

- Four types that cause generally mild illness- 229E, OC43, NL63 and HKU; and
- Two types that can cause severe illness: Middle East respiratory syndrome coronavirus (MERS-CoV) and severe acute respiratory syndrome coronavirus (SARS-CoV).⁽¹⁾ Refer to the <u>Public Health Disease Management Guideline for Coronavirus – MERS/SARS</u> for more information.
- COVID-19 is a new coronavirus first identified in December 2019, in Wuhan, China as having caused an outbreak of respiratory infections, including pneumonia.^(2,3)

Clinical Presentation

Symptoms of COVID-19 range from mild to severe, life threatening illness and may include fever (>90% of cases), dry cough (80%) or shortness of breath (20%).^(3,4)

Complications include severe pneumonia, acute respiratory distress syndrome, sepsis, septic shock, multi-organ failure or death.⁽⁵⁾

Reservoir

Most coronaviruses are considered zoonotic. COVID-19 is thought to have emerged from an animal source although this has not yet been confirmed.

Transmission

To date COVID-19 has limited^(J) person-to-person transmission that can occur via droplet or close contact with bodily fluids (blood, stool, urine, saliva, semen).⁽⁶⁾ Although there is uncertainty on the issue of asymptomatic transmission, it is unlikely to contribute much to the spread of the virus. The highest risk of virus spread would be from a person who has symptoms like fever and cough. Human coronaviruses are rarely spread via fecal contamination.⁽⁷⁾

An aerosol-generating medical procedure (AGMP) has the potential to cause airborne transmission.

^(J) Versus sustained transmission where the virus spreads easily from one person to another and is not limited to groups or people living or working in close proximity to one another.

Incubation Period

The incubation period of COVID-19 is unknown.⁽⁸⁾ SARS-CoV demonstrated a prolonged incubation period (median 4-5 days; range 2-10 days) while the incubation period for MERS-CoV is approximately 5 days (range 2-14 days). Allowing for variability and recall error and to establish consistency with the World Health Organization's COVID-19 case definition, exposure history based on the prior 14 days is recommended at this time.

Period of Communicability

The period of communicability for COVID-19 is not currently known.

Host Susceptibility

Susceptibility is assumed to be universal. People with existing chronic medical conditions (e.g., cardiovascular and liver disorders, diabetes and other respiratory diseases) are likely more vulnerable to severe COVID-19 illness.⁽⁶⁾

Incidence

World Health Organization provides daily updates on global case counts and situation reports: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports

John Hopkins COVID-19 Case Map https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467 b48e9ecf6

Resources on COVID-19

Alberta Health <u>www.alberta.ca/coronavirus-info-for-albertans.aspx</u> Alberta Health Services <u>www.albertahealthservices.ca/topics/Page16944.aspx</u> PHAC <u>www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection.html</u> WHO <u>www.who.int/emergencies/diseases/novel-coronavirus-2019</u> CDC <u>www.cdc.gov/coronavirus/2019-ncov/index.html</u> ECDC www.ecdc.europa.eu/en/novel-coronavirus-china

Public Health Management

NOTE: The strategy outlined in this guidance is containment (i.e. to reduce opportunities for transmission to contacts in the community) and is based on the assumption that the virus is primarily spread while the case is symptomatic. This guidance is based on current available scientific evidence and expert opinion and is subject to change as new information on transmissibility and epidemiology becomes available.⁽⁹⁾

Diagnosis

As the COVID-19 outbreak continues to evolve, prompt collection and testing of specimens to confirm diagnosis is required. **Prior to collecting specimens** from individuals that are being investigated, contact the Zone Medical Officer of Health (MOH) and the Alberta Precision Laboratories (APL) – ProvLab Virologist-on-Call (VOC) to ensure testing is carried out appropriately. Both upper (e.g. nasopharyngeal swab) and lower (if feasible) respiratory tract specimens should be collected for testing.⁽¹⁰⁾

