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The impact of COVID-19 on long-term care in South Korea and measures to address it

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1. Key findings

- South Korea has not implemented massive lockdowns but the population has adhered to social distancing rules and cooperated to reduce the spread of the disease.
- Key population-level measures that have worked well include: extensive testing and tracing using information technology; tests and treatments at no or low cost and covered by the health system; transparent communication between government and the public; extensive use of epidemiological data and travel route information.
- More aggressive approaches were used to contain the spread of COVID-19 in long-term care institutions and social welfare facilities, including nationwide monitoring and inspections, and cohort quarantines of selected facilities.
- So far, of 247 deaths linked to COVID-19 in South Korea on the 30th of April, 20 (8.1%) were people presumed to have been infected in nursing homes, and another 64 deaths (25.9% of the total) in Long-Term Care Hospitals. Deaths in both types of settings would amount to 37.6% of the total. However, there were no deaths in nursing homes as all residents with potential COVID infections were transferred to hospitals.
- Additional preventative and supportive measures for long-term care institutions include temporary re-imbusement packages, low-cost masks for care workers and provision of guidelines.
- No massive infections in long-term care facilities have occurred after these measures were implemented.
- Containment measures for home-based care services have been relatively weak in comparison and have resulted in a reduction in people accessing these services and lack of support for unpaid carers.

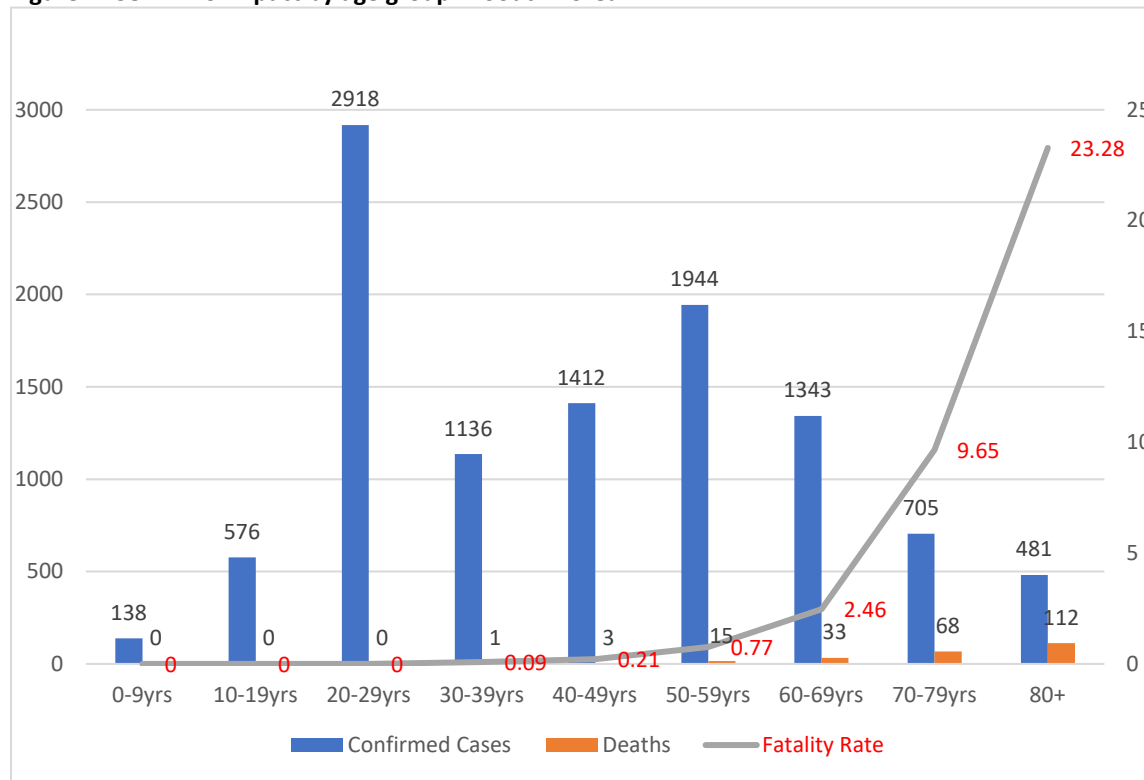
2. Impact of the COVID-19 outbreak in South Korea so far

2.1. Number of positive cases in population and deaths

The first case of COVID-19 in Korea was reported on January 19 (1), and the number of confirmed cases remained low until a mass infection spread from a single religious group, Shincheonji Church in Daegu, a city in the southeast region of Korea, in mid-February (2). The number of new cases per day surged up to 909 on February 29, and it dropped to 78 on March 30. The number of newly confirmed cases per day fell below twenty (18) for the first time on April 18 (3).

