

WEBINAR TRANSCRIPTION:

WHAT CAN LATIN AMERICAN AND CARIBBEAN COUNTRIES LEARN FROM THE SOUTH KOREAN EXPERIENCE WITH COVID-19?

Presented by Seon Kui Lee, MPH, PhD. March, 2020

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Development Bank
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WHAT CAN LATIN AMERICAN AND CARIBBEAN COUNTRIES LEARN FROM THE SOUTH KOREAN EXPERIENCE WITH COVID-19?

March 31, 2020

ENCUENTRA EL WEBINAR EN REDCRITERIA.ORG

Presented by Seon Kui (Erica) Lee, MPH, PhD.

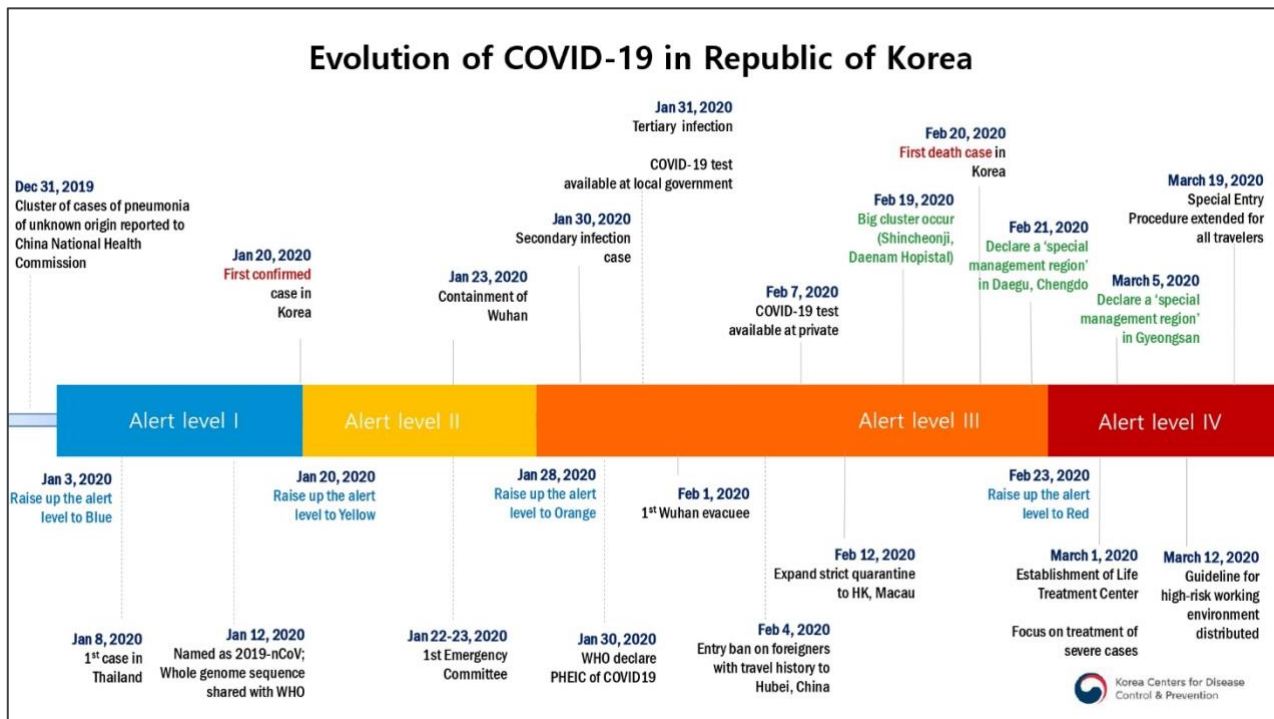
The current COVID-19 situation and response measures in Republic of Korea



PRESENTATION

Minute 00:05:07

Dr. Lee: It is my great honor to share our knowledge and experience in responding to COVID-19 in Korea. Let me start with the presentation.

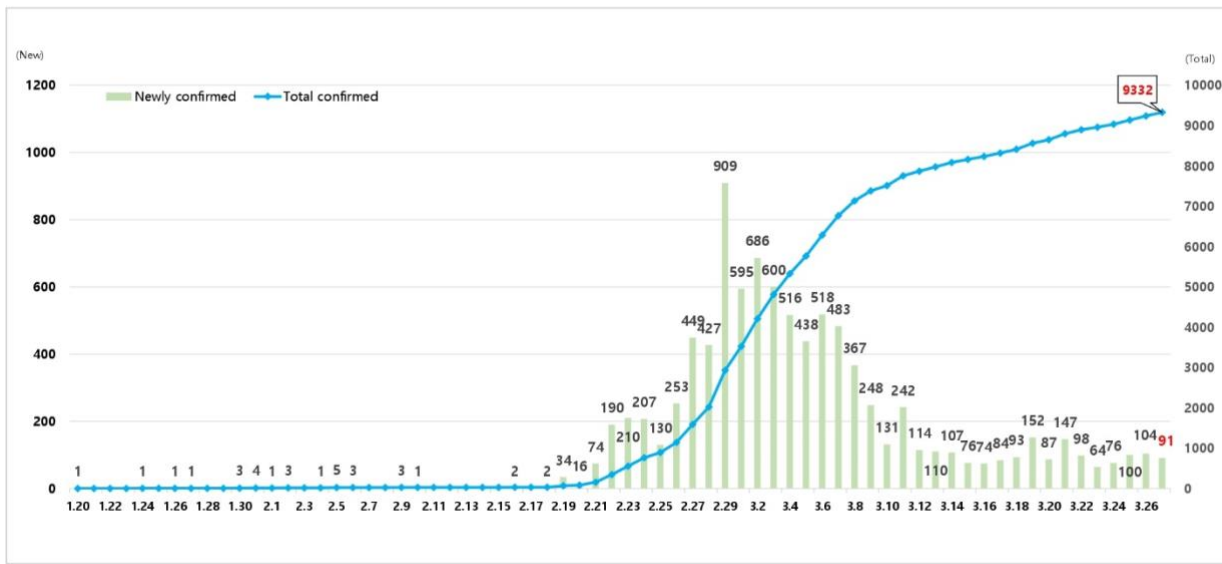


Evolution of COVID-19 in the Republic of Korea

Minute 00:05:22

This slide shows the time line of how the situation developed and how our government responded to COVID-19. As you can see in the time-line here, we issued our alert level I (shown in blue), after the cluster of cases of pneumonia of unknown origin in Wuhan, China, where first reported, so that we could be prepared for possible importation of COVID-19. We gradually raised our national alert level as the outbreak progressed. The alert level increased to level II when the first case was confirmed in Korea and then to level III after more imported cases were confirmed. The secondary and tertiary infections were imported after that. Finally, we raised the alert level to level IV, which is the highest level in responding to the big clusters, which occurred at the Shincheonji religious group and Daenam hospital.

