

Coronavirus Disease 2019 Response Guidelines (For Local Governments)

Edition 7-3

March 15, 2020

The Central Disease Control Headquarters
The Central Disaster Management Headquarters

The Korea Centers for Disease Control and Prevention

- Legal basis:
 - The coronavirus disease 2019 (COVID-19), which was first reported from Wuhan, Hubei, China, corresponds to Infectious Disease Control and Prevention Act of Republic of Korea Article 2, Subparagraph 2, Item **"Class 1 infectious disease — emerging infectious disease syndrome"** until further clinical and epidemiological details are revealed, and will be acted upon accordingly
- **Approach:**
 - The guidelines are written based on current knowledge of COVID-19
 - Case definition, incubation period, procedures, *etc.* are to be updated according to future occurrences and results of epidemiological investigations
- **Matters regarding clinical diagnosis should follow clinical guidelines provided by relevant academic societies except for administrative matters described in this guideline**
- **Major revisions:** Changes in standards for release of confirmed cases from isolation and quarantine release of close contacts
Appendix 13. Frequently Asked Questions (FAQs)

Comparison of new and previous quarantine/isolation releases

Category	Previous release (Edition 7-2)	New release (Edition 7-3)
Confirmed cases	<p>Standards for isolation release of symptomatic confirmed cases:</p> <ul style="list-style-type: none"> Isolation release standards should satisfy the following clinical and laboratory criteria in principle <ol style="list-style-type: none"> Clinical criteria: Clinical symptoms are alleviated with no fever, without any consumption of antipyretics Laboratory criteria: Two negative PCR tests conducted 24 hours apart If the clinical criteria are met, the patient can be discharged from the hospital even if the laboratory criteria are not satisfied. In this case, the standard for release from isolation is as below: <ol style="list-style-type: none"> Laboratory criteria: Two negative PCR tests conducted 24 hours apart, as a guiding principle <p style="text-align: center;">OR</p> <ol style="list-style-type: none"> Release from isolation after 3 weeks of home- or facility isolation since the date of symptom onset <ul style="list-style-type: none"> * However, the high-risk group must meet the clinical and laboratory criteria 	<p><u>Standards for isolation release of symptomatic confirmed cases:</u></p> <ul style="list-style-type: none"> Isolation release standards should satisfy the following clinical and laboratory criteria <ol style="list-style-type: none"> Clinical criteria: Clinical symptoms are alleviated with no fever, without any consumption of antipyretics Laboratory criteria: Two negative PCR tests conducted 24 hours apart If the clinical criteria are met, <u>home or facility isolation upon hospital discharge is possible</u> even if the laboratory criteria are not met. <u>However, isolation release is only granted when the laboratory criteria are satisfied.</u> <ol style="list-style-type: none"> Laboratory criteria: Two negative PCR tests conducted 24 hours apart <p><u>REMOVED</u></p>
	<p>Standards for isolation release of asymptomatic confirmed cases:</p> <ul style="list-style-type: none"> Isolation release standards should satisfy the following laboratory criteria in principle <ol style="list-style-type: none"> On the 7th day from the date of confirmation, patients may be released from isolation following two negative PCR tests conducted 24 hours apart If the PCR test result remains positive on the 7th day from the date of confirmation, patients may be released from isolation after an additional 7 days (14 days since the date of confirmation) following two negative PCR tests conducted 24 hours apart <p style="text-align: center;">OR</p> <ol style="list-style-type: none"> If the patient remains asymptomatic, he/she may be released from isolation following 3 weeks of home or facility isolation since the date of confirmation 	<p><u>Standards for isolation release of asymptomatic confirmed cases:</u></p> <ul style="list-style-type: none"> Isolation release standards should satisfy the following laboratory criteria <ol style="list-style-type: none"> On the 7th day from the date of confirmation, patients may be released from isolation following two negative PCR tests conducted 24 hours apart <u>If the PCR test result remains positive on the 7th day from the date of confirmation, the medical staff may set a new test date (e.g. the 10th day, the 14th day, etc.), and the patient may be released from isolation following two negative PCR tests conducted 24 hours apart after that date</u> <p><u>REMOVED</u></p>

Suspected cases	Isolation for 14 days from the last day of contact with a confirmed case	Maintain current standard
Close contacts	<p>Quarantine for 14 days from the last day of contact with a confirmed case.</p> <p>However, among the close contacts of confirmed cases, health workers (including caregivers) should get tested on the 13th day of quarantine even if they are asymptomatic. If the test result is negative, then the individual can be released from quarantine after the 14th day.</p>	<p>Quarantine for 14 days from the last contact with a confirmed case.</p> <p>However, among the close contacts of confirmed cases, health workers (including caregivers) <u>and family members living with them</u> should get tested on the 13th day <u>from the last day of contact</u> even if they are asymptomatic. If the test result is negative, then the individual should be released from quarantine after the 14th day.</p>
Families living with confirmed cases	<p>1. Family members of a confirmed case in hospital/facility isolation: Release from quarantine 14 days after the last day of contact with the patient</p> <p>2. Family members of a confirmed case in home isolation: Release from quarantine 14 days after the confirmed case is released from isolation</p>	Maintain current standard

< Table of Contents >

I . Background	9
1. Definition	9
2. Current Status	9
3. Coronavirus Disease 2019 (COVID-19) Related Information	10
II . Response	11
1. Response Protocols	11
2. Implementation System ("Red Alert")	12
III . Case Definitions and Management Methods	18
1. Case Definitions	18
2. Close Contact Definitions	19
3. Management (Surveillance) Methods	20
IV . Responding to Suspected Cases and Patients Under Investigation (PUI)	22
1. Suspected Cases	25
2. Patients Under Investigation (PUI)	28
3. Management of Screenees at COVID-19 Screening Centers (Public Health Centers) ...	30
V . Response Guidelines for Confirmed Cases	32
1. Reporting Confirmed Cases and Deaths	32
2. Isolation of Confirmed Cases	32
3. Epidemiological Investigation	35
4. Release from Isolation	45
5. Epidemic Control Measures	47
VI . Bed Allocation and Transfers	49
1. Establishing a Bed Allocation and Management System	49
2. Bed Allocation and Management Principles	49
3. Patient Transportation	50
4. Patient Transfer	50
VII . Management of Deceased Persons	52
1. Purpose	52

2. Principles	52
3. Scope and Responsibilities	52
4. Step-by-Step Measures	53
5. Administrative Matters	54
 VIII . Laboratory Testing Management	 56
1. Specimen Collection	56
2. Testing Request	59
3. Specimen Transport	59
4. Conducting Tests	60
5. Reporting Test Results	60
 IX . Environmental Management	 62
1. General Principles of Disinfection	62
2. Preparation Before Disinfection	62
3. Precautions During Disinfection	63
4. Precautions After Disinfection	64
5. Disinfection Measures	65

< Forms >

1. Infectious Disease Reporting Form	68
2. Report of Death (Post-Mortem Inspection) Relating to Infectious Disease	72
3. Inpatient Treatment Notice	75
4. Notice of Isolation/Quarantine (Korean/English)	76
5. COVID-19 Basic Epidemiological Investigation (Confirmed Case)	78
6. COVID-19 Case Management Report (Confirmed Case)	81
7. Home-Isolated/Quarantined Patient Monitoring Log	83
8. Patient Health Monitoring Log	84
9. COVID-19 Close Contact Tracing Form	85
10. Daily Status Report: Epidemiological Investigation by Municipal COVID-19 Immediate Response Task Force (Sample)	86
11. Epidemic Control Measure Form	88
12. Certificate of Disinfection	89
13. Laboratory Test Request Form	90

Central Disease Control Headquarters (CDCH) Departments

Department		Task
Risk Communication / Administrative Support Division	Risk Communication Unit	<ul style="list-style-type: none"> • Press conference (briefing, telephone briefing, etc.) • Public communication (content development and distribution, communication channel operation, etc.) and statistical analysis • 1339 management team
	Administrative Support Unit	<ul style="list-style-type: none"> • CDCH administrative support (personnel, material support, etc.)
Situation Room		<ul style="list-style-type: none"> • Emergency Operations Center (EOC) • Report, reception, response management and statistical analysis • Daily report and status update • Instant response team
General Situation Management Division	General Management Unit / Guidelines Management Unit	<ul style="list-style-type: none"> • General management of CDCH • Domestic patient outbreak monitoring and outbreak report, statistical analysis • Prepare public information materials such as press releases • Establish diagnostic and reporting criteria • Provide guidance
	Situation Analysis / International Cooperation Unit	<ul style="list-style-type: none"> • Monitoring domestic and international COVID-19 status • Statistical analysis, information and risk analysis, analysis results sharing • Operation of international cooperation channels with foreign governments and international organizations
	Port-of-Entry (POE) Screening Management Unit	<ul style="list-style-type: none"> • Overview of POE screening measures • Statistical analysis and update of the status of National Quarantine Station • Fever monitoring and health condition questionnaire for incoming travelers • Promotion for international travelers
Healthcare Facility / Resource Management Division	Healthcare Facility / Infection Control Unit	<ul style="list-style-type: none"> • Support for infection control in healthcare facilities • Infection Control Guide for COVID-19 Screening Center
	Healthcare Resource Management Unit	<ul style="list-style-type: none"> • National emergency medical resource management, statistical analysis (Nationally designated inpatient beds, national stockpiles, human resources)
Patient / Contact Management Division	Epidemiological Investigation Unit	<ul style="list-style-type: none"> • Instruction and education of local governments for epidemiological investigation • Analysis of epidemiological characteristics through identification of transmission sources and paths • Operation and management of patient / contact management system, statistical analysis

	Patient Management Unit	<ul style="list-style-type: none"> • Patient management planning, high-risk group management • Identify and investigate the status of the fatalities and those released from quarantine/isolation
	Information Analysis Unit	<ul style="list-style-type: none"> • Master database construction and data management, statistical analysis, etc.
Laboratory Analysis Management Division	Laboratory Testing Management Unit	<ul style="list-style-type: none"> • Laboratory testing standardization management • Laboratory quality control management • Expansion and management of external laboratory tests • Specimen transfer
	Laboratory Analysis Unit	<ul style="list-style-type: none"> • Testing to identify pathogens • Virus isolation culture and genome analysis • Distribution of testing method and quality control • Testing method improvement and development

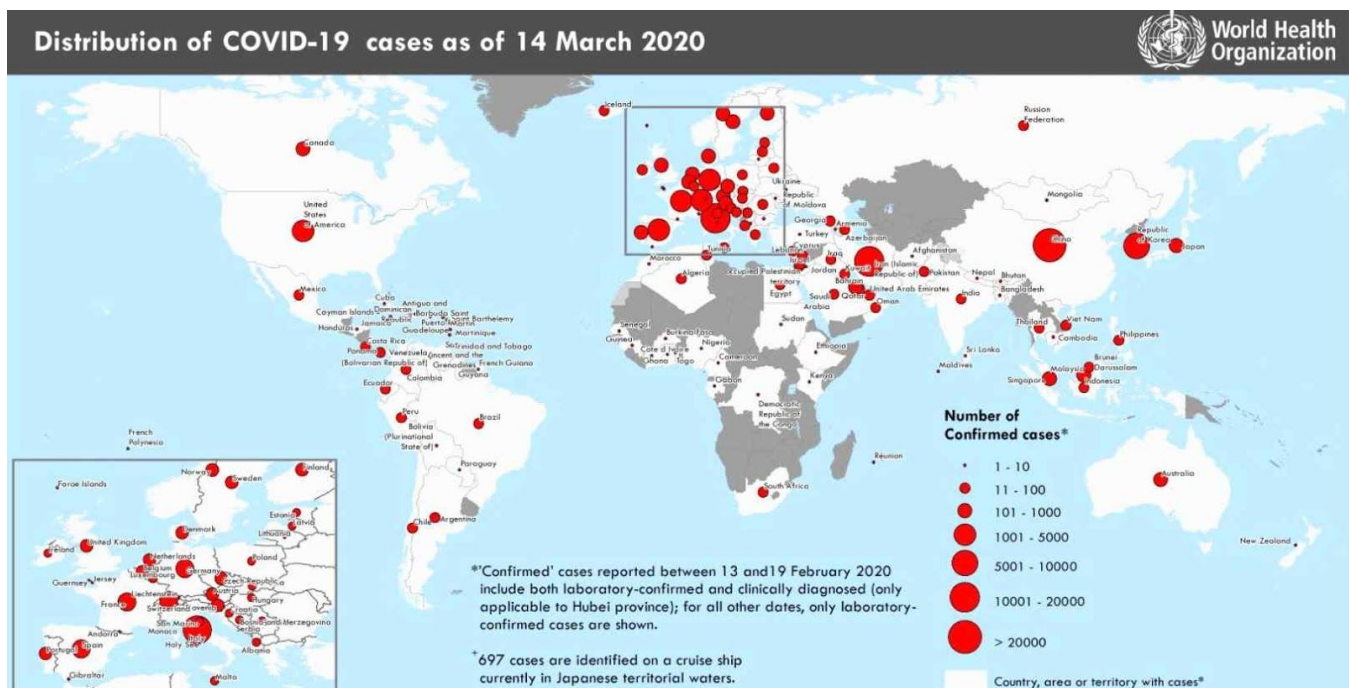
I. Background

1. Definition

- On February 11, 2020, WHO named the novel coronavirus disease, first identified in Wuhan, China, as COVID-19
- * COVID-19 stands for “CO”rona “VI”rus “D”isease-20”19”
- On February 12, 2020, the South Korean government decided to call the coronavirus: “Corona 19”

2. Current Status

- From 12/31/2019 to 01/03/2020, 44 patients with pneumonia of unknown etiology were reported in China
- On 01/07/2020, a new type of coronavirus was isolated by the Chinese Ministry of Health
- On 01/11-12/2020, the Chinese Ministry of Health reported the cases’ exposure history in the Huanan Seafood Wholesale Market in Wuhan
- Since 01/13/2020, other countries* identified confirmed cases related to international travel
- * Thailand (01/13), Japan (01/15), South Korea (01/20)
- As of 03/14/2020, 142,539 cases have been confirmed and 5,393 deaths occurred in a total of 136 countries



3. Coronavirus Disease 2019 (COVID-19) Related Information

* To be updated as the characteristics of the virus are revealed

Definition	<ul style="list-style-type: none"> Severe acute respiratory syndrome due to an infection by coronavirus 2 (SARS-CoV-2)
Disease classification	<ul style="list-style-type: none"> Nationally notifiable infectious disease: Class 1 infectious disease — emerging infectious disease syndrome Disease code: U07.1
Pathogen	<ul style="list-style-type: none"> SARS-CoV-2: RNA virus belonging to the <i>Coronaviridae</i> family
Transmission routes	<ul style="list-style-type: none"> As of now, it is thought to spread from person to person via droplets and contacts <ul style="list-style-type: none"> Through droplets when an infected person coughs or sneezes By touching objects contaminated with the virus, then touching one's eyes, nose or mouth
Incubation period	<ul style="list-style-type: none"> 1~14 days (4~7 days on average)
Diagnostic criteria	<ul style="list-style-type: none"> Patient: A person who has been confirmed to be infected with the pathogen according to the laboratory criteria for the diagnosis
	<ul style="list-style-type: none"> Laboratory criteria for the diagnosis <ul style="list-style-type: none"> The virus is isolated from the specimen Specific genes are detected from the specimen
Symptoms	<ul style="list-style-type: none"> Fever, malaise, cough, shortness of breath, pneumonia, and various symptoms of respiratory infections, ranging from mild to severe <ul style="list-style-type: none"> Phlegm, sore throat, headache, hemoptysis, nausea, and diarrhea are also seen
Treatment	<ul style="list-style-type: none"> Symptomatic Treatment: Conservative treatments such as IV fluid and antipyretics No specific antiviral drug currently available
Case fatality rate	<ul style="list-style-type: none"> The case fatality rate is known to be 1-2%, but not yet confirmed However, the elderly, immunocompromised patients, and patients with underlying medical conditions are most likely to fall in critical condition or die from the disease
Management	Patient management <ul style="list-style-type: none"> Compliance with standard regulations and avoidance of droplets and direct contact While having symptoms, patients are advised to stay at home and avoid contact with others
	Close contact management <ul style="list-style-type: none"> Observation of symptom development
Prevention	<ul style="list-style-type: none"> No vaccine exists Correct handwashing <ul style="list-style-type: none"> Wash hands with soap for 30 seconds or more in running water Wash hands after returning home, after bowel movement, before and after meals, before and after diaper change, after blowing nose, coughing, sneezing, etc. Cough etiquette <ul style="list-style-type: none"> When coughing, cover mouth and nose with tissue or upper sleeves Wear a mask when having any respiratory symptoms Avoid touching eyes, nose and mouth with unwashed hands

II. Response

1. Response Protocols

A. Legal Basis

We will respond to the **coronavirus disease** (COVID-19), first reported in the Hubei Province of China, as a “**Class 1 infectious disease — emerging infectious disease syndrome**” until more clinical and epidemiological information becomes available.

➤ **Appendix 1. Main Contents of Legal Basis for COVID-19 Response**

B. Direction of Response

- Early detection and identification of outbreak patterns
- Rapid epidemiological investigation, management of patients and their contacts
- Reinforced promotion of education for prevention of COVID-19

C. Management Policy

- Prevent spread of infection through “Monitoring - Epidemiological investigation - Management”
- Prevent infection through education and promotion of personal hygiene including proper hand washing and cough etiquette
- Strengthen capacity of regional communities by establishing a cooperative system of local governments, private healthcare facilities, and relevant organizations

Summary of management policy

Monitoring	Epidemiological investigation	Management	Education/public awareness/cooperation
1. Patients <ul style="list-style-type: none"> ● Early detection of patients ● Early detection of clusters 2. Pathogen <ul style="list-style-type: none"> ● Isolation and identification of virus ● Confirmation of suspected viruses ● Genetic analysis, etc. 	<ul style="list-style-type: none"> ● Identify scale of outbreak ● Identify infection sources and pathogens ● Block spread ● Prevent additional outbreaks 	1. Patients <ul style="list-style-type: none"> ● Treat and isolate 2. Close contacts <ul style="list-style-type: none"> ● Monitor symptom development ● Quarantine/monitor if necessary 3. Environment <ul style="list-style-type: none"> ● Disinfect and perform prevention measures 	<ul style="list-style-type: none"> ● Strengthen capacity of local government ● Establish cooperative system between relevant organizations ● Educate and raise public awareness in the community

