SYNOPSIS

News of the outbreak of an unknown virus in Wuhan, China, quickly caught the attention of South African disease experts in December 2019. In the event the virus spread globally, those experts understood that the South African government would find itself face to face with two persistent challenges. First, although an upper-middle-income country, South Africa was also the world’s most unequal. Within the country, household access to health care varied dramatically, as did the vulnerability of livelihoods to economic shocks. Second, there were wide disparities in the levels of readiness across the provinces, districts, and cities that would manage the front lines of any response. During mid-March 2020, as the first South African residents fell ill, the government set up a structure for making policy decisions. It vested responsibility for pandemic response coordination in the security services, implemented stringent restrictions on movement, and used the country’s natural disaster management system to try to align policy with the provinces. The Department of Health, already focused on disease surveillance, testing, and other technical functions, cochaired many of the work streams in those institutions. Nonetheless, during the first wave, poorer provinces and districts struggled to respond effectively, and the national government—with external help—surged assistance to those areas. The investment helped contain the spread of infection and return the country to lower alert levels, but disparities in capacity, illness, and deaths persisted in subsequent waves. The country continued to adapt and performed better on several metrics than did a number of similarly situated counterparts. However, the experience pinpointed the difficulties of boosting local preparedness and addressing underlying inequalities amid a crisis.
INTRODUCTION

Western Cape Premier Alan Winde recalled growing increasingly anxious as that the end of February 2020 neared. After first triggering a wave of illness in Wuhan, China, in December 2019, a novel coronavirus that caused severe respiratory disease was beginning to sweep the globe. At the time, with no vaccines and no effective therapies yet available, it was all but certain the virus would affect South Africa, where provinces like the Western Cape were responsible for health care and many other basic services that the country’s 58.5 million residents used. But the national government had not offered a either a clear strategy or guidance, and Winde’s management team was sailing in uncharted waters. “Around the world, everybody was reacting slightly differently,” Winde said. “There was no template. And we had to sit down and ask, ‘All right, what are we going to do?’”

Winde gathered some of his senior staff on a Saturday morning and gave them pads of sticky notes so they could post ideas on the boardroom walls. “We brainstormed,” he said. “What are we going to do about schooling? What are we going to do about Easter weekend? Will our offices shut down? And if we have to do that, how are we going to do it?” (figure 1)

Figure 1: Map of South Africa Showing Province Boundaries

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The national government, too, was racing to form a plan and assemble the main elements of the country’s response. South African President Cyril Ramaphosa, elected in 2018, was chair of the African Union (AU), and he had received information about the virus and its effects from his own government and from the AU’s Africa Centres for Disease Control and Prevention.

The country’s health ministry, the National Department of Health, had a top-notch group of scientists experienced with communicable diseases such as HIV/AIDS. The ministry had started to screen travelers at airports in January with the help of the military, and it established its own incident management system at the end of that month—the same day the World Health Organization (WHO) declared a public health emergency of international concern.

Under the leadership of Dr. Zwelini Lawrence Mkhize, a physician and former provincial premier, the department prepared recommendations for Ramaphosa’s cabinet to consider. The WHO recommended a whole-of-government approach. The question was how, in a federal system, to align action both horizontally—across national agencies—and vertically, across levels of government.

Months later, the sticky notes were still on the walls of Winde’s boardroom. “It is interesting to think back to those days,” Winde said, “because you read those things that you wrote then, and you realize you have gone through a major journey.” Some of the changes proposed that day became permanent. Others were discarded. Taken together, Winde concluded, “We learned so many lessons.”

THE CHALLENGE

News of the novel virus emerged at the beginning of 2020, giving every reason to believe that the pandemic would soon reach South Africa. The country had built a reputation as a vacation destination and business hub. Tourism in 2019 contributed 6.4% of gross domestic product and drew 14.8 million international visitors. At the time of the pandemic, South Africa also had a close trading relationship with China, the virus’s point of origin, South Africa was the continent’s largest exporter to China and the second-largest buyer of Chinese goods, making it China’s largest trading partner in the region.

In the weeks and months before COVID-19 vaccines and therapies became available, containing the outbreak of a highly contagious new pathogen required nonpharmaceutical measures, such as traveler screening, masking, and physical distancing, including closures when businesses or other institutions could not be made safe. To succeed, the steps required collaboration horizontally across departments and agencies and vertically across levels of government. Officials also needed broad cooperation from the public, businesses, and social and cultural organizations. In the best of times, it was hard to successfully execute a whole-of-government, whole-of-society effort, and these were scarcely the best of times in South Africa. Regardless of the strategy the president adopted, the
chosen approach would have to recognize several difficulties specific to South Africa.

The first problem was inequality. Although the World Bank categorized South Africa as upper middle-income, with a per-capita gross domestic product of US$14,288 in 2019, the country also topped the list of the world’s most unequal—a legacy of apartheid policies that before 1990 enshrined in law discrimination against nonwhite citizens. The top 1% of South Africans owned 70.9% of the country’s wealth. Although majority rule had brought a gradual end to those policies during the 1990s, the legacy persisted into the present day, complicated by a variety of other problems.

The year before the outbreak, an estimated 57% of residents lived on less than US$5.50 per day—the international poverty line for upper-middle-income countries. A little more than 25% of citizens were unemployed and depended on modest social grants for their livelihoods as well as wages they earned day-to-day. In the event of a strict shutdown, without the ability to sell goods or work as casual laborers, they would be unable to feed their families.

Further, many poor people lived crowded together in informal settlements or shantytowns, where they could not isolate or distance from one another. A survey of households by South Africa’s national statistics service found that 13.9% of the country’s 58 million people lived in such settlements. Asking people to not leave their homes—a common disease prevention measure—did little to reduce crowding and contact in those areas. A researcher at Johannesburg-based University of Witwatersrand wrote that it was simply impossible to lock down South Africa’s largest townships, such as Soweto.

The health-care system was likewise a study in contrasts. In 2019, the Global Health Security Index ranked South Africa the 13th best in the world with respect to disease detection but 65th with respect to having a health system that was sufficient and robust enough to respond to a pandemic. The country’s National Institute for Communicable Diseases had world-class scientists, a long-standing relationship with the WHO and the new Africa Centres for Disease Control, and assistance from university-based research centers, including a network for genomic surveillance. But for health care, 84% of South Africans relied on overstretched public-sector service providers managed by provincial and metropolitan governments.

“Before the pandemic, South Africa’s health-care services were systematically underperforming for reasons such as poor management of health facilities, the inadequate maintenance of health infrastructure, 37,000 vacant posts in the system, a lack of equipment, drug stock-outs, and severely strained emergency medical services,” a subsequent independent review commissioned by the Department of Planning, Monitoring, and Evaluation observed. In 2017, the Office of Health Standards reported that 62% of the 851 public-sector health establishments throughout the country failed to meet the “norms and standards for health-care quality.” Private health-care providers were available, but not everyone could afford them. Although the government had
designed a national health insurance system, approval and implementation were still incomplete, and only 16% of South Africans belonged to medical insurance programs at the time.\textsuperscript{13}

Government capacity in the nine provinces also varied greatly as a result of differences in underlying conditions and leadership. Management of financial resources, including timely and accurate budgeting and the ability to direct resources to the purposes for which the resources were allocated, was one way to approximate capacity. In 2018, the national auditor general gave highest marks to provincial operations in Western Cape—with 83% clean audits—and Gauteng, with 52% clean audits. Other provinces performed less well, and Eastern Cape had regressed. With respect to health services specifically, the auditor general said: “All the health departments, except the Western Cape and Free State, had claims against them that were more than their 2018–19 total operational budget. The claims of the Eastern Cape health department were over three times more than its operational budget.”\textsuperscript{14}

Further complicating pandemic response, South Africans placed little trust in politicians and public officials to respond effectively. A 2018 Afrobarometer survey estimated that only about 38% of the public placed trust in the president. They gave slightly lower ratings to parliament, the premier of their province, the police, and traditional leaders. Only about 28% trusted that their local councils would do the right thing.\textsuperscript{15} It was unclear how South Africans would perceive a health emergency. During the administration of President Thabo Mbeki (1999–2008), the HIV/AIDS epidemic in South Africa had prompted disinformation and government denial. On the eve of another pandemic, responders had reason to worry about a similar spread of misunderstanding and false cures.\textsuperscript{16}

The political context was also inauspicious. During previous years, evidence that private individuals had captured control of some types of government spending burst into the news and eventually led the African National Congress (ANC), the party in power, to replace the sitting president, populist Jacob Zuma, with Ramaphosa, the deputy president. When voters gave the ANC a majority of the seats in parliament in 2019 elections, Ramaphosa began his first full term as president, but his base of support was fragile. He continued to face internal party opposition from the Zuma wing and dissent from the Economic Freedom Fighters, a left-wing populist party led by former ANC Youth League President Julius Malema, as well as pressure from the liberal centrist Democratic Alliance Party, which had about 20% of parliamentary seats. In February 2020, as South Africa’s pandemic response was gearing up, Zuma faced trial on corruption charges, a potential powder keg.\textsuperscript{17} At a moment when South Africans most needed to come together, the prospects for effective coalition building were dim.