The number of confirmed cases (as of 27 March)

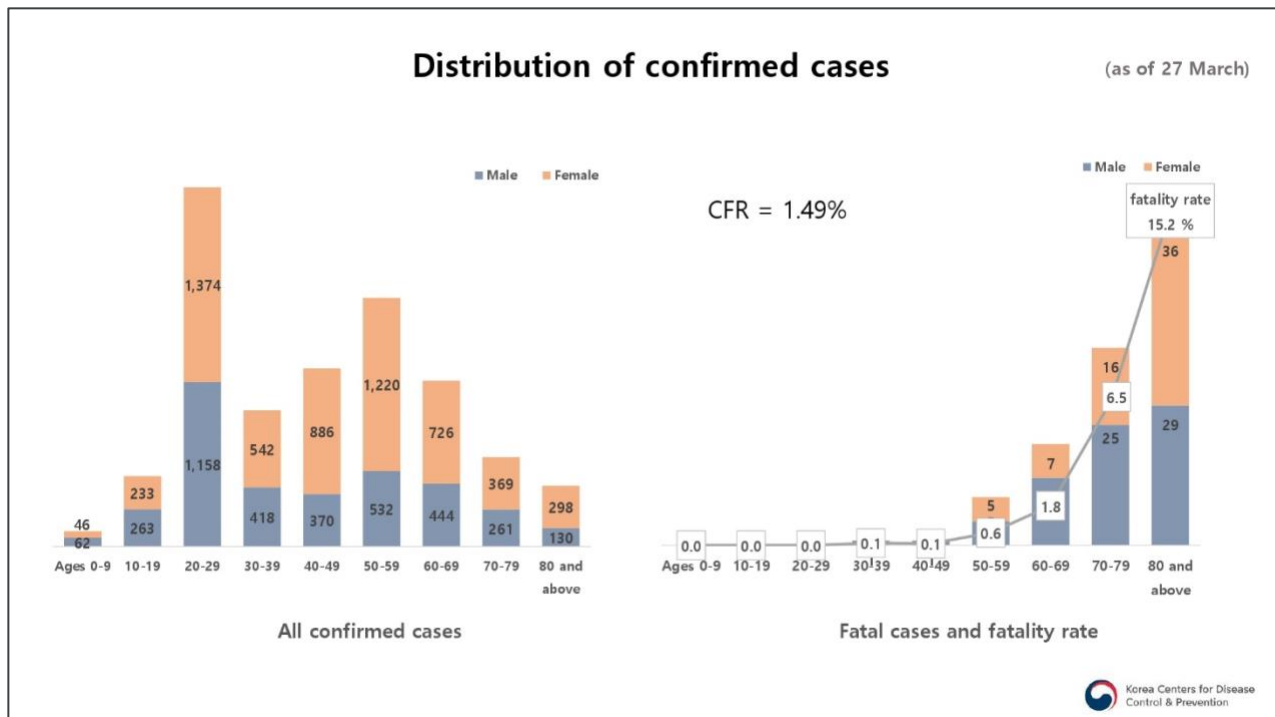


Korea Centers for Disease Control & Prevention

The number of confirmed cases

Minute 00:06:34

This graph shows the total number of confirmed cases and the confirmed cases on each day since the first case was confirmed on January 20. As of March 27, there have been 9,332 cases in total, as shown on this slide. But as of today, our number of confirmed cases is 9,786. The peak of the transmission, so far, was on February 29, with a record of 909 confirmed cases on a single day. After that though, the newly added cases have slowly decreased. Since March 12, the number of newly confirmed cases has been around 100. We are trying our best to maintain the number of new confirmed cases to not exceed 100 right now and hoping that number will decrease by as many cases and as fast as possible.



