South Korea: learning systems and pandemic governance

The WHO's Country Connector shares learnings from countries: in this new case study, we analyze how South Korea has learned from previous pandemics to strengthen its response to COVID-19

Introduction

By many accounts, South Korea has been an exemplar of pandemic response, lauded for its effectiveness, rapid and targeted nature [1]. Despite having the second highest number of cases globally in the first two months of the COVID-19 pandemic [2], South Korea successfully suppressed the disease; this was achieved without restricting movement or imposing long lockdowns [3]. Many reasons are cited for the success of South Korea's response. These include a tradition of strong central governance [4], administrative and social characteristics, and prevailing market conditions [1]. This case study considers South Korea's governance of the pandemic response, in particular the government's stewardship of the private sector in health. In doing so, we seek to distil behaviours that enabled an effective response, while recognising potential limitations to their portability[1, 5].
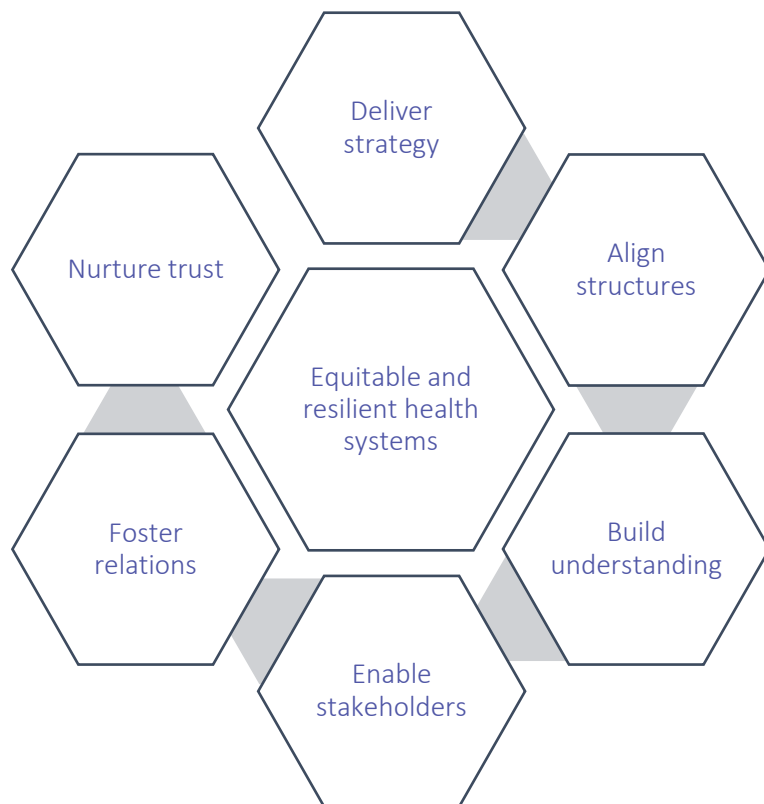
Process and methodology

The case study is based on a literature review. We searched the WHO COVID-19 Database and Google Scholar for articles published between January 2020 and June 2021. We included articles in English that discussed a combination of key concepts, including COVID-19 response/preparedness, private sector, governance, regulation, and public health policy filtered by our country of interest. In total, ten articles were extracted and fully analysed.

Framework

Findings have been structured using the WHO governance behaviours, a framework adopted in the WHO strategy, "Engaging the private health service delivery sector through governance in mixed health systems". (9) Behaviors have been operationalized for the COVID-19 response as follows:

- **Deliver strategy**: organizational learning and innovation to improve engagement of the private sector for the COVID-19 response
- **Build understanding:** private sector data capture and information exchange for the COVID-19 response
- **Align structures**: alignment of public and private structures and institutional architecture for the pandemic response
- **Enable stakeholders**: the development and implementation of development and implementation of financing mechanisms and regulations, to authorize and incentivize health system stakeholders in the COVID-19 response
- **Foster relations**: coordination arrangements and their representativeness of sectoral interests for the COVID-19 response
- **Nurture trust**: recognition and management of competing and conflictive public and private sector interests as part of the COVID-19 response

We have further delineated behaviours as preparedness and response to illustrate the temporal nature of pandemic governance.

Deliver strategy

Nurture trust

Align structures

Equitable and resilient health systems

Foster relations

Build understanding

Enable stakeholders

Deliver strategy

Preparedness. South Korea learned from previous emergencies, the most cited being the Middle East respiratory syndrome coronavirus (MERS-CoV) outbreak in 2015. South Korea's management of MERS-CoV, was recognized largely as a failed response, attributed to a lack of effective inter-governmental and sectoral collaboration, communication and cooperation [6]. There was deliberate effort to learn from this experience. A MERS-CoV white paper was commissioned by the Government outlining lessons and policy recommendations [7]. In response to the white paper, the Infectious Disease Control and Prevention Act, enacted in 1954, was revised in 2016. This conferred responsibilities and accountabilities to the Korean Centre for Disease Control (KCDC) for distribution of resources and multi-stakeholder engagement in the event of infectious disease outbreaks [3].

