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The U.S. Government and Global Health Security

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Key Facts

- Attention to global health security – that is, efforts to help prepare for and address pandemic and epidemic diseases – has grown significantly over the past few decades, driven by the ongoing threat posed by emerging infectious diseases (EIDs), including HIV, SARS, H1N1, Ebola, and Zika.
- While the U.S. government (U.S.) has supported global health security work for more than two decades, its involvement has expanded over time, and global health security is now a defined component of the U.S. global health response. The U.S. has also played a key role in development of the “Global Health Security Agenda (GHSA),” an international partnership launched in 2014.
- U.S. funding for its primary global health security programs –activities primarily carried out by the U.S. Agency for International Development (USAID), Centers for Disease Control and Prevention (CDC), and Department of Defense (DoD) – has remained relatively flat from FY 2006 (\$390 million) through FY 2017 (\$402 million), with episodic funding spikes through supplemental funding mechanisms reflecting specific outbreak events, including Ebola in FY 2015 (\$1 billion) and Zika in FY 2016 (\$145.5 million). The Administration has proposed reduced global health security funding for FY 2018 (\$353 million).
- Through these programs, the U.S. has helped other countries to make measurable improvements in capabilities to detect and respond to emerging disease events, but more work is needed to achieve stated U.S. objectives. In addition, while U.S. efforts were able to expand in recent years due largely to emergency Ebola and Zika funding, much of this funding is set to end in FY 2019, leaving the future of an expanded U.S. response uncertain.

Global Situation

After a period of optimism during the 1960s and 1970s about humankind’s ability to conquer infectious diseases, global concern about EIDs² and their threat to global health security has grown. The emergence of the HIV epidemic in 1981 marked an important turning point in global consciousness about vulnerabilities to emerging diseases. Since then, multiple other new human infectious diseases have been identified (e.g. SARS,

Global Health Security: Activities supporting epidemic and pandemic preparedness and capabilities at the country and global levels in order to minimize vulnerability to acute public health events that can endanger the health of populations across geographical regions and international boundaries.¹

MERS); others have “re-emerged,” causing greater numbers of cases than before and/or affecting different populations and regions (e.g., dengue fever, or Ebola); and still others have developed resistance to available treatments (e.g., multi-drug resistant tuberculosis) or been newly linked to adverse health outcomes (e.g., Zika). See Table 1. Emergence and spread are driven by a number of factors, including population growth; greater international travel and trade; changes in animal handling, agricultural, and land use practices that can lead to more contact between people and animals (the source of many new human diseases³); and poor public health infrastructure in many parts of the world.

Table 1: Selected Emerging Infectious Diseases Since 1975⁴

Emerging Disease	Year First Identified	Description
Ebola Virus Disease (Ebola)	1976	West Africa epidemic 2014-15 caused 28,616 cases and 11,310 deaths
HIV/AIDS	1981	36.7 million people worldwide living with HIV/AIDS in 2016
H5N1 Influenza (“bird flu”)	1997	850 cases and 449 deaths between 2003-2016
Severe Acute Respiratory Syndrome (SARS)	2003	8,096 cases and 774 deaths worldwide
H1N1 (2009) Influenza (“swine flu”)	2009	More than 284,000 deaths worldwide
Middle East Respiratory Syndrome (MERS)	2012	2,090 cases in 27 countries, and 730 deaths
H7N9 Influenza (“bird flu”)	2013	1589 cases and 616 deaths in China
Zika Congenital Syndrome	2015	235 infants born in U.S./territories with Zika-linked birth defects

NOTES: As of Oct. 17, 2017.

While not every newly identified infectious disease has major public health implications, some result in significant epidemics or global pandemics. Such outbreaks can lead to significant economic costs and interruptions in trade and travel. For example, SARS created an estimated \$30 billion in economic losses (over \$3 million per case) in 2003, primarily from reduced commerce, travel and trade.⁵ Zika is expected to cost six U.S. states an estimated \$0.5 to \$2 billion.⁶ Looking ahead, it is estimated that an influenza pandemic similar in nature to the 1918 influenza pandemic could kill 100 million people worldwide and cost 5% of global GDP.⁷

In 2005, because of growing concerns about emerging diseases, member states of the World Health Organization (WHO) agreed to revise the *International Health Regulations* (IHR), a legally-binding instrument requiring countries to develop a minimum level of capacity to “detect, assess, notify and report” potential outbreaks and other public health emergencies.⁸ Most countries have yet to do so though; by 2014, just 64 of the 196 WHO member states (33%) self-reported as having met minimum IHR capacity benchmarks.⁹ Further, the global health security capabilities of WHO itself were called into question following its poor response to the Ebola outbreak in West Africa in 2014.¹⁰ More recently, the Sustainable Development Goals (SDGs), adopted by the U.N. in 2015, include specific reference to the importance of global health security as part of SDG 3 (“ensure healthy lives and promote well-being for all at all ages”) as follows: “strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks.”¹¹

