





New research finds that the world is not prepared to prevent or respond to a global pandemic. But lessons learned from previous outbreaks can help address vulnerability gaps.

a
Contagious
Crisis



Infectious diseases

know

no borders.

So says the first *Global Health Security (GHS) Index*, a benchmarking assessment of health security and related capabilities across 195 countries, released in October 2019. The *GHS Index* produced alarming results—in measuring countries’ abilities to prevent, detect, and respond to infectious disease threats, the average global score was a mere 40.2 out of 100. Unpreparedness stretched across all income levels as well; among the 60 high-income countries assessed, the score climbed to just 51.9.





The risks inherent in high-consequence and globally catastrophic biological events have recently been “magnified by a rapidly changing and interconnected world; increasing political instability; urbanization; climate change; and rapid technology advances that make it easier, cheaper, and faster to create and engineer pathogens,” the *GHS Index* said.

According to the report, “national health security is fundamentally weak around the world. No country is fully prepared for epidemics or pandemics, and every country has important gaps to address.”

The *GHS Index* also rated countries individually based on six factors: prevention of the emergence or release of pathogens; early detection and reporting for epidemics of potential international concern; rapid response to and mitigation of the spread of an epidemic; sufficient and robust health system to treat the sick and protect health workers; commitments to improving national capacity, financing, and adherence to norms; and overall risk environment and country vulnerability to biological threats.

Across those metrics, the most prepared countries overall include the United States, the United Kingdom, The Netherlands, Australia, Canada, and Thailand.

The report found that countries are unprepared for a globally catastrophic biological event, including those caused intentionally; 92 percent of the 195 countries evaluated do not show evidence of requiring security checks for personnel with access to dangerous biological materials or toxins.

Fewer than 5 percent show a requirement to test emergency operations centers at least annually, and 85 percent of countries evaluated show no evidence of completing a biological threat International Health Regulations simulation exercise with the World Health Organization (WHO) in the past year.

“More than half of countries face major political and security risks that could undermine national capability

to counter biological threats,” the *GHS Index* found.

Fewer than 7 percent of countries scored in the highest tier for the ability to prevent the emergence or release of pathogens, and only 19 percent received top marks for detection and reporting. Fewer than 5 percent of countries scored in the highest tier for the ability to rapidly respond to and mitigate an epidemic’s spread.

No country is fully prepared for epidemics or pandemics, and every country has important gaps to address.



The *GHS Index* offered 33 recommendations, including that “national and international health, security, and humanitarian leaders improve coordination among sectors, including operational links between security and public health authorities, in response to high-consequence biological events, deliberate attacks, and events occurring in insecure environments.”

The *Index* also recommended strengthening information-sharing channels between veterinary, wildlife, and public health professionals and policymakers. Considering that direct contact with animals may be a risk factor for many serious diseases, such as Middle East Respiratory Syndrome (MERS), this level of communication is essential, especially for new or novel viruses. In late 2019 and early 2020, Chinese authorities linked the emergence of a new strain of coronavirus-triggered pneumonia to a seafood and live animal market in Wuhan, in central China.

The WHO released a statement in early January 2020 praising China’s swift response. “China has strong public health capacities and resources to respond and manage respiratory disease outbreaks. In addition to treating the patients in care and isolating new cases

as they may be identified, public health officials remain focused on continued contact tracing, conducting environmental assessments at the seafood market, and investigations to identify the pathogen causing the outbreak.”

Nearby countries and regions quickly increased screening for travelers and released educational materials after the announcement of the new virus, and Hong Kong released a full prepared-

ness and response plan to address the potential effect of a novel infectious disease outbreak on public health. As of 14 January, more than 40 cases of the virus had been recorded, and one person died.

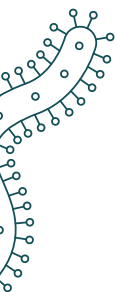
In addition to an outbreak’s effect on nations and general populations, the increasingly global and interconnected nature of businesses can be heavily affected, and unlike for natural disasters like hurricanes, many organizations do little to prepare, says Jerome Hauer, senior advisor with CEO advisory firm Teneo.