2. Implementation System ("Red Alert")

A. Establish Organizations

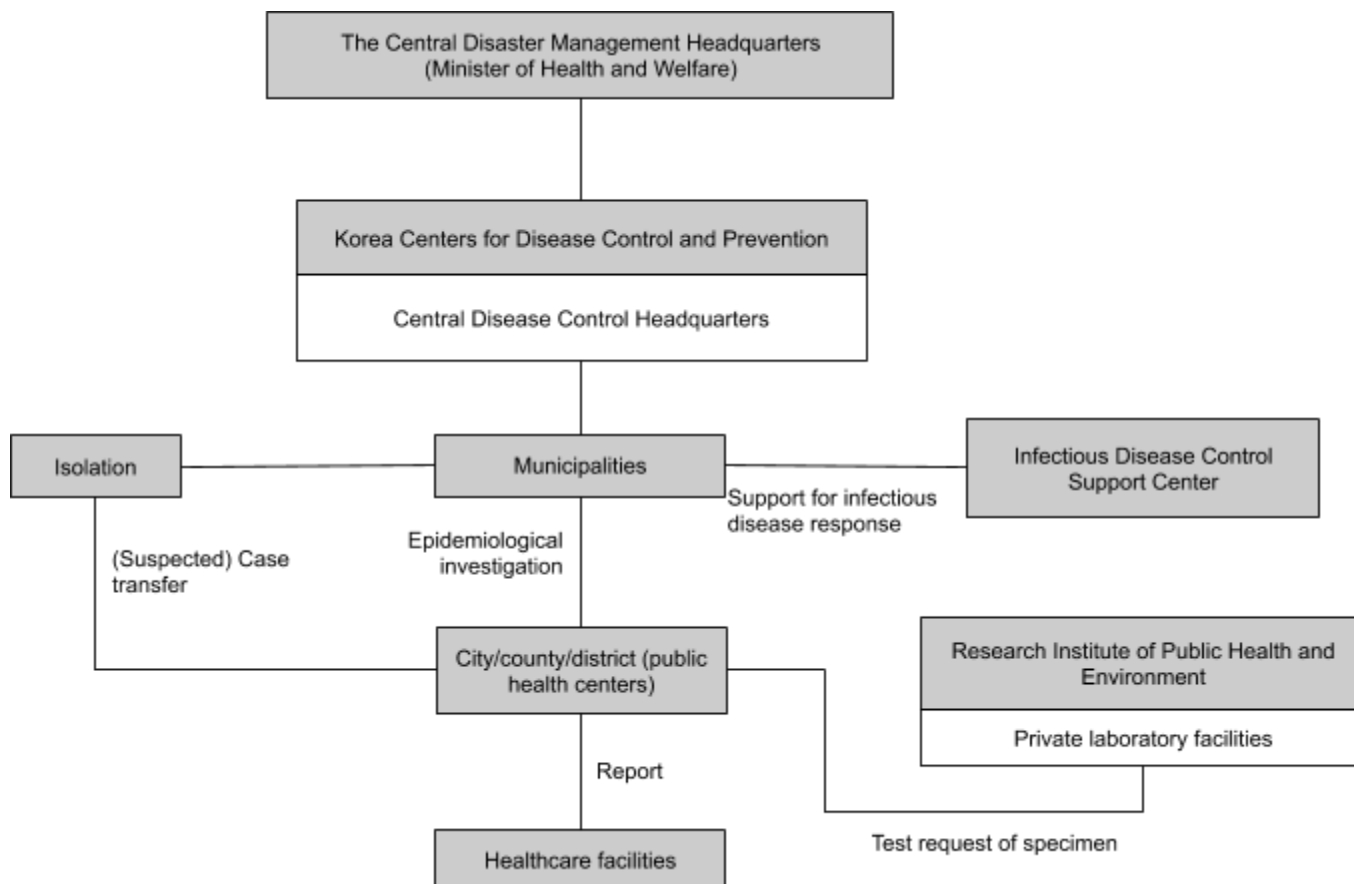
- Continue operation of the **Central Disease Control Headquarters** at the Korea Centers for Disease Control and Prevention
- Establish and operate the **Central Disaster Management Headquarters** of the Ministry of Health and Welfare
- Continue operation of **Regional Epidemic Control Task Forces** at the municipal and city/county/district levels; establish **Regional Disaster and Safety Countermeasures Headquarters** in affected areas

Crisis warning level	Response system		
	Central		Local
4 Red alert	<div> Central Disease Control Headquarters (Centers for Disease Control and Prevention) </div>	Central Disaster and Safety Countermeasures Headquarters (Minister of Public Administration and Security or Prime Minister)	Regional Disaster and Safety Countermeasures Headquarters (Local governments)
		<div> Central Disaster Management Headquarters (Ministry of Health and Welfare) </div> <div> Pan-government Support Headquarters (Ministry of Public Administration and Security) </div>	<div> Regional Epidemic Control Task Forces (Local governments) </div>

B. Working Council

- Establish the Central-Local Working Council under the Deputy Head of the Central Disaster Management Headquarters (Vice Minister) to coordinate activities of central and local governments

C. Roles of Central and Local Governments



D. Responsibilities of Each Organization

Relevant organizations	Roles
Korea Centers for Disease Control (Central Disease Control Headquarters)	<ul style="list-style-type: none"> Continue to operate Central Disease Control Headquarters In case of large-scale clusters, support on-site measures (e.g. epidemiological investigations and control measures) Enhance crisis monitoring and evaluation Strengthen the operation of 24/7 Emergency Operations Center Prevent additional imported cases by strengthening port-of-entry screening Strengthen early detection and surveillance system Manage laboratory testing (facility expansion, quality management, etc.) Coordinate cooperation and arrangement among relevant organizations Press communications (briefing, press releases, coverage support), responses to public complaints and public communication management
Municipality City / County / District	<ul style="list-style-type: none"> Operate regional epidemic control task forces for all municipalities, cities, counties, and districts nationwide Operate regional disaster safety countermeasures headquarters for all municipalities, cities, counties, and districts where COVID-19 occurred Cooperate with the central-local government working councils Operate patient management task forces in all municipalities nationwide (severity classification task force, bed allocation task force)* Regional patient monitoring system Operate regional epidemic control infrastructure Regional epidemiological investigation, on-site epidemic control measures, patient transfers, contact investigation support, patient and contact management, quarantine release, etc. Strengthen the cooperation system with relevant local organizations Strengthen communications such as education and promotion for local residents Manage isolation beds and facilities in the area and plan for additional securing Reorganize public health centers focused on epidemic control services and reinforcement of testing personnel
Research Institute of Public Health and Environment	<ul style="list-style-type: none"> COVID-19 pathogen laboratory testing at the municipal level
Infectious Disease Control Support Group	<ul style="list-style-type: none"> Technical support (COVID-19 surveillance, epidemiological investigation, data analysis, etc.) at the municipal level Technical support for management strategies for COVID-19 tailored to each municipality

Healthcare facility	<ul style="list-style-type: none"> ○ Diagnosis and treatment of COVID-19 patients ○ Report COVID-19 cases, deaths, and discharges ○ In case of COVID-19 outbreak, cooperate with epidemiological investigations and infectious disease management ○ Operate COVID-19 screening center
---------------------	---

* **Patient Management Task Force:** Refer to VI. Bed Allocation and Transfers

E. Municipal COVID-19 Immediate Response Task Force

- Establish and operate an **Municipal COVID-19 Immediate Response Task Force*** within **Municipal COVID-19 Regional Epidemic Control Task Force**
 - For every municipality and city/county/district with confirmed cases, dispatch the Immediate Response Task Force with the authority to **perform epidemiological investigation and manage countermeasures for close contacts and local environment**
 - * The KCDC shall form a response team for each region (consisting of one epidemic control officer and one to two epidemiological investigators) to advise epidemiological investigation and patient management
 - Should additional cases or multiple close contacts emerge in a community facility, provide support (epidemic control, medical care, lifestyle) and guidance on control measures and operational plans
 - **Organization:** Establish an Immediate Response Task Force consisting of 5 to 7 personnels or more covering the following positions/tasks:

Epidemic control officer*	Epidemiological investigator(s)	Field management/Security	Contact tracing database manager	Administrator	Testing management
1	1-2	1	1	1	(1)

* The epidemic control officer must be appointed by the mayor/governor of the municipality and either be the current Director General or Director of Public Health Policy Department (Infectious Disease Control and Prevention Act, Article 60)

- **Operation:** Operate flexibly according to the circumstances* of each local government
 - * e.g. number of personnel, order of deployment, and mode of operation (planning must include backup personnel)
- **Task:** Perform timely investigation and response; assess situations, implement emergency measures, control site access, conduct epidemiological investigations, etc.

Qualifications and duties of an epidemic control officer

- **Article 60, Infectious Disease Control and Prevention Act of Republic of Korea (Epidemic Control Officer)**
 1. An epidemic control officer is a public official who oversees tasks related to prevention of infectious diseases and control of epidemics; the officer is to be appointed by the Minister of Health and Welfare or mayor/governor of the respective municipality. However, to prevent and

control infectious disease outbreaks, an epidemic control officer may be appointed by a head of a city/county/district among its government officials if necessary

- **Article 25, Enforcement Decree of The Infectious Disease Control and Prevention Act of Republic of Korea (Qualifications and Duties of the Epidemic Control Officer)**
 1. As required by Article 60, Paragraph 1, the appointee must be a level 4 or above government official with strong experience in fields related to infectious disease management
 - * For an officer of a city/county/district, the appointee must be a level 5 or above government official with strong experience in fields related to infectious disease management
 2. In addition to those outlined in Article 60, Paragraph 3, an epidemic control officer is authorized to perform the following at the site of an infectious disease outbreak:
 - i. Measures to hospitalize or quarantine anyone suspected to be infected by the pathogen at a proper venue for a certain period of time
 - ii. Measures to disinfect contaminated sites or buildings and any other necessary measures
 - iii. Measures to prohibit laundry or mandate wastewater treatment in specified areas

Step	Main task
Advance preparation	<ul style="list-style-type: none"> Establish Municipal COVID-19 Immediate Response Task Force
	<ul style="list-style-type: none"> Determine the scale, history, and locations after the symptom onset through information from confirmed cases and their close contacts Immediate quarantine measures for close contacts; report and test those showing symptoms Acquire information regarding employees, users, and environment of community facilities; announce epidemiological investigation and response plan
Field response	<ul style="list-style-type: none"> Set action items, epidemiological investigation plans, priorities, etc. through initial situation evaluation Divide tasks Epidemiological investigation: identify patient's location history and transmission paths, and manage facilities and environment On-site control <ul style="list-style-type: none"> Facility management (temporary restriction on operation until proper disinfection) Close contact investigation and management Waste management
Corrective measures	<ul style="list-style-type: none"> Manage confirmed cases (isolation release if criteria are met) Home quarantine of close contacts and active monitoring of their symptoms When extensive exposure is confirmed in a community facility <ul style="list-style-type: none"> (if necessary) shut down the facility, quarantine close contacts, etc.
Situation report	<ul style="list-style-type: none"> Daily epidemiological investigation updates to municipal COVID-19 Immediate Response Task Force (Once a day) Immediately report death case

F. Municipal COVID-19 Patient Management Task Force

- Patient Management Task Force: Each Municipality to establish two teams under the task force:
 - Severity Classification Task Force: Consists of doctors and operating personnels
 - Hospital Bed Allocation Task Force: Consists of administrative and public health personnels

III. Case Definitions and Management Methods

The case definitions below apply to the imported COVID-19 spread under the **crisis alert level “Red Alert,”** and may change depending on the occurrence of domestic confirmed cases, results of epidemiological investigations, and the size of the epidemic

1. Case Definitions

- **Confirmed case**

A person whose infection with a pathogen has been confirmed in accordance with laboratory criteria, regardless of clinical condition

❖ Diagnostic test : COVID-19 gene (PCR) test, isolation of the virus

- **Suspected case**

A person who, after **contact with a confirmed case** during the confirmed case's symptomatic period, within 14 days of the contact, develops a fever (37.5°C or higher) or respiratory symptoms (e.g., coughing, shortness of breath, etc.).

- **Patient Under Investigation (PUI)**

- **A person who, according to a physician's judgment, is suspected of COVID-19 or of pneumonia of unknown etiology**

- A person who develops fever (37.5°C or higher) or respiratory symptoms (e.g., coughing, shortness of breath, etc.) within 14 days of **visiting a country with regional spread* of COVID-19 such as China (including Hong Kong and Macau)**

*Refer to the country classifications on the WHO website (local transmission) or the KCDC website→COVID-19→outbreak trends→local transmission

- A person with an **epidemiological association** with a **domestic cluster** of COVID-19, and who develops a fever (37.5°C or higher) or respiratory symptoms (e.g., coughing, shortness of breath, etc.) within 14 days

Cases subject to reporting

○ (Confirmed)	Someone confirmed as infected in accordance with laboratory criteria, regardless of clinical condition	
○ (Suspected)	Someone who has had contact with a confirmed case within the last 14 days	+
○ (PUI*)	Someone who has visited a country with regional COVID-19 transmission (e.g., China including Hong Kong and Macau) within the last 14 days	+
○ (PUI*)	Someone with an epidemiological association to a domestic cluster outbreak of COVID-19 in the last 14 days	+
○ (PUI*)	Someone who is suspected to have COVID-19, such as pneumonia of an unknown etiology, according to a doctor's opinion	

Develops a **fever** (37.5°C or higher) or **respiratory symptoms** (e.g., coughing, shortness of breath, etc.)

*Patient Under Investigation

Criteria for laboratory testing fee subsidy

- **Healthcare facilities other than public health centers:** Only patients reported to public health centers according to the applicable case definitions (applicability must be noted on the Remarks section) will be eligible for health insurance coverage and coinsurance support
- **Public health centers:** Subsidized testing fees will be given to the KCDC-designated laboratories according to the commission contract, but only for patients reported to public health centers according to the applicable case definitions. Local governments will pay the fees for specimens requested due to the respective government's needs, aside from the applicable case definitions.

2. Close Contact Definitions

- A close contact is a person who has been in contact with a confirmed case
 - Close contacts are determined by city/county/district public health centers as well as epidemiological investigations by Municipal COVID-19 Immediate Response Task Force
 - Close contacts can be added by reporting and contact monitoring in addition to epidemiological investigations

3. Management (Surveillance) Methods

- ❖ Note: Contact management by public health departments and task forces can be done flexibly according to the local conditions (see **Appendix 2. Role Classification - Department Overseeing Home-Quarantined Persons and Department of Public Health**)

A. Subject Monitoring

- Monitoring: confirming whether COVID-19 suspected symptoms occur during the maximum incubation period
- Active surveillance
 - Method: Actively confirming existence/nonexistence of fever or respiratory symptoms twice a day by the subject
 - Jurisdiction: The public health center in the jurisdiction of the subject's residence*
 - * If the subject moves the quarantine location, jurisdiction is transferred from the public health center of the previous location
- Monitoring via self-diagnosis app

B. Health Education

- **DO NOT:** Go out, contact with others (including meals), use public transportation, visit public facilities, etc.
- **DO:** Wear masks to prevent respiratory infections, emphasize hand washing, observe cough etiquette, inform any history of international travel/contact with a patient when visiting healthcare facilities, etc.
- If symptoms occur or exacerbate, first contact the KCDC call center (☎1339, area code+120) or a public health center

C. Quarantine/Isolation Measures

- If at risk for transmitting a pathogen to others, make sure a patient resides in a space separated from others; reduce the risk of transmission by managing symptoms
- Subject to quarantine/isolation: confirmed cases, suspected cases, contacts with confirmed cases (without symptoms)
- Quarantine/isolation locations can be classified as: home, facility, hospital
- Quarantine/isolation methods
 - **Home quarantine:** quarantine in a separate place at home
 - **Facility quarantine/isolation:** isolation at an **infectious diseases control facility***, **quarantine office**, **healthcare facility**, or temporary quarantine facility within the national quarantine station, designated by the Minister of Health and Welfare or a municipal governor
 - * A facility established according to the *Infectious Diseases Prevention Act* (article 37, paragraph 1, subparagraph 2) to isolate confirmed cases that is not a healthcare facility are referred to as “Residential Treatment Centers” below

- ◆ Legal Basis: Infectious Diseases Prevention Act, articles 37 and 39, and its enforcement regulations (article 31, paragraph 2); Quarantine Act, article 16 and its enforcement regulations (article 14)
- **Hospital isolation:** isolation at hospital due to the necessity of inpatient treatment; patients in severe conditions according to severity classification or in high risk groups must be hospitalized

High risk group

- **Age:** 65 or older
- **Chronic underlying health conditions:** Patients with diabetes mellitus; chronic renal, hepatic, pulmonary, and/or cardiovascular diseases; patients with hematologic malignancies; any cancer patients undergoing chemotherapy; patients taking immunosuppressants; HIV/AIDS patients
- **Special situations:** Patients with morbid obesity, pregnancy, end-stage-renal-disease undergoing dialysis, and/or organ transplant history
- **Inpatients:** Patients with oxygen saturation below 90% on room air requiring initial supplemental oxygen therapy

IV. Responding to Suspected Cases and Patients Under Investigation (PUI)

□ Suspected Case

		Details	Authority
1	Suspected case reporting	<ul style="list-style-type: none"> • Input information into the Integrated Disease & Health Management System • (Starting 14 days before onset of symptoms) Check records of contact with confirmed cases • Check symptoms 	Agency that first identified the case
2	Suspected case management • Isolation protocol	<ul style="list-style-type: none"> • Case classification (severity classification) • Issue inpatient treatment notice • If necessary, assign and transport to hospital bed • Sample collection and request • Input sample analysis results into the Integrated Disease & Health Management System 	Municipal COVID-19 Immediate Response Task Force Municipal COVID-19 Patient Management Task Force City/county/district epidemiological investigation team
3	Release of isolation • Final confirmation of test results from suspected case and release of isolation	<ul style="list-style-type: none"> • Confirmation of test results from suspected case • Even if test results are negative, quarantine for 14 days after contact with a confirmed case 	Municipal COVID-19 Patient Management Task Force City/county/district epidemiological investigation team

□ Patient Under Investigation (PUI)

		Details	Authority
1	Declaring/reporting PUI	<ul style="list-style-type: none"> Input information into the Integrated Disease & Health Management System <ul style="list-style-type: none"> Remarks section must be completed Confirm history of overseas travel, relations to domestic outbreak, occupation, etc. 	Agency that first identified the case
2	Diagnosis	<ul style="list-style-type: none"> Conduct laboratory test 	<ul style="list-style-type: none"> COVID-19 screening center (healthcare facility/public health center) General healthcare facilities
3	Management of PUI	<ul style="list-style-type: none"> Health education* Check laboratory test results of PUI <ul style="list-style-type: none"> Positive: Treat as confirmed case Even if negative, advise following procedures as outlined in the health education* until 14 days from the date of entry/symptom onset 	<ul style="list-style-type: none"> COVID-19 screening center (healthcare facility/public health center) General healthcare facilities

* Health education

- **DO NOT:**
 - Go out (especially to public facilities where many people gather)
 - Be in close contact with others
 - Use public transportation
- **DO:**
 - Emphasize hand washing for personal hygiene and observe cough etiquette
 - When talking with others is necessary/unavoidable, keep a distance of at least 2 meters and wear a mask to prevent respiratory infections
 - When visiting a healthcare facility is necessary/unavoidable, disclose pertinent personal information such as history of overseas travel, connections to domestic outbreaks, occupation, etc.
 - If symptoms occur or worsen, contact the Center for Disease Control and Prevention (☎1339, area code + 120) or a public health center

Principal agents for each step in managing suspected cases/PUI

Distinction	Incidence report	Specimen collection	Managing authority	Management method	Specimen transfer
Suspected case	First recognizing agency (healthcare facility/public health center)	Screening clinic (healthcare facility/public health center)	Municipal epidemiological investigator	Home isolation/ designated hospital etc.	Screening clinic (healthcare facility/public health center)
PUI	First recognizing agency (healthcare facility/public health center)	Screening clinic (healthcare facility/public health center)	Screening clinic (healthcare facility/public health center)	Health education	Screening clinic (healthcare facility/public health center)
		General healthcare facility	General healthcare facility		General healthcare facility
Distinction	Laboratory testing	Patient transfer/ information guidance before notice of test results	Quarantine notice	Release from quarantine	Support
Suspected case	In-house (health facility) or assigned agency	Own car/on foot/ ambulance (public health center, 119*) (Information guidance: screening clinic at healthcare facility/public health center)	1. First recognizing public health agency (verbal notice) 2. Local public health center (written notice)	Municipal epidemiological investigator	Testing and isolation costs, etc.
PUI	In-house (health facility) or assigned agency	Refrain from public transportation (Information guidance: screening clinic at healthcare facility/public health center)	-	-	Testing costs*
	In-house (health facility) or assigned agency	Refrain from public transportation (Information guidance: general healthcare facility)	-	-	Testing costs*

* Translators' note: 119 is the number for emergency services in Korea

❖ Information guidance: Prior to notification of test results, the institution that provides medical services and testing should provide basic guidance regarding transportation, health education, etc.

* However, if preemptive isolation is required among PUI due to pneumonia of unknown etiology or other reasons, health insurance will be applied to the hospital room fees for the isolation in addition to the testing costs

Laboratory test priority

1. Symptomatic PUI among close contacts of confirmed cases
2. Symptomatic PUI with epidemiological association to domestic clustering cases

3. Symptomatic PUI suspected of COVID-19 according to doctor's opinion
4. Follow-up test of confirmed cases (to determine isolation release)

1. Suspected Cases

A. Declaration / Report

1) Recognition of symptoms of suspected case

- Situation 1: Voluntary notification while at home (1339 or public health center) or during home isolation
- Situation 2: Report by a healthcare facility (outpatient, emergency room, hospital ward, screening facilities (including public health centers), etc.)