U.S. Government Efforts

For more than two decades, the U.S. has actively engaged in efforts to address global health security.¹² U.S. policy milestones include:

- key policy documents, such as a 1996 Presidential Directive and subsequent U.S. strategies on health security (released in 2010 and updated in 2015) and antibiotic-resistant bacteria (released in 2014);¹³
- active U.S. engagement in and support for the 2005 IHR revision;¹⁴
- a U.S. Memorandum of Understanding with WHO on global health security (2011);¹⁵
- U.S. leadership in the development, launch, and ongoing activities of the GHSA;¹⁶ and
- an unprecedented deployment of U.S. personnel (including over 2,000 uniformed military service members), and resources in response to Ebola in West Africa, with Congress authorizing emergency appropriations for the response and for global health security.

ORGANIZATION

Multiple U.S. agencies support global health security activities to prevent, prepare for, detect, and respond to EIDs.¹⁷ The **National Security Council (NSC)** is responsible for overall U.S. strategy and coordinating U.S. work on global health security.¹⁸ Key implementing agencies include USAID, CDC, and DoD.

USAID

USAID's **Emerging Pandemic Threats (EPT)** program helps countries build their capacity to identify and respond to dangerous pathogens in animals and humans and to be prepared for outbreaks, including pandemics.¹⁹ Other USAID global health programs support general health systems strengthening, including building surveillance and laboratory capacities that have applications for global health security.

CDC

Several CDC divisions and programs, including the **Global Health Protection Division of the Center for Global Health**, engage in global health security efforts. The Division provides capacity-building, training, and educational support to other countries through the Global Disease Detection (GDD) Program and the Field Epidemiology Training Program (FETP).²⁰ Other CDC global health programs help build surveillance, laboratory, and other capacities relevant to global health security.²¹ CDC has also created a cross-agency rapid response team for deployment in the event of an outbreak.²² The CDC was instrumental in developing the GHSA (see below) and is involved in supporting other countries' efforts to reach the GHSA's goals and targets in conjunction with other partners.

DoD

The Department of Defense (DoD) is engaged in global health security efforts through two main programs. The Defense Threat Reduction Agency's **Cooperative Biological Engagement Program (CBEP)** funds capacity-building efforts to strengthen partner countries' biosecurity, surveillance, and response capabilities and is a component of the DoD's broader Cooperative Threat Reduction (CTR) program.²³ The **Global Emerging Infections Surveillance and Response System (GEIS)** provides technical and funding support for DoD and partner organizations' surveillance, research and development, outbreak response, and local capacity-building²⁴ and helps support Army and Navy laboratories that are located in multiple countries.²⁵

OTHER U.S. GHS EFFORTS

The **Department of State** engages in diplomacy and coordination in support of global health security and is home to the Biological Engagement Program (BEP), a GHSA-related biological security assistance and capacity building effort with an annual budget of about \$35 million a year.³⁰ The **Department of Health and Human Services (HHS)** is the official U.S. point of contact with WHO for IHR purposes and has typically been the primary U.S. representative at multilateral meetings on EID topics; it also helps plan and coordinate U.S. global health security efforts. The **National Institutes of Health (NIH)** supports research and development of vaccines and drugs for EIDs, and the **Food and Drug Administration (FDA)** oversees their subsequent regulatory approval. The **Department of Agriculture (USDA)** engages in capacity building for animal health and food safety and supports surveillance and research on animal diseases overseas.

U.S. ENGAGEMENT IN THE GHSA

The U.S. government played the leading role in developing the Global Health Security Agenda (GHSA), an international, multilateral initiative that aims to “provide guidance for countries to assess and manage serious health threats that have the potential to spread beyond their borders” and accelerate progress toward a world “safe and secure from infectious disease threats.”³³ With an initial five-year horizon (2014-2019), the GHSA was created to help countries build the basic capacities required under the IHR, elevate pandemic threats as a global priority, and bring together actors across governments and societies to address infectious diseases. Today, the U.S. remains a key member of the initiative as part of the GHSA Steering Group, and recently, the Administration has expressed support for the extension of the GHSA for an additional five years.³⁴

The U.S. has an emphasis on 31 countries and one region in its global health security activities related to the GHSA (see Tables 2 and 3). In July 2015, the U.S. announced it would spend \$1 billion on these activities in the 17 “Phase One” countries over five years

