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Educating and Training the Department of Defense Workforce for Global Health Engagement to Support the Geographic Combatant Commands



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About This Report

Despite the importance of global health to U.S. national security and the value of U.S. Department of Defense (DoD) global health engagement (GHE) to security cooperation and military readiness, a 2018 GHE capabilities-based assessment (CBA) funded by the Deputy Assistant Secretary of Defense for Health Readiness Policy and Oversight (DASD HRP&O) found substantial gaps in the way DoD, as a whole, organizes, manages, and resources GHE activities and develops its workforce for GHE. A DOTmLPF-P Change Recommendation (DCR) was compiled to close the gaps identified during the CBA, and the DCR's 15 recommended actions were endorsed in a Joint Requirements Oversight Council Memorandum, with DASD HRP&O requested to serve as the lead organization for implementation. The Office of the Assistant Secretary of Defense (OASD) for Health Affairs asked RAND researchers to conduct research and analysis in support of actions related to education and training, the feasibility of an Intellipedia-like site, technology platforms, and funding mechanisms. This report presents the results of this research in one of these areas: GHE education and training.

Using a systematic review of the GHE literature, discussions with more than 80 subject-matter experts and officials, a review of materials from nearly 70 GHE-relevant blocks of instruction, and two GHE stakeholder workshops, we developed key findings and policy recommendations with respect to target student populations, GHE competencies, professional development pathways, GHE courses and course providers, and instructional strategies. In addition, we developed a concept for integrating the major GHE education and training components and a prioritized framework for implementing the policy recommendations. This report should be of interest to members of DoD's GHE community, as well as officials and policy analysts in the larger DoD medical and health and security cooperation communities.

This report is part of a series of three reports on DoD GHE activities. The two companion reports detail our study findings on employing the most-efficient technology platforms and on orchestrating funding mechanisms to enable long-term GHE capability development.

Human Subject Protections (HSP) protocols were used in this study in accordance with the appropriate statutes and DoD regulations governing HSP. Additionally, the views of the sources rendered anonymous by HSP are solely their own and do not represent the official policy or position of DoD or the U.S. government.

The research reported here was completed in October 2022 and underwent security review with the sponsor and the Defense Office of Prepublication and Security Review before public release.

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For more information on the RAND Personnel, Readiness, and Health Program, see www.rand.org/nsrd/prh or contact the director (contact information is provided on the webpage).

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Summary

The importance of global health to U.S. national security was brought into sharp relief when the coronavirus disease 2019 (COVID-19) pandemic expanded exponentially in 2020 and inflicted serious and prolonged harm to the world's populations, economies, and political systems. For many national security experts, this recognition of global health's importance coincided with a belief in the value of U.S. Department of Defense (DoD) global health engagement (GHE) as an instrument of security cooperation with U.S. allies and partners and as an enabler of readiness for U.S. and allied military forces.¹ However, as discussed in a 2018 GHE capabilities-based assessment (CBA) funded by the Deputy Assistant Secretary of Defense for Health Readiness Policy and Oversight (DASD HRP&O), DoD is constrained in its ability to conduct GHE activities by limitations in the way the department, as a whole, organizes, manages, and resources GHE activities and develops its workforce for GHE. To close the gaps identified, the CBA committee generated a DOTmLPF-P² Change Recommendation (DCR). Its 15 recommendations were endorsed by the Joint Requirements Oversight Council (JROC), which requested DASD HRP&O to serve as the lead organization for implementing the recommendations. The Office of the Assistant Secretary of Defense (OASD) for Health Affairs asked RAND researchers to conduct research and analysis in support of actions related to education and training (E&T), technology platforms, and funding mechanisms. This report presents the results of this research into educating and training the DoD workforce for GHE in support of the combatant commands (CCMDs).³

GHE E&T matters for three reasons:

1. It is a principal means by which DoD develops and maintains a workforce that is prepared to conduct the right kind of GHE activities in the right way.
2. It is important for developing a broad understanding within DoD about what GHE is and how it contributes to departmental objectives.
3. It provides a basis of support for the resources required to carry out GHE activities that help achieve DoD objectives.

¹ GHE activities include global health–related initiatives in the areas of force protection, such as medical research and development activities; humanitarian assistance and foreign disaster relief; nuclear, chemical and biological defense programs; and building partner capacity and interoperability.

² DOTmLPF-P stands for stands for Doctrine, Organization, Training, materiel, Leadership and education, Personnel, Facilities, and Policy.

³ The two other reports in this series are Beth Grill, Trupti Brahmbhatt, Pauline Moore, Jennifer D. P. Moroney, and Chandler Sachs, *Funding Global Health Engagement to Support the Geographic Combatant Commands*, RAND Corporation, RR-A1357-2, 2023; and Padmaja Vedula, Trupti Brahmbhatt, Jonathan Tran, and Chandler Sachs, *Assessing Technology Platforms for Global Health Engagement to Support Integration of Efforts Across Geographic Combatant Commands*, RAND Corporation, RR-A1357-3, 2023.

Behind the 2018 CBA’s call for improved GHE E&T was a broad critique of human resource–related shortcomings. These criticisms include

- insufficient intercultural and foreign language capabilities among GHE practitioners
- limited GHE planning capabilities within the CCMDs and service component commands
- an imbalance in GHE resources devoted to the treatment of foreign nationals versus building partner medical and health capacity
- inadequate understanding of GHE and its utility for enabling DoD security cooperation and operations
- inadequate preparation of DoD medical and health personnel for working in austere environments and helping to develop sustainable partner medical and health capabilities
- a lack of consensus within DoD regarding the competencies required by GHE personnel in support of the CCMDs.⁴

Research Approach

Although this report addresses most of the DCR topics recommended for review by JROC, we adopted a strategic, holistic, and practical research approach to (1) analyze the major elements of GHE E&T,⁵ (2) develop and evaluate a range of options for improving GHE E&T, and (3) present an integrated and sequenced set of E&T recommendations for the GHE community. Accordingly, we organized our investigative efforts around the following eight research questions:

1. Which DoD populations need GHE competencies (i.e., knowledge, skills, and abilities), and why?
2. What GHE competencies do each of these populations need?
3. How can each population develop and expand needed competencies throughout their careers through GHE E&T?
4. Which institutions are or could be responsible for GHE E&T for DoD populations?

⁴ Discussions with U.S. defense officials, November 17, 2020, and January 7, 14, and 21, 2021; Maysaa Mahmood, Ali Alameri, Ali, Shakir Jawad, Yasir Alani, Scott Zuerlein, Gregg Nakano, Warner Anderson, and Charles Beadling, “Cross-Cultural Communication Capabilities of U.S. Military Trainers: Host Nation Perspective,” *Military Medicine*, Vol. 178, No. 6, June 2013; and Bertram C. Providence, Derek Licina, and Andrew Leiendecker, “Increasing Partner-Nation Capacity Through Global Health Engagement,” *Joint Force Quarterly*, No. 87, October 2017.

⁵ In this report, we regularly use the composite term *education and training*, or E&T. We acknowledge that the two words are not synonymous: *Education* is commonly referred to as the acquisition of broad knowledge and skills (typically, within a classroom) over a protracted period; *training* focuses on the acquisition of a specific and applied knowledge and skills (often, on-the-job or in the field) over a shorter duration. However, many GHE-relevant learning institutions offer both education and training courses, as well as courses that contain educational and training aspects. Furthermore, the groups of students targeted for GHE instruction often require both education and training, although they may need different kinds of education and training, delivered by different institutional providers, at different stages of their careers. Therefore, using education and training in combination often makes sense in the context of GHE. Still, as demonstrated in subsequent chapters, we take care to distinguish between different types of education and training in our analysis of GHE courses, providers, and student populations when the situation warrants it.

5. What curricula—programs, courses, and certifications—could these institutions offer?
6. What instructional strategies are being employed for GHE E&T by these institutions? Are they appropriate for target populations?
7. What are the challenges to providing GHE E&T, and how might they be overcome or mitigated?
8. How should the components of GHE E&T be conceptually integrated? How might any changes necessary for GHE E&T improvement be strategically assigned and sequenced?

We relied on four main sources of data for our research and analysis:

1. a systematic review of the policy and academic literature related to GHE E&T
2. a review of materials from 67 primarily DoD blocks of instruction relevant to GHE E&T⁶
3. semistructured discussions with 83 DoD GHE stakeholders and educational providers
4. two stakeholder workshops designed to synthesize findings and refine recommendations.

There are two main outputs of this study: (1) a concept for tailoring GHE E&T to different target populations that could serve as a focal point for discussions of DoD E&T guidance and (2) a tiered framework for implementing our policy recommendations, including for the offices of primary responsibility and offices of coordinating responsibility, along with potential implementation challenges.

Findings and Recommendations

We developed three types of research findings. First are challenges and opportunities that cut across the individual elements of GHE E&T. Second, the majority of the findings relate to important elements of E&T: i.e., target student populations, competencies and development pathways, courses and course providers, and instructional strategies. Finally, we created an overarching finding related to GHE E&T integration and implementation. These findings are summarized below by category.

Our elemental and overarching findings are followed by recommendations developed through an analysis of available options for E&T improvement and of challenges that might hinder, or opportunities that might facilitate, their implementation. These recommendations were honed via our stakeholder workshops and consultations with OASD Health Affairs and revised as necessary. We also suggest DoD offices of primary responsibility for implementing our recommendations (**in bold**) according to a combination of legal and policy jurisdiction, organizational interest, knowledge and experience, staff availability, and sponsor feedback. Behind these recommendations are two basic assumptions with respect to the management of DoD and the nature of security cooperation between the United States and its foreign partners: (1) policy and doctrine drive requirements, which in turn drive resources, and (2) there is an

⁶ In most cases, these blocks of instruction are individual courses. In some cases, however, they consist of multiple courses with similar content.

almost infinite demand for security cooperation,⁷ including GHE, but a finite amount of available resources for such cooperation, which necessitates prioritization when it comes to the development of operational and institutional requirements.

Cross-Cutting Challenges and Opportunities

Challenges that inhibit GHE E&T include

- insufficient joint and service requirements for specialist and nonspecialist GHE E&T⁸
- varying support for GHE professional development among the services
- limited assessment, monitoring, and evaluation expertise among GHE planners
- lack of resources (both personnel and funding) devoted to GHE E&T.

Opportunities that facilitate GHE E&T include

- increased awareness of DoD's role in global health
- interest expressed by DoD medical and health professionals in GHE courses
- DoD's use of GHE as an important tool in achieving its objectives.

Target Student Populations

Finding: A large portion of the DoD medical and health community who may become engaged in GHE activities does not receive GHE-specific E&T.

To expand GHE E&T opportunities for DoD personnel, we recommend the following:

- revise DoD Instruction 2000.30, *Global Health Engagement (GHE) Activities*, to drive the requirement for providing and tailoring GHE E&T to the broader DoD health and security cooperation communities and to GHE specialists (**OASD Strategy, Plans, and Capabilities**)
- make GHE a “special area of emphasis” for joint professional military education, requiring the insertion of GHE content into security cooperation and leadership courses (**Joint Staff**)
- finalize and deliver an intermediate (Fundamentals of Global Health Engagement 2) course for GHE specialists (**Center for Global Health Engagement**)

⁷ According to Joint Publication 3-20, *Security Cooperation*, Joint Chiefs of Staff, May 23, 2017, p. v, Security cooperation (SC) encompasses all Department of Defense (DOD) interactions, programs, and activities with foreign security forces (FSF) and their institutions to build relationships that help promote US interests; enable partner nations (PNs) to provide the US access to territory, infrastructure, information, and resources; and/or to build and apply their capacity and capabilities consistent with US defense objectives. It includes, but is not limited to, military engagements with foreign defense and security establishments (including those governmental organizations that primarily perform disaster or emergency response functions), DOD-administered security assistance (SA) programs, combined exercises, international armaments cooperation, and information sharing and collaboration.

