Tackling COVID-19

Health, Quarantine and Economic Measures:
The Korean Experience

March 31, 2020

The Government of
the Republic of Korea

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(to be updated)

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Tackling COVID-19: Korean Experience

President Moon Jae-in participated in the G20 Extraordinary Virtual Leaders' Summit on COVID-19
(March 26, 2020)

"Over the last two months, Korea has been at the center of the COVID-19 challenge. The time is never right for complacency, yet preemptive and transparent quarantine measures, combined with the public's voluntary and democratic participation in such efforts, are bringing gradual stability. "

President Moon Jae-in
Republic of Korea

As President Moon Jae-in of the Republic of Korea said, "the impact of the health and economic crisis caused by COVID-19 is the first of its kind." In order to overcome this crisis, it is very important to make joint efforts at both regional and national level, as well as globally. This paper is a summary of Korea's health and economic response against COVID-19 over the past two months from January to March 30, 2020.

1. Introduction

With the spread of COVID-19, the world is facing an unprecedented economic and health crisis. Many global leaders and economists view COVID-19 as "the gravest challenge since World War II." On March 16, the G7 leaders issued a joint statement "acknowledging that the COVID-19 pandemic is a human tragedy and a global health crisis, which also poses major risks for the world economy."

In this extreme situation, Korea is becoming a beacon of hope and a model to follow. According to major media outlets around the world, "South Korea took rapid, intrusive measures against COVID-19 and they worked" (Guardian, March 20). Fortune magazine wrote that "South Korea has the highest rate of testing and the most comprehensive data for coronavirus in the world" (March 19).

On February 29, the number of new cases in one day surged to 909, mainly in a specific region and due to a single religious group. In just four weeks, however, on March 30, the number of new cases dropped to 78. So far, Korea is the only country with a population of over 50 million that has slowed the spread of the virus, and flattened the curve of new infections without shutting down the country or cities at the epicenter of the outbreak, without imposing extreme personal travel or movement restrictions, and without closing airports or taking other authoritarian actions.

Picture 1   President Moon Jae-in at a Special Meeting for COVID-19 Measures

Figure 1 Flattening trend of COVID-19 in Korea: New and Cumulative Cases
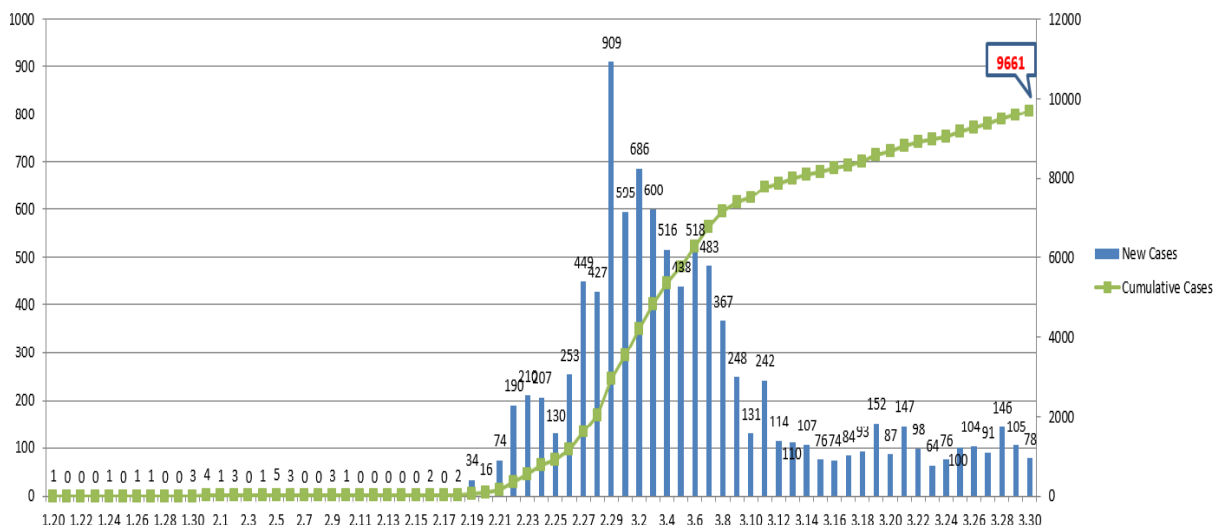
How did Korea test more than 300,000 people? (equivalent to 6,000 per million people)

How did Korea control the COVID-19 outbreak within a month?

What is Korea's secret in tackling COVID-19?

The Korean government is receiving many inquiries about Korea's response against COVID-19. The number of inquiries that Korea can address is certainly limited as the virus continues to spread in the country. However, examining the health, quarantine and economic measures taken by the Korean government through different stages of the spread will provide valuable information on how to tackle COVID-19. It will be helpful to share information on the first drive-through testing in the world, rigorous epidemiological investigations using ICT, and pan-governmental cooperation at national, provincial and city levels.

As the world has become tightly connected into a global society, the problems of one country can also greatly impact other countries through global chains. We hope that information on Korea's measures against COVID-19 will help other governments, businesses, medical institutions and societies in coming up with measures to fight COVID-19.

2. COVID-19 Situation in Korea

2.1. CURRENT SITUATION

As of March 30, the total number of COVID-19 cases in Korea stands at 9,661 with 158 deaths. The number of new cases per day has shown a steady decline since hitting a peak at 909 on February 29. On March 13, the number of patients that had recovered, tested negative and been released from care exceeded the number of new cases. Korea has kept the number of new cases under 100 for four days in a row from March 15, and only 78 new cases were reported on March 30. It appears that the country has brought the outbreak under control.

Figure 2 Evolution of COVID-19 in Korea
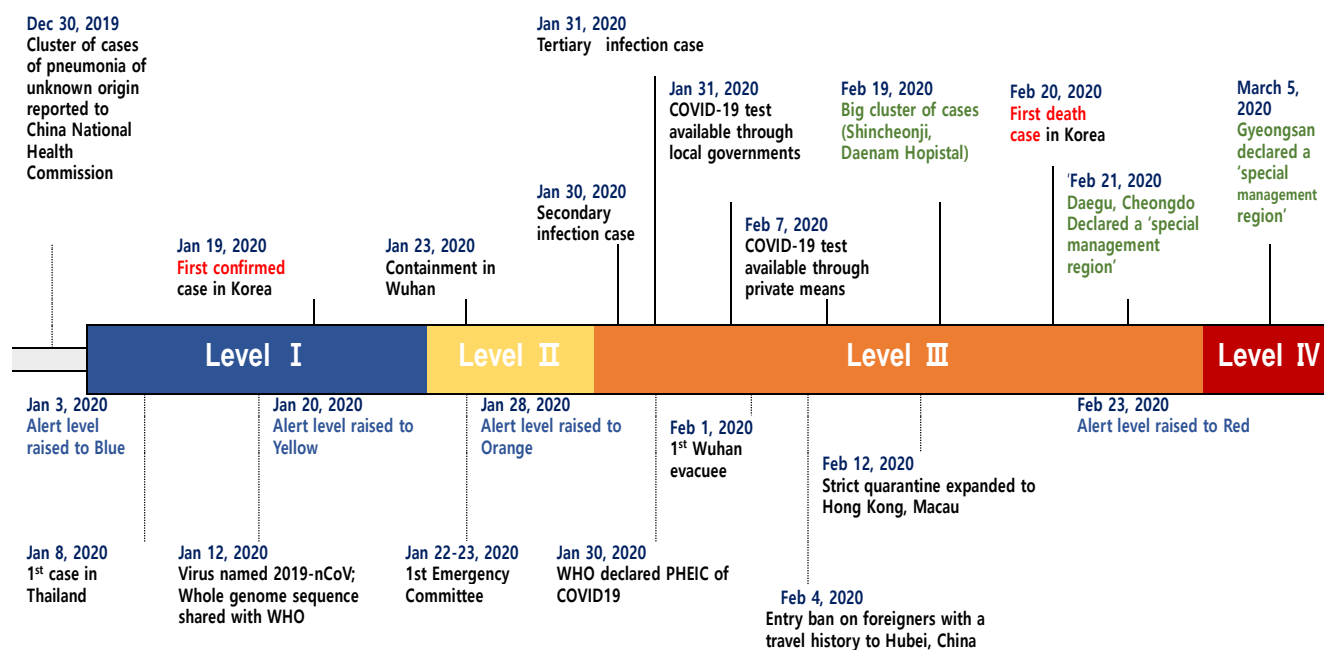
Among all confirmed cases, 60% are females and 40% are males. The highest number of confirmed cases is among those in their 20s, followed by those in their 50s, 40s, and 60s. The fatality rate stands at 1.64%, with most of the deaths found among the elderly (92% were 60 or older) or those with underlying diseases.
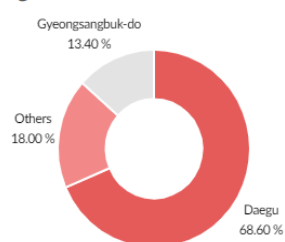
Table 1   Confirmed Cases of COVID-19 by Gender and Age (as of March 30)

|		Confirmed Cases (%)	Deaths (%)	Fatality rate (%)
Total		9,661 (100)	158 (100)	1.64
Sex	Male	3,834 (39.69)	80 (50.63)	2.09
	Female	5,827 (60.31)	78 (49.37)	1.34
Age	80 and above	437 (4.52)	80 (50.63)	18.31
	70-79	640 (6.62)	45 (28.48)	7.03
	60-69	1,218 (12.61)	21 (13.29)	1.72
	50-59	1,812 (18.76)	10 (6.33)	0.55
	40-49	1,297 (13.43)	1 (0.63)	0.08
	30-39	1,002 (10.37)	1 (0.63)	.0.10
	20-29	2,630 (27.22)	0 (0.00)	-
	10-19	513 (5.31)	0 (0.00)	-
	0-9	112 (1.16)	0 (0.00)	-

The number of confirmed COVID-19 cases in Korea so far has largely consisted of a specific region and a single religious group, Shincheonji religious group in Daegu City. Few people were infected in Korea at the beginning of the outbreak, but the number jumped from just a few dozen to more than 900 in late February. Evidence points to a mass gathering of thousands of Shincheonji religious group members in Daegu on February 1 as the point where the virus began to spread more quickly. Since then, the estimated 9,300 members of the Shincheonji religious group in Daegu have been placed on self-quarantine and tested. All other members of the Shincheonji religious group around the country - more than a quarter-million - have mostly been tracked, questioned, and tested as symptoms are reported.

Figure 3   Breakdown by Regions and Cluster Outbreaks
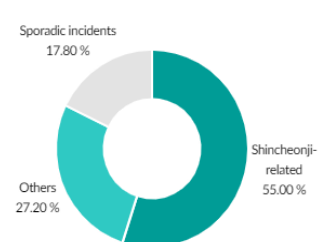
As of March 30, 55% of confirmed cases are linked to Shincheonji religious group and 82% are residents of Daegu City and Gyeongbuk Province. The number of confirmed cases in regions outside Daegu City and Gyeongbuk Province remains at around 1,739, well within the country's capacity for disease control. Sporadic spikes in local transmission in other parts of the country (e.g. the recent case of a call center in suburban Seoul) are being quickly contained.

Table 2   Distribution of South Korean Cases by Region (as of March 30)

Region	# of cases	(%)	Incidence rate (per 0.1M)	Region	# of cases	(%)	Incidence rate (per 0.1M)
Seoul	426	4.41	4.38	Gyeonggi	463	4.79	3.49
Busan	118	1.22	3.46	Gangwon	36	0.37	2.34
Daegu	6,624	68.56	271.87	Chungbuk	44	0.46	2.75
Incheon	58	0.60	1.96	Chungnam	127	1.31	5.98
Gwangju	20	0.21	1.37	Jeonbuk	13	0.13	0.72
Daejeon	34	0.35	2.31	Jeonnam	9	0.09	0.43
Ulsan	39	0.40	3.40	Gyeongbuk	1,298	13.44	48.75
Sejong	46	0.48	13.44	Gyongnam	95	0.98	2.83
Airport Screening	202	2.09	-	Jeju	9	0.09	1.34
				Total	**9,661**	**(100)**	**18.63**

Figure 4   Distribution of South Korean Cases by Region (as of March 30)
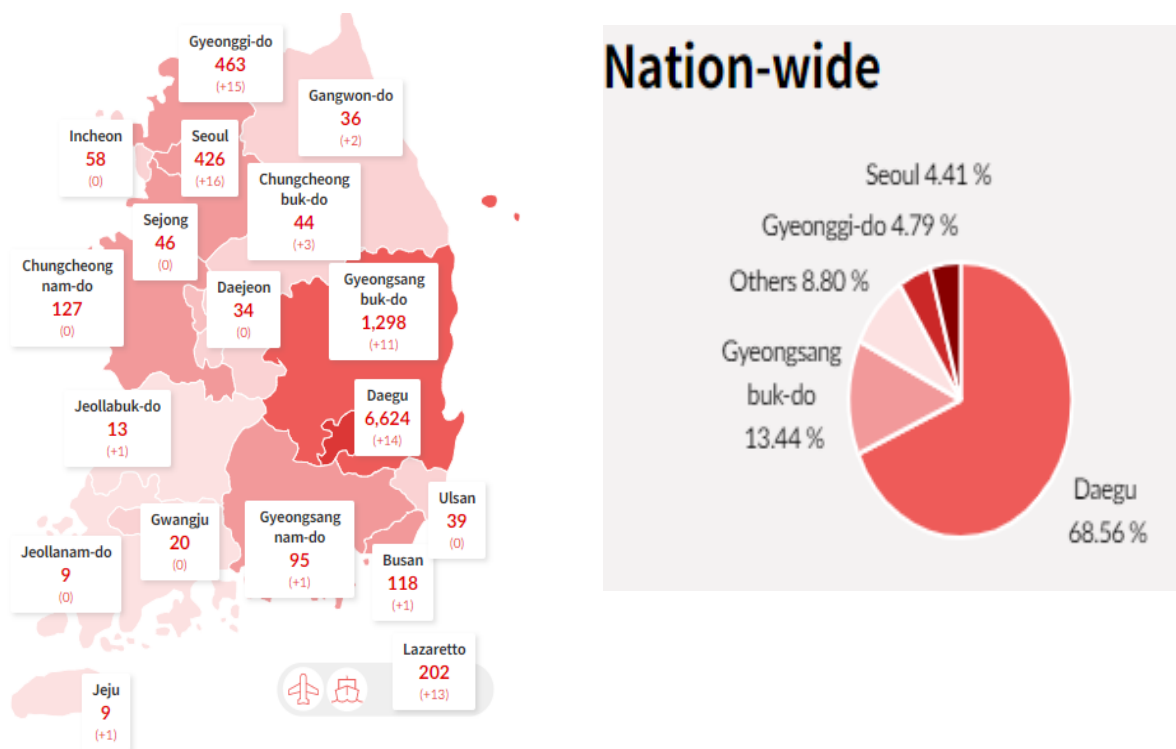
2.2. RESPONSE OF THE KOREAN GOVERNMENT

Since raising the national infectious disease crisis alert level to "highest" (on February 23, 2020), the Korean government has assembled a Central Disaster and Safety Countermeasures Headquarters (CDSCHQ), headed by the Prime Minister to double down on a government-wide response against COVID-19.

Figure 5 Response Systems of the Korean Government

Crisis Alert Level	Response System			
Level Ⅲ **(highest)**	**Central Disease Control Headquarters (KCDC)**	**Central Disaster and Safety Countermeasures Headquarters (Minister of Interior and Safety)**		**Local Disaster and Safety Countermeasures Headquarters (local municipal governments nationwide)**
		Central Disaster Management Headquarters (Ministry of Health and Welfare)	**Government-wide Support Center (Ministry of Interior and Safety)**	**Local Disease Control Task Force (local municipal governments nationwide)**

Given the distinct nature and expertise required for responding to an infectious disease, the Korea Centers for Disease Control & Prevention (KCDC) has become the Central Disease Control Headquarters, the control tower for disease control, spearheads the response with assistance from the Minister of Health and Welfare acting as the first deputy head for the CDSCHQ and the head of the Central Disaster Management Headquarters. The Minister of Interior and Safety takes the role of the second deputy head and the director of the Government-wide Countermeasures Support Center. It provides necessary assistance including coordination between the central and local governments.

Each local government also forms its own Local Disaster and Safety Countermeasures Headquarters directed by the head of the local government to establish hospital sites dedicated to the infectious disease and procuring sickbeds. The central government will provide assistance in terms of hospital beds, manpower, supplies, and other areas where local governments face shortages.

Picture 2 Drive-thru centers

3. Health and Quarantine Measures (3Ts: Testing – Tracing – Treating)

3.1 TESTING for COVID-19

Measures at the Point of Entry(PoE)

The Korean government banned the entry of travelers from Hubei very soon after the initial outbreak in China. Korea also expanded its special entry procedures to all travelers since March 19, and is requiring a 14-day self-quarantine at home or quarantine at facilities for all travelers entering Korea from April 1, other than those traveling for national or public interest. At each point of entry, all inbound travelers, including citizens, go through heightened quarantine procedures, including a fever test and a questionnaire on their health status that must be submitted via a self-diagnosis app. Individuals are required to inform quarantine officials at entry if they have symptoms of COVID-19 such as cough or fever, and report to the health authorities where they will be staying and how they can be reached. During the 14 days of quarantine, travelers continue to use the self-diagnosis app to update their health status. Those failing to do so will be contacted and tracked down. Also, all travelers under self-quarantine must install a self-quarantine safety app to help authorities check their suspected symptoms, their location and compliance with the quarantine guidelines.

Figure 6   South Korea's Infection Control System
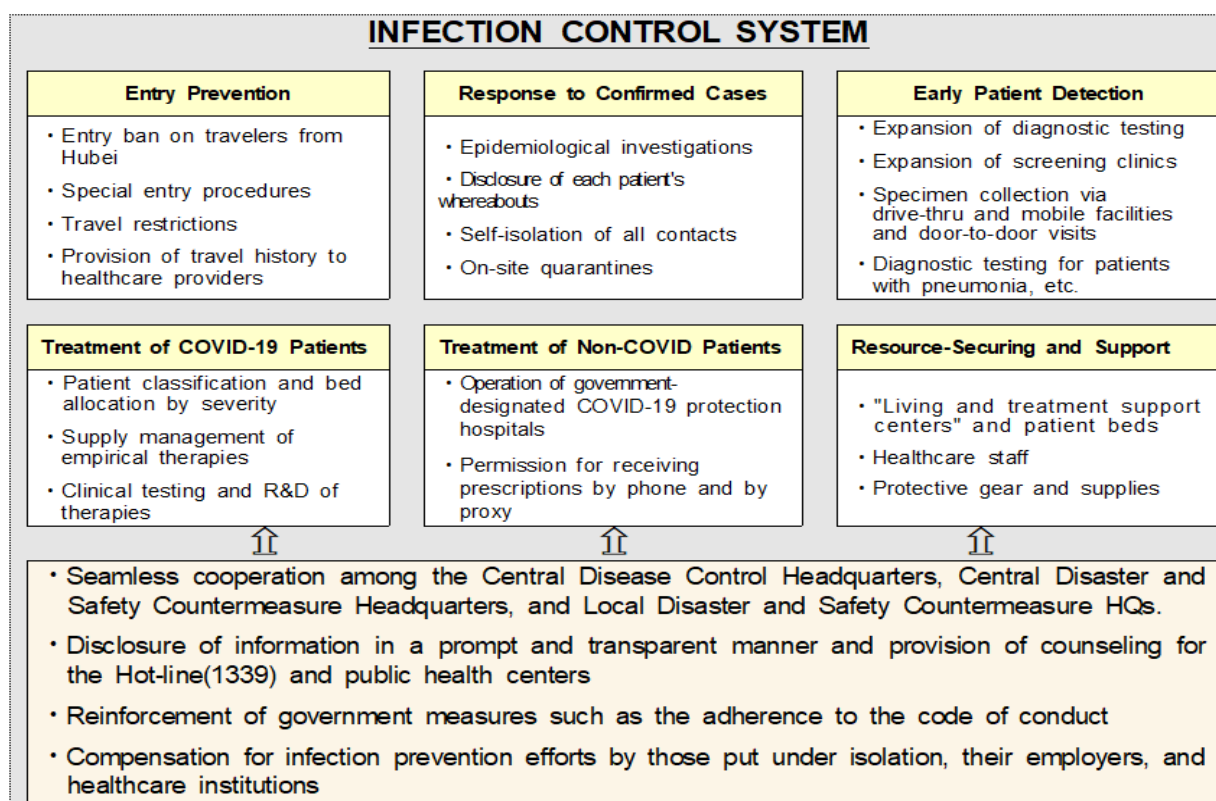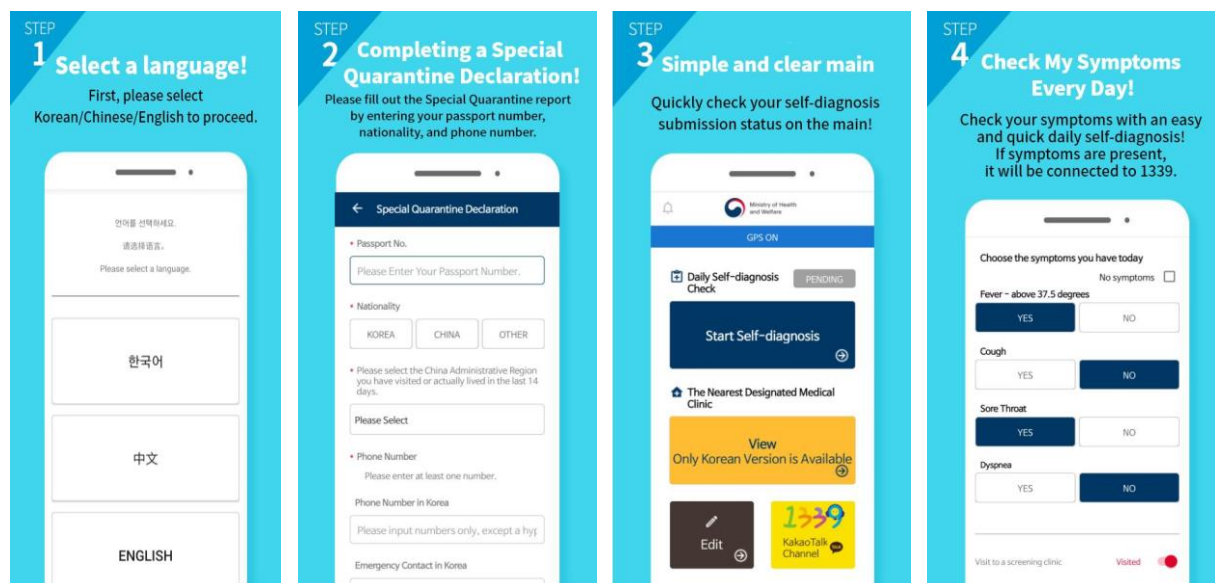
Picture 3   Self-Diagnosis Application

Figure 7   Special Entry Procedures Flowchart (as of March 30)

❶Landing	❷Quarantine	❸Special immigration declaration	❹Test
·Fill out the health condition questionnaire and special quarantine declaration ·Use the dedicated arrivals hall	·Submit the health condition questionnaire ·Body temperature check ·Koreans get notification on self-quarantine	·Submit the special quarantine declaration ·Verify domestic contact information ·Install the self-diagnosis app and self-quarantine safety protection application	·**Those without symptoms:** Receive a quarantine certificate and placed under 14 days of self-quarantine. ·**Those with symptoms:** Get tested in Incheon Airport Quarantine Center ⇒**Positive:** Treated in hospitals or living and treatment support center ⇒**Negative:** Self-quarantine for 14 days

* Some information may become outdated due to ongoing and rapidly changing nature of the situation up-to-date information can be found in regular briefings provided by the Central Disaster and Safety Countermeasure Headquarters on COVID-19(http://ncov.mohw.go.kr)

Furthermore, the Korean government began testing all travelers coming from Europe. Both foreign and Korean nationals traveling from Europe and showing symptoms are tested in quarantine facilities at Incheon International Airport while the foreign nationals without symptoms are tested in temporary living facilities. Korean nationals arriving without symptoms are placed under self-quarantine, and are tested within three days upon arrival to make available quarantine rooms for those with symptoms.