Hauer previously served as commissioner of the Division of Homeland Security Services for the State of New York and as acting assistant secretary for the Office of Public Health Emergency Preparedness at the U.S. Department of Health and Human Services.

“When it comes to continuity planning, businesses think through fires, floods, and IT disruptions, but they don’t consider the flu,” Hauer says.

The Nature of Contagions

While influenza might not immediately come to mind when pondering pandemics, consider that the Spanish flu of 1918 infected an estimated 500 million



people worldwide and killed between 20 million and 50 million.

In the 2019–2020 flu season, 4,800 people had died and 87,000 people had been hospitalized in the United States due to influenza, according to preliminary data released in early January by the U.S. Centers for Disease Control and Prevention (CDC). In total, the CDC estimates that 9.7 million people had gotten the flu so far this season. In the 2017–2018 season, the CDC estimates that 61,000 people in the United States died from the flu, predominantly among those aged 65 and older.

Influenza is highly contagious, and strains change frequently—making finding the right vaccine a gamble. According to a survey conducted in 2019 by the National Foundation for Infectious Diseases, only half of Americans reported plans to get the flu vaccine. While some businesses provide or recommend flu shots, many do nothing to prevent an influenza outbreak in the workplace or mitigate the potential impact on productivity, Hauer notes. The nature of a disease outbreak means one employee who comes to work sick could infect dozens of other employees, potentially triggering a domino effect in the workforce, he adds.

The ability of the business to respond hinges largely on planning, and no single plan will suit all potential outbreaks, Hauer says. The nature of the disease in question—whether spread by a vector such as mosquitos or through close contact with infected persons—will change the response needed.

For a mosquito-spread disease, organizations can act by draining any pools of standing water on property that could breed additional insects, educating the workforce about repellent and early symptoms, and using good ventilation to keep offices and buildings safe.

An airborne disease such as measles or influenza would require a different response, Hauer notes, including stocking up on respirators, enabling remote work where possible (especially as mass

transit may be shut down during an epidemic), and shifting education campaigns to focus on handwashing and avoiding close contact or tight spaces with others who may be infected.

Organizations can ask employees to stay home if they or family members are ill and require them to wait a certain period of time before returning to work. Liberal leave policies are also helpful strategies during an outbreak—assuring employees that they will not suffer a financial hit for staying home when contagious can discourage them from trying to tough it out through the workday, potentially infecting others in the process, Hauer says.

During a widespread, serious outbreak, however, Hauer warns that even these good practices may not be enough to keep the business open and running. The geographical nature of epidemics makes it likely that any locally

contracted temporary workers will also be unavailable or unwilling to work, and it may be better to have a backup location in a different region where an organization can shift the workload from an affected office, he says.

But given the nature of travel today, any pandemic will move more quickly than ever around the world, and once a disease is international, it is vastly more difficult to control, Hauer says.

Countries that are prepared for a rapid response are poised to better protect citizens and businesses, even as an outbreak escalates.

In the 2013–2016 Ebola virus epidemic in West Africa, for example, Nigerian officials witnessed the devastating effect the disease had on nearby countries and took action. When the first indexed case of Ebola was reported in Nigeria in the summer of 2014, the government was ready.





PROTECTING CORPORATE & GOVERNMENT PRIVACY OVER 25 YEARS



Professional Bug Sweeps and TSCM Services
Protecting Your Corporate Privacy for over 25 years

- Conference Rooms and Boardroom Sweeps
- C-Suite Executive Office Sweeps
- Home Office Sweeps
- Hotels Rooms
- Off-Site Meeting Locations
- Live Monitoring

Request a Confidential Proposal

Nationwide Services
866.448.3138

info@tscmamerica.com
www.tscmamerica.com

Preparedness, Tested

Ebola is a highly contagious virus that can be transmitted through direct contact with an infected animal or a sick or dead person infected with the virus. After people become infected, they do not immediately develop signs or symptoms

of the disease—meaning they are not contagious. Once they start to exhibit initial symptoms such as fever, aches and pains, weakness, and fatigue, they are contagious, according to the CDC.