⁸ By *specialists*, we mean designated GHE professionals, including Air Force International Health Specialists, Navy Global Health Specialists, and Army Veterinary Corps global health specialists. By *nonspecialists*, we mean other DoD medical and health professionals—as well as certain DoD operational and security cooperation professionals—who are or may become engaged in planning or executing GHE activities.

- jointly create GHE content for medical professional development E&T courses, especially for medical planners (**Uniformed Services University of the Health Sciences, Defense Health Agency and the Defense Medical Readiness Training Institute, and service medical E&T providers**).

Competencies

Finding: GHE competencies are not standardized across the services.

To promote the development of joint and service GHE competencies and associated E&T, we recommend the following:

- identify and prioritize the joint GHE competencies—and constituent knowledge, skills, and abilities—required to support CCMD GHE efforts in accordance with U.S. Office of Personnel Management standards (**Joint Staff and CCMD Surgeons General, with the assistance of joint and service GHE experts**)⁹
- establish service-specific GHE competencies, knowledge, skills, and abilities (**service GHE programs and medical E&T providers**)
- continue to incorporate GHE missions into Combatant Command Plan and Operational Plan medical annexes (**CCMD Surgeons General**)
- establish just-in-time GHE training for security cooperation and operations (**Defense Health Agency and the Defense Military Readiness Training Institute**).

Development Pathways

Finding: GHE development pathways are not systematically established.

To encourage the institutionalization of GHE career development pathways via service and joint mechanisms, we recommend the following:

- establish a program or programs for nonveterinarian Army personnel to develop GHE professionals (**Army Surgeon General**)
- review CCMD and service component medical and health billets for GHE workforce relevance and determine required GHE competencies for these billets to meet CCMD requirements (**CCMD Surgeons General and services**)
- consider conducting a study on the career path and promotion potential of GHE assignments that accounts for the education and experience of GHE practitioners (**service GHE programs**)
- convene a joint working group to compare GHE and security cooperation professional development and determine whether a formal linkage is warranted (**OASD Health Affairs and the Defense Security Cooperation University**).

⁹ The U.S. Office of Personnel Management has used its Multipurpose Occupational Systems Analysis Inventory—Closed-Ended (MOSAIC) methodology to conduct occupational studies of federal government positions and functions for more than 20 years. See U.S. Office of Personnel Management, “Policy, Data, Oversight: Assessment & Selection,” webpage, undated.

Courses

Finding: Few courses recommended by GHE programs and experts have GHE-specific content, limiting the exposure of nonspecialist DoD personnel to GHE concepts and practices.

To expand the number of DoD E&T courses with GHE content, we recommend the following:

- establish a working group to determine gaps and overlaps in the GHE content of medical professional development courses (especially for medical planners) and consider course modifications that increase the medical community's exposure to GHE (**joint and service medical E&T providers**)
- develop service requirements for basic and intermediate GHE instruction and determine appropriate delivery mechanisms (**service GHE programs**)
- review medical and health billets for security cooperation workforce relevance, determine the security cooperation training necessary for these billets, and ensure all GHE professionals with security cooperation responsibilities are in the Security Cooperation Workforce Development Database (CCMDs, services, and Defense Security Cooperation Agency).¹⁰

Course Providers

Finding: There is no explicit division of curricular responsibility among course providers.

To establish a more explicit division of curricular responsibility among GHE E&T providers, we recommend the following:

- develop service requirements for joint basic and intermediate GHE E&T and determine appropriate delivery mechanisms (**service GHE programs**)
- finalize and deliver basic and intermediate courses—e.g., Fundamentals of Global Health Engagement 1, the Global Health Engagement Orientation Course, and Fundamentals of Global Health Engagement 2—for GHE specialists in all services to meet jointly developed competency requirements (**Center for Global Health Engagement, service GHE programs**)
- determine the GHE content in existing medical professional development courses and create additional content for these courses as needed (**joint and service medical E&T providers**)
- determine whether additional resources are needed to ensure sufficient course offerings and qualified instructors (**Center for Global Health Engagement, service GHE programs, and joint and service medical E&T providers**).

Instructional Strategies

Finding: GHE courses are mostly academic and increasingly virtual.

¹⁰ Maintained by the Defense Security Cooperation University, the Defense Security Cooperation Workforce Development Database contains security cooperation positions from around the world, organized by organization and funding source, and provides the status of training for the security cooperation workforce.

To better tailor GHE instruction to different target populations, we recommend the following:

- study the types of GHE personnel (e.g., planners, operators) who would benefit from more practical training and consider expanding practical training offerings for these personnel (e.g., field training, joint medical readiness training) (**Center for Global Health Engagement, service GHE programs, Uniformed Services University of the Health Sciences, Defense Medical Readiness Training Institute**)
- study the efficiency and effectiveness of virtual GHE course instruction during the COVID-19 pandemic (**OASD Health Affairs, Center for Global Health Engagement**).

Integration and Implementation

Finding: GHE has been conducted with limited strategic and policy integration of E&T elements and joint development of E&T policy.

To develop and implement an integrated, centrally managed GHE E&T strategy, we recommend the following:

- incorporate conceptual guidance on the need for GHE E&T that is tailored to different target populations into DoD Instruction 2000.30 (**OASD Strategy, Plans and Capabilities**)
- endorse a tiered implementation framework for GHE education, training, and professional development (**GHE Council**).

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Chapter 1. Introduction

The coronavirus disease 2019 (COVID-19) pandemic brought into sharp relief the importance of global health to U.S. national security.¹¹ Not coincidentally, national security experts are recognizing the value of U.S. Department of Defense (DoD) global health engagement (GHE) activities as an instrument of security cooperation with U.S. allies and partners and an enabler of readiness for U.S. and allied military forces.¹² In support of this belief in the efficacy of GHE, the authors of a 2021 report published by the Center for Strategic and International Studies wrote that DoD played a significant role in procuring and delivering 1 billion doses of the Pfizer-BioNTech vaccine to a wide variety of low- and middle-income countries and could do even more in combating COVID-19 globally, given its logistical, biosurveillance, and infectious disease research capabilities and network of international security relationships.¹³ And yet, as explained below, experts and leaders in the GHE community have identified major gaps in DoD's capabilities to conduct GHE, including in the education and training (E&T) of medical and health personnel and nonmedical personnel involved in planning, approval, and execution of GHE activities.

In this introductory chapter, we define GHE, describe the major DoD GHE stakeholder organizations, review the force development constraints that affect the operation and expansion of GHE, discuss our role in supporting DoD to better understand and remedy challenges related to GHE E&T, outline our research approach and key research questions, and summarize the contents of the rest of this report.

Global Health Engagement Definition

Department of Defense Instruction 2000.30, issued by the Under Secretary of Defense for Policy in 2017, establishes policy, assigns responsibility, and prescribes procedures for conducting GHE activities. It also establishes a capacious definition of the GHE mission. As Figure 1.1 indicates, GHE encompasses a range of sometimes overlapping activities in the areas

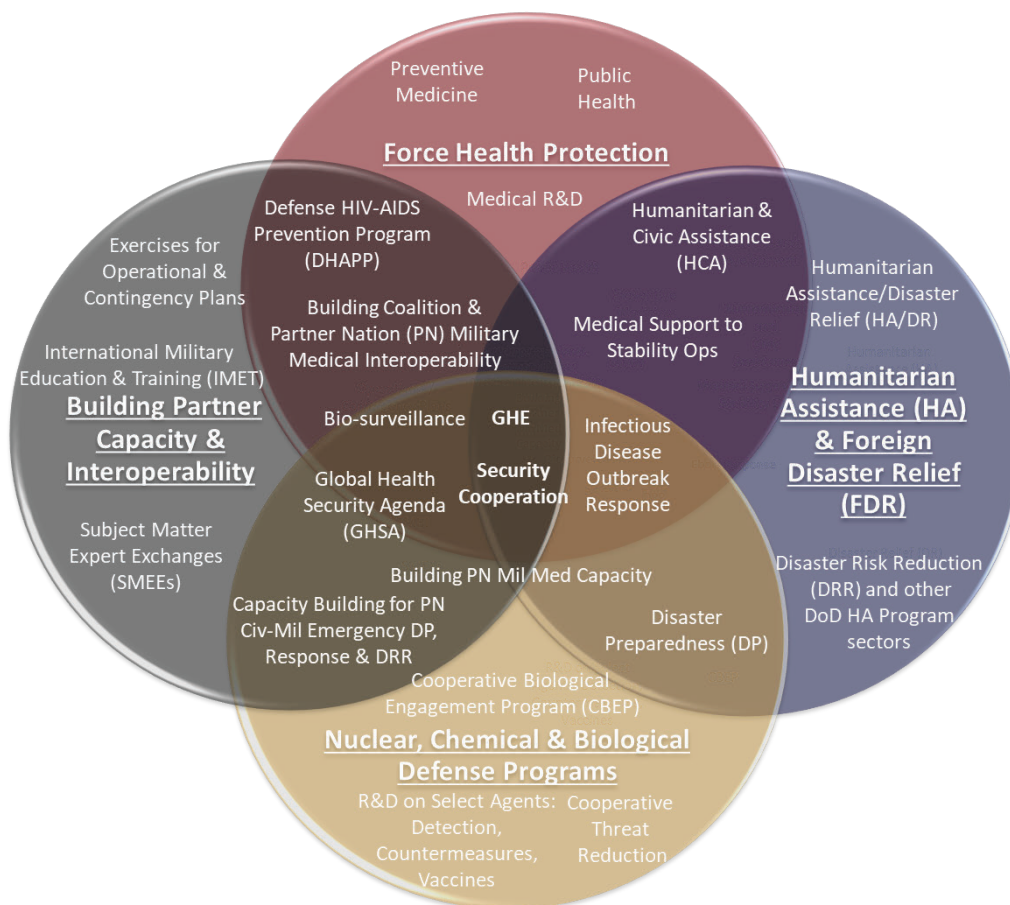
¹¹ Craig Albert, Amado Baez, and Joshua Rutland, "Human Security as Biosecurity: Reconceptualizing National Security Threats in the Time of COVID-19," *Politics and the Life Sciences*, Vol. 40, No. 1, May 2021; and Segun Oshewolo and Agaptus Nwozor, "COVID-19: Projecting the National Security Dimensions of Pandemics," *Strategic Analysis*, Vol. 44, No. 3, 2020.

¹² Asad Moten, Daniel Schafer, and Edwin K. Burkett, "Global Health Engagement and the Department of Defense as a Vehicle for Security and Sustainable Global Health," *Military Medicine*, Vol. 183, No. 1–2, January–February 2018; and Gerald V. Quinnan, Jr., "The Future of Department of Defense Global Health Engagement," *Joint Force Quarterly*, No. 80, January 2016.