To quickly test asymptomatic foreign travelers, Korea also began operating "walk-through" testing facilities at Incheon International Airport. The facilities have been set up in an open space outdoors without walls to allow natural ventilation at all times. With natural wind ventilating the space, there is low possibility of infection via surface contact, which allows quick and safe collection of samples from a large number of people. Compared to a general screening clinic, where a sample can only be collected every 30 minutes to allow time for disinfection and ventilation, a sample can be collected every 4 to 5 minutes in an open clinic.

Picture 4   Walk-through Testing Facilities

Early detection through screening clinics and diagnostic testing

The Korean government has been conducting an impressive number of tests within a short period of time to diagnose patients and to block the viral spread as early as possible (338,036 tests have been conducted as of March 23). Korea turned to a network of public and private laboratories to develop tests. On February 4, the South Korean government granted emergency use authorization for a company's coronavirus test and began shipping the test kits. A second company was approved a week later, and two more soon followed. The Korean government has continued to increase the number of testing institutions and test kit manufacturers, thereby successfully raising the maximum daily testing capacity from 3,000 (February 7) to 18,000 (March 16).

Figure 8   COVID-19 Tests per One Million People (as of March 17)
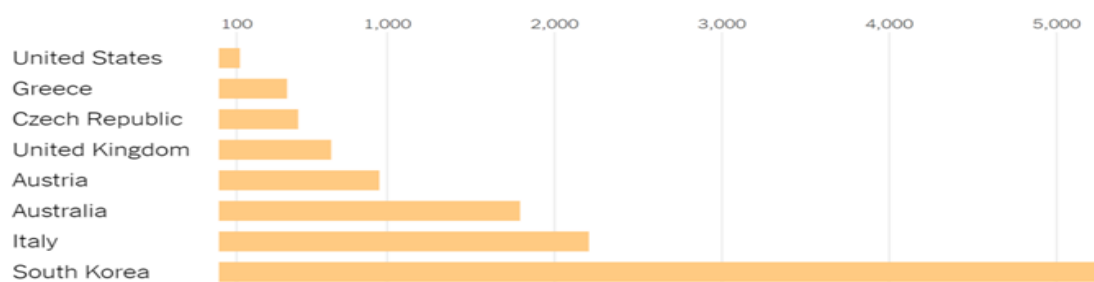
How to find a COVID-19 screening center

You can call the 1339 call center to get information about the nearest screening center. Korean users can visit the official COVID-19 website (http://ncov.mohw.go.kr) and easily find the location of screening centers. In addition, you can search for "COVID-19 screening center" in application such as Kakao Map or Tmap to automatically get directions to the nearest screening center.

Case Definitions (Excerpt from COVID-19 Response Guidelines(as of March 15, 2020))

<Confirmed case>

A person who has been confirmed to be infected with the infectious disease pathogen according to the diagnostic testing standard, regardless of clinical manifestations.

　　※ Diagnostic test: COVID-19 genetic(PCR) testing, virus isolation

<Suspect case>

A person exhibiting fever(37.5°C and above) or respiratory symptoms(coughs, shortness of breath, etc.) within 14 days of contact with a confirmed COVID-19 patient during the confirmed patient's symptom-exhibiting period.

<Patients Under Investigation(PUI) case>

① A person suspected of COVID-19 according to a physician's opinion for reasons such as pneumonia of an unknown cause

② A person exhibiting a fever(37.5°C and above) or respiratory symptoms (coughs, shortness of breath, etc.) within 14 days of visiting a country with local transmission* of COVID-19, e.g. China(including Hong Kong, Macau)

　* Refer to the WHO or KCDC website (COVID-19→Situation reports→Local transmission classification)

③ A person exhibiting fever(37.5°C and above) or respiratory symptoms(coughs, shortness of breath, etc.) with an epidemiological link to a domestic COVID-19 cluster.

The Korean government also set up screening clinics* at public health centers and healthcare institutions to ensure easy access to diagnostic testing and limit the spread of the virus. The government has expanded the range of operating models to respond more effectively to the increasing demand for diagnostic testing.

  * Screening clinics are facilities dedicated to testing those with suspected symptoms (such as cough or fever) in order to minimize potential transmission from suspected cases to staff and patients in other healthcare institutions.

Specimen collection is conducted by around 50 drive-through centers, mobile facilities and door-to-door visits to ensure greater efficiency and safety. This method helps to minimize the risk of transmission within hospitals and reduces pressure on hospital resources by keeping potential patients out of hospital waiting rooms and by reducing the time and resources that would otherwise be spent on disinfection measures required by the hospital if specimens were collected there.

3.2 TRACING COVID-19

Conducting rigorous epidemiological investigations

The Korean government is undertaking vigorous measures to track and test those who have been in contact with confirmed patients, utilizing credit card transactions, CCTV recordings and GPS data on mobile phones when necessary. Anonymous information is disclosed to the public so that those who may have crossed paths with confirmed patients can get themselves tested. The close contacts identified through epidemiological investigations are put under self-quarantine and monitored on a one-on-one basis by staff of the Ministry of Interior and Safety and local governments.

To rapidly complete epidemiological investigations, preliminary investigations of individual cases are conducted by local governments. The central immediate response teams of the KCDC are dispatched to regions experiencing massive outbreaks to conduct epidemiological investigations in partnership with each local government team in charge.

  * Screening clinics are dedicated to testing those with suspected symptoms such as cough or fever to eliminate the possibility of contaminating healthcare institutions.

For persons who are returning after traveling to highly affected countries and areas, their recent travel records can be accessed by hospitals and pharmacies during the incubation period of the disease(14 days), in order to aid the screening of suspected.

Postmortem diagnostic tests may be conducted on deaths of unknown cause if the deceased had shown symptoms of pneumonia or other possible markers that point to COVID-19 infection. When a case is confirmed, the Korean government tracks and monitors all those who have been in close contact with the deceased.

Monitoring of Contacts

Those under self-quarantine are linked to their individually assigned public health officials through an innovative 'safety protection app,' which allows staff to monitor their symptoms submitted on the app twice a day, and receive an alert if the self-quarantine order is broken. This tracking of a phone's GPS location is done only with the consent of close contacts.

Close contacts under self-quarantine are not allowed to leave the country regardless of whether or not they develop symptoms. Anyone violating self-quarantine will be subject to a fine of up to KRW 10 million or one year imprisonment.

3.3 TREATING COVID-19

Establishment of Patient Management System

Table 3 Establishment of Patient Management System

Treatment System Based on Severity	Classify patients based on severity (mild, moderate, severe and extremely severe)	
	Mild cases are isolated and monitored at living and treatment support centers	Moderate, severe, and extremely severe cases are immediately hospitalized for treatment
Securing Beds For Hospitalized Treatment	Beds at government-designated institutions for hospitalized treatment, regional hub hospitals, and national infectious disease hospitals are allocated to confirmed cases	
	60 infectious disease hospitals designated	
	Continually securing additional beds	
Providing Healthcare Staff and Protective Gear	Recruiting healthcare specialists via a range of channels and methods	
	Protecting healthcare staff by paid self-quarantine, infection control services and financial compensation	
	Distribution of government reserves of protective equipment to local governments and government-designated institutions for hospitalized treatment	
Managing Medicinal Supplies and Developing Vaccines and Therapies	Supply management of empirical therapies and sharing distributor information	
	Clinical testing and R&D of vaccines and therapies in collaboration with the private sector	

To hospitalize patients with severe symptoms and provide appropriate treatment options to other confirmed cases, the Korean government is classifying patients based on severity, and accommodating them accordingly at hospitals or living and treatment support centers.

First, confirmed patients are diagnosed at public health centers by healthcare specialists in the city, and then classified based on severity (mild, moderate, severe, and extremely severe) by the patient management teams at a provincial level. Moderate, severe, and extremely severe patients are immediately hospitalized for treatment (at national infectious disease hospitals and other government-designated institutions for hospitalized treatment).

　* The National Medical Center (Patient Transfer Support Center) coordinates patient transfers between cities and provinces when patient beds are in short supply in certain regions.

Patients showing mild symptoms are isolated at living and treatment support centers* and are monitored by healthcare staff at least twice a day, to be immediately transferred to healthcare institutions if symptoms become aggravated, or discharged based on relevant standards when symptoms are clear up (in about three weeks).

　* City and provincial governments designate government-run facilities or lodgings as living and treatment support centers, and provide a relief kit (underwear, toiletries, masks, etc.) and a hygiene kit (a thermometer and medicine).

Beds at government-designated institutions for hospitalized treatment, regional hub hospitals, and national infectious disease hospitals are being allocated to confirmed patients. The central and local governments have designated 69 such hospitals. Existing inpatients at these institutions have been transferred to other hospitals to make wards available exclusively to COVID-19 patients. The government is continually securing additional beds, and plans to secure 254 more beds by end of March for patients with severe symptoms.

In order to support patient care and infection control for different regions. the Korean government is aggressively recruiting healthcare specialists via a range of channels such as calling on staff members from other institutions and stationing them at healthcare institutions in need, mainly in Daegu City and Gyeongbuk Province. To secure additional healthcare staff, 750 new public health doctors have been appointed and stationed, and nurses are continually being recruited. The government puts health care staff under paid self-quarantine after two weeks in order to protect them, and replaces them with other staff, providing infection control services as well as financial compensation. Furthermore, the government has distributed the government reserves of protective equipment to local governments and government-designated institutions for hospitalized treatment, with priority given to Daegu and Gyeongbuk Province. The government is managing the supply of empirical therapies and securing additional imports as recommended by experts, while also sharing distributor information.

　* Four major drugs are available including Kaletra Tab, and more will be imported (in March and May).

In addition, the Korean government is currently pushing ahead with clinical testing and R&D of vaccines and therapies in collaboration with the private sector. Research on diagnostic agents, therapies, clinical epidemiology, and vaccines is to be conducted through the distribution of research resources (from February 2020 onwards), notification of research tasks, conducting of emergency response research, and cooperation with the private sector.

Realignment of Healthcare Institution Use Systems

The Korean government is trying to ensure hospital accessibility and safety for non-COVID-19 patients by separating areas for respiratory patients and non-respiratory patients. As of March 27, 337 hospitals have been designated as COVID-19 protection hospitals. Also, the government has permitted non-respiratory patients to receive counsultations and prescriptions by phone and by proxy to prevent infection within healthcare institutions.

Pneumonia patients are put through diagnostic testing before being allowed to be hospitalized or they enter an ICU to detect confirmed cases in order to prevent infection within healthcare institutions. Suspected cases are required to undergo testing in a separate area before being allowed to enter the emergency center.

To reinforce infection control within healthcare institutions, the Korean government is providing infection control guidelines to healthcare institutions and focusing on expanding cooperation and communication with the medical sector. Healthcare institutions are required to provide patients with guidance on hygiene, restrict visitor entry, check each visitor's body temperature, and mandate the wearing of masks. Staff members are required to wear masks while on duty and immediately report to public health centers or 1339 if a patient falls into any of the predefined categories (confirmed cases, contacts of confirmed cases showing symptoms, suspected cases based on medical opinions, etc.), and are excused from work for 14 days if they show signs of illness such as a fever or cough. An infection control staff member is designated at each health care institution to ensure that infection prevention measures and reinforced monitoring are properly implemented.

4. Economic and Financial Measures

President Moon Jae-in spoke at a roundtable with business and labor leaders on March 18, 2020. "The COVID-19 outbreak is simultaneously impacting supply and demand and causing a crisis for the real economy and finance sector. As the entire world is going through this problem, the economic crisis is highly likely to become prolonged. In particular, as it is unfolding in ways completely different from past economic crises, we need unprecedented countermeasures."

With the spread of COVID-19, the Korean economy is facing a crisis of unprecedented contraction. In trying to overcome the downturn by utilizing both fiscal and monetary policies, the government has announced various economic remedies totaling 142 trillion won.

Korea has taken step-by-step economic measures in line with the spread of COVID-19. Korea's economic policy against COVID-19 can be largely summed up in nine measures (4-4-1). Nine measures include 4 financial support packages, which include a supplementary budget, 4 monetary policies* which supply liquidity of both domestic and foreign currencies and 1 emergency relief payment for disaster.

 * 4 monetary policies comprise cutting base rate, signing currency swaps, easing 3 types of
   regulations for foreign currency and pledging to supply unlimited liquidity.

Picture 5   President Moon spoke at a roundtable with business and labor leaders (March 18, 2020)

Table 4   Major Government Economic Measures against COVID-19

Feb 5 ~ Feb 12	Announced the first "Financial Stimulus Package"
Feb 28	Announced the second "Financial Support Package"
March 16	Cut the Base Rate
March 17	Passed the supplementary budget
March 18	Raised forex futures trading limits
March 19	Announced the third "Financial Stimulus Package"
	Signed the Currency Swap with the US
	Launched the Emergency Economic Council Meeting
March 24	Announced the fourth "Financial Stimulus Package"
March 26	Announced additional method to Ease FX Market Stability rules
	Announced the Supply of Unlimited Liquidity (Korean QE)
March 30	Adopted an Emergency Relief Payment for Disasters

4.1 FIRST FINANCIAL STIMULUS PACKAGE (February 5 ~ 12)

The Korean government prepared several emergency support measures totaling four trillion won through the 2nd to 4th Ministerial Meetings on Boosting the Economy. The following is a summary of the first economic support package against COVID-19.

Table 5   Key Financial Measures announced at the Economic Ministerial Meetings

2nd Ministerial Meeting on Economic Resilience (Feb 5)	Policy support related to internal and local taxes
	Support for the supply and demand of sanitary and medical supplies
	Helping to expedite customs procedures for raw and sub-materials
3rd Ministerial Meeting on Economic Resilience (Feb 7)	Emergency relief fund for affected SMEs and micro-business owners (via loans, guarantees and import – and - export financing)
	Enhancing monitoring of unfair trading practices in the capital market / Operating an exclusive reception counter for financial inconveniences of SMEs after COVID-19's outbreak
4th Ministerial Meeting on Economic Resilience (Feb 12)	Underwriting additional accounts receivable insurance and lowering insurance premiums
	Helping group imports and identifying alternative countries for procuring raw and sub-materials
	Enlarging financial support for SMEs and micro-business owners

4.2 SECOND FINANCIAL STIMULUS PACKAGE (February 28)

The Korean government unveiled its second comprehensive support package against COVID-19, resulting in a total of 20 trillion won in support together with the first package. A summary of the second support package is as follows:

Support package of over 20 trillion won including a supplementary budget

- 4 trillion won including government reserve funds and policy financing to support disease prevention, local governments, imports of manufacturing supplies and small merchants

- 7 trillion won to provide financial and tax support for affected families and businesses, including 50% income tax cuts given to landlords for rent reduction and individual consumption tax cuts for car purchases to boost consumption

- 9 trillion won in loans, guarantees and investment through financial institutions and public institutions

- A supplementary budget to support local economies, as well as disease control

Table 6 Ten Government Spending Principles on COVID-19

❶	Support careful and proper disease control and prevention
❷	Provide up to 7 million masks for people in Daegu City and Cheongdo County
❸	Promote the lowering of commercial rents by providing landlords with a 50%　income tax break in the first half of the year
❹	Provide a VAT break for businesses earning 60 million won or less a year
❺	Help small merchants and SMEs with their business operation: Considerably expand the special financial support for small merchants and SMEs [2]
❻	Provide employment support severely impacted business, sectors such as tourism
❼	Increase the issuance of local gift certificates this year by 3.5 trillion won to help local economies and traditional markets
❽	Give working parents up to five days of childcare leave along with pay of 50,000 won per day
❾	Promote consumption: Give a 70% individual consumption tax cut for car purchases, and a 10% refund for purchases of high energy-efficiency home appliances
❿	Promote consumption by issuing discount coupons to be used for attending cultural events and purchasing from products, as well as tourism expenses and paychecks

4.3 CUT BASE RATE (March 16)

The Monetary Policy Board of the Bank of Korea decided to lower the Base Rate by 50 basis points from 1.25% to 0.75%, effective March 17. In a related set of actions, the Board has decided to lower the interest rate on the Bank Intermediated Lending Support Facility from 0.50%-0.75% to 0.25%, effective March 17. To manage the liquidity in the financial market at a sufficient level, the Board will also broaden the range of eligible collateral for open market operations to include debentures issued by banking institutions.

Figure 9   Trend of Base Rate

Note : 1) The overnight call rate target, until February 2008.
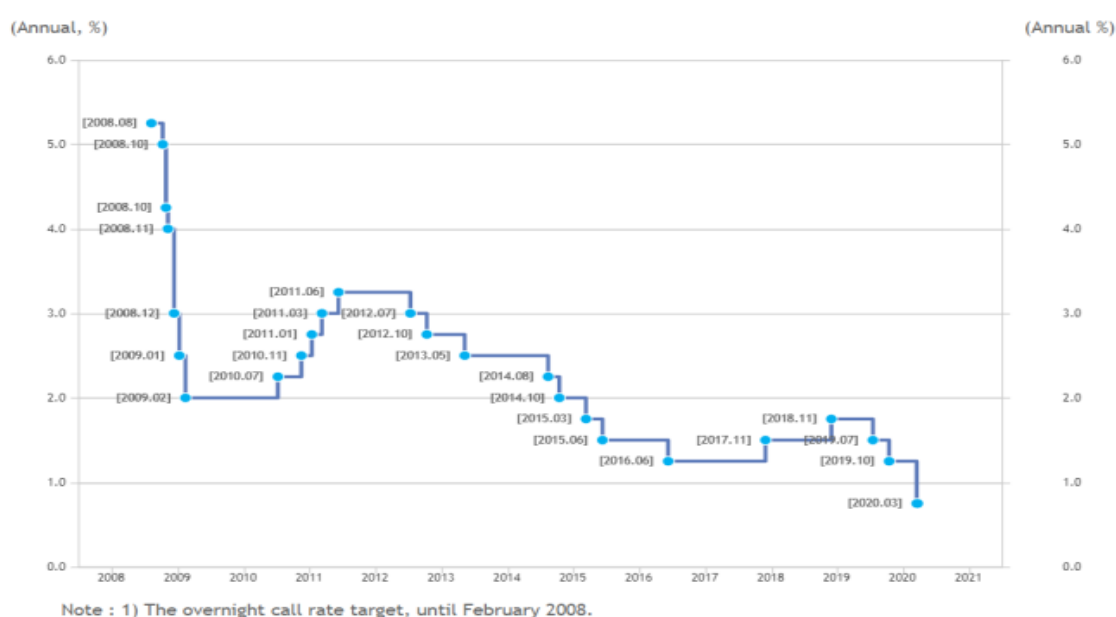
4.4 SUPPLEMENTARY BUDGET OF 11.7 TRILLION WON (March 17)

The 2020 supplementary budget of 11.7 trillion won (10.9 trillion won for new spending and 0.8 trillion won for revenue adjustments) was passed on March 17.

- 1 trillion won to be spent on disease prevention and treatment
- 4.1 trillion won to be spent on small business loans
- 3.5 trillion won to be spent on household support, including daycare vouchers and emergency livelihood support
- 1.2 trillion won to be spent on severely impacted local economies

  * In particular, special management areas (Daegu City and Gyeongbuk Province) will receive 1.7 Trillion won from the amount above.

4.5 RAISED FOREX FUTURES TRADING LIMITS (March 18)

Although Korean banks have maintained a relatively high level of FX liquidity, Korea aims to be prepared for sudden volatility in the FX swap market. The government has decided to raise the forex futures trading limit by 25%, to 50% for local banks and 250% for foreign bank branches from March 19.

Table 7 History of changes to Forex Futures trading limits

Adjustments to FX Derivative Position Ceilings						
(Introduction of Adjustments)	Introduction (Oct. 2010)	1st adjustment (Jul. 2011)	2nd adjustment (Jan. 2013)	3rd adjustment (Jul. 2016)	⇨	4th adjustment (Mar. 19 2020)
Domestic banks	50.0%	40.0%	30.0%	40.0%		**50.0%**
Foreign bank branches	250.0%	200.0%	150.0%	200.0%		**250.0%**

Picture 6 Vice Minister Kim Yongbeom made the opening speech at the Macroeconomic and Financial Market Committee (March 16, 2020)

4.6 THIRD FINANCIAL STIMULUS PACKAGE (March 19)

The Korean government announced a financial support package worth over 50 trillion won on March 19 to help businesses and households affected by the COVID-19 outbreak. The package is comprised of programs designed to help maintain businesses, ease the burden on borrowers and avoid a credit crunch. The following nine programs were included in the third financial support package.