At the time of the pandemic, the country’s economy and fiscal health also faced challenges. In 2019, per-capita GDP had fallen by 1.9%, and the pandemic would cause economic activity to shrink further. The budget deficit was about 6.4% of GDP, and gross government debt was 63.3% of GDP.\textsuperscript{18}
Nonetheless, there were some bright spots. The National Department of Health—South Africa’s health ministry—in 2017 had invited a WHO evaluation of the country’s disaster risk reduction functions. In response, the department introduced several reforms, including the creation of a Public Health Emergency Coordinating Committee, which provided technical capacity for an interministerial committee on public health emergencies. The country had a strong network of more than 70,000 community health workers, who formed an important link between many marginalized communities and the health-care system. At the beginning of 2020, South Africa also had laboratory capacity, genomic-sequencing expertise, and a large number of intensive-care-unit beds relative to other African countries. Previous public health campaigns against HIV/AIDS had developed the know-how and infrastructure to conduct widespread testing.

FRAMING A RESPONSE

South African researchers first heard rumors of a novel virus in November 2019, and in December, the National Department of Health activated a multisectoral national outbreak response team to develop plans and train staff in the event of a global pandemic. The department also briefed the National Joint Operational and Intelligence Structure, or NATJOINTS, on the functions the country would have to establish. A committee of representatives of the police, the South African National Defence Force, and a variety of other government agencies and ministries, NATJOINTS regularly coordinated all security and law enforcement operations surrounding major events such as elections and natural disasters. Initially, however, the health ministry was fully in charge.

At the end of February, the parliamentary committee on health called on the government to explain government preparations for the pandemic. Shadow health minister Siviwe Gwarube, a member of parliament affiliated with the opposition Democratic Alliance Party, opened the discussion with an appeal: “There comes a time in any country where politics have to be set aside for the benefit of all its citizens. That moment is now.” Gwarube noted several issues that required urgent attention, including procurement of medical supplies and the implementation of measures to enable the transport of goods to continue in the event of a lockdown. She and others expressed concern that sharp inequalities and weaknesses in government capacity would make South Africa highly vulnerable. She urged the government to be transparent—to take the nation into its confidence—and to explain its plans for dealing with the “knock-on effects of an outbreak of this kind.”

Gwarube recalled her nervousness at that moment: “Toward the end of February, we saw really big countries with very sophisticated health-care systems struggle with this new virus, COVID-19, and I thought to myself, If this were ever to happen here, we are going to be in a lot of trouble.”

The health minister’s March 5 legislative briefing was matter-of-fact. The minister said his ministry’s emergency operations center, already established,
would begin working around the clock. The center would trace all contacts of those who had contracted the virus. With the help of the military and government agencies, the center set up screening at international points of entry and identified locations where people could quarantine or isolate. During the coming days, he said, center staff would meet with religious leaders, sports groups, and the hospitality industry to find ways of helping people congregate safely. However, he added, the pandemic would inevitably reach South Africa, and the public had to step up and work with health services and the government to limit its impact. Residents would have to be on guard against misinformation or disinformation and take precautions. He concluded, “We need to make sure that South Africans are united behind the fight.”

The same day Mkhize’s meeting with parliamentarians took place, news headlines announced that a South African citizen who had vacationed in Italy had fallen ill the week before and tested positive for the virus. Six other members of the patient’s travel party would later test positive as well. At the time, about 3,600 South Africans were stranded, including more than 100 in China in the vicinity of Wuhan.

Behind the scenes, the president’s office was trying to identify both the best policies to pursue and a way to coordinate the response. The president had to empower ministries to carry out crucial tasks outside the normal scope of the health ministry’s responsibilities, including, for example, negotiating for the return of people stranded elsewhere, enabling schools to operate safely, and assisting the poorest.

There were three main options: invoke the president’s emergency powers under the constitution, ask parliament to approve a fit-for-purpose arrangement led by the health ministry, or invoke the Disaster Management Act 57 of 2002, which would empower the disaster management system to propose rules and implement policy.

The language of the country’s constitution, framed in 1996 at the end of apartheid, carefully constrained the president’s powers to declare a state of emergency, and the State of Emergency Act of 1997 detailed those limitations. A state of emergency could be declared only to restore peace and order, and it could last for only 21 days. By majority vote, the parliament could choose to extend the period by three months. Subsequent requests to extend for an additional three months required a supermajority (60%). Under a state of emergency, the government could abrogate certain individual rights—but not others—for the duration of the emergency. Any court within South Africa could assess the need for a state of emergency and the appropriateness of associated regulations the government decided to issue.

The second option was to ask parliament to create a fit-for-purpose agency for managing the response, with a sunset provision attached. That approach gave elected representatives more control over the design of the response and was therefore more democratic—at least in its formation and in the sense that officials would be answerable to the legislature. However, it would likely require time to assemble draft legislation and even more time to build a coalition behind
the draft. In addition, any agency set up that way might duplicate capacities the country already had in place in other parts of the government.

The third major alternative was to invoke the Disaster Management Act, which gave the president and the minister of cooperative governance and traditional affairs, whose department included the disaster management system, the power to temporarily limit—though not suspend—certain individual rights, including freedom of movement. A state of disaster could last for three months, and the minister could extend it by one month at a time thereafter. The courts could rule a disaster declaration or any rules created under that declaration invalid, but there was no explicit provision for a parliamentary role in supervising the government's action or in exercising oversight.

The advent of the COVID-19 pandemic met the criteria for a disaster as spelled out in the law: the “progressive or sudden, widespread or localised, natural or human-caused occurrence which causes or threatens to cause death, injury or disease; damage to property, infrastructure or the environment; or disruption of the life of a community.” And by invoking the Disaster Management Act, the government could activate the tiered management system the country had previously used for collaborating with provinces and districts in response to wildfires, floods, or droughts.

“From around the 10th of March, there was a lot of debate within the government about which legislative mechanism to use and whether people would follow the regulations put in place,” said Jurgens Dysell, senior manager of legislation, policy and compliance management with the National Disaster Management Center. A Department of Health lawyer led the group that assessed whether to declare a state of emergency or a state of disaster and whether the health legislation and its regulations sufficed.

At a special meeting of the cabinet on March 15, 2020, Ramaphosa’s government chose the third option. Upon notification by the ministry’s National Disaster Management Center head, Mmaphaka Tau, that the outbreak met the relevant criteria, the minister of cooperative governance and traditional affairs, Nkosazana Dlamini-Zuma, proclaimed a national state of disaster. In addition, to help review policy options and present choices to the full cabinet, the president announced the creation of a cabinet subcommittee named the National Coronavirus Command Council. The council absorbed members of an earlier, interministerial COVID-19 committee. A secretariat, the National Command Center, made up of the directors general of the ministries represented on the Command Council, would screen materials and follow up.

The president then outlined further guidelines and emergency measures the cabinet had adopted on recommendation by the Ministry of Cooperative Governance and Traditional Affairs and the Command Council to help curb the spread of the virus, supplementing earlier decisions to screen incoming visitors at airports and to postpone a by-election. The measures included closures of some of the country’s ports and land entry points and a ban on visitors coming from countries already in the throes of the pandemic: China, Germany, Iran,
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Italy, South Korea, Spain, the UK, and the USA. Next, the government required school closures, limits on the size of gatherings, a halt to nonessential travel, and a temporary ban on prison visits. The following day, the minister of public service administration issued instructions to civil servants on containing and managing the virus so that essential government operations could continue. At the time, the country had slightly more than 60 confirmed cases, about a dozen of them people who had traveled internationally and the rest the result of community transmission.

A week later, as the case count rose and the country recorded its first COVID-19 deaths, the president, on advice of his new command council, announced a 21-day national lockdown starting March 27. The purposes of the lockdown were to give the country space to improve the capacity of its health system so the system could handle people who fell ill and to implement other measures that would help keep people safe. The policy was strict in comparison to similar programs in many other countries; it also included measures that perplexed some South Africans. Unless identified as essential personnel, people were restricted to their homes. They could venture out only for lifesaving medical care, for collecting a social security grant or pension, for obtaining food or other essentials, and for attending funerals. Walking for exercise was not among the permissible activities. Only essential businesses remained open such as grocery stores, market produce stalls, convenience stores, transportation and logistics services, fuel stations, banks, and pivotal industries such as mines and steel mills. Sales of alcoholic beverages and cigarettes were banned. All gatherings except funerals (capped at 50 people) were also prohibited.

When making those decisions, the president reached out to some of his political opponents and other important leaders to win support for the overall approach as well as for specific policies. Ramaphosa persuaded Julius Malema, leader of the Economic Freedom Fighters, to get on board, and the president also worked with religious leaders to persuade them to cancel services and other group activities.

GETTING DOWN TO WORK

It was one thing to authorize new systems and policies, and quite another to make them work. Public servants, external partners, and businesses came together during the weeks after the president’s announcement in an effort to do so.

