

# No need for blockade, Korea still controlled Covid-19, thanks to the bloody lesson in MERS 2015 epidemic.

The price they paid 5 years ago was 36 lives of doctors, patients and their relatives, from a single case of super-infection.

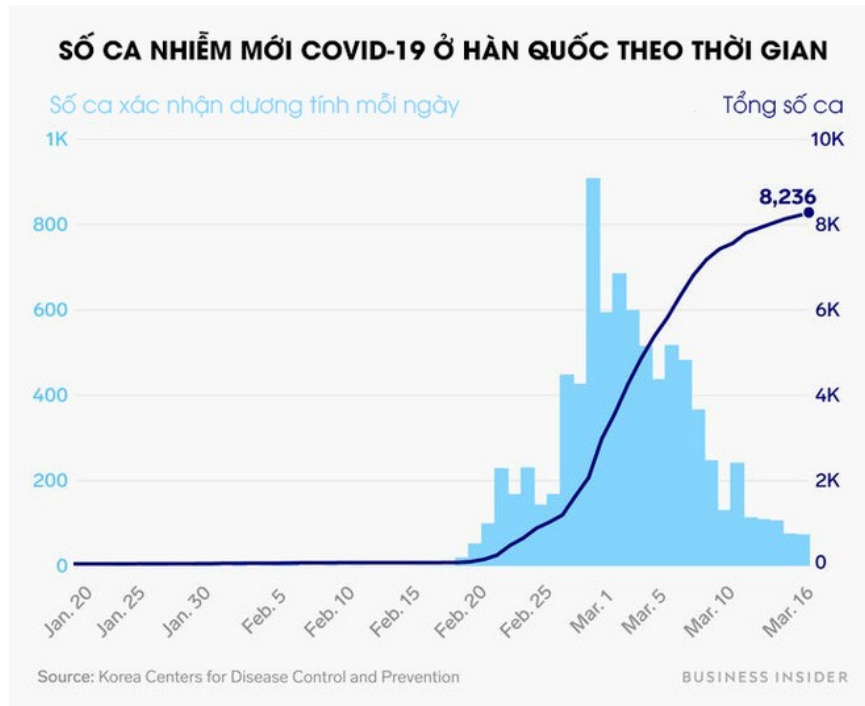
Europe is currently the focus of the Covid-19 pandemic. Spain, France, Germany and especially Italy have seen an increase in the number of infections and deaths in recent days. Many EU member states have had to impose blockade and border closures.

Meanwhile, the US test system is in trouble so experts can only guess, the actual situation in the US is on the same trajectory with European countries.

Amid these devastating trends, South Korea has emerged as a glimmer of hope, a model for other countries to learn. The country of 50 million seems to be doing a good job of curbing the spread of Covid-19.

South Korea reported only 93 new infections yesterday on March 18, down from 909 at the peak of the epidemic on Feb. 29. And they did this without blocking cities like China.





" *Korea is a democratic republic, we feel blockade is not a reasonable option,* " said Kim Woo-Joo, an infectious disease expert at Korea University.

South Korea's success may become a reference lesson for other countries, but it is also a warning: Even after the number of new infections has decreased day by day, the country is still preparing for a wave of Covid-19 increased again.

### **Batch testing strategy**

Behind the success of Korea, it is impossible not to mention the expanded Covid-19 testing strategy, which is considered to be the best testing program in the world.

While some countries still do not have enough Covid-19 test kits to diagnose suspicious patients, Korea has provided free quick test kits to every patient whom the doctor finds they need. have to do tests.

The Korea Centers for Disease Control and Prevention (KCDC) knows the country has 118 health facilities that can perform Covid-19 diagnostic tests. All are under supervision and must be reported to KCDC.



Behind the success of Korea, it is impossible not to mention the expanded Covid-19 testing strategy, which is considered to be the best testing program in the world.

According to the Worldometer website, South Korea now tests Covid-19 for more than 270,000 people, equivalent to more than 5,200 tests per 1 million people. That's a higher rate than any other country in the world, except for tiny Bahrain.