¹³ Thomas Cullison and J. Stephen Morrison, "Department of Defense Contributions to the U.S. Covid-19 Response, at Home and Abroad," Center for Strategic and International Studies, December 16, 2021.

of force protection; humanitarian assistance and foreign disaster relief; nuclear, chemical, and biological defense; and building partner capacity and interoperability.¹⁴

Figure 1.1. Conceptual Framework for the Spectrum of DoD GHE Activities



SOURCES: Adapted from Uniformed Services University, “Department of Defense Global Health Engagement,” briefing, undated, Not available to the general public; and Department of Defense Instruction 2000.30, 2017, p. 4.

The Global Health Engagement Enterprise

Figure 1.2 depicts major organizational elements of the loosely knit GHE enterprise. DoD stakeholders who provide top-level guidance and resources to the GHE community include the Office of the Assistant Secretary of Defense (OASD) for Health Affairs, the Joint Staff Surgeon, the Defense Health Agency, and the services’ surgeons general. Coordinating GHE activities within DoD and in relation to the rest of the U.S. government and the international community is

¹⁴ Department of Defense Instruction 2000.30, *Global Health Engagement (GHE) Activities*, U.S. Department of Defense, July 12, 2017, p. 4.

the GHE council, a task force of all the major DoD stakeholders led by OASD Strategy, Plans, and Capabilities.

Figure 1.2. GHE Stakeholders and Education and Training Providers



Helping provide the human infrastructure for DoD GHE activities are several joint and service programs, as well as educational and research institutions. The Air Force’s IHS program, established in 2000, and the Navy’s GHS program, established in 2017, manage the recruitment and professional development of each service’s cadre of several hundred medical and health officers by ensuring that these officers have the appropriate GHE experience and training for advisory positions within the CCMDs, SCCs, and other DoD agencies. Each program has a diverse (albeit somewhat different) set of competencies associated with a two-tiered secondary career specialization, which can be obtained through recommended GHE-related training courses or on-the-job GHE experiences.¹⁵ Although the Army does not currently have a GHE occupational specialization that is open to all members of its medical department, the Army

¹⁵ For more information on IHS/GHS competencies and associated E&T, Air Force Instruction 44-162, *International Health Specialist (IHS) Program and Global Health Engagement (GHE)*, Department of the Air Force, March 28, 2019; and Bureau of Medicine and Surgery Instruction 6000.17, *Global Health Specialist Program*, Department of the Navy, February 17, 2017.

Veterinary Corps recently created two new skill identifiers for field and senior veterinary global health specialists and established training requirements for them.¹⁶ Throughout this report, we will use the term *specialist* to refer to designated GHE professionals, currently including Air Force IHS, Navy GHS, and Army Veterinary Corps GHS. Nonspecialist GHE practitioners include other DoD medical and health professionals—as well as certain DoD operational and security cooperation professionals—who are in some way engaged in planning or executing GHE activities.

Many joint and service E&T institutions are involved in some way in providing E&T that is relevant to GHE.¹⁷ The Defense Institute for Medical Operations, managed by the Air Force, was established in 2002 as a joint security cooperation school that provides health E&T to international military and civilian partners (generally through mobile education teams) in support of CCMD objectives.¹⁸ Three other important joint GHE education efforts operating under the auspices of the Uniformed Services University of the Health Sciences (USUHS) are the

- Global Health Distance Learning Program, which offers a graduate certificate in GHE
- Global Health Track in four master's degree programs in the Uniformed Services University School of Medicine's Department of Preventive Medicine and Biostatistics¹⁹
- Center for Global Health Engagement (CGHE), established in 2016, which provides operational support to the DoD GHE enterprise through research and scholarship, leadership and leader development, and E&T, including managing the Fundamentals of Global Health Engagement (FOGHE) course.²⁰

The DMRTI, a component of the Defense Health Agency, manages the Joint Medical Operations Course, which is a regular component of many GHE specialists' educational curriculum. Service E&T providers, such as USAFSAM, the Naval Medical Leader and Professional Development

¹⁶ Department of the Army, Office of the Deputy Chief of Staff, G-1, "Notification of Future Change to DA Pam 611-21, O-2010-05, Establishment of Skill Identifier (SI) 8D (Field Veterinary Global Health Engagement Specialist), SI 8E (Senior Veterinary Global Health Engagement Specialist) and Revision of Branch 64 (Veterinary Corps)," memorandum, July 22, 2020.

¹⁷ In this report, we regularly use the composite term *education and training*, or E&T. We acknowledge that the two words are not synonymous: *Education* is commonly referred to as the acquisition of broad knowledge and skills (typically, within a classroom) over a protracted period; *training* focuses on the acquisition of a specific and applied knowledge and skills (often, on-the-job or in the field) over a shorter duration. However, many GHE-relevant learning institutions offer both education and training courses, as well as courses that contain educational and training aspects. Furthermore, the groups of students targeted for GHE instruction often require both education and training, although they may need different kinds of education and training, delivered by different institutional providers, at different stages of their careers. Therefore, using education and training in combination often makes sense in the context of GHE. Still, as demonstrated in subsequent chapters, we take care to distinguish between different types of education and training in our analysis of GHE courses, providers, and student populations when the situation warrants it.

¹⁸ Air Force Research Laboratory, "The Defense Institute for Medical Operations (DIMO)," webpage, undated.

¹⁹ Uniformed Services University School of Medicine, "Global Health Distance Learning Program," webpage, undated.

²⁰ Center for Global Health Engagement, homepage, undated-a.

Command, and the U.S. Army Medical Department Center and School, also provide foundational courses (e.g., in public health, preventive medicine, and medical planning; operations and intelligence), which are considered essential for GHE specialists and nonspecialists.²¹ The National Defense University also offers a Health Strategies elective concentration for senior military leaders, which contains a GHE block of instruction. Finally, the DSCU offers courses in security cooperation planning and programming that are attended by GHE specialists who serve in the billets at combatant and SCCs.

At the operational level, the CCMD and SCC surgeons general plan and oversee the execution of GHE activities in their areas of operation with the assistance of GHE specialists from the services.

Force Development Constraints and Remedies

Constraining DoD's ability to conduct GHE activities more broadly and more effectively to help achieve U.S. national security ends are limitations in the way the department, as a whole, organizes, manages, resources, and develops its workforce for GHE, a situation that one former DoD official equated to pedaling "a GHE bicycle without any handlebars."²² In 2018, a GHE capabilities-based assessment (CBA), funded by the Deputy Assistant Secretary of Defense for Health Readiness Policy and Oversight, identified the following overall gaps in GHE capabilities:

- lack of an operational framework, methodology, and relevant metrics to assess the effectiveness of GHE activities
- lack of standardized ways and means to capture, track, and monitor execution of GHE activities
- insufficient means to analyze the status of partner nation and host nation health systems and assistance needs
- inconsistent training
- lack of consistent funding or multiyear funding.

²¹ Franzello Aeromedical Library, "USAFSAM Education Portal: Public Health & Preventative Medicine," webpage, updated November 3, 2022; and Naval Medical Leader Professional Development Command, "Plans, Operations, and Medical Intelligence Course (POMIC)," webpage, undated.

²² Derek Joseph Licina, E. Amspacher, and C. Francisco, "United States Department of Defense Global Health Engagement: Watering Plastic Flowers in the Hopes That They Will Grow?" *International Review of the Armed Forces Medical Services*, Vol. 93, No. 2, June 2020, p. 55.

To close these gaps, the CBA committee generated a DOTmLPF-P²³ Change Recommendation (DCR) with 15 recommendations, which were endorsed via a Joint Requirements Oversight Council (JROC) Memorandum.²⁴

OASD Health Affairs asked RAND researchers to help synchronize DoD's capability-building efforts in several of the above functional areas: specifically, E&T, technology platforms, and funding mechanisms. In this report, we present the results of our research into educating and training the DoD workforce for GHE in support of the CCMDs. Two companion reports detail our study findings on employing the most-efficient technology platforms and orchestrating funding mechanisms to enable long-term GHE capability development.²⁵

JROC's Education and Training Recommendations

GHE E&T matters for three basic reasons. The most obvious is that E&T is a principal means by which DoD develops and maintains a workforce that is prepared to conduct GHE activities. Beyond that, E&T is important for developing an understanding within the broader medical and health community and among nonmedical DoD planners and leaders about what GHE is and how it contributes to operational and security cooperation objectives. E&T provides a basis of support for the resources required to carry out GHE activities that help achieve DoD objectives.

The 2018 CBA identified gaps in DoD's capability and capacity to consistently train and educate the right personnel in the right set of competencies for the right positions and missions at the right points in their careers. Behind the call for improving and expanding GHE education, training, and professional development was a broad critique of human resources-related shortcomings found in the GHE literature and repeated in our discussions with GHE subject-matter experts and DoD medical and health leaders. These interrelated shortcomings include

- insufficient intercultural and foreign language capabilities among GHE practitioners²⁶
- limited GHE planning capabilities within the CCMDs and SCCs²⁷

²³ DOTmLPF-P stands for Doctrine, Organization, Training, materiel, Leadership and education, Personnel, Facilities, and Policy.

²⁴ Paul Selva, Vice Chairman of the Joint Chiefs of Staff, "DOTmLPF-P Change Recommendation for Global Health Engagement," memorandum, JROCM 008-19, February 25, 2019.

²⁵ See Beth Grill, Trupti Brahmhatt, Pauline Moore, Jennifer D. P. Moroney, and Chandler Sachs, *Funding Global Health Engagement to Support the Geographic Combatant Commands*, RAND Corporation, RR-A1357-2, 2023; and Padmaja Vedula, Trupti Brahmhatt, Jonathan Tran, and Chandler Sachs, *Assessing Technology Platforms for Global Health Engagement to Support Integration of Efforts Across Geographic Combatant Commands*, RAND Corporation, RR-A1357-3, 2023.

²⁶ Maysaa Mahmood, Ali Alameri, Ali, Shakir Jawad, Yasir Alani, Scott Zuerlein, Gregg Nakano, Warner Anderson, and Charles Beadling, "Cross-Cultural Communication Capabilities of U.S. Military Trainers: Host Nation Perspective," *Military Medicine*, Vol. 178, No. 6, June 2013.

²⁷ Discussion with U.S. defense official, January 21, 2021.

- an imbalance in GHE resources devoted to the treatment of foreign nationals versus building partner medical and health capacity²⁸
- inadequate understanding of GHE and its utility for enabling DoD security cooperation and operations within the military medical and health community and leadership²⁹
- inadequate preparation of DoD medical and health personnel for working in austere environments and helping to develop sustainable partner nation medical and health capabilities³⁰
- a lack of consensus within DoD regarding the competencies required by personnel from different services in positions associated with the planning and implementation of GHE activities in support of the CCMDs.³¹

To close the CBA-identified gaps in E&T, the DCR included four recommendations that were endorsed in the 2019 JROC memorandum:

- Review, revise, and (if necessary) develop GHE-related training modules across DoD to incorporate key principles outlined by DoD Instruction 2000.30 (*Global Health Engagement [GHE] Activities*). Consider the most appropriate platform for each of these trainings, including web-based applications for mobile device modules.
- Review, revise, and (if necessary) develop GHE-related education courses across DoD to incorporate key principles outlined by DoD Instruction 2000.30 (*Global Health Engagement [GHE] Activities*) and DoD Instruction 6200.07 (*Delivery of Direct Health Care to Non-Detainee Host Nation [HN] Civilians*). Consider the most appropriate platform for each of these trainings, including web-based applications for mobile device modules.
- Review and, as appropriate, revise medical planner courses and other relevant courses to incorporate GHE planning requirements. Provide GHE input to line community and CCMD training courses.
- Review and, as appropriate, incorporate pertinent curriculum material into Joint Professional Military Education core security cooperation curricula throughout the leadership continuum, including senior service colleges and command and staff institutions to educate leaders on the use and value of health capabilities and GHE as part of security cooperation operations.³²

Research Approach and Questions

Rather than conducting the tasks in the DCR actions in isolation without considering their relationship to the major elements of GHE E&T and the willingness and capability of GHE

²⁸ Bertram C. Providence, Derek Licina, and Andrew Leiendecker, “Increasing Partner-Nation Capacity Through Global Health Engagement,” *Joint Force Quarterly*, No. 87, October 2017.