2) Reporting the suspected case

- Healthcare facility / Public health center
 - Confirm that a patient meets the case definition criteria (history of contact with confirmed cases, clinical symptoms, relations to domestic clustering cases, etc.)
 - **Form 1 Infectious Disease Reporting Form**
- Public health center that first identified the case
 - Immediately upon recognition of the reported case, verify whether it has been reported through the Integrated Disease & Health Management System's Infectious disease web reports
 - If unreported, notify the healthcare facility to report the case to a healthcare institution

Infectious disease onset information

Date of disease onset		Date of diagnosis		Date of report	
Test result	Positive / Negative / Testing / Not tested			Status of hospitalization	Outpatient / Hospitalized / Neither
Patient classification	Confirmed case / Suspected case / Carrier / Neither (not a patient)				
Notes	[Classification of suspected case] Suspected case: A person with symptoms who had contact with a confirmed case [Classification of a Patient Under Investigation] Category I: Cases with pneumonia of unknown etiology or suspected COVID-19 infection, according to physician's clinical judgment Category II: Symptomatic cases with known travel history to China or other countries with COVID-19 outbreak Category III: Symptomatic cases related to domestic clusters				
Case status	Survived / Fatal				

Reporting healthcare facility

Healthcare facility ID		Healthcare facility name	
Address		Phone number	
Name of diagnosing doctor		Name of reporting facility head	

- Even if the web form’s “patient classification” box has been checked, ensure that the “Remarks” section is filled out, indicating a “**suspected case**”

Suspected case classification

Suspected case: symptomatic individuals among those who have come into contact with a confirmed case

B. Triage of Suspected Cases

- ❖ Determine hospital isolation or home isolation depending on whether the patient belongs to high-risk groups and/or severity of symptoms (by Municipal COVID-19 epidemiologic investigator and Patient Management Task Force)

1) Public health center that first identified the case

Transfer of suspected cases: by personal vehicle, walking, or ambulance (public health center, 119), if necessary, to transfer between healthcare facilities for sample collection or to move to a location for isolation

* If the health center or 119 (emergency services) cannot provide the patient with an ambulance (suspected case must wear a mask)

1. Drive a personal vehicle
2. If within a walkable distance, walk while wearing a mask (minimize contact with others)
3. If provided with an official car (a passenger car), the driver should wear a KF94 or equivalent mask and disposable gloves

2) Home isolation notification

- Public health center that first identifies the case: Home isolation and testing guidance, verbal notification, and notification of public health center in the jurisdiction of residence
 - Public health center in the jurisdiction of residence: Provide instructions on the first visit and guidelines, as well as **hospitalization notice** (hospital, home, or facility) and day-to-day guideline
 - Suspected case must home-isolate by principle*
 - * In the case of a patient with mild symptoms who cannot home-isolate due to requiring independent space or additional assistance, proper isolation location is to be provided such as facilities or hospitals; patients with moderate or higher severity and those in the high-risk group according to patient classification must be isolated at hospital
 - **Municipal COVID-19 epidemiological investigator:** Confirm action items, such as home isolation before notification of test results and transfer to a designated hospital.
 - * If it is determined that home isolation is not possible, inform the Municipal COVID-19 Patient Management Task Force
- **Form 3. Inpatient Treatment Notice**

➤ **Appendix 3. Guidelines for Home-Quarantined Persons, Appendix 4. Guidelines for Family Members and Cohabitants of Home-Quarantined Persons**

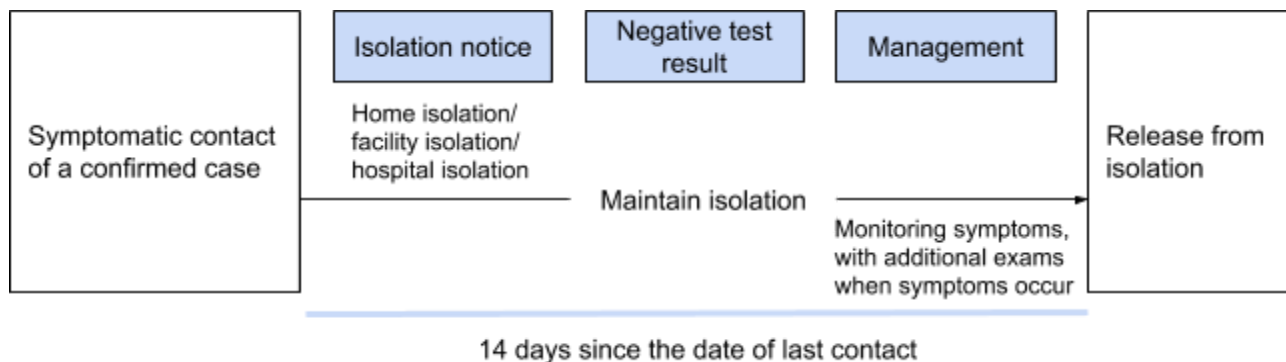
3) Guide to hospital isolation

- **Municipal COVID-19 Patient Management Task Force:** Severity Classification Task Force should assess case severity according to the severity score and risk factors, and Hospital Bed Allocation Task Force should identify the hospital bed availability among designated hospitals for infectious diseases and/or secondary or tertiary hospitals within the jurisdiction that meet the severity classification
 - Priority is given to patients in need of hospitalization and immediate bed allocation
 - Notify the public health center of the hospital bed allocation
- **Public health center:** Upon confirmation of hospital bed assignment
 - Transfer the case to the assigned healthcare facility by transportation means such as an ambulance
 - Guide patient through hospital admission (treatment objectives, process, healthcare facility for isolation, etc.) and issue inpatient treatment notice
- **Form 3. Inpatient Treatment Notice**
 - * The inpatient treatment cost is provided by the public health center in the jurisdiction of the patient's residence (Cost support will be announced in a separate letter according to the COVID-19 inpatient treatment cost support plan procedure)

C. Discharge and Isolation Release of Suspected Cases

- Criteria for isolation release
 - **Suspected case:** Even if the test result is negative, **isolation must be maintained for 14 days since last contact with a confirmed case**
That is, even if they are discharged, they must maintain 14 days of isolation from the last contact with a confirmed case
* E.g. if the last contact date was Apr 1, isolation is released on Apr 16, the day after 14 days have elapsed.

Management and release from isolation of a suspected case



1) Discharge and management post-isolation

- **Public health center in the jurisdiction of the patient's residence** is in charge of management, such as checking the suspected case's status and discharge schedule
- **Healthcare facility** must notify the **public health center in the jurisdiction of the patient's residence** when the patient is discharged
- **Procedures for discharge and isolation release**
 - i. **If isolation is released:** Return home by any possible means of transportation
 - ii. **If isolation is necessary after discharge:** Use a personal car, walk, or take an ambulance (from fire department or public health center) to return home or to a facility (while wearing a medical-grade mask)
- **Public health center:** Re-issuance of inpatient treatment notice (home or facility) following isolation location change, and carry out active monitoring (isolation notice, notice distribution and education)

2) Release from isolation

- The public health center checks the patient's condition
- **Hospital/Facility isolation:** Notify the **public health center in the jurisdiction of the patient's residence** upon releasing the patient from isolation
- **Home isolation:** The **public health center** should inform the patient of his/her release from isolation
 - Advise patients to immediately inform the public health center if symptoms worsen
 - Use *Appendix 6. COVID-19 Code of Conduct* to provide health education to the patients and their family members about precautions relevant to COVID-19.
- **Public health center:** Report isolation release to the municipal COVID-19 epidemiological investigator and enter the isolation release information into the Integrated Disease & Health Management System
 - **Appendix 6. COVID-19 Code of Conduct**

2. Patients Under Investigation (PUI)

A. Notification / Report

1) Recognition

- **Situation 1: Screening at a port of entry (POE)**
 - In case of an **unrecognized mild fever without respiratory symptoms** at POE screening, **determine** whether to further investigate for COVID-19 based on the individual's body temperature, epidemiological relevance, and duration of stay in Korea
 - At POE screening, **issue the notice of quarantine** for asymptomatic incomers from Hubei Province, China. Upon notification of the list, **the public health center in the jurisdiction of the individual's residence/accommodation will conduct active surveillance for 14 days from the date of entry**

- If an isolated PUI presents aggravating symptoms or tests positive, the quarantine center requests allocation of an isolation bed to the municipal government

◆ **See Coronavirus Disease 2019 (COVID-19) Entry Screening Response Guidelines**

- **Situation 2: Voluntary notification** from the patient's home (call 1339 or public health center) or confirmation during home isolation
- **Situation 3: Declaration by healthcare facility** (outpatient, emergency room, hospital ward, COVID-19 screening center (including public health centers), etc.)

2) Reporting

- Healthcare facility: Confirm whether an inpatient qualifies under the criteria for PUI based on: history of international travel, exposure to patients, proximity to domestic clusters, and clinical symptoms
 - **Form 1. Infectious Disease Reporting Form**
- Public health center in the jurisdiction of healthcare facility: Ensure healthcare facilities report via the online infectious disease report procedure on the Integrated Disease & Health Management System

Infectious disease onset information

Date of disease onset		Date of diagnosis		Date of report	
Test result	Positive / Negative / Testing / Not tested			Status of hospitalization	Outpatient / Hospitalized / Neither
Patient classification	Confirmed case / Suspected case / Carrier / Neither (not a patient)				
Notes	[Classification of suspected case] Suspected case: A person with symptoms who had contact with a confirmed case [Classification of a Patient Under Investigation] Category I: Cases with pneumonia of unknown etiology or suspected COVID-19 infection, according to physician's clinical judgment Category II: Symptomatic cases with known travel history to China or other countries with COVID-19 outbreak Category III: Symptomatic cases related to domestic clusters				
Case status	Survived / Fatal				

- After selecting “**Suspected case,**” input “**Patient Under Investigation**” in the notes section (special remarks) of the reporting form

Categorization of a Patient Under Investigation

Category I: Cases with pneumonia of unknown etiology or suspected COVID-19, according to physician's clinical judgment

Category II: Symptomatic cases with known travel history to China or other countries with local transmission of COVID-19

Category III: Symptomatic cases related to domestic clusters

B. Measures to Be Taken by Healthcare Facilities

- If a test is negative, educate the patient on topics such as personal hygiene according to *Appendix 6. COVID-19 Code of Conduct*. If symptoms worsen, instruct the patient to first call the Korea Centers for Disease Control and Prevention (☎ 1339, area code +120) or the public health center in the jurisdiction of the patient's residence
- If a test is positive, follow the protocol for responding to confirmed cases

3. Management of Screenings at COVID-19 Screening Centers (Public Health Centers)

A. Patient Admission

- Confirm patient information and classify the patient by clinical signs/symptoms, physical examination (if necessary), etc. according to case definitions
- 1) Check for any history of overseas travel (visits), contact with confirmed cases, etc. via patient interview by receptionist/physician and use of the examinee qualification inquiry/DUR/ITS
 - *As of 3/5/20, the DUR/ITS is only offered for travel histories to and from China, Singapore, Thailand, Hong Kong, Vietnam, Macau, Japan, Taiwan, Malaysia, Iran, and Italy. Travel to and from all other countries should be checked through patient interviews.
 - * DUR (Drug Utilization Review): program that promotes patient safety by monitoring drug prescription, dispensation, and use
 - * ITS (International Traveler Information Systems): program that provides overseas travel history
- 2) Check whether the patient currently has a fever (over 37.5°C) or respiratory symptoms (cough, dyspnea, etc.)
 - Use a non-contact or tympanic thermometer
- 3) Check whether the patient has suspected symptoms related to COVID-19, such as pneumonia of unknown etiology, according to the physician's clinical judgment

B. While Waiting for Admission: continue wearing a mask and complete self-examination questionnaire

C. Patient Evaluation

- Confirm clinical symptoms and medical history
- Determine whether testing is necessary
- Classify patients according to case definitions
- Obtain brief medical history (if obtained without direct patient contact, replacement of Personal Protective Equipment is not necessary)

- If the patient falls within case definitions, provide instructions for specimen collection. If the patient does not qualify but requires treatment, redirect to general practice (e.g. ER, outpatient services)

D. Response Guidelines

- **Patient transport:** Transport patient to an isolation room or (if there is no isolation room) a separated area
- **Collection and transport of specimen:** Collect and store in designated containers
 - **VIII. Laboratory testing management → Refer to 1. Specimen collection, 3. Specimen transport**
 - One sample from the upper airway (nasopharyngeal and oropharyngeal swab). If there is sputum, also obtain a sample from the lower airway.
 - The sample collector must wear Personal Protective Equipment (medical-grade mask (KF94 or higher), a disposable waterproof long-sleeved gown or full-body protection suit, disposable gloves, goggles or a face shield, etc.)
- **Case reporting:** Report the occurrence of Class 1 Infectious Disease — emerging infectious disease syndrome to the local public health center
 - ❖ In the report, select “Suspected case” in the notes section (special remarks), then classify as either “**Suspected case**” or “**Patient Under Investigation.**”
 - **IV. Refer to the guidelines for responding to suspected cases/patients under investigation**
- **Disinfection and ventilation**
 - Disinfect all door knobs, waiting room chairs, reception desks, examination room beds, sampling rooms, furniture surfaces, and floors according to the patient’s movement
 - If the sampling room is indoors, ventilate the space for at least 30 minutes. If samples are to be collected outdoors, no ventilation is required but sampling must be conducted in an isolated space where no other person is present
 - ◆ **For more detailed information, refer to the guidelines for “Coronavirus Infection (COVID)-19 Screening Centers”**
- Additional information: End exam by informing examinees on how they will be notified of test results and advising them on staying-at-home and other public health topics

V. Response Guideline for Confirmed Cases

1. Reporting Confirmed Cases and Deaths

A. Reporting and Registration

- Upon identifying a new confirmed case (including death), a public health center should **immediately report case to its respective municipality and the Korea Centers for Disease Control and Prevention (KCDC) by phone**, and register case in the system portal (Integrated Disease & Health Management System)
 - * Register positive test results within the same day of testing; for these cases, KCDC Emergency Operations Center will assign the test confirmation number
 - **Form 1. Infectious Disease Reporting Form**
- Upon identifying the death of a confirmed case, the healthcare facility that first identified the case (or the public health center in the jurisdiction where the healthcare facility is located) shall **immediately report (probable) cause and time of death to KCDC Emergency Operations Center** and register disease occurrence and death in system portal
 - **Form 2. Report of Death (Post-Mortem Inspection) Relating to Infectious Disease**

Steps for reporting new cases or deaths

- ◆ Contact KCDC Emergency Operations Center: ☎ 043-719-7979, 7790, 7878, 7789
- ◆ Report case via system portal: “Integrated Disease & Health Management System (<http://is.cdc.go.kr>) - Patient Monitoring”

- Report any status changes of confirmed cases (e.g. new symptom development, worsening conditions, death, discharge from hospital, quarantine release) through *Form 6. COVID-19 Case Management Report (Confirmed Case)*
 - ❖ Report through the “Integrated Disease & Health Management System (<http://is.cdc.go.kr>) - Patient Management - Patient Information Management” (Note that this system is currently undergoing updates; completion of system updates will be announced on the website’s bulletin board)
 - **Form 6. COVID-19 Case Management Report (Confirmed Case)**

2. Isolation of Confirmed Cases

- **Refer to Appendix 7. Patient Severity Classification and Hospital Bed Assignment Protocol**

A. Public Health Center in Charge

- Public health center that first identified case or one in the jurisdiction of patient’s residence is responsible

- Public health center that first identified case should conduct immediate isolation for confirmed cases if test results return positive while patient waits at public health center
- If a patient is confirmed after returning to his/her residence, public health center in the jurisdiction of the patient's residence should conduct isolation
- Assess severity of case based on key indicators, including but not limited to patient's level of alertness, body temperature, and risk factors (refer to *Appendix 7. Patient Severity Classification and Hospital Bed Assignment Protocol*)
 - Public health center that first identified case should assess patient's severity if patient tests positive while waiting for care at health center
 - If patient tests positive after having returned to his/her residence, public health center in the jurisdiction of residence shall assess the patient's severity

B. Cases That Require Hospital Isolation

- Contact the Municipal COVID-19 Patient Management Task Force to request patient severity assessment and allocation of available hospital beds
 - **Municipal COVID-19 Patient Management Task Force:** Severity Classification Task Force classifies severity according to severity scores and risk factors; Bed Allocation Task Force identifies status of bed availability that meets severity classification within the jurisdiction
 - Prioritize patients with moderate to severe symptoms (excluding asymptomatic patients and those with mild symptoms) and assign a hospital bed immediately; report assignment to public health center
- **Public health center:** Upon confirmation of hospital bed assignment, public health center shall
 - Transfer patient to appropriate medical facility by ambulance or other means of transportation
 - Notify patient of hospitalization processes (treatment indication, admission process, treating healthcare facility, etc) and need for inpatient treatment
- **Form 3. Inpatient Treatment Notice**
- **Healthcare facility:** When patient transfer to another healthcare facility is required in course of treatment (e.g. due to worsening symptoms), the **initial treating healthcare facility** should report transfer to the Municipal COVID-19 Patient Management Task Force (local public health center) and carry out transfer to the newly assigned healthcare facility
 - ❖ In case of hospital bed shortage in the municipal area, contact Transfer Support Task Force for patient transfer and hospital bed allocation
- **Refer to section VI. Bed Allocation and Transfers**

C. Cases Not Requiring Hospital Isolation

- **Candidates:**
 - Among hospitalized patients, those who meet the discharge criteria according to the physician's judgement
 - Among confirmed cases, those who do not meet the criteria for hospitalization according to the patient's level of severity

1) Eligibility for admission to a Residential Treatment Center

- Physician in charge determines that a patient needs admission to a Residential Treatment Center according to discharge criteria or severity classification
- Patient is a candidate for home isolation but conditions are not adequate (self-reliance at home is difficult, no individual room is available, an appropriate residence is not available, living with a member in high-risk groups*, etc.)
- Local government authority determines that patient should enter a Residential Treatment Center for any other reason
- ❖ See Appendix 7. Patient Severity Classification and Hospital Bed Assignment Protocol

2) Eligibility for home isolation

- Patient's health status meets the discharge criteria and is stable enough for home isolation
- Patient can be self-reliant in an individual space (separate bedroom, toilet, sink, etc.)
- Patient has no problem acquiring daily necessities such as food
- Patient does not live with a member of high-risk groups*
- ❖ See Appendix 7. Patient Severity Classification and Hospital Bed Assignment Protocol

- **Management procedures:** Public health centers should check whether home isolation is possible, then contact the Municipal COVID-19 Patient Management Task Force. This task force will determine appropriate isolation level (isolation in a facility or home isolation) and notify the Health Department
- **Management methods:** Public health center in the jurisdiction of the patient's residence should issue the hospitalization notice; rules and regulations to be followed during isolation period; instructions on COVID-19 testing procedure, symptoms monitoring and recording; report of any changes to patient's major symptoms (such as symptom onset, worsening symptoms, and/or death)

➤ **Form 3. Inpatient Treatment Notice**

➤ **Form 6. COVID-19 Case Management Report (Confirmed Case)**

➤ **Form 7. Home-Isolated/Quarantined Patient Monitoring Log**

➤ **Form 8. Patient Health Monitoring Log**

- 1) **Residential Treatment Center: Health manager** (medical staff in charge) monitors and records patient's symptoms twice per day
 - When major events such as transfer, discharge, death, and/or isolation release occur, report them to local public health center
 - If symptom onset and/or deterioration occur during isolation, notify **health manager** (medical staff in charge); transfer patient to a medical facility and notify public health center within the jurisdiction of the patient's residence
 - If there is a shortage of hospital beds, notify public health center within the jurisdiction of the patient's residence to request bed assignment

- ❖ A public health center within the jurisdiction of the patient's residence is the main management entity; however, if a transfer across municipalities is required, this is deliberated by all involved parties
- 2) **Home isolation:** Public health center manager should monitor and record symptoms twice a day
 - If symptoms arise or worsen during isolation period, **public health center** should report to Municipal COVID-19 Patient Management Task Force (Bed Allocation Task Force), which should assign hospital beds as necessary