Response. COVID-19 triggered the "upgraded" emergency response apparatus under the leadership of the Ministry of Health and Welfare (the KCDC) and the President's Office (the Central Disaster and Safety Countermeasures Headquarters). This included a public health response to prevent and detect further infections; a clinical response to manage infections; and deliberate intervention to ensure the continuation of essential services [2]. The response was modulated, based on crisis alert level, which established the KCDC as the centre for disease control [8]. Public-private and central-local cooperation frameworks were critical to this strategy [2]. These guided a blend of "quick action and technological innovations" [8] which were "multi-sectoral from the beginning", drawing on public-private-partnerships and technical capacity, deliberately nurtured after MERS-CoV [3].

Align structures

Preparedness. Based on recommendations in the MERS-CoV white paper, the government embarked on "bold organisational restructuring", to strengthen the autonomy and authority of health professionals [7]. Health infrastructure was upgraded and medical capacities expanded through partnership with the private sector [4]. Partnership was critical given that almost 90 per cent of all medical institutions in South Korea operate as independent private facilities [9].

Response. At the onset of COVID-19, the South Korean health system was endowed with adequate infrastructure to respond to the pandemic, much of it privately owned and operated. The country had more hospital beds per population compared to many high-income countries [2]. While a "predominance" of private-sector hospitals was previously criticized [2], these facilities played an active role in the COVID-19 response [10] and allowed the country to remain within the hospital system capacity thresholds [2]. Systems and supply chains were calibrated to coordinate referrals from lower to higher level facilities, which enabled structural alignment "beyond boundaries of metropolitan city or provincial territories", facilitated through the National Medical Center [2]. While there was a clear role for hospitals in the response, the role of primary health care (PHC) facilities was more limited [9].

Build understanding

Preparedness. A learning from MERS-CoV was that coordination and response structures need to be synchronized to the crisis level, to adapt to changes in disease dynamics [6]. The government invested in information and communication systems and pioneered e-government technologies. These systems and technologies were in place when coronavirus struck [1].

Response. Health information and communication systems enabled a calibrated response. As new developments and information emerged on COVID-19, the government revised its assumptions and adjusted its actions accordingly [7]. Information and communication systems facilitated open and transparent communication of the COVID-19 situation and government policies in response to the crisis [8]. In addition to twice-daily media briefings, the government used multiple channels to communicate including traditional media, mobile text messages, social networks, mobile applications, government websites and call centres [7]. By building understanding through open and transparent communication, the government was also able to channel the good intentions of private philanthropy towards a government-led and integrated response [5, 11].

Enable stakeholders

Preparedness. Post MERS-CoV, the government embarked on "constructive pathways toward public-private partnership" to build infectious disease response capacity; this included recognition of the need to test early in the event of an outbreak [3]. To facilitate this, the government overhauled regulations [3, 4] and invested intensively in the biotech industry, which at the time comprised "scientist-led small-sized entrepreneurial start-ups" [3]. Furthermore, the government modified legislation to streamline approval processes for test-kit development and clinical trials and developed an accreditation system for infectious disease laboratories [4]. Accreditation was under the oversight of the Korean Society for Laboratory Medicine (KSLM) and included a network of over 100 laboratories.

Response. The government was agile in its regulatory response to COVID-19. At the onset of the pandemic, legislation was modified to allow for rapid testing [8]. A fast-track approval process for the development of test kits with pre-vetted domestic biotech companies was established [3]. Quality assurance of rapid tests was done in tandem through the KSLM and its laboratory network [3]. Choreography between government agencies and the private sector was effective; the first test kit was approved by the KCDC in late January 2020, with other test kits following rapidly behind [4]. Through swift and coordinated action, the government was able to reach a testing capacity of more than 20,000 people daily [3], working in close partnership with local governments [2]. By April 2020, the country was exporting test kits to more than 60 countries, including for diplomatic and aid purposes [3].

Foster relations

Preparedness. A critical learning from MERS-CoV response was the need for a centralized coordination structure, to allow "sufficient responsibility to the health authority to act as early, rapidly, and transparently as possible" [6]. During the MERS-CoV outbreak this was not in place and resulted in collaboration and coordination issues, communication breakdowns, and conflicts [6]. The government legislated the KCDC with the necessary authority over regional governments, the private sector, medical practitioners, and the public [3] and endowed it with "substantial staff, budget, specialties, and autonomy" [4].