²⁹ Discussion with U.S. defense official, January 7, 2021.

³⁰ Discussion with U.S. defense official, November 17, 2020.

³¹ Discussion with U.S. defense officials, January 14, 2021.

³² Selva, 2019.

stakeholders to carry out recommended actions, we adopted a research approach that addresses the GHE (E&T) problem in a strategic, holistic, and practical way, as follows:

1. analyzing the major elements of GHE E&T from the perspective of major GHE stakeholders and educational providers
2. developing and evaluating a range of options for improving GHE E&T that respond to issues raised by our research findings
3. presenting an integrated and sequenced set of recommendations that meet CCMD GHE priorities and that are supported by important GHE E&T providers.

We organized our investigative efforts around the following eight research questions:

1. Which DoD populations need GHE competencies (i.e., knowledge, skills, and abilities), and why?
2. What GHE competencies do each of these populations need?
3. How can each population develop and expand needed competencies throughout their careers through GHE E&T?
4. Which institutions are or could be responsible for GHE E&T for DoD populations?
5. What curricula—programs, courses, and certifications—do or could these institutions offer?
6. What instructional strategies are being employed for GHE E&T by these institutions? Are they appropriate for target populations?
7. What are the challenges to providing GHE E&T, and how might they be overcome or mitigated?
8. How should the components of GHE E&T be conceptually integrated? How might any changes necessary for GHE E&T improvement be strategically assigned and sequenced?

The first six questions involved seeking subject-matter expertise and documentary evidence on major components of GHE E&T: target student populations, GHE competencies, professional development pathways, GHE courses and course content, E&T providers, and instructional strategies. The latter two questions involved obtaining the perspectives of GHE experts and DoD E&T providers on the challenges associated with providing improved GHE E&T and developing a strategy for integrating and implementing our GHE E&T recommendations in close coordination with OASD Health Affairs.

Organization of This Report

This report is broken into eight short chapters and six appendixes. In Chapter 2, we describe the study methodology, including the literature review process, subject-matter expert discussions, course assessment process, and stakeholder workshops. Chapters 3–6 present findings that address the first six research questions listed above. Specifically, Chapter 3 focuses on targeted student populations. Chapter 4 addresses GHE competencies and professional development pathways. Chapter 5 discusses GHE courses and course providers. Chapter 6 covers the methods used by GHE instructors. In addition to presenting our findings related to shortfalls in these four topical areas, these chapters lay out options for mitigating these shortfalls, which

were developed during our stakeholder workshops. Normally, such options would be discussed in conjunction with study recommendations. In this report, however, these options are integrated with research findings because they represent the perspectives of important stakeholders who would be responsible for approving and executing any changes in DoD's GHE E&T strategy; therefore, they help establish the boundaries for acceptable recommendations. In Chapter 7, we discuss practical challenges to, and opportunities for, improving GHE E&T. In Chapter 8, we make policy recommendations based on the findings and options from Chapters 3–6 and the challenges and opportunities from Chapter 7. This final chapter also provides our proposed concept for integrating the major components of GHE E&T and a general strategy for implementing our policy recommendations.

The six appendixes contain information that supports and supplements our descriptions of the research methods, findings, and recommendations found in the main report. Appendix A describes our literature selection method. Appendix B classifies our discussion participants by number and organizational type and contains our discussion protocols. Appendix C outlines our data collection and analysis process. Appendix D provides our GHE course descriptions and course assessment criteria. Appendix E describes the methodology associated with the two GHE stakeholder workshops that we facilitated in September 2021. Appendix F presents a detailed framework for implementing our policy recommendations, along with possible Offices of Primary Responsibility (OPRs) and Offices of Coordinating Responsibility (OCRs) and potential implementation challenges.

Chapter 2. Methodology

We relied on four main sources of data for our study: (1) a review of the gray and academic literature, (2) a series of 30- to 60-minute discussions with 83 GHE stakeholders and E&T providers, (3) a review of GHE-relevant course materials, and (4) two 75-minute stakeholder workshops designed to confirm findings and refine recommendations. Data were collected and analyzed using a common analytic approach centered around a shared set of coding categories derived from the research questions (Tables 2.1 and 2.2). This approach allowed us to synthesize multiple sources of data along the main lines of inquiry and allowed us to capture distinct information for each data source. Multiple members of the study team engaged in data analysis, and we performed an interrater reliability process to ensure coding was consistent and to develop inclusion and exclusion guidelines for each of the coding categories.

We provide a brief overview of our research approach below. Greater detail on the tools, techniques, and approaches used to identify and analyze these sources of data can be found in Appendixes A through E.

Table 2.1. Linkages Between Research Questions and Coding Categories

Question	Coding Categories
1. Which DoD populations need GHE competencies, and why?	a) GHE competencies b) DoD GHE E&T target populations
2. What GHE competencies do each of these populations need?	a) GHE competencies b) DoD GHE E&T target populations
3. How does each population develop and expand needed competencies throughout their careers through GHE E&T?	b) DoD GHE E&T target populations
4. Which institutions are or could be responsible for GHE E&T for DoD populations?	c) GHE E&T providers f) GHE course target population and competencies
5. What curricula do or could these institutions offer?	d) GHE courses
6. What instructional strategies are being employed for GHE E&T by these institutions?	e) GHE course level and instructional approach
7. What are the challenges to providing GHE E&T to these populations, and how might they be overcome or mitigated?	g) GHE E&T challenges h) GHE E&T recommendations

Table 2.2. How We Used Our Data Sources for Each of Our Lines of Inquiry

Coding Category	Literature	Discussions	Course Materials	Stakeholder Workshops
a) GHE competencies	X	X	X	X
b) DoD GHE E&T target populations	X	X	X	X
c) GHE E&T providers	X	X	X	X
d) GHE courses	X	X	X	X
e) GHE course level and instructional approach			X	X
f) GHE course target population and competencies			X	X
g) GHE E&T challenges	X	X		X
h) GHE E&T recommendations	X	X		X

Data Selection

We selected the aforementioned four sources of data based on the research question and aims, as well as previous research on the topic. GHE E&T is not a well-established field of research, necessitating a primarily exploratory and qualitative orientation to research. Because it is also a field of practice, and our study goal is to contribute to improving GHE as a field of practice, we went beyond academic research and sources of data to include primary and secondary data from policymakers and practitioners.

Our literature review (Appendix A) was useful for gaining an understanding of GHE issues and practices that are relevant to our study and for identifying areas of inquiry for primary data collection and analysis. Literature also pointed us toward relevant competencies, target populations, providers, courses, and challenges and recommendations.

Discussions (Appendix B) were designed to build on the results of the literature review and provide additional information otherwise not available in the literature. We used the results of our literature review to develop a discussion protocol for our GHE E&T subject-matter experts and identify respondents.

Our GHE course review (Appendix D) was designed to understand the GHE courses available, including the competencies they were designed to develop for target populations, the providers offering the courses, and the level (basic or advanced) and instructional approach (lecture, seminar, practical educational exercises, fieldwork).

Lastly, the two stakeholder workshops (Appendix E) were designed to support the facilitation of the analysis process and ensure that the resulting findings and recommendations of the study were valid, complete, and useful for decisionmaking and policy improvement. The workshops therefore focused primarily on validating findings and formulating policy recommendations.

Data Collection

Because of the differing natures of our four data sets, our approaches to identifying data for our data sets varied. To identify our literature, we combined a systematic review of academic and gray literature with a snowball and expert-driven approach. We used the results of our literature review as part of the process for identifying an initial pool of potential subject-matter experts for semistructured discussions, which we expanded using snowball sampling techniques, conducting discussions until we reached a theoretical saturation point.

We identified our course material in a similar manner, combining the results of our literature review and recommendations from subject-matter experts with a systematic course search. Workshop participants were primarily subject-matter experts who participated in the semistructured discussions. We had a standardized approach to screening data, with an inclusion criteria based on whether the data were related to our coding categories and research questions. Screening processes were piloted before finalization, and we coordinated to ensure employment of consistent screening method across our study team members. Using this collection and screening approach, we ended up with 54 studies from the literature, 83 respondents, 67 blocks of instruction,³³ and two workshops that were relevant to the study and included in our analysis.

Data Analysis and Development of Results

As detailed in Appendix C, the sources of data were collected and analyzed concurrently and were used to triangulate each other and build coherent findings. Data were analyzed using coding frameworks that we developed. Each source of data had a slightly different coding frame, reflecting the differences in what these data could provide, but the data sources were centered around the common set of coding categories. All initial frameworks were drafted by the team, vetted with experts, and then piloted before finalization. All team members participated in the analysis process and worked together to ensure consistent analysis (interrater reliability). Data were analyzed concurrently because these data were collected to guide further collection and identify areas of further inquiry. This strategy was chosen because of the nascent state of the field and emergent nature of the study.

We used the same coding frame for subject-matter expert discussions and literature, which focused on two categories: background information on the literature or respondent and analytic codes. The background information was as follows:

1. name (of article/expert)
2. number (assigned by coder)
3. an abstract of article or background to respondent
4. whether GHE E&T is mentioned (binary yes/no; if no, stop).

³³ In most cases, these blocks of instruction are individual courses. In some cases, however, they consist of multiple courses with similar content.

The analytic codes were

1. utility of E&T for GHE
2. specific descriptions and assessments of GHE courses
3. instructional approaches
4. training institutions
5. competencies
6. GHE E&T populations
7. GHE E&T successes
8. GHE E&T challenges
9. recommendations
10. coder notes.

For the course review, we collected two categories of information: (1) basic background information about the course and (2) analytic and assessment criteria. The basic information we collected was

1. source
2. course title
3. course acronym
4. course description
5. course website
6. whether the course was discontinued, in development, or in use
7. name of institution and school or center providing the course
8. name of the program the course fell under.

The analytic criteria we used were

1. type of institution
2. type of education or training
3. level of GHE-specific content of the course
4. whether the course was identified as GHE-relevant instruction
5. course length and credit
6. whether the course is part of a series
7. stage of career where the course was taken
8. population receiving the course
9. instructional approach
10. competencies covered
11. GHE area covered in the course.

From our analysis of the literature and courses and our discussions, we generated initial findings and draft recommendations. We further refined these recommendations following two 75-minute workshops with key GHE E&T providers and users. The two workshops followed a common structure. Ahead of the workshops, participants were given a short read-ahead explaining the workshop's aims and process. Both workshops began with a reiteration of the workshop's aims and process before providing a short overview of the study (including the study's purpose, objectives, and areas of inquiry). Next, we engaged in a series of discussions on

draft recommendations, presenting our findings and draft recommendations as discussion prompts. We concluded with a wrap-up, during which we summarized the main workshop points as a confirmatory exercise. We took notes throughout the workshop, then used these notes to develop workshop summaries of the main points of discussion related to findings and recommendations.