If hospital care/treatment is needed or expected for the home-isolated person

- Maintain home isolation if not urgent
- If urgent:
 - Contact the monitoring manager
 - Manager should wear Personal Protective Equipment (PPE) as necessary; provide a vehicle (ambulance recommended); and refer to a hospital that can treat and isolate symptoms
- If urgent treatment is expected:
 - Perform COVID-19 diagnostic test the day before treatment, confirm negative result before starting treatment according to standard protocol
- * Manager should ensure home-isolated person wears a mask and check symptoms such as body temperature before leaving home isolation; accompany the person through process of leaving isolation and going outside
- * Regularly check symptoms such as body temperature, respiratory symptoms, and any incidence of diarrhea before leaving home isolation

3. Epidemiological Investigation

A. Case Investigation

- Public health center that initially identifies a case should conduct a case investigation and promptly report to the municipal authorities and the KCDC
 “Integrated Disease & Health Management System (<http://is.cdc.go.kr>) – Epidemiological Investigation – Class 1 Infectious Disease Management – Emerging infectious disease syndrome – COVID-19 Basic Epidemiological Investigation (Confirmed Case)”
 ➤ **Form 5. COVID-19 Basic Epidemiological Investigation (Confirmed Case)**
- ❖ Enter and/or update epidemiological information in the “COVID-19 Confirmed Cases List (Separate Form),” received from municipal database administrator, and send it with an email daily by 17:00 (KCDC Central Disease Control Headquarters kcdceid@korea.kr)

B. Close Contact Investigation and Management (Contact Tracing)

- Investigating Agency: Public health center* that initially identifies a case should conduct an investigation under direction of Municipal COVID-19 Immediate Response Task Force

- * Public health center that initially identifies case should conduct investigation; however, if two or more municipalities are involved in a case, they should share list of close contacts and relevant information
- Public health center that initially identifies a case should register the close contact list in the system; notify via phone the public health centers in the jurisdiction of close contacts' residence; and transfer the case
 “Integrated Disease & Health Management System (<http://is.cdc.go.kr>) – Patient Management – Contact Tracing”
- **Form 9. COVID-19 Close Contact Tracing Form**

Precautions when registering individuals to the Integrated Disease & Health Management System

- For each case, add name of confirmed case with whom the individual had contact, as well as a description of context
 - When transferring an individual to another health center, set transfer date to one day after day of transfer; assigned health center must be public health center in the jurisdiction of exposed person's residence
 - Issue a quarantine notice from the Integrated Disease & Health Management System
- **Case management:** On the day a confirmed case is first identified, the public health center must (within 24 hours):
 - 1) Identify family members (including domestic partners) and close contacts and perform home quarantine measures
 - 2) Check for potential exposure in healthcare or community settings
 - ❖ As COVID-19 is highly contagious during the initial mild symptomatic phase, has a short incubation period and is transmitted through close contacts, it is important to identify close contacts early and take swift action
 - If there were potential exposures in healthcare or community facilities (nursing homes or social welfare facilities) during the infectious period (beginning from one day before the onset of symptoms), the Municipal COVID-19 Immediate Response Task Force should conduct an epidemiological investigation and provide support
 - ❖ Give priority to hospitalized patients or health/social workers at respective facilities
 - If deemed necessary by the epidemic control officer, perform a detailed investigation of travel and movement history

C. Epidemiological Investigation of Community or Healthcare Facilities

1) Preparation

- Confirm preliminary information
 - Patient information: Confirm case study results of the confirmed case and basic investigation of contact range
 - * Preliminary investigation to determine source of infection: domestic and international travel history of confirmed case and family members, history of close contacts with

confirmed cases, history of contacts with close contacts of confirmed cases, and hospital visit history

- Allocation of personnel: Reallocation of regional investigation and response personnel when isolation location of confirmed case differs from location of close contacts
- Carry out emergency measures for close contacts and deliver preparedness checklist
- Quickly identify and immediately quarantine close contacts such as family members and report to a public health center if symptoms of close contacts meet the case definition
- Secure contextual information including personnel, clients, and environment in community facilities; announce enforcement of administrative measures for epidemiological investigations and field response

2) On-site response

- Initial situation assessment: Determine immediate actions to be taken, and establish an epidemiological investigation plan and task priorities
- Municipal COVID-19 Immediate Response Task Force: Systematically enable a cooperative, integrated response with relevant departments
- Epidemiological investigation
 - **Advance notice:** Investigator must inform patient and any other involved parties (as well as any facilities involved) that investigations will be conducted according to the Infectious Disease Control and Prevention Act
 - * Infectious Disease Control and Prevention Act, Article 18 Epidemiological Investigation, Article 76-2 Request to provide personal information
 - **Patient investigation:** Investigate date of onset of symptoms, movements of patient, source and path of infection, domestic and international activity 14 days prior to the onset of symptoms, etc.

Notes on investigating the infection pathway of a confirmed case

- Obtain information on patient's activities beginning 14 days prior to the date of onset of symptoms
- Investigate international travel history, contact with any existing confirmed cases, use of or employment in community and/or healthcare facilities, relevance to case clusters, and medical history (if necessary, track detailed movements)

Notes on investigating close contacts of a confirmed case

- Set investigation range for close contacts from one day prior to date of symptom onset for confirmed case
- ❖ In case of asymptomatic infection, set range from one day prior to test sample collection date
- Municipal COVID-19 Immediate Response Task Force should determine investigation range for close contacts based on symptoms of confirmed case, whether masks were worn, length of stay during travels, exposure condition and duration (within 14 days of last contact with confirmed case)
- ❖ Transmissions typically occur in situations where respiratory droplets are released, including cohabitation, eating together, worship, lectures, karaoke, and meetings, thus a prompt

epidemiological investigation and home quarantine are necessary; conduct further investigations as needed.

- **Facility/environmental management:** Manage facilities including patient's residence and activity locations (work, school, hospital, etc.)
 - * Related: Infectious Disease Control and Prevention Act Article 47 Disinfection and temporary closures, etc. at the discretion of the director of the public health center
- **Contact tracing:** Investigate and classify close contacts by time and place of exposure
 - Based on results of investigation, conduct a secondary situational assessment to review date of symptom occurrence, and reset exposure and contact range

Examples under the definition of close contacts (Based on WHO guidelines as of 2/27)

- 1) A person who has directly examined or cared for a confirmed case without appropriate personal protective equipment (Appendix 9. COVID-19-Related Use of PPE)
- 2) A person who has been with a confirmed case in a close or intimate setting in the same place (family, workplace, classroom, meeting, etc.)
- 3) A person who used the same means of transportation as a confirmed case and was in close proximity (within 2 meters*) within 14 days after onset of the confirmed case's symptoms
 - * Note, however, that the distance suggested by the WHO is 1 meter

<Example>

- i. A person who was within a 2-meter distance from a confirmed case in a ward or waiting room in a health facility, for a substantial amount of time, without wearing appropriate protective equipment (i.e. medical staff, caregivers, etc.)
 - * If a person is deemed **not exposed** due to **correctly wearing a mask** (covering both nose and mouth, with a tight fit around the nose), **conduct health education and passive monitoring.**
- ii. A person who was with the confirmed case in the same area for a considerable amount of time according to daily routines (e.g. colleagues at work, classmates, etc.)
- iii. A person who used the same means of transportation with confirmed cases
 - * This applies to passengers who sat within three rows of the confirmed case's seat on an airplane or other vehicle, as well as the flight attendant(s) managing the section containing the confirmed case's seat
- iv. A person who has been directly exposed to infectious secretions of a confirmed case without wearing appropriate protective equipment (e.g. sample collection, laboratory diagnosis, patient's respiratory secretions, coughs, etc.)
- v. A person who had hand-to-hand contact within 2 meters or had a face-to-face conversation with a confirmed case without wearing appropriate protective equipment

Tracking locations (e.g. travel routes) of a confirmed case and tracing contacts

- Prioritize identifying the patient's movements through patient interview and begin prompt preventive measures; investigations using GPS*, DUR**, and credit/debit card usage data** should only be performed when deemed necessary by a municipal epidemic control officer

* GPS inquiries can be requested from municipalities and city/county/district police stations (Infectious Disease Control and Prevention Act) Article 76-2 (2))

**For inquiries using DUR and credit/debit card usage history, the municipal epidemic control officer should file a request to the KCDC through an official document or equivalent computerized system

Scope of disclosure of movements (e.g. travel routes) of traced contacts

- Subject to disclosure: Patients with infectious diseases* as defined under *Prevention of infectious diseases* Article 2 (13)
 - * A person who has been confirmed with a disease, showing symptoms from infection by a pathogen
- Scope of disclosure: Information relevant to the prevention and management of infectious diseases, deemed as an epidemiological necessity
- Time period: From one day before* occurrence of symptoms to date of quarantine
 - * Updated from the 5th edition of COVID-19 Response Guideline (2/7): From “date of symptom onset” to “one day before occurrence of symptoms”
- Location: Places (including means of transportation) where close contacts* would have occurred, considering the probability of infection based on time and spatial factors
 - * Determine the investigation range of close contacts with holistic consideration of: the symptoms of the confirmed case, whether or not the patient wore a mask, length of stay during travels, and context and time of exposure

Reference: Work standards for health workers who have had contact with COVID-19 patients and suspected cases

Epidemiological risk factors	Level of exposure	Recommended monitoring*	Work limit for asymptomatic health workers
<p>①Health worker performing a medical procedure without Personal Protective Equipment (unprotected eyes, nose or mouth)¹⁾ or otherwise present in the same space during such procedures</p> <p>→Procedures likely to produce more concentrated respiratory droplets or aerosols (e.g. cardiopulmonary resuscitation, intubation, extubation, bronchoscopy, nebulizer therapy, sputum induction)</p>	High	By the health facility/agency	14-day suspension from work since the last contact date
<p>②Health worker performing aerosolizing procedures without a gown or gloves, or otherwise present in the same space during such procedures</p> <p>→Procedures likely to produce more concentrated respiratory droplets or aerosols (e.g. cardiopulmonary resuscitation, intubation, extubation, bronchoscopy, nebulizer therapy, sputum induction)</p> <p>Note: Classify as ① if the health worker's eyes, nose or mouth were not protected during aerosolizing procedures</p>	Medium	By the health facility/agency	14-day suspension from work since the last contact date
<p>③Health worker without Personal Protective Equipment (unprotected eyes, nose or mouth)¹⁾</p> <p>→Close contact with a patient not wearing a mask</p> <p>Note: Applicable to unprotected eyes during close contact with a patient not wearing a mask</p>	Medium	By the health facility/agency	14-day suspension from work since the last contact date
<p>④Health worker without Personal Protective Equipment (unprotected eyes, nose or mouth)¹⁾</p> <p>→Close contact with a patient wearing a mask</p>	Medium	By the health facility/agency	14-day suspension from work since the last contact date
<p>⑤Health worker without gloves and unable to practice immediate hand hygiene</p> <p>→Direct contact with a patient's secretions / excreta</p> <p>Note: Classify as low risk if hands washed immediately after contact</p>	Medium	By the health facility/agency	14-day suspension from work since the last contact date
<p>⑥Health worker wearing a mask</p> <p>→Close contact with a patient wearing a mask</p>	Low	Self-monitoring	-
<p>⑦Health worker wearing all recommended protective equipment (e.g. respirators, eye protection, gloves and gowns)</p> <p>→Close contact with or handles a patient's secretions / excreta</p>	Low	Self-monitoring	-
<p>⑧Health worker without recommended protective equipment</p> <p>→Simple interactions* with a patient</p> <p>* Entering a patient's room without physical contact, etc.</p>	Low	Self-monitoring	-

⑨Health worker with neither direct contact with patients nor patients' secretions/excreta, and no entry to patient rooms	None	-	-
--	------	---	---

* Monitor up to 14 days after the last potential exposure

1) When PPE is not worn on the designated parts of the body

Source: Interim US Guidance for Risk Assessment and Public Health Management of Healthcare Personnel with Potential Exposure in a Healthcare Setting to Patients with Coronavirus Disease 2019 (COVID-19)

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html>

◆ **Refer to Coronavirus Disease 2019 (COVID-19) practical guidance for healthcare facilities (2/22/2020)**

3) Action plan

- Risk assessment and management method
 - Municipal epidemic control officers or epidemiologists should evaluate exposure, facilities/environment, and operational personnel, then establish a management plan based on a field investigation
 - Risk assessment: Exposure period, scope, level
 - Close contact evaluation: Age, underlying conditions, level of independence/self-care capacity, etc.
 - Evaluation of facilities: Available space for admitting confirmed cases and close contacts
 - Evaluation of operational capacity: Personnel to manage confirmed cases and close contacts, and infection control
 - Manage patients and contact tracing to minimize additional spread of disease and severe cases, with consideration of risk levels.
 - Establish monitoring systems and facility management plan*.
 - * Contact tracing within and outside health facilities, management of patients/guardians/staff, management of visitors, sanitation/sterilization of facilities, expansion of infection control, strategy to prevent community spread
 - If necessary, discuss management method* with the Rapid Response Team of the Central Epidemic Countermeasures Headquarters before deciding on a method.
 - * Determine whether or not to close health facilities such as emergency rooms/hospital wards/outpatient facilities/examination rooms, and the scope (level) of closure/measures to take
- Management of confirmed cases
 - Public health centers are assigned with confirmation of additionally traced close contacts
 - Confirmed cases under management will be released from quarantine as long as the criteria for quarantine release is met
- Contact tracing
 - Public health centers issue quarantine notices to close contacts, conduct public health education and manage contacts by supplying home-quarantine kits, etc.

* Depending on progress of the investigation, if precautionary measures are necessary, the first health center to recognize a close contact will guide on precautions

➤ **Form 4. Notice of Isolation/Quarantine**

- The municipal data manager should report to the Integrated Disease & Health Management System (<http://is.cdc.go.kr>) until the case is concluded.
- The municipal rapid response team concludes its activities when the close contact's incubation period after contact with the confirmed case has elapsed and no further confirmed cases arise among the close contacts
- If there is risk of additional infection
 - Applicable situation: If a hospitalized patient develops symptoms, if a staff member of a community facility becomes a confirmed case or if there has been extensive-long term exposure* to anyone during the incubation period

* e.g. Multiple visits to healthcare facilities and/or attending crowded events

Additional measures for each situation (summary)

Situation	Facility and environment management	Contact management	Human resources management
Hospital	<ul style="list-style-type: none"> · Consider temporarily closing Hospital · Environmental inspection · Disinfect premises and reopen 	<ul style="list-style-type: none"> · 1 room per patient or attempt cohort isolation · Medical staff home quarantine 	<ul style="list-style-type: none"> · Assign substitute workers
Community facility	<ul style="list-style-type: none"> · Consider temporarily closing facilities · Environmental inspection · Disinfect premises and reopen 	<ul style="list-style-type: none"> · Severe cases are transferred to a hospital · When hospital transfer is difficult: Isolate individual in own room or attempt cohort isolation · Contain all contactees, and if not possible, isolate individual in own room or attempt cohort isolation 	<ul style="list-style-type: none"> · Assign substitute workers
Broad exposure	<ul style="list-style-type: none"> · Evaluation of exposure by facility · Control and disinfection 	<ul style="list-style-type: none"> · Confirm and manage close contacts (contactees), prepare an organized system for departments to respond to (police, fire department, etc.) 	-

* Decisions should be made following situation assessment by the municipal epidemiological investigator or epidemic control officer

◆ Refer to Coronavirus Infectious Diseases-19 Guidelines for Management of Healthcare Facilities with Confirmed Cases (3/4/20)

➤ **Appendix 8. Cohort Isolation Protocol**

- Determine the scope and method of quarantine for community facilities
 - **Containment scope:** Evaluate the risk of contamination (confirmed case's condition, activity patterns, movements, number and range of close contacts* etc.) and determine quarantine area (floor, living area, dormitory)
 - * Criteria: Check clinical status of confirmed cases (respiratory symptoms such as coughs and presence of pneumonia), determine whether or not to wear a mask, and observe characteristics of occupied space (air conditioning, ventilation, structural division, etc.), duration of stay, space usage and transport means (elevators, etc.)
 - **Isolation procedures:** Determine according to the characteristics of spaces occupied by confirmed case, movements, and facility's infection control capacity (individual quarantine, cohort quarantine)
- Determine the closure of community facilities
 - If the risk of transmission is high and the containment range is too wide, the immediate response team decides whether or not to close the facility (determine whether or not to admit all close contacts into a hospital setting or to have as outpatients)
- If it is difficult to transport a confirmed case from a community facility to a hospital
 - Establish a management plan with an infection control expert
 - Relocate the patient from the common living areas to a separate space and isolate in a one-person room or isolate as a cohort
- Manage close contacts within community facilities
 - Quarantine at home when independent living is possible; if not, isolate within facility
 - A single room per person or other methods to minimize infection, such as cohort isolation, is applicable depending on facility circumstances
 - Monitor fever, respiratory symptoms, diarrhea symptoms (2 times / day)
- Quarantine release and resumption of operation for community facilities
 - Release quarantine: when there is no additional incidence of confirmed cases, and the quarantine period for all close contacts has elapsed
 - Resume operation: when City/Province COVID-19 Immediate Response Task Force confirms infection control plans and actions, and decides resumption is acceptable

4) Status report

- The Municipal COVID-19 Immediate Response Task Force should send a daily report of investigation / management results of the cases in community facilities or healthcare facilities to the Korea Centers for Disease Control and Prevention (kcdceid@korea.kr)
 - **Form 10. Daily Status Report of Epidemiological Investigation by Municipal COVID-19 Immediate Response Task Force**

5) Cooperative tasks

- Municipal Disease Control and Prevention Headquarters Support Team
 - Operating principle: Based on the site assessment of the Municipal COVID-19 Immediate Response Task Force, the Regional Disaster Safety Countermeasures Headquarters should coordinate a support team for each sector *

- * Epidemic control team, medical support team, household support team, field control team
- Manage unusual matters including sharing results on progress until conclusion of the situation
- o Main measures for the Regional Disaster Safety Countermeasures Headquarters

Division	Role
Facility and environmental management	<ul style="list-style-type: none"> · Movement restrictions, closure of places/spaces, disinfections, etc. * Guidance on Disinfection of Community/Public Facilities used by Confirmed Cases (Edition 2-1)
Close contact management	<ul style="list-style-type: none"> · Household support and active monitoring quarantined persons · Transfer to Screening Clinic when symptoms develop
Waste management	<ul style="list-style-type: none"> · Linens used by patients, medical tools, infectious waste, etc. * Be cautious not to have direct physical contact when handling waste
Other	<ul style="list-style-type: none"> · Maintain a cooperative system with related organizations (fire department, police, healthcare facilities, etc.)

Transfer of patients due to closure of healthcare facility

The Regional Disaster Safety Countermeasures Headquarters support team secures and supports resources for relocating patients:

- 1) Secure temporary quarantine/isolation hospital
- 2) Check necessities for facility operation (beds, medical equipment, medicines, medical supplies, etc.)
- 3) Prepare essential supplies, such as safe water and food
- 4) Operating personnel (medical staff and assistants, etc.)
- 5) Facility control, guardian and visitor management

6) Data management

- o Basic principles
 - Basic approach: The epidemiologist charged with the initial investigation and the database administrator of the city/county/province office should maintain close coordination in verifying and updating the database until the patient is released from monitoring
 - Designation of data manager: The epidemic control officer designates the city/county/province data manager and assigns tasks

- Coordination management: The data manager should maintain a contact network with liaisons in the municipal or city/county/province offices until case reaches conclusion
- o On-site response stages
 - Task assignment: The epidemic officer assigns personnel for city/county/district “situation report,” “contact tracing database management”
 - * In case of two or more municipalities involved, the epidemic control officer in each municipality assigns a liaison
 - Task delegation: The epidemic officer ensures that the “daily situation report” and “contact tracing database” are “managed” by the local governments and “reported” centrally with the same criteria until the situation resolves

4. Release From Isolation

A. Criteria for Releasing Confirmed Cases From Isolation

Criteria for releasing confirmed symptomatic cases from isolation

- o Criteria for release from isolation **must meet clinical and laboratory criteria**
 - 1) Clinical criteria: Not taking antipyretics, no fever and improvement of clinical symptoms
 - 2) Laboratory criteria: Two negative results from PCR tests taken 24 hours apart
- o If clinical criteria are met, the patient can be discharged from the hospital and remain in home isolation or facility isolation, even if laboratory criteria have not been met. To be released from isolation, examination criteria must be met.
 - 1) Laboratory criteria: Two negative results from PCR tests taken 24 hours apart

Criteria for releasing confirmed asymptomatic cases from isolation

- o Patients can be released from isolation when the following laboratory criteria are met
 - 1) Two negative results from PCR tests taken 24 hours apart, 7 days after the patient tested positive
 - 2) If the result from the PCR test is positive on the 7th day after the patient tested positive, the healthcare provider should determine the next test date (10th day, 14th day after the patient tested positive, etc.). The patient can be released from isolation after two negative results from PCR tests taken 24 hours apart.

