# Building Resilience through a whole-of-society approach: COVID-19 pandemic response in East Asia

**Interim report of the East Asian response to COVID-19 Project**

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## About the Asia Pacific Initiative (API)

**Asia Pacific Initiative (API)** is a Tokyo-based independent think tank and a program brand of **the International House of Japan (I-House)**. Based on I-House's mission to "contribute to building a free, open, and sustainable future through intellectual dialogue, policy research, and cultural exchange with a diverse world," API esfocus on its work in the areas of 1) international relations, regional studies, and geopolitics and 2) social systems, governance, and innovation.

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## About API's "East Asian response to COVID-19" Project

Since 2020, API has reviewed how East Asian countries confronted COVID-19, and good practices and lessons learned to share with the world. The project covers seven countries/regions: Japan, Singapore, Vietnam, South Korea, Taiwan, Thailand, and Hong Kong. The project will provide recommendations on how to prepare not only for the current COVID-19 response, but also for Disease X, a serious infectious disease that could cause outbreaks by a pathogen currently unknown, including the next highly lethal coronavirus (COVID-X).

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## Summary

— The COVID-19 pandemic is the most devastating global health crisis in over a century. During the crisis, East Asian countries and regions, except China, were able to provide effective operational knowledge to the public, reduce national vulnerabilities, and adjust healthcare capacity and resources in ways that created public trust and a sense of legitimacy in the competency of the governments' strategies. This created and maintained a whole-of-society response, which allowed East Asia to build resilience and effectively control the COVID-19 pandemic. Such responses bought these governments time by keeping infections relatively low until vaccines were available.

— East Asian countries and regions — Thailand, Japan, South Korea, Hong Kong, Taiwan, Vietnam, and Singapore — successfully detected the first COVID-19 cases in January 2020 and gained early control over the virus, which enabled the countries and regions to learn more about its epidemiology, raise awareness among their citizens, and develop informed strategies. Overall, this allowed East Asian countries and regions to minimize deaths and severe infections. Crucially, this also increased public trust in government measures over the long term, allowing these countries to control the virus while they awaited the arrival of vaccines.

— Other factors included creating mechanisms for a swift national shift into an efficient and organized pandemic response, which benefited immensely from East Asia's past experiences with SARS and MERS. East Asia has experienced several epidemics of infectious diseases since 1997, including the Highly Pathogenic Avian Influenza A(H5N1), SARS, and MERS. Having dealt with the outbreaks of pathogens, many East Asian countries had a preparatory advantage in terms of infectious disease control and people's awareness of potential dangers, assisting governments with their citizens' willingness to comply with public health instructions.

— In East Asia, vaccine rollout was implemented with less controversy and division. As a result, many East Asian countries have either matched or surpassed the vaccination rates of their Western counterparts, despite getting access to those vaccines at a later stage of the pandemic.

— The reduction of vulnerability is fundamentally about removing the barriers to active public participation in the pandemic response, which can act as a bolster to operational knowledge. One advantage of the governments mentioned above is that they all have some form of Universal Health Care（UHC）available to the population, even if limited in scope. This has created societies generally less vulnerable to infectious disease, accustomed to government involvement in medical care, and with pre-existing avenues for the universal distribution of medical care. During a pandemic, however, a nation must go beyond UHC, as vulnerabilities in the public make for much larger potential infection vectors and compromise any potential control over the viral spread.

# Introduction

The COVID-19 pandemic is the most devastating global health crisis in over a century. The virus, SARS-CoV-2, rapidly spread from Wuhan to the rest of the world. In the initial few months, little was known about the virus. The disease spread through many nations which were ill-prepared for a pandemic. As a result, most countries across the world experienced major outbreaks, causing millions of people to tragically lose their lives to the virus. As of 30 September 2022, there were 6.5 million confirmed deaths from COVID-19[1]. It has been a profound tragedy.

When the virus hit mankind, the global economy had become increasingly reliant on international migration flows, cheap and highly interconnected air travel networks, and the movement of people across borders. As we approach the end of 2022, the COVID-19 pandemic continues to threaten people's lives and livelihoods, with developed countries suffering some of the highest mortality figures in the world. The United States' cumulative deaths stand at more than 1.06 million[2], the highest confirmed deaths in the world. Life expectancy at birth in the U.S. declined nearly a year from 2020 to 2021. That decline – 77.0 to 76.1 years – in 2021, along with a 1.8 year drop in 2020, was the biggest two-year decline in life expectancy since 1921-1923[3].

During the COVID-19 crisis, in maintaining a balance between saving lives, minimizing economic and social disruption and respecting human rights, East Asian countries have largely avoided the social and economic turmoil experienced by many countries and regions around the world, as well as maintained the trust of their public vis-a-vis their pandemic response.

East Asian countries and regions — Thailand, Japan, South Korea, Hong Kong, Taiwan, Vietnam, and Singapore — successfully detected early COVID-19 cases in January 2020. This allowed the governments to devise and implement effective and targeted policy tools before the virus reaches a point of critical mass.

