



REPUBLIC OF GEORGIA VERSUS COVID-19: SECURING AN EARLY WIN, BEATING BACK A LATE-STAGE CHALLENGE, 2020 – 2021

Tyler McBrien drafted this case study based on interviews conducted with Nona Tsotseria, MD, PhD, in January and February 2021. Case published June 2021. This case study was supported by the United Nations Development Programme Crisis Bureau as part of a series on center-of-government coordination of the pandemic response.

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SYNOPSIS

As soon as the Republic of Georgia’s National Center for Disease Control and Public Health (NCDC) sounded an alarm about a cluster of unusual pneumonia cases in Wuhan, China, Prime Minister Giorgi Gakharia’s government set its pandemic response into motion. It was early January 2020, and there was still no hard evidence that the infection had spread across borders, but the country’s health leaders were wary. As outbreaks of the virus, identified as COVID-19, began to appear in other countries, the government quickly created a multisectoral coordination council chaired by the prime minister and then adopted a number of emergency response measures. Working with a network of local public health centers, the NCDC launched a communications blitz, with scientists and physicians at the forefront. The public health campaign encouraged compliance with stringent—and unpopular—lockdown measures. Through the first half of 2020, the weekly number of new cases remained low, even as infections surged in many high-income industrial countries. But it was too early for a victory lap. Pressure grew to open up resort centers during July and August in an economy heavily dependent on tourism. During September, October, and November the number of new cases per day climbed sharply, driven mainly by expansion of the outbreak in Adjara, a vacation destination. Compared to most European countries, the incidence of disease remained low, however, and the number of new infections later plummeted, approaching initial levels by March 2021. This case study highlights how a small, middle-income country with a privatized and decentralized health-care system initially succeeded in its pandemic response, struggled with sharp reversals, and then brought the infection rate close to earlier levels prior to vaccine distribution.

INTRODUCTION

On February 25, 2020, a 50-year-old man traveled from Iran to Azerbaijan. From there he made his way to the Republic of Georgia, his home country, in a 12-passenger minibus. At the Georgia border, guards stopped the bus and took the temperature of each traveler.¹ Because the man's temperature was slightly elevated, public health workers administered a test for COVID-19, a novel coronavirus first observed in Wuhan, China, in early January. The test result was positive and marked Georgia's first known case of the virus and its associated disease.

Local authorities immediately transferred the man to the Tbilisi Infectious Disease Hospital, and required his fellow passengers to quarantine. "We have no reason for panic, because our government is doing everything to avoid the coronavirus epidemic in Georgia," Minister of Health Ekaterine Tikaradze declared at a press conference the next day.

The patient was lucky to have made it to his destination. Weeks earlier, before the World Health Organization (WHO) declared an international public health emergency on January 30, the Georgian government had set up thermal screenings at border checkpoints to help prevent the importation of COVID-19, and the day before the man arrived, it had suspended flights to and from Iran, an early COVID-19 hot spot.

Georgia's effort to prevent and contain the COVID-19 pandemic began far earlier than it did in many countries, and Georgia's government initially allowed scientists and health professionals to take the lead. At the forefront was the



Map of Georgia and surrounding areas.

Image credit: Public Domain, <https://commons.wikimedia.org/w/index.php?curid=2963959>

Tbilisi-based National Center for Disease Control and Public Health (NCDC), an agency under the Ministry of Health tasked with early detection and prevention of diseases; monitoring, evaluating and analyzing of the health status of the population; promoting health, science, education and awareness; and preparing for and responding to public health emergencies. The NCDC's public health workers had been closely monitoring and managing the pandemic since first alerted in late December 2019 to an unusual outbreak of pneumonia in Wuhan, China, later identified as cases of COVID-19.

Having earlier prevented a SARS coronavirus outbreak (2002) and a MERS coronavirus outbreak (2012) from reaching Georgia, an NCDC team led by Dr. Amiran Gamkrelidze, the institution's director general, was already familiar with the potential havoc that could be brought on by this new, particular type of virus.

On January 6, just days after the first WHO reports, the health minister informed Prime Minister Giorgi Gakharia and other cabinet ministers about the outbreak. Gakharia, who had taken office only five months prior, established an interagency coordination council without delay.

THE CHALLENGE

The government's quick reaction was possible because of an attentive pandemic response team. Ana Kasradze, head of the NCDC's Emergency Preparedness and Response Division, had immediately briefed Gamkrelidze on the situation after seeing the first reports from the WHO. Her division functioned as Georgia's International Health Regulations focal point for the WHO, and she also collected information daily from two other sources: the Atlanta-based US Centers for Disease Control and Prevention (CDC) and the European Centre for Disease Prevention and Control. Shortly after Kasradze's briefing, the NCDC briefed Minister of Health Dr. Ekaterine Tikaradze, as well as First Deputy Minister Dr. Tamar Gabunia.

As they began to draft plans for Georgia's response to the rapidly developing international health emergency, the team at the NCDC, a network of nine regional branch offices employing around 400 personnel, assessed both the resources they had available and the challenges they faced.²

The country's health system had some distinctive strengths, as well as some weaknesses. The government provided universal health-care coverage and reimbursed private hospitals and clinics for eligible services. It also operated municipal public health centers, which formed an integral part of the country's public health system. It ranked 42 out of 195 countries in the 2019 Global Health Security Index—with a score of 52—and second overall in the Western Asia region), but by its own assessment it fell short of full compliance with international health regulations. (Figures 1 and 2) Georgia had high numbers of physicians per capita (roughly between 5 and 7 per 1,000 people), of critical-care beds (62 per 100,000 people), and of ventilators (1,749 ventilators approved for the management of respiratory distress syndrome).³ With respect to physicians per capita, it was among the top five European countries, and it had more

critical-care beds, adjusted for population, than did the United States, Germany, and other well-resourced health systems.⁴ However, the figures masked sharp regional disparities in to access to doctors and an acute shortage of nurses.⁵

Also on the positive side of the ledger, Georgia rapidly developed COVID-19 testing capacity at the Tbilisi-based Richard Lugar Research Centre, Georgia’s hub for surveillance of human and animal diseases. By the beginning of February, the center had received an initial supply of testing kits and materials from Germany’s Bunderswehr Institute of Microbiology. It later expanded its capabilities with assistance from the US CDC, US Department of Defense, the Government of the People’s Republic China, the Republic of Korea and others, prior to availability of testing kits and supplies in global markets.⁶

To succeed against COVID-19, however, the response team had to navigate significant implementation challenges. Ahead of a national election scheduled for later in the year, partisanship had already started to increase. The need to coordinate a decentralized, largely privatized health-care system and enable disparate parts of government to work together effectively loomed large. Plus, the team lacked adequate information for modeling the effects of policies or the need for supplies, and major uncertainties about the virus itself made clear public messaging difficult—especially in a context in which foreign and domestic disinformation competed for attention. And some of the public health measures the government might need to invoke put jobs at risk.

Figure 1: Georgia, Global Health Security Index

	Colombia	Georgia	Germany	New Zealand	Nigeria	Pakistan	Senegal	South Africa	Tunisia	United States	Vietnam
GHS Index	44.2	52	66	54	37.8	35.5	37.9	54.8	33.7	83.5	49.1

Score out of 100. This index, developed by Johns Hopkins University, uses 140 questions about capacity in prevention, detection and reporting, rapid response, health system to treat the sick and protect health workers, compliance with international norms, and the risk environment. Its authors say it is based not only on whether capacity exists but also whether that capacity is regularly tested and shown to be functional.