Table 8   Key Measures in the Third Financial Package

1. Help maintain businesses	- Provide small businesses with liquidity: A total of 12 trillion won to be spent on emergency funding for business operation and low interest rate loans (1.5%, lower than ordinary rates by an average of 2.3% points)
	- Provide special guarantees on SMEs and small business loans: 5.5 trillion won worth of guarantees to be provided through the Korea Technology Finance Corporation, Korea Credit Guarantee Fund and local credit guarantee foundations
	- Provide a 100% loan guarantee worth 3 trillion won for small merchants
2. **Ease the burden on borrowers**	- Defer loan repayment for SMEs and small businesses: At least six months of deferment to be offered by banks and nonbanking financial institutions
	- Suspend loan interest payments for SMEs and small businesses: For six months starting on April 1
	- Support debt workout programs: Debt relief programs at Credit Counseling and Recovery Service, and outstanding debt purchases by the Korea Asset Management Corporation
3. **Avoid a credit crunch**	- Use Bond Market Stabilization Funds to provide liquidity to corporations
	- Issue a total of 6.7 trillion won (1.7 trillion won at first with an additional 5 trillion won) worth of P-CBOs over the next three years
	- Create an Equity Market Stabilization Fund: A temporary fund jointly invested in the financial sector, designed to invest in equity index products

* Decision yet to be made on the sizes of the Bond Market Stabilization Funds and the Equity Market Stabilization Funds

4.7 BILATERAL CURRENCY SWAP WITH THE FED (March 19)

   The Bank of Korea and the Federal Reserve will establish a temporary bilateral currency swap arrangement (swap line) to provide U.S. dollar liquidity. This new facility will support the provision of U.S. dollar liquidity up to 60 billion USD in exchange for Korean won, and will be in place for at least six months. This facility is designed to help lessen the strains in U.S. dollar funding markets, thereby mitigating the effects of these strains on the supply of credit to households and businesses.

4.8 FOURTH FINANCIAL STIMULUS PACKAGE (March 24)

The government unveiled financial market stabilization measures to help provide sufficient liquidity to businesses and deploy market stability tools to absorb shocks in the financial markets amid the spread of COVID-19.

In order to address financing difficulties and help restore stability in the financial markets, the measures will increase the financing support package from 50 trillion won to more than 100 trillion won. This includes financing support through policy banks with 58.3 trillion won and 41.8 trillion won in funds to help restore stability in the country's bond market, stock market and short-term money markets.

Table 9　Key Points of the Fourth Financial Package

1. Financing support for businesses: 58.3 trillion won	- Additional financial support worth 29.2 trillion won in addition to the financial support previously announced, such as emergency loans and guarantees for microbusiness owners, the purchasing of arrears, and adjusting liabilities
	- Expanding benefits to SMEs and conglomerates
2. Corporate bond market & short-term money market stabilization	- Establishing a total of 20 trillion won(10 trillion won at first with an additional 10 trillion won) in the Bond Market Stabilization Fund through a capital call
	- Additional financing for corporate bond issuance(4.1 trillion won)
	- Supplying liquidity for stabilizing short-term money markets (stock finance loans, refinancing support through purchasing corporate commercial paper and electronic short-term bonds)
	- Relaxing regulations imposed on the call market (temporarily raising the limit of call money and the limit of call loans for asset management institutions)
3. Addressing stock market stabilization measures	- Establishing a Stock Market Capitalization Fund worth 10.7 trillion won through a capital call
	- Tax Support to prop up demand in stock markets
Reviews	- Reviewing an increase in the number of subscribers to the ISA as well as measures for equity investment

4.9 ADDITIONAL MEASURES TO EASE FX MARKET STABILITY RULES (March 26)

The government has decided to ease the country's FX market stability rules as uncertainties in capital flows continue to grow amid fears over the spread of COVID-19.   The rules were first introduced after the 2008 global financial crisis to control excessive capital movements and short-term borrowings, and then have been applied flexibly according to changes in market conditions.

The two following measures, along with Raising Forex Futures Trading Limits announced on March 18, will contribute to the stability of the FX market

1) The levy of non-deposit FX liabilities on financial institutions will be limited over the next three months from April through June. Installment payments will be applied and expanded to liabilities, which were imposed last year and are scheduled to be collected this year
2) Low FX liquidity coverage ratio (LCR) of 70 percent, down from 80 percent, for a limited period until May, which will be applied as soon as it is approved by the Financial Services Commission.

**4.10 SUPPLY OF UNLIMITED LIQUIDITY (KOREAN QE)** (March 26)

On March 26, the Bank of Korea (BOK) decided to supply unlimited liquidity to financial institutions as part of its efforts to combat the coronavirus pandemic. The BOK committed itself to purchasing the total amount of Repurchase Agreements (also known as RP) with no limits on a regular basis every week until the end of June. The interest rate was set at 0.85 percent as the ceiling, a 0.1 percentage point per year increase in the benchmark rate (0.75 percent per year). However, it is different from the Quantitative Easing (QE) implemented by a number of countries such as the US, in that Korea's Central Bank has not yet introduced its direct purchase of corporate bonds or CPs. The decision to extend this Korean version of QE will be made after July, considering market conditions.

4.11 EMERGENCY RELIEF PAYMENT (March 30)

The Korean government decided during the third Crisis Management Meeting on March 30 that it would provide an emergency relief payment to households with income levels that fall in the bottom 70 percent (households with income at or below the top 30 percent (70th percentile)). The provision of such a subsidy will be provided to families in the form of a certificate worth one million won based on a family of four, the level of which will be changed contingent on the number of family members. The emergency payments will total 9.1 trillion won, and this measure is scheduled to be passed in April by the National Assembly after the second Supplementary Budget is executed.

- A total of 14 million households to become recipients
- Payments to vary according to number of household members: 0.4 million won (single-person households), 0.6 million won(two-person households), 0.8 million won (three-person households), 1.0 million won (households with four or more family members)
- Payments to be made in the form of online and offline gift certificates issued by local governments
- A total of 9.1 trillion won to be spent: Another supplementary budget of about 7.1 trillion won to be drawn up, and about 2.0 trillion won to be funded by local governments
- Some of the 2020 budget to be cut to finance another supplementary budget worth 7.1 trillion won

Figure 10 Benefits and income after introducing emergency relief payments
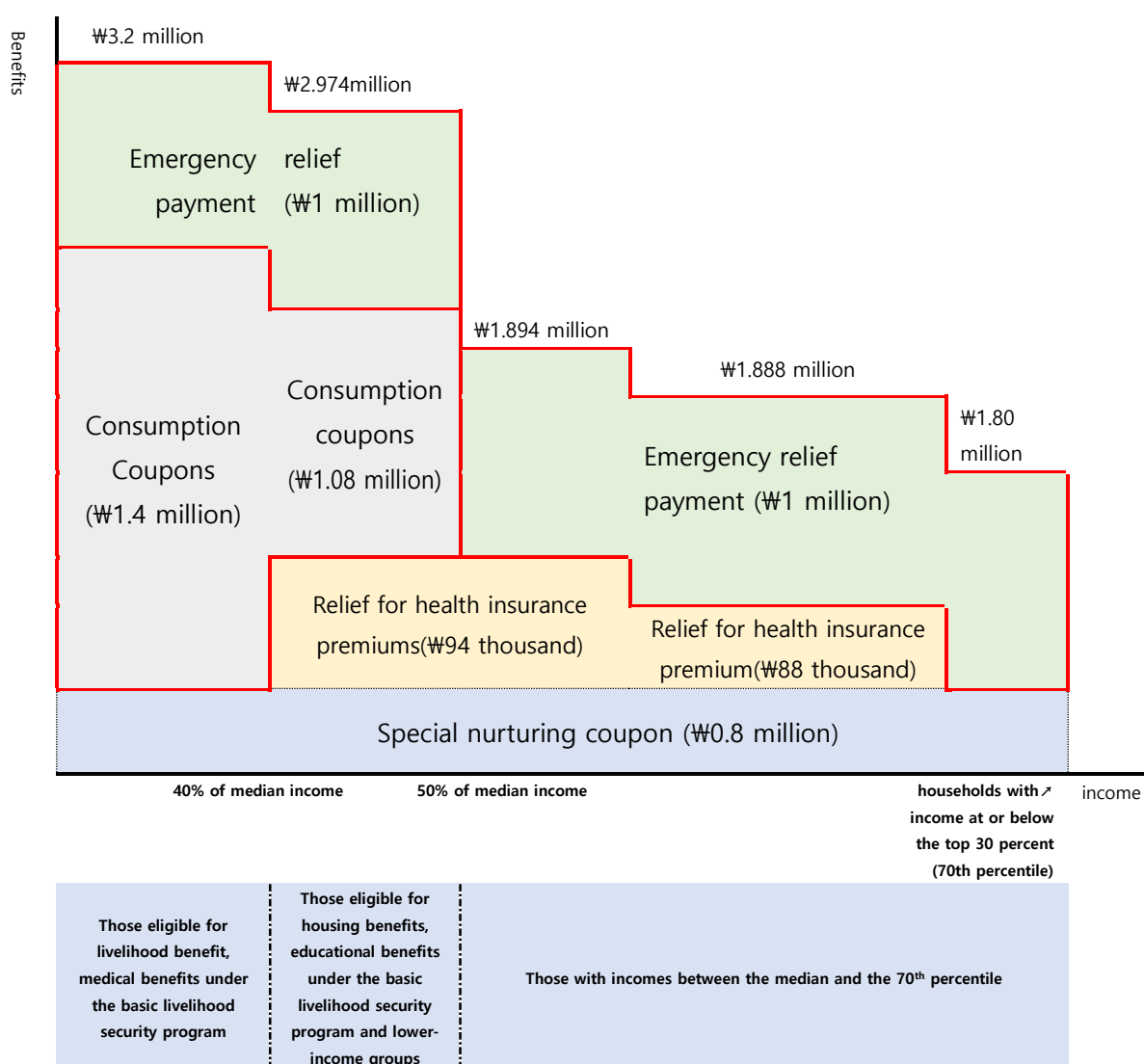
Meanwhile, policy measures including a reduction in social security insurance premiums and electricity bills were also suggested during the meeting. Specific measures to provide relief for the social security insurance premiums are as follows:

Table 10 Relieving the cost of the four social insurances and electricity use

<table>
<tr><td colspan="2"></td><td>Suspension of Monthly Payments
(For those who apply)</td><td>Fee Reduction</td></tr>
<tr><td rowspan="8">F
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S</td><td>National Health Insurance Service</td><td>-</td><td>-For those in the 20th to 40th percentile of payments
*Those below 20% already received a fee reduction

-30% reduction for 3 months (March – May)
-4.88million persons
(or households)

-0.4 trillion won required</td></tr>
<tr><td>National Pension Service</td><td>-For those currently covered who meet the reduced income requirements

-Extend the eligibility for suspension of payments (for three months from March to May)

-6 trillion Won required(assuming 50% of those covered apply)</td><td>-</td></tr>
<tr><td>Employment Insurance</td><td>-For applying businesses with less than 30 workers

-Give a three-month payment deferral for three months (from March to May)

-6.12 million persons; 2.28 million firms

-0.8 trillion won required</td><td>-</td></tr>
<tr><td>Industrial Accident Compensation Insurance</td><td>-For applying firms with less than 30 workers and individual holders of the insurance such as the self-employed and contract employees

-Give a three-month payment deferral for three months from March to May)

-2.59 million firms

-0.7 trillion won required</td><td>-For applying firms with less than 30 workers, self-employed, firms under special employment assistance categories

-30% contribution reduction for 6 months (March – August)

-2.59 million firms

-0.4 trillion won required</td></tr>
<tr><td colspan="2">Electricity Use</td><td>-For small-shop owners and low-income families

-Give a three months payment deferral for three months (from April to June)</td><td></td></tr>
</table>

5. Conclusion

The global COVID-19 pandemic has not only brought a state of emergency to those at the frontline of quarantine, but also dealt a severe blow to the world economy. The COVID-19 outbreak is impacting both supply and demand, and causing a dual crisis for the real economy and finance sector. As the world struggles through this problem, the economy is likely to suffer a prolonged crisis that is undeniably complex. It is not only paralyzing day-to-day social activities but also rapidly contracting consumption and production as well as supply and demand, while the real economy and the financial markets are also being buffeted. Especially because this pandemic is different from economic crises of the past, we need unprecedented measures to overcome this crisis.

What are Korea's measures and plans for tackling this great challenge? Despite the international community's interest in Korea's action to contain the spread of the coronavirus, Korea's fight against the pandemic is still ongoing in consideration of the risk of another resurgence. Therefore, while it is premature to provide answers to the questions raised in the Introduction of this paper, the following can still be highlighted as potential valuable lessons for other countries facing similar challenges.

Lessons from Korea

The first is speedy and swift action. Just one week after the first case was confirmed in the country on January 27, government officials met with representatives from several medical companies. In early February, Korea's CDC allowed emergency use authorization to a diagnostic testing kit from company and another company followed soon after. By February, Korea had made international headlines for being the first to implement drive-through screening centers, and its ability to test thousands of people a day. It is critical to act quickly before the situation worsens. The second step can be summarized into 3 T's. These are: 1) widespread Testing, 2) contact Tracing and 3) rigorous Treating. You cannot fight what you cannot see. Korea has identified over 9,600 cases after testing more than 350,000 people as of March 25, which was far more than the number tested in any other country. This helped the health and quarantine authorities isolate and treat many people soon after they became infected. Once an individual tests positive, the health authorities retrace the patient's recent course of movement to find and isolate others who came in close contact with the patient using various data available such as security camera footages, credit card transactions and/or GPS data from the patient's cars and cellphones(within the scope allowed in times of infectious serious disease outbreak emergencies by Infections Disease Control and Prevention Act). The health authorities then classify the confirmed cases into four groups based on the severity of symptoms from 1) mild, 2) moderate, 3) severe and 4) extremely severe. The moderate, severe and extremely severe cases are hospitalized immediately for intensive care until the patients fully recover from the virus. Finally, the third step is public-private cooperation and civic awareness. The most important aspect in the fight against the coronavirus is the public. There would not have been enough healthcare professionals to measure the health conditions and body temperatures of all citizens if the virus had spread nationwide. A high level of civic awareness and voluntary cooperation is arguably one of the biggest factors helping to curb the spread of this highly contagious viral disease.

What needs to be done?

In addition to the health and quarantine issues, there is also rising concern over a possible global economic recession. The current situation is even more serious than the 2008 global financial crisis, which was prompted by a crisis in the financial sector. The current crisis triggered by the COVID-19 outbreak is moving beyond a public health issue and spreading into all sectors, including the economy, finance and society at large. This requires extraordinary measures at local, national and international levels. In particular, we should not be limited by the actions we have taken to date and seek to take additional measures that are preemptive, bold and sufficient to revive the economy for the sake of the livelihood of ordinary people and responding to the global economic shocks.

First, the government should focus all its capacity on quarantine and testing for the coronavirus. COVID-19 is one of the most contagious viruses we have ever witnessed. In Korea, one super-spreader is suspected to have infected more than 300 others. There is little chance of winning this war against the coronavirus without flattening the curve of new infections. To this end, the central government should work with local authorities in their efforts to stop the viral spread across communities by sharing vital quarantine information, including data on confirmed cases and travel histories as well as supporting quarantine systems for inner- and inter-urban transportation networks; and cooperation regarding access to hospital beds.

Second, while striving to bring the COVID-19 outbreak under control, we should prepare to take full-fledged measures in order to boost domestic demand and consumption. All possible means should be used to adopt expansionary macroeconomic policies, strengthen the global financial safety net, and work together for the economic stability of the least-developed and impoverished nations. It is especially important to mobilize all available resources to support the vulnerable, including microbusiness owners and low-income workers, and to counteract the contraction in domestic consumption.

Third, we need to clarify policy priorities. Support should be provided first and foremost to those who have suffered the most, making sure that vulnerable individuals and businesses can withstand this situation. In times of difficulty, the priority has to be on protecting the jobs of workers on the brink of unemployment, and providing support for the people who are more susceptible: those who have lost their jobs or are struggling to make ends meet. In addition to this, the government should work to protect the microbusiness owners and the self-employed in the restaurants as well as wholesale, retail, tourism and travel industries.

Finally, in order to minimize the negative repercussion of the virus on the global economy, it is vital that countries share all of their clinical data and quarantine experiences combatting the crisis, in addition to working together to develop therapeutics and a vaccine. We must maintain the flow of essential economic exchanges rather than shutting down movement and borders. We also need to work together in providing support to nations with weaker healthcare systems. Korea will be there every step of the way as the international community endeavors to develop a vaccine for COVID-19, engage in development cooperation for health services, and ramp up the capacity of developing countries to combat epidemics.

References

Ministry of Economy and Finance. http:// english.moef.go.kr

Ministry of Health and Welfare. http://www.mohw.go.kr/eng

Financial Services commission. http://www.fsc.go.kr/eng

Korea Centers for Disease Control & Prevention. http://www.cdc.go.kr/cdc_eng

Coronavirus Disease-19, Republic of Korea. http://ncov.mohw.go.kr/en

Bank of Korea. http://www.bok.or.kr/eng/main/main.do

The Republic Of Korea Cheong Wa Dae. (2020, March 26). Remarks by President Moon Jae-in at
  G20 2020 Extraordinary Virtual Leaders Summit
  Retrieved from http://english1.president.go.kr/BriefingSpeeches/Speeches/786

Larry Buchanan, k.K. Rebecca Lai and Allison McCann. (2020, March 17). U.S. Lags in Coronavirus
  Testing After Slow Response to Outbreak. The New York Times.
  Retrieved from http://www.nytimes.com/interactive/2020/03/17/us/coronavirus-testing-data.html

Byun Hae Jung. (2020. February 8). Granting living expenses for self-quarantined up to 1.23million won ...
  increase the fine for refusing to quarantine : 3 million won → 20 million won . Newsis.
  Retrieved from https://newsis.com/view/?id=NISX20200208_0000912548&cID=10201&pID=10200

Kim Jin-Ah. (2020, March 18). Supplementary budget worth of 11.7 trillion won for COVID-19 passed
  the plenary session of the National Assembly... a total of 2.4 trillion won for Daegu and Gyeongbuk
  province. Newsis.
  Retrieved from https://newsis.com/view/?id=NISX20200317_0000959581&cID=10301&pID=10300

Park Kwang Soo. (2020, March 19). President Moon presiding Emergency Economic Council Meeting said
  "push ahead with emergency financial plans worth of 50 trillion won focusing on helping SMEs and Micro-
  business owners". Korea Joongang Daily.
  Retrieved from https://news. joins.com/article/23733946

Jang Won Seok. (2020, March 26). The Bank of Korea announced the supply of unlimited liquidity…
  Korean QE that is not used even in credit crisis.   Korean Joongang Daily.
  Retrieved from https://news. joins.com/article/23740199

Lim Kyung Koo. (2020, March 30). President Moon, "Provide basic income for disaster worth of 1 million
  won for each household with income in the bottom 70%", Who is the target for this support?. Pressian
  Retrieved from
  http://www.pressian.com/pages/articles/2020033011452613777?utm_source=naver&utm_medium=search

Annex

1. COVID-19 Timeline in Korea

Dec 31, 2019	Cluster of cases of pneumonia of unknown origin was reported to China National Health Commission
Jan 3, 2020	Korean government raised the alert level to Blue(level 1 out of 4-level national crisis management system)
Jan 12, 2020	Coronavirus was named 2019-nCoV, and Chinese scientists shared the genetic sequence of the virus internationally.
Jan 20, 2020	First confirmed case of Coronavirus, a 35-year-old female, Chinese national, residing in Wuhan, Hubei province. She was detected with fever upon arrival at Incheon International Airport, and was confirmed positive for coronavirus.
Jan 20, 2020	Korean government raised the national alert level to Yellow (level 2)
Jan 23, 2020	Chinese government locked down Wuhan, the center of the outbreak.
Jan 28, 2020	Korean government raised its infectious disease alert level to Orange (level 3).
Jan 30, 2020	WHO declared the coronavirus a global public health emergency
Jan 31, 2020	COVID-19 test kits based on the virus' genetic code released by China had been distributed to local government labs across the South Korea.
Feb 4, 2020	Korea began banning entry of all foreign nationals who had been to China's Hubei province in the past two weeks
Feb 7, 2020	COVID-19 test kits became available in private hospitals.
Feb 12, 2020	WHO declared an official name for the new coronavirus - COVID 19
Feb 20, 2020	Number of confirmed cases in Korea reached 100, and first death occurred.
Feb 21, 2020	Korean government declared 'Special Management Region' in Daegu and Cheongdo.
Feb 23, 2020	Korean government raised its infectious disease alert level to Red(level 4) and ordered schools to start the new semester one week later on Mar 9, from Mar 2.
Mar 1, 2020	Korean government divided confirmed patients into four groups and only the sickest and elderly were sent to hospitals. The young and asymptomatic went to dormitories.
Mar 2, 2020	Korean government delayed the start of the new semester to Mar 23.
Mar 4, 2020	Korean government proposed an 11.7 trillion won extra budget bill.
Mar 5, 2020	Korean government declared 'Special Management Region' in Gyeongsan.
Mar 9, 2020	Korean government applied special entry procedures for those from Japan.
Mar 10, 2020	A cluster of confirmed cases appeared in a Seoul call center.
Mar 11, 2020	WHO declared COVID-19 a pandemic
Mar 17, 2020	Korean government delayed the start of the new semester to Apr 6.
Mar 19, 2020	Korean government applied special entry procedures for all foreigners.
Mar 22, 2020	Korean government began implementing stricter rules on social distancing

2. LIST OF PUBLIC HEALTH MEASURES

1. **Code of Conduct for the Public**	The Korean government is guiding the public to refrain from attending social gatherings and coming into direct contact with others, eat nutritionally balanced meals, ventilate indoor spaces sufficiently, etc. If any signs of a cold are detected, the public is asked to observe their symptoms for three to four days and contact with a public health center or the KCDC call center. If the need arises, they should visit a screening clinic (do not use public transportation). They should go to a COVID-19 protection hospital for respiratory symptoms and use phone counseling service for non-respiratory diseases. Citizens are strongly urged to stay at home, except for essential needs or jobs, with the government restricting religious gatherings, indoor sport activities and attendance at entertainment facilities, such as night clubs are karaoke rooms.
2. **Latest Information in a Transparent Manner**	Domestic law (Infectious Disease Control and Prevention Act) ensures the public's right to be informed about the latest developments and responses to outbreaks and infection control. The government also mandates the disclosure of the whereabouts, means of transportation, healthcare institutions visited, and contacts of confirmed cases.
3. **Mild Cases and Treatment Support Centers**	Once public health centers or city- and provincial patient management teams classify patients based on severity (mild, moderate, severe, and extremely severe), all cases excluding mild cases are immediately hospitalized, and mild cases are transferred to living and treatment support centers. Healthcare staff conducts the monitoring of mild cases at least twice a day. If symptoms are aggravated, they are immediately transferred to healthcare institutions. When symptoms are mitigated, they are discharged based on relevant standards (about three weeks).
4. **Aggressive Inspections of High-risk Groups such as 'Shincheonji' Religious Group Members**	The list of 'Shincheonji' religious group members nationwide was provided to all local governments including Daegu to identify confirmed cases and rapidly conduct tests on those with symptoms. In order to prevent any Daegu residents from being disadvantaged by the testing of 'Shincheonji' religious group members, those with symptoms are advised to undergo diagnostic tests at screening clinics. The government is making door-to-door visits to conduct diagnostic testing for seniors and those with underlying health issues.
5. **Hospital Beds and Healthcare Staff**	Government offices and hospitals across South Korea have offered space and medical services in their areas to solve the shortage of hospital beds and isolation facilities to treat coronavirus patients in Daegu. Moreover, physicians and nurses are being recruited from public hospitals, etc., and dispatched to Daegu on a continual basis.