The world has drawn its attention to how East Asia has managed the risk of COVID-19 and controlled the potential damage. Case studies by governments

1 Hannah Ritchie, Edouard Mathieu, Lucas Rodés-Guirao, Cameron Appel, Charlie Giattino, Esteban Ortiz-Ospina, Joe Hasell, Bobbie Macdonald, Diana Beltekian and Max Roser, "Coronavirus Pandemic (COVID-19)". Published online at OurWorldInData.org. https://ourworldindata.org/coronavirus.
2 Ibid.
3 CDC, "Life Expectancy in the U.S. Dropped for the Second Year in a Row in 2021," 31 August 2022.

and experts have been accumulating. COVID-19 is an ongoing crisis with no end in sight. As such, it would be useful for policymakers and experts worldwide to review their national responses and identify best practices and lessons learned in East Asia's preparedness for and response to infectious diseases.

This paper seeks to highlight from a regional perspective some of the common themes of pandemic response in East Asian countries. We have found that through activating a comprehensive response which lead to a shared set of conditions upon first contact alongside a common response framework, East Asian countries were able to provide effective operational knowledge to the public, reduce national vulnerabilities, and adjust healthcare capacity and resources in ways that maintained trust in the competency of the government's strategy. This created and maintained a whole-of-society response, which allowed these countries to effectively control and manage the pandemic.

## Response framework

It is extremely difficult to contain COVID-19, a disease in which pre-symptomatic infected people can transmit the virus. Unlike Ebola and SARS, symptoms are mild or asymptomatic in the majority of COVID-19 cases. Moreover, individuals with COVID-19 become infectious from two days prior to the onset of symptoms until approximately seven to ten days after those symptoms take effect. Yet, the most contagious period tends to occur around the initial phase of infection, and before the onset of those symptoms, leading to the majority of new cases stemming from stealth infections[4]. Only testing and isolation of symptomatic cases is not a sufficient strategy for suppressing the transmission of COVID-19.

In pandemic response analysis, 'resilience' has been a core concept used to evaluate response success. A broad definition of resilience is the ability of institutions' and health actors' capacities to prepare for, recover from, and absorb shocks, while maintaining core functions and serving the ongoing and acute care needs of their communities.[5] Here, the relevant element of resilience is shock absorption. In particular, how the behaviors of East Asian

**4** Nandini Sethuraman, et al. Interpreting Diagnostic Tests for SARS-CoV-2. JAMA. Published online 6 May 2020.
**5** Victoria Haldane, Chuan De Foo, Salma M Abdalla, Anne-Sophie Jung et al., "Health Systems Resilience in Managing the COVID-19 Pandemic: Lessons from 28 Countries," *Nature Medicine* 27, no. 6 (June 2021): 964-980, https://doi.org/10.1038/s41591-021-01381-y.

countries and regions built whole-of-society responses along with public trust and compliance.

Also, a whole-of-government response is applied to relatively successful responses that mobilized their governments far beyond their specific infectious disease and public health apparatus. Yet, for many, the goal was more ambitious, creating what amounted to a whole-of-society response[6].

East Asian countries have managed to maintain whole-of-society responses over time and despite rapidly changing circumstances. The pandemic called for societal mobilization and coordination, demanding a full commitment of national resources to emergency public health management measures.

Building from and modifying the resilience elements of highly effective national responses identified by Haldane et al. in "Health systems resilience in managing the COVID-19 pandemic," this targeted analysis of selected East Asian countries will identify the characteristic elements of a comprehensive response. Such measures include response activation, healthcare capacity and resource adjustment, operational knowledge, and the reduction of vulnerability.

## China, Europe, and the United States: spread of lockdowns and lack of public trust

As of 2 October 2022, the United States and the U.K. have suffered from cumulative deaths per million standing at over 3,000, some of the highest cumulative rates of mortality per million in the world. Close behind, Italy suffered at a rate of 2,990 per million people, with France and Germany standing at 2,301 and 1,799 respectively[7]. By contrast, Taiwan's cumulative confirmed deaths stands at 467 per million people, Vietnam at 442, Thailand at 457, Japan at 357, and Singapore at 297 deaths per million people[8].

One of the greatest mistakes the United States and many European countries made at the outset was implementing COVID-19 public health policies on the belief that it would likely be manageable in a similar way to the Ebola and

**6** Walaiporn Patcharanarumol, "Thai UHC and Health Systems for COVID-19 Responses" (JICA Webinar, 8 April 2022), slide 10, https://www.youtube.com/watch?v=7s3uOEvl9lM.
**7** Our World in Data
**8** Ibid.

SARS outbreaks. As a result, the U.S. and many European countries repeatedly experienced large-scale rises in infections followed by harsh lockdowns, creating a significant impact on social and economic activities, and worsening to intense social divisions.

