Summary of Key Recommendations
Meeting to Solicit Stakeholder Input on forthcoming US Global Health Security Strategy

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Introduction

Since the Ebola epidemic in West Africa in 2014, which was unprecedented in its human toll and geographic scope, the United States government (USG) has invested more than $1 billion in emergency supplemental funding over 5 years to strengthen countries' public health capacities to prevent, detect, and respond to infectious disease threats. This increase in US funding followed the launch of the Global Health Security Agenda (GHSA), a multi-lateral effort started by the United States in order to recruit countries to work at home and abroad to strengthen public health capacities. These investments have resulted in key improvements in countries' abilities to prevent, detect, and respond to infectious disease outbreaks. This progress is evidenced in the quick response and containment of an Ebola outbreak that occurred in Guinea two years after the 2014 epidemic.

As the initial 5-year timeframe for US global health security (GHS) investments approaches an end, there have been questions about whether and how US efforts to improve global health security abroad will continue. The Trump Administration has voiced support for a continuation of efforts like the GHSA, but there have been unclear signals about the possibility of sustained US funding for global health security-related programs. In the 2018 Omnibus Spending bill, the US Congress provided additional three-year "bridge" funding to ensure that global health security programs at the US Centers for Disease Control and Prevention could continue for the time being. The bill also directed the Administration to create a strategy to guide future US government work in this area. This US Global Health Security Strategy is due to Congress "not later than 180 days" after the enactment of the Omnibus spending bill, which occurred in March of 2018.

To gather broad input on the forthcoming US Global Health Security Strategy, the Johns Hopkins Center for Health Security convened more than 70 public and private sector global health security stakeholders for a meeting on July 30, 2018, in Washington, DC. The purpose of the meeting was for stakeholders to engage in discussion regarding the US Global Health Security Strategy and provide recommendations to the USG for this strategy. Below we report on the recommendations based on participant discussions. This document does not represent consensus of the meeting participants, but rather reflects the Center's interpretation of what was discussed and our recommendations.

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The US Global Health Security Strategy Should Acknowledge that US GHS Investments Provide Direct Value *to US National Security and Economy*

Meeting participants made many points related to how US GHS efforts are valuable to the United States and how those efforts should be included in the strategy. The ability for disease outbreaks and pandemics to cause significant levels of deaths and disease, and destabilize economies and governments, is a central reason why countries must work to improve global health security capacities at home and abroad. Pandemics and epidemics pose a significant economic threat to governments through possible reduced efficiency of workforces, decreases in travel, and high costs of response to mitigate the spread of the disease. The World Bank reports that a moderate and a severe pandemic can cause millions of deaths, and decrease global gross domestic product (GDP) between 0.7% to 1%. Though not a pandemic, the Ebola epidemic in West Africa is estimated to have cost the three affected countries $2.2 billion in lost GDP in 2015.

US programs aimed at improving other countries' health security capacities have direct benefits for US public health and national security. When countries lack the abilities to rapidly detect and respond to infectious disease outbreaks, it increases the likelihood that these events will spread across their borders and farther abroad via travel to places like the United States. This challenge not only increases the number of people who may ultimately become sick and die during these events, but also increases the chances that other countries will have to become involved in response operations to try to combat an outbreak that has spiraled into an epidemic. In working to prevent cases of Ebola from spreading beyond West Africa, the US government spent more than $2.3 billion on response activities in the region. Conversely, with much smaller investments, the US Centers for Disease Control and Prevention has worked to enable the rapid detection and containment of viral hemorrhagic fever outbreaks in countries like Uganda.

Working with countries to build their health security capacities also has other benefits for the United States. Partnering with countries to work on health security capacity-building initiatives affords the United States an opportunity to engage with its allies. For example, the US Department of Defense (DoD) has several military goals that align well with the GHSA, and its supportive activities are outlined in the National Security Strategy and National Defense Strategy. DoD-led efforts including the Global Emerging Infections Surveillance (GEIS), which conducts global biosurveillance, and the Cooperative Biological Engagement Program (CBEP), which improves biosafety practices and promotes sample destruction, are examples of how national security programs align with public health goals. Having on-the-ground partnerships also helps the United States maintain situational awareness when an outbreak occurs, which is important for informing its own preparedness and response efforts.