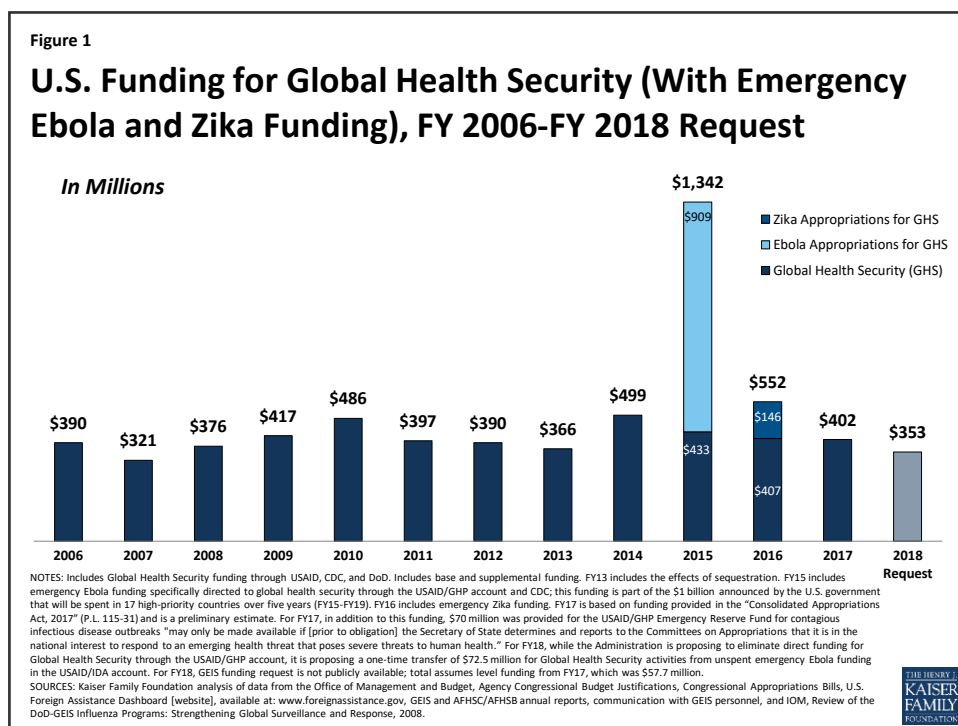
Table 2: Priority Countries for U.S. Global Health Security Efforts Related to the GHSA ³¹			
Phase One (17 countries, announced in July 2015)		Phase Two (14 countries and 1 region, announced in Nov. 2015)	
Bangladesh	Liberia	Cambodia	Malaysia
Burkina Faso	Mali	Democratic Republic of Congo	Mozambique
Cameroon	Pakistan	Georgia	Peru
Cote D'Ivoire	Senegal	Ghana	Rwanda
Ethiopia	Sierra Leone	Haiti	Thailand
Guinea	Tanzania	Jordan	Ukraine
India	Uganda	Kazakhstan	Caribbean Community (CARICOM) ³²
Indonesia	Vietnam	Laos	
Kenya			

Table 3: The GHSA's Approach
<p>Launched in 2014, the Global Health Security Agenda (GHSA) includes governments (including the U.S.) and multilateral institutions (including WHO), with support from public and private stakeholders, and was initially designed as a five-year (2014-2019) effort. Its more than 50 member countries have agreed to coordinate efforts and progress toward a set of goals in 11 areas (known as “action packages”).²⁶ Some countries also agreed to undergo an external evaluation process to determine areas for improvement under the GHSA.²⁷ This ultimately led to the development of the Joint External Evaluation (JEE) tool, which has helped over 50 countries measure areas in need of improvement under the GHSA. The overarching goals of the GHSA are threefold:</p> <ol style="list-style-type: none">1. prevent avoidable epidemics, including naturally-occurring, intentional, or accidental outbreaks;2. detect threats early, including identifying, characterizing, and transparently reporting threats at the earliest possible moment; and3. respond rapidly and effectively to biological threats of international concern.²⁸ <p>The GHSA Steering Group, which includes the U.S. and nine other countries, coordinates the work among member countries.²⁹ In addition to the WHO, other key partners in the GHSA include the United Nations Food and Agriculture Organization (FAO) and the World Organization for Animal Health (OIE), since many EIDs have origins in animals. The World Bank and World Trade Organization (WTO) are also GHSA partners, and the private sector engages through a GHSA Private Sector Roundtable.</p> <p>The GHSA and IHRs are meant to be complementary approaches, as GHSA action packages are designed to support countries’ progress toward meeting their IHR core capacity requirements. While the GHSA and IHR facilitate cooperative efforts among countries, ultimately country governments are responsible for ensuring capacity to prevent, identify, and respond to emerging diseases within their borders.</p>

(FY 2015-FY 2019). This \$1 billion includes \$909 million specified for global health security by Congress in the FY 2015 emergency Ebola appropriation (see below) as well as additional Ebola funds that the U.S. government determined support global health security activities.³⁵ U.S. global health security efforts contribute to partner countries' implementation of GHSA action packages. Measurable improvements in country capabilities have been reported, including more comprehensive and timely reporting of disease outbreaks in countries like Cameroon, India, Uganda, and Vietnam.³⁶

FUNDING³⁷

Total funding for the primary U.S. global health security programs has remained relatively flat from FY 2006 through FY 2017, with episodic spikes in funding through supplemental funding mechanisms (including emergency funding) reflecting specific outbreak events, including Ebola in FY 2015 and Zika in FY 2016. U.S. funding was \$407 million in FY 2016 (not including Zika funding) and \$402 million in FY 2017 (see Figure 1). The Administration has requested \$353 million for global health security in FY 2018, which would represent a decrease of \$49 million (12%) compared to FY 2017.