Diagnosing the virus quickly after infection can be difficult because these early symptoms are not specific to Ebola

and can be confused with symptoms of more common illnesses, such as malaria or typhoid fever.

This delay in being able to identify the disease can allow Ebola to spread. In Guinea, Liberia, and Sierra Leone, the West African Ebola epidemic claimed a reported 11,308 lives.

Multi-Crisis Management

The Democratic Republic of the Congo (DRC) is currently facing a triple threat: Ebola, measles, and militant attacks. On 1 August 2018, an Ebola outbreak was officially declared in the DRC. By the end of 2019, health workers had mitigated the spread of the virus in all but a few remaining hot zones. But on 28 November, unidentified armed assailants attacked the offices and living quarters of several Ebola response teams, killing three workers and forcing others to evacuate—which led to a resurgence of new Ebola infections.

Between August 2018 and December 2019, more than 3,300 people in the DRC had been infected with Ebola, making it the worst outbreak on record for Congo and the second worst worldwide, after the Ebola outbreak in West Africa that lasted from 2013 through 2016.

The physical attacks targeting healthcare workers have set back Ebola response in the DRC, according to World Health Organization (WHO) Field Coordinator Dr. Marie Roseline Belizaire. She told NPR that response teams have had to cut back on time they spend in areas where Ebola is spreading—the teams relocated to cities hours away from outbreak locations and could no longer check in daily.

The difficulty in containing the Ebola outbreak early lay in the country's isolated response—Ebola response work was outsourced to specialized temporary teams instead of embedding it into preexisting health centers, NPR reported. Late in the crisis, response has shifted more toward community health centers, which has fostered more trust and acceptance from citizens.

Meanwhile, measles has killed more than 6,000 people in the DRC in what the WHO has called the “world's worst measles epidemic.” Battling the twin epidemics of measles and Ebola has proven exceedingly challenging

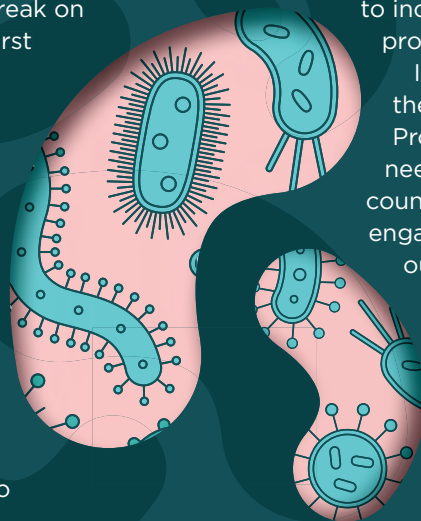
for officials the DRC and international health organizations, especially given distrust of health systems and militia conflict in some provinces.

Around 310,000 suspected measles cases have been reported in the DRC since 2018, and a shortage of funds remained an impediment to curb the outbreak, the WHO said in a statement in January 2020. Although the WHO and its international partners have vaccinated 18 million Congolese children under the age of 5 against measles, routine immunization is still low, and the WHO said it would need a further \$40 million—in addition to the \$27.6 million already mobilized—to include children older than 5 in vaccination programs.

In the statement, the officer in charge of the WHO office in the DRC, Dr. Amédée Prosper Djiguidé, said that more effort is needed to address the health crises in the country. “We recognize the government's engagement in the efforts to end the outbreak, and we are grateful for the generosity of our donors,” Djiguidé said. “Thousands of Congolese families need our help to lift the burden of this prolonged epidemic from their backs. We cannot achieve this without adequate finances.”

In January 2020, the WHO announced that 60 additional health workers were being deployed across the DRC to assist in epidemic response and conduct community engagement.

The *Global Health Security (GHS) Index* recommended that domestic financing for health security be urgently increased, made transparent, and tied to benchmarks within national action plans. In addition, international leaders should examine the availability of financing to support rapid and complete outbreak response, and the United Nations should track and publish outbreak-related costs and contributions, the *GHS Index* said.