Wuhan was the first to implement a lockdown, followed by China's all-in approach of closing borders and isolating people by stay-at-home orders. European countries and the United States emulated some of Chinese restrictive measures; over time their citizens became fatigued due to living under such draconian measures.

Ultimately, a lack of serious surveillance and integrated coordination overwhelmed Europe and North America in the early stages of the pandemic. This caused major stress on healthcare systems, and led to a sense of distrust amongst citizens of European countries and the U.S.

Also in East Asia, Hong Kong's initial response was promising, but was ultimately constrained by political conditions from the mainland China. This eroded trust in government amongst Hong Kongers, and thus undermined the coordination of a long-term resilient response. On 16 February 2022, Hong Kong's deaths per million people stood at just 30[9]. Due to a low degree of public trust in the government as a result of the suppression of democratic protests, as well as the subsequent implementation of the sweeping National Security Law, Hong Kongers were distrustful of the government's vaccine scheme – even though they had an option to get Fosun Pharma（Shanghai Fosun Pharmaceutical）– BioNTech mRNA vaccines. In particular, many had a mbivalence towards vaccines sourced from the mainland China. For example, the day after a man was reported to have died after taking a Sinovac vaccination shot on 3 March 2021, data reportedly published by the government of Hong Kong displayed a decrease of 10,300 appointments for the vaccine[10]. Since March 2022, Hong Kong's mortality rate has tragically risen to 1,288 deaths per million people[11].

While the U.S. and Europe's responses differed sharply from China's, the outcomes of both share a failure of resilience, leading to a breakdown in public trust, and an inability to utilize the whole-of-society towards a

9 Ibid.
10 Timothy McLaughlin, "The Place With Surprisingly High Vaccine Capacity", *The Atlantic*, 1 April 2021. https://www.theatlantic.com/international/archive/2021/04/hong-kong-trust-vaccine/618469/.
11 Our World in Data

common goal of containing the virus. Despite very different strategies in containing the virus, a breakdown of public trust in each region complicated the national government's ability to control the virus, while exacerbating tensions and increasing social divisions. The West was successful in producing safe and effective vaccines, such as mRNA vaccines, essential to eventually living with the virus; both respective political systems failed to produce a resilient response to the pandemic.

## East Asia's resilient whole-of-society approach: activating a comprehensive response

East Asian countries took significantly different approaches and strategies in their efforts to control the COVID-19 pandemic. The initial response to an emergency situation can be instructive of sufficient preparedness of a countries' strategy in the short to medium term. As mentioned, East Asia countries and regions successfully detected the first COVID-19 cases in January 2020 and gained early control over the virus, which enabled the countries and regions to learn more about its epidemiology, raise awareness among their citizens, and develop informed strategies. Overall, this allowed East Asian countries and regions to minimize deaths and severe infections. Crucially, this also increased public trust in government measures over the long term, allowing these countries to control the virus while they awaited the arrival of vaccines.

Other factors included creating mechanisms for a swift national shift into an efficient and organized pandemic response, which benefited immensely from East Asia's past experiences with SARS and MERS. East Asia has experienced several epidemics of infectious diseases since 1997, including the Highly Pathogenic Avian Influenza A(H5N1), SARS, and MERS. Having dealt with outbreaks of pathogens, many East Asian countries had a preparatory advantage in terms of infectious disease control and people's awareness of potential dangers, assisting governments with their citizens' willingness to comply with public health instructions.

Indeed, such was the memory of SARS in Hong Kong that despite initial inaction from the central government, civil society actors mobilized and pressured the central government to close Hong Kong's borders with the mainland. This was despite citizen-state tensions from the aftermath of a clampdown on pro-democracy protests. Hong Kong's Steering Committee ultimately implemented widespread mask-wearing measures in January 2020, six months before the WHO updated its advice in June that year[12].

The ability to effectively control the virus during the early stages of the outbreak created a sense of trust in government public health provisions, which in the eyes of citizens throughout the pandemic helped to maintain a sense of legitimacy in government institutions vis-a-vis those public health measures. This not only generated but sustained a whole-of-society approach throughout the pandemic, which was crucial in maintaining a sense of personal responsibility among citizens in following public health rules.

Due to this higher sense of trust in government, vaccine rollout was also implemented with less controversy and division. The result is that many East Asian countries have either matched or surpassed the vaccination rates of their Western counterparts[13], despite getting access to those vaccines at a later stage of the pandemic. As of 28 August 2022, Singapore's share of its population with a full initial protocol of vaccinations stands at 92%. The U.S. by contrast had only achieved 79% according to Our World in Data[14].

*Early border control and quarantine:* One of the first steps of successful early pandemic responses was timely border control and early quarantine. These measures delayed the arrival of COVID-19 and prevented the virus from hitting a point of critical mass, at which point stopping its spread would become impossible, as happened in Italy during the early stages of the pandemic. Border control and early quarantine provided time for epidemiological investigations while protecting the public. As early as 31 December 2019, Taiwan's government recognized the potential threat of the virus to its citizens, and began to quarantine passengers from Wuhan and study the COVID-19 virus[15]. Thailand activated a national lockdown and total border closure[16].