Funding is provided through both regular appropriations and at times through supplemental appropriations (usually designated as emergency funding not subject to budget spending limits) in response to specific disease events. For example, Congress provided \$3.7 billion in emergency funding in FY 2015 for international activities related to the Ebola outbreak, specifying that \$909 million – \$312 million to USAID and \$597 million to CDC – should be directed to global health security activities.³⁸ The CDC funding must be expended by the end of FY 2019, while the USAID funding does not have an end date.³⁹ In FY 2016, Congress provided an additional \$145.5 million for global health security activities at USAID as part of an emergency Zika funding package to be expended in that fiscal year.⁴⁰

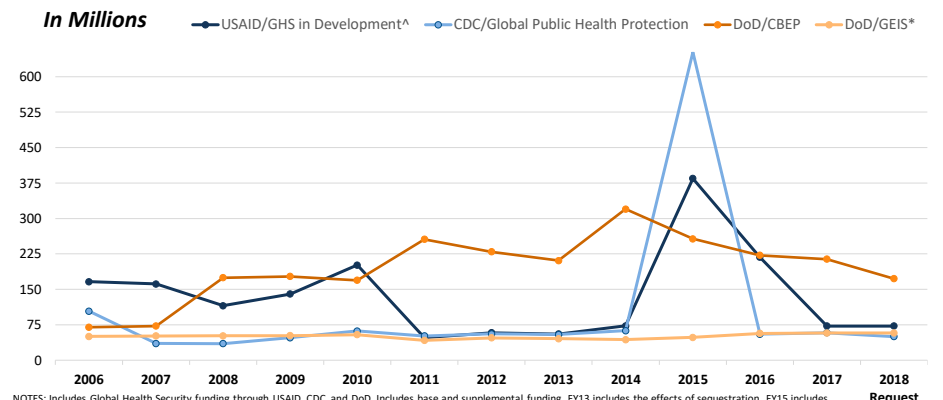
U.S. funding for global health security is provided primarily through accounts at USAID, CDC, and DoD (see Figure 2 and Table 4):

- **USAID:** After falling from its peak of \$201 million in FY 2010 to below \$60 million each year from FY 2011 through FY 2013, USAID received about \$72.5 million each year since FY 2014 through regular

appropriations for its global health security activities,⁴¹ primarily the EPT program. In FY 2015, however, its overall total grew to \$385 million, including \$312 million in emergency Ebola funding made available with no end date, and in FY 2016, it was \$218 million, including \$145.5 million in emergency Zika funding to be expended in that fiscal year. In FY 2017, its funding was \$72.5 million; additionally, Congress provided for a \$70 million “emergency reserve fund,” to be made available to support a future response to an “emerging health threat that poses severe threats to human health.”⁴² The Administration has requested \$72.5 million in re-programmed funding to support global health security activities in FY 2018.⁴³

Figure 2

U.S. Funding for Global Health Security (With Emergency Ebola and Zika Funding), FY 2006-FY 2018 Request



NOTES: Includes Global Health Security funding through USAID, CDC, and DoD. Includes base and supplemental funding. FY13 includes the effects of sequestration. FY15 includes emergency Ebola funding specifically directed to global health security through the USAID/GHP account and CDC; this funding is part of the \$1 billion announced by the U.S. government that will be spent in 17 high-priority countries over five years (FY15-FY19). FY16 includes emergency Zika funding. FY17 is based on funding provided in the “Consolidated Appropriations Act, 2017” (P.L. 115-31) and is a preliminary estimate. For FY17, in addition to this funding, \$70 million was provided for the USAID/GHP Emergency Reserve Fund for contagious infectious disease outbreaks “may only be made available if [prior to obligation] the Secretary of State determines and reports to the Committees on Appropriations that it is in the national interest to respond to an emerging health threat that poses severe threats to human health.” For FY18, while the Administration is proposing to eliminate direct funding for Global Health Security through the USAID/GHP account, it is proposing a one-time transfer of \$72.5 million for Global Health Security activities from unspent emergency Ebola funding in the USAID/IDA account. ^a Indicates this was previously referred to as “Pandemic Influenza and Other Emerging Threats” (PIOTET). ^{*} For FY18, GEIS funding request is not publicly available; total assumes level funding from FY17, which was \$57.7 million. SOURCES: Kaiser Family Foundation analysis of data from the Office of Management and Budget, Agency Congressional Budget Justifications, Congressional Appropriations Bills, U.S. Foreign Assistance Dashboard [website], available at: www.foreignassistance.gov. GEIS and AFHSC/AFHSB annual reports, communication with GEIS personnel, and IOM, Review of the DoD-GEIS Influenza Programs: Strengthening Global Surveillance and Response, 2008.