3. SUMMARY OF ECONOMIC MEASURES AGAINST COVID-19

1. Small- and medium-sized enterprises (SMEs) and Micro-business owners

Fiscal support	Tax relief
・ Support programs provided to normalize the operations of affected stores that were visited by confirmed patients ・ Support for rental fees for micro-business owners (providing a 50% tax relief cut when building owners reduce rental fees for micro-business owner tenants, and rental fees cut for buildings owned by the government and public organizations) ・ Emergency relief fund for affected SMEs ・ Provision for maintaining employment and labor costs	・ Extending the deadline of filing and paying internal and local tax returns, postponing tax investigations, and applying a grace period for collecting taxes and any arrears ・ Reducing the tariff for the emergency procurement of key parts via airlines
Financial support	**Administrative support and other support**
・ Expanding lending support (via loans and guarantees) ・ Underwriting greater level of accounts receivable insurance and lowering insurance premiums ・ Enlarging the size of P-CBO issuance and relaxing its requirements	・ Expediting customs procedures for raw and sub-materials, and helping to identify alternative procurement services ・ Streamlining importing screenings ・ Extending contract/delivery periods for goods procured by the government

2. Export Industries

Fiscal support	Tax relief
・ Offering exporting vouchers ・ Helping to establish online exhibitions	・ Prolonging the deadline for tariff collections, and allowing payments in installments ・ Expediting tax refunds ・ Putting off tariff investigations
Financial support	**Administrative support and other support**
・ Reprieving bankruptcies filed by insolvent exporting companies ・ Reducing the spread on deferred payments of bills bought in foreign currency ・ Extending the expiration period of import L/C	・ Operating trouble-shooting help centers

3. Local Economy

Fiscal support	**Tax relief**
・ Emergent budget execution in local areas for the first of this year ・ Issuing additional local gift certificates and offering a larger discount on them ・ Designating areas for special management such as Daegu and Gyeongbuk Province, and providing special support worth 1.7 trillion won	・ Suspending tax investigations in local areas ・ Helping to pay local taxes in installments and postponing due dates for tax payments
Financial support	**Administrative support and other support**
・ Applying the prime rate on initial lending ・ Backing local governments and municipalities that are propping up local SMEs (through loans and guarantees)	・ Reducing the bidding time period when purchasing masks ・ Running an on-site center and an inspection force for reporting unfair practices pertaining to sanitary aid and quarantine products

4. Airline and Shipping Industries

Fiscal support	**Support for fees and penalties**
・ Lowering the usage rate of port and airport facilities ・ Reducing rental fees for passenger terminals	・ Extending the deadline for penalty payments newly incurred by airliners ・ Longer period for reducing fees for Aircraft Certification Systems (ACS)
Financial support	**Administrative support/Miscellaneous**
・ Emergency lending targeting LCCs, passenger ships, and stevedoring companies ・ Introducing a public guarantee program on operational leases for airliners ・ Injecting liquidity when companies confirm a reduction in freight or cargo volume	・ Postponing the retrieval of unused operation rights/slots, and increasing per-time slots ・ Distributing operational rights for mid- and long-distances, and helping to open non-service routes ・ Extending the due date for vessel screenings

5. Tourism, Restaurant and Service Industries

Fiscal support	**Tax relief**
• Pushing ahead with modernizing facilities including tourism special zones and cultural properties • Easing requirements for subsidies for employment stability • Providing disinfection services to companies that confirmed patients visited	• Cutting asset taxes imposed on accommodative facilities • Extending the due date of patent rights payments from duty free shops and permitting installment payments
Financial support	**Administrative support/Miscellaneous**
• Temporarily introducing preferential non-collateral financing • Greater coverage for general loans and applying the prime rate to more borrowers	• Helping to address disputes related to cancellations and requesting refunds • Distributing posters explaining tailored responses to dining industries

6. Workers / Consumers

Fiscal support	**Tax relief**
• Adopting five consumption coupons (for jobs, vacation, cultural events, tourism, and childbirth) • Providing support for living expenses for vulnerable groups • Expanding support for employees suffering from delayed wages • Granting living expenses for the self-quarantined	• Temporary increases in tax relief for the special excise tax and income tax • Putting off the period of value-added tax refunds targeting hotels accommodating foreign tourists • Easing the burden of social security insurance premiums and electricity bills
Financial support	**Administrative support and other support**
• Strengthening financing for living expenses for job seekers	• Escalating support for costs related to civil litigations for pursuing unpaid wages • Further vocational training for job seekers

4. FREQUENTLY ASKED QUESTIONS (FAQ)

Q (TRACE) What is the criteria for classifying someone as a "contact" (a person who has been in contact with a confirmed case)?

☞ The criteria is determined based on an exposure assessment conducted by the Epidemiological Investigation Team. The scope of exposure starts on the day before the confirmed patient started showing symptoms, taking into account the symptoms of the confirmed patient, whether the confirmed patient was wearing a mask, and the risk level of exposure (location of contact, duration of contact, etc.).

Q (TRACE) What happens if you are classified as a contact?

☞ You should isolate yourself for 14 days from your last potential exposure. You will receive a self-quarantine notice from the Head of the Health Service, be informed of the self-quarantine guidelines, and be assigned a clerk who will check in with you twice a day to check for fever and other symptoms until you are released from self-quarantine to check for fevers and symptoms.

Q (TRACE) What are the self-quarantine guidelines?

☞ First, separate yourself from other people and frequently ventilate rooms by closing the doors and opening the windows. If possible, stay in a place where you can have a separate bathroom and wash basin to yourself.

☞ If you use a public bathroom or wash basin, make sure you disinfect the area with bleach or other household disinfectants before other people use them. Use your own personal items, including towels, dishware, and mobile phone. Wash your clothes and bedding separately. Eat alone and make sure to separate your dishware from everyone else's.

Q (TRACE) Is violating a self-quarantine order punishable by law?

☞ Failure to cooperate with quarantine orders may result in a criminal penalty (maximum fine of three million won). Upon the promulgation of the Infectious Disease Control and Prevention Act (passed by the National Assembly on February 26, 2020), violations may be penalized by a prison sentence of up to one year or a fine of up to 10 million won.

Q (TRACE) Are living expenses provided during the self-quarantine period?

☞ Yes, your expenses will be covered during the self-quarantine period and you will be on paid leave. For details, contact your Community Service Center.

Q (TEST) Who is eligible to get tested?

☞ In accordance with KCDC guidelines, patients classified as suspected cases and Patients Under Investigation (PUI) may get testing. There is no need to get tested out of simple anxiety. We ask that you trust the expert advice of your physicians.

Q (TEST) Difference between a suspected case and a Patient Under Investigation?

☞ Suspect cases are people with high risks of having been infected after coming into contact with a confirmed case. Although the risk level is not as high as PUIs, people are classified as suspected cases based on their travel history and physician's opinion.

☞ PUIs must report their symptoms. Even though an epidemiological survey will not be conducted and a self-quarantine notice will not be issued, Patients Under Investigation must follow the same measures as confirmed patients.

Q (TEST) Where can I get tested?

☞ You can get tested at COVID-19 screening centers that are equipped to collect samples. The following link provides a list of COVID-19 screening centers (in Korean) where you can get tested. (Link) http://www.mohw.go.kr/react/popup_200128.html or call the 1339 hotline.

Q (TEST) How is the test performed?

☞ Samples are collected by physicians, nurses, and medical technicians at designated locations (COVID-19 screening centers). Nurses and medical technicians will collect samples under the guidance of physicians. Two types of samples are collected, during which you may experience some discomfort/pain.

Q (TEST) How long does it take to get the DNA test results back?

☞ You can expect to get your results back one to two days after testing.

5. PUBLIC ANNOUNCEMENT POSTERS ON COVID-19

질병관리본부
KCDC

2020.3.2.

Guideline for **Self-quarantine Patient**

✓ **Avoid outdoor activities to prevent the transmission of infection**
※ If you are inself-quarantine, please cooperate in preventing transmission of infection under 「Infectious Disease Control and Prevention Act*」
* You could be fined up to 3 million wonby the Article 80 (Penalty).

✓ **Stay alone in an isolated place**
- Keep the door closed and open the window frequently to ventilate. • Eat by yourself.
- If possible, stay in the place with a bathroom and sink that you can use alone.
(If you share a bathroom and sink, disinfect them after use with a home disinfectant such as chlorine bleach.

✓ **If you need to go out to see physicians or for other inevitable reasons, you must contact the local public health center (the public health officer in charge) first**

✓ **Avoid contact with family members or cohabiters (speaking, etc.)**
- If inevitable, do not face one other, wear masks, and keep your distance at least two meters.

✓ **Use personal items (personal towel, utensils, mobile phone, etc.)**
- Do not wash your clothes and bedding with others.
- Make sure no one uses your personal items before washing them separately.

✓ **Comply with the health guidelines**
- Follow personal hygiene practices (washing hands, sanitizing, etc.) • Wear a mask when coughing.
- If you don't have a mask, cover your mouth and nose with your sleeve when coughing.
- Wash or sanitize hands after coughing or sneezing.

While you are in self-quarantine, your local public health center (the public health officer in charge) will contact you to check your symptoms and conditions
Please monitor and record your symptoms until you are released from quarantine.

How to monitor symptoms

✓ Take the temperature every morning and evening

✓ Check your health condition for any symptoms of infection, such as respiratory symptoms, and record them on the monitoring form (Form 6)

✓ Inform your local public health center (the public health officer in charge) of your temperature and symptoms when they contact you(2 times a day or more)

Major Symptoms of COVID-19

✓ Fever (over 37.5 ℃) ✓ malaise ✓ Sore throat ✓ Respiratory symptoms (cough, difficulty in breathing, etc.) ✓ Pneumonia

질병관리본부
KCDC

2020.2.12.

Guidelines for family and cohabiters of a self-quarantined person

✓ **Avoid contact with the person who is in self-quarantine as much as possible.**
- Contact is strictly prohibited for those with lowered immunity, including seniors, pregnant women, children, sufferers of chronic diseases and cancer, etc.
- Restrict visitors

✓ **If you can't avoid being in contact, wear a mask and keep at least 2 meters distance.**

✓ **Stay in an area independent from self-quarantine area, and ventilate the shared area frequently.**

✓ **Wash hands frequently using water and soap or hand sanitizer.**

✓ **Use personal items separately. (tableware, cup, towel, bedding, etc.)**
- Wash clothes and bedding of suspected infectee separately from others'
- Separate tableware of suspected infectee, so others don't use it before it is cleaned.

✓ **Clean the surface that is frequently touched, such as table top, doorknob, bathroom tools, keyboard, bedside table, etc.**

✓ **Pay a close attention to the health condition of suspected infectee.**

Major Symptoms of COVID-19

✓ Fever (over 37.5 ℃) ✓ Respiratory symptoms (coughing, sore throat, etc.) ✓ Pneumonia

6. CORONAVIRUS RESPONSE GUIDELINES (FOR LOCAL GOVERNMENT)

<Unofficial Translation>

Coronavirus Disease 2019
Response Guidelines
(For Local Governments)

Edition 7-3

3 / 15 / 2020

The Central Disease Control Headquarters

The Central Disaster Management Headquarters

< Table of Contents >

Ⅰ. Definitions and Management Methods

> The case definitions below apply to the imported COVID-19 spread under the **crisis alert level "Severe Stage,"** and may change depending on the occurrence of domestic confirmed cases, results of epidemiological studies, and the prevalence of spread.

1. Case Definitions

○ **Confirmed Case**

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

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

○ **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.).

○ **Person Under Investigation (PUI)**

1. A person who, according to a doctor's diagnosis, is suspected of COVID-19 or of pneumonia of an unknown etiology

2. 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 like China (including Hong Kong and Macau)

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

3. A person with an epidemiological connection with a domestic cluster outbreak 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 diagnostic 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 | +

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

○ (PUI*) | Someone with an epidemiological connection 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**

*Person Under Investigation

Criteria for Diagnostic Testing Fee Subsidy

○ Healthcare facilities: Only patients reported to public health clinics according to the applicable case definitions (applicability must be noted on the Remarks section) will be eligible for health insurance coverage and deductible support

○ Public health clinics: Subsidized testing fees will be given to the KCDC Designated Laboratories according to the commission contract, but only for patients reported to public health clinics according to the applicable case definitions. Local governments will provide the fees for specimens obtained according to the respective government's needs, aside from the applicable case definitions.

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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 clinics as well as epidemiological investigations by City/ Province COVID-19 Immediate Response Task Force
    - Close contacts can be additionally determined by reporting and contact monitoring, aside from the above mentioned 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 divisions for the self-quarantine departments and the public health departments)

Subject Monitoring

- ○ Monitoring: to confirm whether COVID-19 suspected symptoms occur during the maximal incubation period

- ○ Active Surveillance
  - – Method: Actively confirming existence/nonexistence of fever or respiratory symptoms twice a day
  - – Jurisdiction: The public health center with jurisdiction over the subject's residence*
    *(if the subject moves the quarantine location, jurisdiction is transferred from the public health center at the previous location)

- ○ Monitoring done via self-diagnosis app

Health Education

- ○ DO NOT: Go out, come into contact with others (including meals), use public transportation, visit multi-use facilities, etc.

- ○ DO: Wear masks to prevent respiratory infections, emphasize hand washing, obey cough etiquette, inform any history of foreign travel/contact with a patient when visiting medical facilities, etc.

- ○ If symptoms occur or worsen, first contact the KCDC call center (☎1339, area code+120) or the public health clinic

Quarantine 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: confirmed cases, suspected cases, contacts with confirmed cases (without symptoms)

- ○ Quarantine locations can be classified as: self-quarantine, facility quarantine, hospital isolation

○ Quarantine methods

– **Self-quarantine:** quarantine in a separated place at home

– **Facility quarantine:** quarantine 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, a City Mayor, or a Provincial Governor.
* A medical facility established according to the Infectious Diseases Prevention Act (article 37, paragraph 1, subparagraph 2) to quarantine confirmed cases; other facilities 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); isolation Act, article 16 and its enforcement regulations (article 14)]

– Hospital isolation: isolation at hospital due to the necessity of inpatient treatment; during triage, patients in severe conditions or in high risk groups must be hospitalized

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[High Risk Group]

○ **Age:** 65 or older
○ **Chronic Underlying Illnesses:** Patients with diabetes; chronic renal, hepatic, pulmonary, and/or cardiovascular diseases; patients with hematologic cancers; 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
○ **Inpatients:** Patients with oxygen saturation below 90% on room air requiring initial oxygen supplementation

Ⅱ. Response Guidelines for Suspected Cases/Persons Under Investigation (PUI)

□ Suspected Case

		Details	Authority
1	Suspected case reporting	• Input information into the Health and Disease Integration Management System • (Starting 14 days before symptoms arise) Check records of contact with confirmed cases • Check symptoms	Agency that first identified the case
2	Suspected case management • Quarantine protocol	• Case classification (determine severity) • Issue inpatient treatment notice • If necessary, assign and transport to hospital bed • Sample collection and analysis • Input sample analysis results into the Health and Disease Integration 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 quarantine • Final confirmation of test results from suspected case and release of quarantine	• 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

☐ Person Under Investigation (PUI)

		Details	Authority
1	Declaring/reporting PUI	• Input information into the Integrated Disease Health Management System - Remarks section must be completed • Confirm history of overseas travel, relations to domestic outbreak, occupation, etc.	Agency that first identified the case
2	Diagnosis	• Conduct diagnostic test	• Screening clinics (medical institution/public health center) • General medical institutions
3	Management of PUI	• Health education* • Check diagnostic test results of PUI - 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	• COVID-19 screening center (healthcare facility/public health center) • General healthcare facilities

* Health Education

- DO NOT:
  - Go out (especially to multi-use 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
  - Keep a distance of at least 2 meters and wear a mask to prevent respiratory infections when talking to others is necessary.
  - When visiting a medical facility is necessary, disclose pertinent personal information such as   history of overseas travel, connections to domestic outbreaks, occupation, etc.
  - If symptoms occur or worsen, please contact the Center for Disease Control and Prevention (☎1339, area code + 120) or the public health center.

[Response procedures for suspected cases/PUI]

Type	Occurrence report	Specimen collected by	Managing authority	Management method	Specimen transfer by	Inspection agency	Patient transfer/ explanation before notice of test results	Isolation notice	Release from isolation	Support
Suspected Case	First recognizing agency (medical institution/ public health center)	Screening clinic (medical institution/ public health center)	Municipal epidemiological agency	Self-isolation/ private hospital etc.	Screening clinic (medical institution/public health center)	Self or assigned agency	Own car/ on foot/ ambulance (public health center, 911) (info: screening clinic)	1.First recognizing public health agency (verbal notice) 2. Residential health center (written notice)	Municipal epidemiological agency	Testing and isolation costs, etc.
PUI	First recognizing agency (medical institution/ public health center)	Screening clinic (medical institution/ public health center)	Screening clinic (medical institution/ public health center)	Health education	Screening clinic (medical institution/ public health center)	Self or assigned agency	Refrain from public transportation			Testing costs*
		General medical institution	General medical institution		General medical institution	Self or assigned agency	Refrain from public transportation			Testing costs*

❖ (Explanation) Prior to notification of test results, the institution that performs the evaluation and testing will provide basic guidance regarding transportation, public health education, etc.

* However, if a 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 from the isolation in addition to the testing costs.

<Laboratory test priority>

PUI among contacts of confirmed patients

PUI with epidemiologic connection to domestic clustering cases

PUI suspected of COVID-19 according to doctor's opinion

Follow-up examination of confirmed patients (to determine the quarantine release)

1. Suspected cases

A. Declaration / report

1. Recognition of symptoms by suspected cases

(Situation 1) Voluntary notification while at the patient's home (1339 or public health center) or during self-quarantine

(Situation 2) Report by a medical institution (outpatient, emergency room, hospital ward, screening facilities (including public health centers), etc.)

2. Report the suspected case

(Medical institution / public health center) Confirm that the patient meets the case definition criteria (history of contact with confirmed patients, clinical symptoms, relations to domestic clustering cases, etc.) *[Form 1] Infectious Disease Reporting Form

(Public health center where the case was first recognized)

i. Immediately upon recognition of the reported case, verify that it was reported through the Integrated infectious diseases and health management system's Infectious disease web reports

ii. If unreported, notify the individual to report to a medical institution.

– 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 patient

B. Triage of the suspected patient

❖ Determine hospital-isolation or self-quarantine depending on whether the patient belongs to high-risk groups and/or severity of symptoms. (by City/Province's Epidemiologist and Patient Management Group)

1) Public health center where the case was first recognized

Transfer of suspected patients: by a personal vehicle, walking, or an ambulance (public health center, 119), if necessary, to transfer between medical institutions for a sample collection or to move to a quarantine location

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* If the health center or 119 cannot provide the patient with an ambulance (suspected patient 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 equivalent mask and disposable gloves.

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2) Self-quarantine notification

(Public health center where the case was first recognized) Self-quarantine and testing guidance, verbal notification, and notification to the local public health center

(Public health center in the jurisdiction of the patient's residence) Provide instructions on the first visit and guidelines, as well as **hospitalization notice** (hospital, home, or facility) and day-to-day guideline

i. Suspected patient must self-quarantine by principle*

*In the case of a mildly symptomatic patient who cannot self-quarantine at home (requiring independent space or additional assistance), proper self-quarantine location is to be provided (such as facilities or hospitals); patients with symptoms of moderate or higher severity according to patient classification must be quarantined in a hospital

ii. (City/Province epidemiologist) Confirm action items, such as self-quarantine before notification of test results and transfer to a designated hospital.
   1. If it is determined that self-quarantine is not possible, inform the city / province patient management team.

      * [Form 3] Notice of Inpatient Treatment

      * [Appendix 3, 4] Refer to the Rules and Recommendations for Patients in Self-Quarantine and Their Families / Cohabitants

3) Guide to hospital-isolation

○ (City / Province Patient Management Task Force) Severity classification team assesses the severity of the case according to the severity score and risk factors, and hospital bed assignment team identifies 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 result.

○ (Public Health Center) Upon confirmation of hospital bed assignment

– Transfer to the assigned medical institution by transportation such as an ambulance

– Inpatient guidance (treatment indication, process, quarantine medical institution, etc.) and inpatient treatment notice

➢ [Form 3] Notice of Inpatient Treatment

* The inpatient treatment cost is provided by the public health center under the jurisdiction (The cost support will be announced in a separate letter according to the Covid-19 inpatient treatment cost support plan procedure)

C. Discharge and quarantine release of suspected cases

Criteria for quarantine release

i. (Suspected case) Even if the test result is negative, **quarantine is maintained for 14 days from the last contact with a confirmed case**

1. That is, even if they are discharged, they must maintain 14 days of self-quarantine from the last contact with a confirmed case

* (Ex) if the last contact date was Apr 1,   quarantine is released on Apr 16, the day after 14 days have elapsed.

