

Chinese Center for Disease Control and Prevention
Technical Guidance for Prevention and Control of
COVID-19

Audio and Video Training Courseware

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中国疾病预防控制中心
CHINESE CENTER FOR DISEASE CONTROL AND PREVENTION

Guidelines for Epidemiological Investigation of COVID-19

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Technical basis

- *Technical documents for COVID-19 prevention and control of the Chinese Center for Disease Control and Prevention*
- *Protocol for Prevention and Control of COVID-19 (Edition 6)*
- *Protocol for Prevention and Control of COVID-19 (Edition 5)*





Outline

- Purpose
- Objects
- Contents and methods
 - Case investigation
 - Cluster outbreak investigation
- Organization and implementation
- Report and analysis of information
- Annexes
 - Form for Case investigation of COVID-19
 - Investigation and analysis methods for Cluster outbreak





Purpose

- Investigate the source of infection in cases, and track and identify close contacts;
- Investigate incidence, status on seeking medical attention, clinical characteristics and risk factors;
- Investigate and analyze the transmission characteristics and transmission chain of cluster outbreaks.



Objects

Suspected case

Confirmed case

Asymptomatic infection

Cluster outbreak

➤ For definition, see *Protocol for Prevention and Control of COVID-19 (Edition 6)*



Contents and Methods-Case Investigation

Suspected case

Basic Information
Close contacts

Health Status
Monitoring Case
Form for Close
Contacts

Confirmed case Asymptomatic infection

Basic Information
Onset and consultation
Risk factors and
exposure history
Laboratory testing

Health Status
Monitoring Case
Form for Close
Contacts

*See Guideline for
Investigation and
Management of
Close Contacts of
COVID-19 Cases*



Contents and Methods-Cluster Outbreak Investigation

- The county (district) -level disease control agencies shall immediately investigate the clustered outbreak situation that meets the definition based on the online direct report information and case investigation.
- Content: information on the source of infection and close contacts of all cases. Focus on epidemiological links between cases, and analyze transmission chains and routes of transmission.



Organization and implementation-localized management

- The county (district) -level health administrative department, where the medical institution in which cases are treated is located, organizes the disease control agencies to conduct the investigation.
- The investigation unit shall promptly establish an on-site investigation team, clarify the purpose of the investigation, formulate an investigation plan, and determine the staffing and assignment of responsibility of the investigation team.
- During the investigation, investigators should take good personal protection.
- Municipal, provincial and national centers for disease control and prevention can rush to the scene to participate in the investigation



Report and Analysis of Information

- Form for Case investigation of COVID-19 (confirmed cases, asymptomatic infections)
 - Timely reporting through the network reporting system
 - Quality auditing
 - Timely supplementing and correcting based on investigation progress
- Cluster outbreak investigation
 - Timely reporting through the network reporting system
 - Quality auditing
 - Timely supplementing and correcting based on investigation progress
 - Filling in the basic information, preparing initial, progress and closing reports
 - Key information on clustered outbreak cases is attached to the closing report



Form for Case investigation of COVID-19 (1)

Basic information

1. Name: _____ ;

2. Sex: ☐ male ☐ Female

3. Whether imported cases are overseas: ☐ Yes ☐ No (added in infectious disease report card)

If yes, please fill in the following information:

The country or region where you live or travel before entering the country (multiple choices): _____ (Added in the infectious disease report card)

Countries and regions through which to enter the country: _____

Nationality: _____ Passport number: _____

Port of Entry: _____ Province _____ (please fill in the airport, station or terminal, etc.)

Date of entry: _____

Mode of entry (flight number, train number, ship number, etc.): _____



Form for Case investigation of COVID-19 (2)

II. Case detection and consultation

4. Pathway of Case detection: ☐ Active consultation ☐ Detection of close management ☐ Entry screening ☐ Active screening of population

☐ Routine surveillance findings such as influenza and SARI ☐ Other _____

5. Date of admission: _____

6. Symptoms and signs on admission: ☐ Fever: maximum temperature: _____ °C

☐ chills ☐ dry cough ☐ sputum ☐ nasal congestion ☐ Running nose ☐ sore throat

☐ headache ☐ fatigue ☐ Dizziness ☐ muscle soreness ☐ arthralgia ☐ shortness of breath

☐ breathing difficulty ☐ chest tightness ☐ Chest pain ☐ conjunctival hyperemia ☐ nausea ☐ vomiting ☐ diarrhea ☐ abdominal pain ☐ other _____

7. Are there any complications? ☐ YES ☐ No

If yes, please select (multiple choices): ☐ meningitis ☐ encephalitis

☐ bacteremia/sepsis

☐ myocarditis ☐ acute lung injury /ARDS ☐ acute kidney injury ☐ epilepsy

☐ secondary bacterial pneumonia ☐ Other _____

8. Chest x-ray test or CT taken showing pneumonia imaging features:

☐ Not taken ☐ No ☐ Yes

If yes, test time: _____

9. Date of discharge: _____



Form for Case investigation of COVID-19 (3)

III. Risk factors and exposure history

10. Does the patient come from a specific professional group: ☐ No ☐ medical staff

☐ pathogenic microorganism detection staff ☐ personnel with wildlife contact

☐ poultry and livestock farming staff ☐ other____ ☐ nonspecific professional group

