Fight Pandemics Like Wildfires

With Prevention and a Plan to Share the Costs

By Catherine Machalaba and William B. Karesh
March 06, 2020

South Korean soldiers spray disinfectant at the international airport in Daegu, South Korea, March 2020
Kim Kyung-Hoon / Reuters

As the new coronavirus spreads around the world, causing markets to plunge and analysts to slash growth projections, the epidemic's potential to damage the global economy is rapidly becoming clear. The regions in China that have been hardest hit

businesses that in turn supply an estimated 56,000 multinational companies. Already, many of these multinationals are experiencing disruptions in their supply chains, as vital manufacturing components from China are delayed. The effects will likely reach tech giants, pharmaceutical companies, heavy manufacturers, and other industries as well.

China finally appears to be getting the outbreak under control. After fumbling its initial response, the government is rushing to reopen factories and scale up manufacturing to meet global demand. Employers are reportedly offering paid plane tickets to coax workers back to factories and offices. But these efforts are likely to be hampered by worker hesitation and by lack of trust in Chinese institutions. And even if China can resume a normal level of business, supply chains could take longer to catch up. Disruptions may be felt for months in the form of reduced supply and higher prices.

The outbreak is also spreading rapidly outside of China, wreaking havoc on major economies such as Japan, South Korea, and Italy. The coronavirus has now been confirmed in 77 countries, with more than 93,000 cases of COVID-19 (the disease caused by the virus) and 3,198 deaths (the majority of them in China.) Concerts, conferences, and sporting events are being canceled daily throughout East Asia and Europe. Hotels, airlines, event venues, and

Yet around the world, governments and international organizations have treated the new coronavirus outbreak as a public health problem rather than a larger societal one whose causes and consequences will affect everything from finance and insurance to tourism and agriculture. Nearly every other type of disaster calls upon multiple sectors for response and prevention. Fire brigades fight wildfires, for instance, but building codes and flame retardants reduce the likelihood that fires will break out in the first place, while alarms provide early

days before the storm is expected to hit, but zoning and insurance pricing should already have helped anticipate the problem by deterring the development of flood-prone areas. In both types of disasters, a variety of actors, public and private, ultimately bear the costs. Pandemics are unique in that they are treated almost exclusively as public health threats, with few standard prevention efforts and no mechanism for sharing costs across affected sectors.

THE REAL COST OF EPIDEMICS

History suggests that the COVID-19 virus outbreak will do more lasting damage to individual countries and economies than to global markets or international trade. The last two weeks have seen a dramatic selloff in stock markets around the world, indicating that global-scale economic effects are likely to be drastic, but they may be short-lived. Markets took a hit during the epidemic of SARS (severe acute respiratory syndrome) in 2002 and 2003 but recovered rapidly. The same was true for the airline industry, which suffered losses in East Asia as a result of SARS but quickly resumed an upward trend that continued until early this year. Two factors make the current coronavirus outbreak potentially more disruptive than that of the SARS-associated coronavirus: China's share of the global manufacturing and tourism markets is much larger today than it was in 2003, and the COVID-19 virus appears to be spreading across borders much more rapidly than did the SARS-associated coronavirus.

But whether or not COVID-19 proves more harmful to the global economy than SARS or other past epidemics, its effects on individual countries are sure to be stark and lasting. Epidemics do long-term damage to economies, as well as to people's health and productivity, by diverting resources from non-emergency health care as well as from other public goods and services. During the Ebola virus disease (EVD) epidemic in West Africa, GDP growth in Liberia collapsed from 8.7 percent to 0.7 percent between 2013 and 2014. Sierra Leone experienced a similar decline in growth, as did neighboring Guinea. The official death toll from EVD in West Africa was 11,300, but more than 10,600 additional deaths occurred because of untreated HIV/AIDS, malaria, and tuberculosis.

Epidemics do long-term damage to economies, as well as to people's health and productivity.

The Ebola virus disease devastated the region's already strained health-care sector, causing an eight percent reduction in Liberia's health-care workforce and leaving human resources gaps that persist to this day. Months-long school closures disrupted education and left children vulnerable to exploitation, causing a spike in sexual violence and unintended teen pregnancies. The costs of these and other secondary effects of EVD will be felt for years if not decades to come.

But the story of the Ebola virus outbreak in West Africa doesn't have to be the story of future epidemics. While it is impossible to predict when and where future infectious disease outbreaks will originate, there are ways to reduce their frequency and the dangers they pose. National governments and international bodies can take measures to prevent the worst, channel funds where they are needed, and share the costs of recovery if an epidemic is not avoidable.

FROM RESPONSE TO PREVENTION

The origins of epidemics such as COVID-19 are not a mystery. Our organization, the nonprofit EcoHealth Alliance, has warned for years that novel coronaviruses could spread from bats to humans in Asia. Over the last 60 years, the majority of new zoonotic pathogens have emerged as a result of changes to agricultural, food production, or land-use practices or from contact with wildlife. A more robust and effective prevention strategy is needed, one that would strengthen and harmonize national and international laws and standards governing land use, ensuring that high-risk agricultural and food production practices are made safer.