Quarantine for 14 days since the last contact with the patients.
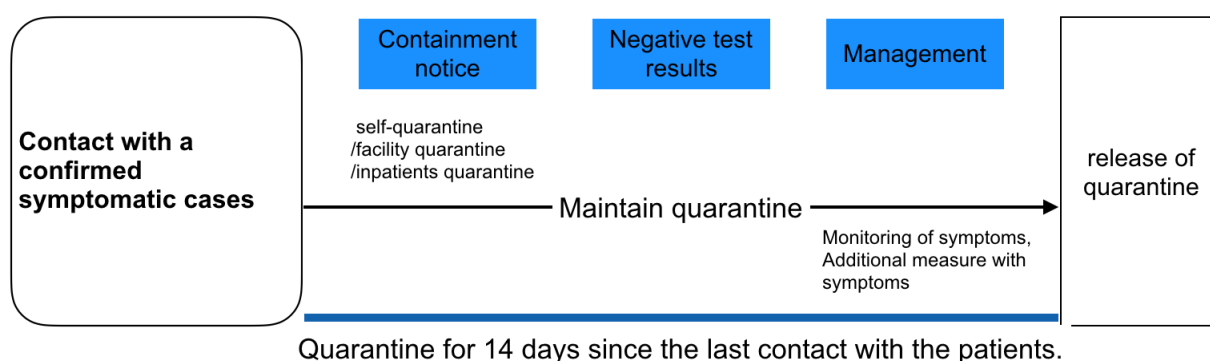
< Release of Quarantine for Suspected Case and Management Plan>

1) Discharge and management post isolation

Public health centers in the jurisdiction where the residence is located are in charge of management, such as checking the suspected patient's status and discharge schedule.

(Medical institution) They must notify the local public health centers when the patient is discharged,

(Procedures for discharge and quarantine release)

B.   In case of quarantine release: Return to home by any possible means of transportation

C.   If one needs to maintain quarantine after discharge: Use a personal car, walk, or take an ambulance (from fire department, or public health center) to go home or a facility (while wearing a medical grade mask)

(Public Health Center) Re-issuance of inpatient treatment notice (home or facility) following quarantine location change, and carry out active monitoring (quarantine notice, notice distribution and education)

2) Release from isolation

○ Check the patient's condition at the public health center in the jurisdiction of residence.

○ (hospital and facility isolation) Be sure to notify the public health center in the jurisdiction of residence when releasing the patient from isolation.

○ (home isolation) The public health center in the jurisdiction of the patient's residence should inform the patient of his/her release from isolation.

  – Educate patients to immediately inform the public health center if symptoms exacerbate

  – Use [Appendix 6 COVID-19 Precautions] 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 Health and Disease Integrated Management System.

➢ [Appendix 6] COVID-19 Code of Conduct

2. Patient Under Investigation (PUI)

A. Notification / report

1) Recognition situations

- ○ (Situation 1) Confirmation at the entry screening stage
  - – In case of an unrecognized mild fever without respiratory symptoms at the entry screening, determine whether to further investigate for COVID-19 based on the subject's body temperature, epidemiological relevance, and length of stay in Korea.
  - – At the entry screening, issue the notice of quarantine for asymptomatic incomers from Hubei province. Upon notification of the list, the public health center in the jurisdiction of residence will conduct active surveillance for 14 days from the date of entry
  - – If an entry screening 'patient under investigation' required temporary isolated observations (target for testing), request assignment of an isolation bed to the municipal government in case of exacerbation of symptoms or a confirmed case

  ◆ **See coronavirus disease 2019 (COVID-19) entry screening response guidelines**

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

2) Report

- ○ (Healthcare institution) Confirm whether an inpatient qualifies for the criteria for patient under investigation based on (history of international travel, exposure to patients, proximity to domestic cluster, and clinical symptoms).
  - ➢ [Form 1] Infectious Disease Reporting Form

- ○ (public health center in the jurisdiction where the healthcare facility is located) Ensure the healthcare institutions report via the online infectious disease report procedure on the Health and Disease Integrated Management System.

- - After selecting "**Suspected case,**" make sure to type "Symptomatic case subject to investigation" in the notes (special remarks) section of the report form.

[Categorizing symptomatic cases subject to 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 outbreak

B. Measures to be taken by medical facility

○ If tested negative, educate the patient on topics such as personal hygiene according to [Appendix 6 of COVID-19 Code of Conduct]. If symptoms worsen, instruct the patient to call the Korea Centers for Disease Control and Prevention (☎ 1339, area code +120) or the local health center for priority consultation.
○ If tested positive, act according to the protocol for responding to confirmed cases.

3. Process for managing examinees in designated screening clinics (public health centers)

A. Patient reception

○ Confirm patient information and classify the patient by clinical signs/symptoms, physical examination (if necessary), etc. according to clinical practice.
1. Check for any history of overseas travel (visitation), contact with confirmed patients, etc. via patient interview by receptionist/physician and use of the examinee qualification inquiry/DUR/ITS
   *As of 03/05/20, 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. Travels to and from all other countries will need to be checked via patient interview.

   *DUR (Drug Utilization Review): a program that promotes patient safety by monitoring drug prescription, dispensation, and use ITIS (International Traveler Information Systems): a program that provides overseas travel history

2. Check if 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 if the patient has symptoms suspicious of COVID-19 such as pneumonia of unknown etiology, according to physician's clinical judgment.

B. While in a waiting room:

○ Continue wearinga mask, 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 simple medical history (if obtained without direct patient contact, replacement of personal protective equipment is not necessary)
○ If the patient falls within the case definitions, provide instructions for a specimen collection. If not but the patient requires treatment, redirect to general practice (e.g. ER, outpatient).

D. Response guidelines

○ **(Patient transport)** Transport patient to an isolation room or (if there is no isolation room) a separated area
○ **(Collecting and transporting 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 phlegm, also obtain a lower airway sample.
– The sampler must wear personal protective equipment (sterile mask (KF94 or higher), a disposable waterproof long-sleeved gown or full-body protection suit, disposable gloves, goggles or a face shield)

○ **(Reporting occurrence)** Report to the designated public health center of the occurrence of Class 1 infectious disease — novel infectious syndrome
❖ In the report, select "Suspected Case" in the notes (special remarks) section, then classify into either **"Suspected case"** or **"Symptomatic case subject to investigation."**

➢ Ⅳ. Refer to the guidelines for the occurrence of suspected cases/symptomatic cases subject to 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 line of movement.
– If the sampling room is indoors, ventilate the space for at least 30 minutes. If samples are to be collected outdoors, sampling must be conducted in an isolated space where no ventilation is required.
◆ For more detailed information, refer to the guidelines for "Coronavirus Infection (COVID)-19 Designated Screening Clinics"

(Additional information) End exam by informing examinees on how they will be notified of test results and educating them on limiting outdoor activities and other public health topics.

Ⅲ. Response Guidelines for Confirmed Cases

1. Reporting confirmed cases and deaths

A. Reporting and registration

○ Upon identifying a new confirmed case (including death), the public health center shall immediately report the case to its respective city/province and the KCDC by telephone and register the case in the system portal (Health and Disease Integrated Management System)

Positive test results must be registered within the same day of testing. For the cases registered within the same day, the KCDC's Emergency Management Office will assign the test confirmation number

➢ [Form 1] Infectious Disease Reporting Form

○ Upon identifying the death of a confirmed patient, 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 the (probable) cause and time of death to the KCDC's Emergency Management Office and register the disease occurrence and death in the system portal
➢ [Form 2] Report of Death (Post-mortem Inspection) Relating to Infectious Disease

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[Steps for reporting new cases or deaths]

◆ Contact the KCDC's Emergency Management Office: ☎ 043-719-7979, 7790, 7878

◆ Report the case via the system portal: "Health and Disease Integrated 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 the hospital, release from quarantine) through the [Form 6] COVID-19 Case Management Report (Confirmed Case) form
❖ Report through the "Health and Disease Integrated 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 Cases)

2. Isolation of Confirmed Cases

➢ Refer to [Appendix 7] for classification of patient severity and allocation of hospital beds

A. **Public health center in charge** (i.e. public health center that first identified the case, or in the jurisdiction of residence)
  ○ The public health center that first identified the case shall conduct the isolation for confirmed cases that require immediate isolation. If a patient is confirmed after returning to his/her residence, isolation shall be conducted by the public health center in the jurisdiction of the patient's residence.
  ○ Assess severity of the case based on key indicators, including but not limited to the patient's level of alertness, body temperature, and risk factors (refer to Appendix 7)
    – The public health center that first identified the case shall assess the patient's severity if the patient tests positive while waiting for care at the health center
    – If the patient tests positive after having returned to his/her residence, the 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 Assessment Team classifies severity according to severity scores and risk factors; Bed Allocation Team identifies the status of bed availability within the jurisdiction that meets the severity classification
    – Prioritize patients with moderate to severe symptoms (excluding asymptomatic patients and those with mild symptoms) and assign a hospital bed immediately. Report the assignment to the public health center
  ○ **Public health center** Upon confirmation of hospital bed assignment, the public health center shall:
    – Transfer the patient to the appropriate medical facility by ambulance or other means of transportation
    – Notify the patient of in-patient treatment processes (treatment indication, hospitalization process, treating medical institution, etc.)
      ➢ **[Form 3] Notice of in-patient treatment**

  ○ **Medical facility** When transfer to another medical facility is required in the course of treatment (due to worsening of symptoms, for example), the **initial treating medical facility** should report the transfer to the City / Province COVID Patient Management Task Force and transfer patient to the medical facility to which the patient has been re-assigned
    ❖ If there is a shortage of hospital beds in the metropolitan area or province, the case shall be referred to the "Transfer Support Emergency Management Office" for re-assignment of hospital beds

    ➢ **Refer to section VI. on "Hospital bed allocation and patient transfer"**

C. Cases that do not require hospital isolation

- ○ Candidates
  - – Among hospitalized patients, those who meet discharge criteria, according to the doctor's judgement.
  - – Among confirmed patients, those who do not meet criteria for hospitalization according to severity classification

1. Eligibility for admission to the Residential Treatment Center

- The physician in charge determines that a patient needs admission to a Residential Treatment Center according to discharge criteria or severity classification.

- The patient is a candidate for self-quarantine but appropriate conditions are lacking (no individual room is available at home, an appropriate residence is not available, living with a member of high-risk groups*, etc.).

- Local government determines that the patient should enter a Residential Treatment Center for whatever reason.

* For definition of high-risk groups, see Appendix 7: Severity Classification

2. Eligibility for self-quarantine

- Patient's health status meets the discharge criteria and is stable enough for self-quarantine.

- Can live alone in an individual space (separate bedroom, toilet, sink, etc.)

- No problem in acquiring daily necessities such as food

- Does not live with a member of high-risk groups*

* For definition of high-risk groups, see Appendix 7: Severity Classification

- ○ **(Management procedures)** Health centers in the jurisdiction where the residence is located should check whether self-quarantine is possible, and then contact the metropolitan and provincial patient management groups. The city/provincial patient management group will determine an appropriate isolation level (facility or self-quarantine) and notify the health department
- ○ **(Management practices)** Public health center within the jurisdiction of the patient's primary residence issues the notice of the hospitalization, rules and regulations to be followed during the quarantine and instructions on COVID-19 testing procedure, symptoms monitoring and recording, and report of the condition of the patient (symptoms onset, worsening, and/or deaths) if any changes occurred
  - ➢ [Form 3] Notification of inpatient treatment (hospital / home / facilities),

    [Form 6] COVID-19 Case Management Report (Confirmed Cases)

    [Form 7] Self-quarantined patient management ledger, [Form 8] Patient health monitoring

1. **(Residential treatment center) Health management manager** (medical staff in charge) monitors and records symptoms (2 times / day)
   – When major situations such as transfer, discharge, death, and release of quarantine occur, they are reported to the local public health center
   – In the event of symptom onset and/or deterioration during the quarantine, the facility's health manager (in charge of medical staff) is notified. Transfer the patient to the medical institution and inform the public health center where the place of residence is located.
   – If there is a shortage of related medical institution beds, notify the public health center of the place where you live and check the applicable city / province.
     ❖ If the jurisdiction of the place of residence is a management entity or a movement between cities and provinces is required, it is coordinated.

2. <u>Home Isolation</u> The public health center manager should monitor and record symptoms twice a day
   – If symptoms arise or worsen during the isolation period, the public health center should report to the municipal patient management team (hospital assignment team), which assigns hospital beds as necessary

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[If hospital care/treatment is needed or expected for the self-isolating person]

○ Maintain home isolation if not urgent
○ If urgent:
   – Ensure the monitoring manager is contacted
   – The manager should wear personal protective equipment as necessary and 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
     * Ensure the self-isolating person wears a mask and check symptoms such as body temperature before leaving home isolation, guiding the person throughout the 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

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3. **Epidemiological Investigation**

A. **Case study**
○ A case study must be conducted by the health center that first identifies a confirmed case, promptly reporting the case to the municipal authority and the Korea Centers for Disease Control and Prevention: "Integrated System for Disease and Public Health Management (http://is.cdc.go.kr) -- Epidemiological Investigation -- Class 1 Infectious Disease Management -- Novel Infectious Syndrome -- Basic Epidemiological Survey (Confirmed Cases)"
> ➢ [Form 5] COVID-19 Basic Epidemiological Survey (Confirmed Cases)

❖ After entering and/or updating epidemiological information in the "COVID-19 Confirmed Cases List (Separate Form)," notify the municipal database administrator daily by 17:00 (Centers for Disease Control and Prevention/Central Disease Control and Prevention Headquarters kcdceid@korea.kr)

B. **Close contacts investigation and management (Contact tracing)**
○ <u>Investigating Agency</u> The health center that first identifies* a confirmed case must conduct an investigation under the direction of the Municipality's Immediate Response Task Force
* The health center that initially identifies the confirmed case will conduct the investigation, but if two or more cities and/or municipalities participate in the investigation, response or management, the health center must share the list of close contacts and relevant information with the dedicated personnel from the cities and/or municipalities involved

○ The public health center that first identifies a confirmed case should register the close contacts list in the system, and will notify via phone and transfer the case to the public health center within the residential jurisdiction.
"Integrated System for Disease and Public Health Management (http://is.cdc.go.kr) -- Case/Patient Management -- Contact Tracing"

> ➢ [Form 9] COVID-19 Close Contacts Survey Form

<Precautions upon registering individuals to the Integrated System for Disease and Public Health Management>

○ For each case, add the name of the confirmed case with whom the individual had contact, as well as a description of the context

○ When transferring an individual to another health center, the transfer date should be set to one day after the day of transfer. The assigned health center must be the public health center in the jurisdiction of the exposed person's residence.

○ Issue a quarantine notice from the Integrated System for Disease and Public Health Management

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○ **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 self-isolation 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 Immediate Response Task Force should conduct an epidemiological investigation and provide support

❖ Priority is given to hospitalized patients or health workers

- A detailed investigation of travel and movement history should be performed if deemed necessary by the epidemic control officer

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 the source of infection: domestic and international travel history of the 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 the quarantine location of the confirmed case differs from the location of close contacts

○ Emergency measures for close contacts and delivery of preparedness checklist

- Quickly identify and immediately isolate 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 the environment in community facilities, and announce the 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: Systematization is needed to enable

a cooperative, integrated response with relevant departments

○ Epidemiological investigation

- **Advance Notice** The investigator must inform the 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 the 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 channel of a confirmed case>

○ Obtain information on the patient's activities beginning 14 days prior to the date of onset of symptoms

○ Investigate overseas 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 the investigation range for close contacts from one day prior to the date of symptoms onset of the confirmed patient

❖ In case of asymptomatic infection, set the range from one day prior to the test sample collection date

○ The Municipal Immediate Response Task Force should determine the investigation range for close contacts based on symptoms of the confirmed case, whether masks were worn, lengths of stay during travels, exposure condition and duration (within 14 days of the last contact with the confirmed case)s

❖ Transmissions typically occur in situations where respiratory droplets are released, including cohabitation, eating together, worship, lectures, karaoke, and meetings. Therefore, a prompt epidemiological investigation and self-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 the results of the investigation, conduct a secondary situational assessment to review the date of symptom occurrence, and reset the exposure and contact range

【 **Examples in the range of contact** 】 **(Based on WHO guidelines as of 2/27)**

1) A person who has directly diagnosed or cared for confirmed patients without appropriate personal protective equipment (Appendix 9)

2) A person who closely stayed with confirmed patients in the same place (family, workplace, classroom, etc.)

3) Person who took the same transportation as confirmed persons and were at a close proximity (2 meters*) within 14 days after confirmed patients showed symptoms * However, proximity distance suggested by WHO is 1 meter

<Example>

① A person who stayed within 2-meter distance to confirmed patients in the hospital room or waiting room for a substantial amount of time, without wearing appropriate protective equipment (ie. medical staff, home health aids, etc.)

* If a person is considered as non-exposed to a confirmed patient due to **correctly wearing a mask** (covering both nose and mouth, tightly pressing it around the nose), **health education is offered and passive monitoring is performed.**

② A person who stayed with the confirmed patient for a considerable amount of time within the same space based on a daily routine of the confirmed patient (e.g. colleagues at work, classmates, etc.)

③ A person who used the same means of transportation with confirmed patients

* The "same means of transportation" applies to the passengers who sat three rows front and rear from the confirmed patient's seat on an airplane and the flight attendant who is in charge of the section for the confirmed patient

④ A person who has been directly exposed to a specimen or infectious secretion of a confirmed patient without wearing appropriate protective equipment. (e.g., sample collection, laboratory diagnosis, patient's respiratory secretions, cough, etc.)

⑤ A person who had hand-to-hand contact within 2 meters or had a face-to-face conversation with a confirmed patient without wearing appropriate protective equipment.

【 **Tracking movements (travel routes, etc.) when evaluating confirmed patients and close contacts** 】

◦ Line of movement is primarily identified from an interview with a patient for a prompt preventive measure and investigations of GPS * , DUR ** , card usage ** performed only when necessary based on the judgment of a quarantine officer of the city or state.

* GPS inquiry can be requested from municipalities to police stations (Infectious Disease Control and Prevention Act) Article 76-2 (2))

** Inquiry of DUR and card usage history is requested by the city / provincial quarantine officer through the official or equivalent computerized system of the Centers for Disease Control and Prevention.

【 **Scope of disclosure of movements (travel routes, etc.) when investigating confirmed patient contacts** 】

◦ (Subject to disclosure) Patients with infectious diseases under 「Prevention of infectious diseases」 Article 2 (13) *

* A person who has been confirmed with the case showing symptoms due to infectious disease pathogen invaded the body.

◦ (Scope of disclosure) Relevant information for prevention and management of infectious diseases such as epidemiological necessity

- (Disclosure period) From * one day before symptoms to quarantine
* Changed "Date of occurrence → 1 day before" from the 5th edition of COVID-19 response guideline (2.7)

- (Place) The place where the close contacts* would have occurred due to confirmed patients, enough to be concerned about infection based on its time and space (Including transportation)
* The range of close contact persons is determined according to the results of epidemiological investigation, based on a comprehensive consideration of the symptoms of the confirmed patient, whether or not he or she

wore a mask, length of stay, exposure situation and the time.

[Reference] Work standards for medical staff who have had contact with COVID-19 patients and suspected patients

Epidemiological risk factors	Level of Exposure danger	Recommended monitoring*	Work limit for asymptomatic medical staff
① A medical staff performs procedures without the recommended protective equipment (unprotected eyes, nose, or mouth)[1] or is present in the same space where such procedures are taking place. → Procedures that may potentially produce more concentrated respiratory droplets or aerosols (e.g. cardiopulmonary resuscitation, intubation, extubation, bronchoscopy, nebulizer therapy, sputum induction)	High	By the agency	14 days suspension from work since the last contact date
② A medical staff performs aerosolizing procedures without gown and gloves, or is present in the same space where such procedures are taking place. → Procedures that may potentially produce more concentrated respiratory droplets or aerosols (e.g. cardiopulmonary resuscitation, intubation, extubation, bronchoscopy, nebulizer therapy, sputum induction) Note: If the practitioner is not protected with eyes, nose or mouth during the aerosolizing procedures, it is classified as ①.	Medium	By the agency	14 days suspension from work since the last contact date
③ A medical staff fails to wear personal protective equipment (unprotected eyes, nose or mouth)[1] → Has close contact with non-masked patients Note: Applicable to those who do not protect the eyes while having close contact with patients who fail to wear a mask.	Medium	By the agency	14 days suspension from work since the last contact date
④ A medical staff fails to wear personal protective equipment (unprotected eyes, nose or mouth)[1] → Has close contact with patients wearing a mask	Medium	By the agency	14 days suspension from work since the last contact date
⑤ A medical staff fails to wear gloves and does not perform immediate hand hygiene → Has direct contact with the patient's secretions / feces Note: It is classified as low risk if hand hygiene is performed immediately after contact.	Medium	By the agency	14 days suspension from work since the last contact date
⑥ A medical staff wears a mask → Has close contact with the patient wearing the mask	Low	Self monitoring	-
⑦ A medical staff wears all recommended protective equipment (e.g respirators, eye protection, gloves and gowns) → Has close contact with or handles the patient's secretions / feces	Low	Self monitoring	-
⑧ A medical staff fails to wear the recommended protective equipment → Has simple interaction❖ with the patient ❖ Entering the patient's hospital room without contact, etc.	Low	Self monitoring	-

⑨ A medical staff has no direct contact with the patient, nor the patient's secretions/feces, and does not enter the patient's room.	None	-	-

* Monitoring up to 14 days after the last potential exposure

1) When PPE is not worn on the designated body part

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 medical institutions (2020/2/22)

3) Action plan

○ Risk assessment and management method

- City / provincial quarantine officers or epidemiologists evaluate exposure, facilities/environment, operational personnel, and then establish a management plan based on a field investigation.

· (Risk assessment) Exposure period, scope, level

· (Contact tracing) Age, underlying conditions, level of independence/self-care capacity, etc.

· (Evaluation of facilities) Available space for placing confirmed cases and close contacts (contactees)

· (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, improvement 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 self-quarantine kits, etc.

* Depending on progress of the investigation, should precautionary measures be necessary, the first health center to recognize the close contact will guide the investigation

➢ **[Form 4] Quarantine Notice**

- The municipal data manager reports to the Integrated System for Disease and Public Health Management (http://is.cdc.go.kr) until the case is concluded.