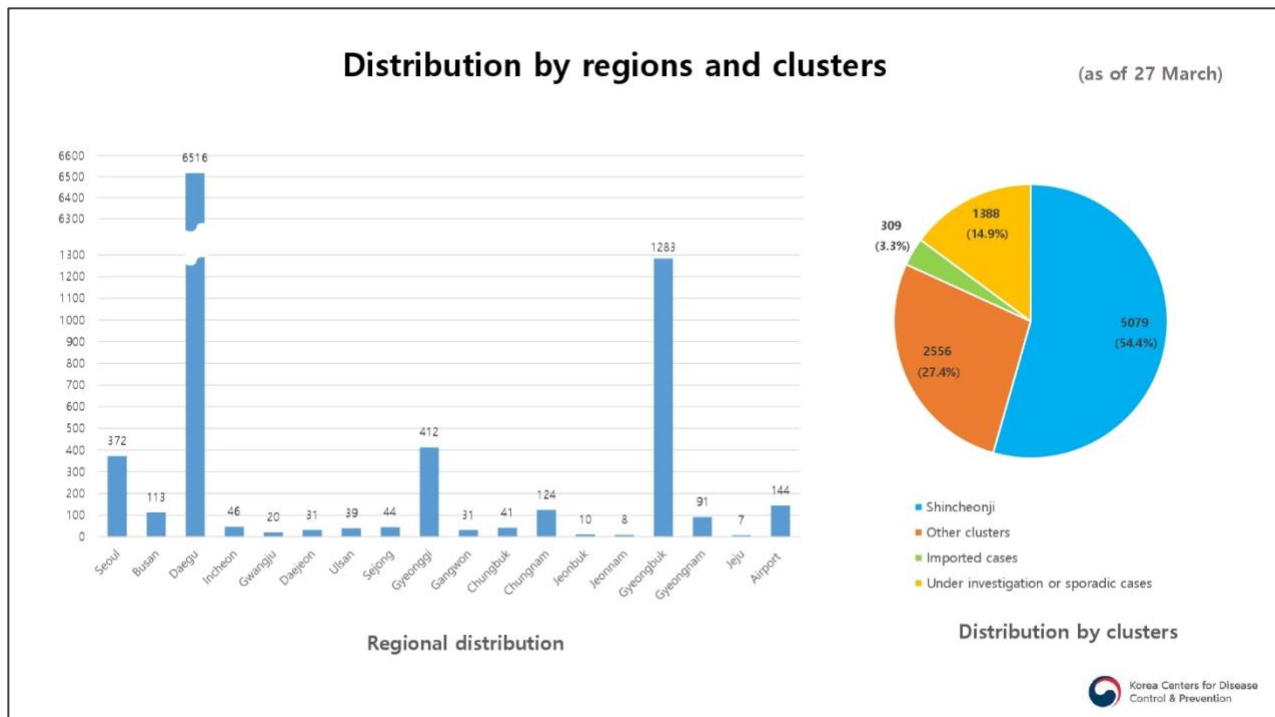
Distribution of confirmed cases

Minute 00:07:52

The next couple of slides show the basic epidemiological information of the confirmed cases in Korea. On the left, you can see the age distribution of confirmed cases. The distinctive feature is that we have the largest number of confirmed cases in the age group of 20 to 29. This is quite unique compared to other countries. The reason we have more patients in the age group of 20-29, is related to the big cluster of the Shincheonji religious group, which is mainly targeting young people in their 20s for their missionary works.

On the right-hand side, you can see the number of fatal cases and the fatality rate in each age group. The highest fatality rate is 15.2% in the age group 80s and above. And the overall case fatality rate is 1.49%. Therefore, as a mitigation strategy we established a new system to put more resources on severe cases.

First, we categorized the confirmed cases into four groups: mild, moderate, severe and very severe. Each category received a different treatment and got admitted to different facilities accordingly.



Distribution by regions and clusters

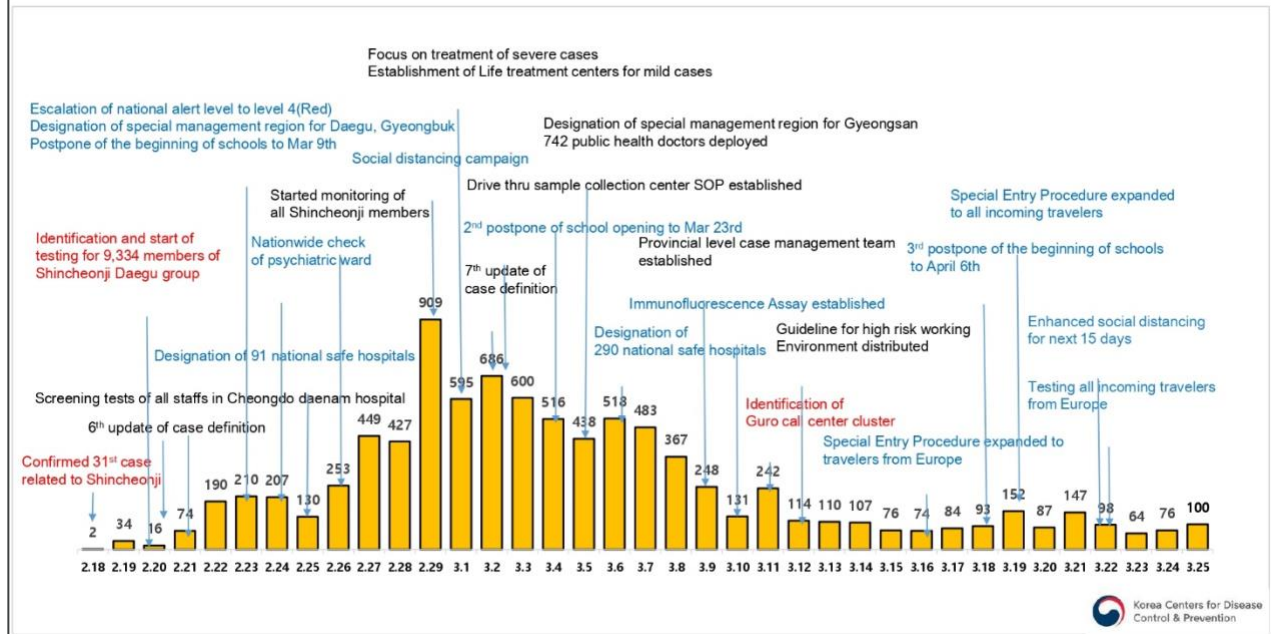
Minute 00:09:29

This slide indicates the distribution of confirmed cases by regions and clusters. The graph on the left shows that the Daegu and Gyeongbuk provinces, where the Shincheonji cluster was found, have the highest number of cases. Other regions such as Seoul, Gyeonggi and Chungnam are experiencing relatively small clusters bringing the grand total number of the cases to around 300 or more in the regions. Furthermore, the number of cases found at the airport screening is 144 as of March 27 and is seems to increase relatively fast. Taking into account the outbreak situation all over the world, it is - sort of - expected. Therefore, we are keener to strengthen our screening system at the point of entry and actively monitor and test all the incoming travelers.

The pie chart on the right shows the proportion of the clusters in Korea. As you may already know, Shincheonji is the biggest cluster as indicated in blue. Orange represents other clusters.