12 Wilson Wong, "When the state fails, bureaucrats and civil society step up: analysing policy capacity with political nexus triads in the policy responses of Hong Kong to COVID-19", *Journal of Asian Public Policy*, 15:2, 198–212, 2022. DOI: 10.1080/17516234.2021.1894314
13 https://ourworldindata.org/COVID-vaccinations.
14 Ibid.
15 Chen, Chien-Jen, "Taiwan's Response to COVID-19." Johns Hopkins Bloomberg School of Public Health Webcast, 25 April 2020. https://www.youtube.com/watch?v=ReI6ROZNbkk&t=115s.
16 Patcharanarumol, op. cit.

Singapore used a "circuit-break" meant to cut the country off from potential sources of infection[17]. Hong Kong began implementing border measures in February 2020, and on 25 March banned non-resident arrivals[18].

*Choosing & implementing a pan-governmental response strategy:* Based on early information, a government must choose and comprehensively pursue its initial pandemic response strategy. An example of this was Singapore's early "circuit-break" measure, implemented with the core policy of preserving "lives and livelihoods."[19] In contrast to other countries with lockdown strategies and aggressive containment policies such as Vietnam with its stringent measures, South Korea pursued a comprehensive "social distancing policy" in combination with mass testing and screening with epidemiological tracking to ensure adequate surveillance infrastructure was in place at the early stages of the pandemic[20]. It also updated legislation to enable a flexible response and systematic adjustment, such as widely-sourced data collection and disclosing crucial health information and advice to the public about appropriate preventative measures. For example, Hong Kong's Centre for Health Protection（CHP）, established during the SARS crisis, implemented real-time surveillance, as well as quickly setting up quarantine facilities and hospitals[21].

*Flexible policy response:* Many East Asian countries' pandemic policy response was decisive and thorough. Crucially, however, their models contained significant flexibility, and were therefore able to change course based on evolving circumstances. An example of this was Singapore's COVID-19 policy response. After the circuit-breaker shut down all but eliminated imported and community-spread cases, Singapore began a containment policy with strict physical distancing restrictions. It was adjustable and calibrated according to severity and sustainability, measures scaled based on case numbers and economic health[22]. In 2022, with the help of data analytics, they pursued a "near-normal" in which COVID-19's status as a disease shifted from being considered a global pandemic the government was aiming to eradicate from its jurisdiction, to endemic in Singapore's population.[23] The purpose of this

17 Teo, Yik-Ying, "Leveraging Data Analytics to Inform Policy Response to COVID-19: A Case Study from Singapore." HDR UK Scientific Conference - Data Insights in a Pandemic, 23 June 2021. https://www.youtube.com/watch?v=U1H_16oTBkg.
18 "HK to ban non-resident arrivals", Government of Hong Kong, 23 March 2020. https://www.news.gov.hk/eng/2020/03/20200323/20200323_164827_699.html.
19 Yik-Ying, op. cit.
20 Taejin Lee, "Korea-WBG Partnership on COVID-19 Preparedness and Response: Case Study of the Republic of Korea." World Bank Group Korea Office & Health, Nutrition and Population Global Practice Webinar, 26 April 2022. https://www.worldbank.org/en/events/2022/04/14/korea-wbg-partnership-on-COVID-19-preparedness-and-response-webinar-series.
21 Simon Cartledge, "So What? Hong Kong's COVID-19 Success Won't be Why It Remembers 2020," The Asia-Pacific Journal, 15 July 2020. https://apjjf.org/2020/14/Cartledge.html.
22 Yik-Ying, op. cit.
23 Hsu Li Yang, "Overview of COVID-19 Situation and Response in Singapore." HITAP Thai webinar, 24 Feb 2022. https://www.youtube.com/watch?v=l7WgJSAggpU.

measure was to shift not only the threat perception from the general public, but also to adapt from the containment approach to a more long-term, suppression approach. The gradual transition began with reduced mask requirements, and relaxed testing and border control policies. It is crucial to note that Singapore's government nonetheless remained prepared to re-escalate prevention measures in the case of a significant rise in cases[24].

Other East Asian states displayed this measured flexibility. Vietnam shifted from its initial containment strategy by introducing mass vaccination via donations, adopting an ethos of "Safe adaptation, flexibility, effective control" in 2021[25]. Later, Vietnam transitioned into "fully open for development."[26] South Korea started the pandemic by implementing a significant social distancing and mass testing approach, focused on vaccination when it became available, before shifting into a "gradual return to normal" starting in November 2021.