1) Discharge and management of the hospitalized and isolated patient

- o The public health center in the jurisdiction of the patient’s residence is responsible for managing the patient’s condition and discharge schedule
- o **Healthcare facility:** When the patient is discharged, the public health center in the jurisdiction of residence must be notified
- o **Measures for discharge and isolation release:**
 - i. **When the patient is released from isolation:** Patients are instructed to return home using available transportation means; the public health center should provide health education and guidelines to follow for 2 weeks

➤ **III. Case Definitions and Management Methods → 3. Management (Surveillance) Methods → b. Refer to pg.10 Health Education**

- ii. **When the patient needs to maintain isolation after discharge:** Use own vehicle, walk, or use an ambulance* (from a fire station or public health center) to return home or to another facility (medical-grade mask worn at all times)
- **Public health center:** Enter hospital discharge information and post-discharge isolation information to the Integrated Disease & Health Management System
 - Re-issue the notice for hospital treatment (home or facility) in case of home or facility isolation. Actively monitor (quarantine notice, distribution of instructions, and education)
 - ❖ Discharge and home-isolation report: Integrated Disease & Health Management System (<http://is.cdc.go.kr>) - Patient management - Patient management - Patient information management (the system is currently being updated; the update will be announced on the bulletin board of the Integrated Disease & Health Management System)
 - ❖ Please refer to V. Response Guidelines for Confirmed Cases - 2. Isolation of Confirmed Cases - C. Cases not requiring hospitalization - Management methods
- **Form 6. COVID-19 Case Management Report (Confirmed Case)**
- **Appendix 5. Guidelines for Home-Isolated Patients**
 - ❖ Based on clinical assessment symptom severity, the attending doctor may discharge an isolated patient in the negative pressure room to a designated hospital, residential treatment center, or home for home isolation.
- If a test is necessary while home-isolated at a residential treatment center or at home
 - **Public health center in the jurisdiction of the home-isolated patient's residence:** Transfer patient to a COVID-19 screening center where specimen collection is possible, and request specimen collection and laboratory testing
 - **Residential treatment center:** Appropriate healthcare providers at the facility will collect specimen and request laboratory test
- If two PCR tests conducted at 24 hour intervals are both negative, patients may be released from isolation. Patients with positive result(s) will remain in isolation.

2) Release from home isolation

- The public health center in the jurisdiction of residence should check on the patient's condition
- **Healthcare facility/residential treatment center:** Notify the public health center in the jurisdiction of residence when releasing patients from-isolation
 - Give precautions* to patients who have been released from home isolation before the end of their 14-day incubation period
- * Provide guidelines on COVID-19 symptoms, preventive measures, and reporting when symptoms develop during incubation period
- **Home isolation:** The public health center in the jurisdiction of residence should inform patients of their home-isolation release
 - Inform patients that they should immediately contact the public health enter in case their symptoms worsen

- Based on *Appendix 6. COVID-19 Code of Conduct*, provide health education to patients and their families
- o **Public health center:** Report home-isolation release to the Municipal COVID-19 epidemiological investigator and enter the quarantine release information into the Integrated Disease & Health Management System

B. Close Contact Quarantine Release Criteria

- o Quarantine release
 - If close contacts show no signs of symptoms during the 14-day home-quarantine period from the last date of contact with a confirmed case or from the date the confirmed case was released from quarantine, the **public health center in the jurisdiction of residence** should inform them on the 15th day that they are released from quarantine and thus monitoring ends
 - * Active monitoring and home quarantine are to be in effect for 14 days even if close contacts' test results come back negative
 - However, even if close contacts do not show symptoms, healthcare facility workers (including caregivers) and cohabiting families must get tested on the 13th day from the last date of contact with a confirmed case and receive negative results prior to being released on the 15th day*
 - * Ex. Release from quarantine is (4/16), the day after 14 days have passed from the last date of contact (4/1) (travelling now possible)
 - Criteria for releasing quarantine for confirmed cases' cohabiting families
 - Cohabiting families of confirmed case who are quarantined in hospitals/facilities: After 14 days have passed since the last contact with the confirmed case (date that they are quarantined at the hospital/facilities)
 - Cohabiting families living with confirmed case in home isolation: after 14 days have passed from the confirmed case's date of release from isolation
 - Notification of release from monitoring: Notification from local public health center in the jurisdiction of the close contact's residence and indicate release of monitoring on the Integrated Disease & Health Management System

5. Epidemic Control Measures

A. Epidemic Control Measures Refer to Measures that Prevent the Spread of Infectious Disease During an Outbreak

◆ Legal basis: Article 47 (Epidemic Control Measures Against Prevalence of Infectious Disease)

B. Content of the Measures

- o Measures for places where there are patients with infectious disease or places that are considered to have been contaminated with infectious disease pathogens
 - Temporary closure

- △ Refrain from unnecessary closure of buildings other than temporary closure required for disinfection and ventilation
- Restrict public access
- Restrict movement within the space
- Other necessary measures to block traffic
- Suspension of healthcare facility operations
 - Hospitalization or isolation of a person suspected of being infected with an infectious disease pathogen in a suitable place for a certain period of time
 - Prohibiting the use, receiving, displacement, and cleaning of contaminated objects or objects suspected of contamination; or burning/disposing the objects
 - Ordering disinfection or other necessary measures for places that has been contaminated with the infectious disease pathogens
 - Preventing (laundry) washing in certain places; ordering waste to be treated in certain places

C. Distribution of Forms Related to Epidemic Control Measures According to Relevant Regulations

- ❖ When distributing orders for disinfection, relevant public officials must specify the execution time and the end time of disinfection
 - **Form 11. Epidemic Control Measure Form, Form 12. Certificate of Disinfection**

VI. Bed Allocation and Transfers

Apply the following contents flexibly according to each local government's circumstances.

1. Establishing a Bed Allocation and Management System

- **Overview:** Municipal governments should accurately identify the availability and capacity of hospital beds, hospitals and medical resources in the region and establish patient management and infection management teams for the allocation of hospital beds
 - City/county/district governments should set up a system that enables severity assessments for confirmed cases and rapid reporting of those with risk factors such as advanced age or chronic health conditions
- **Resource identification:** Municipal patient management teams should take a census of available negative pressure rooms, single patient rooms, **ICU beds and equipment**** for severely and critically ill patients, and staff across both **public and private hospitals***
 - Concurrently, pre-establish a plan for immediate deployment of above resources should need arise
 - *Capacity across designated hospitals for infectious disease, regional healthcare facilities, national hospitals, police hospitals, veterans hospitals, military hospitals, and local medical centers as well as nationally designated isolation beds
 - ** Institutions capable of ECMO (extracorporeal membrane oxygenation), CRRT (continuous renal replacement therapy), etc. and quantity of available devices in each institution
- ❖ If a soldier (active military personnel, etc.) is confirmed or suspected to be infected, contact the Armed Forces Medical Command (1688-5119, 031-725-5119) to assign and isolate the patient at the Armed Forces Capital Hospital (military designated isolation beds) or at a military hospital designated as a national infectious disease control institution

2. Bed Allocation and Management Principles

- **Severely ill patients:** Upon assessment of case severity, prioritize high-risk patients and immediately assign beds for medical care
- **General ward:** Completely separate admitted confirmed cases from general inpatients; operate wards independently
 - * Air-conditioning: Air supply should be sourced 100% from external air, instead of a mixed circulation method combining external air (30%) and internal air (70%)
- **Patients awaiting hospitalization:** Assess risk level based on the level of consciousness, age, and underlying health conditions (chronic disease, organ transplantation, etc.); **continue to monitor* until admission** to a hospital unit for patients with moderate symptoms
 - * Local governments should establish and operate a 24-hour consultation system

3. Patient Transportation

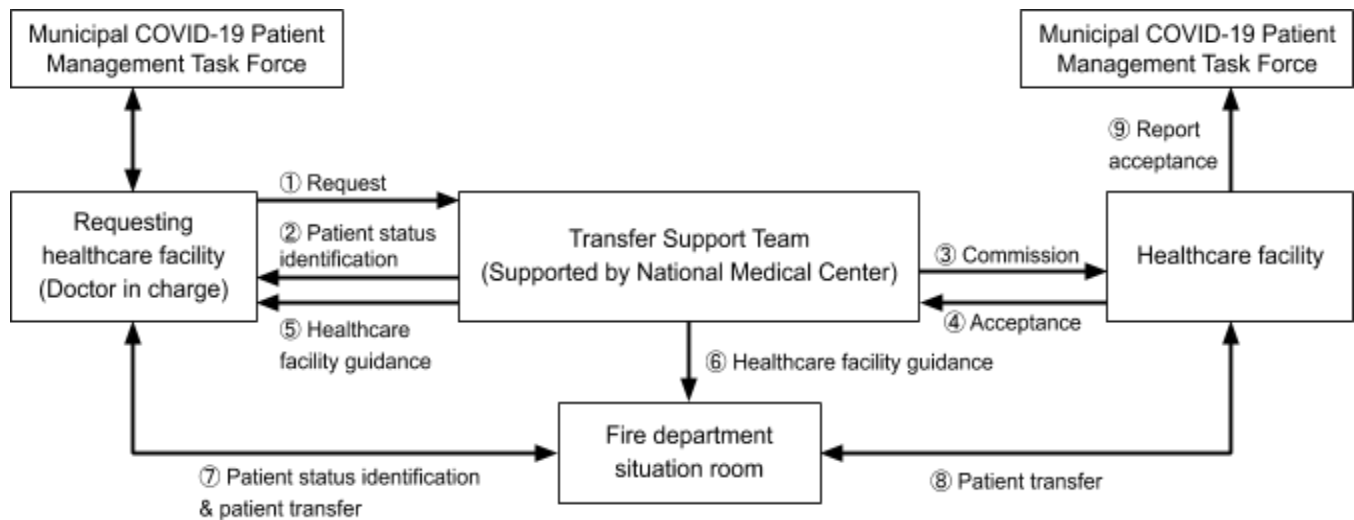
- **Transportation measures:**
 - Transfer patient to assigned hospital bed
 - Suspected (confirmed) patient must wear a **surgical mask** at all times throughout the transfer
 - Transfer personnel must wear appropriate **Personal Protective Equipment (PPE)***
- * Transfer personnel: full body protective suit (including shoe covers), KF94-equivalent respirator mask, disposable gloves, goggles (or face shields).
- **Appendix 9. COVID-19-Related Use of PPE**
 - Ambulance drivers must wear PPE* (KF94-equivalent mask and disposable gloves)
 - * However, if the ambulance driver's seat is not completely walled off or if there is risk of contact between the driver and suspected or confirmed cases, drivers must wear full body protective suit (including shoe covers), KF94-equivalent mask, and disposable gloves (plus goggles or face shields if necessary)

4. Patient Transfer

- Procedures for the transfer of severely ill patients between municipalities
 - 1) The relevant healthcare facility (the doctor responsible for the patient) should place a request for transfer with the Transfer Support Team at the National Medical Center (1800-3323)
 - 2) The Transfer Support Team, in direct consultation with the relevant healthcare facilities, determines transfer eligibility; the healthcare facility should notify the decisions to the municipal government.

- Notes
 - Transfer requests may be dismissed for cases determined by medical staff to be mild
 - Prior to requesting transfers with the Transfer Support Team, municipal patient management teams and requesting healthcare facilities should make due effort to accommodate patients within the municipality
- Municipal cooperation needed:
 - Make due effort to transfer patients within the municipality or to arrange a direct transfer agreement with another municipality prior to requesting transfers with the Transfer Support Team
 - Secure ICU capacity for severely ill patients by constant re-assignment of recovering patients or those with mild symptoms to appropriate wards or designated hospitals for infectious diseases

- Transfer requests **must** include the following information: ① Patient status (case severity, age, underlying health conditions, history of dialysis, cancer, mental illness, etc.); ② Patient location (name of healthcare facility, etc.); ③ Contact information for medical staff available to consult regarding patient condition

Inter-municipal transfer system for severe cases

- Other notes

- 1) Deliver materials* sent to receiving institution in ziplock bag to prevent further infection
* Medical records, information such as CT / X-ray (CD, etc.)
- 2) Share transportation details (departure time, etc.)* with Transfer Support Team upon departure
* Contact information of vehicle operator or accompanying personnel, license or qualification information of accompanying personnel, vehicle number
- 3) Carry out transfer using infection-controlled vehicle such as ambulance
- 4) Medical staff must accompany the patient, and contact receiving institution if patient's conditions worsens during the transfer
(Advance preparation for urgent situations such as cardiac arrest or ECMO)

VII. Management of Deceased Persons

1. Purpose

- Prevent disease spread and social unrest through efficient and prompt protocols for management of deceased bodies and supporting funerals in cases of death attributed to COVID-19
- ◆ Legal basis: Article 20-2 of *Infectious Disease Control and Prevention Act* (Methods of Conducting Funeral, etc. for the Deceased)

2. Principles

- Facilitate a systematic and efficient funerary process while upholding dignity of the deceased and respecting wishes of the family of the deceased
 - As a principle, bodies shall be cremated so as to prevent spread of disease; with family consent, bodies shall be cremated *prior* to the funeral.

Sample processes for cremation and funeral ceremony

- 1) Healthcare facility (Prepare and casket body) → Cremation facility (Cremate) → Funeral hall (Hold funeral)
- 2) Healthcare facility (Prepare and casket body) → Funeral hall (Place in mortuary) → Cremation facility (Cremate) → Funeral hall (Hold funeral)

3. Scope and Responsibilities

- Scope: Management of deceased bodies and facilitation of funerals for deceased persons in cases confirmed as COVID-19 by healthcare facilities etc.
- Role: Central Disaster Management Headquarters, funeral support center, local governments, healthcare facilities, and mortuary facilities (crematories, funeral halls, etc.) fulfill respective roles while maintaining close coordination with overseeing bodies
 - **Central Disaster Management Headquarters:** Provide general oversight; monitor case status
* (Contact) 044-202-3474, 3481, 3471, 3473
 - **Funeral support center / 1577-4129:** Facilitate reservations for cremation facilities, provide guidance regarding funeral process and use of mortuary facilities, offer on-site support as requested by Central Disaster Management Headquarters
 - **Municipal governments / city, county, district offices:** Provide guidance on funeral process to the family of the deceased (explanation)*; arrange vehicle and personnel for transfer to cremation facilities; provide Personal Protective Equipment (PPE)** (family of the deceased, body handling staff); disinfect facilities and equipment (transfer vehicle, cremation facility, funeral hall, etc.); other measures as appropriate

- * Explain process elaborated in Article 20-2 of Infectious Disease Control and Prevention Act (Cremation) to the family
- ** Respiratory mask equivalent to KF94, N95 or higher, disposable long-sleeved waterproof gown, disposable gloves, goggles or face shield, boots, etc.
- **Healthcare facility:** Report case status to corresponding agencies (Central Disaster Management Headquarters, local government, funeral hall, etc.), management of deceased body in accordance with Infectious Disease Control and Prevention Act
- **Funeral hall:** Support management of body, support transfer of deceased to cremation facility, process funeral procedures
 - ❖ Korea Funeral Association: Provide funeral halls and support smooth funeral procedures (e.g., funeral cars)
- **Crematory facilities:** Maintain operation at all times for new cremation appointments

4. Step-by-Step Measures

A. Imminent Death

- **Healthcare facility:** If patient's condition becomes unstable, immediately notify family and confirm whether they will visit
 - Upon request, family members may visit patient in hospital ward wearing PPE
 - Inform patient's family of the final management procedures for prevention of infections and obtain advance consent for such procedures
 - Notify healthcare facility's local public health center of patient's status
- **Central Disaster Management Headquarters:** Notify relevant agencies, arrange support for funeral processes
 - Maintain coordination among funeral support centers, local governments, cremation facilities, funeral halls, etc.
 - Guide local governments to inform the patient's family of suggested protocols for funerals, according to Article 20-2 of the Infectious Disease Control and Prevention Act (Cremation)

B. Death

- **Healthcare facility:** Notify local public health center; file report of death relating to infectious disease; report cause of death to patient's family and settle time for final disposition of body
 - **Form 2. Report of Death (Post-Mortem Inspection) Relating to Infectious Disease**
 - Upon request, allow family of the deceased to examine corpse, wearing PPE (families may also examine through remote closed-circuit camera of quarantine ward)
 - If the deceased was a confirmed case, medical personnel in PPE should handle the deceased body in accordance with *Appendix 10. COVID-19 Funeral and Dead Body Management* at a time agreed to by family of the deceased
 - If the deceased was a suspected case or a Patient Under Investigation, the body should remain in quarantine ward until test results are provided; alternatively, handle as per the

protocol for confirmed cases ⇒ **If test results are positive, identify as confirmed case and if negative, handle as per usual protocols**

- * Even if the patient has died from unrelated causes, if there is reason to suspect infection, follow protocols for management of bodies of confirmed cases
- Funeral hall: Facilitate management and casketing of body
 - Casket body without removing sealed enclosure; seal lid of casket shut
- Central Disaster Management Headquarters: Request cooperation of local governments, cremation facilities, funeral halls, etc.
 - Funeral support center: Facilitate reservations of cremation facilities, provide guidelines for funeral procedures and use of funerary facilities
- Municipal governments / city, county, or district offices: Advise families of patients to adhere to procedures elaborated in Article 20-2 of the Infectious Disease Control and Prevention Act (Cremation); make arrangements for disinfection of facilities and transfer vehicles; provide PPE when necessary; carry out funeral and cremation procedures with families of the deceased; assist in reservation of cremation facilities
 - Identify family members to attend cremation procedures, arrange personnel and vehicles for transfer of bodies

C. Cremation and Funeral

- Healthcare facility: Release sealed body from patient room at a time agreed by family of the deceased
- Funeral hall: Support transfer process of released body from patient room to crematory facility
 - Upon completion of cremation process, carry out funeral process as agreed by family of the deceased
- * Depending on the situation, body may be placed in mortuary of funeral hall before transfer to crematory facility (if mortuary was used, post-hoc disinfection is required)
- Municipal governments / city, county, or district offices: Deploy personnel and vehicles for transfer of bodies; provide PPE to accompanying family members, transfer personnel, and cremation personnel during the process of cremation; disinfect transfer vehicles and crematory facilities, etc.
 - Following completion of the funerary process, report final disposition to Central Disaster Management Headquarters

5. Administrative Matters

- Municipal governments / city, county, or district offices: Maintain communication with family of the deceased and relevant agencies; provide administrative support
 - Operate and maintain public cremation facilities, funeral halls designated for use in disaster response, etc.
 - ❖ If funeral hall attached to medical facility is available, hold funeral there; if unavailable, hold at a funeral hall designated for use in disaster response
 - Provide PPE; apply stringent enforcement of disinfection protocols
 - Monitor case progression from cremation to conclusion of funeral, report outcomes
- Funeral support team: Maintain operation 24 hours a day

- Construct and manage an integrated system in coordination with relevant agencies (Central Disaster Management Headquarters, local governments, etc.), status updates
 - Support reservations for cremation facilities
 - Support for funeral costs: Establish plans for reimbursing funeral costs for the deceased with restricted means, according to Article 20-2 of the Infectious Disease Control and Prevention Act
 - * Specific terms and procedures for reimbursement will be provided separately after reserve funds are procured; reimbursement requests for funerary costs are to be registered at corresponding city, county, or district offices
- **Appendix 10. COVID-19 Funeral and Dead Body Management**

VIII. Laboratory Testing Management

These guidelines only apply to the following:

- 1) Collection and testing of specimens from patients under investigation (PUI) or suspected cases who meet the criteria
- 2) Collection and testing of specimens from asymptomatic healthcare workers (including caregivers) who are confirmed cases or have come in contact with confirmed cases for the purpose of quarantine release

1. Specimen Collection

A. Specimen Collection Site

- **Collection site:** A COVID-19 Screening Center or an Isolated Specimen Collection Site within a medical facility separated from other areas
 - * However, in the case of home isolation, the specimen collection site may vary based on its location

B. Specimen Type and Packaging

- **Type of specimen:** Collect upper respiratory tract specimen (oropharyngeal and nasopharyngeal swab); if patient experiences cough or sputum, collect lower respiratory tract specimen
 - Patient with mild symptoms: request testing of upper respiratory tract specimens only

No.	Type of specimen		Container/volume	Remarks
1	Upper Respiratory Tract	<ul style="list-style-type: none"> · Oropharyngeal swab · Nasopharyngeal swab 	<ul style="list-style-type: none"> · Container: Simultaneous collection of oropharyngeal and nasopharyngeal specimens in a single viral transport medium 	<ul style="list-style-type: none"> · Collect specimen only at isolated specimen collection site
2	Lower Respiratory Tract	<ul style="list-style-type: none"> · Sputum 	<ul style="list-style-type: none"> · Container: 50ml sterile tube · Volume: obtain 3ml or more 	<ul style="list-style-type: none"> · Collect specimen only from patients producing sputum · Do not induce sputum (may generate aerosol) · If sputum collection is required for accurate diagnosis, collect in a negative pressure room (if no negative pressure room is available, collect in isolated area with good external ventilation to avoid risk of aerosol generation and spread)

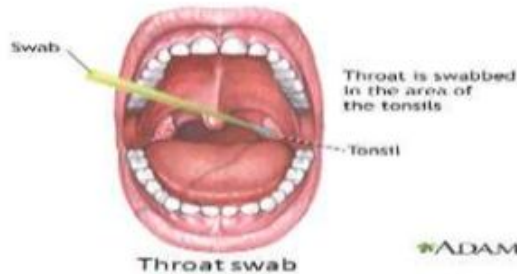
Required specimen: Upper respiratory tract specimen; **Optional specimen:** Lower respiratory tract specimen, blood specimen, etc.