Assigning roles

On March 15, 2020, when Ramaphosa announced the first steps his government intended to take, he also explained other features of the system his team was implementing. For one, he announced the creation of a Ministerial Advisory Committee to assist in decision-making. Made up of about 50 experts, the committee provided technical briefings for the Command Council. Salim S. Abdool Karim, a clinical infectious disease epidemiologist with a global...
reputation, served as its first chair. Karim directed an HIV/AIDS research center and had helped develop several vaccine candidates for preventing HIV/AIDS. He also served on prestigious medical journal _Lancet’s_ COVID-19 commission.

In principle, the National Department of Health retained overall policy leadership of the response (figure 2a and figure 2b). The health minister played a central role in the National COVID Command Council (the interministerial policy task force) and helped lead operational work streams as advisers to the disaster management system in the Department of Cooperative Government. The ministry hosted a council that assembled the heads of the advice for policymakers.

The health ministry set up an emergency operations center, ensured laboratory capacity, implemented testing at ports and borders, conducted epidemiological surveillance, assembled emergency medical care teams, and established a communications program. The ministry also supported provincial health officials in the mobilization of equivalent functions. A procurement unit within the ministry moved quickly to ensure no interruption in the supply of essential medical supplies. According to Khadija Jamaloodien, a director at the ministry, the procurement unit developed a nine-month demand plan, worked with companies to ensure deliveries on specified dates, and—sensing that costs would rise—mobilized additional funding from the National Treasury to cover the expected increased cost.

Assembling the elements of the response quickly revealed challenges that had not been evident previously. For example, although the threshold required to activate the full national disaster management system (based in the Department of Cooperative Government and Traditional Affairs) had clearly been met by March 15, with 23 cases and outbreaks across more than one province, administrative challenges quickly materialized. The disaster management administration had started to prepare in December 2019—well before it was tapped to play a central role—and a staff member routinely participated in the health ministry’s multisectoral national outbreak response team, formed at that time. However, it had previously dealt primarily with wildfires and floods and proved to have limited capacity for supporting a nationwide, whole-of-government approach to combat a pandemic. Dysell, senior manager of the work stream on law and regulations, also suggested that...
although the National Disaster Management Center could have coordinated the response, it had never been fully funded to carry out that role.

To coordinate implementation horizontally across departments and agencies, as well as to strengthen capacities, the president tried to fuse the national disaster management structure with NATJOINTS, the security governance system. Together security institutions and the health ministry had already stepped in to set up screening at borders. In an expanded role, NATJOINTS brought logistics expertise and technical personnel to strategy development and coordination as the government moved from screening at airports to a broader effort to contain the spread of infection and to assist those who were ill. The three set up a National Joint Operations Center and engaged Mmaphaka Tau, head of the Disaster Management Centre, as co-chair (figure 2b).

The National Joint Operations Center had eight work streams co-led by representatives from civilian ministries, including the health ministry as well as divisions focused on legal and regulatory processes, risk and threat assessment, public health infection and containment, social impact, communication, travel restriction and border security, economics, and, finally, law enforcement. Physically based at the South African Reserve Bank in Pretoria, one of the few places with adequate facilities, the operations center also integrated information from other sources and funneled reports and policy issues to the National COVID Command Council, which supported a cabinet subcommittee that served as a policy task force.

The arrangements announced on March 15 endured, but they also sparked controversy. Some critics questioned whether there was an adequate legal basis for creating the National COVID Command Council. The Disaster Management Act did not provide for this kind of council, they argued, noting also that parliament had never approved the council and that the council combined both legislative and executive functions. The South African Institute of Race Relations said it appeared to be a “superlegislative body” dangerously outside of parliamentary oversight, and thus the council represented an unwarranted extension of executive power. The president countered that the command council was simply a cabinet subcommittee and that it referred decisions to the full cabinet for a vote.

The constitutionality of the Disaster Management Act was challenged in court on the grounds that it omitted the kind of legislative oversight required for declarations of emergency and that the legislature had therefore abdicated its duties in granting the minister the power to make rules. The lawyers for the government noted that a disaster declaration had less impact on individual rights than an emergency declaration did; that it therefore did not require the same level of parliamentary scrutiny; and further, that although legislators had delegated power to make regulations, parliament still retained oversight of how those powers were exercised. The court agreed with the government but said it also stood to reason that rules should be neither too wide nor too vague and
should not vest too much power in the executive. The issue continued to percolate within South Africa, however.38

Others specifically questioned the role of NATJOINTS—especially the use of the police to help devise and enforce compliance with COVID lockdown rules, a step that contributed to the adoption of overly broad restrictions that lacked clear rational relationships to the outcomes sought and also inadvertently led to violence against civilians during enforcement. The president’s decision to wear battle fatigues when he announced the council’s creation, as well as his decision to name the task force a “command council,” foreshadowed the militarized character of some of the government’s subsequent actions.39 A draft report by health officials to the Government Technical Advisory Centre expressed appreciation for NATJOINTS’s capacities in the event of a natural disaster but questioned its appropriateness in pandemic response.40

Coordinating with the provinces

An effective pandemic response required coordination not only horizontally, among national government agencies, but also vertically, across levels of government. The provinces, districts, and cities managed health care; each provincial and local jurisdiction would be responsible for winning public compliance with rules, delivering economic and social support, and supporting other key functions. Because the virus was more prevalent in some areas than others and because each province had distinctive social and economic profiles, there was always a risk that local policies would not align with national programs or that national decisions would affect certain localities in disruptive, unimagined ways. It was crucial to enable a two-way flow of information and ideas.

One channel for aligning policy vertically across levels of government was the President’s Coordinating Council, a statutory body that included ministers, premiers, executive mayors, and the leaders of the South Africa Local Governments Association. The President’s Coordinating Council enabled senior subnational leaders to raise issues directly with the president and to work with peers.41 “We used to meet a lot; we met with the president more often than we normally do,” Winde, the Western Cape premier, said, adding, “The President’s Coordinating Council met quite regularly because that’s the consultative forum before any kind of regulatory changes. I would never go into a meeting cold. Beforehand, I phoned my fellow premiers and asked, ‘OK: What are you going to push for? When should we do this? How about that? and, Would you support me in this? or . . . ’ I think it enabled a lot more collaboration.”

There were three other administrative channels for aligning policies vertically across levels of government: the disaster management system, the local branches or counterparts of NATJOINTS, and the public health system.

Shortly after Dlamini-Zuma announced the cabinet’s disaster declaration, she issued a circular calling on districts and provinces to establish COVID-19 command councils or policy task forces of their own, nicknamed “war rooms” in some parts of the country. Her ministry’s national disaster management
center would support the councils through nine provincial disaster management centers and 52 local centers, which would become the main vehicles for daily coordination across levels of government. By designating such a structure and assigning clear roles, Dlamini-Zuma’s aim was also to help reduce the amount of time officials spent meeting and responding to multiple requests for the same information.

The disaster management system was relatively new to infectious disease control, however. The staff of the ministry’s national disaster management center were mostly used to responding to forest fires and floods. Since 2005, the center had hosted workshops and information sessions with municipalities and provinces to help them prepare plans for dealing with a variety of high-impact events in accordance with national guidance. And though the center had recently responded to small outbreaks of typhoid and listeriosis, it had no real experience in handling a major pandemic.

The tiered disaster management centers aimed to help governments understand the scope of their legal authority, set up decision systems and information channels, and overcome challenges. The centers linked local officials to other parts of government that could help them solve specific problems they encountered, and they collated data about conditions on the ground to relay the reports to the NATJOINTS COVID operations center. The system also had a modest pool of funding for grants to help struggling communities close gaps; one project the system funded early on in the pandemic helped municipalities provide water tankers with clean water for handwashing.

Moses Khangale, director of Fire Services and Disaster Operations Centre manager, explained that his staff was anxious at first—partly because they had limited experience in managing major epidemic outbreaks but also because they worried that an airborne virus could disrupt the center’s own operations.

“I was responsible for running a disaster management operations center that was set up to accommodate 26 people who were managing a hazard that did not require physical distancing,” Khangale said. “So, the moment you had COVID, your facilities were no longer able to do what they should do or were designed to do.” To limit the risk of infection at the national operations center, Khangale assembled 100 staff members and divided them into 10 groups. Each day, one group would come in and assign each of its members to work with a province. Eventually, the team equipped members with protective equipment, including masks, with the help of a donation from a private company.

Day-to-day work also moved more slowly than Khangale and others had hoped. Local government personnel sometimes fell ill, and few local authorities had the staff resources to provide substitutes. Even before the pandemic, it had been difficult to get local administrators to attend advisory forum meetings and to develop disaster management plans as a result of staffing shortages.