Study Challenges

As with any research, our study had challenges. GHE, including E&T, is a broad mission area with multiple objectives, organizational participants, and E&T requirements. Such breadth can create challenges in identifying and synthesizing relevant data. To address these challenges, we took a broad approach to our data collection and analysis process, relying on multiple data types and sources. We also worked to ensure consistent screening and analysis through interresearcher reliability exercises. However, we may have missed certain data and perspectives. For instance, we had a large sample of discussion respondents across E&T providers and users: 83 in total. However, we received limited response to multiple requests for discussions with service E&T providers, which may limit the completeness of the discussion sampling pool.

Decisions on inclusion and exclusion criteria for data also influenced results. For instance, we took an expert-oriented approach to course selection, working with our subject-matter experts to identify GHE-related courses and combining this approach with a website search, looking for courses that explicitly mentioned GHE in the course material. This sampling strategy was designed to capture the courses focusing directly on GHE. However, these courses may be only a portion of those that could be relevant for building GHE competencies, since many of the competencies required for GHE are broader and not GHE specific. Once GHE competencies are finalized, follow-up work should explore course availability from a competency-based perspective.

Finally, our synthesis and development of findings may have limitations related to potential biases in analysis. We mitigated analytic biases over the course of the research by working to ensure consistent screening and analysis through interresearcher reliability exercises. The workshops also provided a key opportunity to vet findings and articulate policy solutions. To ensure we interpreted statements of workshop respondents appropriately, we summarized key findings and recommendations and offered an opportunity for additional feedback and discussion following the workshop.

Conclusion

Our study leveraged four types of data—literature, discussions, course material, and stakeholder workshop—and analyzed these data using a common set of coding categories. Relying on four types of data was useful for triangulation and for covering different dimensions of the research questions. Our systematic and thorough approach was designed to help us capture

GHE E&T data that were relevant to our main lines of inquiry in a way that mitigated research challenges. We present the results of this analysis in the following chapters, starting with an overview of the student populations that GHE E&T should target.

Chapter 3. Target Student Populations

Our first line of inquiry involved identifying the student populations that GHE-related E&T institutions potentially should target based on our understanding of the types of professionals who need some GHE knowledge and the student populations currently served. Below are categories of populations that may require GHE knowledge; we developed these categories based on interviews and our review of course materials. In other words, when it comes to GHE E&T, many of these are new categories, and therefore the numbers of students in each category who may receive GHE E&T are not systematically tracked. Moreover, our understanding of the need for GHE knowledge to support GHE activities is based on subject-matter expertise and those professionals' experiences with gaps in planning and engagements in the field. Thus, our analysis is mostly qualitative, although we have sought to identify numbers of courses that appear to serve the different categories of student populations (Figure 3.1).

We identified professionals potentially requiring various levels of GHE exposure as follows:

- *GHE specialists*, who guide, plan, execute, and evaluate health-related engagements that enhance partner-nation stability and security, build partner health capacity, and build trust and influence
- *medical planners*, who determine requirements for medical support to U.S. military operations and develop plans to ensure U.S. military medical readiness and resilience
- *medical and civil affairs operators*, who provide medical support to U.S. military operations and execute plans for U.S. military medical readiness and resilience
- *security cooperation and exercise planners*, who plan U.S. initiatives and engagements with foreign partner security forces
- *military leaders*, who allocate resources and direct forces and organizations that have a GHE-related remit
- *defense attachés and chiefs of offices of defense cooperation (ODCs)*, who work directly with foreign partner governments that may request health-related support
- *all military members*, referring to the general population of military professionals, both medical and nonmedical.

These categories of professionals are not mutually exclusive, as some students may belong to more than one population.

This chapter focuses on the finding associated with this line of inquiry and three options for mitigating the shortfall we identified.

Finding: A Large Portion of the DoD Medical and Health Community Who May Become Engaged in GHE Activities Does Not Receive GHE-Specific E&T

The main finding of the line of inquiry related to target student populations is that the courses provided by E&T institutions may need to serve a broader population than is currently the case. Current courses are targeted to health professionals but not toward other DoD professionals who would benefit. This finding is based on comments by several GHE stakeholders that some professional communities are not as involved in GHE-specific E&T as they should be.³⁴ Many of the stakeholders not only discussed the E&T requirements of GHE specialists but also stressed the need for some kind of GHE E&T for the broader DoD medical community—in particular, medical planners assigned to the CCMDs³⁵—as well as nonmedical personnel, such as security cooperation professionals, operational planners, and leaders.³⁶ Some stakeholders even suggested that all military personnel should have at least an awareness of GHE.³⁷ At this point, however, the foremost GHE guidance document, DoD Instruction 2000.30, does not contain information on policy, responsibilities, or procedures for providing and tailoring GHE E&T for various target student populations within DoD.³⁸

Interlocutors also made the point that there is a high demand for certain GHE courses among both medical and nonmedical personnel in all the services. One E&T provider official noted that some global health-related and GHE-related courses in the USUHS have had large increases in demand from a diverse population since they were established in the mid-2010s. For example, the Global Health Distance Learning Program at USUHS began with a relatively small number of students wanting to take one or two courses. Since then, however, the multicourse program, with a capacity for 180 students per semester, has had to waitlist 500 to 700 applicants and requires prioritization of the types of students it can accept.³⁹ Thus, although access to these and other courses is not generally restricted to certain kinds of professional specialties, capacity is often limited.⁴⁰ This may be due to a combination of a desire to limit courses to small groups, courses being offered less frequently than needed, and shortages in the availability of instructors.

Figure 3.1 provides a view of the number of blocks of instruction out of the 67 we analyzed (y-axis) compared with a breakout of the student populations who attended these courses from

³⁴ RAND GHE E&T Workshop discussions, September 27 and 29, 2021.

³⁵ Discussion with U.S. defense official, January 27, 2021.

³⁶ Discussions with U.S. defense officials, January 28, 2021, and June 14, 2021; and RAND GHE E&T Workshop discussions, September 27 and 29, 2021.

³⁷ Discussion with U.S. defense official, January 29, 2021.

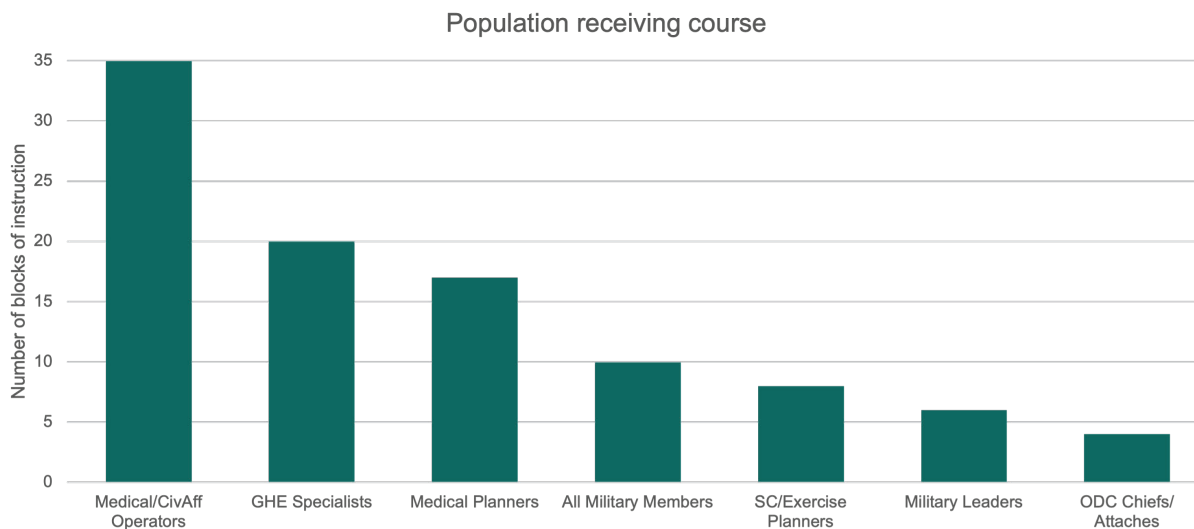
³⁸ Department of Defense Instruction 2000.30, 2017.

³⁹ Discussion with U.S. defense official, November 17, 2020.

⁴⁰ Discussions with U.S. defense officials, February 1, 2021, and June 14, 2021.

the professional communities listed above (x-axis). This figure is based on discussions with GHE stakeholders and officials from the institutions offering the courses, as well as a review of course descriptions that state which professional communities they target. We found that although there are courses available to a wide variety of students, the vast majority of the recommended courses we assessed cater to or are attended by medical operators and planners and GHE specialists.

Figure 3.1. Number of GHE-Related Blocks of Instruction and the Student Populations Served



NOTE: Students can belong to more than one group.

Medical and civil affairs operators attended 35 of the blocks of instruction we reviewed, the largest number for any group. This finding is partly attributable to the broad spectrum of medical professional development E&T and other related health courses we considered in our analysis. For example, 16 of the blocks of instruction were specialized medical and health professional development E&T courses offered by the U.S. Air Force School of Aerospace Medicine on such topics as biomedical engineering, flight nurse and aeromedical technician training, and occupational health—none of which touch on GHE. At the same time, GHE specialists and medical planners were also relatively well-represented in the courses we analyzed. GHE specialists attend courses that are required or suggested by their specialty, including CGHE’s FOGHE courses, USUHS’s Global Health Program courses, and the Air Force’s IHS Orientation Course. Army veterinarians can receive specialized GHE education at civilian universities, such as the University of Georgia’s College of Veterinary Medicine and University of California, Davis.⁴¹ Medical planners take several of these courses as well, including the Navy’s Plans,

⁴¹ These civilian university courses were not included in the counts of courses in Figure 3.1. We were not able to access information about these courses.

Operations, and Medical Intelligence course and the Joint Medical Operations courses offered by DMRTI.

By contrast, relatively few courses were attended by nonmedical personnel who might need to address GHE-related issues in the course of their duties, including security cooperation planners, military leaders, and key country team members, such as ODC chiefs. Courses—such as Humanitarian Assistance Response Training (HART) from the Center for Excellence in Disaster Management and Humanitarian Assistance in Honolulu and security cooperation courses at the DSCU in Washington, D.C.—do cover disaster relief and topics related to working with foreign partners. But these courses often do not touch on GHE concepts in their curricula. Security cooperation planners and country team members tend to take courses offered by DSCU (e.g., the intermediate security cooperation planning, oversight, and execution course or the international programs security requirements course) as part of their certifications or take the Army Security Cooperation Planners Course—none of which contained GHE-specific content.

Notably, very few military leaders appear to attend courses with GHE-specific content, suggesting a narrowing of options for rising leaders late in their careers. Besides the HART and other Center for Excellence in Disaster Management and Humanitarian Assistance courses, USAFSAM's Aerospace and Operational Medical Executive Symposium is one of a handful of courses we reviewed that are geared in part or in whole to leadership, but there is no GHE curriculum included in the five-day course. There also are advanced courses at USUHS (Global Health Seminar, Public Health Issues of Disasters in Developing Countries) that are attended by personnel late in their careers, but these are geared toward the medical community, not other leaders and commanders who might need a more foundational understanding of GHE.