* For confirmed cases: after initial positive testing result and before release from quarantine, collect additional specimens (blood; if possible, stool and urine also). Collect 5~10ml (1ml for

infant patients) of blood specimens in SST (Serum Separator Tube). Collect fecal and urine specimens in sterilized containers.

- ❖ Source: CDC, 2019 Novel Coronavirus, Wuhan, China, Guidelines for Clinical Specimens, 01/17/2020 ver.
- **Upper respiratory tract specimen:** Collect nasopharyngeal and oropharyngeal specimens separately, place both specimens in a single viral transport medium, and transport with a completed *Form 13. Laboratory Test Request Form*
 - Nasopharyngeal swab: Insert cotton swab parallel to the roof of the oral cavity through the nostril to collect discharge by scratching the mid-lower section of the inferior turbinate; allow absorption of the discharge by pausing the cotton swab in the mid-lower section of the inferior turbinate for a few seconds
 - Oropharyngeal swab: Press the tongue down and scratch the posterior pharyngeal wall to collect discharge

How to use oropharyngeal swab



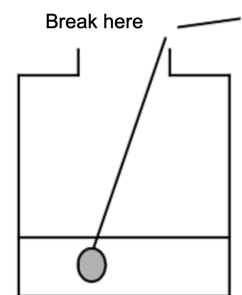
How to use nasopharyngeal swab



Source: ADAM, Influenza, Pandemic Influenza Division (TEPIK)

How to collect the upper respiratory tract specimen

-
- Storage of specimen containers
 - Insert cotton swab with specimen into bottle containing transport medium, and let soak; break the cotton swab at the bottle cap and close the lid tightly
 - When breaking, take care not to contaminate the inside due to contact
 - Specimen containers are immediately stored in the refrigerator (4 °C)
 - After collecting specimen, record the patient's identification information (name, sex, age) and collection date on the specimen container
 - Request testing of specimen with completed *Form 13. Laboratory Test Request Form* (keep at 4 °C)
-



- **Lower respiratory tract specimen:** Patients are instructed to rinse their mouths with clean water and cough deeply without saliva into a sterile container (e.g. sputum bucket) to collect sputum

* Take care not to contaminate the specimen; seal completely to prevent leakage during transportation (triple packaging)



1. Rinse mouth



2. Use aseptic containers



3. Collect sputum by coughing






4. Fully seal (4 °C maintenance)

How to collect sputum

○ Specimen packaging

- Disinfect primary container containing collected specimen with 70% ethanol and label
 - * Display information such as hospital name, specimen type, collection date, patient name, sex, and age
- Wrap disinfected primary container with an absorbent material (e.g. paper towel) and place inside a secondary container
- Tightly close the lid of secondary container and place inside a tertiary container
- Place *Form 13. Laboratory Test Request Form* under tertiary container's lid and pack closed tightly
- On outside of tertiary transport container, write the sender, receiver, and emergency contact information
- Place tertiary transport container into an ice box, and then insert refrigerants (ice packs) around all four sides of the container
- Mark outside of sealed ice box with Infectious Substances label, UN 3373 (Biological Substance Category B) label, package handling label ("This way up"), sender, receiver, and emergency contact information

Triple packaging example

Category	Primary container	Secondary container	Tertiary container
Packaging container			

C. Precautions

- Precautions: When collecting specimens, it is **essential to wear** Personal Protective Equipment (PPE) such as **KF94, N95, or equivalent respiratory mask, disposable gloves, disposable long sleeve gown or full-body protective suit, goggles or face shield (if necessary, also wear disposable impervious medical apron)** and disinfect oneself after the collection.
- **Refer to Appendix 9. COVID-19-Related Use of PPE**

2. Testing Request

- **Request method:** Fill out *Form 13. Laboratory Test Request Form* and submit with specimen
- **Form 13. Laboratory Test Request Form**
- **Testing request by institution:**
 - **COVID-19 Screening Centers within healthcare facilities:** Healthcare facilities capable of testing shall carry out tests themselves; otherwise, send specimens to KCDC Designated Laboratories for testing
 - **COVID-19 Screening Centers within public health centers:** Send specimens to KCDC-designated laboratories and request testing
 - * If unable to request tests at the KCDC-designated laboratories, request testing at the Research Institute of Public Health and Environment (RIPHE)

3. Specimen Transport

A. Specimen Transport Management

- When tested at private healthcare facilities: If on-site testing is possible, specimen transportation is unnecessary. If specimens need to be transported to a KCDC-designated laboratory for testing, they must be transported following the guidelines of the testing laboratory
- When tested at the Research Institute of Public Health and Environment (RIPHE): The designated personnel at the public health center that first identified the case should transport specimens to the assigned RIPHE within the same jurisdiction.
 - * Designated specimen transport personnel must wear KF94, N95 or equivalent respiratory masks and gloves and provide information on the type of specimen, collection date and time, and transport date and time; verified information must be reported to the RIPHE at KCDC

B. Storage Conditions During Specimen Transport

- For specimens to be used in virus isolation or genetic testing: Transport immediately while maintaining the temperature at 4 °C
 - * If it is impossible to transport within 72 hours, store at -80 °C and transport using dry ice

C. Precautions When Transporting Specimens

- Designate specific personnel for transporting samples
- Comply with guidelines for Safe Transport of Infectious Substances (provided by the KCDC)
- Selection of transport vehicles and specimen placement: Place packaged specimens in the trunk of a personal vehicle (or designated vehicles); secure specimens to minimize shaking; keep PPE, contamination treatment equipment (e.g. spill kit), disinfectant, tripods, etc. in vehicle in case of emergencies
- Selection of driving route and precautions: Designate shortest distance and safe route and depart only after reporting to the person in charge at the facility; only take predetermined route (when using rest areas, required personnel must remain in vehicle with specimens); abide by road traffic signals and rules

4. Conducting Tests

A. **Testing Facilities:** Genetic testing for suspected cases or for quarantine release*

* In the case of a confirmed case, based on the status of the patient, the primary physician will request testing at an on-site or KCDC-designated laboratory
(If confirmation is required due to indeterminate results, the KCDC may be consulted)

B. **Research Institute of Public Health and Environment:** Tests in the following conditions:

1) non-suspected cases requiring limited testing as part of the epidemiological investigation to identify the source of infection; 2) when testing at private healthcare facilities is impossible (such as in overnight emergency)

*Specimens must be collected at the public health center that first identified the case, and the testing requested at the RIPHE in the same jurisdiction as the public health center

- ❖ If it is the first positive result for a patient, the testing laboratory must get it double-confirmed by KCDC; subsequently, individual testing facilities may determine patient's test positivity without KCDC confirmation
- ❖ If a test result is indeterminate, testing laboratory must re-examine remaining specimen and determine final result; if necessary, testing laboratory or health facility can re-collect and re-test specimens themselves, or refer to KCDC

5. Reporting Test Results

A. **Testing Laboratory:** Notify the healthcare facility (public health center or other healthcare facility) that has requested the test of suspected cases

- Public health centers or healthcare facilities must enter test results into Integrated Disease & Health Management System (<http://is.cdc.go.kr>) - Patient Monitoring

- Primary healthcare provider at public health center or healthcare facility should inform patient of test results and explain them

⚠ However, if the test result is positive, report immediately to the KCDC Emergency Operations Center by phone (043-719-7789, 7790) and to the public health center that requested the test

B. Research Institute of Public Health and Environment: Enter test result into the Integrated Disease & Health Management System

⚠ However, if the test result is positive, report immediately to the KCDC Emergency Operations Center by phone (043-719-7789, 7790) and to the public health center that first identified the case

➤ Appendix 11. COVID-19 Testing Laboratories

IX. Environmental Management

Basic directions

- ◆ Guidance for promptly disinfecting community facilities or public facilities, or residential spaces used by patients
- ◆ Guidance for selecting appropriate disinfection methods according to the type and condition of the object to neutralize infectious substances

1. General Principles of Disinfection

- **Disinfection plan:** After identifying location history of confirmed case, establish a plan including determining scope of disinfection and type of disinfectant
 - Identify location history of confirmed case; if unable to trace confirmed case's movement, set disinfection targets to objects and places commonly in contact with the public
 - * e.g. Elevator buttons, handrails, door handles, armrests, backrests, desks, lighting controllers, keyboards, switches, etc.
- **Education:** Staff in charge of disinfection should receive training on disinfection methods and infection prevention
 - Personal Protective Equipment (PPE) donning & doffing methods, handwashing or hand sanitizing methods, monitoring of symptoms such as fever, coughing, and difficulty in breathing after the disinfection, measures to follow if symptoms arise
 - Staff responsible for disinfection must wear PPE* when cleaning or disinfecting
 - * Medical-grade masks, full body protective suits or disposable waterproof long sleeve gowns, goggles or face shields, shoe covers or rubber boots, disposable double gloves (outer gloves should be rubber gloves)
- **Disinfecting tools:** To the extent possible, use disposable tools or use the tools exclusively for disinfection
 - * However, if cleaning tools can be reused with washing, disinfect with an appropriate disinfectant and store dry
- Criteria for resuming use of a space should consider type and characteristics of disinfectant used and purpose of space

2. Preparation Before Disinfection

- **Items to prepare:** Clothes to change into, exclusive containers for healthcare waste, buckets, disposable cloth/towels, water, disposable gloves, medical-grade mask, disinfectant, mop, etc.
- **PPE:** For daily disinfection, wear disposable gloves and a medical-grade mask (KF94, N95, or equivalent mask). Depending on the amount of contamination, add disposable waterproof long sleeve gowns, goggles, boots, etc.
- **Selecting environmental disinfectants:**

- Disinfectants must be approved for COVID-19 by the Ministry of Environment for disinfection of environment or object surfaces; follow dosage, directions for use, and precautions for each
- Disinfectants suggested by WHO: sodium hypochlorite (household bleach), alcohol (70%), quaternary ammonium compound, peroxygen compounds.

3. Precautions During Disinfection

- o Wear disposable gloves, disposable waterproof long sleeve gowns, goggles or face shields, medical-grade masks and boots according to PPE donning method
- o Do not touch eyes, nose or mouth during disinfection after donning PPE
 - * Wear goggles to keep hands away from eyes
- o If gloves or masks become dirty or damaged, safely remove and replace
 - * Recommended procedure: Remove gloves → Wash hands with water and soap → Remove mask → Wash hands with water and soap → Wear new mask → Wear new gloves
- o Rub floor or surface repeatedly with rag or cloth soaked with disinfectant instead of spraying
 - Spraying gives uncertain coverage and may promote aerosol production, and should not be used for floor and surface disinfection
- o Follow manufacturer's guidelines on safe usage (dilution ratio, contact time, application target, etc.), handling precautions, etc.
 - * Check whether the product is approved by the Ministry of Environment (Green Nuri, <http://ecolife.me.go.kr>)
- o Do not place disinfectants near flammable materials, do not mix different types of disinfectants, and keep disinfectants away from children
- o When using sodium hypochlorite (household bleach), prepare it by diluting (1000 ppm) immediately before disinfection, wipe surface with diluted solution, and let dry for at least 10 minutes
- o For surfaces that are not suitable for sodium hypochlorite (e.g. metal), use alcohol (70%)
- o Discard the remaining diluted solution after use
- o Ensure enough ventilation to circulate outside air into the room
- o Remove organic substances before disinfection so that disinfection effect is not reduced by residual organic substances such as blood

❖ **Precautions for cleaning and disinfecting patients' secretions (vomiting, blood, etc.):**

Remove foreign substances on surface using paper towels soaked in disinfectant or water, then perform disinfection

❖ **Reference: Dilution ratio of sodium hypochlorite disinfectant**

Effective chlorine concentration (ppm)	Sodium hypochlorite final concentration (%)	Sodium hypochlorite : water mixture ratio	
		4% (40,000ppm) sodium hypochlorite solution	5% (50,000 ppm) sodium hypochlorite solution
1,000 ppm	0.1%	1:40	1:50

5,000 ppm	0.5%	1:8	1:10
-----------	------	-----	------

4. Precautions After Disinfection

- After completing cleaning and disinfection, doff PPE carefully so as not to contaminate body or surroundings with infectious substances that could be on PPE
- Follow instructions for doffing personal protective equipment and be careful not to contaminate the surroundings; immediately discard PPE in medical waste containers
- Wash hands with soap and water after doffing PPE
- Discard all used disposable PPE in healthcare waste container and seal tightly; follow waste disposal procedures
- **Appendix 12. Special Protocol for Safe Management of COVID-19 Related Waste**
(03/02/2020)
 - * Reusable goggles can be reused after disinfection according to manufacturer's instructions
 - If staff have fever or respiratory symptoms within 14 days of cleaning and disinfection, report to a public health center.
 - **Criteria for resuming use:** Consider type and characteristics of disinfectant used and purpose of space
 - Disinfection kills the virus, but criteria for resuming use of a space depends on characteristics of each disinfectant because characteristics widely vary; individually consider safety precautions of each disinfectant
 - When using sodium hypochlorite (over 1,000ppm), thoroughly ventilate the space before resuming use (prohibit use until day after disinfection; sufficient ventilation is recommended before use)

Type	Begin disinfection	Criteria for resume use	Note
Community and/or public facility - space (area) used by patient	<ul style="list-style-type: none"> · Upon confirmation that a patient has used a space (area) in the facility 	<ul style="list-style-type: none"> · Resume use of space (area) based on characteristics of disinfectant 	<ul style="list-style-type: none"> · For sodium hypochlorite, high concentration dilution is used; resume use of space (area) after sufficient ventilation for a day or more after disinfection (considering odor and possible safety risk, etc)
Healthcare facility (Hospital)	<ul style="list-style-type: none"> · Immediately for environmental surfaces contaminated with blood, bodily fluids, secretions and feces. · At least once a day around isolated patient rooms (confirmed cases); frequent disinfection for surfaces with frequent hand contact 	<ul style="list-style-type: none"> · After disinfection, resume use after ventilating more than 6 air changes per hour for at least 2 hours 	<ul style="list-style-type: none"> · Refer to <i>Prevention and Management of Coronavirus Disease 2019</i> (for hospital-level healthcare facilities) (02/11/2020)

	· Disinfect room after patient discharge		
Healthcare facility (Clinic level)	· After a COVID-19 suspected case visits		· Refer to <i>Prevention and Management of Coronavirus Disease 2019 (for hospital-level healthcare facilities)</i> (02/11/2020)
Healthcare facility (Emergency room)	· After a COVID-19 patient visits the emergency room	· After disinfection, resume use after ventilating more than 6-12 air changes per hour for at least 4 hours	· Coronavirus Disease 2019 Guidance for practices in healthcare facilities (02/22/2020)

5. Disinfection Measures

- **Legal basis:** *Infectious Disease Control and Prevention Act*
 - Article 47 (preventative measures for infectious disease epidemic)
 - No. 5 ordering disinfection or other necessary measures for sites contaminated with infectious disease pathogens
 - Article 48 (disinfection measures for contaminated sites)
 - Article 49 (prevention measures for infectious diseases)
 - No. 8 disinfection of facilities or sites relevant to public health
 - No. 13 ordering disinfection or other necessary measures for contaminated buildings
- **Disinfection order:** The Minister of Health and Welfare, municipal governor, or head or city/county/district (public health center) issues notification of disinfection order to management/operator of the contaminated facilities
 - * Specify facility name, disinfection scope, and disinfection date in detail
 - **Form 11. Epidemic Control Measure Form**
- **Disinfection fulfillment:** Manager/operator of the facility that has been ordered to disinfect must perform disinfection following the *Infectious Disease Control and Prevention Act Attachment 6. Disinfection Method*, No 5. Disinfection Using Disinfectants
 - * Director of public health center can instruct and supervise disinfection if necessary
 - Reporting of disinfection plan and results: Personnel performing disinfection will create a plan before disinfection and report results after disinfection to manager/operator of facility ordered to disinfect
 - * Personnel who performed disinfection will issue *Form 12*. Certificate of Disinfection* to manager/operator of disinfected facility
 - *Translators' note: The original text refers to Form 11; this translation has made a correction to direct the reader to the appropriate form
- If the director of a public health center judges a second disinfection necessary (e.g. if the first disinfection did not meet disinfection standards) by checking the disinfection certificate, etc., they may order site to be disinfected again according to disinfection standards
 - **Form 12. Certificate of Disinfection**

- ❖ **For details on disinfection method and list of disinfectants in case of a confirmed case, refer to: *Disinfection guide for congregate or public facilities used by a COVID-19 patient (2-1 Edition)***

< Forms >

1. Infectious Disease Reporting Form	68
2. Report of Death (Post-Mortem Inspection) Relating to Infectious Disease	72
3. Inpatient Treatment Notice	75
4. Notice of Isolation/Quarantine (Korean/English)	76
5. COVID-19 Basic Epidemiological Investigation (Confirmed Case)	78
6. COVID-19 Case Management Report (Confirmed Case)	81
7. Home-Isolated/Quarantined Patient Monitoring Log	83
8. Patient Health Monitoring Log	84
9. COVID-19 Close Contact Tracing Form	85
10. Daily Status Report: Epidemiological Investigation by Municipal COVID-19 Immediate Response Task Force (Sample)	86
11. Epidemic Control Measure Form	88
12. Certificate of Disinfection	89
13. Laboratory Test Request Form	90

Form 1. Infectious Disease Reporting Form

■ Enforcement Regulations of Infectious Disease Control and Prevention Act [Attachment Form No. 1-3]
<Revised Nov. 22, 2019>

Infectious Disease Reporting Form

❖ Please read the instructions on the back regarding how to fill out and submit this report. Check (√) where applicable in [].
(Front)

Recipient: [] Director of the Korea Centers for Disease Control and Prevention
[] Director of _____ Public Health Center

[Patient's Personal Information]

