



WORKING PAPER

Winning the Fight Against Endemic COVID-19



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Winning the Fight Against Endemic COVID-19

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AT A GLANCE

COVID-19 will likely become endemic. If so, a global surveillance, treatment and vaccination infrastructure for monitoring and responding to outbreaks must be developed.

This report discusses what the world might look like under COVID-19 endemic conditions, and presents specific ideas and priorities for how the global public-sector health system might respond.

Our hope is that these recommendations serve as a foundation for further efforts by the global health community to assess and monitor the precise nature of endemic COVID-19 and build a robust infrastructure for responding to endemic COVID-19—and to future pandemics as well.

WILL COVID-19 EVER GO AWAY? That’s an open question. Health officials around the world have approved several vaccines providing varying degrees of immunity from the disease, and vaccination efforts, while still spotty, are ongoing. As the pace of vaccination speeds up, the disease will no longer spread so easily or widely, but vaccination programs are unlikely to completely suppress it. At the same time, the SARS-Cov-2 virus continues to mutate, raising further doubts about the long-term effectiveness of current vaccines.

In short, it is likely that COVID-19 will always be with us in some form or another. If COVID-19 becomes endemic, [then the global health system is facing a very different set of challenges](#) from those we’ve seen in the current pandemic—challenges that demand a coherent response to whatever the future may hold.

In what follows, we offer a view of what the world might look like under COVID-19 endemic conditions, and present specific ideas and priorities for how the global public-sector health system might respond. Our hope is that these tangible near-term priorities will serve as a foundation for further efforts by the global health community to assess and monitor the precise nature of endemic COVID-19 and build a robust infrastructure for responding to endemic COVID-19—and to future pandemics as well.

Hope for the Best

Without question, the arrival of highly effective vaccines has given cause for optimism in the fight against COVID-19. Even if entire populations cannot be completely vaccinated, achieving high levels of vaccine uptake will go a long way toward reducing mortality and suppressing the variants of the SARS-Cov-2 virus against which the vaccines are effective. The threat of pandemic COVID-19 should ease, likely ending the lockdowns and accompanying economic distress the world has suffered over the past 12 months.

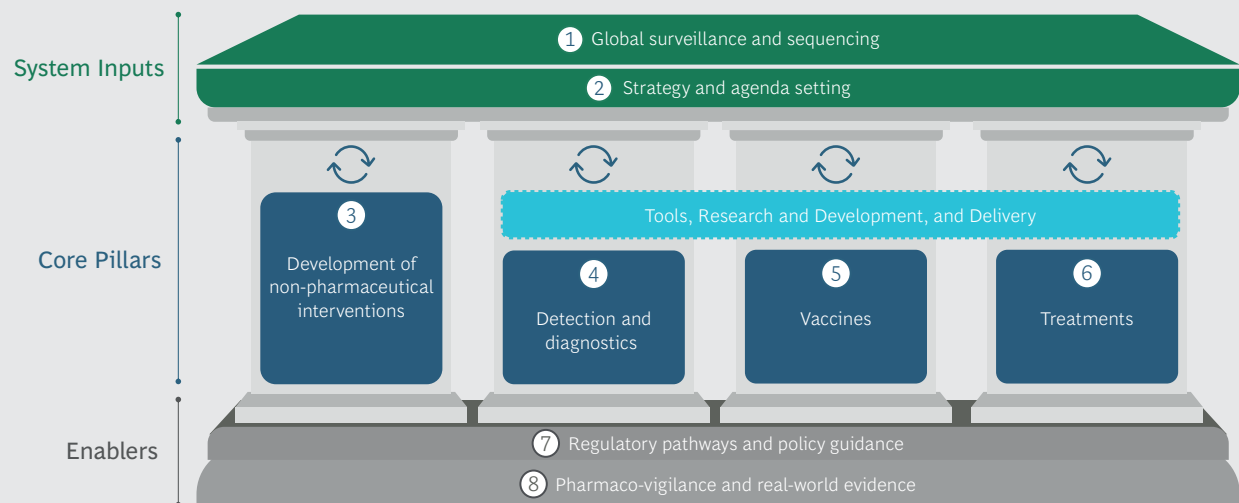
Meanwhile, several new “variants of concern” (VOCs) have emerged, and the degree to which vaccinated people may be susceptible to them and how long their immune response will last are not well understood. It may be that periodic booster shots tailored to the latest variants will be needed to reduce risk over time. And if the SARS-Cov-2 virus further establishes itself in non-human species, it will become virtually impossible to fully eradicate it.