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- **CDC:** Since FY 2012, CDC received roughly \$55 million each year under “Global Public Health Protection.” In FY 2015, however, its overall total grew to \$652 million including \$597 million in emergency Ebola funding, which was made available to be spent through FY 2019. CDC’s global public health protection program received \$55.2 million in FY 2016 and \$58.2 million in FY 2017. The Administration has requested \$50 million for these activities in FY 2018.
- **DoD:** The highest-funded U.S. global health security program, CBEP received \$222 million in FY 2016 and \$214 million in FY 2017, down from a high of \$320 million in FY 2014 but up significantly from \$70 million in FY 2006. GEIS received between \$42 to \$58 million each year during that period. The Administration has requested \$172.8 million for CBEP in FY 2018, while its FY 2018 request for GEIS is not currently known.⁴⁴

Beyond these key accounts, other funds may be used for global health security activities, though public information about them is often limited. For example, DoD provides some funding to support Army and Navy overseas labs, and the Department of State, USDA, and other agencies’ budgets support additional global health security activities.⁴⁵

Table 4: U.S. Funding for Global Health Security (Including Emergency Ebola and Zika Funding), FY 2006–FY2018 Request⁴⁶
(in \$ millions)

Agency/Account	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18*
USAID/GHS in Development^a	166.0	161.5	115.2	140.0	201.5	47.9	58.1	55.2	72.6	384.5	218.0	72.5 ^b	72.5 ^c
From Emergency Ebola	--	--	--	--	--	--	--	--	--	312.0 ^d	--	--	--
From Emergency Zika	--	--	--	--	--	--	--	--	--	--	145.5	--	--
CDC/Global Public Health Protection	103.8 ^e	35.3	35.0	47.5	61.9	51.2	55.6	54.3	62.6	652.1	55.2	58.2	50.0
From Emergency Ebola	--	--	--	--	--	--	--	--	--	597.0 ^d	--	--	--
DoD	120.1	123.9	226.2	229.5	223.1	297.9	276.6	256.6	363.4	305.0	278.9	271.7	172.8
CBEP	69.8	72.4	174.5	177.5	169.1	255.9	229.5	211.0	320.0	256.8	222.0	214.0	172.8
GEIS	50.3	51.5	51.7	52.0	54.0	42.0	47.1	45.6	43.4	48.2	56.9	57.7	57.7
TOTAL	390.0	320.7	376.4	417.0	486.5	397.0	390.3	366.2	498.5	1341.6	552.1	402.4	352.9

NOTES: * indicates the President's budget request. -- indicates not applicable. Includes base and supplemental funding (including emergency funding). FY13 includes the effects of sequestration. "a" indicates that this was previously referred to as "Pandemic Influenza and Other Emerging Threats" (PIOET). "b" indicates that in addition to this FY17 funding, Congress also provided \$70 million for a USAID "emergency reserve fund" for contagious infectious disease outbreaks that can be made available if there is an "emerging health threat that poses severe threats to human health." "c" indicates that for FY18, while the Administration is proposing to eliminate direct funding for Global Health Security through the USAID/GHP account, it is proposing a one-time transfer of \$72.5 million for Global Health Security activities from unspent emergency Ebola funding in the USAID/IDA account. "d" indicates FY15 emergency Ebola funding specifically directed to global health security through the USAID/GHP account or CDC; this funding is part of the \$1 billion announced by the U.S. government that will be spent in 17 high-priority countries over five years (FY15-FY19). "e" indicates that in FY06, DoD provided a one-time transfer of \$68 million to CDC for activities now falling under Global Public Health Protection. "f" indicates for FY18, requested GEIS funding level is not publicly available at this time, so this assumes level funding at the FY17 level.

Key Issues for the U.S.