Figure 2: International Health Regulation Scores by Country

	Colombia	Georgia	Germany	New Zealand	Nigeria	Pakistan	Senegal	South Africa	Tunisia	US	Vietnam
IHR Risk Communication	40	20	60	60	20	20	40	60	60	100	60
IHR Health Services	67	60	100	73	33	33	40	33	73	100	67
IHR Surveillance	60	70	100	80	70	60	50	40	80	100	60
IHR Emergency	67	60	87	100	47	47	53	73	73	100	60
IHR-NHR Coordination	70	80	100	100	100	50	80	50	70	100	70
IHR Laboratory	67	93	100	93	47	60	60	100	100	100	67

The International Health Regulations (WHO) are designed to improve detection, reporting, and response to public health emergencies of international concern. Scores are government *self-assessments* of capacity in disease surveillance and a variety of other functions in response to specific WHO metrics and benchmarks.

Text Box 1. National Center for Disease Control and Public Health

Based in Georgia’s capital, Tbilisi, the National Center for Disease Control and Public Health (NCDC) is a state agency under the Ministry of Health. It oversees the public health of Georgia, including immunization, epidemiological surveillance, disease prevention, health promotion and education, and laboratory testing.¹ Officially founded in 1996 and modeled after the US Centers for Disease Control and Prevention, the NCDC’s history dates back to 1933, when the Soviet Union established the Transcaucasian Anti-Plague Center in Tbilisi after a resurgence of bubonic plague.¹ In the early 2000s, the NCDC grew to integrate Georgia’s Medical Statistics and Information Center and Public Health Department.

As a network of nine regional centers, the NCDC administers its own budget from the Ministry of Health, with additional funding through the Global Fund and other international partners. In 2011, the Richard Lugar Center for Public Health Research opened with funding and support from the US Department of Defense. The center houses a biosafety level 3 certified laboratory, which can conduct research with potentially lethal microbes able to infect humans through inhalation. Before the COVID-19 crisis, the NCDC carried out several successful immunization campaigns and outbreak responses.

¹ Lella Bakanidze *et al.* “Surveillance on Plague in Natural Foci in Georgia,” *Emergency and Endemic Pathogens*, January 2010; https://www.researchgate.net/publication/227112242_Surveillance_on_Plague_in_Natural_Foci_in_Georgia.

The first of those potential obstacles was not unique to Georgia. Election years anywhere posed special challenges for pandemic response. There was always the risk that a political party would try to build support by capitalizing on public weariness with restrictions, and any missteps would draw immediate scrutiny. By the time pandemic preparations began, electoral tensions had already escalated.

The controversy did not initially affect perceptions of the NCDC. Georgians viewed the organization as both apolitical and highly effective (text box 1). “In Georgia, our NCDC has a very good reputation because of its well-trained staff, physical infrastructure, and connections with the US CDC, the World Health Organization, and many other international partners,” said Gabunia, the deputy health minister. “Luckily, their advice was valued by everyone.” The government also hewed to the science.

“Both the government’s trust of science and the public health sector—and the people’s trust of the government and its recommendations—are important factors for success,” said Kasradze.

A second challenge that those in charge of planning and managing the COVID response had to overcome was navigation of Georgia’s highly decentralized health system. Throughout the country, a network of 64 municipal public health centers, most of which reported to local governments, handled regional disease outbreaks and implemented NCDC recommendations at the local level. “The network of local public health centers had epidemiologists trained in contact tracing,” said Dr. Akaki Zoidze, a former deputy minister of health and vice prime minister. “Local or central authorities questioned why we

continued to employ hundreds of epidemiologists, but that old-fashioned approach to public health turned into a benefit when the need for experienced contact-tracing personnel emerged.”

The response team also had to coordinate with private health-care providers, who delivered 85% of care in Georgia as of 2018.⁷ “Private health-care providers in Georgia are difficult to engage in purely public-health-related business,” said Gabunia. Private, for-profit providers operated with little government regulation or oversight.⁸ (Figure 3)

The bridging of different departments and levels of government presented a third potential coordination problem. A pandemic response required close cooperation between departments and agencies that otherwise rarely interacted. The ministries of health, internal affairs, economy, finance, foreign affairs, and agriculture, among others, all had to be involved. The central government also had to work with Georgia’s 76 municipalities, which comprised 12 cities and 64 administrative divisions known as communities—all of them grouped into 9 regions and 2 autonomous republics (Russia had occupied the regions of Abkhazia and South Ossetia since the 2008 war).⁹ Because Gakharia’s Georgian Dream Party held an absolute majority in parliament and all regional local councils,¹⁰ the aligning of policy was easier than it might have been, but finding ways to improve interdepartmental coordination remained a priority.

A third broad challenge that Georgia’s government and public health system faced—especially during the initial response—was lack of substantive information regarding the novel coronavirus. The dearth of data threatened to inhibit the public health authorities’ ability to accurately model outbreak scenarios, predict the amount of health resources needed, and inform policy decisions. “I remember reading a statement from the World Health

Figure 3: Health Expenditure

	current health expenditure as % of GDP	current health expenditure per capita PPP	domestic health expenditure as % of current health expenditure	general government health expenditure as % of current health expenditure	domestic private health expenditure as % of current health expenditure	out of pocket as % of current health expenditure
Colombia	8	1,155	100	72	28	15
Georgia	7	796	99	39	60	4
Germany	11	6,098	100	78	22	1
New Zealand	9	4,024	100	75	25	13
Nigeria	4	233	92	15	77	77
Pakistan	3	178	97	36	64	56
Senegal	4	146	86	24	63	56
South Africa	8	1,129	98	54	44	8
Tunisia	7	912	100	57	42	3
US	17	10,624	100	50	50	11
Vietnam	6	440	98	46	53	45

Source: WHO Health Expenditure Database. <https://apps.who.int/nha/database>

Organization issued in late January that talked about the high level of uncertainty and lack of specific recommendations,” said Gabunia. “It was then that we understood that we immediately needed to decide what kind of preventive measures would be most appropriate within our own context.”

Communicating effectively with the public to encourage compliance with pandemic health restrictions constituted a fourth challenge. “The government response would not be enough without broad support by the population,” said Maya Tskitishvili, vice prime minister and minister of regional development and infrastructure. “So, from the very first days, we focused quite a lot of attention on communication: communication not only between the government and the public but also between decision makers. Timely access to information leads to timely response.”

Any public information campaign had to contend with two major difficulties. The first involved how to distill the nature of the viral threat and convey that nature to the public—especially when knowledge of COVID-19 was evolving day to day and guidance shifted accordingly. The second was the threat of disinformation from neighboring Russia as well as from domestic groups. The Lugar research center was a favorite target of conspiracy theorists because of its link to the United States, which had helped fund the center’s creation in 2011.¹¹ An onslaught of disinformation began early in Georgia’s COVID-19 response, when Kremlin-backed REN TV claimed in late January that the pandemic had originated in a Lugar lab.¹² With the majority of testing and COVID-19 research housed at Lugar, at least in the early months of the pandemic, cultivating public trust in the lab was crucial.

The NCDC’s stature in Georgia eased communication challenges. According to Gabunia, NCDC advice and recommendations were taken seriously by citizens and political leaders alike. The NCDC also could draw on experience from past public information campaigns about immunizations and tobacco use.