Options for Broadening Student Populations Who Receive GHE-Specific Education and Training

If the student populations served by GHE-specific E&T are too narrow, to what extent should these offerings be broadened? Who should be targeted, and what are the advantages and disadvantages of these options? GHE stakeholders suggested that GHE-specific E&T should be provided to a wider population that includes not just GHE specialists but also other medical and health personnel, as well as certain professionals outside the medical and health specialties. There was relatively little discussion or agreement on the idea of providing GHE awareness to all military personnel across DoD. However, our GHE interlocutors favored a tailored system whereby the extent and venue of E&T would be different for three groups. First, GHE specialists should have more in-depth instruction than they are receiving currently, and that curricula could be varied based on whether students are seeking instruction to plan and organize GHE activities. Second, other medical and health personnel, such as medical planners, need greater exposure to GHE concepts earlier in their careers (though at more-basic levels than specialists), perhaps via jointly developed instruction modules. Third, certain nonmedical personnel—in particular,

security cooperation and operational planners on GCC staffs and in U.S. embassies—should at least be exposed to GHE concepts as part of their professional military education.

We draw from these ideas to formulate three options. The following options are not mutually exclusive and could be implemented individually or in combination:

1. **Focus on training and educating GHE specialists within DoD’s medical and health community.** This first option reinforces the educational strategies currently being pursued by the GHE programs of the services and could include creating such a program in the U.S. Army, which already has a GHE skill identifier focused only on veterinarians. Curricula and course offerings for specialists could be expanded both in terms of capacity and in terms of the depth of treatment in key GHE competencies. The advantage of this option would be that it would build on existing service programs that serve a well-defined and highly motivated student population. The Air Force and Navy international and global health specialists and their supervisors we interviewed spoke very highly of these programs in terms of the skills imparted and the GHE contributions that these programs have enabled.⁴² A disadvantage of this option is that it risks isolating GHE specialists from the broader medical and security cooperation communities if it is the sole focus of changes in targeted student populations. With over 300 specialists serving in the Air Force and a smaller number serving in the Navy,⁴³ the IHS and GHS programs have limited capacity, and the Army (with the largest number of medical professionals among the services) has no nonveterinary GHE specialists. Thus, without a substantial change in the size and scope of GHE specialist programs, GHE program specialists will not be able to plan, manage, execute, and assess the full range of GHE activities;⁴⁴ they will need assistance from nonspecialist medical practitioners and some nonmedical security cooperation and operational personnel.
2. **Provide basic GHE instruction to other medical and health professionals.** A second option is to require basic GHE instruction for all other medical and health professionals to expand awareness of and exposure to GHE concepts among populations who are likely to interact with foreign partners during the course of their careers. Personnel who are being trained as medics, planners of health operations and exercises, and medical leaders would be required to have a foundational understanding of GHE concepts and the environments in which they may be executed. This option would facilitate additional opportunities for growth in the GHE specialty by spreading awareness among medical and health professionals. It also would help create the conditions for increased support for GHE within the broader DoD medical community. Many interviewees stressed the need for GHE training for medical planners and leaders. Without such training, planners “don’t know or understand what’s available” in terms of GHE activities.⁴⁵ And providing basic GHE instruction for command surgeons general was a “huge” priority, one interviewee

⁴² Discussions with U.S. defense officials, November 12, 2020; February 4, 2021; February 15, 2021; March 11, 2021; and April 11, 2021.

⁴³ Air Force Medical Service, “International Health Specialists,” webpage, undated.

⁴⁴ Brian G. Min, *A Perspective on Military Medical Service Role in Stabilization Operations: Expansion of Air Force Medical Service Capabilities in Medical Diplomacy*, Air War College, April 6, 2017.

⁴⁵ Discussion with U.S. defense official, February 15, 2021.

noted, because of their control of the GHE program in theater.⁴⁶ However, this option would put GHE in competition with other, sometimes higher priorities of service medical education institutions,⁴⁷ and joint medical institutions lack both the stated requirement for GHE E&T from the CCMDs, the Joint Staff, and the Office of the Secretary of Defense (OSD) on the one hand and funding for the additional training on the other.⁴⁸

3. **Provide basic GHE instruction to nonmedical or nonhealth personnel engaged in security cooperation or humanitarian assistance/disaster relief (HA/DR) missions.**

The third option extends the second option to include nonmedical or nonhealth personnel who are likely to encounter GHE from a security cooperation or HA/DR perspective. For example, security cooperation planners who assess the security needs of partner nations and plan security cooperation initiatives or interventions based on U.S. objectives may address issues related to medical capacity-building in partner security forces. And those involved in supplementing partner resilience and response to natural or manmade disasters would benefit from a basic understanding of GHE concepts. Advantageous aspects of this option are (1) creating opportunities—within service and special operations component commands, geographic CCMDs, and U.S. embassy security cooperation and defense attaché offices—to better integrate GHE into security cooperation and HA/DR planning and implementation and (2) increasing awareness among nonmedical personnel in these organizations of the effectiveness of GHE as a tool for security cooperation and HA/DR.⁴⁹ A disadvantage often raised among interlocutors was the limited time and resources available for additional security cooperation and HA/DR instruction.⁵⁰

Stakeholder Feedback on Options

According to the feedback from GHE stakeholders who reviewed and commented on the options at our workshops, all three options should be considered together. Workshop participants agreed not only that GHE E&T needs to be expanded for GHE specialists but that basic instruction also should be given to medical personnel and nonmedical personnel in particular fields. Some interlocutors discussed creating a division between operational and tactical GHE—for example, focusing on operational-level program planning and implementation or tactical-level execution—in existing GHE-specific courses (such as the IHS Orientation course or FOGHE). However, getting the requirements attached to GHE billets was identified as an issue that needs to be resolved on a joint basis through the establishment of required knowledge, skills, and abilities. Others noted the importance of ensuring that other medical and health professionals—especially, leaders and commanders in the medical and health fields—know what

⁴⁶ Discussion with U.S. defense official, March 29, 2021.

⁴⁷ Discussion with U.S. defense officials, May 26, 2021.

⁴⁸ Discussions with U.S. defense officials, December 12, 2020, and November 23, 2021.

⁴⁹ Discussions with U.S. defense officials, November 12, 2020; January 7, 2021; January 14, 2021; February 4, 2021; and March 1, 2021.

⁵⁰ Discussion with U.S. defense officials, November 20, 2020.

GHE is and what it provides to ensure that the skills of GHE specialists can be appropriately used and applied to meet U.S. objectives. This could potentially be done at the service level by inserting GHE content into existing courses as a seminar or module. Another suggestion was to make GHE one of the Chairman of the Joint Chiefs of Staff's biannual "special areas of emphasis" for joint professional military education. Expanding the GHE content in security cooperation courses, some participants argued, would necessitate increasing the number of GHE-related billets that require security cooperation certification and training as registered in the Security Cooperation Workforce Development Database.⁵¹

Conclusion

In sum, our research indicated that the student populations undergoing E&T involving GHE content were overly focused on a narrow population of health professionals and that a greater number of health and nonmedical professionals would benefit from GHE instruction. Although providing GHE content to all military members was not seen as necessary by our interviewees, broadening the types of professionals who gain basic levels of understanding of GHE would offer opportunities for more-effective engagement with foreign partners. In the next chapter, we focus on GHE specialists, the competencies they build through E&T, and the efficacy of more-formalized career development.

⁵¹ Maintained by the Defense Security Cooperation University, the Security Cooperation Workforce Development Database contains security cooperation positions from around the world, organized by organization and funding source, and provides the status of training for the security cooperation workforce.

Chapter 4. Competencies and Development Pathways

The second and third lines of inquiry we addressed relate to the establishment of competencies for GHE specialists and pathways for their career development. We reviewed several GHE-related DoD and service-specific instructions to identify GHE competencies and variations across organizations, illuminate how these instructions associate E&T courses with these competencies, and understand how the competencies are to be attained by specialists throughout their careers (see Appendix D for details). In our outreach to GHE and educational stakeholders, we posed questions about these issues to get insight into how standardized the competencies were across organizations and how well-defined career pathways are for specialists.

Finding: GHE Competencies Are Not Standardized Across the Services

In pursuing our second line of inquiry on competencies, we found no DoD-wide, standardized set of core GHE competencies. The GHE-related instructions we reviewed set forth somewhat different, yet often overlapping, sets of required competencies; in addition, discussants mentioned a variety of such competencies that appeared to track with one or more of those instructions. DoD Instruction 2000.30 lays out the roles, responsibilities, and activities GHE is designed to support and gives responsibility to OASD Health Affairs to develop and oversee “policies regarding required competencies, professional conduct and standards of Military Health System personnel in the planning, conduct, assessment, monitoring, and evaluation of DoD GHE activities.”⁵² In fact, it has been left to the services to define competencies for their own GHE specialist programs (the Air Force’s IHS, Army’s Veterinary Corps, and Navy’s GHS programs). For example, the Air Force has established ten competencies for its IHS professionals, whereas the Navy has established six, each with subcompetencies.⁵³ Although it is within each services’ authority to develop its own GHE competencies—and it is advantageous to do so in areas in which service medical requirements are clearly different—many GHE specialist positions exist in the joint arena (e.g., on CCMD surgeon general staffs), and the requirements for these positions are arguably best determined jointly.

Although we were not able to conduct an operational analysis of the effects in the field of lack of standardization, many of the GHE subject-matter experts we interviewed subscribed to a

⁵² Department of Defense Instruction 2000.30, 2017, p. 8. GHE activities are categorized under four areas: force health protection, building partner capacity and interoperability, humanitarian assistance and foreign disaster relief, and nuclear, chemical, and biological defense programs.

⁵³ See Air Force Instruction 44-162, 2019, pp. 12–13; and Bureau of Medicine and Surgery Instruction 6000.17, 2017, pp. 8–14.

view that joint billets in the CCMDs, and even service billets at component commands that support the CCMDs, should have a level of standardization that is not met with service-specific competencies. The Air Force and Navy both have separate (though overlapping) competencies that may only partially address challenges faced when operating in a joint environment, while the Army, despite having a preponderance of practitioners, has no GHE specialization aside from the Veterinary Corps. There are differences in the way GHE professionals from each of the services plan and execute activities based on the domain focus of the service, but interlocutors contended that greater commonality is needed when one reaches the CCMDs and other joint organizations. Joint competencies would allow GHE specialists who are assigned to CCMD billets to maximize their effectiveness in the joint arena from the start rather than requiring months to learn the necessary lessons and apply them, only to then rotate out of those positions.⁵⁴

We reviewed GHE competencies in the service instructions for the U.S. Air Force's IHS program and the U.S. Navy's GHS program and gained insights on priorities in competencies from stakeholder discussions. We found considerable overlap across the service statements of GHE competencies.⁵⁵ For the purposes of our study, we combined the competencies from the instructions into six areas, depicted in Figure 4.1. According to this analysis, GHE specialists should be competent in

- cross-cultural and geopolitical issues
- communications
- global health and health systems
- joint campaign and security cooperation planning, monitoring, and evaluation
- mission, program, and project planning and execution
- medical and health professional activities.

⁵⁴ Discussions with U.S. defense officials, January 29, 2021, and February 1, 2021; and RAND GHE E&T Workshop discussions, September 27 and 29, 2021. For more on standardized approaches across services, see Matthew A. Levine, Eric A. Lutz, and Derek Licina, "Global Health Engagement Playbooks: Aligning Tactics with Strategy Using Standardized Engagement Packages," *Military Medicine*, Vol. 183, No. 9–10, September–October 2018; and Providence, Licina, and Leiendecker, 2017.

⁵⁵ It was beyond our scope to systematically analyze whether these are the *right* competencies to maximize the effectiveness of GHE specialists, especially those in joint billets. But the fact that we found significant overlap among service-defined competencies suggests that the ones defined here provide a good start.

