

**Manual for Active Epidemiological Surveillance of Patients with Novel
Coronavirus Infection (Provisional Version)
- Addition for the Implementation of Rapid Detection of Clusters
(Populations) of Patients -**

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This article was prepared to enable health centers to promptly conduct active epidemiological surveillances, according to Article 15 of the Act on the Prevention of Infectious Diseases and Medical Care for Patients with Infectious Diseases for patients with novel coronavirus infection (confirmed cases) detected in Japan.

In light of the Expert Meeting for Measures Against Novel Coronavirus Infection (third meeting) held on February 24, the “Basic Policy of Measures Against Novel Coronavirus Infection,” determined at the Headquarters for Novel Coronavirus Infection of the government on February 25, indicates that the current status is “patients with unknown infection routes are being found sporadically, and small clusters (populations) of patients have been found in some areas.” It is important that each local government, in cooperation with relevant organizations, appropriately conduct active epidemiological surveillances to estimate the sources of infection, and to make efforts regarding the spread of infection, by grasping and appropriately managing persons who have been in close contact with infected persons. Specifically, it is stipulated that local governments, in cooperation with the Ministry of Health, Labour and Welfare, as well as experts, should grasp the generation of clusters based on the detection of individual patients via active epidemiological surveillances, etc., and if there is the possibility that a cluster of patients has formed, necessary actions such as closing of facilities related to such confirmed patient clusters and voluntary refrainment from events should be requested (<https://www.mhlw.go.jp/content/10900000/000599698.pdf>).

In response to the abovementioned circumstances, the Ministry of Health, Labour and Welfare established the Cluster Task Force, which includes newly assigned experts, in the Headquarters for Novel Coronavirus Infection, in cooperation with related organizations (February 25). The contact sections for support for addressing the novel coronavirus infection by local governments will be unified with the Cluster Task Force, for the time being. However, requests for cooperation and coordination for on-site epidemiological surveillances will also be accepted by the FETP (Field Epidemiology Training Program) of the Infectious Disease Surveillance Center, at the National Institute of Infectious Diseases, as usual. The National Institute of Infectious Diseases and the Cluster Task Force will work together closely, in order to stop the epidemic at an early stage.

This article adds new information regarding the detection of, and measures for the clusters of patients described in the basic policy, as an addition to previous active epidemiological surveillances by local governments.

(Definition of terms)

- “Patients (confirmed cases)” means “persons who are suspected of having a novel coronavirus infection based on clinical characteristics, and have been diagnosed to have a novel coronavirus infection via testing.”
- “Suspected patients” means “persons who are suspected of having a novel coronavirus infection based on clinical characteristics, and have been diagnosed as suspected of having a novel coronavirus infection.”
- “Persons having been in close contact with an infected person” means persons who fall into the following scope, among persons who were in contact with a “patient (confirmed case)” on the date of onset or later:
 - Persons who are living together with or have been in prolonged contact (including inside a car or airplane, etc.) with a person who is suspected of being infected with the novel coronavirus
 - Persons who have been consulting, nursing, or caring for patients suspected of being infected with the novel coronavirus, without appropriate protection against infection
 - Persons who are highly likely to have been in direct contact with contaminants, such as respiratory secretions or the body fluid of a person suspected of being infected with the novel coronavirus
 - Others: Persons who have been in contact with a “patient (confirmed case)” without the necessary preventive measures against infection, at a distance that allows touching by hand or a face-to-face conversation (roughly 2 meters) (comprehensively judge the infectivity of the patient based on the patient's symptoms, etc.).
- A “cluster (population) of patients” is a population of patients that may continuously cause outbreaks (continuation of a chain of infection), leading to a large outbreak (mega cluster). Based on the finding that not all infected patients have caused secondary infection, and approximately 10-20% of all patients have contributed to the occurrence of secondary infections in Japan thus far, prompt detection of, and the right measures for this population are the key to preventing the spread of infection.

(Subjects of active epidemiological surveillance)

- The subjects of active epidemiological surveillance will include “patients (confirmed cases)” and “persons having been in close contact with an infected person,” as defined above. If a “suspected patient” has a high likelihood of becoming a confirmed case, it is permissible to include the patient in active epidemiological surveillance under the assumption that he/she will be a confirmed case, and to start epidemiological surveillance.
- For asymptomatic persons who have undergone a test for any reason and been determined to be “asymptomatic disease carriers (persons without clinical characteristics who have been diagnosed to have a novel coronavirus infection via test),” the degree of the effect of transmission of infection to persons who have been in contact with the infected persons, as

well as the future probability of disease onset, should be assessed based on the timing of specimen collection and epidemiological information. In addition, decisions regarding conducting surveillances for persons who have been in contact with the infected persons should be made on an individual basis.

(Understanding of local occurrence)

- Health centers should comprehensively evaluate the status of “patients (confirmed cases)” and “suspected patients,” as well as information on consultations with the counseling center for returnees and persons who were in contact with infected persons, in order to grasp the status of local occurrence. Specifically, the number of PCR tests conducted by local governments, the number of reported confirmed cases, and the status of reports in which the infection route cannot be identified should be determined. In addition, if it is possible to determine the number of consultations and the number of visits to medical institutions, in cooperation with the counseling center for returnees and persons who were in contact with infected persons, it may be possible to infer the occurrence status in the region, based on changes in the proportion of cases suspected of being new coronavirus infections, etc. Attention should be paid to the occurrence of new coronavirus infections throughout Japan.

