COMMENTARY

THE ROAD TO ACHIEVING GLOBAL HEALTH SECURITY: ACCELERATING PROGRESS AND SPURRING URGENCY TO FILL REMAINING GAPS

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FIVE YEARS AGO, the world was on a precipice. An outbreak of Ebola that had started in Guinea spilled into neighboring Liberia and Sierra Leone. None of the affected countries had recorded an outbreak of Ebola before, and the response was challenged by lack of public health capacities, community distrust of healthcare workers, poor communication, and difficulties reaching affected populations. International health officials expressed concerns about the potential for further spread of the virus throughout the continent, and, ultimately, more than 11,000 people lost their lives.

The United States stepped up as a leader in the global response to the West African Ebola epidemic, which, over a 2-year period, would cost billions of dollars and would lead to the development of a complex web of global partnerships across governments, international organizations, foundations, and private industry. Just before the first Ebola cases in Guinea came to light in 2014, the United States brought together in Washington, DC, partner countries from around the world to launch the Global Health Security Agenda (GHSA). Ironically, the intent of the GHSA was to prevent the very type of uncontrolled epidemic that was spreading silently in West Africa by improving countries'

capacities to prevent, detect, and rapidly respond to outbreaks occurring within their borders. During the Ebola epidemic, the United States committed \$1 billion to advance the goals of the GHSA. This likely represented the world's largest single investment by a country toward improved implementation of the International Health Regulations (IHR, 2005) and helped catalyze additional contributions from other countries.

By the time the outbreak was contained, it was clear that it had resulted in considerable loss of life and significant long-term societal impacts. The economic and social burden of the 2014-2016 West Africa Ebola outbreak is now estimated to be around US\$53 billion.¹ Importantly, the outbreak resulted in significant indirect impacts on the health systems in affected countries, including decreases in the use of maternal health services and disruptions in HIV/AIDS treatment that will have lasting consequences for health outcomes.²

The startling tolls of the 2014 Ebola epidemic and the launch of the GHSA helped create political will to externally assess countries' readiness for significant infectious disease events. The GHSA began this effort through the development of pilot assessments of national public health

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capacities, which were conducted in 6 countries.^{3*} This effort helped to define metrics for assessing whether countries possess the core public health capacities needed to fulfill their obligations under the IHR to prevent, detect, and respond to public health emergencies with the potential for international spread.

Eventually, the GHSA assessment process was transitioned to the World Health Organization (WHO), where it became the foundation for WHO's current Joint External Evaluation (JEE) process. Through the JEE, WHO is now taking a proactive role in assessing whether countries can fulfill their obligations under the IHR. For the first time, it is possible to externally assess countries' core public health capacities, identify gaps in countries' readiness, and coordinate with donors to identify and prioritize financing for specific actions to address these gaps.

Since 2014, 108 countries have completed a JEE, and additional countries are in the pipeline. Although a high level of participation in the JEE process is a welcome development following nearly a decade of stalled implementation of the IHR, much more work must be done to improve countries' commitment to advancing global health security. By assessing national core public health capacities, the JEEs represent the first step a country must take to improve its readiness for infectious disease emergencies. Political leadership and actionable follow-through are needed to develop, cost, and finance National Action Plans for Health Security to address gaps in capacities that the JEEs have identified. For example, the first 100 JEEs identified more than 7,000 priority tasks necessary to improve health security, but very few of these gaps have been addressed.⁴ In fact, despite having undergone a JEE, many countries have yet to draft and cost their action plans, and even fewer have mobilized the resources needed to improve preparedness capacities.⁴

These challenges are evident in data from our recently published Global Health Security (GHS) Index.⁵ This first-ever benchmarking of health security among the 195 IHR states parties[†] finds that no country is fully prepared for an epidemic or pandemic. In fact, the average overall GHS Index score is 40.2 out of 100, with all countries showing significant gaps. Most states lack essential public health capacities to prevent, detect, and respond to health emergencies, and there is little evidence that most countries can initiate and exercise these capacities in an actual emergency. Many countries face major political and security risks that could undermine national capability to counter biological threats, and most countries have not allocated funding from

national budgets to fill identified preparedness gaps. For example, only 5% of the countries assessed score in the top tier[‡] for financing health security.