Response measures along with the progress of outbreaks

(as of 25 March)



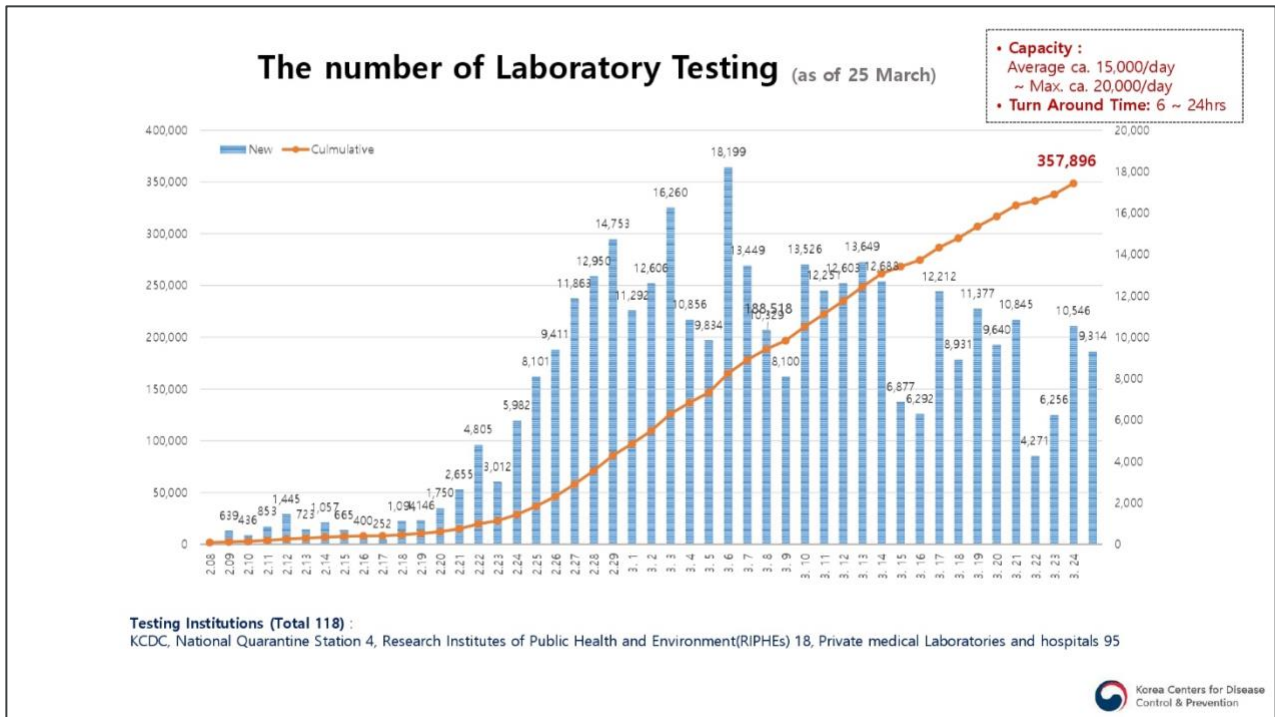
Response measures along with the progress of outbreaks

Minute 00:10:56

This slide summarizes the response measures taken along with the progress of outbreaks, especially after we found out about local transmission, especially the Shincheonji cluster. Right after we recognized the case number 31, which was confirmed on February 18, and which was related to Shincheonji religious group, we started testing all the members of Shincheonji group. As the cases increased and evolved to the big cluster, our government raised the national alert level to level IV, as I mentioned before, and designated Daegu and Gyeongbuk city as a special management region on February 9.

When we had a peak on our epi curve, we started a social distancing campaign as well. And the school opening was postponed on March 2 to Mar 23, then postponed to April 6 again and was after that further postponed until April 9, which we actually announced today. Then the schools will be opening gradually. Maybe on April 9 the school will open for the 3rd grade of junior high and high school students and later some other grades, step by step.

While responding to this big cluster we have taken various measure, including the update of case definition, designation of national safe hospitals, establishment of life and supporting treatment centers, deployment of public doctors and so on.



The number of laboratory testing

Minute 00:13:02

Actually, this slide is about our testing capacity. It is well known that Korea has conducted extensive lab testing and found cases at a very early stage. We have extended testing capacity step by step. At the beginning of the outbreak only KCDC was available for lab testing. Later on, it was expended to the research institutes of the public health environment of local governments and then further expanded to private medical laboratories and hospitals. Therefore, currently we have a total number of 118 testing institutions available nationwide and their testing capacity is 15.000 tests per day on average and 20.000 per day maximum.

Ensuring early patient detection through screening clinics and diagnostic testing