As of April 18, the number of confirmed cases is 10,653, among which the age group with the highest number of infections is those in their twenties (n=2,918, 27.39%), which is primarily due to the Shincheonji Church-related mass outbreak in February and later. The fatality rate is, however, highest among the older adult population; the rate is 2.46 and 9.65 for those in their 60s and 70s, respectively, and it drastically increases up to 23.28% for those in their 80s (confirmed: n=481, died: n=112, Figure 1).

Figure 1. COVID-19 impact by age group in South Korea



Data Source: ncov.mohw.go.kr (accessed on April 18, 2020).

The incidence rate of COVID-19 per 100,000 people was highest for those in their 20s (42.61), followed by those in their 80s (25.27). The proportion of severe and very severe patients was significantly higher in people aged 60 and above (Table 1)

Table 1. The incidence and severity of COVID patients by age group

Age group	Incidence ¹	Patient Severity		
		Total	Severe	Very Severe
		n	n (%)	n (%)
0-9	3.25	0	0 (0.0)	0 (0.0)
10-19	11.58	0	0 (0.0)	0 (0.0)
20-29	42.61	2	2 (10.0)	0 (0.0)
30-39	16.07	0	0 (0.0)	0 (0.0)
40-49	16.81	3	0 (0.0)	3 (7.3)
50-59	22.38	4	1 (5.0)	3 (7.3)
60-69	21.14	13	4 (20.0)	9 (22.0)

70-79	19.49	30	11 (55.0)	19 (46.3)
80+	25.27	9	2 (10.0)	7 (17.1)
Total	20.47	61	20 (100.0)	41 (100.0)

¹Cumulative incidence of COVID-19 per 100,000 people since January 2020.

Source: Korea Centers for Disease Control and Prevention (KCDC)’s briefing report on COVID-19 (April 16, 2020; 4).

Along with the infection in the general population, mass infections of patients in long-term care hospitals (LTCHs) and psychiatric hospitals have also been reported. According to the Korean Convalescent (long-term care) Hospital Association, a total of 389 patients or care workers in twenty-five LTCHs were infected by COVID-19, and four LTCHs were put in cohort isolation (group quarantine) as of April 16, 2020 (5).

As of April 30, there have been a total of 247 deaths due to COVID-19 since February 19, when the first death occurred (4). The overall fatality rate is 2.29%, but the rate increases up to 14.2% (n=35) for people in their 60s, 30.0% for those in their 70s (n=74), and 47.8% for those in their 80s (n=118). As for the route of the infection, more than half of the fatal cases (53.4%) were infected at hospitals or institutions. Among newly infected cases (n=152) during the recent two weeks (April 16-April 30), the majority of people were infected abroad (returnees; 63.2%), and slightly less than one tenth (n=15, 9.9%) were infected in health- or care-related institutions. Only three COVID-19 patients have died at home (1.2%); all others have died in inpatient units (91.9%) or emergency departments (6.9%).

Out of the 247 deaths linked to COVID-19 in South Korea by the 30th April, 29 (8.1%) were people presumed to have been infected in nursing homes. When serious health conditions occur, residents are transferred to hospitals, so no deaths linked to COVID-19 have been recorded in nursing homes. Another 64 deaths (25.9% of the total) were of people presumed to have been infected in LTCHs (these are hospitals that are mostly used by older people with long-term care needs and also patients aged 64 or below with post-acute care needs).