The U.S. has supported global health security activities for more than two decades, with long-standing U.S. programs and policies in place, and was a key architect and driving force in the launch of the GHSA. Through these activities, the U.S. has helped other countries make measurable improvements in their capabilities to detect and respond to emerging disease events.⁴⁷ Even so, U.S. attention to and funding for global health security have waxed and waned over time, often driven by responses to specific disease events – such as Ebola in 2014/15 and Zika in 2016 – and there remain several issues about the future of U.S. engagement in this arena. These include:

- the future U.S. funding for global health security efforts and the potential scaling back of recently expanded U.S. efforts if funding levels are not sustained in coming years;
- the U.S. role in shaping the GHSA going forward;
- U.S. government coordination across the interagency (particularly between the health and security sectors) as well as with partner countries and multilateral actors, such as WHO;
- encouragement and help to countries to meet IHR obligations and GHSA targets; and
- support of efforts to strengthen global epidemic response processes, particularly at WHO.⁴⁸

¹ Definition adapted from the World Health Organization (WHO) definition for global health security in WHO, *World Health Report 2007 - A Safer Future: Global Public Health Security in the 21st Century*, 2007, <http://www.who.int/whr/2007/overview/en/>. Research and development activities for countermeasures to emerging diseases, while recognized as being important for global health security, are not included within the scope of this analysis. The terms "global health security" and "health security" do not have a universally agreed-upon definitions, and opinions can differ as to what is and is not included within each. See: C. McInnes, "The many meanings of health security", in S. Rushton and J. Youde (eds), *Routledge Handbook of Global Health Security*, 2014, pp. 7-17; and W. Aldis, "Health security as a public health concept: a critical analysis," *Health Policy & Planning*, 2008, 23(6):369–375.

