ALL IN: VIETNAM'S WAR AGAINST COVID-19, 2019 – 2020

SYNOPSIS
When SARS-CoV-2 emerged in Wuhan, China, in late 2019, Vietnam’s scientists knew their country was in grave danger. Vietnam, a country of 97 million, shared an 870-mile land border with China, its biggest trade and tourism partner. Adding to the risk posed by the virus, Vietnam was a lower-middle-income nation with limited resources and an already overtaxed health-care system. But in the years after the 2003 outbreak of SARS, a deadly respiratory ailment that traumatized East Asia, Vietnam had built a robust pandemic-preparedness system that swiftly mobilized to confront the threat of SARS-CoV-2. After Vietnam recorded its first case on January 22, 2020, the prime minister declared all-out war on the virus no matter the cost to the economy. The government moved swiftly to implement border closures, extensive contact tracing, targeted lockdowns, and a strict quarantine protocol. Relentless and creative communications based on accuracy, transparency, and timeliness built public trust and compliance with public health measures. After more than three months with no community transmission, the country experienced an outbreak in Da Nang that spread across the nation and threatened to spiral out of control. But Vietnam’s authorities carried out a massive testing, tracing, and quarantine program that halted the contagion. As of December 31, 2020, Vietnam had recorded only 1,465 cases and 35 deaths—and it had posted the highest annual GDP growth of any economy in Asia.
INTRODUCTION

In late November 2019, epidemiologists in Vietnam began hearing rumors that a novel respiratory disease was circulating in Wuhan, a Chinese city 840 miles north of Hanoi. A tropical, lower-middle-income nation, Vietnam frequently grappled with infectious-disease outbreaks. To get ahead of emerging risks, epidemiologists at Vietnam’s four national public health institutes closely monitored formal and informal international scientific channels. They paid especially close attention to reports of airborne respiratory diseases: In 2003, severe acute respiratory syndrome (SARS) had taken the country by surprise, infecting 63 people and killing 5. The government — the executive branch of the Socialist Republic of Vietnam under the rule of the Communist Party of Vietnam — had responded quickly to contain SARS. Vietnam was the first nation in Asia to eradicate the disease within its borders.

But the outbreak was traumatic and had alerted the country’s leaders that more needed to be done to prepare for a pandemic. From 2003 to 2019, the government invested heavily in programs and coordination systems for detecting and responding to infectious-disease outbreaks. During those years, flare-ups of avian influenza, measles, Zika, and other illnesses tested those systems, led to refinements, and habituated Vietnamese society to public health control measures.

In late 2019, however, as more and more information about the novel coronavirus that would come to be known as SARS-CoV-2 trickled out of Wuhan, Vietnam’s infectious-disease-control authorities began preparing for what would be their biggest test yet.

THE CHALLENGE

Disease outbreaks presented a persistent and serious threat to Vietnam’s socioeconomic development. Every year, millions contracted communicable diseases and thousands died.\(^1\) Outbreaks of zoonotic pathogens such as avian influenza viruses and swine influenza viruses forced mass culls of livestock, affecting the livelihoods of millions of Vietnamese households. Frequent natural disasters such as floods and typhoons contributed to environmental conditions under which diseases could more easily emerge and spread. And human activities—such as poorly managed urbanization and industrial waste—only added to the threat.

In the case of SARS-CoV-2, Vietnam’s proximity to China meant it was at especially high risk. The two countries shared an 870-mile land border, and there were daily direct flights between Wuhan and both Hanoi and Ho Chi Minh City, Vietnam’s two largest cities. Exacerbating that risk, Vietnam had become increasingly connected to the world during the previous two decades, with heavier and heavier flows of people and goods—especially to and from China, Vietnam’s largest trading partner. The government drove a push to develop the tourism industry, and from 2009 to 2018, the number of foreign travelers to Vietnam grew at an annual rate of 14%, the highest in Asia.\(^2\) In 2019, Vietnam
received more than 5.8 million Chinese tourists, accounting for around one-third of all of the country’s foreign visitors.³

Vietnam’s geography, too, presented difficulties for containing a rapidly spreading virus. The nation’s 97 million people were dispersed throughout 63 provinces—which comprised some 700 districts, which in turn comprised some 11,000 communes, administrative subdivisions containing towns and villages—all of which elements varied in economic status and provision of government services. Hanoi and Ho Chi Minh City were modern megapolises, with 19.8 million and 21 million inhabitants, respectively, and high population densities, making it easy for a virus to travel from human to human. The urban population had been growing, but more than 60% of Vietnamese still lived in rural locations, many of which were remote and had jungled, mountainous terrains that hindered the reach of government services.

Resource limitations posed additional challenges. Though one of Asia’s fastest-growing economies, with annual GDP growth averaging more than 6% since 2000, Vietnam was still a lower-middle-income country. Its per-capita GDP of about $2,715 in 2019 was less than that of other emerging economies such as Indonesia, Thailand, South Africa, and Brazil.⁴

The health system barely had the facilities and physicians to handle the normal health-care needs of the Vietnamese population—much less cope with an influx of COVID-19 patients. According to the Ministry of Health, Vietnam had more than 30 hospital beds per 10,000 inhabitants—among the highest rates in Southeast Asia⁵—but a growing demand for health care had caused chronic and severe bed shortages. In 2014, the Ministry of Health reported average hospital wait times ranged from four to seven hours.⁶ Despite a government effort to increase capacity and the number of private facilities—(only 7% of beds were in private hospitals), bed-to-patient occupancy rates were typically above 120% in many hospitals.⁷ Further, there were only 8.7 doctors per 10,000 inhabitants.⁸ (Neighbors Malaysia and the Philippines had 15.3 and 11.1, respectively, and the Organisation for Economic Co-operation and Development average was 28.6).⁹
FRAMING A RESPONSE

Despite weaknesses in health-care infrastructure, in late 2019 Vietnam was in many ways prepared to handle a pandemic, due to years of planning, investment, and actual practice.

In the years after the 2003 SARS pandemic, the government prioritized strengthening the system for infectious-disease prevention, detection, and control. The government adopted infectious-disease legislation, undertook organizational restructuring to improve coordination and emergency management, strengthened disease surveillance, developed the public health workforce, and conducted extensive planning to prepare for a pandemic. From 2000 to 2016, public health expenditure per capita increased an average of 9% annually.10

Infectious-disease outbreaks that occurred after SARS—including swine flu in 2009, measles in 2014, Zika in 2016, and multiple outbreaks of avian influenza—enabled public health authorities to test and refine the system.

“There is a lot of value in responding to every single outbreak,” said Matthew Moore, MD, director of the US Centers for Disease Control and Prevention (CDC) office in Vietnam (text box 1). “It strengthens the system. It’s as if you’re training for a marathon: it doesn’t hurt to climb a few flights of stairs each day.”

In addition, certain aspects of Vietnamese society supported infectious-disease control. A cultural tradition of Confucianism—as a group of Vietnamese academics wrote in the medical journal Frontiers in Public Health in late 2020—predisposed the public to prioritize “the health and life of other people in their community over their freedom or liberties.”11 The one-party state’s pervasive public-order apparatus meant the government had the ability to control and monitor people’s movements, which was useful for tracing and containing the spread of a disease.