“...identification of cases was difficult because of weak surveillance and a fragile public health infrastructure,” according to the CDC. “Poor infection control measures and strained health-care systems also contributed to the devastation of this outbreak.”

The *GHS Index* noted: “Massive global assistance was needed to stop the outbreak because of insufficient national capacities in Guinea, Liberia, and Sierra Leone to quickly detect and respond to the epidemic.... The three affected countries lost \$2.8 billion in combined GDP, and a massive global response totaled billions of dollars before the outbreak was contained.”

In contrast, a report from the WHO found that the Nigerian government generously and quickly allocated and dispersed funds to address the disease.

The money was used to build isolation facilities and Ebola treatment centers,

Organizations that pre-plan and think through their response have a better chance at surviving an outbreak.



to conduct house-to-house information campaigns, and to create radio messages in local dialects to ease public fears.

The *GHS Index* found most countries lack the foundational health system capabilities needed for epidemic and pandemic response. Nearly 90 percent of countries do not demonstrate a system for dispensing medical countermeasures during an emergency. Only 3 percent of countries showed a public commitment to prioritizing healthcare services for workers who become sick as a result of participating in the public health response.

The *Index* concluded that decision makers only sporadically focus on health security. “Political will for accelerating health security is caught in a perpetual cycle of panic and neglect,” the report stated.

Nigerian officials took quick action to respond to the potential crisis in 2014, and the WHO described the Nigerian Ebola response as a “spectacular success story” because the country kept the number of cases to just 19, with seven deaths.

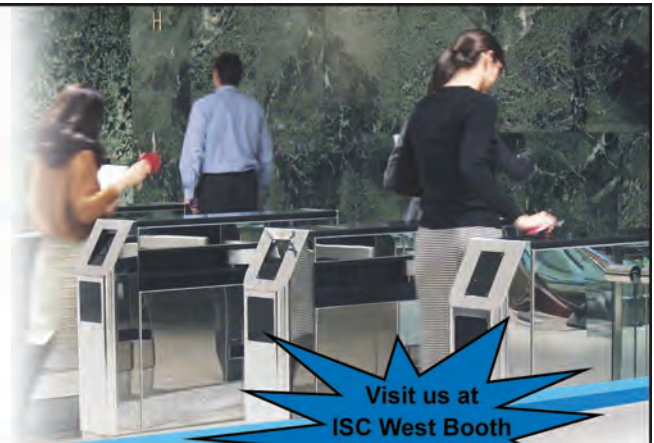
Dr. Isabelle Nuttall, director of global capacities, alert and response, for



DSI
DESIGNED SECURITY, INC.
A Detex Company

SMARTER DESIGN, TIGHTER SECURITY

Optical Turnstiles enhance lobby security and improve pedestrian traffic flow. DSI offers a complete line of products designed to improve access control at entrances to commercial, institutional, educational and government facilities.



Visit us at
ISC West Booth
10109



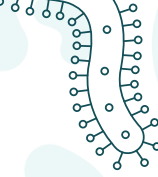
OPTICAL TURNSTILES

- High Throughput
- Detects Tailgaters
- Sleek Architectural Styling

Protecting Your Most Valuable Assets

WWW.DSIGO.COM - 800-272-3555





the WHO, said “the Ebola outbreaks and response in Nigeria and Senegal showed the world that the disease can be stopped if a country is adequately prepared from the outset. WHO is now working with all countries at-risk to help them meet the same standards for preparedness.”

International businesses operating in Nigeria also had to rapidly respond to the crisis, according to Troy Kirby, CPP, PSP, who served at the time as a global security advisor in the region for a major international oil and gas company.

After the second indexed case of Ebola was announced in Nigeria, the organization quickly escalated its response from a heightened sense of awareness to a full-scale incident management mode, driving security to take on an expanded role in safeguarding the workforce.

Security’s Role

Kirby and the security team at large delivered value-added incident response support to help mitigate Ebola-related threats and ensure business continuity, including personnel safety, faster threat identification, and travel management.

“Successes needed to be simple, adequate, and timely,” Kirby says.

