Challenges and Responses to COVID-19: Experience from Asia

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For the past 30 years, the health community has warned governments and the public about the inevitable emergence of a new pathogen that would have a global impact on public health. The COVID-19 pandemic is just of such an event.

Responses to the pandemic in several Asian countries illustrate the importance of political context and basic public health measures combined with previous experience and modern technology. Case and death numbers reported here are from the Johns Hopkins University Center for Systems Science and Engineering COVID-19 Dashboard as of 19 June 2020.

Varied responses

After a period of denial, the Chinese government moved to control the COVID-19 outbreak in Hubei Province on 23 January 2020 by locking down 58 million people and isolating the epicenter from the rest of the country. Nearly all the reported deaths in the first phase of the pandemic were in Hubei, suggesting that the government’s response prevented what could have been a much larger outbreak. As of 19 June, there were a reported 84,944 cases in China and 4,638 deaths.

Before the full government response was initiated, there were reports of widespread mistrust of China’s leaders. The belated, but far-reaching response seems to have restored confidence, and the government appears to have learned a lesson—the response to the mid-June resurgence in Beijing is reported to have been swifter and more transparent.

Hong Kong SAR was the epicenter of the 2002–2003 SARS outbreak, and thus Hong Kong’s leaders understood the potential consequences of an emerging communicable disease. Generally robust public health policies were adopted in the wake of the SARS outbreak, and hospital capacity was much enhanced. In 2020, after some delay, Hong Kong’s government initiated aggressive COVID-19 testing and tracking using sophisticated information and communication (ICT) technologies. The epidemic seemed to have been contained by early March but resurged later in the month. At that point, all residents were ordered to stay at home. In early April, most nonresidents were denied entry, and returning residents had to undergo a 14-day quarantine. The epidemic curve in Hong Kong has been relatively flat, with 1,161 cases and only four deaths as of 19 June. Chief Executive Carrie Lam was criticized for her initial slow response, and some suggest that civil society—aware of the risks and empowered by months of protests—contributed to Hong Kong’s successful control of the virus.

In 2004, after a deadly SARS outbreak, Taiwan established a robust Central Epidemic Command Center (CECC) that took the lead in containing COVID-19. The National Health Insurance database was integrated with the Immigration and Customs database to provide a platform for “big data” analytics. With the advent of COVID-19, a proactive testing program was initiated, masks were made readily available, and government cell phones were issued for monitoring and quarantine. As of 19 June, only 446 cases and seven deaths had been reported, an indication of Taiwan’s highly effective response.

After an outbreak of MERS in 2015, South Korea strengthened its capacity to respond to a disease outbreak. When the first COVID-19 case was detected in January, the government began mass-producing test kits. The number of COVID-19 cases remained low until mid-February when a “super-spreader” continued on next page
was hospitalized in Daegu, the fourth largest city in South Korea. Cases in and around Daegu surged, and the Korean government rapidly initiated a testing and quarantine protocol based on advanced ICT, text alerts, smartphone apps, and efficient contract tracing. The approach was transparent and based on collaboration and communication across administrative units. Both walk-in and drive-through testing were aggressively employed, reaching 15,000–20,000 people a day, and test results were delivered to individuals’ cell phones within 24 hours.

Schools and universities were closed, but there were no drastic restrictions on movement. As of 19 June, South Korea had 112,257 cases, but only 280 deaths, one of the lowest case-fatality rates in the world. The handling of the outbreak improved South Korea’s President Moon Jae-In’s approval ratings, and in mid-April Moon’s Liberal Democratic Party handily won national elections. As in China, however, there was a resurgence of cases in June.

The response in Japan has been mixed. Prime Minister Abe was originally criticized for a weak and delayed response, but eventually he declared a state of emergency in Tokyo and six other prefectures and issued a national stay-at-home order, although not a total lockdown. Testing has not been nearly as extensive as in South Korea. Yet Japan has not experienced an explosive outbreak, with 17,813 cases and seven deaths as of 19 June, despite a highly dense and relatively elderly population. Some attribute this success to Japanese cultural practices, e.g., bowing rather than handshaking and a long-standing focus on hygiene, including hand-washing and wearing face masks.

Early in the pandemic, Singapore was known for its “gold standard” response, including the use of modern ICT technologies for extensive testing and contact tracing. Infection rates remained low until April when cases tripled.

Most of the new cases were among contract workers, mainly from India and Bangladesh, many of whom live in crowded dormitories. The interventions that were successful in most of Singapore were not effectively implemented in areas where contract workers live and work. In response to this resurgence, businesses and schools were closed, and citizens returning from overseas were quarantined for 14 days.

Singapore’s low case-fatality rate—with 41,615 cases but only 26 deaths as of 19 June—stems in part from the fact that most of the infections are in a young population. Singapore also has advanced public health and medical care systems, although contract workers have less access to these services than the rest of Singapore’s population.

Despite its border with China, Vietnam has controlled COVID-19 successfully, with 342 cases and no deaths as of 19 June. Vietnam has a strong public health data system and experience with controlling SARS and multiple waves of avian influenza. Early in the pandemic, the government initiated surveillance, widespread testing, and aggressive social distancing, supported by multisector communication and collaboration. A lockdown was declared on 1 April, and tens of thousands were put in quarantine camps. Surveillance and control are easier in Vietnam’s one-party state than in less-controlled political contexts, and this, along with a strong civil commitment to contain the outbreak, seems to have been instrumental in Vietnam’s success.

**Lessons from Asia**

These examples suggest that public health and medical capacity are critical for an effective response to an emerging infectious disease, and political will and previous experience with disease outbreaks also play a role. Singapore ignored an important segment of its population and is now experiencing a huge spike in cases. China and Vietnam were able to enforce draconian measures, while in Japan and Hong Kong, civil society had a greater role in initiating effective controls. In several countries, local political outcomes have been affected by the perceived success or failure of leaders in controlling the crisis.

The experience in these Asian countries has not been uniform—there have been both successes and failures. Today, COVID-19 is surging in South Asia and elsewhere in the world, and we are still in the first wave of the global pandemic.