- ² Description of EIDs provided in this paragraph draws on definitions that appear in Institute of Medicine (National Academy of Medicine), *Microbial Threats to Health: Emergence, Detection and Response*, 2003; and HV Fineberg and ME Wilson, “Emerging Infectious Diseases,” International Risk Governance Council, 2010, http://www.irgc.org/TMG/pdf/Emerging_Infectious_Diseases_Fineberg_and_Wilson.pdf.
- ³ Most EIDs in human (an estimated 60–80%) have origins in animals. See Quammen D, *Spillover: Animal Infections and the Next Human Pandemic*, 2013; and Morens and Fauci (2013). Emerging Infectious Diseases: Threats to Human Health and Global Stability. *PLoS Pathogens*, 9(7): e1003467.
- ⁴ Ebola-<https://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/case-counts.html>; HIV/AIDS-<http://www.unaids.org/en/resources/fact-sheet>; H5N1 Influenza-http://www.who.int/influenza/human_animal_interface/EN_GIP_20160404cumulativenumberH5N1cases.pdf?ua=1; SARS-<https://www.cdc.gov/sars/about/fs-sars.html>; H1N1 (2009) Influenza-Dawood FS, et al. Estimated global mortality associated with the first 12 months of 2009 pandemic influenza A H1N1 virus circulation: a modelling study *Lancet Infectious Diseases* 12(9):687–695; MERS-<http://www.who.int/emergencies/mers-cov/en/>; H7N9 Influenza-http://www.fao.org/ag/againfo/programmes/en/empres/h7n9/situation_update.html; Zika- <https://www.cdc.gov/zika/reporting/pregnancy-outcomes.html>.
- ⁵ X. Fan, “SARS: economic impacts and implications,” Policy Brief 15, ADB, 2003.
- ⁶ BY Lee, et al., “The potential economic burden of Zika in the continental United States,” *PLoS Neglected Tropical Diseases*, <http://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0005531>.
- ⁷ World Bank, *From Panic and Neglect to Investing in Health Security: Financing Pandemic Preparedness at the National Level*, May 2017, <http://documents.worldbank.org/curated/en/979591495652724770/pdf/115271-REVISED-PUBLIC-IWG-Report-Conference-Edition-8-10-2017-low-res.pdf>.
- ⁸ WHO, “About IHR,” webpage, <http://www.who.int/ihr/about/en/>; WHO, “Frequently asked questions about the International Health Regulations (2005),” fact sheet, 2009.
- ⁹ L. Gostin and R. Katz, “The International Health Regulations: The Governing Framework for Global Health Security,” *Milbank Quarterly*, 2016, Vol. 94(2):264–313.
- ¹⁰ S. Moon, et al., “Will Ebola change the game? Ten essential reforms before the next pandemic. The report of the Harvard-LSHTM Independent Panel on the Global Response to Ebola,” *Lancet*, 2015, 386(10009):2204–2221; B.D. Colen, “An indictment of Ebola response,” *Harvard Gazette*, Nov. 22, 2015, <https://news.harvard.edu/gazette/story/2015/11/an-indictment-of-ebola-response/>; Michelle Roberts, “WHO ‘unfit for health emergencies’,” BBC, July 7, 2015, <http://www.bbc.com/news/health-33422635>.
- ¹¹ U.N., *Transforming our world: the 2030 Agenda for Sustainable Development*, 2015.
- ¹² Research and development activities for countermeasures to emerging diseases, while recognized as being important for global health security, are not included within the scope of this analysis.
- ¹³ White House: “Emerging Infectious Diseases,” PDD/NSTC-7, 1996; *National Health Security Strategy*, 2010 and 2015; and *National Strategy for Combating Antibiotic-Resistant Bacteria*, 2014. Examples of other policy documents mentioning health security and/or emerging disease threats include White House: *U.S. National Strategy on Countering Biological Threats*, 2009; *National Security Strategy*, 2015; and DoD: *Department of Defense Strategy for Countering Weapons of Mass Destruction*, 2014; *Quadrennial Defense Review*, 2010.
- ¹⁴ J. Fischer, S. Kornblat, and R. Katz, *The International Health Regulations (2005): Surveillance and Response in an Era of Globalization*, Stimson Center, June 2011, https://www.stimson.org/sites/default/files/file-attachments/The_International_Health_Regulations_White_Paper_Final_1.pdf.
- ¹⁵ White House, “U.S. Government and World Health Organization Sign Agreement to Help Developing Countries Strengthen Their Capabilities to Meet International Health Regulations,” press release, Sept. 19, 2011, <https://2009-2017.state.gov/r/pa/prs/ps/2011/09/172731.htm>.
- ¹⁶ HHS, “Global Health Security Agenda,” webpage, <https://www.hhs.gov/about/agencies/oga/global-health-security/agenda/index.html>; CDC, “U.S. Commitment to the Global Health Security Agenda,” 2014, http://www.cdc.gov/globalhealth/security/pdf/ghs_us_commitment.pdf.
- ¹⁷ U.S. Government, *Advancing the Global Health Security Agenda: Progress and Early Impact from U.S. Investment*, 2016, <https://www.ghsagenda.org/resources>.
- ¹⁸ White House, “Executive Order -- Advancing the Global Health Security Agenda to Achieve a World Safe and Secure from Infectious Disease Threats,” Nov. 2016, <https://obamawhitehouse.archives.gov/the-press-office/2016/11/04/executive-order-advancing-global-health-security-agenda-achieve-world>.
- ¹⁹ USAID, “Emerging Pandemic Threats 2 Program,” fact sheet, updated Jan. 11, 2016, <https://www.usaid.gov/news-information/fact-sheets/emerging-pandemic-threats-2-program/>.
- ²⁰ CDC, “Global Health Security: About Us,” webpage, <https://www.cdc.gov/globalhealth/healthprotection/ghs/about.html>.
- ²¹ For example, CDC also provides expert technical assistance during outbreak investigations and response efforts overseas, such as the Ebola and Zika outbreaks. It is also a WHO Collaborating Center for Implementation of International Health Regulations (IHR) Core Capacities as well as a WHO Collaborating Center for Public Health Informatics. CDC: “Emergency Response and Recovery: About Us,” webpage, <https://www.cdc.gov/globalhealth/healthprotection/errb/about.htm>; “WHO Collaborating Center for Public Health Informatics,” webpage, <https://www.cdc.gov/globalhealth/healthprotection/gphi/who.html>; WHO, “WHO Collaborating Centres for the International Health Regulations, points of entry,” webpage, http://www.who.int/ihr/ports_airports/collaborating_centres/en/.
- ²² CDC, “CDC Global Rapid Response Team,” webpage, <https://www.cdc.gov/globalhealth/healthprotection/errb/global-rrt.htm>.
- ²³ DoD, *Cooperative Biological Engagement Program FY 2015 Annual Accomplishments*, 2016; National Research Council, *The Biological Threat Reduction Program of the Department of Defense: From Foreign Assistance to Sustainable Partnerships*, 2007, National Academies Press, Washington, DC, <https://www.nap.edu/read/12005/chapter/1>.
- ²⁴ DoD, “Global Emerging Infections Surveillance and Response System,” webpage, <https://health.mil/Military-Health-Topics/Health-Readiness/Armed-Forces-Health-Surveillance-Branch/Global-Emerging-Infections-Surveillance-and-Response>.
- ²⁵ K. Moss and J. Michaud, *The U.S. Department of Defense and Global Health: Infectious Disease Efforts*, Kaiser Family Foundation (KFF), 2013.