For medical staff, please select the specific nature of work:

☐ Doctor ☐ Nurse ☐ CDC staff ☐ Laboratory testing staff ☐ Others_____

11. Whether the patient is pregnant: ☐ Yes, gestational weeks:_____ ☐ No

12. Past medical history and basic conditions (multiple choices): ☐ No ☐ hypertension

☐ diabetes ☐ cardiovascular and cerebrovascular diseases ☐ asthma ☐ chronic lung disease (☐ chronic obstructive pulmonary disease, ☐ other_____) ☐ tumor (☐ lung cancer ☐ others_____) ☐ chronic kidney disease ☐ chronic liver disease

☐ immunodeficiency diseases ☐ postpartum (within 6 weeks) ☐ other_____

Have you had the following exposure history within 14 days before the onset of illness or being tested positive:

13. Is there a history of travel or residence in Wuhan and surrounding areas, or other communities with reported case:

☐ travel history ☐ residential History ☐ No

If yes, please fill in: _____Province_____City_____County (district)

14. Is there a history of travel or residence in a country or region with a severe epidemic abroad: ☐ Travel history ☐ Residential history ☐ No

If yes, please fill in the country or region:_____

15. Have you come in contact with a person who has fever or respiratory symptoms from Wuhan and surrounding areas, or from a community with a reported case/cased : ☐ Yes ☐ No ☐ Unclear

16. Have you come in contact with a person who has fever or respiratory symptoms from country or region with a severe epidemic abroad : ☐ Yes ☐ No ☐ Unclear

17. Is there a history of exposure to confirmed cases or asymptomatic infections: ☐ Yes ☐ No ☐ Unclear

18. Does the patient have a cluster outbreak in the same family, workplace, kindergarten or nursery or school? ☐ Yes ☐ No ☐ Unclear



Form for Case investigation of COVID-19 (4)

IV. Laboratory testing

30. Specimen collection and detection of new coronavirus

Every sample collection and new coronavirus test (including negative and positive test results for each sample) during the period from the first sampling of the case to the isolation after discharge

Specimen type	Sampling time (month day year)	Test results (Positive / negative / to be tested)
Throat swab		
Nasal swab		
Nasopharyngeal swab		
Sputum		
Tracheal secretions		
Tracheal aspirate		
Alveolar lavage fluid		
Urine		
Feces / anal swabs		
Blood specimen (nucleic acid test)		
Blood specimen (IgM)		
Blood specimen (IgG)		
Blood specimen (IgM + IgG)		
* Blood specimen IgG increased times or more (sampling during recovery period)		
Other (fill in specimen name)		
Not collected (do not fill in the sampling time or results)		



Investigation and Analysis Methods for Cluster Outbreak

- Methods: case investigation, Chinese disease control and prevention information system, case epidemiological investigation report
- Investigation contents: cases and close contacts; places where cases are exposed; sampling and testing
- Analysis content: transmission chain; case generation; incubation period; infectivity during the incubation period; infectivity of asymptomatic infection; ; transmission route.



Investigation and Analysis Methods for Cluster Outbreak

Registration Form for Key Information for Cluster Outbreak Cases

Cluster outbreak information	Familial aggregation					Meals spread				Other types of transmission (please specify)			transmission during Incubation period (1 yes 2 no)	Asymptomatic infection Transmission (1 yes 2 no)				
	Number of susceptible persons exposed		Number of cases		Attack rate (%)	Number of susceptible persons exposed		Number of cases		Attack rate (%)	Number of susceptible persons exposed	Number of cases					Attack rate (%)	
Case number	Generation number①	Name	Age	Gender	Identity number	Date of onset	Date of admission	Date of centralized isolation	Date of first positive specimen sampling	Contact history of the previous generation of cases②				Travel history ⑤	Contact history of other cases ⑥			
										Generation number of exposure cases	Date of first contact	Date of last contact	Contact place ③			Contact type④		

Instructions for filling in the form: ① Intergenerational number: 1 for the first generation of cases, 2 for the second generation of cases, and so on; if there are 2 or more cases in the second generation according to the order of incidence, such as 2-1, 2-2, etc.; fill in "unknown" for cases that cannot be determined between generations; ② contact history of the previous generation of cases: fill in the contact with the previous generation of cases. The first-generation cases and cases of unknown generations may not be filled in. ③ Contact places: please fill in the number: 1-home, 2-restaurant, 3-transport, 4-collective unit, 5-public places (such as shopping malls, supermarkets, hotels Etc.), 6-hospital, 7-other (please specify); ④ Type of contact: please fill in the number, 1-family, 2-neighbor, 3-colleague, 4-friend, 5-other (please specify). ⑤ Travel history: Refers to the travel history of Wuhan and its surrounding areas, other communities with case reports in China, or countries or regions with severe epidemics abroad within 14 days before the onset of illness, please fill in the number, 1=yes, 2=no. ⑥ Contact history of other cases: refers to the contact status except for the previous generation of cases, please fill in the number, 1=yes, 2=no.



TECHINICAL TIPS

With increasing awareness of the COVID-19 and progress been made in epidemic prevention and control, the guidelines will be continuously adjusted and improved to better protect the lives and health of the general public.