A final challenge had to do with mitigation of the economic impact of such measures as quarantines and lockdowns. The tourism sector, which accounted for 18.4% of Georgia’s gross domestic product in 2019, was especially vulnerable to travel and movement restrictions.¹³ In 2018, travel and tourism accounted for 27% of total employment.¹⁴ In particular, the Adjara region, which is the home of the country’s second-largest city of Batumi and a popular holiday destination for Georgians and vacationers from neighboring countries, relied heavily on tourism. In addition, any economic shutdown likely would disproportionately affect the 19.5% of Georgians living below the national poverty line.¹⁵

FRAMING A RESPONSE

Urgency and decisive action characterized the early days of Georgia’s response. While other countries around the world delayed and deliberated, the Georgian government mounted a defense developed by the NCDC. The

organization's strong reputation, growing fear of the uncertain, and honest recognition of the shortcomings of Georgia's health-care system all called for quick decision making by the government. "The fact is that prevention is the only viable option for a country like Georgia, having scarce resources and a fragile healthcare system," Dr. Nino Giguashvili, a Georgian public health researcher, told Eurasianet, and prevention required swift action.¹⁶

"The NCDC prompted us to start preparations sooner rather than later," Gabunia said.

The Ministry of Health and the NCDC began to draw up the pandemic response plan after receiving the prime minister's approval to do so. But the two agencies soon realized that the legislative framework for Georgia's national emergency response system, adopted in 2015, lacked specificity and was largely untested. Developed in partnership with the US Department of Defense's Defense Threat Reduction Agency, Georgia's system defined the functions, responsibilities, and coordinating mechanisms for government agencies during different types of national emergencies. "Unfortunately, as in many countries, the plan was very generic," said Zoidze. It lacked the specificity needed to act quickly.

In mid-January 2020, Gamkrelidze and the NCDC prepared a special government action plan for the pandemic response while Tikaradze and the Ministry of Health focused on high-level, multisectoral coordination and immediate emergency measures, including restricting travel from China and other countries that had infections, introducing thermal screening at border and entry points, and developing testing capacity.

The prime minister accepted the Ministry of Health's recommendations and convened the first meeting of the Interagency Coordination Council on January 28, 2020. The council, a policy-making body, served as the main decision-making platform on issues pertaining to COVID-19. It consisted of members of the government, members of parliament, members of the administration of the president of Georgia, and medical experts. Each council meeting began with an NCDC leadership presentation of epidemiological data, followed by Gabunia or Tikaradze updating members on health-care-facility capacity and clinical challenges.

After the coordination council's first session on January 28, the government presented its cabinet-approved plan to the public. The plan established four priority directions in the fight against COVID-19: (1) healthcare, in the form of protection of the health and lives of the population; (2) Georgia's economy and its management and recovery in the face of the global economic crisis; (3) public safety and the protection of citizens, including management of legal violations of restrictions; and (4) supplies and logistics, in the form of management of an uninterrupted supply of food for the population.

The emergency response plan required all agencies that had roles in the response to develop and approve their own special operational plans by March 1, including estimates of costs and financing.¹⁷ The plan directed the finance

Text Box 2. Emergency measures implemented in January and February 2020

After the first meeting of the Interagency Coordination Council, the government of Georgia implemented the following emergency measures to prevent the spread of COVID-19.

- Compulsory isolation for people returning from high-risk countries
- Thermal screening at airports and borders
- Suspension of travel from China, Iran, and other high-risk countries
- Outfitting the NCDC's Lugar laboratory for COVID-19 research and testing (the lab developed testing capabilities by January 30)¹
- Official adoption of the WHO's definition of COVID-19
- Repatriation of Georgian citizens

The plan also empowered the Ministry of Health to ensure the overall coordination of pandemic-response activities, including the following measures.

- Disease detection, identification, validation, and risk assessment
- Laboratory testing
- Epidemiological surveillance and response action
- Informing the public about the risks associated with coronavirus disease and how to mitigate its effects

¹ Akaki Zoidze, "Georgia Case Study of COVID-19 Response: Right Decisions at the Right Time, Prioritizing the Right to Health," Foundation for European Future, July 2020; 14.

ministry to allocate resources to state agencies from Georgia's Reserve Fund, if needed. For example, on March 2, the ministry transferred 1 million lari, or US\$358,000, to the Ministry of Health (text box 2).¹⁸

With the council in place as the main policy body, the Ministry of Health then established a clear-cut operational coordination structure. "At the ministerial level, we set up a council to deal with more-operational and resource allocation decisions to address questions like, 'What kinds of equipment do we have to procure for our hospitals?' 'How many beds do we need?' and 'How many people must we train?'" said Gabunia, who served as vice chair of the council, with the health minister presiding as chair. The Ministry of Health established consultative working groups in three areas: lab testing, clinical, and public health. "All of these groups actually played substantial roles in introducing new policies, revising existing assessment practices, and introducing clinical-care standards," she said.

GETTING DOWN TO WORK

The NCDC envisioned four stages in the fight against the pandemic. Stage one would aim to *prevent* the spread of COVID-19 into the country. Once the outbreak breached Georgia's borders, stage two would focus on measures to *slow* the spread of the virus. Should the country face an uncontrolled outbreak, in which it would be impossible to trace the source of infection, the government would shift into stage three: *manage* the spread of the virus. Finally, once the

health system was no longer overwhelmed and the number of daily infections stabilized at a manageable level, the government could begin gradually *lifting* restrictions and adaptations in stage four.¹⁹

Within the context of that general framework, the Ministry of Health and the NCDC wanted the government's response to remain flexible. "An important part of the plan was to establish thresholds for imposing and then lifting limitations," said Gabunia. "But we wanted the authority to revisit decisions, so nothing was set in stone."

Establishing an emergency response system

While Gakharia and the Ministry of Health were setting up the high-level coordination structure, Kasradze and her team at the NCDC's Emergency Preparedness and Response Division were getting to work immediately to counter transmission of the disease as it appeared. "The main function of my unit was to act at the very first page, the moment the emergency emerged," said Kasradze. "We act as firefighters until the response turns into a routine."

In mid-January, Kasradze and her team established a public health emergency operations center at the NCDC by way of a plan that had been in the works since at least 2015. A self-assessment of Georgia's public-health-system needs from that same year defined an emergency operations center as a "central location for coordinating operational information and resources for strategic management of public health emergencies and events," wherein emergency operations center (EOC) staff "provide communication and information tools and services and a management system during a response."

Kasradze said she decided it was time to "learn by doing." The COVID-19 outbreak precipitated the process to establish an EOC, and in only one week's time, Kasradze and her team set up the space by repurposing anything they could find. "There was one printer, six computers—some new, some old—and tables and chairs in storage," she said. "Someone even gave us a TV screen as a present. We started very simply, just mobilizing whatever resources we had." The EOC was essentially a large meeting room the team called the Situation Room, staffed with epidemiologists conducting investigations, and communications specialists publishing information in traditional and social media. Most of the communicable disease department at the NCDC moved to the EOC, and other experts were seconded from across the agency. "We didn't have the luxury of a dedicated person for each function," said Kasradze. "Everyone was doing everything." For example, when call volume increased at the EOC's call center, many workers from different areas would lend a hand.

Kasradze's division developed an incident management system to respond through the EOC, with teams responsible for rapid response, epidemiology, communications, and laboratories. The NCDC's head of communicable diseases, Dr. Khatuna Zakhshvili, served as incident manager, and Kasradze served as deputy.

One of the EOC's first functions was to monitor the COVID-19 situation locally and globally and produce daily reports for the NCDC's director general, Gamkrelidze. "Providing evidence is the key to gaining people's trust," said Kasradze, who constantly provided data in support of the NCDC's recommendations. In addition to synthesizing data from the WHO, the US CDC, and the European Centre for Disease Prevention and Control, Kasradze and her colleagues at the EOC used a software program owned by the NCDC. Everyone involved in testing, through either the state program's free-testing sites or commercial labs, had to register all results by means of the software. Every day, Kasradze's team, together with the state programs' department at the NCDC, downloaded the testing data, including results by type of test and individual factors (e.g., age, gender, location), which Gamkrelidze used for briefing the Interagency Coordination Council at the beginning of every meeting.