Incidentally, as of February 17, a rough standard for persons who should consult with the counseling center for returnees and persons who have been in contact with infected persons, is as follows:

- 1) Persons who have symptoms of a common cold, or a fever of 37.5°C or higher for 4 days or longer (Persons who are taking antipyretics should be handled in the same manner.)
- 2) Persons with malaise or a feeling of dyspnea
- 3) When 1) or 2) persists for roughly 2 days in persons who are at a high risk of becoming severe (elderly, persons with diabetes mellitus/heart failure/respiratory disease as an underlying disease, persons on dialysis, or persons using immunosuppressants or anticancer drugs, etc.)

(Details of surveillance)

- Collect basic information, clinical information, the estimated source of infection, persons who were in contact with the infected persons, and other necessary information. (Surveillance form attachment 1, 2-1, 2-2, 2-3)
- For estimation of the source of infection, if there are multiple “patients (confirmed cases),” explore the common source of exposure, identify the risk factors for infection, and take appropriate measures to prevent the spread of infection (including calling attention to persons who are estimated to have been exposed to the common source of infection).
- For estimation of the source of infection, from the viewpoint of detecting, and measures for responding to clusters (populations) of patients, there are clusters surrounding infected persons [e.g., patients (confirmed cases)] with an unknown link, and the importance and necessity of a retrospective, thorough search for the common source of exposure should be

emphasized, particularly when multiple cases of infection are found in a region. This will contribute directly to suppressing the spread of infection in the region, and subsequently throughout Japan.

- In active explorations of cases, carefully narrow down the subjects based on the information regarding behavioral surveillances of “patients (confirmed cases).” In particular, the interiors of ships and sports gyms have been identified in Japan as places where many people are in face-to-face contact in an enclosed space (e.g., conversation), where secondary infection is highly likely to occur. Deliberately conduct active explorations of cases for contacts in similar indoor environments, in addition to conventional medical institutions, welfare facilities, workplaces, and schools, etc. If the scope of the subjects in these active explorations of cases is excessively expanded in an attempt to include all cases, there is the concern that the burden on the involved parties will increase, and conducting such explorations will become difficult. The current status of actions to prevent the spread of infection, as a nation, is that measures are limited to monitoring of general health and requests to refrain from certain behaviors, etc. (mentioned later) for family members who are in prolonged contact with “patients (confirmed cases),” among persons who have been in close contact with an infected person, and the use of resources focusing on the detection of patients and populations assessed as a part of a potential cluster (population) of patients. The National Institute of Infectious Diseases and the experts in the Headquarters for Novel Coronavirus Infection/the Cluster Task Force can offer cooperation/advice on these assessments.
- Request for “persons having been in close contact with an infected person” included in the surveillance to pay attention to their health condition for 14 days after the last exposure, and inform a healthcare center of the onset of pyrexia, respiratory symptoms, malaise, etc., if any, prior to visiting a medical institution. (Surveillance form attachment 3)
- “Persons having been in close contact with an infected person” will be handled as subjects for testing, if pyrexia or respiratory symptoms occur. Because these indicate the onset of a certain event in persons at a high risk of infection, and the measure aims to contain the spread of infection on a group basis, the judgment of a physician should be prioritized regarding the necessity of testing, regardless of whether the body temperature is 37.5°C or higher.
- In principle, asymptomatic persons having been in close contact with an infected person during the health monitoring period will not be included in testing for the novel coronavirus. Implement health monitoring after taking measures to reduce the risk of transmission of infection to surrounding persons, such as remaining at home, etc. In particular, when testing is performed in asymptomatic persons, it is still unknown at what timing the virus can be detected, even if it is present; thus, a negative test result does not deny infection. In addition, pay due attention to changes in the physical conditions of “persons having been in close contact with an infected person” who are also assumed to be at a high risk of becoming severe.

(Preventive measures against infection during surveillance)

- When personnel who are engaged in active epidemiological surveillance conduct face-to-face surveys of the subjects of the surveillance, it is considered necessary to wear a surgical mask and appropriately wash their hands.

- When conducting a face-to-face survey for subjects of the surveillance with symptoms such as a cough, the patients should be made to wear a surgical mask, and the personnel in charge should wear protection for their eyes (e.g., goggles or a face shield), in addition to wearing a surgical mask and appropriately washing their hands.

(Measures for persons having been in close contact with an infected person)

- Health centers should instruct “persons having been in close contact with an infected person” to thoroughly implement cough etiquette and wash their hands, and inform them to pay attention to their health conditions at all times during the health monitoring period. Request that they to refrain from unnecessary and nonurgent outings, and avoid using public transportation when engaging in unavoidable travel. In addition, instruct them to take preventive measures against infection, such as wearing a mask and hand hygiene when going out.
- In principle, as described above, asymptomatic persons having been a close contact with an infected person during the health monitoring period will not be included in testing for the novel coronavirus. However, in cases where a person with close contact with an infected person is engaged in operations that present opportunities to be in contact with high-risk persons, such as healthcare workers, and a test is regarded to be necessary, they may be included in the testing if clusters continue to occur and an epidemiological surveillance is determined to be necessary.
- Instruct persons living together with a “person with close contact with an infected person” to wear a mask and observe hand hygiene.
- Instruct them to dispose of wastes, and wash linens and clothing for a “person with close contact with an infected person” as usual.
- For pupils and students of a “person with close contact with an infected person,” refer to the notification of the Ministry of Education, Culture, Sports, Science and Technology (Genshokenshoku notification No. 43 [notification by Director of Health Education and Shokuiku Division, Elementary and Secondary Education Bureau, Ministry of Education, Culture, Sports, Science and Technology], dated February 10, 2020), “Measures for Pupils and Students Returning from China” https://www.mext.go.jp/content/20200214-mxt_kouhou01-000004520_1.pdf.
- For the transport of specimens from medical institutions, refer to the “Manual for Collection/Transport of Specimens Obtained from Patients Suspected of Having 2019-nCoV (Novel Coronavirus) Infection.”