Concerning the impacts of COVID-19 on the long-term care (LTC) system, the National Health Insurance Services, the insurer of the public long-term care insurance (LTCI), has temporarily stopped providing the eligibility test for potential beneficiaries, since it requires in-person interviews and assessments of older people and families (7). Also, the certificate tests associated with the supply of the LTC workforce have been cancelled; if this continues, it could create a workforce shortage.

2.2. Population-level measures to contain the spread of COVID-19

Below are key measures and strategies to contain the spread of COVID-19 in Korea (8).

Established government response system to COVID-19

- Raised infectious disease alert level to “highest” on February 23, 2020

- Assembled the Central Disaster and Safety Countermeasure Headquarters (CDSCHQ) directed by the prime minister to facilitate a government-wide response to COVID-19.
- KCDC designated as the command center for prevention and control of the infection
- Each local government established a Local Disaster and Safety Countermeasure Headquarters headed by the head of its local government.

Preventing the spread through early detection of infected patients

- COVID-19 screening clinics: There are 637 health centers and medical institutions operating screening clinics; almost all (95%) are capable of onsite sample collection. Drive-thru and walk-thru screening stations are also now available.
- Diagnostic tests: A total of 118 locations provide diagnostic tests, and a total of five diagnostic agents have obtained fast-track approval.

Preventing the spread through epidemiological investigation and isolation of contacts

- Epidemiological investigation: The central and local governments respond to infected cases rapidly by tracing each case and isolating contacts. For the epidemiological survey, interviews are conducted with patients, families, and also healthcare workers, if necessary. In addition, more objective data including medical records, mobile GPS, CCTV, credit card records, etc., may be collected and verified. Information about the travel routes of infected cases is provided on a website run by the government, in which no information that can identify a person is provided.
- Monitoring contacts: The contacts of infected patients, including family members, housemates, and other contacts based on patients' travel and infection routes, are informed. The contacts are required to receive health education, go into self-isolation for two weeks, and monitor their symptoms. These self-quarantined cases are managed on a one-to-one basis by the Ministry of the Interior and Safety and local governments; the cases are prohibited from leaving the country for 14 days, and if this is violated, they face a 1 million KRW fine (about 655.3 GBP; 1 GBP= about 1,526 won) or one year in prison.

Preventing inflow by managing entrants

- Special entry procedure: for entrants from all parts of the world as of March 19, 2020
- Stronger measures for infection prevention and control of overseas entrants: A mandatory 14-day quarantine has been imposed on all passengers arriving from all parts of the world, as of April 1, 2020.

Strict social distancing measures from March 22, 2020¹

- Guidelines for the Public
 - Delay or cancel nonessential gathering, dining-out, event, travel, etc
 - In case of fever or respiratory symptoms (cough, sore throat, muscle pain, etc), take sufficient rest at home and never go to work
 - Refrain from going out except for buying necessities, visiting a doctor, commuting to/from work
 - Avoid handshakes and physical contact and keep a 2-meter distance
 - Follow personal hygiene practices such as hand washing, cough etiquette
 - Disinfect and ventilate surroundings every day
- Workplace Guidelines for Individuals
 - Thoroughly wash your hands with soap and running water
 - Maintain at least 1~2 m distance with others and avoid physical contact including handshake
 - Do not use public use facilities such as locker rooms, indoor lounges
 - Use personal items such as cup, eating utensils
 - Maintain a distance and avoid sitting face to face while having meals
 - After work, refrain from making an appointment and directly go to home
- Guidelines for Employers
 - To avoid crowded work environment, keep longer distance between colleagues, telecommute, use flexible work schedule, or adjust start/end time of work and lunch hours, etc.
 - Postpone or cancel business trip, and encourage meeting through phone call or videoconferencing
 - Monitor fever and respiratory symptoms of employees and visitors every day, and make sure those with symptoms do not enter
 - Keep workplaces clean and manage better work environment. For instance, close commonly used spaces, such as locker rooms, disinfect highly touched surfaces every day, ventilate twice a day, and place supplies needed for hygiene.
 - Make sure symptomatic people do not go to work and use telecommuting, sick/annual leaves, or temporary closure. Check fever every day during work and in case of those with symptoms are identified, make sure they immediately leave.