Responding at the local level

Whereas the NCDC and Ministry of Health issued recommendations to the Interagency Coordination Council, which many government officials described as the pandemic response's "nerve center," local governments put the recommendations into action. At the regional level, Georgia's 10 governors convened their own interagency councils composed of local representatives and health-care experts, mimicking the national structure.

Those same regional structures headed by governors supported the management and enforcement of measures under the state of emergency.²⁰ "From the early stage of the COVID-19 outbreak, the Interagency Coordination Council had intensive communication with local governments—especially with regard to the administration process of restrictions," said Minister of Economy and Sustainable Development Dr. Natela Turnava. "We could not manage that from the center."

Regional command centers reported to the operational headquarters while maintaining constant communication. The central nerve center made decisions regarding responses in specific municipalities based on regional assessments made by their respective epidemiological situations. Representatives from the NCDC's regional branches and the municipal public health centers sat on the local councils, advising governors and other decision makers at every step of the pandemic. The municipalities implemented and monitored the national plan at the local level, meaning that they organized and supported testing, monitored and aided patients who needed to self-isolate, increased clinical capacity, and conducted contact tracing and epidemiological investigations. "The main function of the municipal public health centers is to implement NCDC recommendations and respond to local outbreaks," said Kasradze. "So they were actually the main units involved in the response, doing everything from sample collection to epidemiological investigations. They even facilitated the transfer of

patients and communicated with local hospitals, basically doing everything that was either under their responsibility or not.”

During emergency situations, regional branches sometimes responded immediately, unable to wait for guidance from the central government. “I want to highlight the importance of immediate action,” said Dr. Neli Khizanishvili, head of the NCDC’s Kakheti regional unit, about the establishment of quarantine spaces in her region. “The quarantine spaces did not have doctors or nurses, and the staff did not know about biosafety. We trained the staff in biosafety, how to put on and remove PPE [personal protective equipment] safely, how to clean the spaces, and how to manage the flow of incoming patients. Employees were afraid and refused to work at first, but after our training, many agreed to continue their service.”

Informing the public through constant communication

After confirmation of the first COVID-19 case in Georgia on February 27, the government shifted from stage one, preventing the spread of the virus, into stage two, slowing it. Because the second stage involved mainly recommendations—rather than requirements—for the public, clear and trusted information campaigns were central to the response.

Beginning as early as January 20, Gamkrelidze held daily briefings for the public in order to deliver situation updates and explain preventive measures. Gamkrelidze’s team partnered with major media outlets to issue official advice on handwashing, mask wearing, and physical distancing. And each government agency appointed a press speaker to ensure efficient, coordinated, and regular information sharing with the media.

Georgian citizens quickly came to rely on the prominent scientists leading the response to provide authoritative and meaningful information during the pandemic. In mid-April, US- and Swiss-funded news organization Civil Georgia dubbed these medical leaders the Four Musketeers: Gamkrelidze, Dr. Paata Imnadze (Gamkrelidze’s deputy and head of the Lugar lab), Dr. Tengiz Tsertsvadze and Dr. Marina Ezugbaia, who served as director general and medical director of the Tbilisi Infectious Disease Hospital, respectively.²¹ In televised press conferences, Facebook Live streams, and televised interviews, the four regularly provided the Georgian public with straightforward and sometimes sobering updates on the pandemic.

Soon after the first case was confirmed, the Ministry of Health established an official alert website, www.stopcov.ge, available in the Georgian, English, Azeri, Armenian, Ossetic, and Abkhaz languages. The website regularly published information on outbreak severity and the government’s responses. The government also set up a centralized, one-stop-shop hotline, which provided information and advice related to COVID-19 all day, every day.²² Recommendations included a stay-at-home universal recommendation policy, physical distancing, and the transitioning of employees of both public and private institutions to remote work.

The government also disseminated recommendations and information via CDC- and WHO-informed educational materials. Print media and visual media were distributed on social media, on all formal government information channels, and in physical spaces such as bus stops and billboards. Georgians received emergency information pushed to their cell phones.

Declaring a state of emergency

Nearly a month after the country's first confirmed case of COVID-19, the NCDC and Interagency Coordination Council became concerned over the threat of an uncontrolled spread of the virus, which would make it impossible to trace sources of infection. Through epidemiological surveillance and analysis, the NCDC on March 14, 2020, confirmed that the first cases of COVID-19 spread internally rather than through importation from other countries.²³ The finding meant it was time for the government to shift into stage three, managing the spread of the virus.

Earlier in March, the Georgian government had gradually ratcheted up response measures aimed at preventing the virus from entering the country, including through border shutdowns and airline flight suspensions. But after observing data on the flow of traffic and other factors, it became clear that Georgians generally were not following official government recommendations on the restriction of movement, and state institutions had little authority to implement mandatory measures. "By this time, based on the corresponding calculations and the observation of the experience of other countries, Georgia was facing serious risks," said a report published in June 2020 by the Georgian government. "This was indicated by the various models/scenarios developed by the [Ministry of Health] and NCDC, as well as partner organizations, which were prepared on the basis of the analysis of mathematical approaches by leading international universities."²⁴

On March 16, as the number of confirmed COVID-19 cases reached 33, Gakharia convened an emergency meeting of the National Security Council to discuss the possibility of declaring a state of emergency in order to facilitate a nationwide lockdown to contain potential spread.²⁵ As an advisory body to the prime minister, the National Security Council consisted of top-level cabinet officials, the heads of the state security service and intelligence service, and the commander of the defense forces.²⁶ According to the Georgian constitution, the president could declare a state of emergency at the request of the prime minister. The parliament had to approve the measure by simple majority.²⁷

"By March 2020, an analysis of the epidemiological situation around the world and within the country indicated that the pandemic had developed into a national-level threat that needed to be addressed," said Kakhaber Kemoklidze, who served as chief of staff of the security council. Gakharia, Kemoklidze, and the other members of the National Security Council relied significantly on the NCDC and Ministry of Health's epidemiological surveillance, modeling, and forecasting to inform their decision (text box 3).

Text Box 3. Epidemiological modeling in a pandemic with little data

Amid the uncertain, low-information environment of the early pandemic, the government of Georgia sought the advice of independent experts such as the Tbilisi-based Curatio International Foundation. This health systems research group had worked with the Ministry of Health for several decades.

After the first cases were detected in late February and early March 2020, the Ministry of Health began work to forecast the scale and impact of the outbreak so it could develop appropriate response measures. The ministry reached out to Curatio's president, Dr. George Gotsadze, to enlist the organization's help in epidemiological modeling. The most widely available tool at the time was called FluSurge 2.0, an Excel-based model developed by the US CDC for seasonal flu. But researchers at Curatio found the tool limiting. "From the very outset, it was obvious that this model would have not been adequate to reveal the magnitude of the impact of the outbreak and its potential stress on the health-care system," Gotsadze said.

After sifting through several modeling tools, Gotsadze's team found a simple, open-source tool developed by the University of Pennsylvania's Perelman School of Medicine. The tool enabled the team to model the pandemic outbreak as well as the potential impact of physical distancing. The team's analysis also included the experiences of South Korea, Hong Kong, and Singapore—places where COVID-19 had arrived early.¹

On March 23, Curatio submitted its report and recommendations to the Georgia Ministry of Health, which presented it to Gakharia during an Interagency Coordination Council meeting. Throughout the pandemic, Curatio served as an alternative, independent source of information to complement the government's own analytical units and experts.

¹ "The COVID-19 epidemic in Georgia Projections and Policy Options," Curatio Foundation International, March 27, 2020; http://curatiofoundation.org/wp-content/uploads/2020/03/COVID-19_Georgia-Rapid-Response-Product_27-03-2020_ENG.pdf.