Personnel security. Kirby’s regional security team was tasked with detecting people with fevers and ensuring they

issues,” Kirby says. “However, during the Ebola outbreak, this type of activity presented a personnel safety issue given the highly contagious nature of the virus. An employee at the workplace with a fever could be infected with Ebola and in need of additional immediate medical care.”

With several thousand employees and multiple onshore and offshore facilities to manage, this was a monumental task to address quickly. To start, guards would need to be given a method of assessing employees’ temperatures when they arrived at work and trained on how to respond. The facilities had a minimal number of digital thermometers, but not enough to cover all access points. The company needed hundreds more, but there were very few available locally.

Kirby and his team worked with the company’s corporate office in the United States to arrange for anyone traveling to Nigeria or the region within the next few days to bring specialized handheld, contactless thermometers in their luggage. Once a stockpile of thermometers arrived, Kirby got to work on distribution and training.

To avoid comprehension challenges for the security guard workforce—which had varied education and literacy levels—Kirby and his team created quick training videos on their smartphones about the basics of operating the ther-

have the luxury of making a standard, produced video. We had to train 1,000 people or more in a couple of days. It wasn’t possible to hire a trainer to visit each site, so it became a ‘train the trainer’ environment, and then we used constant reinforcement of the message and follow-up quality checks to make sure everyone comprehended it.”

Guards were stationed at every entrance point to check temperatures and watch for signs of infection. Taking employees’ temperatures was more complicated than it seemed—given that the outbreak was in the middle of summer, employees were coming to work overheated. Shaded, cooling areas were provided to help bring workers’ temperatures down enough to reduce false positives and accurately detect a fever.

The access control checkpoints served as a preventative step for safeguarding the workforce and the facilities, while providing help to those who needed it, Kirby says. Educational information and medical assistance were offered at the checkpoints.

Thermal cameras were later installed at major pedestrian entry points to measure and sound an alarm if a person’s body temperature was above the threshold. Security also oversaw handwashing at major entry points, which served as an additional prevention opportunity, Kirby adds.

Foundational supplies, education, and training are essential for epidemic response, but most countries lack foundational health systems capacities vital for epidemic and pandemic response, according to the *GHS Index*, with 131 out of 195 countries ranking in the bottom tier. Only 11 percent of countries showed plans to dispense medical countermeasures during health emergencies. The *Index* recommended that leaders “take steps to build and maintain robust healthcare and public health workforces that play a major role in biological crises.”

The culture of the region proved challenging as well when mitigating the spread of Ebola. According to

When the crisis hit, it was going to affect more than one company.

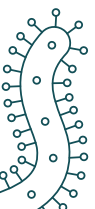


did not gain entry into the company’s facilities. The team also helped employees receive support and access to correct information on where to receive medical assistance.

“Having lived in Africa for several years, it seemed to me somewhat commonplace for people to accept attending the workplace with bouts of low-grade fever associated with malaria or other

mometers. The tutorials explained how to put in a battery, turn the device on, use it, and what to do if an employee’s temperature measured at 38 degrees Celsius (100.4 degrees Fahrenheit) or higher. The videos could be downloaded and replayed for every shift, supplemented by paper handouts.

“Simplicity matters,” Kirby says. “Time was of the essence.... We didn’t



Brian Mair, who was a regional security manager at a different oil and gas company operating in Nigeria, addressing cultural factors was an educational opportunity.

West Africa has a tactile culture, he says, with frequent handshakes, touching, and hugs. During an outbreak, these casual touches carried the risk of spreading the virus, so employees were provided education about the risks involved and hygiene recommendations.

Intelligence. The second area of unexpected opportunity for Kirby's team was supporting senior-level decision makers with a new security-led reporting tool built during the Ebola outbreak.

"After a few initial meetings of the incident response team and an overwhelming amount of incoming raw information, I saw an opportunity to better analyze and distill information streams into a few pages with the

The Ebola outbreaks and response in Nigeria and Senegal showed the world that the disease can be stopped if a country is adequately prepared from the outset.

appearance of a tripwire-styled report," Kirby says. "I was already using this approach elsewhere to generate actionable intelligence regarding militancy and serious incidents and saw an opportunity to apply it to response-related data."