Legal framework

In late 2007, Vietnam adopted the Law on Prevention and Control of Infectious Diseases, which established a legal framework specifying principles, the roles of agencies and ministries, and the structures of coordination in preventing and controlling outbreaks.12 The law codified some of the practices that had proved effective in the SARS response — and it remedied some shortcomings. For though the government’s SARS response had been effective overall, some of the relevant ministries and agencies had, as one academic report put it, “seemed to be passive and uncertain of the measures that should be taken.”13 Moreover, allegations had emerged that the government had not been quickly and totally forthcoming with information—a criticism that emerged again during a 2005 avian influenza outbreak, when some local authorities were accused of withholding details about the disease’s spread.14

The law enshrined four principles to guide Vietnam’s approach to infectious disease: (1) prevention as a top government priority, (2) interagency
coordination and social mobilization to prevent and control disease outbreaks, (3) dissemination of precise and timely information about outbreaks and pandemics to the public, and (4) being proactive, prompt, and thorough to prevent and control infectious disease.

The law stipulated that the General Department of Preventive Medicine (GDPM), an agency within the Ministry of Health, would have primary responsibility for the prevention and control of human infectious diseases. Once a pandemic was underway, the government would form a national steering committee to direct and help coordinate the response. A steering committee was a structure the government had used in the 2003 SARS pandemic. The committee would be chaired by either the minister of health, the deputy prime minister, or the prime minister; and it would comprise representatives from the health, agricultural, financial, communications and information, military, home affairs, and other relevant sectors of the central government. In addition, provincial and district governments were required to form their own steering committees that would mirror the structure of the national one.

Text Box 1. US CDC in Vietnam

A hallmark of Vietnam’s public health system was engagement with international partners. In addition to the WHO, the United States Centers for Disease Control and Prevention was a particularly involved partner in supporting Vietnam’s infectious-disease prevention, detection, and control system.

In 1995, the United States and Vietnam restored diplomatic relations. Authorities from both countries agreed an initial area for cooperation would be public health—a technical, relatively apolitical issue. Three years later, the US CDC opened an office in Hanoi, with a focus on providing technical and financial assistance for Vietnam’s fight against HIV, the virus that causes AIDS. That assistance expanded under the US President’s Emergency Plan for AIDS Relief, a multibillion-dollar initiative launched in 2003 to help countries—particularly in Africa and Asia—prevent, control, and treat HIV. With that collaboration having demonstrated success, the two countries expanded the partnership to include programming and assistance focused on various strains of influenza.

In 2014, with implementation of the Global Health Security Agenda, a multilateral initiative that aimed to reduce global health risks worldwide, the CDC partnership with Vietnam grew to focus on strengthening core technical areas: disease surveillance, laboratory capacity, emergency management, workforce development, and infection prevention and control in health-care settings. Instead of addressing a single pathogen such as HIV or influenza, the assistance provided across those areas was meant to build Vietnam’s capability to handle any infectious-disease threat.

By 2020, the US CDC staff in Vietnam totaled 58 and were closely integrated with their counterparts in the Ministry of Health. “We have a very good working relationship,” said Dr. Moore. “The Vietnamese genuinely want input from the CDC, and they listen and ask incisive questions. It’s a true partnership.”
The law barred government authorities from concealing information about infectious diseases, and it stipulated the responsibilities of various ministries, local authorities, and the mass media for informing, educating, and communicating with the public about pandemic prevention and control. The government had recognized that mass public mobilization was vital to handling a pandemic—and that providing timely and accurate information was vital to mobilization.

Coordination and emergency management

The basic organization of Vietnam’s infectious disease prevention and control system was established in the 1960s. At the top was the GDPM, which oversaw the epidemiology and communicable-disease departments at four national research institutes, each of which supervised and helped coordinate disease prevention, detection, and control in its respective geographic region. The four were the National Institute of Hygiene and Epidemiology in Hanoi, which covered the north; the Pasteur Institute in Ho Chi Minh City, which covered the south; the Tay Nguyen Institute of Hygiene and Epidemiology, which covered the Central Highlands; and the Pasteur Institute of Nha Trang, which covered the Central Coast. Beneath the institutes were provincial preventive medicine centers; beneath those were district health centers; and beneath those were commune health stations.

As part of a larger bureaucratic reform program led by the Ministry of Health in 2018, the various centers that dealt with public health in each province—most provinces had seven—were merged into a single provincial center for disease control. “Putting all the functions together with shared leadership created synergies,” said Le Hong Nga, MD, head of the department of disease control for the Ho Chi Minh City Center for Disease Control. “For example, the international medical verification department can share foreign-outbreak information with us to improve our proactive prevention, and the department of communication can help us quickly raise awareness of a health risk in the community. Because we are all together in the same center, coordination is smooth and effective between all the departments.”

Responsibility for responding to a disease outbreak fell to the most-local level possible. The system adopted a disaster management credo called *four on the spot*, which had been developed in the 1970s to respond to floods and which thereafter was invoked in responses to other natural disasters such as typhoons. On the spot meant local management and response; that is, whoever was there—on the spot—was responsible. Four referred to the four aspects of a response: leadership, human resources, means and materials, and logistics. If the lowest level became overwhelmed or if an outbreak spread across jurisdictions, the level above—usually, the provincial center for disease control—would step in to manage the response.

Starting in 2013, the GDPM, with support from the US CDC and the US Defense Threat Reduction Agency, established a public health emergency
operations center within its building to serve as a nerve center for disease outbreak preparedness and response. Additional emergency operations centers were established in the communicable disease or epidemiology departments of the four national research institutes, thereby leading to better regional oversight and closer coordination.

All five emergency operations centers were linked to one another and to all the provinces, districts, and communes in their respective regions to form a single information network for infectious-disease prevention, detection, and control. Each center had a data warehouse, dashboards with visualization software, and videoconferencing telecommunications equipment, with technical assistance and personnel training—in both the technology and the incident management structure—provided by the US CDC.

The network was built for speed. “Even though we have a big system, all the nodes are linked together,” said Pham Quang Thai, MD, PhD, head of the Communicable Disease Control and Prevention Department at the National Institute of Hygiene and Epidemiology in Hanoi. “Someone in a commune can pick up the phone and directly call me with a problem—without going through the district or the province first. The system is designed to be very, very fast.”

**Disease surveillance**

The data the emergency operations centers gathered was generated through disease surveillance—the backbone of the infectious disease control system. “Our guiding principle is, the earlier we can detect contagion within the community, the better we can respond to it,” said Tran Dac Phu, MD, head of the General Department of Preventive Medicine from 2014 to 2018.

Vietnam practiced two kinds of disease surveillance. The first was indicator-based, or case-based, surveillance. If a patient was diagnosed with one of 26 communicable diseases, the hospital or health center would report the case—within 24 hours if it was high risk, such as a severe acute respiratory infection or an influenza-like illness. Before 2016, provincial health departments aggregated the data reported to commune- and district-level public health authorities and sent it to the regional institute. In 2016, the Ministry of Health launched a centralized, web-based system. When a provider entered a case, it got recorded almost instantly in the database, and staff at the GDPM, the national institutes, and the provincial centers for disease control could view it.