President Salomé Zourabichvili declared the nationwide state of emergency to the public on March 21, citing the need to restrict numerous areas of public life simultaneously. In parliament, the opposition voted in favor of the measure, pausing a boycott of parliament related to electoral reforms.²⁸ "It was feared that any restrictions on travel or movement would have unimaginable consequences on the economy," said Zoidze. "So it took some political courage to follow the scientists' advice. Ultimately, they were respected and heard."

The lockdown included suspension of international and interregional travel, suspension of educational, cultural, and business activities—with the exception of essential services, bans on public events and mass gatherings of more than three people, and stay-at-home orders for individuals older than 70 years. Lockdown parameters were delivered directly to Georgians' cell phones and displayed prominently in public spaces. Fines for violations consisted of \$1,000 for individuals and more than \$3,000 for businesses.²⁹ By the end of March, Georgia had fewer than 100 confirmed cases of COVID-19 and no deaths related to the disease.³⁰ During the passenger-car-movement ban, from April 17 to 26, regional headquarters issued movement permits for certain essential

workers such as farmers, and distributed food in rural areas via so-called markets on wheels.³¹

“The implementation of restrictive measures was the greatest challenge we faced,” said Turnava. “As the Ministry of Economy, we generally aim to open the economy to the greatest possible extent, and then we had to do something quite opposite. It required some mental shifts on the part of myself and the employees of the ministry, but we understood that this was the only way to ensure a swift recovery as soon as possible.”

A few weeks into the state of emergency and lockdown, the government faced a significant test: Orthodox Easter on April 19. The government feared thousands would attend mass ceremonies—especially in light of a publicly defiant Georgian Orthodox Church.³² Gamkrelidze and other government leaders insisted that the church respect public health restrictions, but ultimately, the Orthodox Church went ahead with ceremonies, even refusing to cease the use of common spoons for communion. Likely because of the low numbers of active cases in the country at the time, there was no significant spike in COVID-19 cases following the holiday.³³

Developing an exit plan

By April 26, more than 2.6 million people around the world had contracted COVID-19, and 200,000 people had died. Italy had registered 25,000 deaths (414 per million), Spain had lost 22,000 people (468 per million), and the United States death toll topped 46,000 (140 per million). By contrast, on that day, Georgia had a cumulative total of 500 cases of COVID-19 and 5 deaths (1 per million) attributed to the disease.³⁴ Conditions had started to improve from an already low baseline.

Given Georgia’s epidemiological situation compared with that in other countries, it appeared the state of emergency had worked, at least for the time being, but the ramifications of temporarily shuttering the economy worried the Interagency Coordination Council. From the outset of the pandemic, the council publicly stated it would strive to strike a balance “between protecting human lives and health and reducing the negative economic impact.” To that end, it developed an anticrisis plan to foster rapid economic recovery.

The first stage of the anticrisis plan began in March, prior to the state of emergency. The plan’s emergency assistance for individuals and businesses consisted of three months’ utility bills funded for certain subscribers, stabilized prices for basic food products, three-month credit payment deferral for debtors, and four months of property tax and income tax deferrals for qualifying companies. The next stage, which began in April, encompassed a broader range of measures, including financial assistance for unemployed, self-employed, and low-income individuals and credit collateral for businesses. This initial package cost the equivalent of about US\$1.5 billion.³⁵

During the second quarter of the year, Georgia’s gross domestic product shrank by more than 13%,³⁶ but as the daily rate of new infections leveled off

and the epidemiological situation improved, the government implemented a six-stage plan for lifting the state of emergency and gradually reopening the country. The first stage allowed all passenger car, taxi, delivery service, and open-air food market operations to resume. The next stage restarted construction activities and reopened car washes, automobile repair shops, and some recreation facilities. In the third stage, all retail and wholesale stores accessible by street, together with production and publishing businesses, could resume operations. Next came malls, open-air restaurants, financial services, and salons. In the fifth stage, indoor markets and fairs were permitted to reopen, as were all restaurants and cafés. Finally, the sixth stage allowed the resumption of operations at educational institutions and all types of recreational activities, including sports events, cinemas, nightclubs, museums, gyms, swimming pools, and casinos.³⁷

The plan, announced on April 24 and launched on April 27, allowed restrictions to lift on a biweekly basis, determined by a number of factors— notably, the need to prevent the spread of the virus. If epidemiological conditions worsened, either restrictions would be reintroduced or transition to the next stage would be delayed.

After the Georgian government officially lifted its state of emergency on May 22 and the epidemiological situation improved more than expected over the months that followed, the government began to open the economy more quickly than planned.³⁸

OVERCOMING OBSTACLES

As early as mid-April, several international news outlets were applauding the Georgian government's decisive action to stop the spread of the virus within its borders. In the intervening months, as the number of COVID-19 cases rose around the world, Georgia's case count remained stable even as the country shifted out of lockdown and lifted its state of emergency. By the end of August, Georgia had reported fewer than 1,500 confirmed cases and 19 deaths attributed to the virus.

But the country's success had opened the door to those who wanted to lift important restrictions at the expense of science. Although Georgia had kept the initial outbreak at bay, its accomplishments bred complacency among both politicians and the public.

On July 20, hoping to celebrate the government's initial success in keeping COVID-19 at bay, Georgian Dream Party founder Bidzina Ivanishvili, a billionaire businessman, appeared on a platform to congratulate three of the top health officials: NCDC team leader Gamkrelidze, NCDC deputy director Imnadze, and head of the Tbilisi Infectious Disease Hospital Tsertsvadze. With the start of an election campaign period just around the corner, slated to begin in only 10 days, this event sparked criticism from public health experts and opposition leaders, who argued that it injected partisanship into the NCDC's operations fueled by the intrusion of party politics into pandemic response in the United States and some other countries at the time.³⁹

At about the same time, the government announced more expenditure of about US\$132 million to cover some of the costs the pandemic response had generated and to extend the social assistance package. Human Rights Watch reported that opposition political parties and some civil society groups saw the steps as “manipulation to attract voters.”⁴⁰

In the late summer months, weddings and other large celebrations resumed. The government opened its borders to some foreigners and allowed domestic travel—especially to popular tourist destinations on the Black Sea in the Adjara region. According to Oxford University’s Oxford COVID-19 Government Response Tracker, which graded the stringency of government responses to COVID-19 on a scale of 1 to 100, Georgia’s score sank to around 50 in early August after having reached 100 at the end of April.⁴¹

In September, with the election set for October 31, a second wave of the virus began to take shape.⁴² The number of cases and deaths increased sharply. During September and the first three weeks of October, Georgia registered nearly 20,000 new cases—13 times the total number of cases reported from February through August. More than 150 people died during the two months.⁴³ Figures 3 – 5.

Warning signs proliferated at home and abroad. In July, Germany had deemed Georgia one of only 11 countries epidemiologically safe enough to allow travel, but on October 7, Germany added Georgia to its list of high-risk countries. And two weeks later, the European Union removed Georgia from its list of epidemiologically safe countries.⁴⁴ On October 23, NCDC Deputy Director Imnadze warned that by mid-November, Georgia could be having as many as 4,000 new cases per day.⁴⁵ Public health experts urged the political leadership to call for a nationwide lockdown and movement restrictions, but the ruling party was reluctant to act ahead of the election. “In October, when the election was planned, politics superseded the lives of people,” said Dr. George Gotsadze, president of the Curatio International Foundation, a Georgia-based nongovernmental organization focused on health-care. Politicians pursued campaign objectives at the expense of “a public safety and security agenda,” he added.

