Trace, Test, Triage & Treat COVID-19 in Korea

Myongji Hospital, Korea
Epidemiologic curve in Korea

1. First phase:
   - The first confirmed case was identified (1/20)
   - Confirmed its 31st case in Daegu, a member of the Shincheonji religious organization (2/18)
   - WHO declared COVID-19 as a pandemic (3/11)

2. Second phase:
   - Over 10,000 confirmed cases were reported (4/9)
   - Itaewon clubs clusters emerged (5/9)

3. Third phase:
   - As of 22-Jun, Source: KCDC
Epidemiologic curve in Korea
Epidemiologic curve in Korea

2 phase

3 phase

Daegu, Gyungbuk

Seoul, Gyeonggi, Incheon

as of 22-Jun, Source: KCDC
Demographics & Case fatality rate

Confirmed cases by age

- Male: 42.7%
- Female: 57.3%

Overall case fatality rate: 2.2%

High risk groups: old age (60 and above, patients with underlying diseases)

as of 22-Jun, Source: KCDC
Korea’s 4 Key Strategies against COVID-19

1. Transparency & Openness
2. Containment & Mitigation
3. Triage & Treatment system
4. Massive screening & Fast tracking
Transparency & Openness

Transparent and open communication
Transparency & Openness

No imposed regional blockade in Daegu

International entry is open
Containment & Mitigation

Employs a two-pronged approach to contain the virus namely, containment and mitigation.
Containment & Mitigation

Social distancing has been adopted not forcibly but by inducing voluntary civic participation.

Hold on!
Let’s take a break from social life

Social Distancing Campaign to Prevent the Spread of COVID-19

Please keep the following rules for 2 weeks:

1. Refrain from going outdoors and avoid physical contact with others.
2. Keep in touch with people through social media instead of meeting them in person.
3. Keep your personal hygiene by washing your hands and wearing a mask.

This campaign is based on the recommendations of the COVID-19 Countermeasures Committee (Feb. 29) and the Korean Medical Association (Feb. 28).

Before visiting the hospital, please call: 1330 / 1345 / 120
Triage & Treatment system

5% Severe
14%
81% Mild to Moderate

Cases that were not identified and not diagnosed
Triage & Treatment system

- 5% Severe
- 14% Severe
- 81% Mild to Moderate

Cases that were not identified and not diagnosed

5,000 beds

Community treatment centers
Triage & Treatment system

- 81% Mild to Moderate
- 14% Severe
- 5% Public community hospitals

Cases that were not identified and not diagnosed

1,000 beds
Triage & Treatment system

- Critical: 5%
- Severe: 14%
- Mild to Moderate: 81%

Cases that were not identified and not diagnosed

- National designated hospitals for infectious disease: 29
- Tertiary care hospitals: 30
- Negative pressure isolated units: 500
Massive screening & fast tracking

**EUA-granted diagnostic kits in Korea**

<table>
<thead>
<tr>
<th>Company</th>
<th>Approved</th>
<th>Weekly supply (kits)</th>
<th>Weekly Diagnostic Capability (people)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kogene Biotech</td>
<td>Feb. 4</td>
<td>10,000</td>
<td>250,000</td>
</tr>
<tr>
<td>Seegene</td>
<td>Feb. 12</td>
<td>1,000</td>
<td>30,000</td>
</tr>
<tr>
<td>Solgent</td>
<td>Feb. 27</td>
<td>1,000</td>
<td>50,000</td>
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<tr>
<td>SD Biosensor</td>
<td>Feb. 27</td>
<td>2,000</td>
<td>100,000</td>
</tr>
<tr>
<td>BioSewoom</td>
<td>Mar. 16</td>
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<td></td>
</tr>
</tbody>
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**EUA: Emergency Use Authorizations**
Massive screening & fast tracking

Korea developed ‘drive-thru’ and ‘walk-thru’ test centers for COVID-19.
Massive screening & fast tracking

20,000 people are being tested every day

100 laboratories to test for SARS-CoV-2
New normal in COVID-19 era: 3 possible futures for the pandemic

1. "Peaks and valleys." In this scenario, the current wave — the second and highest wave on the chart below — will recede over the summer and then be followed by additional waves of similar magnitude for one to two years. The severity will vary by region and country. Different cities and countries may reimplement restrictions and mitigation measures.

2. "Fall peak." The current wave would recede over the summer, as in the first scenario. But then we would be hit with a far more severe wave this fall. This is what happened in the 1918-19 "Great Influenza" pandemic, as well as less devastating flu pandemics in 1957-58 and 2009-10.

3. "Slow burn." The most encouraging scenario. The current wave is by far the worst. And then the pandemic smolders for an additional few years while life goes on.

Source: Infectious Research Institute in Minnesota University
New normal in COVID-19 era: *what we have to do for the future*

1. Balance between trace and privacy: establish a best way for surveillance in each community level nationwide.

2. Develop a new healthcare system to prepare for the next wave

3. Compromise between the COVID-19 control and economy
New normal in COVID-19 era: *General election on 15 Apr.*

About 14,000 polling stations were open at 6 a.m. around the country after disinfection, and voters were required to wear a mask and have a temperature check upon arrival.
New normal in COVID-19 era: *Distancing in daily life*

‘Distancing in daily life’

to begin *May 6*

under lifestyle quarantine
Myongji Hospital
Dual track healthcare system: 5 key components

1. Space compartmentalization and manpower delegation for COVID-19 patients.
2. Use of a buffer zone
3. Secure protected areas in the ED and OPD
4. Competent in-house COVID-19 testing laboratory
5. Real-time communication technology
Dual track system in Myongji Hospital

COVID-19 zone

E5 COVID-19 ward Total beds: 27
Occupied beds: 4, vacant beds: 23

A5 A6 A7 A8 General wards

Buffs zone

E4 Admission screening unit Total beds: 37
Occupied beds: 17, vacant beds: 20

C4 C5 General wards

E3 Pneumonia surveillance unit Total beds: 33
Occupied beds: 16, vacant beds: 18

D4 D5 D6 General wards

E2 ICU for COVID-19 patients Total beds: 13
Occupied beds: 5, vacant beds: 8

ICU ICU for non-COVID-19 patients

M Psychiatric ward

Non COVID-19 zone

Total beds: 209
Occupied beds: 191, vacant beds: 12

Total beds: 114
Occupied beds: 104, vacant beds: 10

Total beds: 43
Occupied beds: 48

Total beds: 25
Occupied beds: 20, vacant beds: 5
Dual track system in Myongji Hospital
Thank you for your attention