The web system was also capable of integrating data from the second kind of disease surveillance—event-based surveillance—that Vietnam began adopting in 2015 with training and guidance from the World Health Organization (WHO), the US CDC, and other international partners. Event-based surveillance empowered health-care providers at every level, as well as community figures such as local civil servants and religious leaders, to report unusual, disease-related events. For example, a schoolteacher might report to a commune health station that four kids were all out sick with pneumonia, or a district health center worker might see a local media report about a rabid dog and report that.
The GDPM and two of the regional institutes piloted event-based surveillance in four provinces. Staff in every district health center, commune health station, and public hospital in each province were trained. Thousands of posters and hundreds of thousands of leaflets with information about what and how to report were distributed among communities. Evaluations showed that the pilots resulted in earlier outbreak reporting, increased coordination between health-care facilities and public health workers, and more extensive community participation in surveillance and reporting. In March 2018, the Ministry of Health issued a regulation requiring that all provinces practice event-based surveillance.

All event-based surveillance reports were incorporated into the centralized database alongside the case-based reporting. Data that might signify an incipient outbreak automatically triggered an alarm in the system, prompting an epidemiological team from the provincial center for disease control to deploy to the scene to investigate and conduct contact tracing if necessary. (Because of the memory of SARS, cases of severe viral pneumonia and highly infectious influenza strains were immediately sent to the regional institutes for testing.)

In addition to domestic disease surveillance, Vietnam closely monitored the outside world for possible threats. The GDPM participated in formal networks, such as WHO’s influenza-monitoring FluNet tool and the Global Health Security Agenda, a multilateral health threat reduction initiative. In addition, Vietnam’s doctors and epidemiologists—in the national institutes, hospitals, and universities—cultivated formal and informal partnerships for discussing experiences and exchanging information.

The Vietnamese government facilitated and supported all of that global engagement. “International cooperation is very important,” said Dr. Phu. “We put a lot of energy into developing strong partnerships and mutual support with international organizations and other countries.”

**Workforce development**

The Ministry of Health also put energy into expanding and developing the public health workforce—especially members involved in disease control and surveillance—in all corners of the country. A Ministry of Health regulation required each provincial center for disease control to have at least two public health rapid response teams, and each district and commune to have at least one. Each team had an average of five or six public health workers. The teams were capable of investigating a disease outbreak, conducting contact tracing, and responding to other public health emergencies, such as a water supply disruption.

To help increase the supply of public health workers who could perform those duties, in 2007 the GDPM partnered with the US CDC and WHO to implement the Field Epidemiological Training Program. Modeled on the US CDC’s Epidemic Intelligence Service, a two-year postdoctoral training program in epidemiology, the program trained health professionals to investigate
outbreaks and other public health events in the field and to issue recommendations.

More than 80 countries since 1980 adopted the program, but Vietnam’s version evolved into a distinct model. At first, the program was simply a standard replica of the Epidemic Intelligence Service. “But we realized there was a huge need for more people at the provincial and district levels, frontline workers who could investigate local, sometimes very small outbreaks,” said Dr. Moore of the CDC. So the program took graduates of the two-year course and trained them to become mentors who could lead basic 12-week courses in field epidemiological investigation for frontline workers.

By 2019, Vietnam’s Field Epidemiological Training Program had graduated 40 from the two-year course and 80 from the short course. Ten high-performing graduates from the short courses were set to begin a nine-month-long intermediate course to further develop their epidemiological training. The high performers from that course would then move on to the advanced course. “This progressive, tiered model hadn’t been tried anywhere else in the world, and it’s been wildly successful in helping cover more of the country geographically,” said Dr. Moore. “The Vietnamese are very open to innovation.”

Planning

The GDPM developed the first national pandemic response and preparedness plan in 2005—a human influenza pandemic plan—and in subsequent years, it formulated several national response plans. The plans set the policy agenda for pandemic preparedness and defined the responsibilities and actions of each government ministry. They represented an essential mechanism for coordination. “Our economic resources are limited, so we have to plan ahead in order to minimize the impact of a pandemic,” said Dr. Phu.

The GDPM, working with the regional institutes and often in partnership with the WHO, UN agencies, and the US CDC, developed national response plans for different types of diseases and different outbreak scenarios. There were plans for an outbreak that had yet to enter Vietnam; plans for minor outbreaks; for moderate outbreaks; and for major outbreaks. In addition to the national plans, ministries and local authorities developed operational plans for implementing their individual parts of the response.

Plans were regularly revised and updated, and almost every year since 2004, the GDPM led national tabletop as well as real-world exercises to test responses to different outbreak scenarios. These included an Ebola response exercise in 2015 and an avian influenza H7N9 outbreak in 2018, which also served as a test of event-based surveillance and the public health emergency operations center structure.

What would soon prove to be the most germane national response plan was released in 2019, when the GDPM developed an updated, whole-of-government contingency plan for a highly-infectious influenza pandemic. The Ministry of Health held a conference in late 2019 to familiarize all the ministries, agencies,
and other stakeholders with details of the plan and their role in it. “All the ministries were aware of the plan and knew the parts they were supposed to play during a pandemic,” said Quang Duy Pham, MD, an epidemiologist and acting head of the training center at the Pasteur Institute of Ho Chi Minh City. “That was very important because it meant that when COVID-19 arrived, every piece of the government already had an idea of what it was supposed to do.”

GETTING DOWN TO WORK

After nearly two decades of preparation, Vietnam was ready to handle a pandemic. The public health system had the coordination mechanisms, the personnel, and the tools required. And the officials in the system had planned and practiced, such that everyone had experience and knew what to do when an outbreak occurred.

Yet all of that would be for naught if the system didn’t act quickly. Containing a pandemic depended on stopping outbreaks before they spread out of control and overwhelmed the still relatively limited capacity of both the health and public health systems. The public health authorities had to stay ahead of SARS-CoV-2. If the virus outran them, the costs could be extreme.

Preparations

In late November 2019—more than a month before any WHO or media reporting on the issue—epidemiologists at Vietnam’s national institutes started hearing what they described as “rumors” from their informal international networks of scientific colleagues that an airborne disease similar to SARS was spreading in Wuhan. “These rumors made us concerned,” said Dr. Thai of the National Institute of Hygiene and Epidemiology in Hanoi. “We kept listening.”

In December, as more and more details about the pathogen emerged, Vietnamese scientists alerted leaders in the Ministry of Health. The political leadership took the threat seriously: The last two pandemics—SARS and avian influenza—had originated in China. The prime minister, with support by the party, instructed the Ministry of Health to address the threat, making clear that the ministry would have total political support and all the state resources and capabilities it required.