Prepare for the Worst

In short, COVID-19 will likely present a risk for years to come. It will become much like the flu—another endemic, highly transmittable respiratory illness with new variants arising every year. The global mechanisms in place to counter the flu can serve as a loose guide for fighting COVID-19, but the disease’s global reach, year-round transmissibility, and potentially greater severity, demand a more consistent and thorough response.

To that end, we offer a framework for monitoring and managing an ongoing endemic COVID-19 situation. The framework consists of eight interdependent elements, all of which depend to a greater or lesser degree on systems already put in place during the fight against the current pandemic, while expanding on them where necessary. (See Exhibit 1.) These response elements can be grouped into three broad categories: system inputs, core pillars, and enablers.

EXHIBIT 1 | The Framework Consists of Eight Interdependent Provisions for Global Protection Against Endemic COVID-19



Source: BCG analysis.

1. Two primary system inputs are needed to provide the data to inform the activities of the other response elements:
 - **Global surveillance and sequencing.** Widespread surveillance capabilities and genomic sequencing networks enabled by sentinel sites and multi-pathogen labs monitor the current status of COVID-19; detect new symptoms, outbreaks, variants, and zoonotic strains; and share data through global platforms. These capabilities should expand on existing systems for monitoring outbreaks whenever possible while leveraging novel approaches such as AI-based outbreak detection. This effort can serve as a catalyst to break down today’s siloed pathogen-specific disease surveillance ecosystem.
 - **Strategy and agenda setting.** Systematic, agile, evidence-based coordination of responses to endemic COVID-19 among national, regional, and global entities (such as the World Health Organization and national and regional CDCs) to determine strategy and research agendas. This can be built on current pandemic coordination efforts across academia, government, and multilaterals such as the Access to COVID-19 Tools Accelerator (ACT-A).
2. Four core pillars drive the response to endemic COVID-19 through public health and medical interventions:
 - **Development of decision-making infrastructure for non-pharmaceutical interventions.** Systematic, [evidence-based processes and decision frameworks](#) to determine appropriate interventions, such as vaccination passports and mask requirements, in the event of an outbreak and as variants with different epidemiological characteristics emerge. Better global coordination, stronger local communication platforms including support for behavior change, and programs to promote and support compliance [programs to promote and support compliance](#) with recommendations, such as food delivery for people in isolation, can improve upon the fragmented systems we saw during the pandemic.
 - **Detection and diagnostics development, procurement, and delivery.** A robust and widespread strategy for diagnosing both symptomatic and asymptomatic individuals through clinical testing of those with symptoms, and frequent, accessible mass testing of general populations for screening purposes. Modeled on successful detection systems already in place, this system can extend existing COVID testing efforts to include workforce testing and monitoring. Point-of-care infrastructure should be strengthened, and producers of diagnostic tools should be encouraged to innovate while maintaining adequate levels of supplies.
 - **Vaccine development, procurement, and delivery.** Continuing R&D and delivery efforts must be globally coordinated to continue to produce and distribute current vaccines and develop and distribute new ones, as well as regular boosters effective against new variants. At the same time, improvements in manufacturing, dosing, and delivery platforms (including accurate demand forecasting, greater regional manufacturing capacity, proactive

demand generation, and sustainable distribution systems) will depend in part on further private-sector support and continued government de-risking of supply.