Figure 4.1. GHE Competencies

<u>Cross-Cultural/Geopolitical Competence:</u> knowledge of geopolitical issues impacting U.S. national security overseas; understanding of sociocultural issues that could affect U.S. military's ability to cooperate with partner nations; and ability to build consensus and negotiate effectively with DoD, interagency, and foreign partners.	<u>Joint Campaign/Security Cooperation Planning, Monitoring, and Evaluation:</u> knowledge of joint campaign/security cooperation objectives, funding sources and lines of effort of embassy country teams, combatant commands and service components; and ability to (1) develop medical capacity and capability plans with partner nations in coordination with other DoD components, other U.S. government agencies, and (when appropriate) U.S. allies, international organizations, and nongovernmental organizations and (2) demonstrate GHE's contribution to DoD theater and national objectives.
<u>Communications:</u> ability to communicate effectively with partners from diverse cultures, directly through foreign language proficiency and with the assistance of an interpreter; synchronize communications with other DoD components; coordinate with U.S., partner, and international civilian organizations; and understand basic concepts of strategic messaging and risk and crisis communications.	<u>Mission/Program/Project Planning and Execution:</u> knowledge of missions that GHE activities support and the operational environment in which GHE activities are occurring; ability to plan and manage GHE missions, programs, and projects, including securing funding; and tracking and reporting on GHE activity performance.
<u>Global Health and Health Systems:</u> knowledge of emerging issues in global public health, host-nation health care, and U.S. and international health assistance efforts; understanding cultural and institutional aspects of partner health systems (legal/policy frameworks and practical procedures), as well as ability to conduct health systems assessments using analytic tools.	<u>Medical/Health Professional Competence:</u> certified ability to perform medical, dental, veterinary, or medical service support professional activities useful for GHE.

SOURCES: Features information from Air Force Instruction 44-162, 2019, and Bureau of Medicine and Surgery Instruction 6000.17, 2017.

We linked these competencies to the courses we analyzed to understand where related curricula are provided, and in what combination of competencies. The service instructions, which point students to options for attaining these competencies in specific E&T institutions and courses, also helped guide our analysis. Figure 4.2 depicts the number of blocks of instruction that teach topics associated with the synthesized GHE competencies in Figure 4.1.

It is notable that there appear to be many courses available to a wide range of DoD personnel that provide E&T in most, if not all, the competencies that our research suggests could be useful for GHE. That said, certain competencies are covered in more courses than others: For example, the cross-cultural/geopolitical and medical and health professional competencies are most frequently offered in the courses we analyzed and are especially important for GHE, such as public health and preventive medicine. On the other hand, the communications competency appeared to be less well covered and was mainly seen in HART and air advisor and veterinary courses. We also found that the majority of blocks of instruction focused only on one or two competencies, suggesting that there may be areas to consider for consolidation.

Figure 4.2. Number of Blocks of Instruction Focused on the Six Synthesized GHE Competencies



NOTE: SecCoop PME = security cooperation professional military education. Courses may teach more than one competency.

Given the overlap we found in our review of service GHE competency statements and our efforts at synthesizing our research to establish one set of competencies, it is likely that a DoD-wide effort to define standardized competencies for GHE professionals would not be an overly challenging endeavor. And there appear to be a variety of courses that already provide the relevant instruction.

Finding: GHE Career Development Pathways Are Not Systematically Established

Although service guidance for GHE specialists links competencies to courses, we found through our third line of inquiry that the guidance does not specify the progression of required education, training, and experience that would normally be defined for a professional career path. In other words, guidance documents do not specify what knowledge, skills, experience, and abilities GHE specialists should have in the early, middle, and later portions of their careers: a framework that most other military specializations have in DoD.⁵⁶ In the case of the Air Force's IHS program, we found that special experience identifiers were categorized according to three levels of increasing capability and linked to types of service or joint GHE positions, but they

⁵⁶ See Department of Defense Instruction 2000.30, 2017; Air Force Instruction 44-162, 2019; and Bureau of Medicine and Surgery Instruction 6000.17, 2017.

were rarely linked to competency levels, required educational courses, or performance.⁵⁷ This means that career management, performance criteria, promotions, assignments, and other aspects of career development are either absent or less well-defined than traditional career fields in the military. For GHE E&T, the lack of career pathways means that courses are neither designed for nor aligned with a defined progression, and some decisions about the chronology and type of coursework are left to the individual.

Several interviewees contended that the Air Force IHS and Navy GHS instructions and the overall DoD approach to GHE careers have not been systematic and have not provided the necessary guidance to prospective or existing specialists in terms of pathways to progress in their GHE competencies.⁵⁸ Describing the approach as “scattershot,” one interlocutor summarized it as follows: “Here are some GHE-related courses that you can take. Once you take some you can apply [to become a specialist] and we’ll look at experience and academics and determine if you’re qualified.”⁵⁹ Several discussants mentioned the lack of a clear career path and associated training requirements as creating frustration among service members who would like to make GHE a career, or at least an additional qualification noted as a special experience identifier linked to their primary career.⁶⁰ And there is no standardization of knowledge, skills, and abilities across services that would facilitate the establishment of baseline qualifications in GHE and drive requirements for GHE professionals.⁶¹

To help determine how the availability of courses might align with career pathways, we divided a military career into three periods—early, middle, and late—and assessed the average stage of the military career at which students primarily attended the courses. We did this through a review of course materials and discussions with course providers. We defined the career stages as follows:

- *Early*. Generally, the initial period of a DoD military or civilian person’s career, within the first five years of service in DoD and prior to assignment to a service or joint command staff position (for example, at an SCC, CCMD, or U.S. embassy).
- *Middle*. Generally, six to 15 years of service in DoD, after being assigned to a service or joint command staff position but prior to taking a leadership role in such organizations (e.g., a component or CCMD division or deputy division director).
- *Late*. Generally, more than 15 years of service in DoD and after having been selected for and/or assigned to a leadership role in a service or joint command (e.g., as a division or Security Cooperation Organization chief).

⁵⁷ See Air Force Instruction 44-162, 2019, pp. 14–15; and Air Force Instruction 36-4002, *Air Force Foreign Language Proficiency Bonus Program*, Department of the Air Force, June 16, 2015, p. 18.

⁵⁸ Discussions with U.S. defense officials, January 28, 2021; January 29, 2021; March 9, 2021; and March 10, 2021.

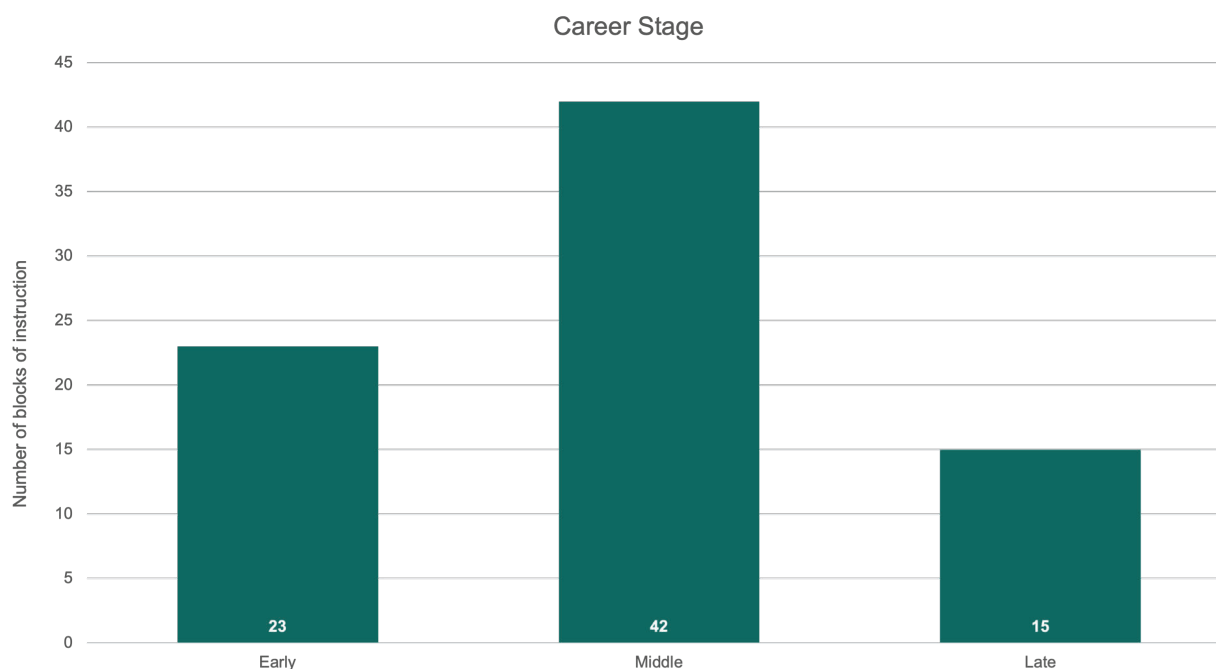
⁵⁹ Discussion with U.S. defense official, December 1, 2020.

⁶⁰ Discussions with U.S. defense officials, December 1, 2020; January 29, 2021; and March 10, 2021.

⁶¹ Discussion with U.S. defense official, November 23, 2021.

We found that there were courses available at all career stages but that most of the courses we analyzed target students at the middle stage of their careers. Figure 4.3 shows that about twice as many blocks of instruction were available to students at this stage than at the other two stages. It is unclear whether this reflects an adequate balance of courses, were the GHE career progression to be defined, but it does suggest that the courses at each stage—especially at the late stage—should be reviewed for availability to specialists at the appropriate points in their careers.

Figure 4.3. Course Offerings at Early, Middle, and Late Points of Careers



NOTE: Courses may apply to more than one career stage.

Options for Standardizing GHE Competencies and Developing Systematic Career Pathways

To what extent should DoD standardize GHE competencies across the joint force, and should the services systematically define career pathways for GHE specialists? Most GHE stakeholders agreed that a cross-DoD approach to competency development is important: i.e., that there should be a standardized set of competencies for DoD GHE specialists while leaving room for service-specific knowledge, skills, and abilities where required. For example, Army veterinarians strongly contend that their competencies should be maintained because of the specialties that the veterinary practice encompass, though they could also adhere to broader joint competencies (i.e.,

geopolitical) when assigned to CCMDs.⁶² The services have stated that their IHS, GHS, and Army veterinary programs have been established to grow GHE professionals and that their processes for recruiting, training, and providing experience to specialists is well developed, although they acknowledge shortcomings. One such shortcoming is that, with no clear career path, retention within the global health arena is low. Often, resources have been invested in training practitioners who are assigned to GHE positions, but they typically only stay for a tour or two before returning to their prior specialty. With no incentive to stay, very few reach an expert level of GHE knowledge. One interviewee stated, “Promotability is a big factor if you don’t get back into your career at the ‘right time.’ Someone who is going for promotion, [needs] leadership . . . I made sure to do squadron command before doing an IHS position.”⁶³ The services have also expressed concern that the pool of GHE specialists is relatively constrained by the relatively small number of GHE billets. Most personnel with a GHE designation cannot be assigned to GHE positions consecutively and must return periodically to their primary specialty. Given the tight linkage between GHE activities and security cooperation, there is some concern about developing GHE professionals in isolation from security cooperation professionals.