“Those without capacity needed more support, which we provided,” Khangale said. “But those with capacity, the bigger cities and so on, were able to grab the issues and move quickly, sometimes faster than we could. Some
provinces were running 24 hours day because they were more ready than others—readier than we were—and they had people who could do that.” For example, the Western Cape activated its disaster management joint command 24 hours a day, seven days a week, before the National State of Disaster was declared. By contrast, some of the other provinces ignored their disaster management agencies and did not include them in planning.42

Outside of the coordinating council and the disaster management system, another vertical coordination system ran through the health ministry. Each province had its own health incident management center that worked with public and private health-care facilities and reported to the ministry’s incident management center. The systems focused on screening, testing, medical care, and related subjects. When capacity problems threatened the effectiveness of local health incident management systems, the WHO repurposed some of its South Africa staff to help.43 In July, the health ministry requested additional WHO technical support and stationed WHO surge teams in eight of the nine provinces and at the national level.

Managing information

Rapid transmission of information across levels of government and between institutions was crucial to an effective pandemic response and essential to any carefully tailored, risk-based, hot-spot strategy, should the government try to move away from a broad-based lockdown.

Establishing communication links with provinces, districts, and cities was harder than anticipated, however. Overstressed provincial budgets rarely allocated much money to low-probability, high-impact events. Poorer areas lacked internet connectivity, and some had hardware and software that were incompatible with the information systems the national center used. Until late June, meetings took place through telephone conferences, and private-sector companies helped create the technical infrastructure needed for online participation.

Obstacles to data sharing remained a hurdle. Because the country’s health system was a patchwork of public and private services, data had to flow into provincial and national incident management systems from many different sources, and not all elements were in place when COVID struck in March 2020. “Our system is chaotic. The private sector is very autonomous and very complex. In the public sector, we have a federal system, and provinces are in charge of health care,” said Dr. Nicholas Crisp, a health-care management specialist. “None of these systems talked to one another. There was no sharing of data.”

To help remedy some of the problems, the United Nations Development Programme provided an information technology specialist and other assistance to help create a web-based system that districts and provinces could populate with information.
Crisp, who had just finished a project to develop the business case for the proposed national health insurance system, volunteered to get the data systems to talk to one another. His extensive professional network gave him a unique advantage. He said he knew the country would have to ramp up its capabilities and the private sector had much more capacity than the public sector did. The digital team that he worked with created a platform that enabled health-care facilities—public and private—to share data on supplies, personal protective equipment, ventilators, tests, and lab capacity, all of which he could then direct to a modeling consortium that had pitched in to project infection patterns and evaluate needs. He was then able to use the predicted bed requirements to plan for expected bed demand at each public hospital and worked to develop service agreements and pricing with private hospitals for public access to private beds.

Shifting into lockdown

When the initial three-week lockdown began on March 27, the national government limited movement, sought to reduce crowding, and circumscribed many personal activities. In addition to restricting people to their homes except for a few types of essential activities, the lockdown banned travel between provinces, including for family visits (figure 3).

Anyone suspected of having COVID-19 or of being in contact with someone who tested positive could not refuse testing, and those who contracted...
the virus could not refuse isolation, quarantine, or treatment—rules adopted in 2017 for control of infectious diseases.\(^{44}\) The government set up quarantine centers, including hotels provided for this purpose, but later found that such venues were underused because infected individuals feared stigma, could not leave their families, or worried that their belongings might be stolen.\(^{45}\)

The minister of human settlements, water, and sanitation also announced an intention to dedensify heavily populated informal townships in order to protect their residents—a proposal that met with outrage in some quarters.\(^{46}\) During the early weeks of the response, 2,000 homeless people were moved to the first of 27 planned temporary camps. But the camps typically lacked essential infrastructure and were far away from social support systems and places of employment. Although South Africa had a national program for settlement upgrading, an emergency or disaster left no time for the kinds of individual and community engagement or construction projects that were essential to the success of such projects.\(^{47}\)

The health ministry worked with the provinces to launch contact tracing, quickly introducing a cell phone tracking system to identify individuals who may have been exposed to people who had tested positive for the virus. Telkom South Africa, a public–private joint venture and the country’s largest telecommunications provider, teamed with the National Institute for Communicable Diseases to use mobility data from individual cell phones. Community health workers followed up to trace primary contacts, tested those likely exposed, and used electronic devices to record and upload data.\(^{48}\)

Ramaphosa extended the lockdown period through April and then on May 1 announced a plan to gradually ease restrictions. The Ministerial Advisory Committee applied a risk-adjusted strategy in deciding whether to advise the government to relax or strengthen infection prevention measures and whether to do so at the national level, provincially, in metropolitan areas, or by district. Alert level 5 triggered a strong and broad response based on rapid spread of the virus, whereas alert level 1 enabled most normal activities to resume, provided people continued to wear masks, practice physical distancing, and wash their hands frequently. (figure 4) From the last week of March through April, the whole country was under strict lockdown, at level 5. During May, it shifted to level 4, moving gradually down to level 1 by September.\(^{49}\)

Later modeling suggested that the lockdown had indeed slowed the spread of disease. The number of cases diminished significantly after the first spike. One study by a South African–US research team used anonymized mobile phone data to show that mobility had fallen significantly in all provinces. The team then performed statistical regression analysis to show that mobility reductions correlated with lower COVID-19 growth rates two weeks later.\(^{50}\) Other studies came to similar conclusions.\(^{51}\) However, both policies and enforcement came in for sharp criticism. The national government deployed the South African Defence Force to support the police in enforcing the measures...
Text Box 1. Testing

Throughout March 2020, South Africa tested only people who voluntarily disclosed they had traveled internationally, come into contact with a traveler, or come into contact with someone with COVID-19. A public health professor at the University of Witwatersrand characterized that approach as “chasing the epidemic,” which blinded the testing regime to community-based outbreaks.1

During April, the National Command Council shifted to a more proactive testing strategy, which required an army of more than 30,000 community health-care workers to screen, test, and trace the contacts of people who tested positive for COVID-19.2 South Africa already had teams of community health-care workers throughout the country who were monitoring TB and other diseases, delivering therapies to millions of HIV-positive South Africans, and working with households to promote better health.3 Those community health-care worker teams, formed in 2011 and supervised by trained nurses, were composed of laypeople from the communities they served.4

“We decided that we shouldn’t just wait in hospitals for patients to arrive,” the government’s top coronavirus adviser, Salim Abdool Karim, told Agence France-Presse “We had to have a more proactive approach and go out there.”5

The ministry of health and provincial departments of health worked quickly to retrain health-care workers. By April 19, 2020, mobile testing units had conducted 114,711 tests, with 3,158 (2.8%) confirmed positive for COVID-19.6 And nearly a month later, by May 15, roughly 28,000 health-care workers had screened more than 9 million people—approximately 15% of the population—and tested more than 420,000.7 “This is the largest and most extensive public health mobilisation in the history of our country,” said Ramaphosa in an address on May 13.8

As with any mass mobilization, rollout was far from perfect. As testing ramped up, laboratories struggled to keep up, and wait times for test results increased from two or three days to up to several weeks in some locations.9 The Solidarity Fund contributed resources to help university-based laboratories near hot spots develop testing capacity. A two-car railroad-based clinic reached some of the country’s more remote areas.

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The lockdown criminalized rule violations as well as the spreading of disinformation. Penalties included fines, imprisonment up to six months, or fines and imprisonment. At first, members of the public were slow to comply, prompting displays of force. In Johannesburg, police fired rubber bullets at shoppers outside a supermarket to disperse crowds. One study found that by mid-May, 17,000 people had been arrested, and the number would later soar to 340,000 to 400,000 before a September 2023 decision to expunge the violations from people's records. Although most of the more than 24,000 security personnel deployed to the streets were law-abiding, reports of abuse by "overzealous" officers also accumulated, including allegations of deaths during the enforcement of COVID rules.

South Africans also questioned the logic of restrictions, which held some evident paradoxes. Why should commercial agriculture, essential for food production, not be deemed essential? Why did the regulations permit people to attend a funeral with 49 other people but ban a wedding of similar size? Why
was it prohibited to walk alone on a beach but permitted to do so if holding a special permit for fishing? Still others asked, Why criminalize the sale of alcohol and cigarettes, considering that under the constitution, regulation of those items was a provincial and local government function? In the absence of clear explanations, public suspicion ran wild—especially when the president indicated on May 1 that he would reverse the tobacco ban and then had to walk back his statements after Dlamini-Zuma, the minister in charge of cooperative governance, insisted they remain in place. In addition, the South African tobacco industry brought court challenges seeking release of the meeting minutes in which the decision to extend the ban had been taken. Illegal sales of alcohol and cigarettes had boomed.

The torrent of questions and requests for exceptions prompted changes in other rules, too. Agricultural operations, initially shut down, restarted at the end of March. As a result of floods of public expressions of concern, the national government began to permit people to travel across provincial boundaries to attend funerals in some instances. E-commerce resumed, and the government announced that specific individuals with business activity in other countries would be permitted to travel internationally.

Courts began to overrule some of the other lockdown restrictions not rationally related to pandemic response goals, although they let stand regulations that were rationally motivated yet not completely reasonable (the courts did not employ a reasonableness standard). One ruling prohibited the government from forcing those who tested positive to move to special facilities if they could self-isolate safely, and others opened up options for people to exercise or to return to work if they could protect themselves and others from contracting the virus. Dysell said that out of the more than 300 cases brought against the pandemic policies, however, most were decided in the government's favor.