- Operation of Drive-Thru Sample Collection & Screening Clinics

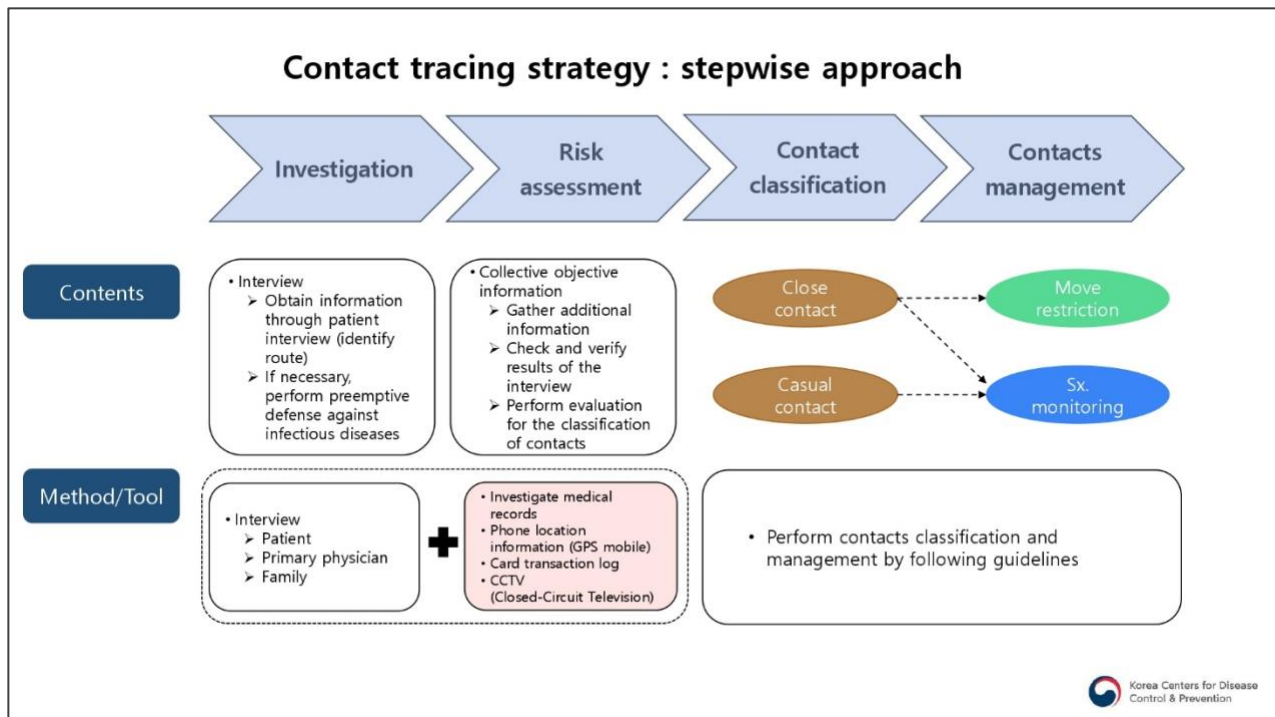


Korea Centers for Disease Control & Prevention

Ensuring early patient detection through screening

Minute 00:14:11

These are the pictures of drive-through sample collections and screening clinics. As you might already know these drive-through clinics have contributed as well to our testing capacity. They actually don't do lab testing. It is the sample collection. By driving through each car and each person can get some kind of diagnosis and then they can get to the sample collection and these samples will be transferred to the testing labs and then you will get the testing results, whether they are positive or negative.



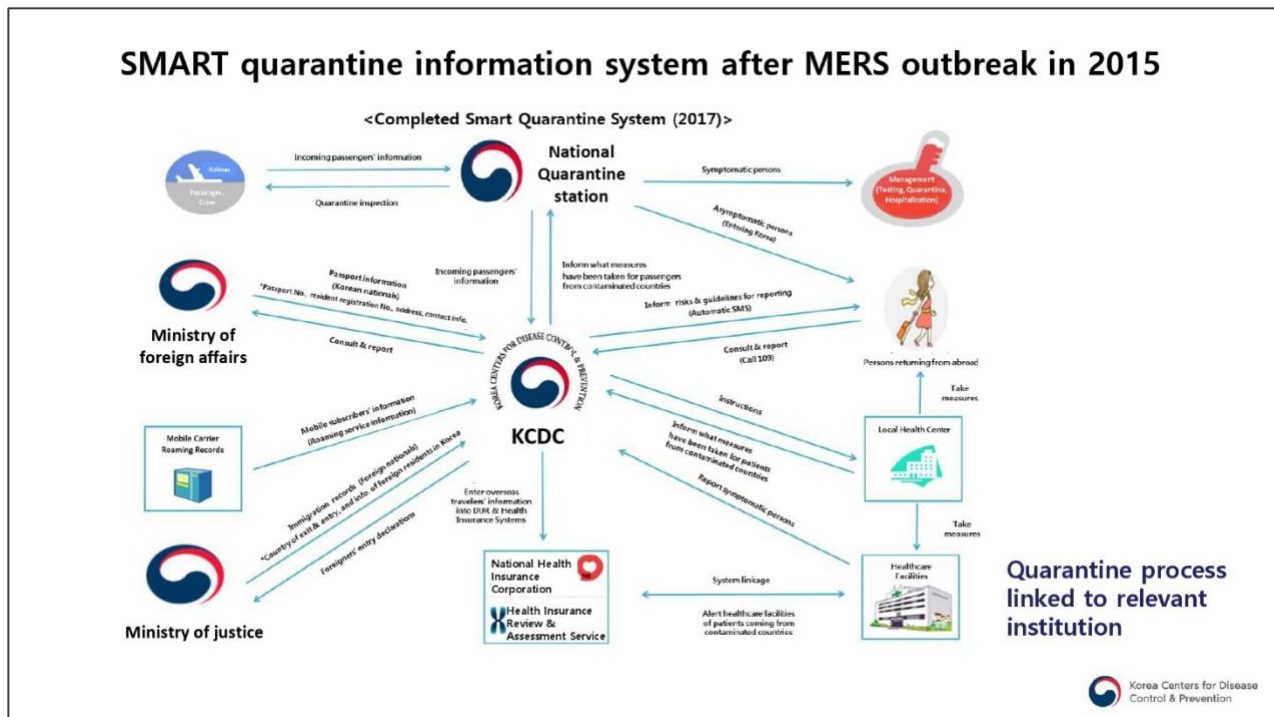
Contact tracing strategy: stepwise approach

Minute 00:15:08

Another aspect I would like to touch on is our contact tracing strategy. There are mainly four steps: investigation, risk assessment, contact classification and contact management.

At the investigation step we obtain the preliminary information through interviewing the patient, the primary physician and the family. And then to compensate the missing information from the interview outcomes, we collect additional information at the stage of risk assessment. The information, such as medical records, mobile phone location using GPS, card transaction log and video footage are collected and investigated in this stage. Based on this information we classify the close and casual contacts and provide guidelines accordingly from movement restrictions to symptom monitoring. Movement restriction refers to a legal public health order for quarantine and controlled travel. Symptom monitoring can be either active or passive, depending on the exposure risk. All these kinds of activities are authorized under the Act.