Key Investigation

- Confirm the diagnosis and that individual meets case definition.
- Ensure appropriate clinical specimen(s) have been collected (see Diagnosis section for more information on specimen collection).
- Obtain history of illness including date of onset of signs and symptoms.
- Determine spectrum of illness and if case requires hospitalization or if they can be managed at home.
- Determine any underlying chronic or immunocompromising conditions.
- Determine possible source of infection:
 - Identify recent travel history, residence in or contact with a recent traveler to an area where COVID-19 is known to be circulating, including dates of travel, itineraries and mode of transportation (e.g., airplane, train, etc.);
 - Identify type of contact within health care settings with known COVID-19 cases (e.g., work, visiting patient, etc.), if applicable;
 - Direct contact with animals (e.g. visited a live animal market);
 - Recent contact with a known COVID-19 case or a person with COVID-19-like illness (i.e. fever, cough or difficulty breathing);
 - Assess if other members in the household have similar symptoms or if there has been any contact with a known COVID-19 case/person with COVID-19-like illness.
- Determine occupation (i.e. healthcare worker).
- Determine possible transmission settings (e.g. flight, household, healthcare setting).
- Identify close contacts that may have had exposure to the case in the 14 days after onset of symptoms in the case.
- Close Contacts are defined as individuals that:
 - provided care for the case, including healthcare workers, family members or other caregivers, or who had other similar close physical contact without consistent and appropriate use of personal protective equipment (PPE), OR

- lived with or otherwise had close prolonged^(K) contact (within two metres) with a probable or confirmed case while the case was ill, OR
- had direct contact with infectious body fluids of a probable or confirmed case (e.g. was coughed or sneezed on) while not wearing recommended PPE.

Management of a Hospitalized Case/PUI

- Isolation precautions apply until symptoms have resolved and laboratory investigation has ruled out COVID-19 infection^(L).
 - However, if the index of suspicion for COVID-19 infection is high, even if another infectious pathogen is identified, isolation should continue as appropriate.
 - For more information on criteria for lifting isolation, refer to <u>Annex A: for Interpretation</u> of Laboratory <u>Results and Management.</u>
- Provide information about disease transmission and measures to minimize transmission, including practicing proper hand hygiene and respiratory etiquette.
 - For information on infection prevention and control precautions refer to the following: - AHS IPC Resources
 - Infection prevention and control for novel coronavirus (2019-nCoV): Interim guidance for acute healthcare settings

Management of a Non-Hospitalized Case/PUI

- Provide information about disease transmission and measures to minimize transmission, including practicing proper hand hygiene and respiratory etiquette.
- Symptomatic cases/PUI managed at home should be isolated (see <u>Definition for</u> <u>Isolation for Non-Hospitalized Cases/PUI</u>) with daily active monitoring regarding health status until:
 - symptoms have resolved and they are well enough to resume normal activities, and there have been two negative tests for COVID-19 that are conducted 24 hours apart^(M), and
 - laboratory investigation has ruled out COVID-19 infection. For more information, refer to Annex A: Interpretation of Laboratory Results and Management.

^(K) As part of the individual risk assessment, consider the duration of the contact's exposure (e.g., a longer exposure time likely increases the risk), the case's symptoms (coughing or severe illness likely increases exposure risk) and whether exposure occurred in a health care setting.

^(L) In hospitalized patients with confirmed *COVID-19* infection, repeat upper and lower respiratory tract samples should be collected to demonstrate viral clearance. The frequency of specimen collection will depend on local circumstances but should be at least every 2 to 4 days until there are two consecutive negative results (both URT and LRT samples if both are collected) in a clinically recovered patient at least 24 hours apart. For more information refer to the WHO guidance on <u>*Clinical management of severe acute*</u> respiratory infection when novel coronavirus (2019-nCoV) infection is suspected-Interim guidance

^(M) Currently it is suggested that two negative tests for 2019-nCoV, conducted 24 hours apart, be considered as evidence that the case is no longer communicable. For more information refer to the WHO guidance on *Home care for patients with suspected novel coronavirus (nCoV) infection presenting with mild symptoms* and management of contacts