The tool collated data from the CDC and the WHO's regular information briefs on the number of cases, key indicators, and progression of the disease in Nigeria and surrounding regions. It addressed any potential links or effects on the company's major work environments, such as tanker ships, oil

terminals, or office buildings.

The one- to two-page report also included key metrics like staffing numbers, border closures or transit challenges, external support from the government, and diplomatic messaging that could herald a shift in policy. This information let company leaders make more informed decisions without needing to sift through mountains of data. For example, Kirby says, if the metrics indicated that air travel would be limited or closed soon, nonessential personnel or employees' families could be sent home beforehand.



Rely on STI®



...for a wide range of buttons & switches

Global ReSet and Stopper® Station Buttons

STI has the right button, right now. Tough polycarbonate buttons in choice of break glass or push, color, phrase, activation, and with or without a cover.

- Any language
- Super tough polycarbonate
- Color options
- Protective covers
- Resettable button simulates break glass activation
- Push button offers several activation choices



Safety Technology International

Learn more at www.sti-usa.com/sema147 or call 248-679-9898

2020

International companies in the region also collaborated throughout this time. “When the crisis hit, it was going to affect more than one company,” says Mair. “People quickly realized the value of working collaboratively. The spread of information was very open and free.”

In particular, companies would share their practices on how to address an employee who had recently traveled to an Ebola-affected region, as well as what tools were in use and what equipment or materials were being donated to the Nigerian government to help in the crisis.

The *GHS Index* found that most countries have not allocated funding from national budgets to fill identified preparedness gaps for epidemics or other health security crises, and political and security risk factors make support and donations challenging. The *Index* recommended that plans be developed

to help countries with challenging risk environments and to bolster preparedness in countries bordering those at increased risk.

Companies operating in West Africa during the 2014 Ebola crisis felt a moral obligation to assist, Mair says, and shared information to eliminate duplicate donations and efforts.

“The poorest of the poor tends to suffer in these things, and we were very keen to help,” he adds.

Preparedness. The third major area of support Kirby’s team provided during the crisis was to use existing security networks at consulates to ensure a clear understanding of support options for repatriation of citizens in case the crisis escalated or a citizen became infected.

He collaborated with HR to determine the national origin of the workforce in Nigeria, and then began arranging repatriation plans.

“This insight on planned and actual diplomatic support options allowed our response teams to plan on how best to manage any potential infections,” Kirby says.

Both Kirby and Mair attribute the smoothness of response escalation to the high level of preparedness in both corporate and local response teams. Because Nigeria is such a dynamic threat environment, teams are well-versed in partnering with each other and are familiar with developing multiple agile responses at once, Mair says. Exercises and planning meetings helped as well.

“Make sure you tabletop every eventuality,” Mair says.

Exercises and response planning should extend to the national and international level as well. According to the *GHS Index*, however, there is little evidence that most countries have tested important health security capacities. The report recommended that countries test their health security protocols and publish after-action reviews at least annually. “By publishing after-action reviews, countries can transparently demonstrate that their response capabilities will function in a crisis and can identify areas for improvement,” the *Index* said.

The report also recommended that national health authorities develop epidemic- and pandemic-specific preparedness and response strategies as part of routine disaster and national security planning efforts.

Epidemics are low-probability events, but they have huge impacts, Hauer says. Especially for small- to medium-sized businesses, recovering after an epidemic affects the entire workforce is a challenge.

“Organizations that pre-plan and think through their response have a better chance at surviving an outbreak,” he adds. ■

CLAIRE MEYER IS MANAGING EDITOR OF SECURITY MANAGEMENT. CONNECT WITH HER ON LINKEDIN OR AT CLAIRE.MEYER@ASISONLINE.ORG.



BULLET RESISTANT SECURITY BUILDINGS

BUILT TO ORDER
BUILT TO LAST

www.parkut.com
586.200.4259

PAR-KUT INTERNATIONAL