

FRS - KF KOREA PROGRAM ON SECURITY AND DIPLOMACY

“In Korea, information and communication technologies play a valuable part in the swift and accurate implementation of infectious disease prevention and control policies”

Conversation with Minister Park & Director Jeong, June 2020



Park Neunghoo has been the Minister of Health and Welfare of the Republic of Korea since July 2017. A Professor at the Department of social welfare at Kyonggi University, he was the Dean of the Graduate School of administration & social welfare (2013-2015) and the President of the Korean Social Security Association (2016). He holds a PhD in social welfare from UC, Berkeley.



Jeong Eunbyeong has been the vice-Minister of Health and Welfare and the Director of the Korea Centers for Disease Control and Prevention (KCDC) since 2017. Previously, she was the Director of the Center for Public Health Emergency Preparedness and Response at the KCDC (2016). She holds a PhD in preventive medicine from Seoul National University.

South Korea is a model of success in managing the Covid-19 epidemic. It was the first democracy to experience a major outbreak and to quickly and decisively flatten the curve of new infections. On June 9th, the total number of confirmed cases was 11,852 (including 1,300 imported cases) and 274 deaths related to Covid-19. However, many misconceptions remain on the country's sanitary response. This conversation with Minister Park and Director Jeong aims at providing a better understanding to the European audience.

Q1: Korea successfully flattened the curve on Covid-19 in only 20 days, through a control strategy relying on 3 Ts: testing, tracing and treating. While the diagnostic testing capacity in some European countries was limited at first, how did Korea achieve in such a short time such a high testing capacity? Why was it instrumental in implementing the broader strategy?

There is a total of 118 institutions available for diagnostic tests: the Korea Centers for Disease Control and Prevention, 4 National Quarantine Stations, 18 Institutes of Health and Environment, and 95 private clinical laboratories and

hospitals. On average, 15,000 tests (max. 20,000) can be performed per day. The relatively fast expansion of testing capacity was made possible thanks to active collaborative efforts between the government, the academia, and the private sector.

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The KCDC quickly developed a test and disclosed it. Based on this, a first company developed and produced diagnostic reagent. Upon evaluation by government and medical academic experts, the reagent was granted emergency use authorization by the Ministry of Food and Drug Safety Testing facilities across the nation then began using the test. To ensure accuracy of the tests performed, Covid-19 testing centers

were selected by KCDC from testing facilities that had been certified for outstanding quality. They also received additional training and passed external quality assessment. The testing quality of each center is maintained by quality assurance by KCDC and academic experts.

Q2: Korea vigorously tracked those who had been in contact with confirmed cases and even developed a self-quarantine safety protection app. Could you please elaborate on how Korea's comprehensive response against Covid-19 used ICT and other innovative technologies?

○ Korea is employing advanced ICT throughout the infectious disease prevention and control process, including contact tracing and quarantine monitoring.

First, in the process of epidemiological investigation, when tracing those who have come into close contact with the confirmed cases, we utilized CCTV footage, mobile phone location data, and credit card transaction history when necessary. Furthermore, the Korean government also launched the COVID-19 Epidemiological Investigation Support System, a centralized data collection and multi-agency coordination platform, which has allowed for even more rapid and effective epidemiological investigation.

Second, forms of ICT are used to help with more effective quarantine monitoring. Persons subject to self-quarantine, such as close contacts of confirmed cases are required to download an app called Self-quarantine Safety Mobile App onto their smartphones and self-report their symptoms on the app during their self-quarantine period. With a GPS-based location tracking function, this app notifies the assigned staff if the person leaves the designated quarantine area.

Thirdly, to accurately monitor the health status of inbound travelers undergoing the point-of-entry screening on their arrival, the Korean Government introduced the Special Entry Procedure. All those entering Korea from abroad are required to go through the procedure. And it is obligatory to download the Self-health Check Mobile App onto their smartphones and to check their own health on this twice a day. In the case that travelers do show symptoms, the health authorities render assistance for them to get tested.

Lastly, for patients with mild symptoms who have been accommodated under quarantine in temporarily

repurposed corporate and public training facilities (called 'Community Treatment Centers) and monitored by a small number of healthcare staff, ICT is being used to provide them with health monitoring services and medical consultations.