- If the case/PUI requires medical attention, advise to contact public health for further direction, which will include where to go for care, the appropriate mode of transportation to use, and Infection Prevention Control (IPC) precautions to be followed.
- The following recommendations also apply:
 - Place the case/PUI in a well-ventilated (e.g. windows open if weather permits) room by themselves, if possible and use a separate bathroom if available.
 - If the case/PUI cannot be separated from others, they should follow respiratory etiquette and use a surgical/procedure mask while others are in the same room.
 - Shared spaces (e.g. kitchens, bathrooms) should be kept well ventilated (e.g. windows open if weather permits), if possible.
 - People in the household should avoid sharing toothbrushes, cigarettes, eating utensils, drinks, towels, washcloths or bed linen.
 - Other types of possible exposure to contaminated items should be avoided. Dishes and eating utensils should be cleaned with soap and water after use.
 - High-touch areas such as toilets, bedside tables and door handles should be cleaned daily using regular household cleaners then disinfected using diluted bleach (one part bleach to nine parts water); clothes, handkerchiefs and bedclothes of the case/PUI can be cleaned using regular laundry soap and water (60-90°C). Use disposable gloves and protective clothing (e.g., plastic aprons, if available) when cleaning or handling surfaces, clothing, or linen soiled with bodily fluids.
 - Dispose of items such soiled tissues paper in a sealed garbage bag and leave out for garbage collection.
 - NOTE: Due to the theoretical possibility that animals in the home could be affected by COVID-19, it is recommended that cases also refrain from contact with pets.

For more information, refer Interim guidance: Public health management of cases and contacts associated with novel coronavirus (2019-nCoV)

Definition of Isolation for Non-Hospitalized Cases/PUI:

- Isolation means avoiding situations where other people could be exposed and infected.
- Situations to be avoided includes but is not limited to:
 - social gatherings, work, school/university, child care, athletic events, faith-based gatherings, healthcare facilities, grocery stores, restaurants, shopping malls, and any public gatherings.
 - consider delivery or pick up services for errands such as grocery shopping
 - may not go out especially if symptomatic
 - use of public transportation including buses, taxis, or ride sharing.
 - having visitors to your home (but friends, family or delivery drivers can drop off food or other things that may be needed).

Treatment

- Currently, there is no specific treatment or vaccine to prevent infection.
- Supportive treatment is recommended based on condition of the case.
- For more information refer to <u>WHO guidance on the clinical management of severe acute</u> respiratory infection when novel coronavirus infection is suspected.

Management of Close Contacts of PUI

- Until PUI is confirmed as a probable or confirmed case, the following recommendations apply to the close contact:
 - Determine the type of exposure, the setting and the time since last exposure with PUI
 - Provide information about COVID-19 disease including signs and symptoms
 - Follow good respiratory etiquette and hand hygiene practices.
 - Self-monitor for the appearance of symptoms, particularly fever and respiratory symptoms such as coughing or shortness of breath.

Management of Close Contacts of Confirmed and Probable Cases

- Close contacts should self-isolate (see <u>Definition of Self-Isolation</u>).
- The Medical officer of Health (MOH) MAY exclude (on a case-by-case basis) from high risk settings (e.g. hospitals, schools, crowded public places) for 14 days following last unprotected exposure.
- Determine the type of exposure, the setting, and the time since last exposure.
- Provide information about COVID-19 disease including signs and symptoms.
- Conduct daily active monitoring for 14 days from last unprotected exposure to the case.
- During the monitoring period, advise the close contact to:
 - Follow good respiratory etiquette and hand hygiene practices.
 - Monitor for the appearance of symptoms, particularly fever and respiratory symptoms such as coughing or shortness of breath.
 - Take and record temperature daily; avoid the use of fever-reducing medications (e.g., acetaminophen, ibuprofen) as these medications could mask an early symptom of COVID-19. If these medications must be taken, notify public health.
 - Stay in an area where health care is readily accessible in case symptoms develop.
 - Should symptoms develop, self-isolate within the home as quickly as possible and contact public health for further direction where to go for care, the appropriate mode of transportation to use, and IPC precautions to be followed.
- A contact who develops symptoms should be managed as a PUI. (Refer to Key Investigation section).