In addition, countries are not prepared for a global catastrophic biological risk (GCBR), including those that could be caused by the international spread of a new or emerging pathogen or by the deliberate or accidental release of a dangerous or engineered agent or organism. Alarming, 75% of countries received low scores in GCBR-relevant areas, including oversight of dual-use research and medical countermeasure dispensing. As biotechnologies continue to advance for societal benefit, a dedicated international normative body should be established to promote early identification and reduction of associated risks.

Perhaps one of the most concerning thematic findings of the GHS Index is how poorly countries score in the category that measures whether they have a "sufficient and robust health system to treat the sick and protect healthcare workers." This category specifically looks at whether countries have the foundational healthcare system capacities necessary to support mobilization of the public health capacities measured elsewhere. The average country score in this category was 26.4 out of 100. This finding suggests a strong need to integrate efforts aimed at strengthening national health systems and promoting adoption of universal health coverage with efforts to boost countries' core public health capacities to tackle infectious disease outbreaks. An important first step will be to reinforce that, as countries are assessing the availability of core public health capacities via the JEE, they are also assessing and improving the strength of their broader health system.

These findings highlight an urgent need to increase the financial, technical, and human capacity available to strengthen global health security. Though difficult, it is possible to make progress. The World Bank has determined that "investing in health security through financing preparedness is a highly cost-effective way to protect lives and safeguard livelihoods and communities."⁶ It estimates that in low-income countries, needed investments in preparedness may cost around US\$1 per person per year—a reasonable sum compared to the cost of the outbreaks described above.⁶

More leaders are prioritizing the creation of urgent health security financing mechanisms, including expanding the use of World Bank International Development Association allocations for epidemic preparedness. The potential for a global health security matching fund, which we have recommended, is also within reach, but making that fund a reality will require urgent and coordinated leadership from decision makers to leverage investments from

*Pilot countries were the Republic of Georgia, Peru, Portugal, Uganda, United Kingdom, and Ukraine.

[†]As of April 16, 2013, there are 196 states parties to the World Health Organization (WHO) 2005 International Health Regulations (IHR), including the Holy See. The Holy See is a sovereign juridical entity under international law, but it was not included in the country-specific research for the GHS Index in light of the Holy See's lack of an independent health system.

[‡]The GHS Index scoring system is on a 100-point scale and includes 3 tiers. Countries that score between 0 and 33.3 are in the bottom tier, countries that score between 33.4 and 66.6 are in the middle tier, and countries that score between 66.7 and 100 are in the upper or "top" tier.

national country budgets, international organizations, philanthropists, and donors against specific action plans and measurable targets. This work should start now and could be one focus area for a heads-of-state summit convened by the UN Secretary-General, another key recommendation from our GHS Index report.

In our view, long-term global health security cannot be achieved without increased and *sustained* investments. The GHSA has set an ambitious target of more than 100 countries achieving, by 2024, completion of health security evaluations, resource mobilization, and implementation to fill gaps. To meet this goal, it is essential that the United States play a major leadership role in improving health security capacities across the globe. Continued technical and financial support by the United States for global health security efforts is central to making measurable progress. US support of the GHSA and country-level global health security activities has been a major contributor to the success of health security programs to date, providing both financing and technical experts from the US Centers for Disease Control and Prevention (CDC), the US Agency for International Development, and the US Departments of Health and Human Services, Defense, and State. The United States is also working behind the scenes to support the JEE process, which has helped more than 100 countries assess their public health capacities and begin addressing any shortfalls. Although these efforts are clearly multilateral, US leadership has been instrumental in setting up and enabling their success.

This CDC supplement provides compelling evidence of the impact of US leadership and investment toward achieving global health security and highlights the important ongoing international work to prepare for biological threats. The challenges faced and lessons learned by the authors are integral to building and sustaining national health security capacities, particularly at the subnational

level. We all know that preparedness begins in the very communities affected by outbreaks, and a country's collective health security is only as strong as its weakest link. Thus, each effort to identify and implement novel, integrative solutions is one small step toward making the world safer and more secure from outbreaks.

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