

GUEST ESSAY

We May Have Only a Few Months to Prevent the Next Pandemic

Oct. 24, 2022

By Craig Spencer

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I'm often asked what it felt like to have Ebola. Eight years later, I still struggle to respond. But the truth is that having Ebola felt like guilt. Guilt for getting a diagnosis only hours after entering a hospital in New York, knowing my patients in Guinea waited in limbo for days or longer. Guilt for having so many providers care for me while remembering the dozens of patients I frantically treated simultaneously back in West Africa. Guilt for feeling helpless as my patients died, the worst possible feeling for any doctor.

In the initial days of my illness, I perseverated on my mortality — an understandable fixation, given the high probability I wouldn't survive. But when it was clear I would beat the odds (as many treated in the United States ultimately did), I remember feeling solace thinking I'd never have to experience the sadness and despair I saw in those hastily erected hospitals in Guinea in 2014. Surely the world would never be this unprepared again.

In March 2020, as Covid surged into New York City, I was proved wrong. On many days as an emergency room doctor, I'd see more people die in my hospital — one of the nation's best, in one of the wealthiest cities in the world — than I ever did while treating Ebola in West Africa. Covid was humbling; it revealed just how vulnerable we all are to pandemic threats.

I chose, as a profession, to respond to outbreaks across continents. And I accepted that doing so comes with risk. I and many other health workers around the world expect to continue to respond, as all evidence points to a future plagued by more pathogens and

pandemics. But policymakers must heed the warnings of the front line. Being perpetually unprepared for global disease outbreaks is not the future society wants, but it's our fate if we don't lay the groundwork for the next pandemic threat.

At the outset of every outbreak, a small window exists when response means the difference between containment and catastrophe. As the crisis wanes, a similar window exists when there's enough will among people and politicians to push for better preparation for other pandemics. With Covid, that window is fast closing.

Covid has been called a once-in-a-century pandemic, but that doesn't mean we're now afforded 100 years of solitude. In our recent past, smallpox and yellow fever outbreaks frequently decimated populations. Vaccines and new treatments helped turn the tide, but with an apparent uptick in emerging diseases, that equilibrium appears to be tilting back.

The World Health Organization has declared six public health emergencies of international concern since 2014. Ebola outbreaks are increasing in frequency. There's a very concerning one happening now in Uganda, caused by a species of the Ebola virus with no approved drug treatment or vaccine. Even diseases once controlled have re-emerged; polio is circulating in the United States again, after it was eliminated here decades ago.

Multiple factors are behind the rise in the number and diversity of outbreaks. Climate change is altering the movement of hosts and pathogens alike. Population increases place the two closer together, increasing the likelihood of pathogen spillover from animals to humans. And global migration and trade networks allow such threats to travel far afield before surveillance networks identify them or travel restrictions can effectively prevent their import.

Yet in the wake of most major public health threats — H.I.V., anthrax, SARS, Ebola — investments and interest consistently peak, only to wane in predictable cycles. While Covid causes over 300 deaths a day in the United States, a largely preventable toll that could amount to double our worst flu season, Congress remains unable to secure funding for future Covid vaccines and response, let alone the \$88 billion requested over five years for pandemic preparedness and biodefense. And if political control of the House and Senate changes hands soon and White House leadership shifts in 2024, the likelihood of sustained investment in preparedness could be at even greater risk.

Even if the next pandemic is years off, it's likely we have only a few months to lay the groundwork to prepare for it. So what should be done?

There are dozens of reforms needed and debated, but three areas require immediate attention and investment: disease surveillance, strengthening of the global health care work force and ensuring equitable access to treatments and vaccines.

We likely can't prevent the emergence of future pandemic threats, and that's what makes rapidly detecting them critically important. But you can't see what you're not looking for. A massive scaling up of disease surveillance is needed not just in wealthy nations but also in low- and middle-income countries and areas of humanitarian crisis. The World Health Organization coordinates an international network of influenza laboratories that conduct year-round surveillance of the flu. A consortium of scientists tracking coronavirus evolution has been built in Africa, and now more than two-thirds of countries on the continent are capable of sequencing genomes. These could serve as models.

Strong pandemic preparedness also demands a dramatic increase in the world's health care work force. Bellevue Hospital, where I was treated for Ebola, had nearly as many physicians on staff as were practicing in Guinea, Liberia and Sierra Leone — the countries worst hit during that Ebola epidemic — combined, according to estimates from a 2015 World Bank report.

The W.H.O. estimates that 15 million more health workers are needed by 2030, primarily in low- and middle-income countries. As with Ebola and Covid, it's often local doctors or nurses who recognize new patterns of illness and flag them to health authorities for further investigation. Without a strong front line, many of those red flags will be missed, with potentially deleterious consequences.

There's also an urgent need for greater capacity to create treatments and vaccines in places where they're often in short supply and last in line for distribution. Before the Covid pandemic, 99 percent of vaccines used in Africa were imported. Even now, that number remains virtually unchanged. This largely explains why three-quarters of people in high-income countries have been vaccinated with at least one dose against Covid, versus only one-quarter in low-income nations.

When monkeypox hit Western countries, there was a scramble by high-income countries to put their vast vaccine supplies into vials as fast as possible. Vaccination campaigns were quickly rolled out in New York, Montreal and Berlin. Yet there hasn't been a similar urgency to dramatically expand the global vaccine supply as monkeypox circulated in Nigeria over the past five years. Or when monkeypox cases recently spiked in a refugee camp in Sudan.

The White House warned in its pandemic preparedness plan that as staggering as the toll from Covid has been, "future pandemics could be far worse." We remain a simple genetic swap of the influenza genome away from a pandemic more catastrophic than anything we experienced in recent memory.

The Covid pandemic has killed nearly as many Americans as U.S. troops died in all of our wars combined. We need to treat pandemic preparedness as a permanent priority, as we do our national defense, which is allocated hundreds of billions in annual funding even in times

of peace. If we allow the destruction of the Covid pandemic to play out again in the future, we'll have only ourselves — not some pandemic pathogen — to blame.

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