“Once we had the government’s attention, everything changed,” said Dr. Thai. “I know that in some countries, it takes time for the government to make a decision. But Vietnam is different. The [public health] system was like a runner on the track at the blocks—waiting for the starting gun. The government pulled the trigger, and then everything started to go.” By December 31, the date the WHO’s China country office was first officially informed of a cluster of pneumonia cases of unknown cause in Wuhan, Vietnam’s pandemic preparedness system had already been off and running.

On January 3, the GDPM issued a directive to increase infectious-disease-control measures at Chinese border crossings. That included implementing quarantines for people and live goods—poultry, especially—with disease cases.
Temperature screenings and health checks of airport passengers arriving from Wuhan were implemented days later.

On January 7, the GDPM released a health risk assessment it had conducted in consultation with leading scientists and doctors. The assessment concluded that given what was known about the rate of propagation and the heavy flows of people between China and Vietnam, there was very high risk that this unknown disease would enter the country. Adding to the risk, from January 23 to 29 was the Lunar New Year, a weeklong holiday during which the volume of travelers between China and Vietnam would surge. Two days after the risk assessment was concluded, the Ministry of Health alerted the public to the likely arrival of the novel disease, recommending mask wearing by anyone in contact with someone with a respiratory ailment.

The GDPM held meetings with national institute scientists, other ministries, outside experts, and staff from the WHO and the US CDC to update the 2019 national influenza pandemic response plan for what the department now knew was a novel coronavirus. (China released the genomic sequence of SARS-CoV-2 on January 12.) On January 16, the Ministry of Health disseminated the response plan—which outlined the roles and responsibilities for each sector and level of authority—across the national government and to the provinces, districts, and communes.

Accompanying the national response plan were technical guidelines for ways to detect, prevent, and treat cases of the disease; the guidelines incorporated lessons learned from handling SARS and other airborne diseases. The guidance was prescriptive by its provision of detailed operating procedures on such subjects as proper case monitoring and how to quarantine suspected cases. The guidelines were quickly transmitted to the lower levels.

On January 20, the GDPM designated 22 hospitals and satellite health centers to serve as COVID-19 treatment facilities. From past outbreaks, the government had learned an important principle: that resources should be deployed to outbreak zones rather than patients being moved from those zones and amplifying disease transmission. The GDPM and the regional institutes began establishing therapeutic teams that could deploy to the selected hospitals in the provinces to treat patients as needed.

Then, on January 22, a 65-year-old Chinese man with a fever and fatigue checked into the emergency department at a hospital in Ho Chi Minh City. He said he had become ill on January 17, four days after he and his wife flew from Wuhan to Hanoi. Throat swabs sent to the Pasteur Institute of Ho Chi Minh City that were tested by means of real-time reverse-transcription polymerase chain reaction (RT-PCR) assays were positive for SARS-CoV-2. Vietnam had become the second country outside China to confirm a case within its borders.

Though the WHO would not declare a pandemic until March 11, as far as the Vietnamese government was concerned, one was now under way. “We had detected our first case,” said Dr. Thai. “We knew Vietnam was now under attack.”
Mobilization

Soon after the patient was diagnosed, the Ho Chi Minh City provincial center for disease control received an urgent report from the hospital via the centralized surveillance database with the patient’s information. In order to trace the patient’s contacts, a rapid response team led by Dr. Nga, head of the center’s department of disease control, together with a team from the district health center and commune health workers, deployed to the hospital and to the hotel where the patient was staying. None showed symptoms, but Dr. Nga instructed all of them to self-isolate for two weeks.

The patient had arrived at the hospital with his son, who was showing mild symptoms. The investigators ascertained that family members of the patient had been in four cities in Vietnam, and investigative teams and contact tracers in those cities deployed. Epidemiologists at the Pasteur Institute confirmed that the virus was transmitting from human to human—something the WHO had suggested might be occurring in Wuhan but that had yet to be confirmed. The institute’s findings were published, first as an online letter posted January 28 in the *New England Journal of Medicine*.\(^\text{18}\)

With local responses underway to trace and isolate potential cases tied to the patient, the GDPM activated the five public health emergency operations centers to coordinate the flow of information and to better oversee and distribute guidance to the provincial centers for disease control with regard to epidemiological measures for prevention and control of the virus. The emergency operations centers began holding a daily morning meeting to circulate information about the national situation and the situation within each region. If cases were present in a particular province, that provincial center for disease control would join the meeting to report and request support if needed.

On January 27, in a speech to government and party leaders that was publicized across state media, Prime Minister Nguyen Xuan Phuc called for a nationwide effort to combat the virus, with the priority being to save lives. “Fighting [this] disease is like fighting an enemy,” he said. “The government is willing to accept economic losses to protect the lives and the health of the people.”\(^\text{19}\)

Phuc announced the creation of a National Steering Committee for COVID-19 Prevention and Control, as mandated under the law on infectious diseases. As chair of the committee he named Vu Duc Dam—the youngest of the government’s four deputy prime ministers—who was the acting minister of health and also responsible for overseeing the ministries of science and technology, information and communication, labor, and others. Dam had a PhD in economics from the Free University of Brussels and was a frequent representative of the government abroad. At home, Dam was known as a skilled and telegenic communicator who had cultivated a public image of competence, openness, and being close to the people.
The committee had 25 members from 13 ministries, as well as from the government’s general office, government-run media, the National Assembly, and information technology companies. Its mandate was to issue directives and make policy decisions about the government’s response. Decisions were made collectively—after consultation with all members, yet with the chair having the final say. The committee met every two days and oversaw four subcommittees focused on different technical and logistics issues. Advisors—including epidemiologists and other kinds of scientists—and international partners such as representatives from the WHO and US CDC would regularly attend national steering committee meetings to provide input.

Each province and district formed its own steering committee. The head of the committee was the chairperson of the People’s Committee, which was the executive arm of a province or district and was the provincial or district equivalent of the national government. The deputy head of the steering committee would be that province or district’s highest-level health official, i.e., the head of the health department. Representatives from other sectors such as police departments, communications departments, and industrial management boards were also on these provincial and district steering committees.

As instructed in the national response plan, a mass mobilization gained steam. By January 31, every national and provincial hospital selected to handle COVID-19 patients had established at least one rapid response team. The provincial centers for disease control formed additional response teams, as well; the Ho Chi Minh City CDC, for instance, added an additional eight teams to the two it already had.

The military and local security forces were mobilized to help erect field hospitals and quarantine facilities and to become prepared to assist with contact tracing and enforcement of lockdowns. Tens of thousands of doctors and nurses were readied to deploy to outbreak zones if needed. Medical students were recruited and trained to take test samples, assist doctors and nurses, and help conduct contact tracing.

The prime minister continued to characterize the country’s mobilization against COVID-19 as a war. He called the initial effort to combat the virus the “spring general offensive of 2020,” a reference to the 1968 Tet Offensive, one of the largest military campaigns in the Vietnam War.

**Containment**

After that first case was detected in Ho Chi Minh City, the government took extraordinary steps to contain further transmission of the virus by tightening border controls and travel restrictions. At the time that Vietnam began implementing the restrictions, the WHO was urging countries not to restrict international travel, arguing restrictions would do more harm than good.