By early June, when many of the rulings were handed down, the health ministry had already announced the government's plan for easing lockdown restrictions and for moving toward a localized, risk-based strategy. The new plan allowed for a differentiated approach to provinces. According to the government: “Levels of alert (1–5) will be determined by the National Command Council at each meeting upon recommendation by the minister of health and the minister of trade and industry. A single national alert level may be determined, or an alert level may be determined for each province.” The country transitioned to level 4 on May 1 and to level 3 on June 1. During much of August, September, and October, most of the country was at alert level 1, and restrictions were relaxed.

Communicating with the public

Early in the year, before the whole-of-government response coordination system was in place, the health ministry moved quickly to constitute a risk communication and community engagement working group. In a crisis, especially when trust in government was low, helping people understand what
they should do to keep themselves and others safe—as well as the reasons for the steps—was essential.

Many aspects of the communication strategy resembled approaches that other governments adopted. The health minister addressed the public in a televised update each Friday, drawing on community health worker reports from the district and province levels, as well as other sources through a data-visualization software program. The ministry issued daily press releases on the epidemiological situation in the country and globally. It launched a multilingual media and social media campaign to explain how the coronavirus spread and how to stay safe, stressing the importance of handwashing, physical distancing, and what to do if ill. A communications working group relied on WhatsApp, Facebook, national and community radio, television, and digital media to get the word out. In an innovative spirit and to answer questions about COVID-19, the communications team adapted a WhatsApp-based chatbot the health ministry had previously used for answering questions on maternal health.

All media requests for information were directed to the National Institute for Communicable Diseases, located within the health ministry, in order to make epidemiologists and other scientists the faces of the response. Karim, who headed the expert advisory group, was often the one who explained patterns in the data and steps the rationale for the steps taken.

The health ministry soon ceded some of its role to the Government Communication Information System (GCIS), under the leadership of Minister of the Presidency Jackson Mthembu. The health ministry was still responsible for ensuring messages were “coherent, credible, and reliable,” but GCIS, which mobilized additional resources, tried to ensure different parts of government remained on message and used a variety of additional tactics to mobilize the public. During early March, Mthembu’s team helped develop a strategy, organize meetings with stakeholders—including the taxi association, representing an industry affected by the pandemic—and conduct a series of provincial roadshows targeting provincial premiers and their cabinets. The team developed talking points, launched daily media briefings, created a series of videos and recorded educational messages, helped distribute leaflets produced by the health ministry, and monitored disinformation.

Combating Disinformation

Controversially, the national government moved to fight disinformation by criminalizing its spread. This was a departure from the approach taken by most other countries, which tended to prefer flooding the media with accurate information and requesting that media flag false statements. On March 18, the government published its initial COVID regulations. Sections 4 and 5 under Offenses and Penalties specified that:

“(4) Any person who intentionally misrepresents that he, she or any other person is infected with COVID-19 is guilty of an offence and on conviction...
liable to a fine or to imprisonment for a period not exceeding six months or to both such fine and imprisonment.

(5) Any person who publishes any statement, through any medium, including social media, with the intention to deceive any other person about—
(a) COVID-19;
(b) COVID-19 infection status of any person; or
(c) any measure taken by the Government to address COVID-19, commits an offence and is liable on conviction to a fine or imprisonment for a period not exceeding six months, or both such fine and imprisonment.”

Those rules attracted concern from the international Committee to Protect Journalists, which wrote: “The COVID-19 pandemic must be taken seriously, but passing laws that emphasize criminalizing disinformation over educating the public and encouraging fact-checking present a slippery slope and send the wrong message to other countries that may be less measured in drafting such laws.”70 Article 19, another international nongovernmental organization (NGO), expressed worry that the provisions would extend to other sorts of so-called false news and violate the International Covenant on Civil and Political Rights.71

Rising to the government’s defense, some lawyers suggested that the predication of the offense on malicious intent limited the negative impact of the regulation. But worries remained, and after a scientist was penalized for criticizing aspects of the government’s strategy for combating the pandemic, the concerns intensified.72

South Africans signaled that they trusted medical expertise and conventional news media more than government communications or the kinds of influencers that many countries sought to use in their information campaigns. A WHO study conducted in 2021 found low trust in what the government said about COVID compared with the statements made by doctors, WHO, TV, radio, family, and news sites. (The study took place when Minister of Health Mkhize was on administrative leave during an investigation into a contract from which his son appeared to have benefited, though he maintained his innocence and left office to pursue a possible run for president on an anticorruption platform.)73

To the government’s credit, trust in the government’s COVID advice did rank higher than trust in faith leaders, community leaders, social media, and celebrities.74

Providing economic support

The economic and social fallouts of pandemic restrictions hit hard. At the end of March, as the implications of the situation became clear, Moody’s Investors Service downgraded the country’s investment-grade credit rating to junk status, and South Africa’s currency, the rand, fell to its lowest level ever against the US dollar. By the end of the second quarter of 2020, as South Africa prepared to emerge from its initial lockdown, the formal nonagricultural sector had shed 648,000 jobs, lowering the total number of nonagricultural sector formal jobs to 9.5 million from more than 10 million at the start of the year.75
Minister of Social Development Lindiwe Zulu activated a Disaster Relief Fund, which she could use to provide immediate help for individuals and families that did not qualify for assistance through existing programs. The initiative provided payments of about 350 rand (US$24 at the time) per month for three months, later increased to one year. The first payments took place in May 2020, two months after the beginning of the pandemic. By November 2020, the program had reached about 6 million households, and it was later extended into 2023 for about 8.5 million people. Those who were already part of the government’s social protection program benefited from an increase in the amount of money they received.

The initial rollout was a mixed success. According to a Center for Global Development study, delays meant that some of those who qualified received their payments late and may have experienced deprivation before help arrived. The ministry also worked to find safe ways of distributing social grants and other forms of assistance. To reduce crowding when people arrived to collect their grants, the government began to stagger pay dates and used a wider variety of pay points such as ATMs, post offices, and retail establishments.

As in some other countries, such as the United States, the emphasis was on getting help to people quickly, and the implementation of measures to ensure COVID grants went to the target demographics sometimes fell by the wayside. There were reports of corruption at post office delivery points and of applications for the R350 benefit from more than 40,000 civil servants who had not lost their jobs and did not meet eligibility requirements.

The government engaged major business associations as part of its effort to pursue a whole-of-society strategy for defeating the virus. The president met with business leaders on March 22 both to listen to their advice and to explain central government priorities. Business Unity South Africa, the Black Business Council, and other business associations had already established a project management office to work with the government on the COVID response and facilitate the changes required to ensure safe workplaces. One work stream within the project management office focused on assistance with contact tracing, information, communications, hospital response, and procurement of personal protective equipment (PPE) and medical supplies. Another focused on economics, energy, and securing critical supplies. A third dealt with labor by helping design protocols that would lead to safe working conditions in specific industries, by stipulating working hours, and by granting special leaves. The finance ministry also put in place a variety of measures to help banks offer clients temporary loan-repayment relief and to enable businesses to recover.

To facilitate collaboration with the government, businesses set up a Solidarity Fund to which private companies, organizations, and individuals could contribute. Managed by a private-sector board, the fund’s operations team was drawn from financial institutions, accounting firms, and government partners. It insisted that contributions and expenditures be fully transparent online. By the time of its first report, in late September, it had collected about R3.1 billion.
Social support for the poorest and for those who had lost their jobs was paramount, but relief for businesses was also a high priority. The government wanted to enable businesses to keep employees on payroll so the businesses could more easily restart their operations when the lockdown ended. On April 21, the government announced a US$26-billion stimulus package, including support for health procurement, local government basic services, and small businesses, as well as a credit guarantee program for companies crucial to pandemic response success, tax subsidies for private-sector workers below a certain pay level, and assistance for the vulnerable. The funds enabled the expansion of an existing social grant program, the introduction of new social-relief-of-distress grants, and expanded unemployment insurance. The government provided several types of assistance, including tax relief, to help businesses accommodate the lockdown and later resume operations.

As a share of GDP, the sums South Africa spent on social grants exceeded the amounts dedicated to similar purposes by other emerging-market economies and by several high-income countries. In July, the government secured a US$4.3-billion emergency assistance package under the International Monetary Fund’s Rapid Financing facility, as well as additional resources to support the poor and vulnerable from the World Bank’s Response Development Policy Operation.

**Mobilizing in the provinces**

In South Africa’s federal system, most of the responsibility for mobilizing the response fell to the provinces and local governments. The national government could put policies in place to respond to a disaster and provide support, but procuring materials, setting up quarantine facilities, expanding hospital capacities, regulating transportation, communicating with residents, and providing food relief—all of those elements ultimately rested with provincial and local officials.

Differences in provincial government capacities, coupled with variations in underlying levels of inequality, affected both the degree of disruption and the ability to flatten epidemic curves.