*Create national teams for response implementation and public communication:* One of the first steps towards creating a coordinated national response is the creation of a lead team dedicated to the transition into a public health crisis, along with later teams and subcommittees to support that shift between various government branches and sectors of public life. Some of this took the form of activating or redirecting existing institutions, as was the case for Taiwan's activation of its Central Epidemic Command Center (CECC)[27] and South Korea's Central Disaster and Safety Countermeasure Headquarters (CDSCHQ), alongside its Disease Control and Prevention Agency (KDCA)[28]. Such agencies can have distinct and important roles: CDSCHQ took on a character of combined central and medical leadership with the Prime Minister at its head, while the KDCA provided the response with key technical information. On the other hand, Thailand's Center for COVID-19 Situation Administration (CSSA)[29] and Vietnam's Steering Committee for COVID-19 Prevention and Control were created specifically for pandemic response[30]. This recentering of power and expertise into specialized authorities signaled action on the belief that a protracted yet concentrated crisis like the COVID-19 pandemic requires specialized leadership and attention.

24 Ibid.
25 Pham Quang Thai, "COVID 19 Pandemic Preparedness and Response: Vietnam Case Study." World Bank Group Korea Office & Health, Nutrition and Population Global Practice Webinar, 29 June 2022. https://www.worldbank.org/en/events/2022/06/20/korea-wbg-partnership-on-COVID-19-preparedness-and-response-webinar-series-2.
26 Ibid.
27 Chien-Jen, op. cit.
28 Lee, op. cit.
29 Patcharanarumol, op. cit.
30 Thai, op. cit.

*Tracing, testing, and treatment system:* Within the first three months of the pandemic, many East Asian countries had implemented a comprehensive contact tracing program. South Korea centered its early pandemic response towards a comprehensive mass testing and tracing system that complemented its decision to pursue social distancing measures rather than lockdown[31]. In Singapore, the government implemented comprehensive contact tracing measures, ring-fencing of high-risk people[32]. The four pillars of its strategy were enhanced surveillance, containment, active case finding, and reducing case importation[33]. Thailand had Surveillance and Rapid Response Teams (SRRT) at the district level, and monitored COVID-19 rates as closely as possible to manage a near full medical care capacity, as well as using PCR testing for its confirmed case number tracking[34].

## Providing operational knowledge

Operational knowledge constitutes the competent communication of actionable response strategies to the public, alongside useful information that encourages the public to act on those strategies. The most important form this takes is in information specifically tailored to activate certain behaviors in the public and in institutions not under government purview. The second form is situational knowledge: how the pandemic is progressing in a particular time and place, what is being done, and what the public should do at that moment. Finally, epidemiological knowledge can help the public know how best to behave in certain circumstances. All of this can be further reinforced by the strength of pre-existing public health education.

*Empower the public with clear messaging to enable basic public protective action:* When it comes to engaging and prioritizing specific behaviors in public engagement, clear and simple publicity can be extremely effective. The greatest example of this in the whole of East Asia was likely Japan's "avoiding the 3Cs" (i.e., closed spaces with poor ventilation, crowded places with many people nearby, and close-contact settings such as close-range conversations) campaign. On 9 March 2020, the Novel Coronavirus Expert Meeting (the Expert Meeting) presented its assessment that environmental settings with "3Cs" were associated with the occurrence of clusters of

31 Lee, op. cit.
32 Li Yang, op. cit.
33 Ibid.
34 Patcharanarumol, op. cit.

COVID-19 cases. The initial concept of Japan's strategy was to conduct intensive retrospective investigations on clusters of COVID-19 cases to identify the original source(s) of infection in the cluster and understand the dynamics of spread within it as well as external to it. Experts also looked into the secondary effects of suppressing COVID-19 transmission by informing the general public of the environmental settings in which COVID-19 clusters were more likely to occur (i.e., environments with the 3Cs) and urging them to adopt behavioral changes and avoid those settings[35].

In a similar vein, Vietnam had its own "5K" response, corresponding to five actions beginning with K in Vietnamese, as well as the "V2K" strategy (vaccination, masks, disinfection) meant to replace it if cases declined. Within its response forces, Vietnam also had the motto "four on the spot," emphasizing the immediate presence of command, forces, facilities, and logistics in on-the-ground response efforts. An adjacent kind of communication meant to prime the public for continued vigilance was Singapore's strategic delay in declaring COVID-19 "over."[36] This was meant to prevent the loss of public compliance that would result if re-introducing increased measures was necessary going forward after the pandemic is declared "over."

*Guidelines for response:* Clear and effectively communicated response guidelines to healthcare workers and the general public can provide detailed direction specific to particular scenarios and parties such as hospitals and businesses. Such guidelines create a set of clear standards and lift complex logistics burdens. An example of this is the Vietnamese planning and resource guidelines for potential scenarios and consistently updated technical guidelines for healthcare networks throughout the pandemic[37]. Later, the Vietnamese government provided guidelines and training for implementing and using six types of COVID-19 vaccines. Broad guidelines for the public can also be useful, as they were in Taiwan, where the government provided clear community transmission prevention guidelines, surveillance, and information management[38]. The value of guidelines holds true for pandemic-era training and re-training in Vietnam, where ICU workers, commune health workers, and mobile teams were trained for COVID-19 treatment and handling.