The day after the first case was detected, the Vietnamese government canceled all flights to and from Wuhan. The government soon stopped issuing visas to Chinese nationals or to any other foreigner travelers who had been in
China in the 14 days prior to their planned arrival in Vietnam. On January 31, the government implemented a policy of mandatory 14-day quarantine of any traveler arriving in Vietnam from a country where the virus was circulating—at that point, only China. Security services began setting up government-run quarantine centers at the Chinese border and near airports. On February 1, all flights to and from China were canceled, and the land border was closed to all but essential trade.

As COVID-19 spread to other countries, travelers from those countries were required to submit medical declarations and, if symptomatic, enter a quarantine facility. On March 1, that included any traveler coming from China, South Korea, Iran, or Italy. A week later, the Ministry of Health instructed all arrivals to self-isolate at home for 14 days. Two weeks later, on March 21, the government announced a mandatory 14-day quarantine for any traveler entering Vietnam regardless of symptoms or testing positivity. A day later, all international flights were suspended; only with special permission were travelers now allowed into the country. And on April 1, borders with Laos and Cambodia were closed, effectively isolating Vietnam from the world.

The government also took steps to limit the spread of the virus within Vietnam. The first case had come during the Lunar New Year holiday, when schools were already closed for the week. Instead of reopening the schools on January 30 as planned, the government ordered them to remain closed. Mass gatherings were banned, and sports games, conferences, festivals, and other events were canceled.

On February 13, public health authorities detected a cluster of six cases in the Son Loi commune of Vin Phuc province—an hour north of Hanoi—among residents who had repatriated from Wuhan. With less than 12 hours’ notice, the authorities locked down the commune, effectively barring the commune’s 10,000 residents from leaving and outsiders from freely entering for 20 days.

The local security and public order authorities provided for those in the commune, making sure clean water was delivered regularly and residents had access to medical care. They prevented food vendors from price gouging. Local charities and civil society organizations pitched in to donate meals. The authorities communicated with the residents, fielding requests and concerns and providing a precise timeline on when the lockdown would lift. “Communication was important because people knew what to expect,” said Dr. Moore. “And when the authorities did lift the lockdown, there was a big celebration, with lots of fanfare and photos and floral arrangements. It was a really big deal.” From February through April, authorities implemented eight targeted lockdowns—of individual city blocks, of entire villages, and of a major hospital in Hanoi. “We really try to minimize the area of isolation instead of doing widespread lockdowns, so that the impact on the economy in the area is as little as possible,” said Dr. Phu.

But on April 1, amid rising numbers of cases, most of which had been imported from Europe and North America, the government issued a 15-day
nationwide stay-at-home order to prevent further spread of the virus. Nonessential businesses were ordered to close. Residents were required to stay at home except to obtain necessities such as food or medicine, and when they did venture out, they were required to wear masks and maintain six feet of physical distance. The lockdown was extended an additional week in 28 provinces deemed at higher risk.

In addition to restrictions on movement, rapid and comprehensive contact tracing and isolation of confirmed and potential cases ensured chains of transmission were detected and broken. Using guidelines issued by the GDPM, local public health authorities stepped up disease surveillance. Even before confirming a positive test result, a hospital that had a patient with even minor flulike symptoms would use the online system to alert the provincial center for disease control, which would rapidly deploy a team to investigate and begin locking down the hospital if necessary. Event-based surveillance guidelines were updated to include reporting anyone with even minor flulike symptoms. “At that time, we didn’t yet understand the disease very well, but we knew it spread very quickly,” said Dr. Nga. “So we tried to raise awareness among the public to report anyone they saw with symptoms so we could immediately deploy teams to investigate and isolate the case.”

Contact tracing was meticulous and far-reaching. When a confirmed case was found, all of the person’s contacts up to four degrees removed from the person’s case were identified. Interventions were based not on symptoms—or even a positive test result—but on a person’s epidemiological risk of transmission. Those who tested positive—even if they were asymptomatic—were hospitalized in isolation for 14 days. Those who tested negative but were in direct contact with someone infected were placed in a government-run quarantine center for 14 days. Close contacts of those people were required to self-isolate at home for 14 days, and their compliance was monitored by local officials.

The police coordinated closely with the public health contact-tracing teams both to verify that individuals were providing accurate information about their whereabouts and contacts and to prevent people from violating quarantine. Departments of communication checked mobile-phone location data and social media posts to help identify and locate contacts. Information about an infected person’s movements in the days leading up to the person’s diagnosis was published online and even pushed out in text messages so that people who may have been in contact with the positive case could come forward.

The Ministry of Information and Communications partnered with technology companies to develop health declaration and contact-tracing apps for smartphone users. One of the apps, called Bluezone, used Bluetooth technology to alert users when they were near someone who had tested positive for COVID-19. (Bluezone had been downloaded more than 22.5 million times by September, topping the list of free app downloads in Vietnam.)

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The military, too, played an instrumental role, coordinating with public health authorities and medical staff to organize and operate mass quarantine facilities. International media outlets reported that conditions in the quarantine camps were spartan but comfortable.\textsuperscript{21} There were no curfews or bans on communications. Everybody received their own bed and bedding, three meals a day, and personal items such as towels, toothbrush and toothpaste, mouthwash, and shampoo. Some of the facilities had free WiFi. And stories of soldiers’ being caring and communicative, such as facilitating special requests for meals or goods, circulated on social media and appeared in international news outlets.\textsuperscript{22}

From January to May 2020, more than 200,000 people spent time in quarantine facilities. The costs of all of those containment measures—testing, hospitalization, quarantine—were covered by the state at no cost to individuals.

\textbf{Communications}

The government implemented a high-frequency, voluminous, and diverse communications campaign to educate the public about COVID-19 and to strengthen public compliance with public health measures. The effort was led by a national committee for communication chaired by the minister of information and communications. The Ministry of Health’s Department of Communications was in charge of providing all COVID-19 health-related information and coordinating communications efforts to disseminate that material with other government ministries and entities. The department had only 13 staff, and it coordinated extensively with other government agencies, state media, and international organizations to help finance and implement communications campaigns.

Prior to the COVID-19 pandemic, the department had prepared an updated risk communications plan for an infectious-disease outbreak that had already been disseminated to every level of the public health system. “We based our plan on our previous experiences with controlling other outbreaks,” said Nguyen Dinh Anh, MD, director of the department. “And those experiences showed us that risk communications about an infectious disease need to be clear, transparent, accurate, and timely. This is very important for building trust among the people, because if the government is not quickly providing accurate information, then that creates space for misinformation, rumors, and fake news.”

The messaging about COVID-19 emphasized two themes: (1) the government’s public health guidance regarding handwashing, mask wearing, physical distancing, avoiding gathering, and declaring one’s health status and (2) solidarity in the country’s war against the virus.

The department launched a website (https://ncov.moh.gov.vn/) that it updated twice daily—at 6 a.m. and 6 p.m.—with the latest epidemiological information, official guidance, and news. (Around 70% of people in Vietnam used the internet).\textsuperscript{23} The website provided detailed information about every single confirmed case, including the age, gender, location, nationality, and recent
movements of every COVID-19 patient. (The government had suspended medical record privacy in the name of the public interest).