- **Treatments development, procurement, and delivery.** Efforts to develop effective clinical treatments for COVID-19, including standardized drug trial design, oral treatments, and treatment libraries for drug repurposing, must continue. Scaling up regional manufacturing capacity for biologic and monoclonal antibody (mAbs) treatments will ensure adequate supplies of some of the most effective treatments. Procurement and delivery of treatments can rely to some degree on current global licensing, allocation, and distribution mechanisms, combined with strengthened demand signals, centralized demand forecasting, and improved service delivery channels and [hospital response planning](#) efforts. Scaling up of oxygen capacity, especially in lower-resource settings, will also be helpful for endemic COVID and to strengthen the global health system more broadly, given pre-COVID shortages.
3. Two enablers must be implemented to support the core pillars and ensure that adequate public health, care delivery, and drug monitoring measures are in place.
- **Regulatory pathways and policy guidance.** WHO must strengthen its policy mechanisms to ensure rapid approval, manufacturing, and delivery of effective vaccines and treatments to low- and middle-income countries. They should continue to work with stringent regulatory authorities (SRAs) and national regulatory authorities (NRAs) in low- and middle-income countries to institutionalize current regulatory pathways, especially for modifications to existing authorized vaccines, and to account for regional differences, including different variants of COVID-19, in an endemic state.
 - **Pharmaco-vigilance and real-world evidence.** Existing efforts to monitor, detect, and prevent adverse side effects of vaccines and treatments, and to optimize dosing requirements must be coordinated and expanded through global electronic data reporting and collection of real-world evidence. This is especially important as a broader array of vaccines and treatments become available and novel population groups (including patients with “long COVID”) receive them.

For example, the AUDA-NEPAD’s Smart Safety Surveillance program aims to help African countries strengthen their pharmaco-vigilance systems through in-country and cross-country collaboration, including adverse event reporting tools, cross-country signal detection tools, a joint signal-detection management group, and other methods. As a broader evidence base is established, it will be critical to ensure the data is shared globally to inform local strategies and adequate deployment of resources.

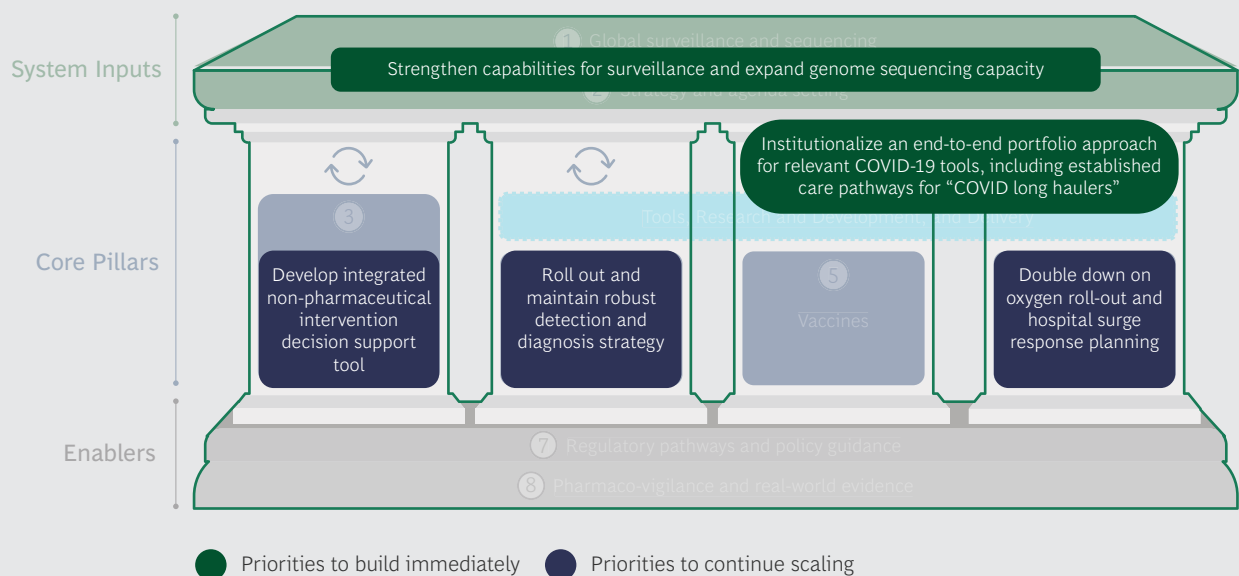
Immediate Priorities

Our framework provides a broad, comprehensive approach to address endemic COVID-19. Within this broad frame, there are five priorities that the global health care system should act on, sooner rather than later. (See Exhibit 2.)