Definition of Self-Isolation:

- Self-isolation means avoiding situations where other people could be exposed and infected.
- Situations to be avoided include but are not limited to:
 - Social gatherings, work, school/university, child care, athletic events, faith-based gatherings, healthcare facilities, grocery stores, restaurants, shopping malls, and any public gatherings.
 - Consider delivery or pick up services for errands such as grocery shopping.
 - May go out ONLY as required for urgent errands such as essential medication. As a precaution to further reduce risk of spread, a surgical mask may be worn out of the home.

- Use of public transportation including buses, taxis, or ride sharing.
- Having visitors to your home (but friends, family or delivery drivers can drop off food or other things that may be need).

Management of Asymptomatic Returning Travelers (Non-HCW)

- Recommendations for asymptomatic travelers returning from Hubei province, China include:
 - Upon arriving at the airport, will be instructed to immediately connect with Public Health by calling Health Link at 811 and to **self-isolate*** (see <u>Definition of Self-isolation</u>) for 14 days following departure from Hubei.
 - Daily active monitoring by public health is not required.
 - Follow good respiratory etiquette and hand hygiene practices.
 - Self-monitor for the appearance of symptoms, particularly fever and respiratory symptoms such as coughing or shortness of breath.
 - Take and record temperature daily and avoid the use of fever reducing medications (e.g., acetaminophen, ibuprofen) as much as possible. These medications could mask an early symptom of COVID-19; if these medications must be taken, advise the Public Health.
 - Stay in an area where health care is readily accessible in case symptoms develop.
 - Should symptoms develop, isolate themselves within the home setting as quickly as possible and contact Health Link at 811 for further direction on where to go for care, the appropriate mode of transportation to use, and IPC precautions to be followed.
- Recommendations for asymptomatic travelers returning from other areas of mainland China include:
 - Upon arriving at the airport, will be provided with information on self-monitoring for symptoms for 14 days following their departure from mainland China and to call Health Link at 811 should symptoms develop.
 - Self-isolation is not required.
 - Active monitoring by Public Health is not required.
 - Follow good respiratory etiquette and hand hygiene practices.
 - Stay in an area where health care is readily accessible in case symptoms develop.
 - Self-isolate as quickly as possible should symptoms develop, and contact Health Link at 811 for further direction on where to go for care, the appropriate mode of transportation to use, and IPC precautions to be followed.
 - Avoid crowded public spaces or travel on conveyances where rapid self-isolation upon onset of symptoms may not be feasible.

Management of Asymptomatic Returning HCW from Mainland China

- ALL Health Care Workers (HCW) who traveled/resided in mainland China in the last 14 days should be assessed before returning to work.
 - Alberta Health Services (AHS) or Covenant Health employees must contact Workplace Health and Safety (WHS)/Occupational Health Services (OHS) for assessment and to determine when to return to work.
 - Non AHS/Covenant Health employees should connect with Public Health by calling Health Link at 811 for individual exposure risk assessment and to determine when to return to work.
- Assessment criteria for high-risk exposures:
 - Travel/residence in Hubei Province, China in the last 14 days;
 - Close contact (see definition of close contact) with a probable/confirmed case in mainland China;
 - Any hospitalization in a facility with COVID-19 patients in mainland China;
 - Visited a healthcare facility in mainland China where cases are being treated (the nature of the visit should be assessed on a case-by-case basis);
 - Worked in a facility in mainland China where probable/confirmed cases of COVID-19 were being treated without wearing appropriate PPE.
- If HCW meets high-risk exposure assessment criteria, the following recommendations apply:
 - Self-isolate* (see <u>Definition of Self-Isolation</u>) and exclude from work (e.g., acute care facilities) for 14 days since last potential exposure^(N);
 - Daily active monitoring for symptoms by WHS/OHS or with local Public Health as appropriate;
 - Stay in an area where health care is readily accessible in case symptoms develop.
 - Should symptoms develop, HCW should contact WHS/OHS or Public Health as appropriate for further direction on where to go for care, the appropriate mode of transportation to use, and IPC precautions to be followed;
 - Follow good respiratory etiquette and hand hygiene practices.
- If HCW does not meet high-risk exposure assessment criteria, then the following recommendations apply:
 - Self-monitor for 14 days for the appearance of fever and respiratory symptoms such as coughing or shortness of breath.
 - Take and record temperature daily and avoid the use of fever reducing medications (e.g., acetaminophen, ibuprofen) as much as possible. These medications could mask an early symptom of COVID-19; if these medications must be taken, HCW should seek advice from WHS/OHS or Public Health.
 - Strictly follow good respiratory etiquette and hand hygiene practices .
 - Stay in an area where health care is readily accessible in case symptoms develop.
 Self-isolate as quickly as possible should symptoms develop, and connect with Public
 - Health by calling Health Link at 811 for further direction on where to go for care, the appropriate mode of transportation to use, and IPC precautions to be followed.
 - Avoid crowded public spaces or travel on conveyances where rapid self-isolation upon onset of symptoms may not be feasible.