The department worked with the Ministry of Information and Communications and the country’s telecommunications providers to push text messages directly to all of Vietnam’s mobile phone users. There were some 150 million mobile phone connections in Vietnam (for 97 million inhabitants), and an estimated 89% of the rural adult population had mobile phones.24 “We could send text messages to people living in remote areas who didn’t have access to the internet or newspapers,” said Dr. Anh. Sometimes multiple messages were sent to a user in a single day. A total of several billion individual messages had been sent by the end of the year.

The department ordered leaflets and posters that were distributed across cities and in noticeable locations in mountainous and rural areas, such as in markets. Famous painters, some of them acting on their own initiative and some of them responding to a call for submissions from the department, created designs that would be emblazoned on posters, billboards, and stamps with a wartime propaganda aesthetic, swapping soldiers for masked doctors and nurses, and featuring public health messages and slogans such as, “To stay at home is to love your country.”25

The department also used social media to get messages out. An estimated 65 million Vietnamese used social media, with YouTube, Facebook, and local app Zalo the most popular platforms.26 It maintained its own pages and accounts across those platforms, and it enrolled celebrities, athletes, and other famous Vietnamese and key opinion leaders to spread public health messages on social media.

Together with the Ministry of Health’s National Institute of Occupational and Environmental Health and with funding from UNICEF, the department contracted Khac Hung, an award-winning record producer, to rewrite the lyrics of one of his hit pop songs to make it a handwashing public service announcement. The song, called “Ghen Co Vy” (“Jealous Coronavirus”), with an accompanying dance choreographed by famous dancer Quang Dang, became a viral sensation, garnering tens of millions of views on social media platforms and sparking an international dance challenge on TikTok.27

The department worked with state-run news outlets to generate a steady stream of news stories, infographics, and other content about the virus. Most of Vietnam’s press was government or party run, and the Ministry of Communication and Information oversaw private outlets.

The reach of the information state was vast. For instance, the Vietnam News Agency, the government-run press agency of the state of Vietnam, had more than 2,300 staff, including more than 1,000 reporters and editors, spread across news bureaus in each of Vietnam’s 63 provinces and in 30 foreign countries. The news agency published in nearly a dozen languages and had more than 60 media products that included print newspapers, online news sites, and magazines.
The various platforms of the Vietnam News Agency—and of the state-run broadcaster and other media outlets—published an immense amount of coronavirus coverage. One analysis found that just 14 online newspapers published 15,000 articles about the coronavirus from January 9 to April 4, 2020.\(^8\)

The Ministry of Health’s Department of Communications used social media not only to distribute information to the public but also to quickly communicate with journalists and health communications workers across the country. It maintained fan pages on social media platforms Facebook, Viber, and Zalo that it used for transmitting new guidance and pieces of messaging. “This network is very important because not only do we use it to send out information in a timely way, but we also get feedback through it—about whether a message is not totally clear or might need to be adjusted,” said Dr. Anh.

**Testing**

“At the start of the COVID-19 pandemic, our system was well equipped,” recalled Dr. Thai. “But only one thing was missing: we didn’t have a testing system already in place.” In early January, only the four national institutes had the ability to perform real-time PCR tests for COVID-19. Every test sample had to be sent to one of the labs, a time-consuming process.

Many lab facilities in provincial centers for disease control and certain hospitals had real-time PCR testing machines and gene-sequencing experts to test for HIV, a capability built up in the preceding years with support from the US CDC. The machines could be used to test for SARS-CoV-2, but the labs lacked the test kit, the protocols, and training in the proper technique.

On January 31, the Ministry of Science and Technology invited virologists and other scientists to an emergency meeting at which it called for proposals for a mass-produced test kit. It approved, among others, a proposal from a team of researchers at Vietnam Military Medical University that had begun developing a test kit of their own volition as early as late December, when they first started hearing about the virus in Wuhan. In mid-January, the team’s lead researcher had contacted Christian Drosten, a virologist in Berlin who had published the first scientific paper on the virus.\(^9\) Drosten shared initial information on the genomic sequence of SARS-CoV-2 and the detection protocol. The researchers began developing a prototype test kit and engaged Viet A Corp., a biotech company, to commercialize and mass produce the test.

The Ministry of Science and Technology provided funding for Vietnam Military Medical University to complete the test kit. The National Institute of Hygiene and Epidemiology in Hanoi provided the genome data for SARS-CoV-2 from Vietnamese patients and later conducted clinical trials to validate the test kit prototypes. The university’s test kit was faster, more sensitive, and more affordable than the WHO’s reference test kit. The Ministry of Health licensed the test kit for public use on March 4, and the government procured it in bulk for laboratories in hospitals and the provincial centers for disease control.\(^10\)
Vietnamese scientists who had participated in the Ministry of Science and Technology’s January 31 meeting produced four viable test kits. By July, the Vietnam Military Medical University test kit had accounted for an estimated 80% of the country’s testing, and Viet A Corp. had received orders for the kit from more than a dozen foreign countries.31

Equipped with the new test kits, the national institutes led trainings for every lab that had a real-time PCR machine. Researchers from the university and staff from Viet A Corp. also joined to help with the training and even to run tests in labs that were short-staffed. The Ministry of Health put in place a certification program to designate labs as confirmatory labs for verification of tests processed in other labs.

By August, 122 labs could test for COVID-19, with a maximum capacity of 34,000 tests per day.32

OVERCOMING OBSTACLES

From April 17 to July 25—a stretch of 99 days—Vietnam recorded no cases of community transmission. During that span, the only new cases were ones that had arrived from abroad and were quickly identified and isolated. In total, Vietnam confirmed only 417 cases, or 4.28 per million inhabitants. (At the same time, Taiwan confirmed 19.23 per million, and the United States, 12,632.5).33 (See Exhibits at end of case.)

Not one person in Vietnam had died from COVID-19. The world had recorded more than 640,000 deaths.

From late April through May, the government incrementally lifted physical-distancing restrictions and closure orders. By early June, children were studying in classrooms, patrons were packing into bars and nightclubs, soccer stadiums were roaring with fans, and domestic tourists were flocking to local destinations. Mask wearing had become less common. The borders remained closed—a seat on an international flight still obtainable only with special permission—but besides that, life in Vietnam had returned to prepandemic normal.

The relative calm ended July 25, when a provincial hospital in Da Nang reported a 57-year-old man had tested positive for COVID-19.

The origin of the case flummoxed public health authorities. But the likely trajectory of the outbreak did not. A seaside city of 1.1 million on the central coast, Da Nang was one of Vietnam’s most popular tourist destinations. And it was the peak of the summer holiday season. From June 15 to July 25, the city recorded approximately 33,000 tourist arrivals per day.34

The patient had no history of recent travel, and he reported that he had begun experiencing symptoms on July 17—a full week before testing positive. The virus had been circulating in Da Nang for weeks potentially, and the authorities knew many infected people had probably already returned to their homes across the country.