Name: Resident (Alien) Registration Number:
Guardian's name: Sex: [] Male [] Female
(If the patient is 19 years old or younger)
Phone number: Cell phone number:
Address:
[] Address unknown [] Identity unknown Occupation:

[List of Infectious Diseases]		
Class 1	<input type="checkbox"/> Ebola Hemorrhagic Fever (Ebola)	<input type="checkbox"/> Francisella Tularensis
	<input type="checkbox"/> Marburg Hemorrhagic Fever (Marburg)	<input type="checkbox"/> Emerging Infectious Diseases (Signs and Symptoms:)
	<input type="checkbox"/> Lassa Fever	<input type="checkbox"/> Severe Acute Respiratory Syndrome (SARS)
	<input type="checkbox"/> Crimean-Congo Hemorrhagic Fever	<input type="checkbox"/> Middle East Respiratory Syndrome (MERS)
	<input type="checkbox"/> South American Hemorrhagic Fever	<input type="checkbox"/> Avian Influenza
	<input type="checkbox"/> Rift Valley Fever	<input type="checkbox"/> H1N1 influenza
	<input type="checkbox"/> Smallpox	<input type="checkbox"/> Diphtheria
	<input type="checkbox"/> Plague	
	<input type="checkbox"/> Anthrax	
	<input type="checkbox"/> Botulism	
Class 2	<input type="checkbox"/> Chickenpox	<input type="checkbox"/> Rubella ([] congenital rubella [] acquired rubella)
	<input type="checkbox"/> Measles	<input type="checkbox"/> Polio
	<input type="checkbox"/> Cholera	<input type="checkbox"/> Meningococcal disease
	<input type="checkbox"/> Typhoid	<input type="checkbox"/> <i>Haemophilus influenzae</i> Type B
	<input type="checkbox"/> Paratyphoid Fever	<input type="checkbox"/> Pneumococcal disease
	<input type="checkbox"/> Shigellosis	<input type="checkbox"/> Hansen's disease/ Leprosy
	<input type="checkbox"/> Enterohemorrhagic <i>E. coli</i> infections (EHEC)	<input type="checkbox"/> Scarlet Fever
	<input type="checkbox"/> Hepatitis A	<input type="checkbox"/> Vancomycin-Resistant <i>Staphylococcus Aureus</i> (VRSA) infection
	<input type="checkbox"/> Pertussis	<input type="checkbox"/> Carbapenem-Resistant <i>Enterobacteriaceae</i> (CRE) infection
	<input type="checkbox"/> Mumps	

Class 3	<input type="checkbox"/> Tetanus	<input type="checkbox"/> Hemorrhagic Fever with Renal Syndrome (HFRS, Hantavirus)
	<input type="checkbox"/> Hepatitis B	<input type="checkbox"/> Creutzfeldt-Jakob disease (CJD) and variant Creutzfeldt-Jakob disease (vCJD)
	<input type="checkbox"/> Japanese Encephalitis	<input type="checkbox"/> Yellow fever
	<input type="checkbox"/> Hepatitis C	<input type="checkbox"/> Dengue fever
	<input type="checkbox"/> Malaria	<input type="checkbox"/> Q fever
	<input type="checkbox"/> Legionellosis	<input type="checkbox"/> West Nile fever
	<input type="checkbox"/> Vibriosis	<input type="checkbox"/> Lyme disease
	<input type="checkbox"/> Rickettsial diseases	<input type="checkbox"/> Tick-borne encephalitis
	<input type="checkbox"/> Murine typhus (<i>Rickettsia typhi</i>)	<input type="checkbox"/> Melioidosis
	<input type="checkbox"/> Tsutsugamushi Disease	<input type="checkbox"/> Chikungunya fever
	<input type="checkbox"/> Leptospirosis	<input type="checkbox"/> Severe Fever with Thrombocytopenia Syndrome (SFTS)
	<input type="checkbox"/> Brucellosis	<input type="checkbox"/> Zika virus infection
	<input type="checkbox"/> Rabies	

[Infectious disease onset information]

Date of Onset: _____ Date of Diagnosis: _____ Date of Report: _____

Confirmed Test Result: ☐ Positive ☐ Negative ☐ Test in progress ☐ Not testedHospitalization Status: ☐ Outpatient ☐ Hospitalized ☐ OtherClassification of Patient Status, etc.: ☐ Patient ☐ Patient Suspected of an Infectious Disease ☐ Pathogen Carrier ☐ Other

Notes (other relevant information):

Alive or Deceased: ☐ Alive ☐ Deceased**[Reporting healthcare facility, etc.]**Health Care Institution
Identification Number:

Name of Health Facility:

Address:

Phone Number:

Name of
Diagnosing Doctor:

(Signature or seal)

Name of the Head of the Reporting Institution:

[Public Health Center Report Information]

Nationality (for foreigners only):

Patient's affiliated institution:

Address of patient's affiliated institution:

Presumed infected area: ☐ Domestic☐ Overseas

(Country: _____ / Length of stay: ~ / Date of Entry: Year ____ Month __ Day __)

210mm × 297mm [Standard paper 60g / m² (Recycled)]

How to report

1. For Class 1 infectious disease - emerging infectious disease syndrome, immediately notify the Director of the Korea Centers for Disease Control and Prevention or a director of a local public health center, by phone or other means. A written report must be submitted to the Director of the Korea Centers for Disease Control and Prevention or a director of a local public health center. For Class 2 or 3 infectious diseases, a written report must be submitted to the Director of the Korea Centers for Disease Control and Prevention or a director of a local public health center within 24 hours. However, if the classification of a patient already reported as having an infectious disease changes based on diagnostic test results, and/or if he/she is confirmed as no longer being a patient, the change must be updated and reported or notified to the local public health center.
2. Depending on the infectious disease, additional information may be requested to determine the patient's condition and the cause of the infectious disease.
3. If the patient expires prior to reporting infection, complete and submit both Report of Infectious Disease Outbreak and Report of Death (Post-Mortem Inspection) of Infected Patients. If the patient expires after reporting infection, complete and submit only the Report of Death (Post-Mortem Inspection) of Infected Patients.
4. Infection of, and death due to, Tuberculosis (among Class 2 infectious diseases) and AIDS (among Class 3 infectious diseases) must be reported separately as stipulated in the "Tuberculosis Prevention Act" and the "Prevention of Acquired Immunodeficiency Act," respectively.
5. In the event of a Class 4 infectious disease (an infectious disease subject to sample surveillance), a healthcare institution designated as a sample surveillance healthcare facility or a director of other institutions or organizations must submit a separate form as determined by the Director of the Korea Centers for Disease Control and Prevention within 7 days.
6. Report through fax or information system [Infectious Diseases Web Report in the Integrated Disease & Health Management System (<http://is.cdc.go.kr>)].
7. A public health center that has received a report from a healthcare facility or others under the same jurisdiction must notify the patient's local public health center.

How to fill out the report

[Recipient] Check (✓) the applicable recipient, and if the recipient is the director of a public health center, write the jurisdiction of the public health center in the blank.

[Patient's Personal Information]

(1) Name: If the patient is 19 years of age or younger, write down the patient's name and the name of his/her legal guardian (Foreigners may write names in English).

(2) Resident (Alien) Registration Number: Write the 13 digits of the patient's resident registration number (For foreigners, write the alien registration number).

[List of Infectious Diseases] Check (✓) the relevant infectious disease, and in case of emerging infectious disease syndrome among Class 1 infectious diseases, write the signs and symptoms in parentheses.

[Infectious disease onset information]

(1) Date of Onset: Enter the date on which the patient's symptoms began (Since a pathogen carrier does not have an onset date, in this case, write "0000-00-00").

(2) Date of Diagnosis: Enter the date on which the infectious disease was first diagnosed at the reporting healthcare facility.

(3) Report Date: Enter the date of the first report from the reporting healthcare facility to the local public health center (If reporting by fax, enter the date on which fax is sent. If you are reporting through the information system, enter the input date).

(4) Confirmation Test Result: Check (√) where applicable, referring to the "Diagnostic Criteria for Infectious Diseases" announced by the Director of the Korea Centers for Disease Control and Prevention.

(5) Classification of Patient Status, etc.: If the test results indicate and confirm that the patient is not a carrier of the relevant infectious disease, etc., check (√) "Other."

(6) Alive or Deceased: If the patient is deceased, check (√) "Deceased," and also complete and submit the [Attachment No. 1-4 Form] "Report of Death (Post-Mortem Inspection) of Infected Patients, etc."

[Reporting healthcare facility, etc.]

(1) If the reporting individual belongs to a healthcare facility, fill out the healthcare institution information, the name of the doctor who diagnosed the infectious disease, and the name of the head of the healthcare facility. If the reporting individual does not belong to a healthcare facility, write the address and telephone number of the institution to which the reporting individual belongs, the name of the doctor who diagnosed the infectious disease, and the name of the head of the institution to which the reporting individual belongs.

(2) If you are using the information system, select the applicable institution by using the "Search Health Care Institution" button. Then, the institution identification number, telephone number, address, and the name of the head of the reporting institution will be automatically filled.

[Public Health Center Report Information]

(1) Patient's affiliated institution name and address: Enter the name and address of the institution to which the patient belongs, including the workplace (business place), school (including daycare center and kindergarten), military units, etc.

(2) Nationality: For foreigners only, fill in the patient's nationality.

(3) Presumed infected area: If it is suspected that the patient was infected while staying abroad, check (√) "Overseas," and write the name of the country (if the patient stayed in multiple countries, write the name of the country in which the patient suspects he/she may have been infected), the length of stay and date of entry.

Form 2. Report of Death (Post-Mortem Inspection) Relating to Infectious Disease

■ Enforcement Regulations of Infectious Disease Control and Prevention Act [Attachment No. 1-4 Form]
 <Revised Nov. 22, 2019> You may report through Integrated Disease & Health Management System
 (<http://is.cdc.go.kr>)

Report of Death (Post-Mortem Inspection) Relating to Infectious Disease

❖ Please read the instructions on the back regarding how to fill out and submit this report. Mark ✓ in [] where applicable.

Recipient: [] Director of the Korea Centers for Disease Control and Prevention

(Front)

[] Director of _____ Public Health Center

[Patient's Personal Information]

Name:

Resident (Alien) Registration Number:

(If the patient is 19 years of age or younger, the name of guardian:)

Sex: [] Male [] Female

Phone number:

Cell phone number:

Address:

[] Address unknown

[] Identity unknown

Occupation:

[List of Infectious Diseases]		
Class 1	[] Ebola Hemorrhagic fever (Ebola)	[] Botulism
	[] Marburg Hemorrhagic fever (Marburg)	[] Francisella tularensis
	[] Lassa Fever	[] Emerging infectious diseases (signs and symptoms: _____)
	[] Crimean-Congo Hemorrhagic Fever	[] Severe Acute Respiratory Syndrome (SARS)
	[] South American hemorrhagic fever	[] Middle East Respiratory Syndrome (MERS)
	[] Rift Valley Fever	[] Avian Influenza
	[] Smallpox	[] H1N1 influenza
	[] Plague	[] Diphtheria
	[] Anthrax	
Class 2	[] Chickenpox	[] Rubella ([] congenital rubella [] acquired rubella)
	[] Measles	[] Polio
	[] Cholera	[] Meningococcal disease
	[] Typhoid	[] <i>Haemophilus influenzae</i> Type B
	[] Paratyphoid fever	[] Pneumococcal disease
	[] Shigellosis	[] Hansen's disease/ Leprosy
	[] Enterohemorrhagic <i>E. coli</i> infections (EHEC)	[] Scarlet Fever
	[] Hepatitis A	[] Vancomycin-resistant <i>Staphylococcus aureus</i> (VRSA) infection
	[] Pertussis	[] Carbapenem-resistant <i>Enterobacteriaceae</i> (CRE) infection
	[] Mumps	

Class 3	<input type="checkbox"/> Tetanus	<input type="checkbox"/> Hemorrhagic Fever with Renal Syndrome (HFRS, Hantavirus)
	<input type="checkbox"/> Hepatitis B	<input type="checkbox"/> Creutzfeldt-Jakob disease (CJD) and variant Creutzfeldt-Jakob disease (vCJD)
	<input type="checkbox"/> Japanese Encephalitis	<input type="checkbox"/> Yellow fever
	<input type="checkbox"/> Hepatitis C	<input type="checkbox"/> Dengue fever
	<input type="checkbox"/> Malaria	<input type="checkbox"/> Q fever
	<input type="checkbox"/> Legionellosis	<input type="checkbox"/> West Nile fever
	<input type="checkbox"/> Vibriosis	<input type="checkbox"/> Lyme disease
	<input type="checkbox"/> Rickettsial diseases	<input type="checkbox"/> Tick-borne encephalitis
	<input type="checkbox"/> Murine typhus (<i>Rickettsia typhi</i>)	<input type="checkbox"/> Melioidosis
	<input type="checkbox"/> Tsutsugamushi Disease	<input type="checkbox"/> Chikungunya fever
	<input type="checkbox"/> Leptospirosis	<input type="checkbox"/> Severe Fever with Thrombocytopenia Syndrome (SFTS)
	<input type="checkbox"/> Brucellosis	<input type="checkbox"/> Zika virus infection
	<input type="checkbox"/> Rabies	

[Cause of Death] ❖ In (B) (C) (D), write only those with a clear direct and medical causal relationship with (A)

(A) Cause directly leading to death

(B) Cause of (A) _____ Interval between onset and _____
 (C) Cause of (B) _____ death term _____
 (D) Cause of (C) _____

Physical conditions other than the cause of death from (A) to (D)

Main findings of surgery: _____ Date of expiration: _____

Key findings of autopsy (or postmortem inspection): _____

[Reporting healthcare facility, etc.]

Health Care Institution Identification Number: _____ Name of Healthcare Facility _____
 Address _____ Phone Number _____
 Name of Diagnosing Doctor _____ (Signature or seal) _____ Name of the Head of the Reporting Institution: _____

210mm × 297mm [white paper (80g / m²) or heavy paper (80g / m²)]

(Back)

How to report

1. For a death due to Class 1 infectious diseases, immediately notify the Director of the Korea Centers for Disease Control and Prevention or a director of a local public health center, by phone or other means. A written report must be submitted to the Director of the Korea Centers for Disease Control and Prevention or a director of a local public health center. For a death due to Class 2 or 3 infectious diseases, a written report must be submitted to the Director of the Korea Centers for Disease Control and Prevention or a director of a local public health center within 24 hours.
2. Depending on the infectious disease, additional information may be requested to determine the patient's condition and the cause of the infectious disease.
3. Infection of, and death due to, Tuberculosis (among Class 2 infectious diseases) and AIDS (among Class 3 infectious diseases) must be reported separately as stipulated in the "Tuberculosis Prevention Act" and the "Prevention of Acquired Immunodeficiency Act," respectively.
4. If the patient expires prior to reporting infection, complete and submit both Report of Infectious Disease Outbreak and Report of Death (Post-Mortem Inspection) of Infected Patients. If the patient expires after reporting infection, complete and submit only the Report of Death (Post-Mortem Inspection) of Infected Patients.

How to fill out the report

[Recipient] Mark ✓ on the applicable recipient, and if the recipient is the director of a local health center, write the jurisdiction of the health center in the blank.

[Patient's personal information]

(1) Name: If the patient is 19 or younger, write down the name of the patient and his/her guardian (foreigners may write in English).

(2) Resident (alien) registration number: Write the 13-digit resident registration number (for foreigners, enter the alien registration number).

❖ For reporting death through the Integrated Disease & Health Management System (<http://is.cdc.go.kr>), the section on patient's personal information in the Report of the Outbreak of Infection will be filled automatically.

[List of infectious diseases] Mark ✓ on the corresponding infectious disease, and for **emerging infectious disease syndrome** among **Class 1 infectious diseases**, please fill in the symptoms as indicated in parentheses.

[Reporting healthcare facility, etc.]

(1) If the reporting individual belongs to a healthcare facility, fill out the healthcare institution information, the name of the physician who diagnosed the infectious disease, and the name of the head of the healthcare facility. If the reporting individual does not belong to a healthcare facility, write the address and telephone number of the institution with which the reporting individual is affiliated, the name of the physician who diagnosed the infectious disease, and the name of the head of the institution with which the physician is affiliated.

(2) If you are using the information system, you can select the applicable institution by using the "Search Health Care Institution" button. Then, the healthcare institution identification number, telephone number, address, and the name of the head of the reporting institution will be automatically filled.

Form 3. Inpatient Treatment Notice

■ Enforcement Regulations of Infectious Disease Control and Prevention Act [Attachment Form No. 22]

Inpatient Treatment Notice			
Name		Resident Registration Number	
Inpatient treatment	Date of Inpatient Admission:		
	Inpatient Treatment Period:		
	Inpatient Treatment Location	[] Hospital [] Home [] Residential Facility	
		Address:	
<p>This serves as notification that the above person is admitted and for inpatient treatment in accordance with Article 41 and Article 43 of the Infectious Disease Control and Prevention Act.</p> <p>❖ Failure to comply with inpatient treatment may result in a fine of up to KRW 3 million in accordance with Article 80-4 of the Infectious Disease Control and Prevention Act.</p> <p style="text-align: center;">____/____/____ (MM/DD/YYYY)</p> <p style="text-align: center;">Head of Local Government or Head of Healthcare Facility</p>			

210mm × 297mm [standaard paper 60g / m² (Recycled)]

Form 4. Notice of Isolation / Quarantine

Notice of Isolation / Quarantine (Korean)			
Name		Date of Birth	___/___/___
Quarantine Type <input type="checkbox"/> Home Isolation/Quarantine <input type="checkbox"/> Facility <input type="checkbox"/> Hospital	Duration		
	Location	Place of Isolation/Quarantine	
		Address	
<p>You are hereby notified that you qualify as “a person suspected of being infected with an infectious pathogen” in accordance with Article 49-1-14 of the Infectious Disease Control and Prevention Act or as “a person in contact with an infectious patient and at risk of infection or spread of disease” in accordance with Article 41-3-2 of the same Act. You are hereby subject to mandatory quarantine.</p> <p>❖ Failure to comply with this notice may result in a fine of up to KRW 3 million in accordance with Article 80-4 or 80-7 of the Infectious Disease Control and Prevention Act.</p> <p style="text-align: center;">___/___/___ (MM/DD/YYYY)</p> <p style="text-align: center;">Director of _____ Public Health Center</p>			

Notice of Isolation / Quarantine (English)			
Name		Date of Birth	___/___/___
Quarantine Type* <input type="checkbox"/> Home Isolation/Quarantine <input type="checkbox"/> Facility <input type="checkbox"/> Hospital	Duration	Effective from ___/___/___ to ___/___/___	
	Location	<input type="checkbox"/> Residence (including home) <input type="checkbox"/> Other facilities	
		Address	
<p>The government of the Republic of Korea notifies you that you should be home-isolated/quarantined for the requested period of time according to Article 49.1.14 or 41.3.2 of the Infectious Disease Control and Prevention Act.</p> <p>If you do not comply with this notice, you will be fined up to KRW 3 million in accordance with Article 80.4 or 80.7 of the Infectious Disease Control and Prevention Act.</p> <p style="text-align: center;">___/___/___ (MM/DD/YYYY)</p> <p style="text-align: center;">Mayor · Governor of metropolitan cities and provinces or Mayor · Governor · Head of district office [gu] or Head of healthcare facility</p>			

**Translators' note: Some items in this form have been modified or updated in English to match the Korean version of the same form*

Form 5: COVID-19 Basic Epidemiological Investigation (Confirmed Case)

- ❖ If the patient on this survey was previously reported as a suspected case and has tested positive, re-classify as a “confirmed case” on the online disease reporting tool before continuing with this survey
- ❖ Please report to: Infectious Disease & Health Management System (is.cdc.go.kr) - Infectious Disease Management Supporting Documents - Epidemiological Investigation - New Infectious Disease - Basic Epidemiology Survey (vs2)

Investigator information	Jurisdiction		Contact Number	(Office)	Reporting agency (Name of public health facility or healthcare facility)	
	Investigation facility			(Mobile)		
	Investigator name		Investigation Date	____/____/____ (MM/DD/YYYY)		