SMART quarantine information system after MERS outbreak in 2015



SMART quarantine information system

Minute 00:16:44

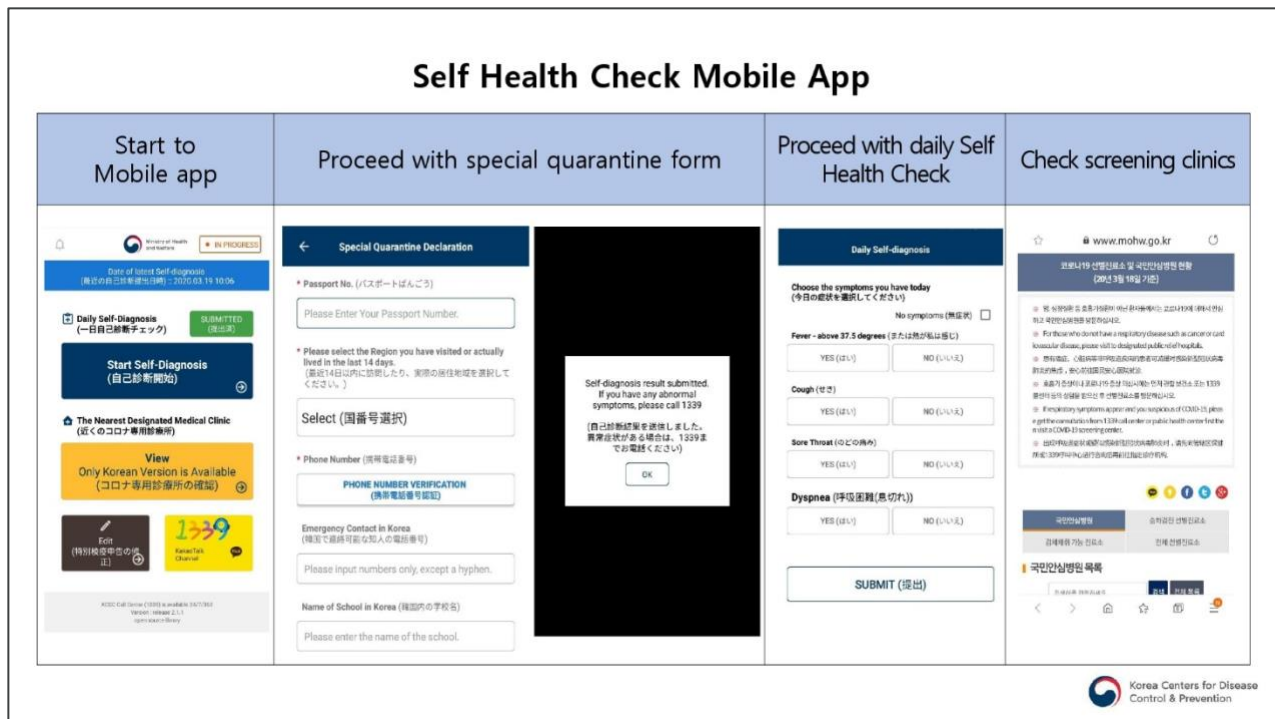
I will just briefly explain the SMART quarantine information system, which was established after the MERS outbreak in 2015. This is done at the airport quarantine station screening at the point of entry. Even before this COVID-19 outbreak every inbound traveler entering Korea is required to be checked for fever and also to fill out a questionnaire about their health condition when they visited these areas in general. In particular, people who have travelled or lived in the areas with outbreaks of certain infectious diseases with high risk, such as MERS or Ebola, are subject to quarantine and investigations, including individual temperature checks and health questionnaires, as I mentioned before. In order to enhance our quarantine system after the MERS outbreak in 2015, we introduced the SMART quarantine information system.

This flow chart shows the overall working of the SMART quarantine information system. The information about the inbound traveler from the Ministry of Justice, the Ministry of Foreign Affairs, airline companies and major telecommunication companies are collected by KCDC's quarantine information system. Then the information gets re-categorized. So, in advance, before the airplane arrives at the airport, we get this information about the quarantine subject and then we get ready for these people from the risk areas for quarantine procedures.

Information about travelers from a country or a region with an infectious disease outbreak is accessible by the frontline health care providers during the incubation period as well. Actually,

we share this information with the health care insurance system as well. Since the frontline healthcare providers can check the international travel history of a suspected case at registration, they are able to quickly identify and treat the suspected case in a timely manner. Based on the information collected from the inbound travelers at the entry, if a person returns to Korea after travelling to a region affected by an infectious disease, we send text message to this person during the incubation time about how to report if they develop symptoms of an infectious disease.

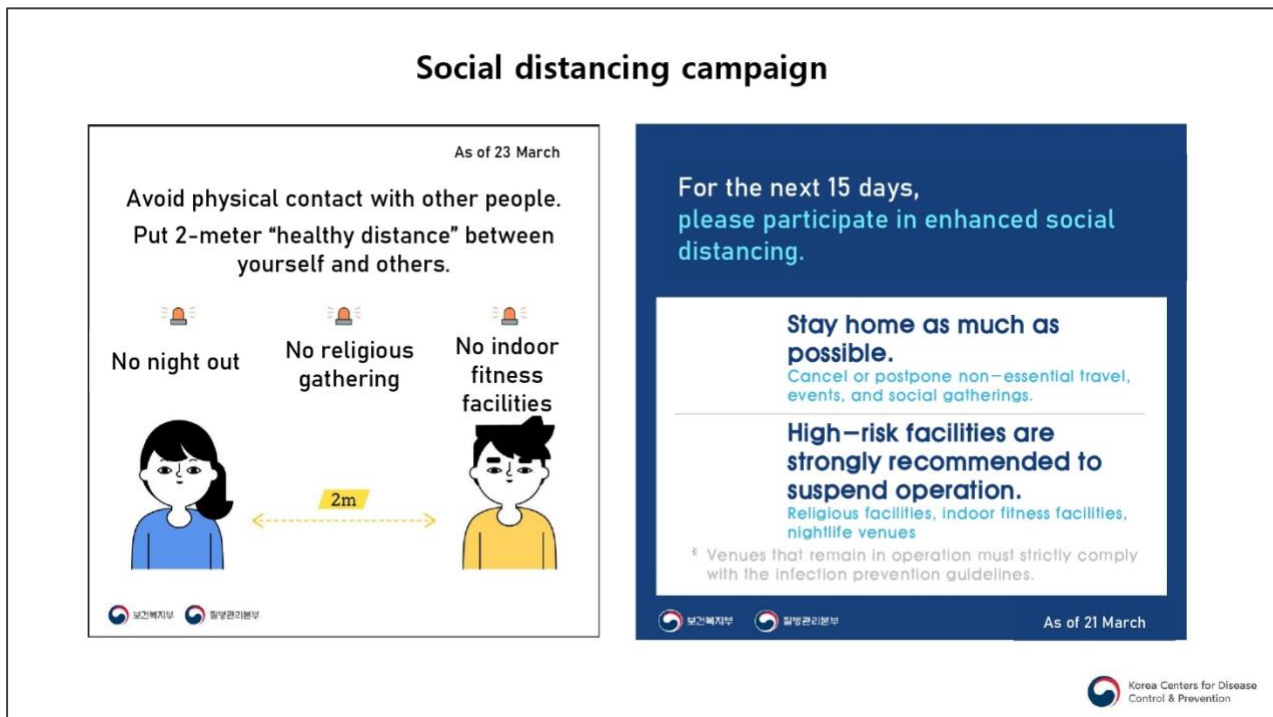
Since we send text messages through local telecommunication companies, they need to have a domestic cell phone number to receive these text messages, which covers most Koreans and foreigners who are living in Korea. Actually, this system plays a very important role in responding to COVID-19 for the early detection of imported cases.