Facing what could become its largest, most sprawling outbreak yet, the government launched an unprecedented response.
As the hospital in Da Nang reported additional cases in the cluster, the Ministry of Health formed a special task force of leading health professionals—who had experience in dealing with COVID-19—to deploy to Da Nang. Led by the deputy minister of health, the force had 65 members, half of whom were doctors from major hospitals in Hanoi, Ho Chi Minh City, and elsewhere who would oversee the treatment of patients. The other half of the team, which comprised epidemiologists, experts, and officials primarily from the GDPM and three of the four national institutes, would help carry out the contact tracing, testing, and quarantine effort. In addition, the Ministry of Health mobilized a thousand medical school students and faculty to support the team.

The government moved to lock down the city. The prime minister ordered all nonessential businesses and schools in Da Nang to close. Physical distancing and mask-wearing requirements were reintroduced. Flights were canceled, visitors were barred from entering the city, and the 80,000 domestic tourists currently in Da Nang were flown home, required to quarantine on arrival. A sports stadium was converted into a 1,000-bed field hospital, lest patients overwhelm the city’s hospitals.

The special task force worked with the Da Nang Department of Health to direct efforts that would identify and isolate every case of community transmission in the city. With speed essential and the national capacity of testing reagents inadequate to cover a city of 1.1 million, the team undertook a mass community-testing strategy. The team members identified 96,000 asymptomatic individuals who were at epidemiological risk of transmission—that is, those who (1) were contacts in quarantine but had tested negative once, (2) had visited a hospital in Da Nang recently, (3) lived in an area with a confirmed case of community transmission, and (4) had a family member who had been in direct contact with a confirmed case.

Those 96,000 individuals were grouped by household or community into 22,000 pools with two to seven individuals in each pool. Nasal swabs were taken from each individual, but then all the samples from each pool were combined into a single collection tube and tested. Of the 22,000 pools, 24 pools came back positive for SARS-CoV-2. Each of the individuals in those pools was then tested to identify who was positive.

In an academic write-up published in 2021, the authors said that without the pooling strategy, the testing of the 96,000 people individually would have taken 64 days. Instead, the testing was completed in 14 days. Moreover, the pooling strategy used only one-quarter of the resources—without compromising the sensitivity of the PCR test.

At the same time that Da Nang was being brought under control, other provinces worked to identify and test all tourists who had returned home from the city since July 1. Cases were identified in 14 provinces outside Da Nang. Physical distancing, mass-gathering bans, and mask-wearing mandates were reinstated in areas with cases. The government pledged to avoid a nationwide stay-at-home order, but it locked down neighborhoods, hospitals, and Buôn Ma
Thuột, a city of 420,000 in the central highlands. From July 25 to August 19, more than 500,000 people who reported having traveled to or from Da Nang were placed in some form of quarantine—either in health facilities, in government-run centers, or in their homes in self-isolation.⁹ Provinces without cases conducted risk assessments and made decisions about whether to implement closures.

The government and state media publicly communicated regular updates and reports about the outbreak. The prime minister made statements emphasizing the importance of containing the outbreak. The Ministry of Health’s Department of Communications rolled out a new messaging campaign, developed by former director of the GDPM Dr. Phu, called 5K because each of the terms in Vietnamese began with the letter k: mask, disinfection, physical distancing, avoiding crowds, and health declaration.

The Da Nang outbreak prompted a rapid and voluntary readoption of public health measures by the entire Vietnamese population. A survey of some 95,000 inhabitants conducted on July 26 found that 35% of respondents reported wearing face masks regularly during the preceding two weeks. The same survey was conducted on August 2, and 90% reported wearing face masks regularly.⁴₀

The last case of community transmission was reported on September 2. On September 18, physical-distancing requirements were lifted in Da Nang, and all establishments except bars and nightclubs reopened. A total of 551 locally transmitted cases were linked to the Da Nang outbreak, the source of which investigators never ascertained. Thirty-five people had died.

**ASSESSING RESULTS**

Data indicate that Vietnam’s efforts to contain COVID-19 were among the most effective of any government’s in the world. By the end of 2020, Vietnam had recorded only 1,465 total coronavirus infections—15 per 1 million residents, a better record than even other high-performing countries. For example, Taiwan had 33.5 per 1 million residents; New Zealand, 448 per 1 million; and South Korea, 1,205 per 1 million.⁴¹

Vietnam recorded only 35 deaths due to COVID-19, or 0.36 per 1 million residents. Only Taiwan had a lower rate, with 0.29 per 1 million. Vietnam’s death rate was far below the rates of Singapore (5 per 1 million), New Zealand (5.2 per 1 million), and South Korea (17.9 per 1 million).⁴²

Early in the pandemic, some questioned whether Vietnam’s numbers were too good to be true. “Especially during the first few months, I remember getting lots of questions from the US and from partners in other countries about whether Vietnam’s case count was really so low,” recalled Dr. Moore. “And we said, ‘Yes, it really is.’ We knew because our staff were sitting in the emergency operations center with our Ministry of Health counterparts, and they were discussing and hearing about every single case in real time.”
Those results were all the more remarkable when considering that Vietnam was a lower-middle-income nation with relatively limited resources. Other countries that limited the spread of the virus tended to be well-off. Singapore’s per capita GDP in 2019 was $62,233. Taiwan’s was $55,078. New Zealand’s was $42,084. And South Korea’s was $31,846. Vietnam’s per capita GDP was $2,715.

Moreover, Vietnam’s ability to control the virus and fully reopen its domestic economy meant that it didn’t suffer as severe a downturn as other countries did. Vietnam’s GDP grew 2.91% in 2020, which was well below the prepandemic expectation of 7% and was the country’s lowest annual growth rate in 30 years. But it was the highest growth rate of any country in Asia. Vietnam was one of only a handful of nations to post economic expansion rather than contraction during the pandemic year.

Independent surveys conducted throughout 2020 suggested high levels of public satisfaction with the government’s response. In a March 2020 survey of 45 countries, 62% of Vietnamese respondents said their government’s public health measures to combat the virus were “the right amount,” the highest percentage of any country surveyed.

In an ongoing survey conducted by YouGov that regularly asked respondents in two dozen countries to rank their satisfaction with their government’s response to the pandemic, Vietnam consistently reported the highest level of satisfaction, with more than 90% of respondents saying the government was handling the pandemic “somewhat” or “very” well. (The only exception was in August 2020 at the height of the Da Nang outbreak, when the number slipped to 76%.)

And an annual nationwide survey with more than 14,000 Vietnamese respondents conducted at the end of 2020 for the UN Development Programme’s Public Administration Performance Index found that citizen satisfaction with government was close to 88%.

REFLECTIONS

The number one insight Vietnam’s leading public health experts took from the country’s war against COVID-19 was the importance of being prepared. “Our key lesson is: prepare as much as possible beforehand,” said Tran Dac Phu, MD, head of the General Department of Preventive Medicine from 2014 to 2018.