35 Atsuna Tokumoto, Hiroki Akaba, Hitoshi Oshitani, Kazuaki Jindai, Koji Wada, Tadatsugu Imamura, Tomoya Saito, and Yugo Shobugawa, "COVID-19 health system response monitor: Japan," World Health Organization Regional Office for South-East Asia (WHO SEARO), January 2021. https://apo.who.int/publications/i/item/9789290228264.
36 Li Yang, op. cit.
37 Tranh Thi Mai Oanh, "Vietnam's Health Service Delivery System from Experience of COVID-19" (Webinar, JICA Webinar, 8 April 2022). https://www.youtube.com/watch?v=7s3uOEvl9lM.
38 Chien-Jen, op. cit.

*Risk communication through providing regular pandemic updates:* Regular, clear updates on the national pandemic situation serves to encourage trust in government authorities（as a show of trust in providing information inspires reciprocation）, remind people of the importance of following response guidelines, and allow the public to proportion their pandemic anxieties to reality. Taiwan's CECC provided daily press livestreams with Q&A sessions that anyone could directly ask the experts about their concerns[39].In Vietnam, government media and private media worked together to provide effective risk communication. For example, infographics created by the private sector helped to spread COVID-19 information and raise public awareness. Crucially, Singapore's clear and regular public communication also allowed for the effective management of post-vaccination transition towards living with the virus. Once 96% of eligible citizens had received some form of vaccination and 50% received some exposure to the vaccine, the Singaporean government communicated clearly that people were no longer required to wear masks in open spaces, yet emphasized that COVID-19 was not "over". This was further underscored by the government declaring several times that measures would be re-imposed if cases rose once again[40].

*Mobilizing campaigns to meet specific goals:* A brand of communication similar to, yet distinct from ubiquitous public action slogans were concentrated campaigns to meet particular goals within certain timeframes. Singapore's early circuit-break strategy was most effective in the service of vaccination goals, such as Singapore's "last mile vaccination" outreach. Also, Vietnam implemented the "Vaccination - keep the faith" media campaign.

*Healthcare & volunteer personnel recruitment and reallocation:* A sign of a competent response is an understanding and use of national human resources, including the recruitment of retired or in-training medical personnel, as well as positioning present professionals where they may be able to most contribute to the response. Vietnam mobilized its medical and nursing students for supervised COVID-19 response work[41]. South Korea mobilized recruiting for epidemiological investigation personnel and healthcare providers[42].

39 Ibid.
40 Teo, Yik-Ying, "WEBINAR SINGAPORE EXCERPT: YIK-YING TEO in TOWARDS THE END OF THE COVID-19 PANDEMIC [新型コロナ　パンデミックの終焉に向けて]", Tokyo Foundation for Policy Research [東京財団政策研究所], June 2022. https://www.youtube.com/watch?v=E5w9hagexwk.
41 Ibid.
42 Lee, op. cit.

Additionally, recruiting volunteers within communities alleviates the burden on professionals with more urgent concerns, gives the response a familiar face for members of local communities, and even reduces some of the employment difficulties stemming from pandemic era business downturns. Taiwan implemented a community-based monitoring/surveillance network[43]. In Thailand, over one million community health workers (CHWs) disseminated and amplified the government's public health messages, mobilizing village health volunteers. In Singapore, volunteers were deployed to educate seniors and provide for their basic needs[44]. In Vietnam, mobile medical stations were also deployed for communes, wards and townships with the participation of medical forces, military medics and volunteers providing testing, vaccinations, referral support and home treatment bags.

*Creating apps and websites for public engagement:* With the right investment and effort, technology can play a huge role in engaging active public involvement and compliance with the pandemic response. It can be a place to easily allow public access to the aforementioned communications and data, but it can also be an additional source of data for the government from the public, a means for vaccinated status identification, and even an avenue for the public to provide feedback on the pandemic itself. In South Korea, this included a Self-Diagnosis Mobile Application and a public mask-purchasing system. In 2021, Vietnam launched a centralized COVID-19 app for travel and vaccine tracking, contact tracing, vaccine reporting, and more. Hong Kong's government implemented a public information campaign on Telegram, which included an Interactive Map Dashboard. The app was designed to serve as a one-stop platform to supply citizens with the latest COVID-19 related updates, while addressing and clarifying areas of public concern[45].

## Reducing vulnerability

The reduction of vulnerability is fundamentally about removing the barriers to active public participation in the pandemic response, which can act as a bolster to operational knowledge. One advantage of the governments mentioned above is that they all have some form of Universal Health Care (UHC) available to the population, even if limited in scope. This has created societies generally less vulnerable to infectious disease, accustomed to gov-

**43** Chien-Jen, op. cit.
**44** Li Yang, op. cit.
**45** Anti-epidemic Info Channel launched, news.gov.hk, 21 February 2020 https://www.news.gov.hk/eng/2020/02/20200221/20200221_212816_106.html.

ernment involvement in medical care, and with pre-existing avenues for the universal distribution of medical care. During a pandemic, however, a nation must go beyond UHC, as vulnerabilities in the public make for much larger potential infection vectors and compromise any potential control over the viral spread.