^(N) In areas with sustained community transmission, it is advisable to continue to monitor for symptoms for a full 14 days after leaving the affected area.

Management of Contacts on Airplane

- There currently is no evidence of transmission risk related to flight duration. The following recommendations apply regardless of length of flight.
- When a case was symptomatic on the flight and contact tracing should focus on the following:
 - passengers seated within two meters of the index case, AND
 - crew members serving the section of the aircraft where the index case was seated, AND
 - persons who had close contact with the index case, e.g. travel companions or persons providing care.
- Refer to <u>Management of Close Contacts of Confirmed/Probable Cases</u> section for further management of these contacts.

Preventative Measures

- Avoid close contact with people suffering from acute respiratory infections.
- Frequent hand-washing, especially after direct contact with ill people or their environment.
- People with symptoms of acute respiratory infection should practice proper cough etiquette (maintain distance, cover coughs and sneezes with disposable tissues or clothing, and wash hands).
- Within healthcare facilities, enhance standard infection prevention and control practices in hospitals, especially in emergency departments.
- People travelling to areas where COVID-19 may be circulating should check for current travel notices on the <u>Government of Canada website</u> prior to travel.

Annex A: Interpretation of Lab Results and Management

RPP *	COVID-19 (ProvLab)	COVID-19 (NML)	Management of PUI/Cases
Negative	Negative	Negative	Lift isolation
Positive [#]	Negative	Pending/Negative	Lift isolation
Negative	Negative	Pending	 Maintain isolation until COVID-19 NML results available
Negative	Positive	Positive	 Maintain isolation for at least 14 days from symptom onset. Repeat testing when symptoms have resolved to demonstrate viral clearance[%]
Negative	Positive	Negative	 Consult with VOC Repeat testing, if necessary If repeat testing required, maintain isolation until results for repeat testing are available May consult with OCMOH on case-by-case basis

*Respiratory Pathogen Panel Results

#Positive result for anything that explains symptoms. This may also include positive tests results outside of RPP. NOTE: if a positive RPP or other result does not fully explain the symptoms of the patient, isolation should be maintained until the NML result is received.

% Demonstration of viral clearance: two negative tests for COVID-19 conducted 24 hours apart.

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ANNEX 1: Revision History

Revision	Document	Description of Revision	
Date	Section		
2020-01-29	Case Definition	 Probable Case definition – Clinical illness moved into Footnote section. Changed from "fever AND" to "fever and/or" Removal of "breathing difficulty" and "Evidence of severe illness" from clinical illness criteria. 	
		 Person Under Investigation – "fever and acute respiratory illness, or pneumonia" changed to "fever and/or cough". 	
		 Exposure criteria expanded from city of Wuhan to include all of Hubei Province, China. 	
2020-02-07	Case definition	 The affected area in the exposure criteria has been expanded to mainland China. 	
2020-02-11	Epidemiology/PH Management	Added full guideline.	