Self-Health Check Mobile App

Minute 00:20:38

Then, in the course of responding to COVID-19, we further adapted IT technology for efficient and creative measures such as the self-health check mobile app as well as the quarantine and protection app. This slide shows how the self-health check mobile app works. All inbound travelers are required to install this app on their smart phones and submit their health condition every day on the app for fourteen days. If they show symptoms of a COVID-19 infection for more than two consecutive days, KCDC and local health authorities follow up to take the necessary measures.



Social distancing campaign

Minute 00:21:43

The last strategy we emphasized is the social distancing campaign. After the peak of the transmission on February 29 we recommended to the public to practice social distancing. Although it was a recommendation back then, now we practice enhanced social distancing. We advised the public to cancel non-essential travel, events and social gatherings and to stay home as much as possible. High-risk facilities, such as religious facilities, indoor fitness facilities and nightlife venues, are strongly recommended to suspend operation. Venues that remain in operation must strictly comply with the infection prevention guidelines. All these recommendations are subject to administrative order.

Finally, I would like to emphasize that COVID-19 is a novel virus. We still need to learn more about its characteristics. Until now we have known that COVID-19 is highly infectious from its early stage and it spreads rapidly with cold-like symptoms. New technologies such as IT are required to enhance our national control and response measures as to develop innovative measures. Currently the world is experiencing a pandemic that we have never experienced in recent years. We really need to share information and work together to resolve all the challenges and overcome this crisis. I really hope our experience can help other countries to take effective measures against COVID-19 under their circumstances.

Questions and answers (moderated by William Savedoff)

Minute 00:24:25

Question from Octavio Martinez

Do you have three key suggestions for the countries in Latin America and the Caribbean? What would be the first three things you would recommend for them, especially given that many of the countries have limited resources?

Answer from Seon Kui Lee

Actually, I am not sure which stage or phase you are facing. Each country may have different phases or stages. But the most important thing that we are really concerned about is the preparedness for the next step. For every stage in Korea we overviewed our situation and evaluated our situation. We considered all kinds of scenarios and we always put the worst scenario first. And then we just tried to reorganize our system and our resources at every stage before something comes up.

Basically, we need some public health system that can respond to certain public health emergencies. You have to actually look at your public health system and you have to prioritize which resources and strategy you have to use.

In Korea we had full capacity of available resources of the lab testing. So, our first strategy was finding out about the cases as fast as possible. So early detection was really important. From our experience of the MERS outbreak in 2015, one imported case could lead to local transmission and further the progressing to the big clusters. So early detection was the first measure that we took. But you need the resources for lab testing. This is one of the strategies that I can suggest.

If you don't have these kinds of strategies you may use some kind of restrictions regarding the people, like strong social distancing strategies and maybe sometimes you have to use strong containment strategies. Also, another strategy you can implement is to have some kind of priorities to find out about certain population, especially for high-risk groups. You have to put your resources towards these high-risk groups, for example the elderly or some people with underlying diseases and some vulnerable because these are the groups that develop severe cases, which may lead to death. In order to protect them you have to put more resources to prevent their infection. Also, you have to look at the areas that might have a high risk of exposure

to these infection sources. So, all these kinds of strategies may should maybe done together or maybe prioritizing. I am sure there is no right answer but we have to try to find the possible appropriate answer for each circumstance and each stage.

Question from Claudia Rodriguez

How are you dealing with the strategy for people who have limited resources, especially when it comes to the recommendation that they self-isolate and they can't get to work? How are you dealing with more crowded areas and the disadvantaged people in more rural areas?

Answer from Seon Kui Lee

We are working with local governments and public health centers in the local governments. We take all kinds of measures and then the local governments usually decide about the possible measures regarding their residents. As you mentioned, rural areas may have different measures but usually in in Korea there are many elderly people living in rural areas. Actually sometimes, if they are sick, they cannot go to the hospital. For managing those people, you really need to look at the health care system within the area. But in the city, we have plenty of clinics and hospital but there are higher risks in certain contexts and higher transmission rates. In that case we will use both social distancing measures and maybe it is better to have an early detection of certain cases. And also, you have to look at the risk groups as well because the resources are always limited.

In the cities we do really try that the cases don't develop into clusters. If they become clusters you sometimes cannot manage all these clusters and it gets out of hand. So, when we find out about a case, we really go for the active contact tracing and, as I mentioned, the isolation of these contacts is very important in order not to further progress to big clusters. So different measures should be taken in the different areas.

Questions related to testing

Some of the questions we received are related to the sensitivity and specificity of the different types of tests? Are you using different ones for different purposes? Can you talk a bit about that?

Answer from Seon Kui Lee

In Korea for the confirmation of the cases we only use real time PCR. That is the only method that we are confirming the cases with. Actually, some of our Korean companies are still

developing rapid testing kits and other types of testing kits but we now consider that the accuracy is not as high as with the RTPCR. We have a certain capacity of performing PCR testing so we stick to this PCR testing but for countries, which do not have these PCR labs and all the things required, maybe for them these kind of rapid kits might be a good alternative. But still, as you mentioned, the sensitivity and accuracy we really need to have a very accurate testing because if we lose one confirmed case, one positive case, this person will transmit it to more people and we might have some big clusters. So, we recommend performing PCR testing in Korea right now.

Questions related to tracking

Related to that, several people have asked about the issues that come up in terms of tracking people and identifying them. When people drive-in is it all through cell phone identification how you interact with people and give them their test results? And more generally, there are ethical issues coming up in terms of the government knowing where people are and having this information. How does that play out in Korea?