Initiatives like the GHSA have helped to improve coordination across US federal agencies. For example, the structure of GHSA has provided the DoD with a framework from which to expand its biosecurity-focused programs and gain a more global vision of the national security risks that infectious disease threats pose. The DoD's involvement in the GHSA has also played an important role in advancing the multi-sectoral nature of the efforts to improve global health security by engaging defense ministries of participating countries to work cooperatively with ministries of health to combat the risk of

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bioterrorism. Training services and engagement by DoD have encouraged key partners such as defense entities in the United Kingdom, Indonesia, and South Korea to move into the health security space.

The US GHS Strategy should highlight the important role that efforts to advance global health security play in meeting our own national health and security goals. The US GHS Strategy should commit to continued involvement in multilateral partnerships and bilateral capacity-strengthening efforts. The Strategy should specify the goals and targets toward which US efforts should be working. Following the development of the US GHS Strategy, the USG should release implementation plans that describe how it will lead this work: who is in charge of ensuring that US efforts meet the goals articulated in the US GHS Strategy; how agencies are to work to meet goals and targets; what resources (personnel and multi-year budget) will be available to fulfill the goals of the strategy; and what process will be used to coordinate agencies' work in global health security. The implementation plan should span multiple years—preferably 5 years or more.

The US Definition of Global Health Security Should be Flexible, but Retain Focus on Health Security

Fundamental to the creation of any strategy is to have a clear definition of the problem the strategy is trying address. For this reason, the scope of "global health security"—and how it should be defined in the strategy—was a leading topic discussed among meeting participants. Central to this discussion was a sense that the vision of global health security that is used by the GHSA now is generally the right approach:

> *"… a world safe and secure from global health threats posed by infectious diseases – where we can prevent or mitigate the impact of naturally occurring outbreaks and accidental or intentional releases of dangerous pathogens, rapidly detect and transparently report outbreaks when they occur, and employ an interconnected global network that can respond effectively to limit the spread of infectious disease outbreaks in humans and animals, mitigate human suffering and the loss of human life, and reduce economic impact."*

The majority of comments supported the need to continue to focus global health security efforts on infectious diseases. An argument was made that restricting US global health security efforts to "dangerous pathogens" was too limiting and could shift the focus of surveillance efforts in low income countries away from more common diseases, such as measles. However, the point was also made that measles vaccination rate is already something that is assessed by the GHSA. It was noted that the DoD is restricted from working with its partners on projects that do not explicitly pertain to a limited list of "especially dangerous pathogens." This restriction has limited its ability to do work in some countries and engage its partners. Participants also noted that the continued emergence of new infectious diseases limits the value of a fixed list and argues for an approach with more flexibility.

A few participants noted that the GHSA definition excluded other health security issues, such as chemical or nuclear events, but many others in the room expressed concerns that having a definition of global health security that includes an all-hazards approach would dilute the focusing function of the GHSA and other health security initiatives. Additionally, it was pointed out that there are other financial and programmatic resources dedicated to addressing broader global health and nuclear, chemical, and other defense-related threats, but there are few other avenues through which resources can be directed

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to health security. And it was widely acknowledged in the discussion that if the focus of this Strategy became too broad, it would weaken its ability to achieve its goals. The example of PEPFAR was raised as a USG program that has a very specific focus and has been highly successful over many years.

The US GHS Strategy Should Call for Meaningful Integration of the Non-Governmental Sector into Global Health Security Efforts

To date, efforts to improve global health security have largely focused on national governments; however, meeting participants stressed that meaningful engagement of non-governmental partners including the private sector, non-governmental organizations, philanthropies, and academia could be of great value in helping the United State meet its US global health security goals. There are many non-governmental actors that are well poised to provide technical advice to governments, to work with them to identify key gaps in capacities within the communities in which they serve, or to improve capacities in ways governments are not able. Non-governmental partner organizations can be a force extender for resource-strapped governments that lack personnel and other resources to conduct evaluations and implement programs to improve capacities. Non-governmental organizations (NGOs) also have first-hand "on-the-ground" experience, and can contribute unique and crucial perspectives to government planning processes that higher-level officials may not necessarily have. Meeting participants noted that non-governmental organizations are eager to share their expertise and contribute to implementation and monitoring of global health security improvement efforts, but find it challenging to build governmental partnerships or participate in key discussions.