Food systems in particular are in desperate need of modernization in much of the world. Hundreds of millions of people mainly in developing countries depend on live animal

such as influenza, and have been implicated in both SARS and the current coronavirus outbreak. Reducing the number of live animals moving through food markets will reduce the risk of future infectious disease outbreaks.

China took a positive step in this direction after authorities linked the COVID-19 virus to a wildlife market in the city of Wuhan. On February 24, the government strengthened its Wildlife Protection Law to prohibit the trade and consumption of wild animals (although it left a number of loopholes and exemptions). China's wildlife industry is valued at $74 billion, and the new and tougher regulations will doubtless hurt many businesses. But the cost will likely pale in comparison with that of the current coronavirus outbreak, which has already lost China an estimated $196 billion in tourism and consumer spending.

Other preventive measures that reduce the risk of animal-borne diseases can be tailored to local disease environments and threats. Malaysian authorities determined that a deadly Nipah virus that led to an outbreak in 1998 had jumped from large fruit bats called "flying foxes" to pigs and finally to humans. As a result, the government mandated that all fruit trees attractive to flying fox bats be separated from pig farms to minimize the chance of transmission, a simple precaution that appears to have worked for 20 years now. Similar preventive measures could work in Bangladesh, where Nipah virus cases have been linked to raw date palm sap—a delicacy harvested much like maple syrup—contaminated by bats. Previous bans on date palm sap had simply fueled black-market sales, and efforts to get people to boil the delicacy failed because of the effect on its taste. But sap harvesters can stop transmission at the source by covering collection containers with something as modest as a homemade bamboo skirt.

Once a pathogen does enter a community, education can be a powerful line of defense. The more communities know about disease transmission, the better they are able to monitor for outbreaks and intervene when they occur. In West Africa, community resistance to medical intervention hampered health workers' response to the Ebola virus, in part because many communities hadn't had much interaction with health professionals prior to the outbreak. In order to build trust and avoid dangerous misunderstandings, health ministries and medical

Like car insurance, epidemic or pandemic insurance products should be priced according to the buyer's risk profile.

Preventive measures such as these are important for staving off the economic as well as the human harm infectious diseases can cause. But governments and international bodies will need to supplement such programs with contingency plans for channeling resources where they are needed—and sharing the costs—during an outbreak. The World Bank has offered a tool for this purpose, the Pandemic Emergency Financing Facility (PEF), which provides privately backed insurance intended to pay out to poor countries if they are affected by large-scale international outbreaks. The PEF is a good first step, but it misses a piece of the pandemic-preparedness puzzle in that it is designed to pay out regardless of whether countries have taken preventive measures. Like car insurance, epidemic or pandemic insurance products should be priced according to the buyer's risk profile—which should depend in part on a country's ability to show that it is taking preventive measures.

One option would be to create a separate international fund for pandemic response paid for by national-level taxes on industries with inherent disease risk—such as live animal producers and sellers, forestry and extractive industries—that could support recovery and lessen the toll of outbreaks on national economies. Other novel financing facilities could fund pandemic adaptation initiatives analogous to climate adaptation efforts that better prepare countries to cope with future outbreaks—by undertaking many of the preventive measures outlined above.

The United Nations has mechanisms for responding to pandemics, but they are scattered among its agencies. Treating pandemics as the disasters they truly are will require a more unified international response. Infectious disease outbreaks should be emphasized under the Sendai Framework for Disaster Risk Reduction, a global agreement whose signatories have committed to national plans for reducing disaster risks. This would help countries address the root causes of infectious disease threats instead of treating them as simple uncertainties. The UN should also make pandemic risk management a priority in all of its activities, such that

UN routinely asks for "risk assessments" in order to evaluate proposed development initiatives. It should include the risk of emerging infectious diseases among those assessed.

Done successfully, pandemic prevention and response will be largely invisible to society. Day to day, diagnosis and treatment of routine diseases will become faster and more precise, and over time, there will be fewer emergency budget requests, less societal disruption as a result of infectious disease outbreaks, and greater confidence in health systems. Pandemics spread more than disease. They threaten the health of whole societies and economies. Treating them purely as health crises will only perpetuate an ineffective and financially reckless cycle of panic, response, and neglect.

AUTHOR BIO

CATHERINE MACHALABA is a Policy Adviser and Research Scientist at EcoHealth Alliance.

WILLIAM B. KARESH is Executive Vice President for Health and Policy at EcoHealth Alliance.

MORE BY CATHERINE MACHALABA

MORE BY WILLIAM B. KARESH

More: Coronavirus

Recommended Articles

Letter From Sana'a: On State Failure's Door

James M. Dorsey

Letter From Port of Spain

Dorn Townsend

Tracking the Spread of COVID-19 in Nigeria's Largest Northern City

by John Campbell

The Department of Defense Should Not Wage Cyber War Against Criminal Hackers During the Coronavirus Crisis

by Guest Blogger for Net Politics

How Nigeria Has Responded to COVID-19 So Far

by John Campbell