- ²⁶ Global Health Security Agenda, “Members,” webpage, <https://www.ghsagenda.org/members>; HHS, “Global Health Security Agenda,” webpage, <https://www.hhs.gov/about/agencies/oga/global-health-security/agenda/index.html>; CDC, “U.S. Commitment to the Global Health Security Agenda,” 2014, http://www.cdc.gov/globalhealth/security/pdf/ghs_us_commitment.pdf.
- ²⁷ GHSA, “Assessments & JEE,” webpage, <https://www.ghsagenda.org/assessments>.
- ²⁸ GHSA, “About,” webpage, <https://www.ghsagenda.org/about>; CDC, “Global Health Security Agenda: Frequently Asked Questions,” webpage [no longer publicly available – accessed Sept. 2015].
- ²⁹ GHSA, “Membership,” webpage, <https://www.ghsagenda.org/members>.
- ³⁰ State Department, “Biosecurity Engagement Program,” webpage, <https://www.bepstate.net>; \$35m figure source: PATH, *Healthier World, Safer America*, Oct. 2017, <https://www.path.org/publications/detail.php?i=2804>.
- ³¹ White House: “FACT SHEET: The Global Health Security Agenda,” press release, July 28, 2015; “FACT SHEET: The U.S. Commitment to the Global Health Security Agenda,” press release, Nov. 16, 2015.
- ³² CARICOM consists of: as member states, Antigua and Barbuda, the Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Saint Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago, and as associate members, Anguilla, Bermuda, the British Virgin Islands, the Cayman Islands, and Turks and Caicos Islands. CARICOM, “Member States and Associate Members,” webpage, <http://caricom.org/about-caricom/who-we-are/our-governance/members-and-associate-members/>.
- ³³ CDC, “Global Health Security Agenda: Frequently Asked Questions,” webpage [no longer publicly available – accessed Sept. 2015].
- ³⁴ Tim Ziemer/White House, “Securing Global Health Through U.S. Leadership,” blog post, Oct. 23, 2017, <https://www.whitehouse.gov/blog/2017/10/23/securing-global-health-through-us-leadership>; Rex Tillerson, “Remarks at the Grand Challenges Annual Meeting,” transcript of remarks, Oct. 4, 2017, <https://www.state.gov/secretary/remarks/2017/10/274635.htm>.
- ³⁵ KFF analysis of FY 2015 Consolidated and Further Continuing Appropriations Act (P.L. 113-235), enacted Dec. 16, 2014; White House: “FACT SHEET: The Global Health Security Agenda,” press release, July 28, 2015; KFF personal communication with CDC staff, Oct. 2017.
- ³⁶ U.S. Government, *Advancing the Global Health Security Agenda: Progress and Early Impact from U.S. Investment*, 2016, <https://www.ghsagenda.org/resources>.
- ³⁷ KFF analysis of data from the Office of Management and Budget, agency congressional budget justifications, appropriations bills, the U.S. Foreign Assistance Dashboard (www.foreignassistance.gov), communication with GEIS personnel, GEIS and AFHSC/AFHSB Annual Reports, and IOM, *Review of the DoD-GEIS Influenza Programs: Strengthening Global Surveillance and Response*, 2008.
- ³⁸ KFF analysis of FY 2015 Consolidated and Further Continuing Appropriations Act (P.L. 113-235), enacted Dec. 16, 2014.
- ³⁹ \$597 million for CDC and \$312 million for the USAID Global Health Programs account.
- ⁴⁰ KFF analysis of Continuing Appropriations and Military Construction, Veterans Affairs, and Related Agencies Appropriations Act, 2017, and Zika Response and Preparedness Act (P.L. 114-223), enacted Sept. 29, 2016, which provides FY 2016 supplemental appropriations to respond to the Zika virus.
- ⁴¹ This funding stream used to be referred to as Pandemic Influenza and Other Emerging Threats (PIOET) but is now referred to as Global Health Security in Development in the most recent USAID congressional budget justification.
- ⁴² Funding provided for the Emergency Reserve Fund in FY 2017 is not included in global health security funding totals in this fact sheet.
- ⁴³ For FY 2018, while the Administration is proposing to eliminate direct funding for USAID’s global health security program through regular appropriations, it is proposing a one-time transfer of \$72.5 million for these activities from unspent emergency Ebola funding in the USAID/IDA account.
- ⁴⁴ Figure 2 and Table 4 assume level funding at the FY 2017 level for GEIS in the FY 2018 request.
- ⁴⁵ Furthermore, the U.S. funds other activities that support broader health systems capabilities in the U.S. and/or overseas that contribute to global health security and EID preparedness and response in emergencies (e.g., CDC’s epidemiology and laboratory training activities that are supported by its International Public Health Capacity Training funding and some domestic and overseas outbreak-related activities of CDC’s National Center for Emerging and Zoonotic Infectious Diseases).
- ⁴⁶ KFF analysis of data from the Office of Management and Budget, agency congressional budget justifications, appropriations bills, the U.S. Foreign Assistance Dashboard (www.foreignassistance.gov), personal communication with GEIS personnel, GEIS and AFHSC/AFHSB Annual Reports, and IOM, *Review of the DoD-GEIS Influenza Programs: Strengthening Global Surveillance and Response*, 2008.
- ⁴⁷ For example, see Arthur G. Fitzmaurice, et al., “Contributions of the US Centers for Disease Control and Prevention in Implementing the Global Health Security Agenda in 17 Partner Countries,” *Emerging Infectious Diseases*, 2017, Vol. 23 Suppl., https://wwwnc.cdc.gov/eid/article/23/13/17-0898_article.
- ⁴⁸ National Academy of Medicine, *The Neglected Dimension of Global Security*, 2016.