Response. Coordination and communication structures facilitated problem-driven collaboration [6, 8]. This was guided by clear understanding of the COVID-19 response structure and related roles and responsibilities [3]. Collaboration was multi-faceted and included public and private medical institutions (i.e., health clinics, hospitals, laboratories, and research facilities), medical societies and associations, military medical personnel, and international organizations [9]. The KCDC acted as "control tower" [3] and modulated the COVID-19 response on a national - not piecemeal - scale [7, 8].

Nurture trust

Preparedness. The MERS-CoV white paper was premised on the protection of the South Korean population from potential infectious disease emergencies in future [7]. A lesson from the MERS-CoV experience was that a lack of risk communication contributed to the failure of the country's response. Post MERS-CoV, the government established a legal framework to address the public and media's right to information to reinforce public trust in and cooperation with response policies [10].

Response. A key factor in South Korea's effective actions was transparent and timely intergovernmental, sectoral and public communications. This was exhibited in the engagement with the private sector through the provision of information in open competition for test kit development [8]. Concurrently, the government, through the KCDC, ensured clear communication to the general public, on the test kit partnership to build confidence in the initiative [3]. Additionally, the government undertook targeted interventions in the healthcare market to avoid panic buying and resource hoarding and allow for equitable access to personal protective equipment. A ration system was created that allowed the public to procure a set number of masks per week, at a set rate, while the government bulk-procured masks from the private sector for hospitals and health workers [1].

While the use of e-government technologies played a critical role, there was also a human side to the response in the form of the KCDC director, who used a consistent blend of "straight talk", "truth to power", "informed analysis", and "stoicism" in her communications [8]. These tactics, in combination and with constancy, allowed for 'public' governance of the response, which secured wider cooperation and compliance [1, 5, 9]. The South Korean response was considered an equitable response with household income level not a significant factor in who accessed services and treatment [1].

Conclusions

A prolonged COVID-19 pandemic necessitates a calibrated, resilient response. South Korea has demonstrated these response qualities and served to remind people of the role of the State in averting crisis [8]. This was a question of governance and deliberate action "to allocate, and liaise with, existing and potential resources, especially from the private sector" [3]. Adaptation and change in response to learning from MERS-CoV were decisive, backed by political will, professional expertise, adequate skills and resources, and a coherent and consistent approach to partnership. Table 1 summarises key actions and behaviours employed as part of health systems preparedness and response in the South Korean context. The case study provides a basis for sharing response practice across countries and will inform forthcoming WHO guidance on governance of the private sector in health for emergency response, to achieve national public health objectives and build more resilient and equitable health systems.

Acknowledgements

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Table 1. Governance behaviours and actions for emergency preparedness and response

Governance behaviours	Preparedness (post MERS emergency)	Response (COVID-19 pandemic)
Deliver strategy	Willingness to engage with and learn from failure (MERS-CoV) Inclusive learning (solicitation and incorporation of diverse perspectives and feedback) Recognised and formal process (e.g., white paper) Compatibility of recommendations with polity and culture Upgrade crisis and emergency response strategy and plan	Defined response strategy and system (integrated public health and emergency response functions) Adoption of crisis management leadership and structure (calibrated to an infectious disease emergency) Institutionalised learning and processes (networked to include diverse perspectives and feedback)
Build understanding	Strengthened information and communications systems Established e-governance technologies	Real-time synthesis of information from multiple sources Adjustment to assumptions based on new information Pooling of resources from different sectors/actors based on shared understanding
Foster relations	Legislated authority to coordinate emergency response (activated based on alert levels) Back legislated authority with requisite expertise, resources and capacity	Unified command system Graduated and modular coordination platform (adapted to crisis level and course of the pandemic) Communications through community networks involving primary care, public health, and hospitals

Table 1. Governance behaviours and actions for emergency preparedness and response

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Align structures	Deliberate investment in partnership and the private sector (health infrastructure and bio-tech industry)	Balanced response between central and local governments (KCDC as control tower) Role delineation and clarity between response levels and actors Distribution of resources between local and central government Reassignment of resources across locales and actors (including the private sector) Coordinated referral system under the National Medical Centre
Enable stakeholders	Decisive overhaul of the regulatory system Development of a laboratory accreditation system Invest in private sector R&D (bio-tech firms)	Development of cooperation frameworks for testing, tracing, and treatment Expedited approval process Open competition with pre-vetted suppliers Deployment of quality assurance systems Integration with global response (exportation of test kits)
Nurture trust	Centrality of the state to protect the population and prevent disaster Build public trust and cooperation in health policy Nurture capacity of the private sector to build response "muscle"	Constancy in communications and dialogue (across stakeholders and over time) Alignment of stakeholders around an inclusive and equitable response "Public" governance, emphasising civic awareness and voluntary cooperation