- The municipal rapid response team concludes its activities when the close contacts' incubation period after contact with the confirmed case has elapsed and no further confirmed cases arise among the close contacts

○ If there is a possibility of additional patients
- Applicable situation: If hospitalized patients develop symptoms, if any member in congregate setting facilities become "confirmed patients," or if there has been extensive-long term exposure* to anyone during the incubation period
* Such as visiting multiple medical institutions and/or attending crowded events

- **Additional measures for each situation (summary)**

Situation	Facility and environment management	Contact management	Manpower management
Hospital	・Consider temporarily closing Hospital ・ Environmental inspection ・Disinfect premises and reopen	・ 1 room per patient or attempt cohort isolation ・ Medical staff self-quarantine	・ Alternative workforce group
Congregate Setting Facility	・ Consider temporarily closing Facilities ・ Environmental inspection ・Disinfect premises and	・ Severe cases are transferred to a hospital (When hospital transfer is difficult) - Isolate individual or attempt	・ Alternative workforce group

	reopen	cohort isolation ・Contain all contactees (If not possible) - Isolate individual or attempt cohort isolation	
Broad Exposure	・ Evaluation of exposure by facility ・ Control and disinfection	・ Confirm and manage contact(contactees), prepare an organized system for departments to respond to (Police, Fire department, etc.)	-

* Decisions should be made after the evaluation of the situation by the metropolitan / province epidemiological investigator

◆ Coronavirus Infectious Diseases-19 Refers to guidelines for management of medical institutions with confirmed patients (20.3.4.20)
  ➢ **[Appendix 8] Quarantine of the same group (cohort quarantine)**

- Determining the scope and method of quarantine for congregate setting facilities
  ● **(Containment scope)** Evaluate the risk of contamination, (confirmed patient's condition, their activity patterns, movements, possible contactees* etc.) and quarantine any related area (Floor, living area , dormitory)

    * Criteria: Check clinical status of confirmed patients (respiratory symptoms such as cough and presence of pneumonia), determine whether or not to wear a mask, and observe characteristics of residence space (air conditioning, ventilation, structural division, etc.), record residence time, space usage and transportation used (elevators, etc.)

  ● **(How to carry out isolation)** Determined accordingly to the characteristics of confirmed patient's occupied space, movements, and facility's capability: (Individual quarantine, cohort area quarantine)

- Determining the closure of congregate setting 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 contactees into a hospital setting or to have as outpatients)
  - If it is difficult to transport a confirmed patient from a congregate setting facility to a hospital

    · Establish a management plan with an infection control expert

    · The patient is relocated from the common living area to a separate (independent) living area

(quarters) and quarantined in an one-person room or isolated as a cohort

- Managing contact within the congregate setting facilities

    · Self-quarantine when independent living is possible, if not, isolated within the facility

    · A single room per person is default. Other methods to minimize infection such as cohort isolation is applicable depending on the facility circumstances

    · Monitor fever, respiratory symptoms, diarrhea symptoms (2 times / day)

- Quarantine release and resumption of operation for congregate setting facilities

    · (Decision to release from quarantine) There is no additional occurrence of confirmed patients, and the quarantine period for all contacts has elapsed.

    · (Operation resumed) City/ Province COVID Immediate Response Task Force confirms the infection control plans and actions and decides.

4) Status report

○ City/ Province COVID Immediate Response Task Force creates and sends a daily report of investigation / management result of the cases of congregate setting facilities or medical institution to Center for Disease Control and Prevention (kcdceid@korea.kr)

➢ **[Form 10] Daily Situation Report of Epidemiological Investigation by City / Province COVID Immediate Response Task Force**

5) Cooperative work

○ Provincial Regional Disease Control and Prevention Headquarters Support Team

- (Basic direction) Based on the results of the site assessment of the City/ Province COVID Immediate Response Task Force, regional Disaster Safety Countermeasures Headquarters forms support team for each sector *

 * Quarantine team, medical support team, life support team, field control team

- Management of unusual matters including sharing results on progress until the end of the situation

○ Major measures for the Regional Disaster Safety Countermeasures Headquarters

Division	Role

Facility and environment management	· Movement restrictions, closing certain places, disinfecting the environment, etc. * Disinfection of Congregate Setting and Public Facilities used by Confirmed Patients (2-1 Edition)
Close contact management	· Life support and active monitoring of~~on~~ the quarantined personnel · Transfer to Screening Clinic when symptoms develop.
Waste management	· Patient-used linen, medical tools, infectious waste, etc. * Be careful not to have direct physical contact when handling waste
Etc.	· Maintain a cooperative system with related organizations (fire fighting, police, medical institutions, etc.)

> **< Translocation of inpatients due to closure of medical institution >**
>
> Regional Disease Control and Prevention Unit Headquarters support team secures and supports resources for relocating patients
>
> ① Secure temporary quarantine hospital
>
> ② Check the necessity for facility operation (beds, medical equipment, medicines, medical supplies, etc.)
>
> ③ Prepare materials necessary for life in general, such as water supply and meal
>
> ④ Operating personnel (medical staff and medical assistants, etc.)
>
> ⑤ Facility control, guardian and visitor management

6) Data management

○ Basic principles

- (Basic directions) The epidemiologist initially participated in the investigation and the City/Province close-contact DB administrator continues to verify data until the patient is released from monitoring.

- (Designate DB administrator) The quarantine officer designates city/county/province DB administrator and assigns tasks.

- (Connection management) DB administrator continues liaison with the city/if the situation until the Follow up while maintaining

○ On- site response stages

- (Task assignment) The quarantine officer assigns personnel for City/ county/ district "Status report," "Contact DB management"

* In the case of two or more cities and provinces involved, each city and province's quarantine officer assigns a person in each city and province.

- (Task relegation) The quarantine officer ensures that "daily situation report" and "contact DB" are "managed" by the local governments and "reported" centrally with the same criteria until the situation resolves.

4. Release from quarantine

A. Criteria for releasing confirmed patients from quarantine

[Criteria for releasing confirmed symptomatic patients from quarantine]

○ Criteria for release from quarantine must meet clinical and examination criteria.

    ① (Clinical criteria) Not taking antipyretics, no fever, improvement of clinical symptoms

    ② (Examination criteria) Two negative results of PCR tests taken at a 24 hour interval

○ If clinical criteria are met, the patient can be discharged and be in self-quarantine or facility quarantine, even if examination criteria have not been met. To be released from quarantine, examination criteria must be met.

    ① (Examination criteria) Two negative results of PCR tests taken at a 24 hour interval

[Criteria for releasing confirmed asymptomatic patients from quarantine]

○ Patients can be released from quarantine when the following examination criteria are met.

    ① Two negative results of PCR tests taken at a 24 hour interval, 7 days after the patient was confirmed of infectious disease

    ② If the result of the PCR test, taken 7 days after the patient was confirmed of infectious disease, is positive, medical professionals will determine the future testing time (10 days after, 14 days after, etc.). The patient can be released from quarantine after two negative results of PCR tests taken at a 24 hour interval.

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1) Discharge and management of inpatients in quarantine

○ The public health center that has jurisdiction over the patient's residential area is responsible for managing the patient's condition and discharge schedule.

○ **(Medical institution)** When the patient is discharged, they must be notified to the local public health center.

○ **(Measures for discharge and quarantine)**

    ① **If the patient is released from quarantine**: Return home, etc. with a possible transportation method. The public health center in jurisdiction should provide health education and have them follow instructions for 2 weeks.

➢ **Ⅲ. Case definition and management method → 3. Management (monitoring) method → b. Refer health education p10**

② **If the patient needs to maintain quarantine after discharge**: Use their own car, walk, or use an ambulance*(fire station, public health center) to go home or to a facility(wear a medical grade mask)

○ **(Public health center)** Enter hospital discharge and post-discharge quarantine information to the Disease Health Management System.

- Reissue notice for hospital treatment (self or facility) in case of self- or facility quarantine. Do active monitoring (quarantine notice, distribution of information/instructions, and education)

❖ Report of discharge and self-quarantine: Health and Disease Integrated Management System(http://is.cdc.go.kr) - Patient management - Patient management - Patient information management (currently updating the system; completion will be notified on the bulletin board of the Health and Disease Integrated Management System)

❖ In case of confirmed patients - 2. Confirmed patient quarantine - C. In case where hospital quarantine is unnecessary - refer to the management method

➢ **[Form 6] COVID-19 case management report (confirmed cases)**

➢ **[Appendix 5] Guidelines for self-quarantined patients**

❖ Based on clinical assessment, the attending doctor may discharge a quarantined patient in the negative pressure room to a designated hospitals, residential treatment center, or home for self-quarantine.

○ If a test is necessary while quarantined at the residential treatment center or self-quarantined at home

- **(Residential jurisdiction public health center - for self-quarantined patients)** Transfer patient to a designated triage center where specimen testing is possible, and request specimen collection and laboratory testing

- **(Residential treatment center)** Appropriate medical staff at the facility will collect and test specimen

→ If two PCR tests conducted at 24 hour intervals are both negative, patients may be released from quarantine. Patients with positive result(s) will remain in quarantine.

2) Quarantine Release

○ The Residential Jurisdiction Public Health Center should check on the patient's condition

○ **(Medical institution / residential treatment center)** Notify the Residential Jurisdiction Public Health Center when releasing patients from quarantine

- Give precautions* to patients who have been released from quarantine 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.

○ **(Self-quarantine)** The Residential Jurisdiction Public Health Center should inform patients of their quarantine release

-Inform patients that they should immediately contact the Public Health Center in case their symptoms worsen

-Based on [Appendix 6 COVID-19 Precautions], health education should be provided to patients and their families.

○ **(Public health center)** Report quarantine release to the metropolitan and provincial epidemiologists and enter the quarantine release information into the Health and Disease Integrated Management System.

B. Close contact quarantine release criteria

○ Quarantine release

- If close contacts show no signs of symptoms during the 14-day self-quarantine period from the last date of contact with a confirmed patient or from the date the confirmed patient was released from quarantine, the **Residential jurisdiction public health center** should inform them on the 15th day that they are released from quarantine and thus monitoring ends

 * Active monitoring and self-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, medical institution workers (including caregivers) and families must get tested on the 13th day from the last date of contact with a confirmed patient and receive negative results prior to being released on the 15th day*

 * (Example) Release from quarantine is (04.16.), which is the day after 14 days have passed from the last date of contact (04.01.) (Travelling is now possible)

- Criteria for releasing quarantine for confirmed patients' families

 · (Families of confirmed patients' who are quarantined in hospitals/facilities) After 14 days have passed since the last contact with the confirmed patient (date that they are quarantined at the hospital/facilities)

 · (Family living with confirmed patients in home isolation) 14 days from the date of release from isolation of the confirmed patient

- (Notification of release from monitoring) Notification from local public health center in the jurisdiction of the contacted's residence and release of monitoring on the Health and Disease Integrated Management System

5. Prevention and Control Measures

A. Prevention and 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

○ Measures for places where there are confirmed patients or places that are recognized 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 place
- Other necessary measures to block traffic
○ Suspension of healthcare facilities
○ 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; Alternatively, burning or disposing the objects
○ Order 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 prevention and control measures according to relevant regulations

- When distributing disinfection orders, relevant public officials must specify the execution time and the end time of disinfection.
❖ [Form 11] Prevention and control measures form, [Form 12] Disinfection certificate

IV. Response Guidelines for Bed assignment and transfers

The following contents should be applied flexibly according to local conditions.

1. Establishing a bed assignment 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 for assessing case severity of confirmed cases and rapidly reporting high-risk cases (the elderly or those with chronic health conditions).

○ **(Identification of resources)** Municipal patient management teams should identify the availability of negative pressure rooms, single rooms, **ICU beds and equipments**** for severely and critically ill patients, as well as staff availability across both **public and private hospitals***.
- Concurrently, there should be efforts to establish a prearranged plan in order to immediately respond to future demand

  * In addition to the nationally designated isolation beds, the available capacity across designated infectious disease treatment hospitals, regional medical institutions, national hospitals, police hospitals, veterans hospitals, military hospitals, and local medical centers has to be identified

  ** Number of institutions with ECMO (extracorporeal membrane oxygen supply), CRRT (continuous renal replacement therapy), etc. and number of available devices in each institution

  ❖ In the event that a soldier (active military personnel, etc.) is confirmed or suspected to have infection, contact the Armed Forces Medical Command (1688-5119, 031-725-5119) to assign and isolate the patient at the **National Military Capital Hospital** (Military Designated isolation bed) 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 patients from general inpatients, operate wards independently.
* (Air-conditioning) Air supply should be sourced 100% from outside air, instead of a mixed circulation method combining outside air (30%) and inside air (70%)

○ **(Patients awaiting hospitalization)** Assess risk level based on the level of consciousness, age, and underlying health conditions (chronic diseases, organ transplant history, etc.), **continuously monitoring*** until admission to hospital unit for patients with moderate symptoms.
* Local governments must establish and operate a 24-hour consultation system

3. Patient Transportation

○ **(Transportation measures)**
- Transfer patient to an assigned hospital bed

- During the transfer, suspected (confirmed) patient should maintain wearing **surgical mask**

- Transfer personnel should wear appropriate **personal protective equipment***

* Transfer personnel: full body protective clothing (including overshoes), KF94-equivalent respiratory protection device, disposable gloves, goggles (or face shields).

➢ **[Appendix 9] Reference on the use of personal protective equipment related to COVID-19**
- Ambulance drivers must wear personal protective equipment* (KF94-equivalent respiratory protection device 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 patients, drivers must wear full body protective clothing (including overshoes), KF94-equivalent respiratory protection device, and disposable gloves (wear goggles or face shields if necessary).

4. Transfer of patients

○ Procedures for transferring severely ill patients between municipalities
i. Applicable healthcare facility (doctor in charge) should request transfers to the Transfer Support Team at the National Medical Center (1800-3323)

ii. The Transfer Support Team, in consultation with the requesting healthcare facility, will determine transfer eligibility, and the healthcare facility will later report the decision to the municipal government

○ Message Notes
- Transfer request may be dismissed for cases determined by medical staff as mild
- Prior to requesting transfers with the Transfer Support Team, municipal patient management teams and requesting healthcare facilities must make due effort to accommodate patients within the municipality

○ Requirements for cooperation between municipalities
- 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 constantly re-assigning patients under recovery or patients with mild symptoms to appropriate wards or designated hospitals for

> infectious diseases

○ Records required for transfer requests (mandatory): i. Patient status (case severity, age, underlying health conditions, history of dialysis, cancer, mental illness, etc.), ii. Patient location (name of healthcare facility, etc.), iii. Contact information of medical staff member available for consultation regarding patient condition

<Inter-Municipal Transfer System for Severe Cases>
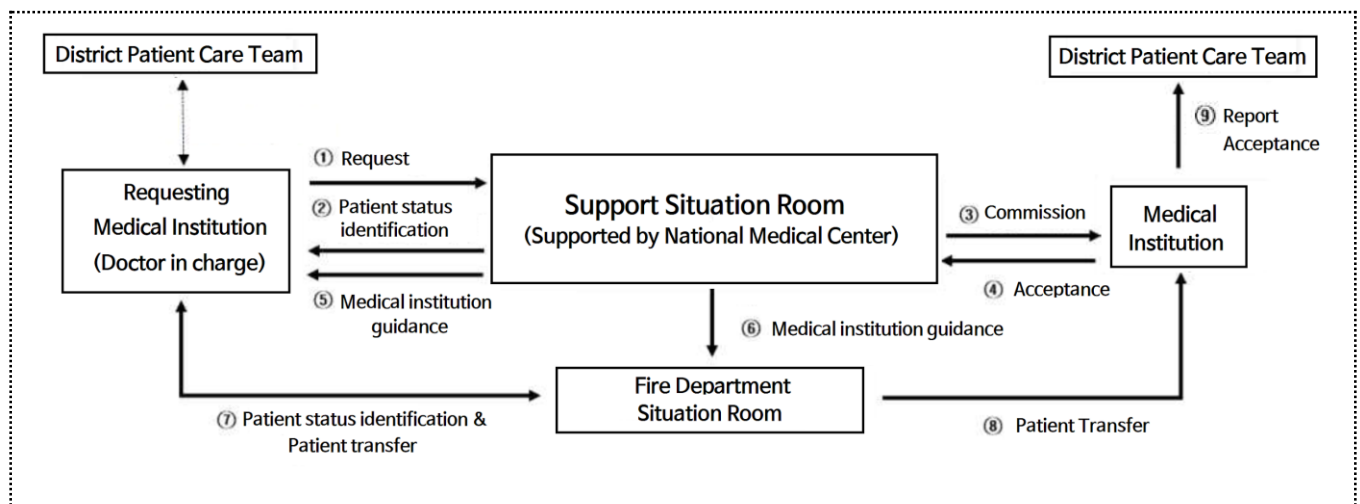
○ Other Messages

1. Materials * sent to the receiving institution must be delivered in a ziplock bag to prevent further infection.
   * Medical records, information such as CT / X-ray (CD, etc.)

2. Transportation details (departure time etc.) * must be shared with Transfer Support Team upon departure.
   * Contact information of vehicle operator or accompanying personnel, license or qualification information of accompanying personnel, vehicle number

3. Transfer should be carried out using an infection-controlled vehicle such as an ambulance
4. Medical staff must accompany the patient; receiving institution must be contacted if the patient's conditions worsens during the transfer
   (Advance preparation for urgent situations such as cardiac arrest or ECMO)

V. Response Guidelines for Deceased Persons

1. Purpose

- ○ Prevent disease spread and social unrest through efficient and prompt protocols for handling corpses 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 the dignity of the deceased and respecting the wishes of the family of the deceased
- ○ As a principle, bodies shall be disposed through cremation so as to prevent the spread of infection. With consent of the family, bodies shall be cremated *prior* to the funeral.

[Sample processes for cremation and funeral ceremony]

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1. Healthcare Facility (Disposal and casketing of corpse) → Cremation Facility (Cremation) → Funeral Hall (Funeral Ceremony)

2. Medical Facility (Disposal and casketing of corpse) → Funeral Hall (Placement in mortuary) → Cremation Facility (Cremation) → Funeral hall (Funeral ceremony)

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3. Scope and responsibilities

- ○ Scope
  Handling of deceased bodies and facilitation of funerals for deceased persons in cases confirmed by medical facilities and etc. for COVID-19 infection

- ○ Role
  Central Disaster Management Headquarters, Funeral Support Center, metropolitan and provincial governments, medical 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 Center Disaster Management Headquarters

- ○ Metropolitan and provincial governments / city, county, district offices
  Provide guidance on funeral process to the family of the deceased (guidance)*, provide personal protective equipment** (family of the deceased, body disposal staff), arrange vehicle

and personnel in cases requiring transfer to cremation facilities, disinfection of facilities and equipment (transfer vehicle, cremation facility, funeral hall, etc.), and other measures as appropriate
* Explain process elaborated in Article 20-2 of Infectious Disease Control and Prevention Act (Cremation)

*Protective masks rated KF94, N95 or higher, disposable long-sleeved waterproof gown, disposable gloves, goggles or face shield, boots, etc.

○ (Medical facility)
Report case status to corresponding agencies (Central Disaster Management Headquarters, municipal and provincial government, funeral hall, etc.), dispose of the deceased in accordance with Infectious Disease Control and Prevention Act Corpse treatment law

○ (Funeral hall)
Support the dispose of the deceased, support carrying coffins 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 each new reservation for cremation.

4. Step-by-step measures

A. Imminent death

○ **(Medical institution)** If the patient's condition becomes unstable, immediately notify the family and confirm whether to arrange a visit.
- Upon request, family members may visit a patient in the hospital ward with personal protective equipment worn.

- Inform the patient's family of final disposition procedures for the prevention of infections and ask consent for such procedures.

- Notify patient's status to the public health centers under jurisdiction of medical institutions.

○ **(Central disaster management headquarters)** Notify status to relevant agencies, arrange support for funeral processes.
- Maintain coordination among funeral support centers, local governments, cremation facilities, funeral halls, etc.

- Local governments inform a patient's family of suggested protocols for funerals, according to Article 20-2 of the Infectious Disease Control and Prevention Act (Cremation).

B. Death

○ (**Medical facility**) Notify status to public health centers under jurisdiction of medical institutions; file report of patient death; inform the cause of death to the patient's family and settle the time of final disposition

➢ **[Form 2] Report of death (post-mortem Inspection) relating to infectious disease**

- Upon request, allow families of the deceased to examine the corpse, wearing personal protective equipment (families may also examine through a remote connection to a closed-circuit camera of the quarantine ward)

- If the deceased was a confirmed patient, a medical personnel in personal protective equipment disposes the corpse in accordance with [Appendix 10. COVID-19 Guidelines for the Management of Funeral Processes and Disposal of Corpses] at a time agreed by the family of the deceased

- If the deceased was a suspected patient or had shown symptoms and was subject to further investigation, the body remains in the quarantine ward until test results are provided; alternatively, handle as per the protocol for confirmed patients ⇒ **If test results are positive, identify as confirmed patient, if negative, handle as per usual protocols.**

* Even if the patient has died from unrelated causes, if there is reason to suspect infection, medical facilities are recommended to follow protocols for handling corpses of confirmed patients.

○ (Funeral Hall) Facilitate disposal and casketing of body
-The body should be casketed without removing the sealed enclosure; the lid of the casket should be sealed shut.

○ (Central Disaster Management Headquarters) Request cooperation of metropolitan and provincial governments, cremation facilities, funeral halls, etc.
- (Funeral Support Center) Facilitate reservations for use of cremation facilities, provide guidelines for funeral procedures and use of funerary facilities

○ (Metropolitan or Provincial Governments / City, County, or District Offices) Advise families of the patient to adhere to procedures elaborated in Article 20-2 of the Infectious Disease Control and Prevention Act (Cremation), make arrangements for the disinfection of facilities and transfer vehicles, provide personal protective equipment where necessary, deliberate funeral and cremation procedures with the family of the deceased, assist in the reservation of cremation facilities
- Identify family members to attend the cremation procedure, arrange personnel and vehicle for transfer of the body

C. Cremation and funeral

○ (Medical facility) Release the sealed body from the hospital ward at a time agreed by the family of the deceased

○ (Funeral hall) If the released body requires transfer to crematory facility, support the transfer process
- Upon completion of the cremation process, carry out the funeral process as agreed by the family of the deceased

*Depending on the situation, the body can be placed in the mortuary of the funeral hall before transfer to a crematory facility (if mortuary was used, post-hoc disinfection is required)

○ (Metropolitan or Provincial Governments / City, County, or District Offices) Deploy personnel and vehicle for transfer of the body; provide personal protective equipment to accompanying family members, transfer personnel, and cremation personnel in cases of cremation; disinfect transfer vehicles, crematory facilities, etc.
- Following completion of funerary process, report final disposition to Central Disaster Management Headquarters

5. Administrative matters

○ (Metropolitan or Provincial Governments / City, County, or District Offices) Maintain liaison with the 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 the funeral hall attached to the medical facility is available, the funeral shall be handled therein. If unavailable, the funeral shall be held at a funeral hall designated for use in disaster response.