Contending political parties invoked constitutionally protected rights to free assembly and highlighted the need to adhere to the prescribed election schedule. Vice Prime Minister Tskitishvili observed: “These were not just regional elections, which you can easily postpone. There were also major parliamentary elections, which were important as one more test for democracy in Georgia. So, there was a general understanding and consensus that we could not change the date for the election—especially keeping in mind that the date of election is written in the constitution.”

With runoff elections in 15 districts slated for November 21, the ruling party delayed a decision to reimpose a nationwide lockdown even as the second wave threatened to overwhelm the health system. Only a little over 26% of registered voters cast ballots in the runoff. The Georgian Dream Party won the

largest share of the seats, with 48% of the vote, despite protests from opposition parties.⁴⁶ Observers with the Helsinki-based intergovernmental Organization for Security and Co-operation in Europe found the elections to be fair, in general, although it noted that public confidence in the electoral process had diminished.⁴⁷

On November 26, the Interagency Coordination Council announced lockdown measures that included new curfew hours; the closure of most shops, restaurants, swimming pools, and gyms; the restriction of public transportation; and a ban on sports and cultural events through January 31, with the exception of Christmas and Georgian Orthodox Christmas. The prime minister could implement those restrictions without declaring a state of emergency because of a bill passed by parliament earlier in the year that authorized the government to take appropriate measures to end the pandemic. If necessary, the measures could limit freedom of assembly and movement as well as curtail certain property, economic, and labor rights.⁴⁸ The parliament extended these powers through the end of 2020.⁴⁹

To quell fears of further economic hardship caused by the restrictions, Gakharia announced additional social and financial assistance programs. The programs included a six-month \$263 total allowance for people who had lost employment because of the pandemic, utility bill reimbursements for four months, and financial assistance for low-income families.⁵⁰

By March 2021, as a result of compliance with the new restrictions, the number of new cases per day had fallen close to the levels the country had experienced before September 2020. Many countries that experienced sharp increases in the numbers of infections per day were struggling to return to earlier levels, but Georgia was able to do so.

ASSESSING RESULTS

As with many countries that grappled with the pandemic, Georgia's story unfolded in two distinct chapters. Chapter one began before the first confirmed case on February 26, 2020, and lasted until early September, during which the number of new daily COVID-19 cases never rose above 50 (9 cases per million people), and during which a total of 19 people died because of the disease. During that first chapter, Georgia outperformed neighboring countries. On March 14, Ezugbaia, medical director of the Tbilisi Infectious Disease Hospital, announced that the initial bus-rider patient had made a full recovery and had tested negative for COVID-19 after the initial positive test.⁵¹ Since the time that the man entered the hospital, the number of confirmed cases in Georgia, with a population of 3.7 million, had risen to 30, or about 8 cases per million. By contrast, the Netherlands, which confirmed its first case one day after Georgia did, reported 962 cases of COVID-19 (56 per million) despite a better-resourced health-care system serving its population of about 17 million. And in Iran, with a population of 83 million, positive cases hit 12,729 (154 per million). (Exhibits at end of case)

With public health experts leading the policy response, Georgia scored an early success in the rapidly developing crisis, punching well above its weight as the disease spread through higher-income countries in Europe and Asia. The government surpassed its own expectations and lifted restrictions on movement and economic activity sooner than planned. As it began to reopen in July, Georgia had the lowest rate of COVID-19 fatalities in Europe.⁵²

During the initial successful response to the virus, public attitudes toward government institutions and leaders were positive. In a survey conducted by the National Democratic Institute and Tbilisi-based Caucasus Research Resource Centers Georgia in late June, 66% of respondents said the Lugar research center, a prominent target of disinformation, had prevented the spread of COVID-19 in Georgia. In the same poll, 44% of respondents said the NCDC performed “very well” during the early months, and 47% said it performed “well.”⁵³ Prime Minister Gakharia polled strongly for the same question, with 34% of respondents saying he performed “very well” and 49% answering “well.”⁵⁴ Gakharia saw the largest increase in approval from prepandemic levels, with one poll showing overall satisfaction soaring to 66% during the pandemic from 21% before it.⁵⁵

During this first phase, clear and constant NCDC-led communication was able to cut through the noise of politics and disinformation and provide Georgia’s citizenry with valuable information. The Ministry of Health reported receiving nearly 86,000 calls to its COVID hotline from February to September and answering 80% of them. In a UNICEF poll in May 2020, 85% of respondents evaluated their own knowledge of COVID-19 positively, and more than 90% correctly identified the symptoms of COVID-19, the risk groups, methods of viral spread, risky behaviors, and methods of prevention.⁵⁶ Analysis of the survey results suggested that the more respondents used government information sources, the more knowledge they had about COVID-19-related issues. In the Caucasus Research Resource Centers’ June 2020 poll, 90% of respondents said they turned to the NCDC for trusted information, and 85% said they listened to the Georgian government. These sources ranked ahead of journalists (73%) and religious leaders or the church (61%).⁵⁷

During the next chapter, the so-called second wave, Georgia transitioned from one of the best-performing countries in the pandemic to one of the worst. The number of new cases hit 4,474 (1,202 per million) on December 10, and the number of new deaths reached 46 (12 per million) on December 24.⁵⁸ On February 9, 2021, Gamkrelidze announced that the epidemiological situation in Georgia had stabilized, and the government announced it would ease lockdown measures across the country.⁵⁹ The spike in cases during the second wave reopened the ruling party to criticism from its rivals. Giga Bokeria, leader of an opposition party called European Georgia, told the media that restrictions without more substantial relief dealt “an additional blow for our citizens and businesses, the price of which we will pay in the future,” and that the

government's mishandling of the second wave came at the expense of the "health of the citizens, lives and the economy."⁶⁰

REFLECTIONS

Dr. Amiran Gamkrelidze, head of the Tbilisi-based National Center for Disease Control and Public Health (NCDC), and others involved in Georgia's fight against COVID-19 stressed that fast, tough action, together with multisectoral cooperation across disparate levels of government, was crucial to their early success. "There is a sufficient base of evidence that timing was critical with regard to adopting the right measures," agreed Dr. Akaki Zoidze, a former deputy minister of health and vice prime minister.

The lockdown measures in January and February 2020 stopped COVID-19—at least temporarily—and created an opportunity to improve logistics, procure supplies, ensure clinical readiness, and train workers, according to the NCDC. That decisiveness existed at the local level as well. "My special advice would be to take initiative," said Dr. Neli Khizanishvili, who headed one of the NCDC's regional units. "It is important to note that initiatives at the regional level require support from the central entity, but do not wait for the central government to establish an action plan if you think immediate action is needed."

During the uncertain early days of the pandemic, the outcome of strict lockdown measures was far from certain, and implementing such policies required a degree of faith on the part of policy makers. "There are no blueprints for fighting a pandemic, but you need to take swift and brave decisions even if they are unpopular," said Minister of Economy and Sustainable Development Dr. Natela Turnava. "Well aware of the imminent negative economic and social repercussions, the Government of Georgia has shown political courage in taking grave and unpopular decisions by swiftly and strictly adhering to the public health experts' recommendations," wrote Zoidze in a case study from July 2020, before the second wave hit.⁶¹

Trust in the public health sector underpinned the government's ability to respond rapidly and decisively—and gain citizen compliance. "The government's trusting in the science, and the public health sector and the people's trusting in the government and its recommendations, were very important success factors," said Kasradze, head of the NCDC's Emergency Preparedness and Response Division. To gain the public's trust, First Deputy Minister of Health Tamar Gabunia said that constant communication, in which the government transparently supported all decisions with evidence, was essential. "We started this communication very early," agreed Kasradze. "As soon as the WHO issued their templates on communications materials, we immediately translated them into Georgian and published them. If people don't trust the recommendations you are issuing, they won't follow them. So transparency and communication with the public are very important."