There were multiple reasons cited to explain why the non-governmental sector was less involved than it could be. Governments might be hesitant to clearly favor or support a particular non-governmental organization or private sector company. Additionally, non-governmental efforts to engage in GHS are often underfunded. Proposed solutions to improve non-governmental engagement include: mapping out individual NGO partners so that government stakeholders are aware of key players; making granting or contracting relationships between funders and NGOs easier to navigate, and clearly articulating the nuances among the different terms or entities (e.g., the GHSA, the World Health Organization's Joint External Evaluation process, and the US GHS Strategy) so that the NGO community understands as clearly as possible what the USG is seeking in these efforts.

It was noted, though, that even in the absence of formal mechanisms, demand from decision makers in governments and international organizations can help improve non-governmental partners' abilities to participate in global health security efforts. Governments should push to ensure that non-governmental partners are integrated into the formal agenda of high-level meetings, such as the GHSA Ministerial and Steering Group meeting, and not just added as participants to separate side meetings or break-out sessions. Non-governmental organizations should also participate in in-country planning and implementation efforts. Governments should recognize that non-governmental partners have a range of capabilities and expertise. For their part, NGOs should be clearer about the value they bring to the US global health security mission and work. It would be quite valuable if the US GHS Strategy affirmed the importance of the relationship between the USG and the NGO community to meeting US goals and articulated ways to strengthen that relationship.

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The Strategy Should Recognize that Continued US Investment is Necessary to Sustain GHS and to Promote US Interests

Meeting participants made clear that continued technical and financial support by the United States for global health security efforts is central to its long-term sustainability. US support of both domestic GHS activities and larger GHSA endeavors was cited among participants as a key contributor to the success of health security programs to date. The United States remains one of the leading technical experts on how to prevent, detect, and respond to significant disease outbreaks, and US agencies will likely be called upon to provide this expertise and to assist other countries that experience public health emergencies. The United States is also working behind the scenes to support efforts like the World Health Organization's Joint External Evaluation (JEE) process, which has helped more than 70 countries assess their public health capacities and begin addressing any shortfalls. Though these efforts are clearly multilateral, US leadership has been instrumental in setting up and enabling their success.

US leadership and investments have been catalytic in helping other countries and organizations make commitments to work to improve global health security. The United States launched and convened the GHSA, which led to participation by dozens of countries across the globe. The assessment tool developed by GHSA participants served as the foundation for the WHO's JEE assessment tool. In response to the recent Ebola outbreak in the Democratic Republic of Congo, the World Bank based its decision to make its first-ever Pandemic Financing Facility award—$12 million—in part on the results of the country's recently completed JEE. Each of these important developments was helped by US leadership and investments and stands as an example of the significant progress toward improved global health security that is possible with US support.

Though the scale of US investment in global health security initiatives could decrease with time as countries develop baseline capacities and as other international partners increase support for these endeavors, some meeting participants made a case that it is in the interests of the United States to stay involved, at some level, in global health security capacity building for the long run. Firstly, it is important that US leaders understand that many of the essential public health capacities have recurring costs. Personnel costs are a large portion of the global health budget of some US agencies, like the CDC. Though other countries can and should make greater investments to strengthen health security capacities across the globe, US overseas personnel are our country's eyes and ears when a serious outbreak emerges. Pulling back on support for country offices would ultimately diminish US situational awareness and ability to respond during public health emergencies.

Investments in bolstering countries' abilities to prevent, detect, and respond to infectious disease threats should be seen as measures to "safeguard economies." The USG and other governments should "end the cycle of panic and neglect" that tends to occur during and following events like Ebola outbreaks, and ensure a sustained commitment to improving health security capacities across the globe. Participants noted that preparedness efforts are generally less costly and more effective than mounting a response operation in the midst of a crisis; therefore, investments in working to boost countries' capacities should be seen as a cost-saving measure for the USG. Future funding of US GHS efforts should move into the normal budgetary cycle to remain sustainable. Prior experiences, such as funding for Ebola outbreak response, demonstrated that health security appropriations outside of the budget cycle

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can be more unstable and lead to situations in which adequate funding for health security efforts can detract funding from other programs.

Meeting participants noted that the long-term economic, health, and national security benefits of global health security investments are not yet well understood or considered by decisionmakers. Quantifying and expressing those benefits will be particularly important when justifying future funding of these programs. Stakeholders should clearly articulate historical bipartisan support for GHS funding and focus on maintaining bipartisanship especially as political environments continue to evolve. Collaborating government departments and agencies should emphasize a unified whole-government approach that illustrates the importance of GHS strategy in shaping their respective missions. Additionally, developing multi-year action plans and providing clear milestones or goals can encourage transparency and improve funding outlooks. Including DoD and USDA technical experts in planning is also important, as biosecurity funds are often the first to get reduced during a national security incident.