In comparison, the United States currently only performs 74 tests per 1 million people, according to data recorded by the US Centers for Disease Control and Prevention.

In addition to testing to find infected people, South Korea implemented a thorough isolation strategy and sought to isolate those who had contact with them.

Korean experience shows that "*large-scale diagnostic capabilities are key to disease control*," said Raina MacIntyre, an emerging infectious disease scholar at the University of New South Wales, Sydney.

*"Tracking those who have come into contact also has a great influence in controlling the epidemic, and so is the isolation measure for these cases."*

However, whether Korea will continue to maintain its success is still a question with no clear answer.

The number of new cases of Covid-19 has decreased in recent days, largely due to an effort to investigate a huge cluster of more than 5,000 cases, accounting for 60% of the total number of cases in Korea. This cluster of infections involves members of a heretical organization called the New Heavenly Sect.

Focusing on quelling this outbreak may have left South Korea unattended in other outbreak areas, said Oh Myoung-Don, an infectious disease expert at Seoul National University.

New Covid-19 infection clusters are currently appearing. Since last week, South Korean authorities have reported 129 new cases, most of which have been linked to a phone exchange in Seoul. "*This could be the start of a disease outbreak in the community,*" in Seoul and surrounding areas of Gyeonggi Province, Kim said.

The population of this region is currently about 23 million.

### **Lessons of Korean blood in the MERS epidemic**

South Korea has learned the importance of preparing for an epidemic, at a cost not cheap. In 2015, a Korean businessman suffered from Middle East Respiratory Syndrome (MERS) after returning from a visit to three countries in the region. He was treated at three medical facilities in Korea, before being diagnosed with MERS and then isolated.

This period of time is sufficient for a superinfection process to occur. This man passed the MERS virus to 186 others and killed 36 of them. Deaths include hospital health workers, patients hospitalized with another illness, and family members visiting them.



Korea had a bloody lesson in the MERS epidemic.

It took South Korea two months to test and isolate nearly 17,000 people to quell the outbreak that year. The specter of an escape virus has put the whole country on alert and crippling the economy.

*"That experience has shown that laboratory testing is essential to control an emerging infectious disease," Oh said. "In addition, our experience in the MERS outbreak has certainly helped us improve our control and prevention of cross-contamination in hospitals."*

So far, South Korea has not reported any cases of Covid-19 infection among its healthcare workers, he said.

Post-MERS law amendments also allowed government agencies to collect cell phones, credit cards and other data from every patient who tested positive, to redraw the latest schedule. their.

This information is no longer considered personal information, and will be shared on social media apps, allowing people to determine if they have ever met an infected person.

The Korea Centers for Disease Control and Prevention (KCDC) said that shortly after the corona virus emerged in China, they embarked on a race to develop a method for testing the virus. KCDC also cooperates with manufacturers to develop a commercial test kit.

The process ended on February 7, when South Korea recorded only a few cases of Covid-19 infection. Shortly thereafter, the test kit was distributed to medical centers in each locality.

It took 11 days for the incident to occur. A 61-year-old woman who is a member of the New Heavenly Sect denies positive for Covid-19. While suffering from the disease and having symptoms, the woman known as Patient No. 31 attended the February 9 and 16 ceremonies at a denominational church in Daegu, about 240 km from Seoul. southeast.

According to local reports, there were more than 500 devotees sitting on the floor by the church to participate in a 2-hour ceremony.

In just 12 days, South Korea identified more than 2,900 cases of Covid-19 infection, the majority being members of the New Heavenly Sect. On February 29 alone, KCDC reported more than 900 new infections, bringing the cumulative number of cases to 3,150. Korea, at that time, became the largest outbreak outside of mainland China.



Before the outbreak of Covid-19 in South Korea, the country distributed enough test kits to each locality.

This rising wave initially overwhelmed the KCDC testing system, with 130 of its employees constantly working but also overloaded, Kim said. Attempts to track contacts were concentrated in the Tan Thien Dia cluster, in which 80% of the believers reported respiratory symptoms showed positive results, compared with only 10% in other clusters.