The experience of the Eastern Cape highlighted the challenges and struggles that unfolded where provincial capacity was low. One of South Africa’s most populous provinces and its most politically central, the Eastern Cape was the historic heart of ANC organizing. It was also the country’s poorest province, once the location of two apartheid-era homelands: ethnically segregated living areas. According to South Africa’s community survey, in 2014 almost 67.3% of Eastern Cape’s adult residents lived in poverty compared with 33.2% in neighboring Western Cape. On the eve of the pandemic, Eastern Cape had...
an official unemployment rate of 37.4%, the country’s highest. Although blessed with two seaports, the province had struggled to promote industry.

The Eastern Cape government was ill prepared to confront COVID during the country’s first wave of infection. Some of the districts had no disaster management teams. Livingston Hospital, the main medical center, had been without a permanent management team for 18 months before the pandemic struck, its previous leaders having been removed for alleged corruption. Although the premier assembled a provincial coordinating council, a coordinating center, and a disaster operations committee, links to municipalities were slow to materialize.

The first wave of COVID-19 infection overwhelmed Eastern Cape health-care systems, causing what one reporter called a meltdown. People crowded onto health center verandas, waiting for care. The centers continually ran out of masks and clean sheets. It took as long as a month to receive results of COVID tests, leading the provincial government to restrict access to testing. And public hospitals, which had already been working with skeleton staffs before the pandemic, lost about a third of their workforces as personnel fell ill, could not reach the office, or went on strike. Laundry workers, cleaning staff, and nurses staged labor actions that closed many of the smaller clinics, affecting maternity care and other medical services. A doctor told the BBC that people were turning on one another instead of working as teams. Eastern Cape soon had the highest COVID death tolls in the country.

By late June 2020, the provincial health-care system “had all but collapsed,” reported South Africa’s News24. But it was not just the public health service that was in turmoil. The province’s largest city was experiencing chronic water shortages. The food banks that some districts had created soon ran out of stocks. Looting of supplies—a problem in many provinces—disrupted solidarity. Social resistance—or a breakdown in the social fabric—started to impede an effective response. Taxi drivers tried to block vehicles that transported health-care staff and other essential personnel, eliciting a rebuke from NATJOINTS. And there were reports of attacks on water infrastructure and water tankers.

The national government worked to fill some of the gaps, deploying a response team and army medical staff to hospitals and reaching out for help from other provinces and from overseas. A Médecins Sans Frontières (MSF) team that operated a field hospital in Khayelitsha, a crowded informal settlement in Western Cape, redeployed half of its operations to Eastern Cape in order to assist. German automaker Volkswagen opened a field hospital near one of its factories in partnership with the German government. A WHO surge team and Cuban doctors pitched in to help. Cuba frequently deployed medical assistance as part of its international diplomacy. And the national disaster management system reached out to assist with equipment and advice.
By August, transmission appeared to have reached low levels, although limited testing may have disguised underlying trends. The country as a whole returned to alert level 1.

In the meantime, Eastern Cape tried to strengthen ward-based response teams and its lapsed disaster management centers. The ward teams included councillors, mayors, street committees, community development workers, clinic committees, traditional leaders, civil society, faith-based groups, businesspeople, police, and NGOs.

Old problems resurfaced, however. A later independent review flagged silos, turf wars, pop-up structures, and capacity problems as persistent obstacles. Unions, which were usually not included in consultation, continued to clash with the government, and sensitivity about criticism led some local command centers to terminate business and NGO participation. A WhatsApp group that the provincial disaster operations center had created to improve communications with the districts and metropolitan governments ceased to function.

At the end of October, epidemiologists began to see a rapid uptick in infections in several provinces, and Eastern Cape was once again a particular source of concern. Health minister Mkhize said: “The whole country has got bubbles of small cluster outbreaks we are seeing but they are transient. Nelson Mandela Bay [the metropolitan area that includes the Eastern Cape’s largest municipality, Port Elizabeth, and other towns] has continued to fester.” Mkhize traveled repeatedly to the province as hospital admissions, deaths, and the percentage of people testing positive all rose.

Significant numbers of health-care workers fell ill. “Our Eastern Cape hospitals are incredibly full at the moment,” Richard Friedland, head of South Africa’s leading private health-care provider, Netcare, told Agence France-Presse. Doctors asked MSF to assist at three public health centers.

The surge led the president to impose selective restrictions in Eastern Cape and move the country to alert level 3. Nelson Mandela Bay was declared a coronavirus hot spot; people were not taking precautions, the national health minister said.

Travel, alcoholic beverages, and resistance to physical distancing initially appeared to have fueled the outbreak. But epidemiologists soon confirmed the existence of a new, highly contagious coronavirus variant, called Beta, as an additional culprit (text box 2).

National response officials met again with traditional, community, and religious leaders; they also extended the duration of curfews, prohibited alcohol consumption, limited indoor gatherings to 100 people, and closed the province’s beaches at the height of the southern hemisphere’s tourist season. The US Agency for International Development, through its partner Right to Care, procured medical equipment and supplies for Eastern Cape, trained health workers in COVID case management, and prepared 500 unemployed young people to assist with COVID care in hospitals.
**Text Box 2. Scientific Expertise and Disease Surveillance**

When cases of COVID-19 began to appear in South Africa, the Network for Genomic Surveillance, a consortium of South African researchers led by Houtiyou Tegally, PhD, and Tulio de Oliveira, PhD, saw an opportunity. The consortium proposed using genomic sequencing to identify virus variants in circulation, flagging any mutations that might make some of them more transmissible or more dangerous than others or likely to undermine the effectiveness of tests and vaccines then in development. The researchers could also use the data to identify sources of spread. The research would contribute to scientific knowledge and to pandemic response globally.¹

By mid-September 2020, as the first wave of infection faded, the consortium had found 42 variants circulating in South Africa.² Soon after, when a second wave of infections began to appear, sequencing identified a new variant, Beta, which was outcompeting others and contributing to the surge in cases in Eastern Cape.

A year later, the consortium identified another variant, later labeled Omicron.³ The scientists discovered that not all tests could detect the new variant, and as a result, surveillance systems might fail to help keep people safe. The researchers quickly contacted the health minister, who in turn contacted the president. The global public health community needed to know whether the new variant, of uncertain origin, could threaten some of the countermeasures governments had adopted, yet revealing that the variant was spreading in South Africa might cause alarm. The president opted for transparency and informed the World Health Organization.

To the dismay of the scientists involved, many countries closed their borders to South African travelers, although the new variant was already present outside South Africa.⁴ To some consortium members, the decisions underscored global inequities in pandemic responses. The scientists continued making significant contributions to pandemic-related research and to public health. South African scientists at the Public Health Alliance for Genomic Epidemiology—based at the South African National Bioinformatics Institute and the University of the Western Cape—worked to set standards for new public health bioinformatic tools and resources.⁵ South African teams also began to participate in a new public health surveillance system called Sentinel, led by the African Centre of Excellence for Genomics of Infectious Diseases and the Broad Institute.⁶


By December, half of all of the country’s newly confirmed COVID cases were in Eastern Cape.¹⁰⁹ Disease specialist Richard Lessells told the Mail & Guardian newspaper: “We are now seeing an increase in deaths again—most
noticeably in Eastern Cape, which is the first province to experience a significant resurgence in infections. This is extremely worrying. The deaths in Nelson Mandela Bay are already at a higher level than at the peak in the first wave in July.”110 Confirmed or suspected deaths from COVID-19 were higher in Eastern Cape than in other provinces.111 The pattern persisted, and by March 2022, the death rate per 100,000 people in the Eastern Cape was 790 compared with about half that level in Gauteng, which was the richest province at this time.112

OVERCOMING OBSTACLES

Eastern Cape’s experience revealed the difficulty of remedying deficiencies in the middle of a crisis. However, some provinces were able to plan, mobilize, innovate, and adapt more easily than others. One of those more successful provinces was Winde’s province, the Western Cape, where the pandemic was first detected. “Politically, I received a beating in those first few weeks as infections climbed,” Winde said. “I kept reminding our team that others would learn from what we did.”

In May, during the pandemic’s first wave, Western Cape, the epicenter, had half of all of the country’s infections and 65% of its deaths. The crowded informal settlement of Khayelitsha was especially affected. However, much earlier, on observing that a novel virus had hopped national borders, Winde had assembled a strategy team and announced he had two priorities. The first was to ensure that the province had sufficient hospital beds so as to avoid repetition of what was happening in Italy, where people were dying in parking lots outside hospitals. The second was to see that coffins did not pile up, as in New York.

Just a few years earlier, Western Cape had implemented a variety of nationally driven reforms to enable three levels of government—national, provincial, and local—to work more effectively together. The province had introduced a consolidated data platform called Uniti, which integrated information and communication systems in its disaster management center. The head of the province’s health department, Dr. Keith Cloete, a physician by training, had helped craft the province’s pandemic preparedness plan, which built on a disaster response strategy already in place.