"One of the biggest success factors was putting the Interagency Coordination Council in place," said First Deputy Minister of Health Gabunia. "It was a perfect mechanism for multisectoral cooperation and shared decision

making. I wish we had similar coordination mechanisms for other ideas as well. Actually, COVID showed us how important it is to have health integrated into all kinds of policies and to have all agencies informed, engaged, and aware of how important it is to invest in health and build resilient health systems.” Ana Kasradze, head of Emergency Preparedness and Response Division at the Tbilisi-based NCDC, agreed. “The health sector alone can’t succeed,” she said. “Working together is the key.”

Kasradze also said that the Public Health Emergency Operations Center (PHEOC) and incident management system (IMS) that had been rapidly set up in the early days of the pandemic worked well, and she wanted to see them codified for future emergencies. “Using the PHEOC and IMS structures enables you to be more organized, which lessens the amount of time needed to respond,” said Kasradze. “The PHEOC gives you the opportunity to all work from one shared space, which facilitates rapid communication and problem solving.”

After the success of the first phase of the pandemic, the second wave threw into stark relief the dynamic balancing act of public health, politics, and economics in a protracted crisis. “COVID-19 presents one of the most formidable challenges in recent history for government, businesses, and society,” said Turnava. “The economic crisis is like no other crisis. First, the shock is large and associated with both the health emergency and the related containment measures. The second distinction is the continued, severe uncertainty about the duration and intensity of the shock.”

“In the beginning, we were very good at introducing timely—and even ahead-of-time—preventive measures,” Zoidze recalled. “But we failed to do the same during the second wave because of political and economic considerations.”

To some, those considerations boiled down to a single motivation: winning the election. “Some active measures should have been taken right after the outbreak in summer,” Dr. Zurab Tatanashvili, a professor at Tbilisi State Medical University, told Eurasianet in December 2020. “Instead, we waited for the elections to end.”

Data Exhibits

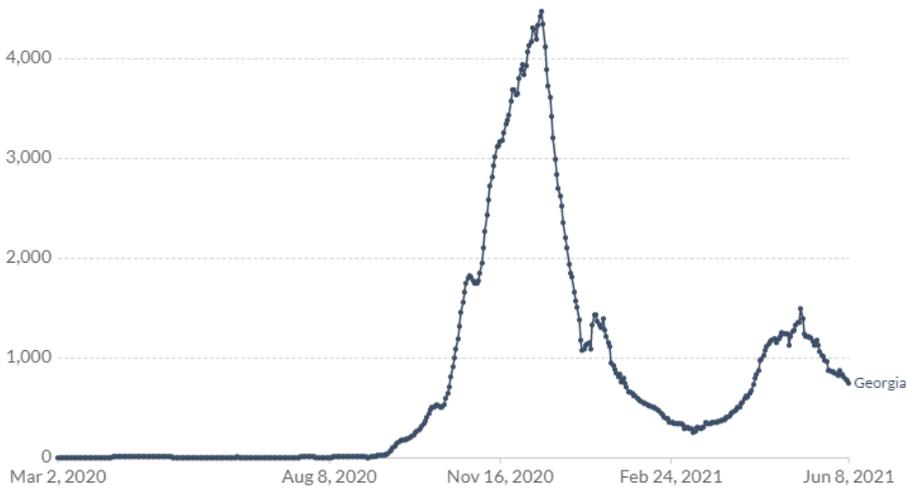
These figures come from the Oxford University Blavatnik School’s COVID tracking project as made available through Our World in Data.

Daily new confirmed COVID-19 cases

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



LINEAR LOG + Add country



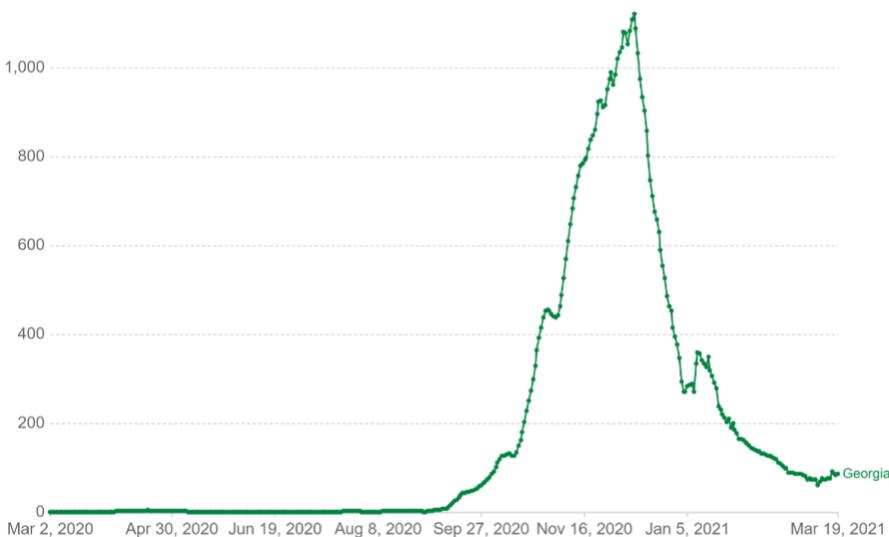
Source: Johns Hopkins University CSSE COVID-19 Data

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Daily new confirmed COVID-19 cases per million people

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



Source: Johns Hopkins University CSSE COVID-19 Data

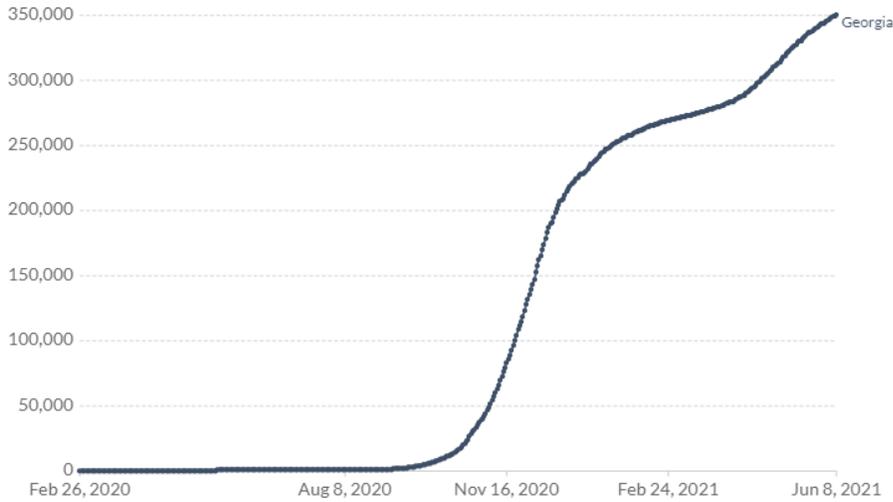
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Cumulative confirmed COVID-19 cases

The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing.



