



Novel Coronavirus 2019 (2019-nCoV)
Clinical and Public Health Management of Cases and Contacts
January 22, 2020

Identification, Evaluation and Management of Suspect 2019-nCoV Patients

The Centers for Disease Control and Prevention (CDC) is closely monitoring an outbreak caused by a novel (new) coronavirus which was first detected in Wuhan City, Hubei Province, China. Individuals began to present with respiratory illness and pneumonia of unknown etiology (PUE) in December 2019. To date, several hundred cases have occurred in China with exported cases being reported in several other countries including the U.S. Testing of ill individuals revealed a new coronavirus which has been named “2019 novel coronavirus” or “2019-nCoV”. An epidemiologic linkage to a large wholesale fish and live animal market in Wuhan City has been established for many of the initial cases. Person-to-person transmission is still being evaluated but appears to be occurring within case households and in the healthcare setting. This document has been created to assist the public health and the health care community plan for the management of suspect 2019-nCoV cases and their contacts. The information contained in this document is based on current knowledge of the virus and is subject to change based on new information.

Additional information on the current situation can be found at the following website:
<https://www.cdc.gov/coronavirus/2019-ncov/index.html>

Identification of Suspect 2019-nCoV Cases

- The New Jersey Department of Health has developed surveillance criteria to assist healthcare professionals with the identification of patients suspected of having 2019-nCoV. Guidance can be found at the following website:
<https://www.nj.gov/health/cd/topics/ncov.shtml>
- Cases meeting the surveillance criteria should be reported ***IMMEDIATELY*** to the local health department (LHD) where the patient resides. If patient residence is unknown, report to your own LHD. LHDs are available 24/7/365. Contact information for LHDs during business hours can be found at: www.localhealth.nj.gov. Contact information for LHDs after business hours or on weekends can be found at: http://nj.gov/health/lh/documents/lhd_after_hours_emerg_contact_numbers.pdf. If LHD personnel are unavailable, healthcare providers should report the case to the New Jersey Department of Health (NJDOH), Communicable Disease Service (CDS) at 609-826-5964, Monday through Friday 8:00 AM - 5:00 PM. On weekends, evenings and holidays, CDS can be reached at (609) 392-2020.

Management of 2019-nCoV Cases

Circulation of respiratory viruses are common at this time of year, as are visits to clinicians for associated illnesses. This situation makes it difficult to immediately identify individuals who may be infected with 2019-nCoV. In order to best protect patients and staff from both the common respiratory viruses and the potential infection with 2019-nCoV, NJDOH recommends that the following precautions be taken in **all** healthcare settings:

- Signage should be placed in triage and waiting areas asking patients to self-report travel history to Wuhan City.
- Take steps to ensure all persons with symptoms of a respiratory infection adhere to respiratory hygiene and cough etiquette, hand hygiene, and triage procedures throughout the duration of the visit.
- Consider posting visual alerts (e.g., signs, posters) at the entrance and in strategic places (e.g., waiting areas, elevators, cafeterias) to provide patients and healthcare providers with instructions (in appropriate languages) about hand hygiene, respiratory hygiene, and cough etiquette.
- Offer facemasks or tissues and provide instructions on how to use these items to cover nose and mouth when coughing or sneezing, to dispose of tissues and contaminated items in waste receptacles, and how and when to perform hand hygiene.
- Provide space and encourage persons with symptoms of respiratory infections to sit as far away from others as possible. If available, facilities may wish to place these patients in a separate area while waiting for care.

Inpatient management

- ***The hospital infection preventionist(s) must be notified of any patients suspected to have 2019-nCoV to ensure that appropriate infection control practices are implemented and maintained.***
- Immediately place patients thought to have 2019-nCoV in an airborne infection isolation room (AIIR). If AIIR is not available, place the masked patient in a private room with the door closed. If feasible, the patient should continue to wear the mask for the duration of time spent in the non-AIIR room.
 - Preferably, the patient should be placed in a room where the exhaust is recirculated with high-efficiency particulate air (HEPA) filtration.
 - After the patient leaves the room, it should remain vacant for the appropriate time (up to 2 hours) to allow for 99.9% of airborne-contaminant removal.
- Standard, contact, and airborne precautions are recommended for management of any patients with known or suspected 2019-nCoV infection.
- Information regarding minimizing exposures, patient placement, personal protective equipment, monitoring health care workers and environmental cleaning is available at:
 - <https://www.cdc.gov/coronavirus/2019-nCoV/infection-control.html>

- [https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-\(ncov\)-infection-is-suspected](https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected)
- <https://www.cdc.gov/infectioncontrol/guidelines/isolation/index.html>
- Duration of precautions will be determined on a case-by-case basis, in conjunction with local, state, and federal health authorities.

