

Submitted on 24 March 2022

Oral Testimony of Dr. Ezekiel J. Emanuel, MD PhD

U.S. House of Representatives
Committee on Science, Space and Technology
Subcommittee on Investigations and Oversight

The New Normal: Preparing for and Adapting to the Next Phase of COVID-19
Thursday, March 31, 2022 | 10:00 AM ET

Chairman Foster, Ranking Member Obernolte, and members of the Subcommittee:

It is a privilege to be here with you today at this critical juncture in our nation's response to the COVID pandemic.

As you know, this month marks the two-year anniversary of SARS-CoV-2 officially being declared a global pandemic. Since that time, the U.S. has experienced nearly 1 million deaths, 80 million infections and hundreds of millions of lives dislocated economically and socially. As we look towards a "next normal", there is need for humility in acknowledging we don't know what the next few years will bring, and to be ready for a range of possibilities: new variants and surges, waning immunity to existing vaccines or previous infection, viral resistance to our current arsenal of therapeutics, and so on.

The only way to stay ahead of this virus is to prepare for different scenarios by scaling up physical, virtual and human public health infrastructure. Our system has many gaps that predate COVID. These need to be filled to address the current situation and preempt future biosecurity and pandemic threats. There are no shortcuts here. The government needs to do more, do better and move faster.

Since January, I have convened an independent, bipartisan group of 25+ public health experts in drafting a [Strategic Roadmap](#) with actionable steps for how the country can achieve – and, most importantly, sustain – this "next normal". I'd like to highlight 6 of our core recommendations.

1. Respiratory Viral Diseases Dashboard for Policymakers

When economists determine the health of the economy, they use multiple indicators: unemployment, inflation, GDP growth. Similarly, there is no single metric that dictates when we are in the "next normal", or when emergency measures should be either imposed or lifted. Policymakers should create a COVID data dashboard that tracks 5 critical metrics: vaccination rates, seroprevalence, wastewater virus levels, health system stress and death rates. Each of these metrics has a threshold at which public health interventions kick in. Chapter 1 of the [Strategic Roadmap](#) - submitted as my written testimony - contains an in-depth description of these metrics and thresholds, including mock-ups of this data dashboard.

- **Vaccination rates** assess population immunity, especially among the elderly, and impact predictions for the expected burden of disease in a community.
- **Seroprevalence** shows immunity from previous infections, which is important for assessing how well the community can withstand viral infection.
- **Wastewater virus levels** determine the amount and type of circulating virus, serving as a passive but accurate early indicator of viral spread that often precedes confirmed cases.
- **Health system stress**, including staff shortages and excessive hospital occupancy, is critical to track since deaths tend to increase when hospitals cannot provide optimal care.
- **Death rates** should consider COVID within the mortality totals from all major respiratory viruses. For example, a tolerable “risk” level in the next normal might place the cumulative viral respiratory illness risk at about the level associated with a bad influenza and RSV season.

By establishing a dashboard of metrics with clear, straightforward thresholds, policymakers will be able to define “tolerable” vs. “emergency” risk levels in the context of different regions, states and localities and make decisions based on real-time data. This will help build trust with the public, who will better understand the rationale for decisions based on localized, standardized, evidence-based criteria.

Unfortunately, the U.S. does not presently have enough real-time data or appropriate national standards/definitions for each of these metrics. For example, wastewater surveillance is not yet standardized or timely enough to provide a comprehensive snapshot across the whole country, and hospital bed occupancy is not reliably reported by all hospitals. The data inputs for these metrics need rapid upgrading.

This may sound like a straightforward next step for the CDC to solve. However, the CDC lacks the legal ability to direct what and how data are reported to public health agencies, resulting in a fragmented, inefficient system with inconsistent reporting across all 50 states and territories that requires excessive data cleaning. This has undermined our COVID response. The CDC needs the legal authority to lead and coordinate data reporting across our complex public health ecosystem. I’d encourage you all to read a recent opinion piece published in [The Hill](#) by 5 former CDC Directors on this very issue.

2. Necessary Investments: Vaccines, Therapeutics, Surveillance, Indoor Air Quality, Long COVID

Let me highlight 5 other critical investments that urgently need to be made.

- **Vaccines:** There is already evidence of waning immunity to a three-dose mRNA vaccine regimen 6+ months after the booster. Our scientific agencies need to rapidly prioritize the development of next-generation vaccines, especially mucosal, pan-coronavirus and variant-specific designs. We also need to establish the optimal dosing schedule for the vaccines already in use. That we haven’t done so already is a failure of the NIH.
- **Therapeutics:** There is potential for the rapid emergence of viral resistance to existing monotherapies. We urgently need new, more effective therapeutics, especially multi-drug oral antivirals and monoclonal antibodies matched to circulating variants.

- **Surveillance:** Our viral surveillance systems have left us weeks behind many peer nations. We need to invest in a substantial upgrade of data collection and analysis infrastructure for pathogen surveillance at the national, state and local levels to ensure our data is standardized and collected on a timely basis. We also need to enhance our monitoring capacities in 4 key areas: (1) environmental (wastewater), (2) immunologic, (3) genetic and (4) zoonotic, and ensure these monitoring systems are equitably available across geographies.
- **Indoor Air Quality:** Throughout much of the pandemic, the importance of improved ventilation and filtration was unrecognized or unacknowledged in CDC guidance. States and localities should be directed by Congress to use allocations from the American Rescue Plan to upgrade ventilation and air filtration in schools, childcare facilities and public buildings. The EPA and OSHA should work together to grade commercial buildings on indoor air quality.
- **Long COVID:** According to some estimates, as many as 1 in 3 individuals develop long COVID, yet little is known about this condition. We need to rapidly coordinate and expand research on long COVID to generate definitive answers to fundamental questions on frequency, risk factors, prognosis and clinical treatment guidelines. We should strategically leverage existing large-scale epidemiological cohorts such as ECHO and All of Us. We should ramp up the NIH's RECOVER trial to increase participation from its current level of 1,000 patients to its enrollment target of 40,000 patients. We should provide additional funding for the CDC's INSPIRE trial to expand it to additional clinical sites and ensure study participants are representative across age, sex, race and socioeconomic status. We also need to launch new clinical trials to investigate how best to treat this condition with immunomodulators and antivirals. The data from all these efforts should be immediately and widely accessible via open science, with our federal agencies setting the tone. These efforts will lead to more definitive answers to questions that affect millions.

Thank you very much for your time today. I look forward to answering your questions.