*Nationalize and increase access to medical countermeasures:* During a pandemic, medical systems and the public cannot rely on prior rates of medical product acquisition and consumption. An example of this during COVID was the skyrocketing global demand for medical-grade face masks. To compensate for this, some governments began their own domestic production. Singapore, along with building national medical supply stockpiles, acquired masks by restarting domestic production and personnel support. Alternatively, South Korea accessed masks through government requisition, export restrictions, price incentives, and personnel support. Likewise, Thailand centralized the procurement and distribution of medical supplies and technology through its Ministry of Public Health.

*Subsidize testing and treatments:* Minimizing the costs of care and prevention also minimizes the possibility of people concealing infection (expensive treatment), not knowing they have an infection to begin with (expensive testing), or not bothering with prevention measures (expensive supplies). South Korea provided free testing and treatment for the public as the government mandate is to fund communicable disease treatment. It also implemented price controls on medical masks.[46] Thailand provided free testing, treatment, isolation and quarantine to all. It also developed an emergency Additional Budget for a prevention and promotion program, screening, testing and tracing, home/community isolation programs, and compensation for people with adverse reactions to vaccines.

*Protect vulnerable communities:* Vulnerable communities are less likely to afford or receive appropriate medical care during the pre-pandemic phase, creating a predisposition towards higher vulnerability during a pandemic, and therefore a critical weak point of focus for pandemic response measures. Utilizing local communities is consequently crucial. Due to the potential underlying vulnerabilities of such groups, most crucial of all is a fast and effective vaccine rollout strategy. Vietnam prioritized the elderly for

**46** Chien-Jen, op. cit.

vaccinations and made efforts to protect the homebound unvaccinated elderly. It also provided regime-based subsidies and free testing and treatment for poor and migrant workers. Thailand expanded its UHC system to include resident non-citizens. It also developed a list of vaccine priority groups which expanded as vaccine access increased: first were frontline health professionals, then the elderly, patients with comorbidities, pregnant, non-Thai adults, and finally adolescents and young children.

One group particularly vulnerable and negatively impacted by pandemic is schoolchildren. Singapore protected the education and wellbeing of students with a sliding scale of face-to-face, blended, and home-based learning supported by a combination of public health and educational measures[47]. This policy was based on the great costs school closures have on student welfare and the disproportionate impact felt by vulnerable groups.

*Providing a safety net for the consequences of national response measures:* Societal mobilization can interfere significantly with the lives and livelihoods of its citizens. In order to mitigate some of these effects, Taiwan provided compensation for epidemic prevention that included a daily allowance, free Wi-Fi, care packages, food and medical services for those living alone[48]. It also made services available during quarantine, including contact with the local government for questions, access to family, and meal packages. In South Korea, socially distanced production and business continued with the support of a relief fund and an expansionary fiscal policy cushioning the impact of the pandemic on the public. Such countermeasures decrease the burden of compliance and increase public trust.

## Adjusting healthcare capacity & resources

The process of adjusting capacity and resources involves comprehensive response activation. While there was significant variation with regard to this in every country in East Asia we analyzed, some marks of exceptional and committed responses were the reorganization of care systems, the mobilization of civilian volunteers, and the triage of strained medical resources.

**47** Wong, Yee Lok. "First-Year Under COVID-19: School Closures in Hong Kong and Singapore." Lee Kuan Yew School of Public Policy Panel Discussion, 25 June 2021. https://www.youtube.com/watch?v=BeBlCfCrqlM.
**48** Chien-Jen, op. cit.

*Tiered/designated hospital/treatment system:* A tiered or flow-model hospital/treatment system can concentrate the treatment of moderate and severe cases of COVID-19 in the hands of those professionals and facilities most equipped to handle them. Vietnam organized a tiered treatment that was organized into three levels, corresponding with mild, moderate and severe cases, based on concentric levels of local, province and city, and finally central healthcare facilities[49]. Thailand had a similarly tiered system, while Taiwan created a list of designated hospitals for COVID-19 isolation, in order to prevent collateral infection of non-infected patients[50] [51].

*A triage to preserve limited medical, hospital, and personnel resources:* In the countries studied, as the pandemic progressed to approximately an 80% majority of asymptomatic and mild COVID-19 cases, it became viable to offload the care for such cases from the overburdened mainstream medical system, thereby relieving pressure on hospital capacity. South Korea used a Living Treatment Center（LTC）for quarantine of low-risk/asymptomatic COVID-19 patients with at-home isolation capacity[52]. Singapore implemented facility-based quarantine, along with home-isolation and self-testing[53]. In Vietnam, grassroots community health stations were responsible for mild or asymptomatic cases, and mobile medical stations mobilized at the local commune, ward and township levels[54]. These stations used virtual consultations of Tier 3 and 2 workers for lower-tier workers to support community health workers and prevent unnecessary cases from being elevated to the more in-demand specialists and hospital beds[55].