- Provide personal protective equipment; apply stringent enforcement of disinfection protocols

- Confirm case progression from cremation to the conclusion of the funeral, report outcomes

○ (Operation of Funeral Support Team) Funeral Support Team operates at all times: 24 hours a day
- Construct and manage an integrated system in coordination with relevant agencies (Central Disaster Management Headquarters, municipal and provincial governments, etc.), disseminate status reports

- Support reservations for cremation facilities

○ (Support for funeral costs) Establish plans for reimbursing funeral costs of the deceased with restricted means, according to Article 20-2 of the Infectious Disease Control and Prevention Act
* Specific terms and procedures for the reimbursement will be provided separately after reserve funds are procured; reimbursement requests for funerary costs are to be registered at the corresponding metropolitan or provincial government office

❖ [Appendix 10] Guidelines for management of funerary process and disposal of corpses

VI. Response Guidelines for Laboratory testing

These guidelines only apply to the following:

① Collection and testing of specimens from patients under investigation (PUI) or suspected patients who meet the criteria

② Collection and testing of specimens from asymptomatic healthcare workers (including caregivers) who are confirmed patients or have come in contact with confirmed patients for the purpose of quarantine release

1. Administrative matters

A. Specimen collection site
○ **(Collection Site)** Isolated Specimen Collection Site within the COVID-19 Screening Center or within the healthcare facility medical facility that is separated from other areas in the facility
  * However, in the case of home isolation, the specimen collection site may vary based on the location of home isolation

B. Specimen type and packaging
○ **(Type of specimen)** Upper respiratory tract specimen (oropharyngeal and nasopharyngeal swab). If patient presents with cough or sputum, also collect lower respiratory tract specimens.
  - Patient with mild symptoms : request testing of upper respiratory tract specimens only

No.	Type of Specimen		Container/Volume	Remarks
1	Upper Respiratory Tract	·oropharyngeal ·nasopharyngeal	·(Container) Simultaneous collection of oropharyngeal and nasopharyngeal specimens in one VTM batch	· Specimen must be collected at an Isolated Specimen Collection Site
2	Lower Respiratory Tract	·Sputum	·(Container) 50ml sterile tube ·(Volume) 30ml or more should be obtained	·Collect 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 an isolated area with good external ventilation in order 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 patients: collect additional specimens (blood) after the initial positive testing result and before the release from quarantine. (If possible, also collect fecal and urine specimens)

- Collect 5~10ml (1ml for infant patients) of blood specimens in SST. Collect fecal and urine specimens in sterilized containers.

❖ Source: CDC, 2019 Novel Coronavirus, Wuhan, China, Guidelines for Clinical Specimens, 2020.1.17. ver.

- **(Upper respiratory tract specimen)** Collect nasopharyngeal and oropharyngeal specimens **separately**, and place and transport both specimens in a single VTM batch together with the filled out [Form 13] Specimen 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 collect oropharyngeal swab>   **<How to collect nasopharyngeal swab>**
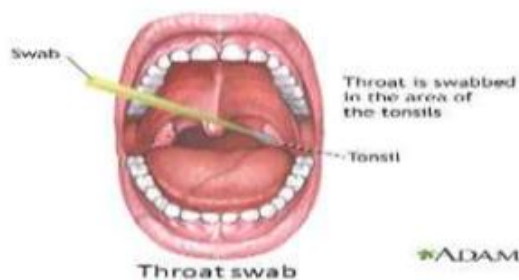
Source: ADAM, Influenza, Pandemic Influenza Division (TEPIK)

<How to collect   the upper respiratory tract specimen>

• Storage of specimen containers

- Insert cotton swab with specimen into the bottle containing transport medium, and soak the collected cotton swab in the transport medium. Break the cotton swab at the bottle cap and close the lid tightly
- When breaking, handle with caution to not contaminate the inside due to contact
- Specimen containers are immediately stored in the refrigerator (4 ℃)

• After collecting specimen, be sure to record the patient's identification information (name, sex, age) and collection date on the specimen container

• Request testing of specimen with completed [Form 13] Specimen Testing Request Form (maintain specimen at 4 ℃)
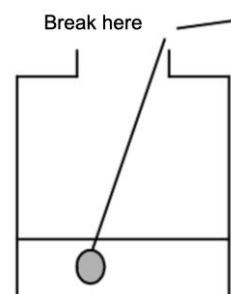
- **(Lower respiratory tract specimen)** Patients are instructed to rinse their mouths with clean water and cough deeply into a sterile (asceptic) container (e.g. sputum bucket) to collect sputum without saliva.

  * Be careful 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 ℃ maintenance)

<How to collect sputum>

○ Specimen packaging

- Disinfect the primary container containing the collected specimen with 70% ethanol and label it.

* Display information such as hospital name, specimen type, collection date, patient name, sex, and age

- Wrap the disinfected primary container with an absorbent (e.g. paper towel) and place it inside a secondary container

- Tightly close the lid of the secondary container and place it inside a tertiary container.

- Place the [Form 13] Specimen Test Request Form between the tertiary container's lid and then close the container
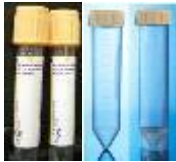
- On the tertiary transport container, write the receiver, sender, and emergency contact information

- Place the tertiary transport container into an ice box, and then insert the refrigerant (ice pack)

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into 4 sides around the container.

- Mark the outside of the 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.

Table. 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 protection, disposable gloves, disposable long sleeve gown or full body protective clothing, goggles or face shield (if necessary, also wear impervious disposable apron)** and to disinfect oneself after the collection.
➢ **[Appendix 9] Reference on the use of personal protective equipment related to COVID-19**

2. Inspection request

○ (Request method) Fill out the Specimen test requisition form and send it with the specimen.
➢ **[Form 13] Specimen test requisition form**

○ (Testing request by institution)
- (Medical Screening Clinics) Clinics capable of testing shall carry out the tests themselves. Otherwise, send to an entrusted testing facility.

- (Public Health Center Screening Clinics) Request an entrusted testing facility for inspection.

* If the entrusted testing facility cannot administer tests, request the Research Institute of Public Health and Environment.

3. Specimen transport

A. Specimen transport management

○ (When private hospitals can test) If on-site testing is possible, sample transportation is unnecessary. If the samples need to be transported to an entrusted testing facility, they must be transported following the procedures of the testing facility

○ (When tested at the Research Institute of Public Health and Environment) The first person who identified the patient should transport the samples to the assigned Research Institute of Public Health and Environment.

* Sample transport personnel must wear KF94 equivalent respiratory protection and gloves and provide information on the type of specimen, collection time, and transfer time. The verified information must be reported to the Research Institute of Public Health and Environment at Centers for Disease Control and Prevention.

B. Storage conditions during sample transport

○ For samples to be used in viral isolation or genetic testing : Transport immediately while maintaining temperature at 4℃

* If it is impossible to transport within 72 hours, store at -80 ℃ and transport using dry ice.

C. Precautions when transporting samples

○ Designate specific personnel for transporting samples

○ Comply with the guidelines for safe transport of infectious substances (the Korea Centers for Disease Control and Prevention)

○ (Selection of transport vehicles and sample placement) Packaged samples are placed and secured in the trunk of a personal self-driving vehicle (or designated vehicles). Prepare personal protective equipment, pollution treatment equipment(spill kit), disinfectant, tripods, etc. in case of emergencies.

○ (Selection of driving route) Designate the shortest distance and safe route and depart after reporting to the person in charge at the transported agency. Only take the predetermined route (required personnel must remain in a stationary vehicle when using the rest area), and abide by the road traffic signals and rules.

4. Conducting tests

A. (Testing institutions) Genetic testing for suspect cases, quarantine release, and other medical patients*

* In the case of a confirmed patient, the attending doctor requests a test to an on-site laboratory or entrusted testing facility depending on the patient's condition

(If confirmation is required due to indeterminate results, the KCDC may be consulted)

B. (Research Institute of Public Health and Environment) **only tests when 1) limited testing is necessary for those who are not medical subjects (or suspected cases) during the epidemiological surveillance, or 2) the test in private hospitals is impossible (such as in overnight emergency).**

* Sample collection should take place at the public health center where the patient was first identified and referred to the assigned Research Institute of Public Health and Environment.

❖ If confirmed positive on a test conducted by an institution, it must be double-checked with the Korea Centers for Disease Control and Prevention. (Once for the very first positive result. The testing institutions may determine positive cases for subsequent results on their own)

❖ In the case of an undetermined result, the testing institution re-examines the remaining sample and determines the final result. (If necessary, the agency can re-collect or re-test sample or refer to the Korea Centers for Disease Control and Prevention.)

5. Reporting test results

A. (Testing Institution) **The testing institution notifies the organization (public health center or medical institution) that has requested the test of suspected patients**
- Public health center or medical institution enters the result from the testing institution into "Health and Disease Integrated Management System (http://is.cdc.go.kr) - Patient Monitoring."
- The medical staff in charge of the public health center or medical institution inform the patient and explain the test results.
  ! However, if the result is positive, the Emergency Management Office, the Korea Centers for Disease Control and Prevention (043-719-7789, 7790) and the public health center that requested the test should be immediately notified by wire.

B. (Research Institute of Public Health and Environment) **The test result is entered into and reported to "Health and Disease Integrated Management System."**
⚠ □ However, if the result is positive, the Emergency Management Office, the Korea Centers for Disease Control and Prevention and the public health center that requested the test should be immediately notified by wire.

➢ **[Appendix 11] Institutions that can test for COVID-19**

VII. Response Guidelines for Disinfection

[Basic directions]

◆ Guide for promptly disinfecting congregate setting or public facilities, or residence spaces used by patients

◆ Guide for selecting appropriate disinfection methods according to the type and condition of the object to inactivate infectious substances

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1. General principles of disinfection

○ **(Disinfection plan)** After identifying the confirmed patient's movement, establish a plan including determining the scope of disinfection and the type of disinfectant.
- Identify the confirmed patient's movement and disinfect accordingly; if the confirmed patient's movement is unidentifiable, set disinfection targets to objects and places that are 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 mounting, handwashing or hand sanitizing methods, monitoring of symptoms such as fever, coughing, and difficulty in breathing after the disinfection

- Staff responsible of disinfection must wear personal protective equipment when cleaning or disinfecting

* Medical grade masks, full body protective clothing or disposable waterproof long sleeves, 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, in the case of cleaning tools that can be reused with washing, sterilize them with an appropriate disinfectant and store them dry.

○ Criteria for resuming use of the space should consider the characteristics of the used disinfectant and the purpose of the space.

2. Preparations before disinfection

○ **(Items to prepare)** Clothes to change into, exclusive containers for medical waste, buckets, disposable cloth/towel, water, disposable gloves, a medical grade mask, disinfectant, a mop, etc.

○ **(Personal protective equipment)** For daily disinfection, wear disposable gloves and a medical grade mask (KF94 equivalent mask). Depending on the amount of contamination, add disposable waterproof long-sleeved gowns, goggles, boots, etc.

○ **(Selecting environmental sterilizer)**
- Must be a disinfectant for the coronavirus approved by the Ministry of Environment for treatment of environmental surfaces or objects. Must follow dosage, usage, and precaution for each.

- Disinfectants suggested by WHO, sodium hypochlorite (aka household bleach such as Clorox), alcohol (70%), quaternary ammonium compound, peroxygen compounds.

3. Precautions for disinfection

○ Wear disposable gloves, disposable waterproof long-sleeved gowns, goggles or face protection, medical grade masks and boots according to the method of donning for personal protective equipment.

○ Do not touch your eyes, nose and mouth during disinfection after wearing personal protective equipment.
* Wear goggles to keep your hands away from your eyes

○ If gloves or masks become dirty or damaged, remove them safely and wear new ones.
* (Recommended procedure) Remove gloves → Wash hands with soap → Remove mask → Wash hands with soap → Wear new mask → Wear new gloves

○ Rub the floor or surface repeatedly with a rag or cloth soaked with disinfectant instead of spraying.

○ The method of spraying disinfectants has uncertain coverage and may promote aerosol production. As such, it should not be applied to floor and surface disinfection.

○ Manufacturer's safety usage method (dilution ratio, contact time, application target, etc.), handling precautions, etc. recommendations must be followed
* Check whether the product is approved by the Ministry of Environment (Green Nuri, http://ecolife.me.go.kr)

○ Do not place disinfectants near flammable materials, do not mix different types disinfectants, and keep disinfectants away from children.

○ When using sodium hypochlorite (household bleach), prepare it by diluting (1000 ppm) immediately before disinfection, wipe the surface with the diluted solution, and let it dry for at least 10 minutes.

○ For surfaces that are not suitable for sodium hypochlorite (for example: metal), use alcohol (70%).

○ Do not store the remaining amount after using the diluent. Discard.

○ Enough ventilation to circulate outside air into the room.

○ Remove organic substances before disinfection so that the disinfection effect is not reduced by residual organic matter such as blood

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

: Remove foreign substances on the surface using disinfectant or disposable paper towels soaked in water, etc. Afterwards do additional 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	5% (50,000 ppm) sodium hypochlorite
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, take off personal protective equipment with caution. Be careful not to contaminate parts of your body or surroundings with infection sources that could be on your personal protective equipment.

○ Follow the instructions for taking off the protective equipment and be careful not to contaminate the surroundings. Immediately after you take off the equipment, discard it in medical waste containers.

○ Wash your hands with soap and water after you take off your personal protective equipment.

○ Discard all used disposable personal protective equipment in a medical waste container, and seal it tightly. Follow the waste disposal procedures.

➢ **[Appendix 12] Safety management and special measures for COVID19 related waste** ('20 .3.2.)

* Reusable goggles can be reused after disinfecting them according to the manufacturer's instructions

○ If you have fever or respiratory symptoms within 14 days of cleaning and disinfection, report to the public health center.

○ **(Criteria for resuming use)** Consider the characteristics of the used disinfectant and the purpose of the space.

- The virus is killed after disinfection, but the criteria for resuming use of the space will depend on the characteristics of each disinfectant because they are so different. Therefore, it is necessary to individually consider the precautions of each disinfectant.

- When using sodium hypochlorite (over 1,000ppm), thoroughly ventilate the space before use. (Use of the space is prohibited until the day after disinfection; we recommend that the space is sufficiently ventilated before use.)

Type	Point of disinfection	Criteria for resume use	Other
Congregate setting and/or public facility that has been used by a patient. Patient transport space (area)	· Upon confirmation that a patient has used a space(area) in the facility	· Resume use of the space based on the characteristics of the disinfectant.	For sodium hypochlorite, high concentration dilution is used. As such, recommend resuming use after sufficient ventilation for about a day after disinfection considering odor etc.
Medical institution (Hospital)	· Immediately implement for environmental surfaces contaminated with blood, body fluids, secretions and feces. · Around the an occupied containment room, at least every day, frequent disinfection for surfaces with frequent hand contact · After the patient is discharged	· Recommend resuming use after ventilating more than 6 times per hour for at least 2 hours after disinfection.	· 「Prevention and management of new Coronavirus Disease (for hospital-level medical institutions) Information ('20 .2.11.)
Medical institution (Clinic level)	· After a COVID-19 suspected patient visiting		· 「Prevention and management of new Coronavirus Disease (for clinic-level medical institutions) Information ('20 .2.11.)
Medical institution (Emergency room)	· After a COVID-19 patient visiting the emergency room	· Recommend resuming use after ventilating more than 6-12 times per hour for at least 4 hours after disinfection.	Coronavirus Disease 2019 Guidance for practices in medical institutions ('20 .2.22.)

5. Disinfection measures

○ **(Legal basis)** 「Infectious Disease Control and Prevention Act」
- Article 47 (preventative measures for infectious disease epidemic)
  * No. 5 ordering disinfection of places contaminated with infectious disease pathogens or other necessary measures

- Article 48 (disinfection measures such as contaminated places)
- Article 49 (precautions of infectious diseases)
  * Article 8 disinfection of facilities or places relevant to public health

  * No. 13 ordering disinfection of other contaminated buildings or other necessary measures

○ **(Disinfection order)** The Minister of Health and Welfare, the city ・ governor or mayor ・ county ・ ward office (Health Center) issues notification of sterilization execution order to management/operator of the contaminated facilities.
  * Specify the facility name, disinfection scope, and disinfection date in detail

➢ **[Form 11] Forms related to quarantine measures**

○ **(Disinfection fulfillment)** The manager/operator of the facility that has been ordered disinfection must perform disinfection following the Infectious Disease Prevention Law [Attached 6, Disinfection Method], No 5. Disinfection Using Disinfectants.
  * The director of the public health center can instruct and supervise disinfection if necessary.

- (Reporting of disinfection plan and results) The personnel doing disinfection will create a plan before disinfection and report the results after disinfection to the manager/operator of the facility that was ordered disinfection.
  * The personnel who did disinfection will issue Form 11. Disinfection Certificate to the manager/operator of the disinfected facility.

○ If the director of the public health center judges that a second disinfection is necessary (for reasons such as the first disinfection did not suffice the disinfection standards) by checking the disinfection certificate, etc., they can order the space to be disinfected again according to the disinfection standards.

➢ **[Form 12] Disinfection certificate**

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

<Forms>

Form 1. Infectious Disease Reporting Form

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

Infectious Disease Reporting Form

❖ Please read the instructions on the back regarding how to fill out and submit this report. In [ ], check (√) 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 their 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)	[ ] Francisella tularensis
	[ ] Marburg Hemorrhagic fever (Marburg)	[ ] Emerging infectious diseases (signs and symptoms:)
	[ ] Lassa Fever	[ ] Severe acute respiratory syndrome (SARS)
	[ ] Crimean-Congo Hemorrhagic Fever	[ ] Middle East Respiratory Syndrome (MERS)
	[ ] South American hemorrhagic fever	[ ] Avian Influenza
	[ ] Rift Valley Fever	[ ] H1N1 influenza
	[ ] Smallpox	[ ] Diphtheria
	[ ] Plague	
	[ ] Anthrax	
	[ ] Botulism	
Class 2	[ ] Chickenpox	[ ] Rubella ([ ] congenital rubella [ ] acquired rubella)
	[ ] Measles	[ ] Polio
	[ ] Cholera	[ ] Meningococcal disease
	[ ] Typhoid	[ ] *Haemophilus influenzae* Type B

	[ ] Paratyphoid fever	[ ] Pneumococcal disease
	[ ] Shigellosis	[ ] Hansen's disease/ Leprosy
	[ ] Enterohemorrhagic *E. coli* infections (EHEC)	[ ] Scarlet Fever
	[ ] Hepatitis A	[ ] Vancomycin-resistant *Staphylococcus aureus* (VRSA) infection
	[ ] Pertussis	[ ] Carbapenem-resistant *Enterobacteriaceae* (CRE) infection
	[ ] Mumps	
	[ ] Tetanus	[ ] Hemorrhagic Fever with Renal Syndrome (HFRS, Hantavirus)
	[ ] Hepatitis B	[ ] Creutzfeldt-Jakob disease (CJD) and variant Creutzfeldt-Jakob disease (vCJD)
	[ ] Japanese Encephalitis	[ ] Yellow fever
	[ ] Hepatitis C	[ ] Dengue fever
	[ ] Malaria	[ ] Q fever
	[ ] Legionellosis	[ ] West Nile fever
Class 3	[ ] Vibriosis	[ ] Lyme disease
	[ ] Rickettsial diseases	[] Tick-borne encephalitis
	[ ] Murine typhus (*Rickettsia typhi*)	[] Melioidosis
	[ ] Tsutsugamushi Disease	[] Chikungunya fever
	[ ] Leptospirosis	[] Severe Fever with Thrombocytopenia Syndrome (SFTS)
	[ ] Brucellosis	[] Zika virus infection
	[ ] Rabies	

[Infectious Disease Onset Information]

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

Confirmed Test Result:	[ ] Positive [ ] Negative [ ] Test in progress [ ] Not tested
Hospitalization Status:	[ ] Outpatient [ ] Hospitalized [ ] Other
Classification of Patient Status, etc.:	[ ] Patient [ ] Patient Suspected of an Infectious Disease [ ] Pathogen Carrier [ ] Other
Note (Other relevant information):	
Alive or Deceased:	[ ] Alive [ ] Deceased

[Reporting Medical Institution, etc.]

Health Care Institution   Name of Health Care Institution:

Identification Number:

Address: Phone Number:

Name of the
Diagnosing Doctor: (Signature or seal) Name of the Head of the Reporting Institution:

[Public Health Center Report Information]

Nationality (For foreigners only):

Patient's institution name: Patient's address:

Presumed infected area: [ ] Domestic

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

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

(Back)

How to report

1. For Class 1 infectious disease — novel infectious syndrome, immediately notify the director of the Korea Centers for Disease Control and Prevention or a director of the local public health center, verbally, by means of telephone, etc. Subsequently, a written report must be submitted to the director of the Korea Centers for Disease Control and Prevention or a director of the 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 the   local public health center within 24 hours. However, if patients with previously reported infectious diseases have a change in their diagnostic test result or classification, and/or if they have been identified as not patients, such 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 (Autopsy) of Infected Patients. If the patient expires after reporting infection, complete and submit only the Report of Death (Autopsy) 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 health care institution designated as a sample surveillance medical institution or a director of   other institutions or organizations must submit a separate form 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 Health and Disease Integrated Management System (http://is.cdc.go.kr)].
7. A public health center that has received a report from a medical institution and others under its jurisdiction must notify the information to 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 their legal guardian. (Foreigners may write their name in English.)

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

[Name of the Infectious Disease] Check (√) the relevant infectious disease, and in case of novel infectious 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, write "0000-00-00").

(2) Date of Diagnosis: Enter the date when the diagnosis of the infectious disease was first diagnosed at the reporting medical institution.

(3) Report Date: Enter the date of the first report from the reporting medical institution to the local public health center. (If you are reporting by fax, enter the date you are sending the fax. If you are reporting through the information system, enter the information system 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 (Autopsy) of Infected Patients, etc."

[Reporting Medical Institution, etc.]