Outpatient management

- If a patient is being evaluated in an outpatient setting and is thought to have 2019-nCoV, healthcare providers should follow public health reporting instructions as described above.
- Immediately place patients thought to have 2019-nCoV in an airborne infection isolation room (AIIR). If AIIR is not available, place the masked patient in a private room with the door closed. If feasible, the patient should continue to wear the mask for the duration of time spent in the non-AIIR room.
 - Preferably, the patient should be placed in a room where the exhaust is recirculated with high-efficiency particulate air (HEPA) filtration.
 - After the patient leaves the room, it should remain vacant for the appropriate time (up to 2 hours) to allow for 99.9% of airborne-contaminant removal.
- If public health officials feel this is a suspect case, healthcare providers may be asked to collect specimens from the patient. If the provider cannot collect specimens, alternate arrangements may need to be made. This may include directing the individual to an acute care setting where additional testing and clinical assessment can be conducted.
- Healthcare providers should notify any facility where the patient is being sent and advised about clinical suspicion of 2019-nCoV.
- If a surgical mask is available, the patient should be asked to wear the mask during transport.
 - NOTE: If emergency medical personnel are contacted for transport, they should be asked follow same infection control recommendations as healthcare providers in an acute care setting.
- If a patient refuses additional healthcare evaluation, public health official should be notified immediately.

Management of Individuals who had close contact with a 2019-nCoV Case

Close Contact Definition

Close contact, for both community and healthcare exposures, is defined as follows:

- a) being within approximately 6 feet (2 meters), or within the room or care area, of a novel coronavirus case for a prolonged period of time while not wearing recommended personal protective equipment or PPE (e.g., gowns, gloves, NIOSH-certified disposable

N95 respirator, eye protection); close contact can include caring for, living with, visiting, or sharing a healthcare waiting area or room with a novel coronavirus case.

– **OR** –

b) having direct contact with infectious secretions of a novel coronavirus case (e.g., being coughed on) while not wearing recommended personal protective equipment.

Data to inform the definition of close contact are limited; considerations when assessing close contact include the duration of exposure (e.g., longer exposure time likely increases exposure risk) and the clinical symptoms of the person with 2019-nCoV (e.g., coughing likely increases exposure risk). Special consideration should be given to those exposed in healthcare settings (see below).

Close Contacts in a Non-healthcare setting

- Any person who meets the criteria for a close contact should self-monitor for the development of fever (i.e., oral temperature of 100.4 F or greater) or respiratory symptoms (e.g., cough, sore throat, runny nose, congestion, shortness of breath, fatigue) for 14 days after last contact.
- LHDs may be asked to assist in identifying and notifying contacts of suspected 2019-nCoV cases of their need to self-monitor and steps to take should illness develop.
- Any symptomatic individual who had close contact with a 2019-nCoV case should be referred for medical evaluation and evaluated as a patient under investigation for 2019-nCoV. Symptomatic close contacts should notify public health and health care providers about their contact with a 2019-nCoV case prior to their visit to limit additional exposures.

Management of Healthcare Contacts in a Healthcare Setting

- Healthcare personnel (HCP) refers to all persons, paid and unpaid, working in healthcare settings who have the potential for exposure to patients and/or to infectious materials, including body substances, contaminated medical supplies and equipment, contaminated environmental surfaces, or contaminated air. HCP could include, but are not limited to, physicians, nurses, nursing assistants, therapists, technicians, emergency medical service personnel, dental personnel, pharmacists, laboratory personnel, autopsy personnel, students and trainees, contractual personnel, home healthcare personnel, and persons not directly involved in patient care (e.g., clerical, dietary, house-keeping, laundry, security, maintenance, billing, chaplains, and volunteers) but potentially exposed to infectious agents that can be transmitted to and from HCP and patients.
- Surveillance through symptom monitoring of health care personnel is necessary to ensure that workers who become ill are quickly identified, receive appropriate care, and are isolated to prevent further transmission within the health care setting.
- Healthcare facilities that care for 2019-nCoV patients should implement surveillance of all HCPs who have any contact with suspect or confirmed 2019-nCoV patients or their environment of care, regardless of whether PPE was used.

- NJDOH and LHDs will work with hospitals to ensure that recommended surveillance activities are implemented. These activities include:
 - Develop and maintain a listing of all personnel who enter the rooms of 2019-nCoV patients, or who are involved in the patient’s care in other parts of the hospital;
 - Instruct personnel who have contact with 2019-nCoV patients or their environment of care to notify occupational health, infection control or their designee if they have unprotected exposure to a 2019-nCoV patient or if they develop any fever or respiratory symptoms; and,
 - Monitor employee absenteeism for increases that may suggest emerging respiratory illness in the workforce. Notify local and state health authorities of clusters or unusual increases in respiratory illness, including atypical pneumonia or respiratory illness of unknown etiology.