“We had institutionalized the practice of disaster preparedness in our department with regard to how to deal with what we call mass incidents,” Cloete said. The department had been involved in events with high spectator participation levels, such as the annual Cape Town Cycle Tour and the 2010 Soccer World Cup, and it had participated in the response to events that generated social stress, such as a water shortage that had almost forced taps to run dry in Cape Town in 2017. (See ISS case study “Keeping the Taps Running: How Cape Town Averted ‘Day Zero,’ 2017–2018.”) The department had a unit for disaster management and a disaster medicine specialist professional with a degree recognized in Europe and the Middle East, who was part of the Western Cape government disaster management unit.
Cloete met with health department staff daily at 8 in the morning and 5 in the afternoon to get the disaster management process going at the health department and to get everything organized while also helping direct the provincial response. The health department worked with private-sector hospitals and clinics to ensure that medical-response elements were in place. Existing data systems, including a single-patient-view database, facilitated the flow of information and enabled the province to tailor responses to the local level.

Winde moved quickly to set up a management system with a team of five at the helm; the group later included more finance people as well as other new faces. Sundays were set aside for strategy discussions. “Monday, Wednesday, and Friday were cabinet meetings,” Winde said. By late March, he had expanded the system. “I opened up the cabinet meetings to our district mayors and our metro mayor [of Cape Town, the major city] and then to municipal managers, the national departments of police, and the national disaster people,” he added. An operations center supported the decision-makers.

The premier divided the province into geographic areas and assigned heads of departments to oversee each. “We gave everybody these reporting lines, and then we got to work.” Winde said that when the group identified a problem, he would ask, “What are we going to do about this? How are we going to deal with this?” Then he would turn responsibility over to someone with an idea, “OK, you take it and you get to work on it and come back.” If a proposed solution did not work, the group would adapt the ideas or find a new approach and then go on to the next thing.

The teams shared data in real time and across themes: health and medical response, safety, business and the economy, education (management of school feeding, remote learning, and other functions), food security, infrastructure (field hospitals, clinic extensions, and other emergency infrastructure), and disaster management. The team assigned to disaster management helped link local governments to the province and was also responsible for getting tourists back to their homes, securing water, and securing communications. A tailored COVID performance management system enabled the premier’s team to keep track of progress.

The premier’s office consulted with businesses to discuss ways of improving safety and of sustaining operations. Staff canvassed the experience of other countries and identified useful innovations. With that information on hand, the Department of Economic Development and Tourism provided safety guidance for small and medium enterprises, convenience stores, and informal traders, and the tourism promotion agency worked with hotels and restaurants.113

Winde also assembled advisers, including a medical-and-health red team composed of critics. South African professionals who disagreed with WHO guidance had formed an organization called PANDA (Pandemics Data & Analytics). Winde invited PANDA representatives to sit on the red team and to speak at expanded cabinet sessions. Other advisers came from health-care
institutions and from universities based in the Western Cape. Because the provincial government funded a significant portion of the salaries of some of the university-based staff, it had a quickly accessible source of assistance.

Ensuring food security was a major part of the Western Cape strategy, and a Food Relief Forum helped assemble those who could help organize that aspect of the response. The education department expanded its feeding programs and relaxed access rules to enable people who were not students to receive meals. Private companies and nonprofit organizations worked with the government to distribute food parcels or vouchers. Later, the same groups helped construct vegetable gardens and soup kitchens.

A communications platform was essential. In South Africa, where trust in government was low, transparency was crucial to win public compliance with safety measures. The Western Cape’s IT team created a dashboard that enabled the viewing of trends by district. The province launched a weekly digital press conference, locally known as a digicon. The meetings included health professionals, in whom people tended to place more trust, and provided important updates. The digicons were accessible through social media such as Facebook. Winde’s office additionally created a platform for regular engagement with faith-based organizations.

The main dashboard, which won an award from Next Generation, an Africa-based social and digital media network, also enabled officials to view heat maps of areas where people needed food; it also linked to a system that monitored the times of deliveries of food parcels to specific addresses; the system later helped track vaccine registration. A call center, staffed by government employees whose workloads had diminished as a result of the pandemic, helped respond to specific questions. And the province engaged university behavioral scientists to help refine messaging.

Then there was the matter of acquiring PPE. The province ordered PPE but found itself in an international competition for supplies. Prices fluctuated, and sometimes equipment it had contracted to buy was diverted to purchasers who paid more. Concerned that the public might start worrying about the use of its tax money, Winde put all of the information on a website so that everyone could view items purchased and their cost.

With those elements in place and the premier’s license to experiment, Western Cape was able to innovate. It built a field hospital in Khayelitsha, a large informal settlement on the outskirts of Cape Town, in partnership with Médecins Sans Frontières. Then, within six weeks, it constructed the biggest field hospital on the African continent—860 beds with oxygen for each—by converting a convention center for the purpose. It obtained advice from the UK’s National Health Service, which had built seven such facilities, known as the Nightingale Hospitals. “We started getting lessons from what they were doing,” Winde said. An IT staffer from his office figured out how to equip the facility for Wi-Fi so that patients could see their families on tablets or phones and so medical staff could keep electronic records. The medical teams opted to use
high-pressure nasal oxygen instead of intubation because many intubated patients in Europe and the United States had died. “It wasn’t part of the plan,” Winde said, “but the projects came together because people in the system were innovating and putting ideas in and making it happen. And for me that was really exciting to see.”

To avoid the experience South Africans saw unfolding in Europe and the United States and keep deaths low, the team also focused on reducing the risks that comorbidities such as diabetes, HIV, and tuberculosis posed—especially for poorer or older residents. The team worked with clinics to identify patients with diabetes and help them balance their sugar levels so they were less likely to be hospitalized with serious disease. Older people in low-income communities often had to get out at 4 a.m. to procure medicines at local clinics, so with the support of the Bill and Melinda Gates Foundation, the province packaged the medicines and partnered with Uber to take the deliveries to local NGOs, which in turn took them directly to patients.

“So now, suddenly, you are getting a medicine delivery at home instead of queuing at the clinic. And you minimize your risk of being outside and actually being susceptible to catching COVID-19,” Winde said. “That, for me, is an amazing change in people’s lives.”

Myriad practical problems required quick attention. For example, national lockdown rules were strict, and the government had to get health-care workers to clinics and hospitals and then back to their homes safely. Taxis—typically in the form of minivans—were notoriously crowded in normal times, when the industry and its regulators (the provincial and local governments) were usually at each other’s throats about routes, rules, and fines. But both sides had to work together in this circumstance. To do so, the government created a red-dot taxi system. It outfitted these designated taxis with plastic sheeting between rows and strictly limited numbers of passengers to six. It then equipped health-care workers with an app to book trips in red-dot taxis. Drivers could consult the app to identify where to go and when. The arrangement was a win-win. Taxi drivers had a reliable source of income—and health-care staff had a safe way to travel.

The budgetary impact of these measures was substantial, and as a result, cost became a sore point in the province’s relationship with the national government. Early on, Winde’s Western Cape provincial government started to redirect funding from intended uses to pandemic response. The national government had indicated it would help pay some of those costs but was slow to offer details on how much. The provincial government was therefore out on a limb. It adjusted its budget four times in the course of the year, dedicating additional treasury staff to help with the emergency-funding adjustments.

The measures the province implemented during the first wave worked. By mid-July 2020, Western Cape had reduced the size of its field hospital in Khayelitsha and sent oxygen machines to other parts of the country, where the machines were more needed. At the time, infections were still surging in
neighboring Eastern Cape as well as the country’s wealthiest province, Gauteng.115

All provinces faced trouble during the second wave, which began in late November 2020. The new variant spread in Western Cape, too—this time in less densely populated areas—and it began to take a toll on the health system.

Cloete, head of the Western Cape health department, put measures in place to systematically safeguard the department’s personnel, drawing on prior steps to build trust and on commitments to occupational health and employee health and wellness. In spite of those measures, however, many medical staff contracted the virus, and some lost their lives. The department decided to intentionally slow the pace of work and created opportunities and safe spaces for personnel and their families to talk and grieve together—intentional healing he called it. Vaccines would later protect staff members, but in the thick of the crisis, the need for attentiveness to the nurturing of relationships and the need for expressing appreciation for numerous acts of humanity were two of his biggest lessons, he said.

If he had one regret, Winde said, it lay in not obtaining vaccines as they were about to reach the market. Securing vaccines globally was highly competitive. The national government had asserted responsibility for procurement. However, Winde had set aside the money in case the national government fumbled. “I would have bought vaccines earlier on,” Winde said.

Figure 5: New confirmed COVID-19 cases per million compared

![Graph showing new confirmed COVID-19 cases per million people from March 2, 2020, to January 1, 2021, for countries including Georgia, Colombia, South Africa, and Nigeria.](image)
ASSESSING RESULTS

South Africa was among the first countries to detect COVID-19 infections within its borders, and its pandemic policies were, on paper, among the most stringent. By the end of 2020, the country had 1.06 million cumulative confirmed cases—about half the number recorded in Italy, a country of comparable population size. In terms of cases per million population, South Africa’s first wave of infection did not reach the level experienced in several similarly situated countries, such as Colombia\textsuperscript{116} (figures 5 and 6). The country was able to reduce transmission and reopen for a few months before a second wave began.