Patients at high risk for underlying background diseases are given priority for hospitalization. Moderately symptomatic individuals are sent to requisitioned field facilities, where they receive basic medical supervision and assistance.

Those who recover and have a negative test result twice are released. People who have close contact with the patient but only have very mild symptoms, family members who do not have chronic illnesses, and those who

can measure their own body temperature are required to isolate themselves for 2 weeks.

A local health monitoring team will call them twice daily to ensure that isolation is taken seriously, and monitor symptoms if they progress badly. Those who violate quarantine face fines of up to 3 million won (equivalent to more than 55 million VND). If a recent bill becomes law, the fine will be up to 10 million won and the maximum is a year in prison.

However, despite these strong efforts, the wave of patients still overloaded hospitals in the Daegu-Gyeongbuk area. They have full room for seriously ill people. According to local media, at least 4 patients died when they had to wait for their beds at home to get worse.

Overall, however, the number of new Covid-19 infections in Korea has decreased in the past two weeks. Part of that result comes from the people in the Daegu-Gyeongbuk region and the whole of Korea self-consciously taking measures to keep social distance.

The government advises people to wear masks, wash their hands, avoid gathering in crowds and delay unnecessary meetings. Those who can work remotely should stay at home, and religious activities should be organized online instead of everyone having to go to church.

In particular, those with a fever or respiratory illness are encouraged to stay home and monitor their symptoms for 3 to 4 days. Chun Byung-Chul, an epidemiologist at Korea University, said the Koreans were shocked by the contagious cluster in New Heaven, which prompted them to adhere to preventive measures. Less than 1 month after Patient No. 31, "*this infection cluster is under good control*," Oh added.

However, new Covid-19 clusters are emerging and 20% of all virus-positive cases say they are not sure how they were infected. This suggests that in Korea there are still sources of spread in the undiscovered community.

*"As long as this uncertainty persists, we cannot say that the epidemic has passed its peak,"* Chun said.

### **Need more data**

The South Korean government now hopes it can control the new infection clusters in the same way it faced the cluster in New Heaven. Korea's power now allows them to test 15,000 cases a day, a staggering number.

South Korea has also deployed 43 testing stations right on the highway. Drivers will pass through it, stopping for a moment for health-care workers wearing full body protective gear to sample fluid from their throat and nose.

This medical checkup takes only a few minutes and neither the driver nor the passenger need to leave their vehicle. This mobile testing model is being followed by countries like the United States, Canada and the United Kingdom.



South Korea has deployed 43 testing stations right on the national highway. This model is being followed by countries like the United States, Canada and the United Kingdom.

In the first week of March, the South Korean Ministry of the Interior launched a smartphone app that can track compliance and collect data on the symptoms of quarantine.

In South Korea, the Centers for Disease Control and Prevention is constantly updating reports on the number of cases and deaths from Covid-19 every day. These reports contain basic information about patients such as age, gender and size of infectious clusters.

However, Chun said scientists like him are eager to get more epidemiological data. " *That's not enough,* " Chun said. " *Actually, we are standing still.* "

He and others wanted to study the individual patient's detailed data, allowing epidemiologists to model outbreaks and predict the number of new infections from each case. This number is also known as the basic transmission coefficient  $R_0$ .

Chun also wants to determine the average interval from when a patient is exposed to a virus, until symptoms appear. There is also a question of whether early diagnosis improves treatment outcomes for Covid-19 patients.

Chun and a team of epidemiologists and scientists in South Korea have proposed working with KCDC to collect and share such information. " *And we are waiting for their response,* " he said.

For his part, Kim said medical doctors are also planning to share details about the clinical characteristics of each Covid-19 case in the country. They will start publishing scientific papers about them. " *We hope our experience will help other countries control this Covid-19 pandemic,* " Kim said.

Refer to *Sciencemag*

You finished reading the article "**No need for blockade, Korea still controlled Covid-19, thanks to the bloody lesson in MERS 2015 epidemic.**" edited by the [TipsMake](#) team. We hope this article has provided you with many useful tech tips and tricks. You can search for similar articles on tips and guides. Thank you for reading and for following us regularly.