(1) If the reporting individual belongs to a medical institution, fill out the health care institution information, the name of the doctor who diagnosed the infectious disease, and the name of the head of the medical institution. If the reporting individual does not belong to a medical institution, 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, you can select the applicable institution by using the "Search Health Care Institution" button. Then, the health care institution identification number, telephone number, address, and the name of the head of the reporting institution will be automatically filled out.

[Public Health Center Report Information]

(1) Patient's 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 had stayed in multiple countries, write the name of the country in which the patient suspects he/she may have been infected), the length of the stay and the 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 Health and Disease Integrated Management System (http://is.cdc.go.kr)

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

❖ Please read the instructions on the back page 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 their guardian:)	Sex: [ ] Male [ ] Female
Phone number:	Cell phone number:
Address:	
[ ] Address unknown [ ] Identity unknown	Occupation:

[List of Infectious Diseases]

	[ ] Ebola Hemorrhagic fever (Ebola)	[ ] Francisella tularensis
	[ ] Marburg Hemorrhagic fever (Marburg)	[ ] **Emerging infectious diseases (signs and symptoms:)**
	[ ] Lassa Fever	[ ] Severe acute respiratory syndrome (SARS)
	[ ] Crimean-Congo Hemorrhagic Fever	[ ] Middle East Respiratory Syndrome (MERS)
Class 1	[ ] South American hemorrhagic fever	[ ] Avian Influenza
	[ ] Rift Valley Fever	[ ] H1N1 influenza
	[ ] Smallpox	[ ] Diphtheria
	[ ] Plague	
	[ ] Anthrax	
	[ ] Botulism	
Class 2	[ ] Chickenpox	[ ] Rubella ([ ] congenital rubella [ ] acquired rubella)
	[ ] Measles	[ ] Polio

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	[ ] Cholera	[ ] Meningococcal disease
	[ ] Typhoid	[ ] *Haemophilus influenzae* Type B
	[ ] Paratyphoid fever	[ ] Pneumococcal disease
	[ ] Shigellosis	[ ] Hansen's disease/ Leprosy
	[ ] Enterohemorrhagic *E. coli* infections (EHEC)	[ ] Scarlet Fever
	[ ] Hepatitis A	[ ] Vancomycin-resistant *Staphylococcus aureus* (VRSA) infection
	[ ] Pertussis	[ ] Carbapenem-resistant *Enterobacteriaceae* (CRE) infection
	[ ] Mumps	
	[ ] Tetanus	[ ] Hemorrhagic Fever with Renal Syndrome (HFRS, Hantavirus)
	[ ] Hepatitis B	[ ] Creutzfeldt-Jakob disease (CJD) and variant Creutzfeldt-Jakob disease (vCJD)
	[ ] Japanese Encephalitis	[ ] Yellow fever
	[ ] Hepatitis C	[ ] Dengue fever
	[ ] Malaria	[ ] Q fever
	[ ] Legionellosis	[ ] West Nile fever
Class 3	[ ] Vibriosis	[ ] Lyme disease
	[ ] Rickettsial diseases	[] Tick-borne encephalitis
	[ ] Murine typhus (*Rickettsia typhi*)	[] Melioidosis
	[ ] Tsutsugamushi Disease	[] Chikungunya fever
	[ ] Leptospirosis	[] Severe Fever with Thrombocytopenia Syndrome (SFTS)
	[ ] Brucellosis	[] Zika virus infection
	[ ] 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)		
(C) Cause of (B)	— Interval between onset and death term	—
(D) Cause of (C)	—	—

Other 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 medical institution, etc.]

Medical institution number	Medical institution name
Address	Phone number
Diagnostic doctor's name (Signature or seal)	Report head

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

(Back)

How to report

1. For Class 1 infectious diseases, immediately notify the director of the Korea Centers for Disease Control and Prevention or a director of the local public health center, verbally, by means of telephone, etc. Subsequently, a written report must be submitted to the director of the Korea Centers for Disease Control and Prevention or a director of the 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 the   local public health center within 24 hours. However, if patients with previously reported infectious diseases have a change in their diagnostic test result or classification, and/or if they have been identified as not patients, such 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. 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 (Autopsy) of Infected Patients. If the patient expires after reporting infection, complete and submit only the Report of Death (Autopsy) of Infected Patients.

How to fill out the report

[Recipient] Mark √ on the applicable recipient and if the recipient is the director of the local health center, write down 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 their guardian (for foreigners, you may write in English).
(2) Resident (alien) registration number: Write down equivalent resident registration number that your country uses (for foreigners, enter the alien registration number).
❖ For the case of reporting death through **Health and Disease Integrated 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 out automatically.

[List of Infectious diseases] Corresponding infectious disease is marked with √, and for **Novel infectious disease syndrome** under **Class 1** infectious disease, please fill out the symptoms and sign as indicated in parentheses.

[Reporting Medical Institution, etc.]
(1) If the reporting individual belongs to a medical institution, fill out the health care institution information, the name of the doctor who diagnosed the infectious disease, and the name of the head of the medical institution. If the reporting individual does not belong to a medical institution, 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, you can select the applicable institution by using the "Search Health Care Institution" button. Then, the health care institution identification number, telephone number, address, and the name of the head of the reporting institution will be automatically filled out.

Form 3. Inpatient Treatment Notice

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

**Inpatient Treatment Notice**			

<table>
<tr><td>Name</td><td></td><td>Resident Registration Number</td><td></td></tr>
<tr><td colspan="4"></td></tr>
<tr><td rowspan="4">Inpatient treatment</td><td colspan="3">Date of Inpatient Admission:</td></tr>
<tr><td colspan="3">Inpatient Treatment Period:</td></tr>
<tr><td rowspan="2">Inpatient Treatment Location</td><td colspan="2">[   ] Hospital   [   ] Home   [   ] Residential Facility</td></tr>
<tr><td colspan="2">Address:</td></tr>
<tr><td colspan="4">The government notifies you that you should be admitted and treated inpatient in accordance with Article 41 and Article 43 of the 「Infectious Disease Control and Prevention Act」.

❖ If you do not comply with this notice, you will be fined up to $3,000 in accordance with Article 80-4 of the 「Infectious Disease Control and Prevention Act」.

<center>___/___/____
(MM/DD/YYYY)</center>

<center>Head of the Local Government / Ward
or Head of Medical Institution</center></td></tr>
</table>

210 ㎜ ✕ 297 ㎜ [General paper 60g / ㎡ (Recycled)]

Form 4. Notice of Isolation/ Quarantine

<table>
<tr><td colspan="4" align="center">Notice of Isolation/ Quarantine (Korean)</td></tr>
<tr><td align="center">Name</td><td></td><td align="center">Date of Birth</td><td align="center">___/___/____</td></tr>
<tr><td align="center">Quarantine Type

□ Home/Self-quarantine
□ Facility
□ Hospital</td><td align="center">Duration</td><td colspan="2">Effective from ___/___/____ to ___/___/____</td></tr>
<tr><td></td><td align="center">Location</td><td colspan="2">[　] Residence (including home)
[　] Other facilities</td></tr>
<tr><td></td><td></td><td colspan="2">Address</td></tr>
<tr><td colspan="4">

The government notifies you 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.

❖ If you do not comply with this notice, you will be fined up to $3,000 in accordance with Article 80.4 or 80.7 of the Infectious Disease Control and Prevention Act.

<div align="center">

___/___/____
(MM/DD/YYYY)

Director of _____ Public Health Center

</div>

</td></tr>
</table>

Notice of Isolation/ Quarantine (English)

Name		Date of Birth	___/___/____
Quarantine Type	Duration	Effective from ___/___/____ to ___/___/____	
□ Home/Self-quarantine	Location	[ ] Residence (including home) [ ] Other facilities	
□ Facility □ Hospital		Address	

The government of the Republic of Korea notifies you that you are to be self-quarantined for a requested period of time according to Article 49.1.14 or 41.3.2 of the Infectious Disease Control and Prevention Act.

If you do not comply with this notice, you will be fined up to $3,000 in accordance with Article 80.4 or 80.7 of the Infectious Disease Control and Prevention Act.

___/___/____
(MM/DD/YYYY)

Mayor · Governor of metropolitan cities and provinces
or
Mayor · Governor · Head of district office [gu]
or
Head of medical institution

Tackling COVID-19: The Korean Experience

Form 5: COVID-19 Basic Epidemiology Survey (Confirmed Case)

> ❖ If the patient on this survey was previously reported as a suspected patient and has tested positive, please make sure to re-classify as a "confirmed patient" on the online disease reporting tool before continuing on with this survey
> ❖ Please report to: Infectious Disease 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 medical institution)	
	Investigation facility			(Mobile)		
	Investigator name		Investigation Date	___/___/____ (MM/DD/YYYY)		

Test confirmation number	(given by the KCDC)	Testing facility		Quarantine type and location	□ Home □ Facility □ Hospital (name: _____)	
Date of test confirmation	___/___/____ (MM/DD/YYYY)	Date of test performed	___/___/____ (MM/DD/YYYY)	Quarantine start date	___/___/____ (MM/DD/YYYY)	

1. Patient Information (Check the box or write down the response)						
1.1 Name		1.2 Resident Registration Number		-	1.3 Sex	○ Male ○ Female
1.4 Nationality	○ Citizen ○ Foreigner (country name:_____)	1.5 Address				
1.6 Contact phone number	Patient	1.7 Occupation (company name, school name,				

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	Emergency Contact		medical institution name, etc.)	
1.8 For medical workers	○ Applicable (□ Doctor □ Nurse □ Other (Radiology technologist, nursing assistant, medical laboratory technologist, paramedic, etc.) ○ Not applicable			

2. Symptoms and Underlying Illnesses (Check the box or write down your response)

2.1 Symptoms (From 14 days prior to the test confirmation up to now)	○ Yes (fill out 2.2, 2.3) ○ None		2.2 Date of symptom onset	___/___/____ (MM/DD/YYYY)	
2.3 Initial symptoms	□ Fever (including subjective complaints)	□ Respiratory symptoms		□ Other non-respiratory symptoms	□ Pneumonia
	○ Yes (temperature: _____) ○ No	○ Yes ➢ □ Cough 　□ Phlegm 　□ Sore throat 　□ Shortness of breath ○ No		○ Yes ➢ □ Muscle pain 　□ Chills 　□ Other: ___ ○ No	○ Yes ○ No
2.4 Pre-existing conditions	○ Yes (please be specific: _____) ○ No		2.5 Pregnancy	○ Yes (_____ weeks) ○ No	
2.6 Treatment status (at the time of confirmation)	□ Routine treatment □ Oxygen treatment (nasal cannula, face mask) □ Mechanical Ventilation □ ECMO □ Death □ Under investigation □ Other: _____				

3. Suspected Source of Infection (From 14 days prior to the symptom onset up to now; check the box or write down the response)

3.1 International travel	○ Yes 　(Country name: ___ , Entry date: ___/___/____ (MM/DD/YYYY))	○ No
3.2 Contact with a person who tested positive	○ Yes □ Family member (or partner), 　- Name: ___ 　- Patient confirmation number: ___ □ Persons other than family members (or partners), 　- Name: 　- Patient confirmation number: ___ □ Date of last contact: ___/___/____ (MM/DD/YYYY)	○ No
3.3 Clustered outbreaks	○ Yes □ Family member (or partner) □ Medical institution: ___ □ Place of worship: ___	○ No

	□ Nursing homes or psychiatric facilities: ___ □ School: ___ □ Other: ___	
3.4 Other remarks		

4. Usage of Public Facilities - medical institutions or other facilities, etc. (From 14 days prior to the symptom onset up to now, check the box or write down the response)

○ Yes (Institution / facility name: ___
  □ Currently hospitalized (admission date: ___/___/____ (MM/DD/YYYY))
  □ Discharged (discharge date: ___/___/____ (MM/DD/YYYY))
	○ No

5. Family members, partners, and other persons with whom contact was made (any person with whom the contact was made from one day prior to the symptom onset up to now; check the box or write down the response)

5.1 Family members or partners	○ Yes □ Number of people: ___	○ No
5.2 Other facilities (places of worship, nursing homes, psychiatric facilities, schools, institutions, etc.)	○ Yes □ Organization name: ___ □ Number of people: ___	○ No
5.3 Medical facilities	○ Yes □ Name of medical facility: ___ □ Number of people: ___	○ No

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

> ❖ Tips: Check and register major progress / results such as "hospital discharge," "quarantine release," and "death" of confirmed patients
>
> ❖ Online registration portal: Report through the Integrated System for Disease Control/Public Health (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 facility or medical institution)	
	Investigation facility			(Mobile)		
	Investigator name		Investigation Date	___/___/____ (MM/DD/YYYY)		

Test confirmation number	(given by the KCDC)	Testing facility		Quarantine type and location	□ Home □ Facility □ Hospital (name: _____)
Date of test confirmation	___/___/____ (MM/DD/YYYY)	Date of test performed	___/___/____ (MM/DD/YYYY)	Quarantine start date	___/___/____ (MM/DD/YYYY)

1. Patient Information (Check the box or write down the response)					
1.1 Name		1.2 Resident Registration Number		- 1.3 Sex	○ Male ○ Female
1.4 Nationality	○ Citizen ○ Foreigner (country name:_____)	1.5 Address			
1.6 Contact phone number	Patient		1.7 Occupation (company name, school name, medical institution name, etc.)		
	Emergency Contact				

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1.8 For medical workers	○ Applicable (□ Doctor □ Nurse □ Other (Radiology technologist, nursing assistant, medical laboratory technologist, paramedic, etc.) ○ Not applicable

2. Report Status

2.1 Patient report	○ Reported	○ Not Reported
2.2 Basic epidemiological surveillance	○ Reported	○ Not Reported

3. Patient Status (Record any major progress of patient care until the end of the patient care)

3.1 Patient status (Choose one)	○ Currently hospitalized (___/___/____ - ___/___/____) (MM/DD/YYYY) □ Name of medical facility: _____) ○ Discharged from the hospital (___/___/____) ○ Death (___/___/____)	○ None
3.2 Treatment status (Status at the time of report)	○ Routine treatment ○ Oxygen treatment (nasal cannulas, face masks) ○ Mechanical ventilation ○ ECMO ○ Death ○ Under investigation ○ Other ( )	○ None

4. Isolation/ Quarantine status (Record any major progress until the end of the patient care)

4.1 Quarantine	○ Under quarantine (□ Self-quarantine, □ Quarantine in designated facilities, □ Hospital isolation) ___/___/____ - ___/___/____ (MM/DD/YYYY), □ Name of isolation place: _____ ○ Not under quarantine ○ Discharged from quarantine (___/___/____ (MM/DD/YYYY))	○ None

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

Form 7.   Self-Isolated/Quarantined Patient Monitoring Log

Form 7. Self-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	Current Status
	Brian Jones	Male		Jan 10	Jan 20			Discharged from xx hospital		Discharged after proper health education
								No symptoms	Fever, sore throat (Jan 1, 2019)	Transferred to xx medical institution

Form 8.   Patient Health Monitoring Log

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:
(Example) Name:	1.Body Temperature	AM	36.5ºC	36.5ºC	36.5ºC	36.5ºC	36.5ºC		36.5ºC	36.5ºC	36.5ºC	36.5ºC		36.5ºC	36.5ºC	36.5ºC
		PM	38ºC	6.5ºC	36.5ºC	36.5ºC	36.5ºC		36.5ºC	36.5ºC	36.5ºC	36.5ºC		36.5ºC	36.5ºC	36.5ºC
	2. Clinical Symptoms															
	A. Cough		✓	✓	✓					✓		✓				
	B. Fatigue					✓	✓							✓	✓	✓
	C. Shortness of breath		✓	✓	✓											
	D. Sore throat			✓												
	E. Others				Diarrhea											
	1.Body Temperature	AM														
		PM														
	2. Clinical Symptoms															
	A. Cough															
	B. Sore throat															
	C. Shortness of breath															
	D. Sputum production															
	E. Others															
	1.Body Temperature	AM														
		PM														
	2. Clinical Symptoms															
	A. Cough															
	B. Sore throat															
	C. Shortness of breath															
	D. Sputum production															
	E. Others															

Form 9.   COVID-19 Close Contact Tracing Form

Form 9. COVID-19 Close Contact Tracing Form

Number	Name of close contacts	Date of Birth	Sex	Address 1	Address 2	Classification of close contacts	Quarantine status	Nationality	National ity cont'd	Cell phone number	Home number	Employment	Date of contact	Are you the doctor of the confirmed patient?
Formatting Instruction	Full name	YYYY MMDD	1:Male 2: Female	State, City	Street, Unit	01: Healthcare providers including doctors, nurses and physician assistants 02: Other hospital employees 03: Patient 04: Family 05: Friends 06: Others	1: No quarantine 2: Quarantine released 3: Self-quarantine 4: Hospital quarantine 5: Cohort quarantine	Y: Korean, N: Foreigner	Type in the country of origin if not from Korea	Number	Number	Company or school name in text	YYYY MMDD	Y: Yes, N: No
1	John Smith	1971 0101	1[Male]	Seoul Mapo Sangsoo Dong	111-11	1[Healthcare provider]	3[Self-quarantine]	Y		01012341234	0212341234	____Hospital	2015 0630	Y
2	John Doe	1971 0102	1[Male]	Seoul Mapo Sangsoo Dong	111-11	4[Family]	3[Self-quarantine]	Y		01012341234	0212341234	____University	2015 0630	N
3	Nick Doe	2001 0101	1[Male]	Seoul Mapo Sangsoo Dong	111-11	2[Other Hospital employee]	3[Self-quarantine]	N	China	01012341234	0212341234	____Company	2015 0630	N
4	Tom Brenner	2001 0103	1[Male]	Seoul Mapo Sangsoo Dong	111-11	4[Family]	3[Self-quarantine]	Y		01012341234	0212341234	Unemployed	2015 0630	N

* Fill out and complete the above close contact tracing form in excel and upload the file into the KCDC's comprehensive public health management system (Infectious Disease Control Information → Patient Control → Close Contacts Tracing → upload).
* Resident registration number of the confirmed patient, test confirmation number as well as the location of close contact should be included in the "Public health center opinion" section.

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

❖ Disclaimer : Any and all Municipal COVID-19 Immediate Response Task Force's activities (e.g. cases in group facilities and/or medical institutions) must be reported daily via this form
❖ Instructions : Fill out the form and send it to the Korea Centers for Disease Control and Prevention (Central Defense Response Headquarters)'s 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
  - o **Patient**
  - o **Close Contacts:** Secure a list of Close Contacts*, **Self / Facility / Hospital Isolation** in their body of jurisdiction (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)
    - **Sending Close Contacts List and Form:** List of close contacts by local governments, Initial Investigation of Close Contacts and Daily Monitoring Form, Monitoring Method Guide
    * Report to [agency] by 17:00 after monitoring patients' status daily at [no.] AM and [no.] PM

- Active Measures
  - o **On-site Response:** Dispatch to the [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]
    - Conducted patient interviews to determine overseas travel/ activity and activity after entry [TIMESTAMP]
    - Mapped out patients' path of activity from point of entry and confirm the range of possible close contacts
    - Re-collected samples (from upper and lower respiratory tract), requested for re-testing [TIMESTAMP] → Confirmed positive re-testing results from the corresponding Research Institute of Public Health and Environment
  - o **Measures:** Secure a list of Close Contacts*, **Self / Facility / Hospital Isolation** in their body of jurisdiction (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)
    - **Sending Close Contacts List and Form:** List of Close Contacts by local governments, Initial Investigation of Close Contacts and Daily Monitoring Form, Monitoring Method Guide
    * Report to [agency] by 17:00 after monitoring patients' status daily at [no.] AM and [no.] PM
  - o **Press Briefing:** Distribute reference materials for press release, briefings held at [name of venue]
- Future plans
  - o Municipal COVID-19 Immediate Response Task Force to return to the corresponding municipality; identify, monitor, and manage close contacts via district/county/city public health centers and confirm follow-up measures

Form 11. Epidemic Control Measures Form

Temporary Closure ☐ Restricted Access ☐ Limited Movement ☐ Suspension of Medical Institute ☐ Disinfection ☐ 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 medical institute	Disinfection	From __:__ ___/___/2020 To __:__ ___/___/2020
Order Target	Range	Entire facility			Part of facility (If so, describe range in detail)	
Guidelines	**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**. • 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 Medical Institute), No. 5 (Disinfection), Order of Temporary Closure, Restricted Access, Limited Movement, Suspension of Medical Institute, Disinfection has been declared as above.

___ /_ __ / 2020

[Name Here], Director of Public Health Center

(No signature required)

Notes

In case of violation of Order Temporary Closure, Restricted Access, Limited Movement, Suspension of Medical Institution, 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.

Form 12. Certificate of Disinfection

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

Number:		
## Certificate of Disinfection		
Target Facility	Company Name:	Coverage Area (Volume): m²(　　　　　m²)
	Address:	
	Administrator/Manager Confirmation	Position:
		Name:　　　　　　Signature:
Disinfection Period	From　　　　　　　　　　　to	
Disinfection Activity	Type:	
	Details of chemicals used:	

I certify that disinfection was carried out as above in accordance with Article 54(1) of the 「Infectious Disease Control and Prevention Act」 and the Enforcement Rule Article 40(2) of the same Act.

Day/Month/Year: _____/_____/_____

Name of Disinfected Company:
Address:
Name(Representative):　　　　　　　　　　Signature

Form 13. Specimen Test Request Form (Sample)

❖ The following is a form for cases referred to the Korea Centers for Disease Control and Prevention, and must be filled out appropriately and submitted by an applicable health and environment researcher when requesting a test.

■ Request Guideline for Testing by the Korea Centers for Disease Control and Prevention [Attachment Form No. 7] <Revised 08/ 23/2019>

( ) Specimen Test Request Form		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 Medical Institution	Admin Name				
		Admin Contact				
	Address	(Phone:) (Fax:)				
Patient	Name (or Identification Number)	Date of Birth			Sex	
	Date of Confirmation	Date of Specimen Collection				
Specimen Type (Quantity)						
Test Categories						
Specimen Collection Classification (1st or 2nd)						
Physician's Notes

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 medical institution approved by the "Medical Law," and the form must be signed by the Director of the requesting institution.
2. The phone number of the requesting institution must be a reachable number 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, write down both the type of specimen and quantity of each type. (ex. blood sample (2)) | | | | | | |
| Process Procedure | | | | | | |

Complete request form	Submit	Test/Examine	Approve	Provide results

Requesting party	Korea Centers for Disease Control and Prevention (Relevant department)