“Always try to be ready,” said Pham Quang Thai, MD, PhD, head of the Communicable Disease Control and Prevention Department at the National Institute of Hygiene and Epidemiology in Hanoi. “Almost every year, we run pandemic exercises—for a scenario in which there are no cases, for a scenario with one case, for a scenario with imported cases, for a scenario with community transmission, and for a scenario in which there is a big outbreak. Otherwise, without the preparation, people won’t know what to do.”

Part of Vietnam’s preparedness was owed to idiosyncratic factors. The government, public health experts, and the public had had experience in dealing
with infectious-disease outbreaks. Wearing a face mask in public or making health declarations were familiar experiences for many Vietnamese.

In addition to a communal-leaning culture rooted in Confucian traditions, Vietnam had a history of mass mobilization, dating back to the country’s struggles against colonialism and then the bloody war with the United States. The government appealed directly to that tradition of militant solidarity in the fight against COVID-19. “Vietnam has a long and proud history of fighting off foreign invaders, and so, invoking the idea that the country was at war with this virus was powerful for getting people to buy in and be willing to sacrifice for the public good,” said Todd Pollack, MD, country director of the Partnership for Health Advancement in Vietnam.

As a one-party state with an extensive administrative presence, even at the neighborhood level, Vietnam could quickly make and execute decisions—an important quality, given speed was essential for containing the virus. The ability to detect the disease and then control its spread was aided by the Vietnamese state’s existing surveillance infrastructure. Some of the same tools used for maintaining political control—such as pervasive monitoring of the population and state media—were also useful in controlling the spread of the virus.47

Yet, at the same time, openness and transparency were cornerstones of the government’s response. The government’s communications with the public were constant, consistent, and reliable. “The way the government handled this pandemic was to get out of the gate very, very early and to be open and transparent,” said Matthew Moore, MD, director of the US Centers for Disease Control and Prevention (CDC) in Vietnam. “The rapidity of communication, the predictability of communication, and the transparency of communication went a long way to getting the public to buy in to what the government was doing.”

Other lessons from Vietnam were also transferable.

The government chose to empower the experts. When Vietnam’s epidemiologists rang the alarm about the inexplicable pneumonia cases in Wuhan, the political leadership took the concern seriously. It threw its entire weight behind the Ministry of Health, granting it the resources, authority, and support it needed to implement the response. Data, evidence, and scientific best practice informed policies, and the government listened to public health experts—both Vietnamese and foreign—such as from the WHO and the US CDC.

Moreover, there was strong political will. Vietnam’s political leaders repeatedly professed an unequivocal commitment to containing the pandemic. “The leaders of the government really viewed this outbreak as a war. And that motivated the response not only in the health sector but also in other sectors and among the public,” said Quang Duy Pham, MD, acting head of the Training Center at the Pasteur Institute of Ho Chi Minh City.

In the years before the pandemic, the government made serious and sustained investments in public health to build a system that had the capacity
and speed to respond to outbreaks. Many of the programs, mechanisms, and reforms the government adopted after SARS in 2003—the web-based information database; event-based surveillance; rapid response teams; the provincial centers for disease control; the public health emergency operations centers—helped information and resources flow more efficiently, such that public health authorities could detect and respond to outbreaks before they got out of control. Building up the workforce meant Vietnam had trained contact tracers immediately ready to go when the pandemic began.

Participation in international scientific networks, both formal and informal, helped Vietnam detect and then gather information that helped it better respond to SARS-CoV-2. “When a new virus emerges, the only way to be ready for it is by sharing information,” said Dr. Thai. “That’s why we keep listening to our colleagues, and we always share information with the outside world.”

In addition, partnerships with other governments and international organizations helped Vietnam develop and strengthen its public health system. “One of the things Vietnam is very good at is taking international recommendations and experiences and then learning and adapting them—not just copying them but tailoring them to the Vietnamese context,” said Dr. Pollack.

Vietnam’s coordination structures facilitated a truly whole-of-government response. “We really encourage coordination between the ministries of different sectors—and also between lower and higher levels of government,” said Dr. Phu. The National Steering Committee for COVID-19 Prevention and Control—which brought together all the key ministries and sectors involved in the response—facilitated consultation and ensured that every relevant ministry and sector was on the same page.

Even though guidance and policy direction were centralized, implementation was local. Adherence to the four-on-the-spot doctrine, under which responsibility for an incident fell to the most local level possible, helped ensure a speedy response. At the same time, the Ministry of Health coordinated the rapid allocation of experts and resources when a large outbreak occurred, such as the one in Da Nang. “A lot of support and resources came from the national level to the local levels,” observed Dr. Pollack. “Because Vietnam was on top of the virus early and kept numbers low, it was never overwhelmed; and when an outbreak occurred in a particular one or two or three provinces, the Ministry of Health was able to move experts and resources there to help contain it.”
Exhibits

Daily new confirmed COVID-19 cases
Shown is the rolling 7-day average. The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing.

Source: Johns Hopkins University CSSE COVID-19 Data

Daily new confirmed COVID-19 cases per million people
Shown is the rolling 7-day average. The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing.

Source: Johns Hopkins University CSSE COVID-19 Data
Cumulative confirmed COVID-19 cases
The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing.

Source: Johns Hopkins University CSSE COVID-19 Data

Estimate of the effective reproduction rate (R) of COVID-19
The reproduction rate represents the average number of new infections caused by a single infected individual. If the rate is greater than 1, the infection is able to spread in the population. If it is below 1, the number of cases occurring in the population will gradually decrease to zero.

Daily new confirmed COVID-19 deaths per million people

Shown is the rolling 7-day average. Limited testing and challenges in the attribution of the cause of death means that the number of confirmed deaths may not be an accurate count of the true number of deaths from COVID-19.

Source: Johns Hopkins University CSSE COVID-19 Data

Cumulative confirmed COVID-19 deaths

Limited testing and challenges in the attribution of the cause of death means that the number of confirmed deaths may not be an accurate count of the true number of deaths from COVID-19.

Source: Johns Hopkins University CSSE COVID-19 Data
Case fatality rate of the ongoing COVID-19 pandemic

The case fatality rate (CFR) is the ratio between confirmed deaths and confirmed cases. During an outbreak of a pandemic the CFR is a poor measure of the mortality risk of the disease. We explain this in detail at OurWorldInData.org/coronavirus.

Source: Johns Hopkins University CSSE COVID-19 Data

Daily new COVID-19 tests

Shown is the rolling 7-day average.

Source: Official data collated by Our World in Data

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COVID-19: Stringency Index
This is a composite measure based on nine response indicators including school closures, workplace closures, and travel bans, rescaled to a value from 0 to 100 (100 = strictest). If policies vary at the subnational level, the index is shown as the response level of the strictest sub-region.

OurWorldInData.org/coronavirus • CC BY

How did the number of visitors change since the beginning of the pandemic?, Vietnam
This data shows how community movement in specific locations has changed relative to the period before the pandemic.

Source: Google COVID-19 Community Mobility Trends – Last updated 30 June, 16:02 (London time) OurWorldInData.org/coronavirus • CC BY
Note: It's not recommended to compare levels across countries; local differences in categories could be misleading.
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