Surveillance

Healthcare Contacts

Large outbreaks occurring within the healthcare system have been noted with previously identified prior novel coronaviruses [i.e., Severe Acute Respiratory Syndrome (SARS), Middle East Respiratory Syndrome (MERS)]. Given this fact, it is imperative that measures are promptly put in place to mitigate the spread of this novel virus within the health care setting.

Surveillance, prompt identification of symptoms, and exclusion of HCPs are measures that help to reduce transmission within the healthcare setting. As indicated above, facilities should implement surveillance of all HCPs who have any contact with suspect or confirmed 2019-nCoV patients or their environment of care, regardless of whether PPE was used.

- HCPs should be instructed to be vigilant for fever and respiratory symptoms (e.g., cough, shortness of breath), including measurement of body temperature at least twice daily for 14 days following the last contact with a 2019-nCoV patient.
- These HCPs should be contacted by occupational health, infection control or their designee regularly over the 14-day period following the last contact to inquire about fever or respiratory symptoms.
- They should immediately report any signs (e.g., fever of 100.4 F or greater^{*}) or respiratory symptoms (e.g., cough, sore throat, runny nose, congestion, shortness of breath, fatigue) of acute illness to their supervisor or a facility designated person (e.g., occupational health services) for a period of 14 days after the last known contact with a 2019-nCoV patient, regardless of their use of PPE.

^{*}Fever may not be present in some patients, such as those who are very young, elderly, immunosuppressed, or taking certain medications. Clinical judgement should be used to guide testing of patients in such situations.

Unprotected exposures

- HCPs who develop any respiratory symptoms after an unprotected exposure (i.e., not wearing recommended PPE at the time of contact) to a patient with 2019-nCoV should:
 - Not report to work or immediately stop working;
 - Notify their supervisor;
 - Implement respiratory hygiene and cough etiquette;
 - Seek prompt medical evaluation; and,
 - Comply with work exclusion until they are deemed no longer infectious to others.
- For asymptomatic HCPs who have had an unprotected exposure (i.e., not wearing recommended PPE at the time of contact) to a patient with 2019-nCoV, exclude from work for 14 days to monitor for signs and symptoms of respiratory illness and fever (100.4 F or greater).
 - If necessary to ensure adequate staffing of the facility, the asymptomatic provider could be considered for continuing patient care duties after discussion with local, state, and federal public health authorities.

Protected exposures

HCP who have cared for or otherwise been in contact with a 2019-nCoV patient while adhering to recommended infection control precautions should be instructed to be vigilant for fever and respiratory symptoms, including measurement of body temperature at least twice daily for 14 days following the last contact with a 2019-nCoV patient. These HCP should be contacted by occupational health, infection control or their designee regularly over the 14-day period following the last contact to inquire about fever or respiratory symptoms. No limitation of duties or work exclusions need to be implemented unless symptoms develop.

Non-healthcare contacts

If suspect 2019-nCoV cases are identified, surveillance and monitoring of non-healthcare contacts will be needed. As indicated above, LHDs may be asked to assist in identifying, notifying and monitoring these contacts. Monitoring will likely include requesting the contact to measure body temperature at least twice daily for 14 days following the last contact and report a fever (100.4 F or greater) or changes in clinical status to the LHD. Currently, LHDs are being asked to have an initial communication with the contact to provide education and information about the monitoring process. The LHD should follow up with the contact every 3-4 days of their 14-day monitoring period to ensure the contact remains asymptomatic.

- Any person who meets the criteria for a close contact should self-monitor for the development of fever or respiratory symptoms (e.g., cough, shortness of breath) for 14 days after last contact.
- Any symptomatic individual who had close contact with a 2019-nCoV case should be referred for medical evaluation and evaluated as a patient under investigation for 2019-nCoV. Symptomatic close contacts should notify public health and health care providers

about their contact with a 2019-nCoV case prior to their visit to limit additional exposures.

- Symptomatic person should refrain from going to work/school and limit activities outside of the home to those required for medical care. If the symptomatic person has not already done so, they should ask the healthcare provider to call the local or state health department.
- If these individuals do not have any of the symptoms, daily activities, such as going to work, school, or other public areas can continue.

Additional Resources

NJDOH – General Information Page

<https://www.nj.gov/health/cd/topics/ncov.shtml>

CDC – General Information Page

<https://www.cdc.gov/coronavirus/2019-ncov/index.html>

CDC – Information on Infection Control in Health Care Setting

<https://www.cdc.gov/coronavirus/2019-nCoV/infection-control.html>

CDC – Information on Infection Control at Home

<https://www.cdc.gov/coronavirus/2019-ncov/guidance-home-care.html>