Accordingly, ICT plays a valuable part in the swift and accurate implementation of infectious disease prevention and control policies. And indeed, it is of value in overcoming the relative lack of sufficient administrative staff in the process.

We believe it is also important to strike a proper balance between protection of personal information and public health when utilizing ICT. Therefore, it is necessary to carry out prevention and control activities based on laws and regulations as well as social consensus.

Q3: There is growing debate in France on the necessity to track potentially infected people. Yet, many are afraid of an abusive use of technologies to monitor people, especially in terms of exposing people's privacy? How has Korea succeeded in reconciling health requirements, use of technology and privacy concerns?

Currently, we DO NOT trace and track all the potentially infected people. We only trace and track confirmed cases and their contacts. Also, information required for epidemiological investigation can only be collected and/or used within the scope permitted by the Infectious Disease Control and Prevention Act.

Privacy-sensitive data such as cellular GPS logs, credit card transaction logs, and camera footage are NOT collected for every confirmed Covid-19 patient. The need to collect such data is carefully assessed based on the result of preliminary investigation through patient interviews. From our experience, some patients provide inaccurate or partial information during interview, either unintentionally or deliberately, while some others have trouble recalling every location they have visited from their memory.

For certain infectious diseases, such information gaps may be detrimental to disease control efforts and put the general population at great risk. Our investigators do their best to gather as much information as possible by first interviewing patients, their family, and/or healthcare workers. If, despite their efforts, there is still not enough information to identify the infection source

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and/or contacts, relevant personal data is collected if available. Information collected during epidemiological investigation is managed as safely as possible with strict security measures in place and is destroyed when the investigation is over, as required by law.

Q4: NIH Director Kwon recently warned there could be an “unexpected, explosive spread of Covid-19 anytime, even tomorrow”. My question is two-fold. How do you explain the Korean society’s excellent preparedness before the epidemic and how is the society preparing for a potential new outbreak?

Drawing upon the experience of domestic MERS outbreak in 2015, the Korean Government formulated and implemented 48 policy tasks to reform the nation’s epidemic control system and improve healthcare environment, to prevent importation of future emerging infectious diseases, enable early detection, and prevent community spread.

Such efforts enabled Korea to respond more promptly and systematically when MERS appeared again in 2018. When a suspected patient visited a healthcare facility, the healthcare staff quickly isolated the patient and reported the case to the authorities. Local public health centers responded promptly and systematically. The Emergency Operation Center within the Korea Centers for Disease Control and Prevention (KCDC) operated as the control tower 24/7. Once the patient was confirmed with a diagnostic test, the KCDC, in accordance with the standard manual for infectious disease crisis management, promptly established the Central Disease Control Headquarters and worked closely with other relevant authorities including the Ministry of Interior and Safety, Ministry of Justice, Ministry of Foreign Affairs, and National Police Agency as well as local authorities and the healthcare sector to prevent further spread of the disease to community.

The amended Infectious Disease Control and Prevention Act allowed more active epidemiological investigation and response. The improved healthcare environment and the increased number of nationally designated hospital beds also played a role in preventing the occurrence of additional cases.

Furthermore, the Korean government put consistent effort to transparently communicate with the public and ease people’s anxiety, sharing information about the locations that confirmed patients had visited and how

the government was responding to the situation and operating a call center (1339) and a risk communication team.

Such preparedness and active response enabled Korean society to be better ready to respond to outbreaks of infectious diseases.

Korea will continue to prepare for potential future outbreaks of emerging or re-emerging infectious diseases through various public health emergency preparedness efforts including risk assessment and other methods mentioned above.

Q5: President Moon recently told Estonian President Kaljulaid that “there will be a lot of room for cooperation on Covid-19 responses”. In concrete terms, how could Korea and European countries better cooperate in epidemic prevention and control? If you have one advice for French and Europeans decision-makers, which one would it be?

Whilst of course the individual efforts by each respective country are of great importance for a return to normal life and the recovery of the economy, given the new post-Covid-19 context, cooperation in the international community, including of course the countries of Europe, is imperative. If Korean and European countries can exchange information relating to Covid-19, for example, each country’s responses to this crisis, the characteristics of patients and an analysis of information, in a quick and transparent manner, we believe that we can take further steps forward towards overcoming this health crisis.