Discussion of follow-up measures of social distancing and plans to resume the operation of public outdoor facilities, such as recreation forests, national parks (9).

¹ [Source](#): Regular briefing of CDSCHQ on COVID-19 on April 21, 2020

3. Brief background to the long-term care system

South Korea is a rapidly aging East Asian country. People aged 65 or older represented 14.9% of the total population in 2019, and that percentage is expected to be over 43.9% in 2060 (10). Korea has had national health insurance with universal coverage since 1989 (11). As a response to the drastic demographic transition, a universal, public long-term care insurance (LTCI) for the older population was introduced in 2008, and it requires no means-test (12). Home- and community- based services (HCBS) as well as institutional services are covered by the LTCI. About 9% of people aged 65 or older were eligible for the LTCI at the end of 2018, and the population and service coverage have continued to increase (12). Long-term care hospitals (LTCHs) under the national health insurance also take a role in long-term care provision (13); the average length of stay at such hospitals was about 168 days per year in 2016. A total of 648,792 beneficiaries of the public LTCI received care at 5,320 nursing homes and/or 15,970 HCBS agencies in 2018 (14). A total of 483,433 patients were hospitalized in the 1,560 LTCHs in the same year (15).

4. Long-Term Care policy and practice COVID-19 measures

4.1. Whole-sector measures (16)

The Korean National Health Insurance Services (KNHIS), the insurer of the public LTCI, developed and released a response manual for all welfare and LTC facilities against COVID19 on February 20, 2020.

The Korean Ministry for Health and Welfare (KMOHW) and KNHIS posted a series of temporary reimbursement guidelines for LTC facilities and home-based LTC agencies, taking into account social distancing measures and staff shortages due to COVID-19.

Service providers in the “special disaster zone” are not subject to payment cuts for failure to meet staffing requirements during this time.

The LTCI has drafted a response plan for COVID-19 to effectively react to suspected and confirmed cases of the virus within the service boundaries of each institution (e.g., suspected/affected care recipients, suspected/affected care providers).

LTC service providers may order public masks (ordered and distributed by the government) online for their care workers. The cost paid by the LTC institutions is about 94,000-114,000 KRW for 100 masks (1 box) including delivery fees, and delivery takes 4-7 working days.

4.2. Care homes (including social welfare facilities, long-term care facilities and long-term care hospitals)

On January 29, the government introduced a monitoring system to check social welfare facilities' compliance with the guidelines.² From February 9, the central headquarters has conducted daily monitoring on the exclusion of workers and temporary suspensions of operations.

Containment measures for residential facilities for vulnerable people³:

- Strengthening preventive measures at residential facilities for vulnerable people:
 - Cohort quarantine as a preventive measure in some facilities in Gyeonggi (March 1) and Gyeongbuk (March 5) where confirmed cases had increased
 - Instructed other local governments to take preventive quarantine measures at residential facilities for older people and those with disabilities, if needed.
- Conducting nationwide investigation on long-term care hospitals (LTCHs)
 - To ensure exclusion of workers with a recent travel history to China or other affected regions, restrict visitors, and check whether there are patients with unknown pneumonia;
 - To check exclusion of care workers with symptoms including fever, cough, etc., and restriction of visitors
- Undertook diagnostic test for COVID-19 for 460 inpatients (as of March 5) in LTCHs who were being treated for unknown pneumonia
- Introduced social welfare facility response guidelines and infectious disease prevention guidelines to prevent transmission in social welfare facilities that accommodate the vulnerable (children, elderly, persons with disabilities, etc.).
 - Social welfare facilities are required to comply with the guidelines and take thorough preventive measures including personal hygiene measures for workers and residents; a temperature check twice a day; restrictions on visits, travels, and leaves; and exclusion of high-risk workers.
- Ensuring stringent entry and exit management of workers and residents, compliance with personal hygiene measures, and regular temperature checks to prevent group transmission.

² This includes awareness of prevention guidelines and control measures, education and training for workers and residents, equipped with hand sanitizer and masks, restriction of outsider access, exclusion of high-risk workers, and any other abnormalities.

