

**“If this viral pandemic has shown us anything it is that good public health at home and abroad is an investment and not an expense.”**

Imagine if every time there was a new financial crisis, the President appointed a new Federal Reserve and granted it new fiscal powers. With no existing structure or network in place, the organization would face an overwhelming challenge. It would be chaos. Why, then, do we expect this approach to work in a public health crisis such as COVID-19?

With our long history of fighting diseases, two points have become increasingly clear. The first is that successfully managing viral pandemics requires a dedicated, mission-focused health organization comprised of leaders with experience in this field. The second critical lessons of public health – one that we are painfully relearning in this pandemic – is that an outbreak anywhere threatens all of us. Here’s how we can potentially get back to work faster and make sure we stay at work even when the next pandemic strikes.

The spread of Coronavirus was hardly a surprise, and certainly not an anomaly. Population growth and increased geographic mobility have led to the encroachment of forests and the rapid transmission of pathogens globally. We are now seeing new, deadly viral outbreaks, epidemics and pandemics emerge almost every year, as evidenced in recent years with Nipah, Ebola, MERS, H1N1, Swine Flu and Bird Flu just to name a few.



At the same time, rising global temperatures are exacerbating the spread of vector-borne diseases such as Dengue fever, Zika and Malaria, as evidenced by a Zika outbreak in the US and elsewhere in the global north just two years ago. This month, while Nigeria is battling COVID-19 like the rest of the world, Nigeria is also experiencing an outbreak of Lassa Fever — a disease with a mortality rate of more than 20%, compared to less than 2% case fatality for COVID-19.

### **Viral pandemics? This is our new normal.**

We need to ask ourselves: what is a sustainable, humane model for dealing with this new normal in a manner that permits the economy to continue to function?

No developed country should have a passive strategy as its response to a viral pandemic.

And yet everything that has been done in the US and Europe in response to COVID-19 has been passive. People have to self-isolate, self-identify as having symptoms, and even seek out a test themselves. In short, we seek to mitigate through a passive strategy.

We have fought widespread infectious diseases before. The most successful eradication campaigns include smallpox and our ongoing efforts against polio and Guinea worm which have resulted in near eradication. When we set out to control polio, we go out and actively find infected people. Guinea worm eradication efforts have been successful because here, too, we go out and actively find infected people. This is active suppression, and it's the same successful strategy deployed by the authorities in Wuhan against COVID-19. When an initial passive strategy slowed but didn't stop transmission of the virus, they adopted an active strategy that proved successful. Most of the Wuhan factories are back on-line and people are back at work. For those skeptical about the Wuhan data, look at Vietnam, Singapore, Hong Kong or South Korea. Here too it's actively 'screen, test, isolate and trace'. That's an active strategy to suppress transmission for COVID-19.

In Vietnam, if screening identifies someone as potentially infectious, the surrounding area is closed down, and testing and tracing continue until patient zero is identified. Everyone else, meanwhile, can go to work. This approach curbs transmission and protects the economy from the devastating impacts of a shutdown.

It is highly likely that we will see a second wave of COVID-19 in the fall, and not unlikely that this illness becomes cyclical. Any lockdown phase is extremely costly socially, politically and economically; we cannot shut society down in every country that has a passive strategy every time we have a viral pandemic. Co-morbidity will likely be significant as a result of the mental and physical dangers of prolonged isolation and unemployment, including hunger, depression and suicide. These are problems we should all be concerned about.

*A vaccine next year will be very welcome, but that is only for this version of COVID-19 let alone the inevitability of new deadly viral pandemics in the years to come.*

## **What are the options for tackling viral pandemics?**

One option is central isolation which proved successful in Wuhan. Stay-at-home orders cause family transmission and transmission within close communities. However, transmission eventually spreads when individuals go shopping for essential groceries and medicine. Central isolation means that all confirmed cases are brought away from home to a specialized medical facility. For such a strategy to work, people with symptoms and those who have been in contact with cases must be isolated while being tested and awaiting results. This avoids the situation where infected people awaiting results become super spreaders by getting on airplanes or attending parties.

Another option is to move faster towards herd immunity. The term “herd immunity” refers to when enough infected people have developed antibodies which prevents further transmission of the virus. In this option, we isolate and protect only the medically vulnerable and people above 65. Everyone else can return to work or school. Not every virus allows us to take advantage of herd immunity, however. This strategy wouldn’t work for the seasonal flu as it is also dangerous for children and pregnant women. This further requires widespread testing so that we would know when enough of the population has sufficient antibodies and the elderly can come out from isolation.

The final option is one that has worked well in some Asian countries and is the most debated in the media: test-isolate-trace. Before COVID-19, we saw this strategy successfully applied during the last Ebola outbreak. This was in Nigeria, a country with the population of the US squeezed into an area the size of California. When Ebola was first identified in Lagos in 2014, the threat of it becoming endemic in the largest and most-densely populated country in Africa was terrifying. Nigeria quickly commandeered a health program fully dedicated to managing polio, and the Polio Operations Center in Nigeria became the springboard for routing out the Ebola virus. The organization’s leaders and professionals quickly identified ‘patient zero,’ identified everyone he had been in contact with, and quarantined and treated anyone infected. As a result, Nigeria was declared Ebola-free within three months.

## **Let the health experts decide.**

Which of these options to apply, and where to apply them, is for public health experts to decide. Each of these options, or a combination of them, will all let us out of self-isolation faster than a passive strategy. It could also keep us working, keep children in school and in

general, require less adaptation for society when the second wave hits or when the next new deadly viral pandemic arrives.

Every option requires a dramatic increase in testing and a vertical health organization to implement it. This kind of organization has a narrow mission and only one focus. It functions separately from most national healthcare systems, with an established direction at the top carrying through to healthcare professionals and line workers on the ground.

We have excellent current and historic examples of what a vertical organization can achieve. Smallpox is eradicated, polio and Guinea worm have both been reduced by >99%, and malaria has been reduced by 62% since 2000.

There are examples of this approach in other spheres. The best-known is the US Federal Reserve – an expert-led, expert-managed, empowered body that is politically independent. It collects and analyzes relevant data and takes action for the good of the economy.

A permanent shift to a “public health Fed” is what’s called for. They will provide both preparedness and rapid response. These vertical health organizations, acting quickly, thoroughly and vigorously will generate political support, public engagement and cooperation. And when there is no new outbreak, there are plenty of problems to practice on.

## **An outbreak anywhere threatens all of us.**

As an outbreak anywhere threatens all of us. Whether preparing for a new viral pandemic each year or for a vector-borne disease, these are not purely domestic issues. Let’s fight these viral pandemics where they are right now and not wait until they arrive on our shores. The critical lesson of everything we have learned in public health is that we need to be proactive in tackling these diseases.

The US provided \$11 billion in global health funding in fiscal 2019, up from \$5.4 billion in 2006. There is significant pressure to cut that funding. We can’t afford to lose this funding and it’s an insignificant amount compared to the cost of any one of those diseases spreading. Organizations like PEPFAR, PMI, the Global Fund and others must be fully resourced to keep everyone safe, as we are in this together.

Well-resourced public health verticals at home and abroad can be the most useful security assets and foreign policy tools. Most importantly, we don't have an economy if we don't have public health. If this viral pandemic has shown us anything it is that good public health at home and abroad is an investment and not an expense.

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