What is more, considering that the development of vaccines and treatments is a difficult task to achieve through the efforts of one country alone, the cooperation between Korea and European countries in this area would be of real value not only in enhancing the international community’s capacity to respond to epidemic crisis such as Covid-19 but indeed the realization of human security.

Every country – France or any other European countries – have their own distinct demographic and geographic features – and they have their own economic and cultural background. Given this, it might not be feasible to directly apply the experience of Korea in European countries. However, there are certain common elements that may be important for all countries in responding to Covid-19 crisis.

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First, "solidarity and cooperation" among members of the society is key - as this new infectious disease, which spreads rapidly, is indiscriminate and makes no distinction between race and region and there is truly a need for a sense of solidarity and for all of us to cooperate. In Korea, the public has demonstrated an attitude of mature citizenship by willingly participating in social distancing. And this has helped greatly in containing infection within the community.

Second, as there is not much information available on emerging infectious diseases, we should keep in mind that there is always the possibility of making mistaken decisions. Considering this, whilst there is a need to make bold decisions, yet at the same time we should be ready to rethink these if necessary. To give you one example, once we realized that there had been an asymptomatic case, we allowed a person suspected of being infected can be tested regardless of any symptoms. And at the stage when there was a massive number of patients with only mild symptoms who did not require hospitalization, we adapted our strategy by placing them under the care of Community Treatment Centers.

In summary, I would like to emphasize that making efforts to: a) lower the fatality rate of high risk groups such as the elderly or those with existing medical conditions; b) take active steps to identify positive cases to prevent community acquired infection; and c) provide information in a prompt and transparent manner, on a basis of scientific facts and civic engagement, will be powerful tools for overcoming this Covid-19 crisis.

Interview conducted in June 2020 by Antoine Bondaz, Ph.D.

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Excerpt from Infectious Disease Control and Prevention Act:

Article 76-2 (Request to Provide Information, etc.)

(1) If necessary to prevent infectious diseases and block the spread of infection, the Minister of Health and Welfare or the Director of the Korea Centers for Disease Control and Prevention may request the heads of relevant central administrative agencies (including affiliated agencies and responsible administrative agencies thereof), the heads of local governments (including superintendents of education prescribed in Article 18 of the Local Education Autonomy Act), public institutions designated under Article 4 of the Act on the Management of Public Institutions, medical institutions, pharmacies, corporations, organizations, and individuals to provide the following information concerning patients, etc. with infectious diseases and persons likely to be infected by infectious diseases, and persons in receipt of such request shall comply therewith:

1. Personal information, such as names, resident registration numbers prescribed in Article 7-2 (1) of the Resident Registration Act, addresses, and telephone numbers (including cell phone numbers);
2. Prescriptions prescribed in Article 17 of the Medical Service Act, records of medical treatment prescribed in Article 22 of the same Act, etc.;
3. Records of immigration control during the period determined by the Minister of Health and Welfare;
4. Other information prescribed by Presidential Decree for monitoring the movement paths of patients with infectious diseases.

<Amended by Act No. 14286, Dec. 2, 2016>

(2) If necessary to prevent infectious diseases and block the spread of infection, the Minister of Health and Welfare may request the relevant head of the National Police Agency, regional police agency, and police station established under Article 2 of the Police Act (hereafter in this Article, referred to as "police agency") to provide location information of patients, etc. with an infectious disease and persons likely to be infected by an infectious disease. In such cases, notwithstanding Article 15 of the Act on the Protection, Use, etc. of Location Information and Article 3 of the Protection of Communications Secrets Act, the relevant head of a police agency, upon request by the Minister of Health and Welfare, may request any location information provider defined in Article 5 (7) of the Act on the Protection, Use, etc. of Location Information and any telecommunications business operator defined in subparagraph 8 of Article 2 of the Telecommunications Business Act, to provide location information of patients, etc. with an infectious disease and persons likely to be infected by an infectious disease; and the location information provider and the telecommunications business operator in receipt of such request shall comply therewith, except in extenuating circumstances.

<Amended by Act No. 13639, Dec. 29, 2015>