LINEAR LOG + Add country



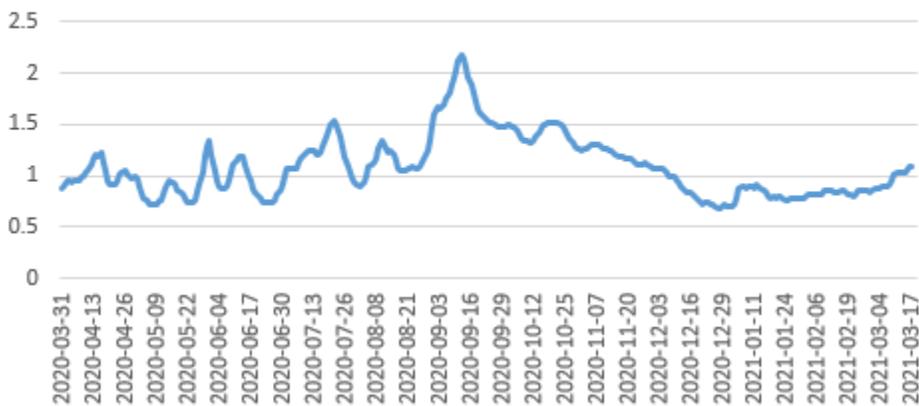
Source: Johns Hopkins University CSSE COVID-19 Data

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COVID-19 Effective Reproduction Number R

Georgia

Source: ourworldindata.org

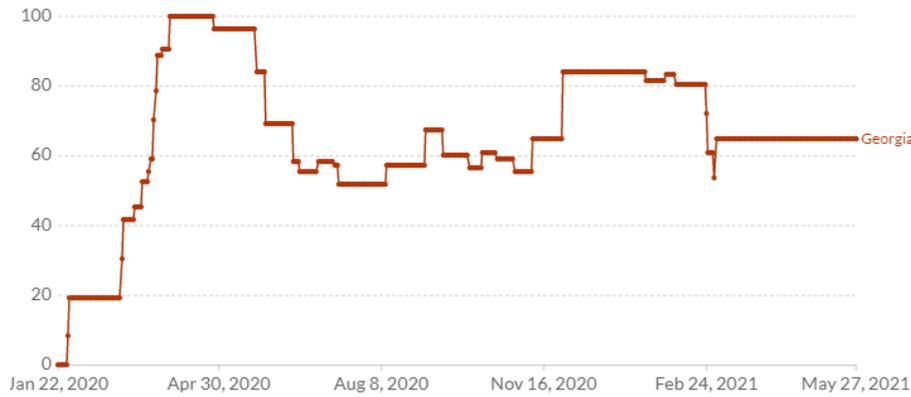


COVID-19: Stringency Index

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



+ Add country

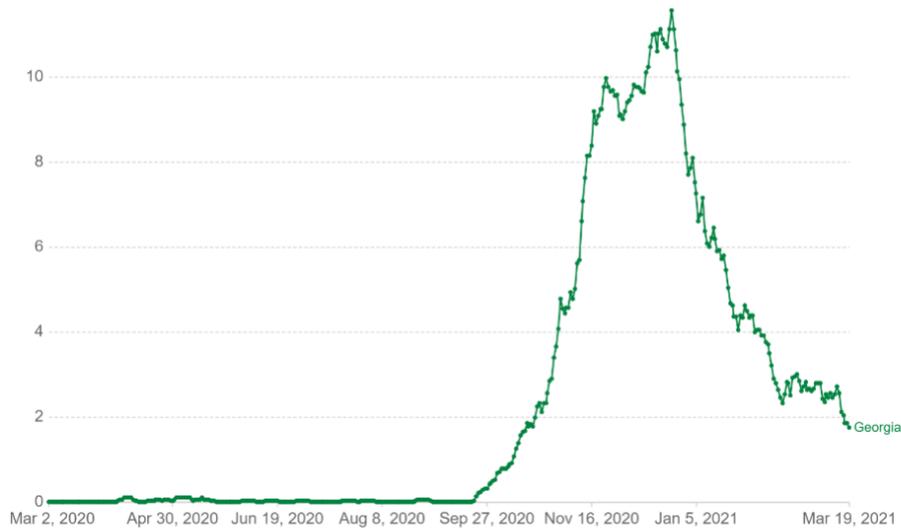


Source: Hale, Angrist, Goldszmidt, Kira, Petherick, Phillips, Webster, Cameron-Blake, Hallas, Majumdar, and Tatlow (2021). "A global panel database of pandemic policies (Oxford COVID-19 Government Response Tracker)." Nature Human Behaviour. - Last updated 9 June, 02:00 (London time)
OurWorldInData.org/coronavirus • CC BY



Daily new confirmed COVID-19 deaths per million people

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

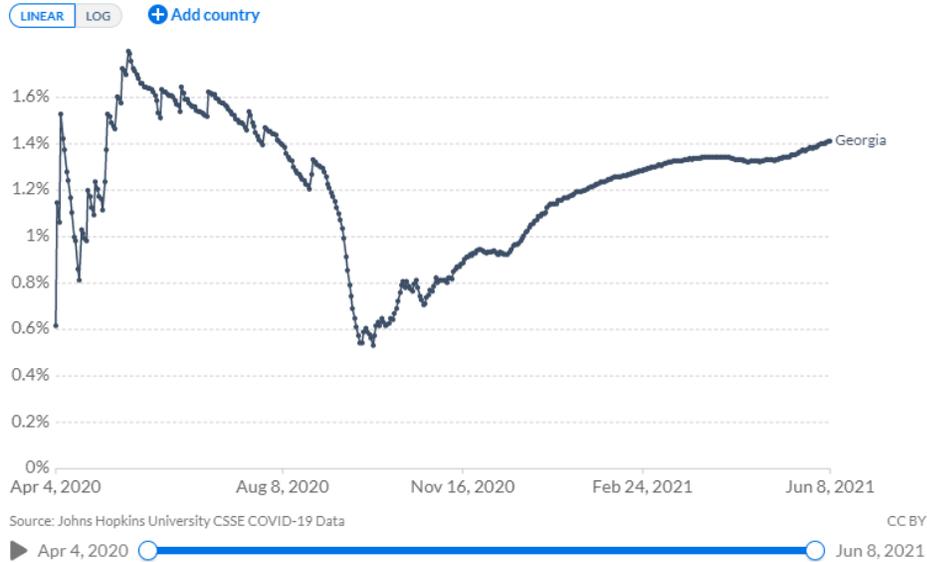


Source: Johns Hopkins University CSSE COVID-19 Data

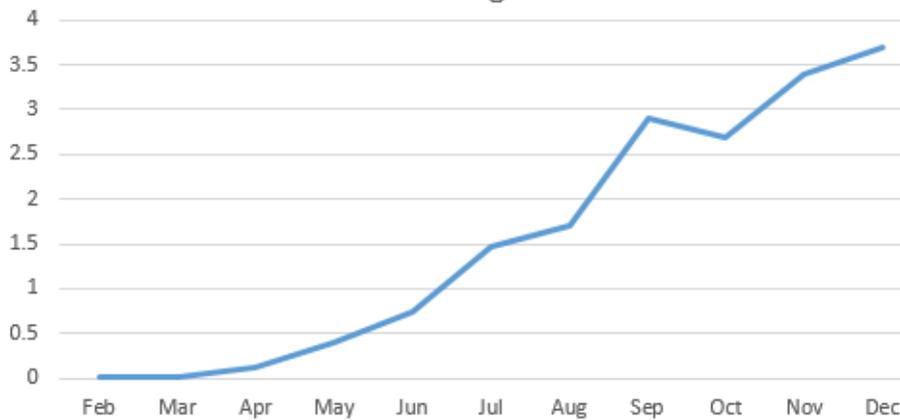
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Case fatality rate of the ongoing COVID-19 pandemic

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



Daily Tests (Monthly Averages) per 1,000 in 2020 Georgia



How did the number of visitors change since the beginning of the pandemic?, Georgia



This data shows how community movement in specific locations has changed relative to the period before the pandemic.

↔ Change country



Source: Google COVID-19 Community Mobility Trends - Last updated 9 June, 17:00 (London time) OurWorldInData.org/coronavirus • CC BY
Note: It's not recommended to compare levels across countries; local differences in categories could be misleading.



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