

# Abstract

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The coronavirus has quickly developed into a pandemic since its outbreak, posing a grave threat to the global community. Efforts to curb the spread of the pandemic are made across all sectors of the society, and the critical need for international cooperation to combat COVID-19 is even further emphasized. Hence, any case of effective response to COVID-19 holds useful lessons for other countries.

This study reviews and analyzes South Korea's response to COVID-19 utilizing information and communication technology (ICT). South Korea had to deploy effective epidemic-preventive measures early on in the pandemic as it experienced its COVID-19 peak before most other countries. The country implemented accurate and extensive 'testing', 'tracing' and 'treatment', and communicated with the public upon its principles of 'rapid, accurate and transparent' information- sharing. In doing so, ICT-based centralized information systems including the Smart Quarantine System, Epidemiological Investigation Support System and Patient Information Management System were utilized, which resultingly flattened the infection curve.

Furthermore, the government disclosed data collected from its centralized information system in user-friendly forms by engaging with the private sector. One outcome of such efforts was stabilized supply and demand for face masks, a necessity good for securing individual health. Such aforementioned technologies served to advance traditional epidemic response measures, enhancing the procedural speed and accuracy and tracing coverage.

This study aims to share South Korea's experience in responding to COVID-19 as it offers useful and practicable insights for countries interested in making greater use of ICT to tackle the COVID-19. While current knowledge exchange-dialogues are somewhat limited in producing widely applicable solutions due to context- specific factors, it is anticipated that an accumulation of shared experiences will strengthen

the global community's COVID-19 response capabilities.

Keywords: COVID-19; Coronavirus; ICT; Information and communication technology