³ [Source](#): Regular briefing of CDSCHQ on COVID-19 on March 7, 2020

4.3. Community-based care

The Korean Ministry of Health and Welfare (KMOHW) recommended the closure of social welfare facilities from the 28 February. Their closure has been extended and new measures to strengthen care were announced on the 18 March⁴.

Social welfare facilities that have been closed include the following services:

- Children: community child centres, community childcare centres⁵
- Senior citizens: senior welfare centres, senior centres, dementia care centres, senior day/night care centres
- Persons with disabilities: welfare centres, day care centres, vocational rehabilitation facilities
- Employment: employment for older people and for people with disabilities, self-support programmes
- Others: psychiatric rehabilitation facilities, social welfare centres, integrated support centres in homeless facilities

The KMOHW has requested staff members in such facilities to work as usual even during the closure and prepare to ensure those who wish to visit will be able to use the facilities without difficulty when they reopen. For children, older people, and persons with disabilities who need care while facilities are closed, provision of care services such as delivering meals, checking on welfare, and supporting activities. Also, the utmost effort will be made to prevent the spread of infectious disease by bolstering the disinfection and infection control in facilities, checking the temperature of and monitoring workers and visitors (if visitors want).

The KMOHW plans to actively run a social safety net to assist those in need while social welfare facilities are shut down, such as flexible delivery of emergency aid and support, implementation of temporary assistance programs for low-income families, and provision of pay in advance for those participating in government employment programs.

A supplementary budget has been drawn up, this includes emergency aid and support of 200 billion KRW and a temporary assistance program budget for recipients and other groups that are economically disadvantaged of 1 trillion 24.2 billion KRW.

On the 1st of April the closure of social welfare facilities was extended again (17). Currently, 110,340 social welfare facilities (99.3%) are closed.

5. Lessons learned so far

South Korea kept a minimum level of restrictions until late March, when the government recommended strict social distancing measures; yet there are still no massive lockdowns or

⁴ [Source](#): Regular briefing of CDSCHQ on COVID-19 on March 18, 2020

⁵ Order made to further extend closure of childcare centres (Mar. 31)

closure of the country's borders. Citizens and companies quite autonomously follow social distancing measures. No food hoarding has happened in any part of the country. For multiple consecutive days the number of newly confirmed cases has remained around ten in Korea, but there are concerns about another potential outbreak after the loosening of social distancing measures. A set of population-level measures has worked quite well to contain the spread of COVID-19 while keeping a low level of restrictions with citizens' cooperation:

- Extensive testing and tracing using information technology;
- tests and treatments at no or relatively low cost are provided under the universal coverage of the national health insurance;
- transparent communication between the responsible government bodies and the public, with quite extensive epidemiologic data and travel route information of infected people available without personal identification data.

While containing the spread of COVID-19 at the population level quite successfully with low-level approaches, the Korean government took more aggressive approaches to contain the spread in LTC institutions and social-welfare facilities when collective infections occurred in a few long-term care hospitals (LTCHs) and other care settings, including instituting nationwide monitoring and inspections of LTCHs as well as cohort quarantines in select facilities in the two regions with high numbers of confirmed cases. Along with such strict measures, additional preventive and supportive measures for LTC institutions were also established, such as temporary reimbursement packages, masks for care workers supplied at a relatively low cost, provision of guidelines, etc. No massive infections in LTCHs or LTC facilities have been reported under the series of measures implemented.

Future challenges:

Considering the limited sustainability of infection control measures after the current acute stage of COVID-19 passes, it will be necessary to strengthen infection monitoring and control systems and the relevant professional workforce. Compared to the containment measures for institutional LTC settings, those for home care agencies are relatively weak; tailored containment measures are needed for highly vulnerable people residing at home with LTC needs, such as people with dementia and those with mental and physical disabilities. It is also imperative to provide meaningful and effective support for informal caregivers with increased demands on them due to the closure of social welfare facilities and to the lack of (or reduced) visits of home care personnel during possible future epidemic outbreaks. The current shared challenges of ensuring quality LTC under COVID-19 may open a wider policy window for building integrated care delivery systems and investing in health and care innovation using technology in South Korea and beyond.

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