Test confirmation number	(given by the KCDC)	Testing facility		Isolation type and location	<input type="checkbox"/> Home <input type="checkbox"/> Facility <input type="checkbox"/> Hospital (name: _____)
Date of test confirmation	____/____/____ (MM/DD/YYYY)	Test date	____/____/____ (MM/DD/YYYY)	Isolation start date	____/____/____ (MM/DD/YYYY)

1. Patient information (Check the box or fill in with the response)

1.1 Name			1.2 Resident Registration Number	-	1.3 Sex	<input type="radio"/> Male <input type="radio"/> Female
1.4 Nationality		<input type="radio"/> Citizen <input type="radio"/> Foreigner (country: _____)	1.5 Address			
1.6 Contact information	Patient		1.7 Occupation (company name, school name, healthcare facility name, etc.)			
	Emergency Contact					
1.8 For health workers		<input type="radio"/> Applicable (<input type="checkbox"/> Doctor <input type="checkbox"/> Nurse <input type="checkbox"/> Other (Radiology technician, nursing assistant, medical laboratory technologist, paramedic, etc.) <input type="radio"/> Not applicable				

2. Symptoms and underlying illnesses (Check the box or fill in with the response)				
2.1 Symptoms (From 14 days prior to the test confirmation up to now)	<input type="radio"/> Yes (fill out 2.2, 2.3) <input type="radio"/> None		2.2 Date of symptom onset	____/____/____ (MM/DD/YYYY)
2.3 Initial symptoms	<input type="checkbox"/> Fever (including subjective complaints)	<input type="checkbox"/> Respiratory symptoms	<input type="checkbox"/> Other non-respiratory symptoms	<input type="checkbox"/> Pneumonia
	<input type="radio"/> Yes (temperature: _____) <input type="radio"/> No	<input type="radio"/> Yes > <input type="checkbox"/> Cough <input type="checkbox"/> Phlegm <input type="checkbox"/> Sore throat <input type="checkbox"/> Shortness of breath <input type="radio"/> No	<input type="radio"/> Yes > <input type="checkbox"/> Muscle pain <input type="checkbox"/> Chills <input type="checkbox"/> Other: ____ <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No
2.4 Pre-existing conditions	<input type="radio"/> Yes (please be specific: _____) <input type="radio"/> No		2.5 Pregnancy	<input type="radio"/> Yes (_____ weeks) <input type="radio"/> No
2.6 Treatment status (at the time of confirmation)	<input type="checkbox"/> Routine treatment <input type="checkbox"/> Oxygen treatment (nasal cannula, face mask) <input type="checkbox"/> Mechanical Ventilation <input type="checkbox"/> ECMO <input type="checkbox"/> Death <input type="checkbox"/> Under investigation <input type="checkbox"/> Other: _____			

3. Suspected source of infection (From 14 days prior to the symptom onset up to now; check the box or fill in with the response)		
3.1 International travel	<input type="radio"/> Yes (Country: _____, Entry date: ____/____/____ (MM/DD/YYYY))	<input type="radio"/> No
3.2 Contact with confirmed case(s)	<input type="radio"/> Yes <input type="checkbox"/> Family member (or co-residing partner), - Name: ____ - Patient confirmation number: ____ <input type="checkbox"/> Persons other than family members (or co-residing partners), - Name: ____ - Patient confirmation number: ____ <input type="checkbox"/> Date of last contact: ____/____/____ (MM/DD/YYYY)	<input type="radio"/> No
3.3 Clustered outbreaks	<input type="radio"/> Yes <input type="checkbox"/> Family member (or co-residing partner) <input type="checkbox"/> Healthcare facility: ____ <input type="checkbox"/> Place of worship: ____ <input type="checkbox"/> Nursing homes or psychiatric facilities: ____ <input type="checkbox"/> School: ____ <input type="checkbox"/> Other: ____	<input type="radio"/> No

3.4 Other remarks	
-------------------	--

4. Usage of public facilities - healthcare facilities or other facilities, etc. (From 14 days prior to the symptom onset up to now, check the box or fill in with the response)	
<input type="radio"/> Yes (Institution / facility name: ____ <input type="checkbox"/> Currently admitted (admission date: ____/____/____ (MM/DD/YYYY)) <input type="checkbox"/> Discharged (discharge date: ____/____/____ (MM/DD/YYYY))	<input type="radio"/> No

5. Family members, co-residing partners, and other persons with whom contact was made (any person with whom physical contact was made from one day prior to the symptom onset up to now; check the box or fill in with the response)		
5.1 Family members or co-residing partners	<input type="radio"/> Yes <input type="checkbox"/> Number of people: ____	<input type="radio"/> No
5.2 Other facilities (places of worship, nursing homes, psychiatric facilities, schools, institutions, etc.)	<input type="radio"/> Yes <input type="checkbox"/> Organization name: ____ <input type="checkbox"/> Number of people: ____	<input type="radio"/> No
5.3 Medical facilities	<input type="radio"/> Yes <input type="checkbox"/> Name of medical facility: ____ <input type="checkbox"/> Number of people: ____	<input type="radio"/> No

Form 6. COVID-19 Case Management Report (Confirmed Case)

- ❖ How to fill in this form: Check and register major progress/results such as “hospital discharge,” “isolation release,” and “death” of confirmed cases
- ❖ Where to go on the online registration portal: Integrated Disease & Health Management System (is.cdc.go.kr) - Infectious Disease Management Integrated Information Support - Patient Management - Patient Information Management

Investigator information	Jurisdiction		Contact Number	(Office)	Reporting agency (Name of public health center or healthcare facility)	
	Investigation facility			(Mobile)		
	Investigator name		Investigation Date	____/____/____ (MM/DD/YYYY)		

Test confirmation number	(given by the KCDC)	Testing facility		Isolation type and location	<input type="checkbox"/> Home <input type="checkbox"/> Facility <input type="checkbox"/> Hospital (Location name: _____)
Date of test confirmation	____/____/____ (MM/DD/YYYY)	Test date	____/____/____ (MM/DD/YYYY)	Isolation start date	____/____/____ (MM/DD/YYYY)

1. Patient Information (Tick the box or fill in with the response)					
1.1 Name			1.2 Resident Registration Number	-	1.3 Sex <input type="radio"/> Male <input type="radio"/> Female
1.4 Nationality		<input type="radio"/> Citizen <input type="radio"/> Foreigner (Country: _____)	1.5 Address		
1.6 Contact information	Patient		1.7 Occupation (Company name, school name, name of healthcare facility, etc.)		
	Guardian				
1.8 For health workers		<input type="radio"/> Applicable (<input type="checkbox"/> Physician <input type="checkbox"/> Nurse <input type="checkbox"/> Other (Radiology technician, nursing assistant, medical laboratory technologist, paramedic, or other _____) <input type="radio"/> Not applicable			

2. Report Status		
2.1 Patient report	<input type="radio"/> Reported	<input type="radio"/> Not Reported
2.2 Basic epidemiological investigation	<input type="radio"/> Reported	<input type="radio"/> Not Reported

3. Patient Status (Record any major progress until patient care concludes)		
3.1 Patient status (Select one)	<input type="radio"/> Currently hospitalized (___/___/___ - ___/___/___) (MM/DD/YYYY) <input type="checkbox"/> Name of medical facility: _____ <input type="radio"/> Discharged from the hospital (___/___/___) <input type="radio"/> Death (___/___/___)	<input type="radio"/> None
3.2 Treatment status (Status at reporting time)	<input type="radio"/> Routine treatment <input type="radio"/> Oxygen treatment (nasal cannulas, face masks) <input type="radio"/> Mechanical ventilation <input type="radio"/> ECMO <input type="radio"/> Death <input type="radio"/> Under investigation <input type="radio"/> Other ()	<input type="radio"/> None

4. Isolation Status (Record any major progress until patient care concludes)		
4.1 Status (Select one)	<input type="radio"/> Under isolation (<input type="checkbox"/> Home isolation, <input type="checkbox"/> Facility isolation, <input type="checkbox"/> Hospital isolation) ___/___/___ - ___/___/___ (MM/DD/YYYY), <input type="checkbox"/> Name of isolation place: _____ <input type="radio"/> Not under isolation <input type="radio"/> Released from isolation (___/___/___ (MM/DD/YYYY))	<input type="radio"/> None

❖ If the reporting patient is deceased, register the patient's medical record and death certificate

Form 7. Home-Isolated/Quarantined Patient Monitoring Log

No.	Name	Sex	Date of birth	Date of self-quarantine	Date of quarantine release	Address	Severity classification	Comments	Symptoms during quarantine period (Onset date)	Current status
	Brian Jones	Male		Jan 10	Jan 20			Discharged from xx hospital		Discharged after conducting health education
								No symptoms	Fever, sore throat (Jan 1, 2019)	Transferred to xx medical institution

Form 8. Patient Health Monitoring Log

Patient name	Clinical symptoms		Day 1	Day 2	Day 3	Day 4	Day 5	~	Day 10	Day 11	Day 12	Day 13	~	Day 19	Day 20	Day 21	
			Date:	Date:	Date:	Date:	Date:	Date:	Date:	Date:	Date:	Date:	Date:	Date:	Date:	Date:	Date:
Example Name	1. Body temperature	AM	36.5°C	36.5°C	36.5°C	36.5°C	36.5°C		36.5°C	36.5°C	36.5°C	36.5°C		36.5°C	36.5°C	36.5°C	
		PM	38°C	36.5°C	36.5°C	36.5°C	36.5°C		36.5°C	36.5°C	36.5°C	36.5°C		36.5°C	36.5°C	36.5°C	
	2. Clinical symptoms																
	A. Cough		✓	✓	✓				✓			✓		✓	✓	✓	
	B. Fatigue					✓											
	C. Shortness of breath		✓	✓	✓												
	D. Sore throat		✓														
	E. Other symptoms			Diarrhea													
	Body temperature		AM														
			PM														
Clinical symptoms																	
A. Cough																	
B. Sore throat																	
C. Shortness of breath																	
D. Sputum																	
E. Other																	
Body temperature		AM															
		PM															
Clinical symptoms																	
A. Cough																	
B. Sore throat																	
C. Shortness of breath																	
D. Sputum																	
E. Other																	

Form 9. COVID-19 Close Contact Tracing Form

Number	Name of close contact	Date of birth	Sex	Address 1	Address 2	Type of close contact	Quarantine status	Korean	Nationality	Cell phone number	Home number	Employer (or school)	Final date of contact	Suspected case
	Full name	YYYY MMDD	1: Male 2: Female	State, City	Street, Unit	01: Healthcare providers including doctors, nurses and physician assistant 02: Other hospital employees 03: Patient 04: Family 05: Friends 06: Others	1: Not quarantined 2: Quarantine release 3: Home-quarantine 4: Hospital quarantine 5: Cohort quarantine	Y: Korean N: Foreigner (please specify nationality)	Country of origin (if indicated 'N' for Korean)	Numbers only, no dashes	Numbers only, no dashes	Company or school name, text only	YYYY MMDD	Y: Yes N: No
1	John Smith	1971 0101	1 [Male]	Seoul Mapo Sangsoo-Dong	111-11	1 [Healthcare provider]	3 [Home-quarantine]	Y		010 1234 1234	02 1234 1234	XYZ Hospital	2015 0630	Y
2	John Doe	1971 0102	1 [Male]	Seoul Mapo Sangsoo-Dong	111-11	4 [Family]	3 [Home-quarantine]	Y		010 1234 1234	02 1234 1234	XYZ University	2015 0630	N
3	Nick Johnson	2001 0101	1 [Male]	Seoul Mapo Sangsoo-Dong	111-11	2 [Other hospital employee]	3 [Home-quarantine]	N	China	010 1234 1234	02 1234 1234	XYZ Company	2015 0630	N
4	Tom Brenner	2001 0103	1 [Male]	Seoul Mapo Sangsoo-Dong	111-11	4 [Family]	3 [Home-quarantine]	Y		010 1234 1234	02 1234 1234	Unemployed	2015 0630	N

* Fill out and complete the above Close Contact Tracing Form in Excel and upload the file into the Integrated Disease & Health Management System: 'Infectious disease management integrated information support' → Patient management → Contact tracing → Submit (Excel).

* The resident registration number of the close contact, the case number of the confirmed patient with whom he/she had contact, as well as the location where they came into contact should be included in the "Public Health Center Opinion" section.

Form 10. Daily Status Report: Epidemiological Investigation by Municipal COVID-19 Immediate Response Task Force (Sample)

- ❖ Tip : Activities of the Municipal COVID-19 Immediate Response Task Force (e.g. when cases arise in community facilities and/or healthcare facilities) must be reported daily
- ❖ Instructions : Fill out the form and send to the Korea Centers for Disease Control and Prevention (Central Disease Control Headquarters) by email at kcdceid@korea.kr

Daily Status Report of Epidemiologic Investigation by Municipal COVID-19 Immediate Response Task Force

<[Name of municipality]'s Municipal COVID-19 Immediate Response Task Force, __/__/2020 (Sat)>

☐ Management status

- **Patient**
- **Close contacts:** Secure a list of close contacts*, **(home/facility/hospital) isolation** in their local district/county/city
 - * *Distribution and size of close contacts: Ex. As of [time] on [date], close contacts total [number] - the patients' spouses, [number] passengers aboard the aircraft, [number] flight attendants, [number] quarantine officers, [number] staff at [hospital name] ([number] doctors, [number] nurses)*
 - **Send close contacts list and form:** List of close contacts by local governments, initial investigation of close contacts/daily monitoring form, guidelines for monitoring
 - * *Report daily to [agency] by 17:00 after monitoring patients' status at [time] AM and [time] PM*

☐ Active measures

- **On-site response:** Dispatch to [hospital name] in [name of municipality], conduct epidemiological investigation
 - * *Dispatched [no.] of Municipal COVID-19 Immediate Response Task Force and [list all responses taken here]*
 - Conduct patient interviews to determine overseas travel/activity and activity after entry [TIMESTAMP]
 - Map out patients' path of activity from point of entry and confirm the range of close contacts
 - Re-collect samples (from upper and lower respiratory tract), request re-testing [TIMESTAMP] → Confirm positive re-testing results from the corresponding Research Institute of Public Health and Environment
- **Measures:** Secure a list of close contacts*, **(home/facility/hospital) isolation** in their local district/county/city
 - * *Distribution and size of close contacts: Ex. As of [time] on [date], close contacts total [number] - the patients' spouses, [number] passengers aboard the aircraft, [number] flight attendants, [number] quarantine officers, [number] staff at [hospital name] ([number] doctors, [number] nurses)*
 - **Send close contacts list and form:** List of close contacts by local governments, initial investigation of close contacts/daily monitoring form, guidelines for monitoring
 - * *Report daily to [agency] by 17:00 after monitoring patients' status at [time] AM and [time] PM*

- **Press briefing:** Distribute reference materials for press release, briefings held at [name of venue]
- **Future plans**
 - Municipal COVID-19 Immediate Response Task Force to return to the corresponding municipality; district/county/city public health center to identify, monitor, and manage close contacts and confirm follow-up measures

Form 11. Epidemic Control Measure Form

Temporary closure <input type="checkbox"/> Restricted access <input type="checkbox"/> Limited movement <input type="checkbox"/> Suspension of healthcare facility <input type="checkbox"/> Disinfection <input type="checkbox"/> Order						
Target Facility	Name					
	Address					
Owner (Manager)	Name			Date of birth		
	Address			Phone number		
Order Instructions	Order Category					Effective Period
	Temporary closure	Restricted access	Limited movement	Suspension of healthcare facility	Disinfection	From __ : __
						__ / __ / 2020 To __ : __ __ / __ / 2020
Order Target	Range	Entire facility			Part of facility (If so, describe range in detail)	
Guidelines	<p>The standard for resuming operation of individual facilities can be adjusted according to the characteristic(s) of each type of disinfectant and the purpose of the facility after the space(area) the patient used has been disinfected.</p> <ul style="list-style-type: none"> The virus will be killed off completely after disinfection; however, as the characteristic for each disinfectant varies, it is necessary to consider separate precautions for each disinfectant product. A decision on the time for resuming operation should not be made across-the-board. When sodium hypochlorite (1,000ppm or higher) is used for disinfection, sufficient ventilation is required before reusing the space. (It is recommended to restrict the use of the space until a day after disinfection and with sufficient ventilation.) 					
In accordance with the Infectious Disease Control and Prevention Act Article 47, No. 1 (Temporary closure, Restricted access, Limited movement), No. 2 (Suspension of healthcare facility), No. 5 (Disinfection), Order for temporary closure, restricted access, limited movement, suspension of healthcare facility, disinfection has been declared as above.						
____ / ____ / 2020						
<p>[Name], Director of public health center</p> <p>(No signature required)</p>						
Notes						
In case of violation of Order for temporary closure, restricted access, limited movement, suspension of healthcare facility, disinfection (in accordance with Infectious Disease Control and Prevention Act Article 47), the violator can be fined up to \$3,000 in accordance with the corresponding Act, Article 80, No. 7.						

■ Enforcement Regulation on the Prevention and Management of Infectious Diseases [Attachment Form No. 28]

89

Form 13. Laboratory Test Request Form (Sample)

❖ The following is a form for cases referred to the Korea Centers for Disease Control and Prevention (KCDC). The form must be appropriately filled out and submitted when requesting the Research Institute of Public Health and Environment (RIPHE) for a test.

■ Test request guidelines by the KCDC [Attachment Form No. 7] <Revised 08/23/2019>

Test Request Form for () Specimen			Processing time			
			Please refer to the processing time based on "Testing Notification by the Korea Centers for Disease Control and Prevention."			
Requesting institution	Name of healthcare facility		Name of designated personnel			
			Contact information of designated personnel			
	Address		(Phone:) (Fax:)			
Patient	Name (or Identification Number)		Date of birth		Sex	
	Date of disease onset		Date of specimen collection			
Specimen type (quantity)						
Test categories						
Specimen collection classification (1 st or 2 nd)						
Designated physician's notes						
Designated physician: (signature)						
The above test is requested in accordance with Article 4 of the "Request Guideline for Testing by the Korea Centers for Disease Control and Prevention."						
Day/Month/Year: ____/____/____						
Director of the requesting institution: (signature)						
❖ Attachments						
1. Specimen for testing						
2. Other required materials for the test						
Notes						
1. The requesting party must be a healthcare facility approved by "Medical Law," and the form must be signed by the director of the requesting institution. 2. For the requesting institution, please write down a phone number that can be reachable for notification of test results. 3. For AIDS, please write down the identification number of the patient instead of his/her name. 4. In the "Specimen type (quantity)" box, please write down both the type of specimen and quantity of each type. [ex. blood sample (2)]						
Processing procedure						
<div style="display: flex; align-items: center; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">Complete request form</div> <div>→</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">Submit</div> <div>→</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">Test/Examine</div> <div>→</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">Approve</div> <div>→</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">Provide results</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div>Requesting party</div> <div>Korea Centers for Disease Control and Prevention (Relevant department)</div> </div>						

Disclaimer

The original document was developed by the South Korean government and has been translated from Korean to English by a group of volunteers listed below.

Contributors

Alexander Bae	Ki Young Park
Anisa Khalifa	Kipom Kim
Ashley Eom	Michael Joseph Walsh
Changgyo Yoon	Michelle (So Young) Park
Charis Jung	Minju Kim
Chris J. Kil	Na Yeon Kim
Clare Jung Yoon Choi	Rachel Bae
Dajin Jung	Rachel Choi
Doyeun Kim	Ranjit Sandhu
Edward Kim	Ruby Kwak
Eileen Yoon	Sang Woo Park
Eric Ristad	Sebastian Seung
Ga Young Lee	Sehyo Yune
Grace Y. Kim	Seungjae Ryan Lee
Hannah Bae	So Hyun Rhee
Hye Jin Park	Sooah Cho
Hyewon Kim	SunJung Lee
Inhwan Bae	Sunnie Kim
Irin Cho	Swan Lee
James Choi	Yoojin Chung
JiYoung Park	Yoon Hyung Hahn
Jun Hyuk Choi	Youhan Kim
Jung-Eun June Ha	Youngjoon Kim
Jungho Son	Youngshin Keum
Jungmin Hwang	