The Strategy Should Establish Clear Targets by Which to Measure Progress

Participants noted that the ability to accurately evaluate the progress of US efforts to improve gaps remaining in health security capacities across the world is essential for future planning and for judging the extent to which infectious disease outbreaks will pose risks to other countries. Measurement of the impact of US programs will be essential to make the case for continued funding. Some participants cited general strengths of current GHSA targets in measuring the impacts of US GHS programs. Others suggested that metrics used to evaluate other US programs are more compelling than existing GHSA targets. For example, the number of individuals using antiretroviral therapy is measured in PEPFAR. However, it is unclear whether comparable metrics are possible for GHS programs that, unlike PEPFAR, do not provide clinical services. Other participants suggested that qualitative tools could also be used to measure success, particularly when quantitative data were too difficult to collect. For example, identifying commonalities among outbreak responses that do, or do not, go well can help with future resource prioritization. The sharing of lessons learned among participating countries can also optimize resource allocation and prioritization.

One issue noted was the potential risk midstream changes to US GHS program evaluation metrics could pose to accurately evaluating those programs and demonstrating their value. Some participants noted that even if existing metrics are imperfect, it is better to keep them so as to have a consistent longitudinal measurement of progress. Other participants noted that as long as metrics are clear and explainable, it would be okay to modify them for the sake of improvement.

The US GHS Strategy Should Address Gaps Under Existing GHS Efforts

Several meeting participants pointed out that current efforts to advance global health security tend to ignore the need to strengthen the health systems upon which public health capacities depend. For example, the JEE and other national assessments tend to assume that public health laboratories are supported by functioning health systems able to see patients and collect specimens for those labs to analyze. However, many resource-constrained countries lack robust health systems, and efforts aimed at “health-systems strengthening” are not well integrated into efforts to promote health security. Additionally, some participants noted that efforts to combat the spread of antimicrobial resistance (one

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of the action packages of the GHSA) do not adequately address a key driver of resistance: overprescribing of antimicrobial agents by medical providers. They called for governments to do more to work with healthcare providers as partners in improving health security. Participants noted that the absence of adequate numbers of trained healthcare professionals is a key weakness in countries' abilities to prevent, detect, and respond to infectious disease outbreaks, and it is a weakness that is not adequately addressed by existing global health security initiatives. Training of medical professionals and engagement with local health departments will be crucial for ensuring that the higher-level US GHS Strategy and policies translate to the local level. Shortages of doctors and nurses can lead to inadequate or irresponsible healthcare administration and over-the-counter antimicrobial administration. The WHO Global Strategy on Human Resources for Health: Workforce 2030 is a recent effort aimed at helping countries meet healthcare workforce targets within the United Nations' Sustainable Development Goals. Ensuring that GHS efforts complement this goal and work to strengthen workforce will be important.

Additionally, some participants suggested that a focus on research and development (R&D) should be added to the US GHS Strategy. Having effective and safe medical countermeasures such as vaccines, medicines, and diagnostics are central to goals to prevent, detect, and respond to infectious disease outbreaks. However, R&D is not an area of focus of existing GHSA action packages and is not a coordinated focus of US global health security programs. One approach to including R&D more directly would be to more effectively share the outcomes of US R&D. Another would be to foster the development of R&D programs in low- and middle-income countries. Others, however, argued that support for R&D for medical countermeasures should be in a separate budget and strategy outside of the US Global Health Security strategy because they are expensive and are already addressed in budgets for NIH and BARDA.

Conclusion

Significant strides in strengthening GHS have occurred within the past 5 years, particularly after the initiation of the GHSA. US GHS work has required and promoted USG interagency collaboration and has a significant role in supporting the missions of diverse departments including DoD, HHS, and USDA. As the next phase of the GHSA approaches, communicating the benefits of these programs, engaging with diverse non-governmental partners, ensuring sustained funding, strengthening health systems, allowing targeted strategic flexibility, and maintaining robust measurements will all be critical steps toward continued progress.

The following members of the Johns Hopkins Center for Health Security contributed to this report: Divya Hosangadi, Jennifer B. Nuzzo, Noga Aharony, and Tom Inglesby.

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