The first two priorities are “no-regret” actions that represent step changes following the initial response to the pandemic. These actions can strengthen our global health infrastructure and ensure we are ready to meet challenges posed by endemic COVID-19.

- Strengthen surveillance and expand genome sequencing capacity globally to detect outbreaks and new variants early on. In contrast to pandemic COVID-19, the focus in an endemic state will be on syndromic surveillance at sentinel sites, including self-swabbing and saliva sample drop-off for pool testing. To date, genomic sequencing has been patchy at best, with limited capacity in low- and middle-income countries. Regional sequencing hubs will be needed to systematically detect and track variants.
- Institutionalize an end-to-end portfolio approach for COVID-19 vaccines, vaccine boosters, and therapies—from R&D to sustainable, ongoing delivery. Such an approach ensures that global investments are sufficiently diversified to address multiple scenarios of endemic COVID. These include scenarios where vaccines provide strong and long-term immunity, and ones where vaccines are not as effective, making treatments more essential for reducing mortality and morbidity and treating long COVID.

Exhibit 2 | To prepare for endemic COVID-19, five critical actions should be carried out immediately.



Source: BCG analysis.

With greater surveillance and sequencing capacity and a robust portfolio of vaccines and therapies in place, three further actions must be taken to guarantee a successful global response to endemic COVID-19:

- Develop an integrated decision support tool to activate non-pharmaceutical interventions rapidly and dynamically, both to avoid outbreaks and to manage them when they do occur. In the event of outbreaks, decision tools should take into account tradeoffs between public health, economic, and socio-cultural impacts, informed by analysis of relevant data such as health surveillance, demographics, and school closures.
- Build on existing efforts to develop and roll out permanent testing capacity using easily accessible tests through strengthened point-of-care channels, and issue clear testing criteria differentiated from current pandemic COVID-19 testing in their ease of use and accessibility.
- Accelerate global distribution of oxygen supplies and develop mechanisms to ensure that hospitals are prepared to manage sudden increases in demand, including rapid hospital assembly and new capacity planning tools.

Open Questions

The goal of our framework is to set the proposed terms for a comprehensive response to COVID-19 if, like many expect, it becomes endemic. Putting these strategies and actions into practice, however, raises two further questions, the answers to which are beyond the present scope of our research.

First: Who pays? Answering this question has been challenging enough during the current pandemic and will likely prove even more difficult as COVID-19 moves toward endemicity, and the immediate impact of the pandemic passes. Among the key considerations: establishing the level of resources needed once the disease declines to post-pandemic levels, ensuring COVID-19 priorities do not displace funding or resources for other important global health and economic priorities, and finding the resources needed to allow for the equitable distribution of vaccines, diagnostic tests, and treatments.

Second: How will all the different actors come together to implement a successful post-pandemic strategy? The answer to this question is equally vital, given the importance of a concerted, collaborative response to endemic COVID-19 from both the public and private sectors. Every aspect of the response must be coordinated at the appropriate level, whether regional, national, or global; and a workable, proactive forum must be established to allow for discussion and cooperation, and to promote partnerships. Finally, the roles and responsibilities of the many pre-COVID organizations, such as the Coalition for Epidemic Preparedness Innovations (CEPI), and those that have arisen in response to the COVID-19 pandemic, including ACT-A, must be redefined, if necessary, to include a policy and coordination focus as the disease becomes endemic.

THE FIGHT AGAINST COVID-19 is likely to go on well past the point when the world will return to some sense of normality. The hope, of course, is that we never suffer through another full-on pandemic like we have over the past year and more. But that will require constant vigilance on the part of the worldwide health system and the right set of institutional strategies and mechanisms for monitoring global health and responding effectively if, and when, outbreaks do occur.

The challenge is considerable, but the potential benefits are too great to measure.

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