South Africa suffered higher rates of infection and more deaths clearly linked to COVID-19 than did other countries in Africa. More than 785,000 people in South Africa became infected during the first year of the pandemic, accounting for roughly half of all reported COVID-19 cases on the continent, although it was likely that underreporting throughout the continent was responsible for some of the difference.\textsuperscript{117} Moreover, disparities among South Africa’s provinces with respect to capacity to bring infection under control proved stubborn, enabling the second wave to take many lives.\textsuperscript{118}

In early 2021, the South African government engaged more than 80 independent experts to review the response coordination system and policies and recommend changes. The first edition of the report—published under the auspices of the presidency and the Department of Planning, Monitoring, and Evaluation—ran more than 700 pages.\textsuperscript{119} At that stage, few countries had

Figure 6: Confirmed COVID-19 deaths and excess deaths

![Figure 6: Confirmed COVID-19 deaths and excess deaths](source: The Economist (2022), Johns Hopkins University (2022))
engaged in that kind of assessment in their pandemic response nor with the same level of candor.

Whether the policies adopted were appropriate remained a matter of debate. The independent report pointed to the difficulty of arriving at a clear answer given the unprecedented and continuous nature of the pandemic and the need for millions of people to earn livelihoods. Even though transmission had dropped after the initial strict lockdown—suggesting that policy was indeed effective—maintaining or reimposing the measures was impracticable given the devastating impact on incomes and economic activity.

“We started to get it right—with a differentiated approach,” Western Cape premier Winde said. “We doused the flares, the bushfires.” By contrast, the initial national lockdown had imposed high costs. “Communities hit early, where the number of cases had already fallen, had to wait under lockdown until the rest got sorted out,” Winde said. “And that really hurt the economy badly.” However, the later, more selective approach controlled but did not curtail the spread of the virus. Only broad public adoption of individual protective measures and effective vaccines, which became available later in 2021, provided a potential route out of the predicament (Epilogue).

It was somewhat easier to assess the strengths and weaknesses of the coordination system, and government’s own review highlighted these insights.

At the national level, South Africa had several essential elements of a successful response already in place before the initial outbreak, including a strong disease surveillance system, top-notch scientific expertise, a disaster management administration, and a coordinating council to promote collaboration with the provinces. The country also had had recent experience in handling infectious-disease outbreaks, though not at the scale that COVID-19 required.

Nonetheless, as the government-published independent report indicated, several areas of concern remained, including lack of clarity about the roles and responsibilities of the main disaster management coordination systems involved—the command council, NATJOINTS, the health ministry, and the disaster management administration—and the division of labor across levels of government: national, provincial, district, and local. Moreover, not all provinces and districts had created offices of disaster management administration, with the result that there were no uniform capabilities and protocols, which made it difficult to carry out an effective risk-based hot-spot strategy. The WHO pointed to similar breakdowns in capacity on provincial and district health-incident-management teams. The report noted that the speed of the response had led to some confusing and contradictory messages about roles in public notifications.

Inadequate preparation of police and military personnel, coupled with the decision to criminalize violations of COVID restrictions, led to significant abuses of authority and rights violations not observed in countries that imposed other types of penalties or relied on less militarized responses. At the local and
Global Challenges
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provincial levels, police occasionally sought to usurp authority. Individual officers sometimes misunderstood either government regulations or ambiguously worded instructions. For example, NGO Human Rights Watch flagged instances of police shutting down immigrant-owned businesses because relief policies did not specifically say immigrant-owned businesses were eligible for support.\textsuperscript{121} South Africa’s Institute for Security Studies said, “It was a huge risk to deploy officials in this role without training” and “some were bound to get it wrong.”\textsuperscript{122} The NGO also faulted NATJOINTS for inadequate supervision on the ground and its failure to hold supervising officers responsible.

Some of the initial lockdown restrictions and some of the subsequent modifications were not well thought through—a problem the government might have avoided by consulting with predesignated stakeholder groups. Such a step would have reduced frustration and distrust during the early weeks of the response and built goodwill the government would later need for sustaining compliance with safe practices. Some of those consulted as part of the independent review advocated rewriting the Disaster Management Act to address these challenges.

Incompatible technologies, limited internet access, and gaps in information systems impeded the flow of essential information at points and required a variety of workarounds. The independent report noted: “With data so important for decision making, [the health ministry’s National Institute for Communicable Diseases] and other stakeholders were frustrated by the limitations of the incoming data and the lack of standardized data collection tools; many did not provide data in real time.”\textsuperscript{123} The Western Cape public health data system performed better than most and offered lessons for others.

Implementing policies at high speed also led to the neglect of corruption prevention measures. One report indicated that as the end of 2020 neared, the government had provided support for an estimated 36 million people—61\% of the South African population.\textsuperscript{124} However, not all the support went to those for whom the relief was intended. The independent review drew attention to an “observed surge in corrupt practices and collusion between the public service and the private sector, which undermined confidence and generated widespread public anger.”\textsuperscript{125} In late 2020, the president authorized a Special Investigating Unit to probe allegations of misuse of COVID-19 funds. The National Treasury also took steps to strengthen procurement regulations and enable the auditor general to audit COVID-19 expenditures in real time. By the end of the year, more than 930 companies were under investigation for irregularities in contracts associated with field hospitals and provincial purchases of PPE or educational materials. And by the end of 2021, the auditor general reported it had found that 5,812 public servants had fraudulently applied for and received R350 Social Relief of Distress grants, at a cost of R5.8 million.

Above all, the South African experience threw the difficulties of curbing a pandemic in the context of inequality into stark relief. Although people of all
income levels and backgrounds fell ill, poorer South Africans were especially affected, and immigrants were particularly vulnerable. The independent review suggested that the public had become increasingly divided along class lines “in part because government appeared to lack understanding of how poor people access food, housing, transport, and employment.”

Government capacity at the provincial and local levels varied, with less-wealthy areas struggling to manage a disaster response effectively. Some provinces, such as the relatively wealthier Western Cape, were better positioned than others to handle the extreme demands of a pandemic response because of their prior investments in capacity, foresight, broad collaboration, and strong leadership.

As the pandemic continued, South Africa faced difficulties in COVID-19 vaccine acquisition. Despite the prominent and important roles of South African scientists in alerting the world to new variants and the country’s participation in vaccine testing, the government struggled to obtain shipments of the products initially developed, the lion’s share of which went to the world’s wealthiest countries. By the time vaccines arrived, vaccine hesitancy and reduced public concern led to lower levels of uptake than anticipated (epilogue).

In response to those concerns, the independent review advocated (1) requiring disaster management units at all government levels, (2) elevating the need for stronger capacity at all government levels, (3) ensuring that the Department of Cooperative Governance and Traditional Affairs adequately lived up to its responsibility to maintain this system, (4) creating a dedicated pandemic unit in the health ministry, and (5) strengthening and streamlining information flows.

The authors acknowledged that “sustainable public finance for subnational governments remains an unsolved problem.”

**REFLECTIONS**

At every level of government, South African officials had ideas about how to strengthen the country’s response to subsequent waves of infection or future pandemics. But there were also some common themes that usually centered on people and governance.

National health department adviser Nicholas Crisp said, “Success in pandemic response is about personalities. Individuals make it work or make it fail. The key is to give people the space to do the best they can do.” He added that high-level managers had to be flexible. They had to plan and monitor, and they needed standard reporting, but they had to be willing to adapt. “Good governance must just be a habit; we just do it,” said Western Cape Premier Alan Winde, echoing that view. “It’s about that innovative spirit, about constantly asking, ‘How do we make the citizen matter?’ and, ‘How can we do things quickly, efficiently, differently, and effectively?’”

Throughout government, business, and civil society, individuals and teams used creativity and invested long hours to devise a response tailored to the country’s individual situation and specific needs. Others emphasized the value of preparation and prior experience. In the words of National Disaster
Management Center law specialist Jurgens Dysell, “The key issue is to be better prepared because when you’re behind the curve, it’s very difficult to catch up.” The government should start to build recommendations into its operations immediately, so that it would not be caught off guard, he urged.

Winde attributed his province’s successes to that same general idea. He stressed the value of having engaged in prior whole-of-government and whole-of-society problem-solving and having learned from those engagements. The area around Cape Town had hosted international events, including soccer competitions and cycling races. Ensuring that the events concluded successfully required considerable preparation. “One of the first projects was to make sure that the 2010 football World Cup was delivered,” Winde said. “We had a year and a bit to put on a great show. There was a lot of learning on getting collaborative government—on helping the private sector and government to work together.”

Winde also pointed to his province’s experiences in previous health emergencies. “Our ability to deal with HIV/AIDS and TB also enabled us in various ways,” Winde said. “The province pioneered getting antiretrovirals out into our country—going against national policy. And that helped a different way of thinking. We broke records anywhere in the world with regard to getting water usage down per capita. And it’s still there; there was a really huge lesson in getting the messaging right and linking it to behavior change.”

The value of those experiences lay not just in what people learned but also in the networks they developed, argued Dysell. “The network that gets developed during a disaster is one you use after the disaster,” Dysell said. “You really never know people until you work with them in the trenches.”

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