*Supporting the medical care system with technological information systems:* Technological information systems can alleviate some burdens of human record-keeping and allow for swift information sharing between COVID test records, healthcare providers, and the government. Digital technology in South Korea included an ICT-based network, the Smart Quarantine Information System（SQIS）, and a QR-code digital entry-exit list system. Taiwanese technology networks included a government open data platform, its national testing network and contact tracing, and a digital quarantine system[56].

49 Thai, op. cit.
50 Patcharanarumol, op. cit.
51 Chien-Jen, op. cit.
52 Lee, op. cit.
53 Li Yang, op. cit.
54 Thai, op. cit.
55 Ibid.
56 Chien-Jen, op. cit.

Despite having less access to a thriving technology sector equivalent to a developed economy such as South Korea, Vietnam was also able to develop a national database for COVID-19 vaccination.

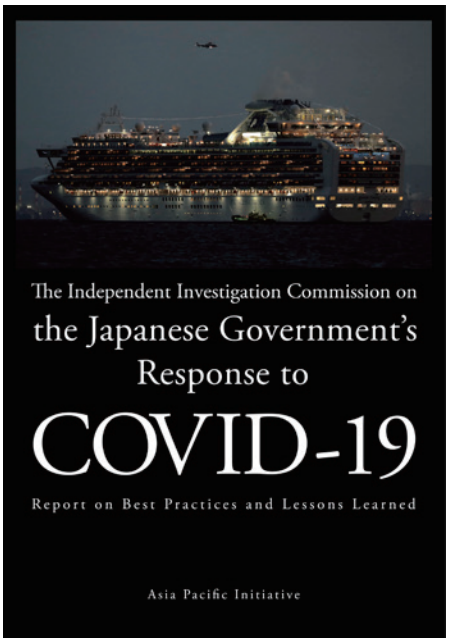
*Public-private partnerships:* In sectors important to response efforts but with significant private ownership, public-private partnerships can align interests and ensure a comprehensive response. South Korea, built its formidable diagnostic capacity through the collaboration of the public and private lab systems, namely the KCDC and the Society for Laboratory Medicine. Together they structured the testing system with agreements on issues such as lab accreditation standards and processes, and the preferred type of virus testing. In Vietnam, there was collaboration between Vietnamese government agencies and private companies to cope with the outbreak of COVID-19, particularly in contact tracing.

## Conclusion

This paper has demonstrated that East Asian countries and regions were able to provide effective operational knowledge to the public, reduce national vulnerabilities, and adjust healthcare capacity and resources in ways that created public trust and a sense of legitimacy in the competency of the governments' strategies. This created and maintained a whole-of-society response, which allowed East Asia to build resilience and effectively control the COVID-19 pandemic. Such responses bought these governments time by keeping infections relatively low until vaccines were available.

Perhaps most importantly, through highlighting the whole-of-society approach in East Asia, countries are not bound by a binary choice between locking up their citizens against their will and shutting down their economy, or letting the virus tear through the population. Such a binary choice implies that governments are forced to choose a lesser of two evils. Yet, we have demonstrated that empowering citizens with the latest available scientific advice — operational knowledge — and trusting them to implement clearly communicated and necessary measures, importing the most scientifically

effective vaccines for the specific disease rather than favoring national champions, maintaining moderate restrictions until a sufficient level of immunity is developed, and listening to the public is demonstrated here to be not only more effective at saving lives but also less harmful to the economy and society in the long-term. Our analysis demonstrates that a more compassionate approach that aligns controlling COVID-19 effectively with minimizing human suffering and governing by popular consent is possible.




## About "The Independent Investigation Commission on the Japanese Government's Response to COVID-19 (API/ICJC)"

API established "The Independent Investigation Commission on the Japanese Government's Response to COVID-19" in July 2020 to examine how Japan responded to the COVID-19 crisis, and published a report titled "The Independent Investigation Commission on the Japanese Government's Response to COVID-19: Report on Best Practices and Lessons Learned" in Japan in October 2020.

On 8 January 2021, API published the English version of the Commission Report .

Under the guidance of the Commission, which consisted of four leading experts, the Working Group (WG) composed of 19 experts in medical, law, public policy, crisis response, health security, and international relations, conducted 102 interviews with 84 government officials and experts, including the Prime Minister Shinzo Abe, the Chief Cabinet Secretary Yoshihide Suga, the Minister of Health, Labour and Welfare Katsunobu Kato, as well as numerous other senior government officials who provided insight on the background of the events.

The full report is available online.
https://apinitiative.org/en/project/covid19/

Cover image: COVID-19 Omicron variant detected in Hong Kong, China - 28 November 2021
Photo: Budrul Chukrut/SOPA Images via ZUMA Press Wire/KyodoNewsImages

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