Answer from Seon Kui Lee

Actually, there is kind of a misunderstanding. We don't take such measures for everyone. As I mentioned in my presentation, the basic method is the interview with these confirmed cases. If we get the accurate information from these cases we do not use or collect additional information. But sometimes for some confirmed cases their onset date of first symptoms is very far back in time from now. So sometimes people don't remember where they were, what they did or whom they met. In those cases, we get some additional information through tracing. That is only used for epidemiological purposes and we really have strict privacy measures so we don't look at everybody's location or things like that. We also open is information to the public through communicating only the locations they have visited which might cause some public health risks. If this person stayed at home or in a very isolated area, we don't publish these kinds of locations, only the locations that might have some concern from a public health perspective. This information is really treated very carefully and we only collect this additional information for epidemiological investigation purposes and this is actually authorized by the Act, the law. We are not doing this under normal circumstances but only under crisis circumstances. So, it is kind of a limited authority that we have under the Act.

Questions related to maintaining healthy economic activity

How do you maintain healthy economic activity? For example, regarding construction sites? What is done for micro- small- and medium-sized businesses to keep up incomes or to deal with lay-offs or closures?

Answer from Seon Kui Lee

We are really grateful to our public as well because their participation was very important for us. Some enterprises and entities voluntarily participated in our public health measures. Sometimes we are very surprised about their active participation in this. It was done because from the beginning our government had a transparent communication with our public. Our Korean citizens have great understanding and trust regarding the government's response. Strong public participation was important, as I mentioned and the key was to use all kind of possible measures to control such a crisis. Then our government decided to go for subsidies for small businesses and all the vulnerable groups. Currently we are considering these at the central level. Even the local governments have their own subsidies to support all this kind of economic loss or any kind of challenges that these businesses and also the people are facing.

Questions from Alvaro Carreno Katia de Pinho Campos

When you are communicating are there particular ways in which you use behavioral approaches to get the desired behaviors?

Answer from Seon Kui Lee

Yes, actually we do. Our government has at least two briefings every day, one briefing by the Ministry of Health and Welfare and one by the KCDC, mostly. And each time we give some messages and guidance to the public how they have to behave to prevent this kind of infection. And also, as you already know, we use all kinds of media and all kinds of means of communication. Risk communication is very important for changing the behavior of people. We have the division of risk communication at KCDC. They are very specialized and professional people who develop all kinds of materials for changing people's lives. Actually, currently we are having a very strong social distancing campaign and as I mentioned before we are now preparing for our school opening in early April. We are currently preparing for getting back to our new normal life gradually. So, we say the "new" normal life. It is not going to be the same life as we have lived before COVID-19. Even though we go back to normal life it will be different. We have to change our social lifestyles. Maybe we still have to avoid big gatherings and we have to behave in accordance with these infection control measures and all those things. Our government is preparing for all these guidelines and messages for how they can behave to go

back to the new normal life. During this time of the social distancing campaign we have been doing this preparation and then we will communicate more with our public about this for the next month.

Questions regarding mental health

How are you dealing, in this stage of the crisis, with mental health issues, psychosocial issues and the effect of people not being able to get to large gatherings and being isolated in their homes?

Answer from Seon Kui Lee

We are having physiological consulting service by phone by the academic society and also some clinics and hospital participate. We are giving this kind of service to our people to manage this crisis regarding the mental state. That is a very important thing and sometimes you need not only this kind of direct service but we also have to communicate in a very smart way. As I mentioned, this communication also includes kind of negative messages sometimes but we also need to include positive messages to make people not to be anxious about the crisis. We need the messages and the briefing messages to communicate with the public in a really appropriate and effective way and give them strong messages to do something and also comforting messages to ease their anxieties and the fears. So, this communication is very important in the middle of this infectious outbreak.

Question

How important has the coordination been between different levels of the government in terms of getting those messages across and also providing the local support networks that keep people from being actually isolated?

Answer from Seon Kui Lee

Every day our Prime Minister organizes a meeting with the entire government. We always have discussions where all the Ministries participate. We are discussing and trying to have the same messages from the government side. So, all these briefings have one voice and for all the communications we really try to have one-voice messages. So, if there are messages for a certain group of people, like messages for young people, messages for health care workers, messages to the elderly or all these types of messages, we all work together in the government. If there are certain kinds of challenges that each Ministry faces, for example the Ministry of Education is preparing for the school opening next month, we actually have a special meeting

between the ministries to have some internal consultation and discussion to develop the guidelines or certain protocols for the schools and the students. Every day we have a lot of meetings on special subjects and all the meetings are multi-Ministry meetings. In the crisis level IV, the whole government is working together. This is why we have this kind of alert levels in our government. If we reach the highest level, which is controlled by the prime minister, then all the Ministries gather and work together.

***Questions regarding protective equipment and masks, in particular
Could you tell us a bit about both, of how you are protecting health care workers in terms of protective equipment and other people in other areas, which might be vulnerable and the general use of masks by the population. Is that encouraged or not and if so, how do you manage that?***

Answer from Seon Kui Lee

Especially regarding the PPEs (Personal Protective Equipment), at KCDC to prepare for this kind of national crisis we already had our own stock. And then when the outbreak started, we actually distributed the special PPEs to the health care practitioners and health care workers. We tried to maintain a certain number of PPEs, like a stock, so that the health care workers can use these PPEs sufficiently. But we have also considered certain phases when we could be out of stock and we had some kind of priorities of distributing these PPEs to the health care workers who are treating the severe cases in the ICUs and the health care providers, tertiary hospitals and things like that.

But currently we have this situation under control regarding the health care providers. If they inquire the PPEs to the KCDC we try to send and distribute our units. And for the general public we recommended to the public to wear the masks if they have symptoms. That was the principle for the risk communication. But currently we found out that these COVID-19 shows very mild symptoms and sometimes there are asymptomatic cases. So, in that case some people who are in contact with a lot of people we recommend to those people - for example those who give services to people or who meet a lot of people - to wear the mask for their personal protection.

For the high-risk groups we recommended to wear these masks. Actually, we consider the masks to be very effective but because of the limited resources we sometimes have to prioritize these resources. Currently we had some kind of shortage of masks in the general public. Now our government is providing the public masks sales. Each person can buy two masks a week on a certain day. So, they are very reasonably priced, at \$1.5 for each mask, and they can buy two

pieces of masks per week. So that is our government's public service to the public. And then we are actually controlling all the distribution and stocks of these masks currently nationwide.



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