We considered the following three options for standardizing GHE competencies and developing systematic career pathways:

- **Pursue a service-based strategy of determining GHE competencies and course-to-competency linkages.** This option is similar to what is currently being pursued de facto: that is, DoD would pursue a service-based approach to defining GHE competencies and establishing course-to-competencies linkages through the services’ individual GHE programs and instructions. The fact that these competencies and linkages already exist may be considered an advantage. On the other hand, this option risks isolating GHE communities from one another, may result in duplication of effort and inefficient use of resources, and does not ensure a systematic career development approach.
- **Develop joint GHE competencies but allow the services to determine their own developmental pathways that define E&T and experience requirements.** A second option has DoD pursuing and finalizing the development of joint competencies but allowing the services to determine their own professional development pathways, including the required training, education, and experience requirements that suit each service best. An advantage of this option is that it fosters enduring cohesion within the GHE community while allowing flexibility in terms of the ways to achieve professional development goals. Conversely, this option may duplicate E&T efforts, motivate competition for resources between service and joint educational providers, and establish uneven development requirements for GHE professionals.
- **Develop joint GHE competencies and development pathways that specify a progression of education, training, and experience.** This third option places responsibility for developing GHE competencies and career pathways on the joint community. This option is advantageous in that it creates an integrated system for

⁶² Discussion with U.S. defense official, January 15, 2021.

⁶³ Discussion with U.S. defense officials, April 30, 2021.

developing GHE competencies and for defining career progression that lies outside the services and sets the GHE specialty as a high priority. It would require that GHE billets be designated as “joint.” But it also risks ignoring distinct service GHE requirements and requires overcoming the practical hurdles to establishing a single progressive pathway for GHE professionals.

Stakeholder Feedback on Options

There appeared to be less agreement among the stakeholders attending our workshops on the advisability of these options than for the first set on targeted student populations. There was broad agreement on the need for joint GHE competencies, especially if they are geared toward joint GHE positions in the CCMDs and the embassies—somewhat along the lines of the joint requirements for security cooperation certification that DSCU addresses. They noted that there had been a tri-service working group established in 2019 and hosted at CGHE to develop joint GHE competencies, but it did not result in a final set of joint competencies because of the lack of a solid commitment by the three services to make this area a priority.⁶⁴ The stakeholders suggested that part of the problem resides in the lack of a clear “demand signal” from the CCMDs that specifies their requirements for GHE expertise. One stakeholder group said that a way around this challenge would be to charge the CCMD surgeons general—perhaps under the auspices of the Joint Staff Surgeon General—with the responsibility for developing joint GHE competencies. Others felt that this course would likely prove challenging, given regional differences in medical and health needs and the lack of GHE expertise within the CCMDs as compared to the service GHE programs and CGHE. That said, there was general agreement that the services should maintain some of their competency requirements for particular service needs that could be nested within the joint competencies. Regarding development pathways, however, it was not clear which option rose to the top. One concern was that GHE specialists on a defined pathway might not be promoted at the same rate as other specialties and that, once one entered that pathway, one could not exit it.

Conclusion

In light of the apparent agreement among stakeholders that joint competencies would offer DoD-wide standardization for joint GHE to better serve the CCMDs and other joint organizations, development of such joint competencies could be viewed as “low-hanging fruit.” We found through our initial analysis and synthesis of service-level competencies that such an endeavor would not be overly taxing. Still, bureaucratic obstacles and uncertain CCMD requirements have so far prevented it from succeeding. An effort to bring together the common elements of the service competencies, informed by joint requirements and lessons, likely could be accomplished in a matter of months, but debate is ongoing within the GHE community

⁶⁴ RAND GHE E&T Workshop discussions, September 27 and 29, 2021.

regarding the roles and responsibilities for joint competency development. More consideration needs to be given to whether the GHE specialty would benefit from more-systematic career development pathways. Regardless of a DoD decision to build such pathways, there may be a need to rebalance some of the GHE course offerings to personnel at different stages of their military careers. This leads us to our next set of inquiries into GHE-specific and GHE-related course offerings and institutional course providers.

Chapter 5. Courses and Course Providers

To characterize the GHE content of courses, we analyzed these courses and identified who provides them. This constituted our fourth and fifth lines of inquiry for the study. By reviewing a combination of GHE program instructions, course descriptions, and discussions, we ascertained whether course curricula included a specific focus on GHE or broader global health concepts. In addition, we sought to illuminate what types of educational institutions offer these courses: whether these institutions are military or nonmilitary and medical or nonmedical. These inquiries would help DoD stakeholders understand the prevalence of GHE content in a wide array of institutions and the courses they offer.

Finding: Few Recommended Courses Have GHE-Specific Content, Limiting the Exposure of Nonspecialist DoD Personnel to GHE Concepts and Practices

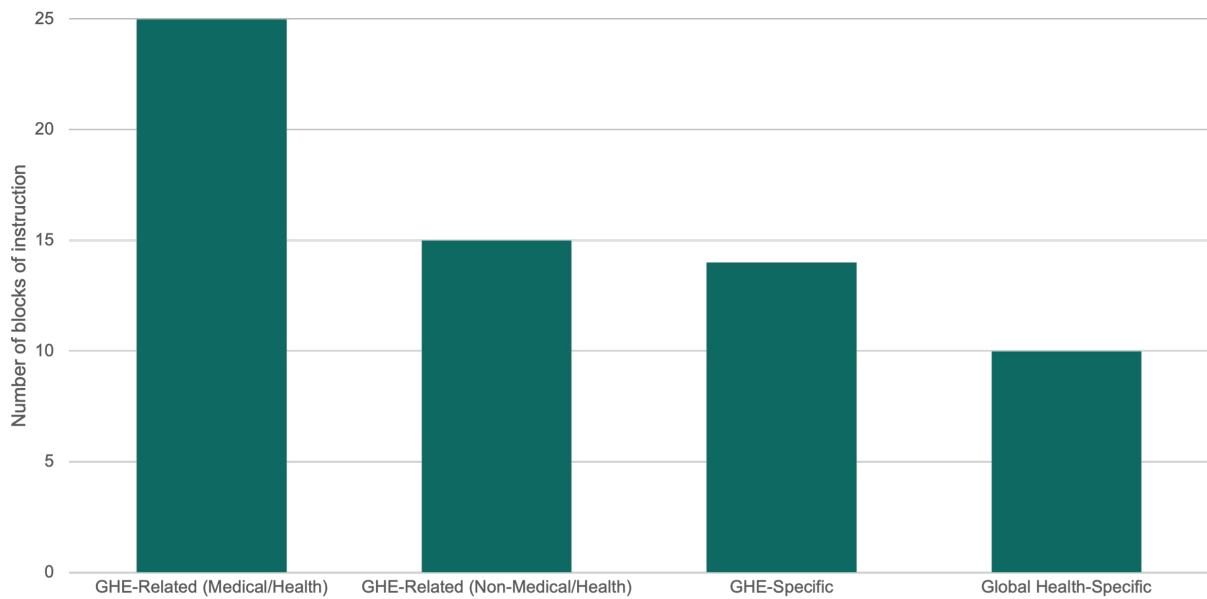
After compiling a list of 67 blocks of instruction to analyze from DoD GHE guidance and recommendations by GHE and other stakeholders, we set out to understand how many of these courses were specifically focused on GHE and how many related to knowledge or skills that would be useful for a GHE specialist but were not specifically focused on GHE. We categorized the course content as follows:

- *GHE-specific*. Course materials mention GHE as the primary focus of instruction. These could include such courses as FOGHE or the Global Health Engagement Orientation Course.
- *Global health-specific*. Course materials mention global health as the primary focus of instruction. The USUHS's Fundamentals of Global Health is an example of such a course.
- *GHE-related (medical and health)*. Medical or health courses that are recommended by GHE experts or E&T providers as useful for GHE planners or practitioners. Examples include the Navy's Plans, Operations, and Medical Intelligence course and USAFSAM's Contingency Preventive Medicine course.
- *GHE-related (nonmedical or nonhealth)*. Nonmedical or nonhealth courses recommended by GHE experts or E&T providers as useful for GHE planners or practitioners, such as DSCU's security cooperation courses.

Figure 5.1 provides an overview of the number of courses we found under each of the content categories. We found that some two-thirds of courses were GHE-related and did not have GHE-specific content, although they were recommended by our interlocutors as useful for GHE professionals. These included the Joint Medical Operations Course at DMRTI—an example of a medical course—and DSCU's nonmedical Security Cooperation Management Policy, Programs,

and Planning course. A minority of courses are GHE-specific, global health-specific, or both, and most of these are offered by the USUHS-housed CGHE or School of Medicine. USUHS offers courses that are both GHE-specific and global health-specific through its Global Health Distance Learning Graduate Certificate in Global Health and Global Health Engagement. The Air Force’s Global Health Engagement Orientation Course (GHEOC, formerly the IHS Orientation Course) is the only service-developed curriculum dedicated to GHE instruction. It has a joint focus and is open to medical personnel from the other services.

Figure 5.1. Number of Blocks of Instruction Categorized as GHE-Specific, Global Health-Specific, or GHE-Related



NOTE: GHE-specific, global health-specific, and GHE-related courses are mutually exclusive; however, some GHE-specific and global health-specific courses may focus on both GHE and broader global health concepts.

This finding suggests that if there is a desire to broaden the student population (for example, medical and security cooperation planners) who receive GHE-specific content in their education, there may be multiple opportunities to do so, given the preponderance of courses that are GHE-related but do not teach GHE concepts. In other words, it may be preferred in some cases to add GHE content to existing GHE-related courses, while expanding or adding GHE-specific courses may be advisable in other cases.

Finding: There Is No Explicit Division of Curricular Responsibility Among Course Providers

We expanded our analysis of GHE content to identify the types of institutions that tend to offer the different categories of courses. We found many types of providers but no centrally

driven division of responsibility across those organizations when it came to who offered GHE-specific and GHE-related curricula. We categorized course providers as follows:

- *Joint-medical.* Joint DoD medical education or training institutions, such as USUHS, that provide GHE-related education or training courses to DoD personnel.
- *Joint-nonmedical, security cooperation.* Joint DoD institutions (in particular, DSCU) that focus on security cooperation education or training courses for DoD personnel that are relevant to GHE.
- *Joint-nonmedical, other.* Joint DoD institutions, such as the National Defense University, that offer nonmedical, non–security cooperation education or training courses to DoD personnel that are relevant to GHE.
- *Service-medical.* DoD service medical education or training institutions, such as the Navy Medical Leader and Professional Development Command, that provide GHE-related education or training courses to DoD personnel (e.g., medical planners).
- *Service-nonmedical, security cooperation.* DoD service institutions, such as the Army War College’s Peacekeeping and Stability Operations Institute, that focus on security cooperation education or training courses for DoD personnel that are relevant to GHE.
- *Service-nonmedical, other.* DoD service institutions, such as the U.S. Air Force Special Operations School, that offer nonmedical, non–security cooperation education or training courses to DoD personnel that are relevant to GHE.
- *Nonmilitary.* Non-DoD education or training institutions, such as the University of Georgia’s College of Veterinary Medicine, that offer GHE-relevant training or education courses that are sponsored or approved by DoD.

Figure 5.2 associates the blocks of instruction we analyzed with these categories of institutions. Some 63 percent of these blocks were offered by military medical institutions, evenly split between joint and service organizations. As indicated above, most GHE-specific courses are in the joint medical institutional category in which USUHS resides, aside from the Air Force’s GHEOC. Service medical institutions largely provide GHE-related courses that are foundational to the defense medical profession—such as those in USAFSAM’s Aerospace Medicine program—but contain little, if any, GHE-specific content.

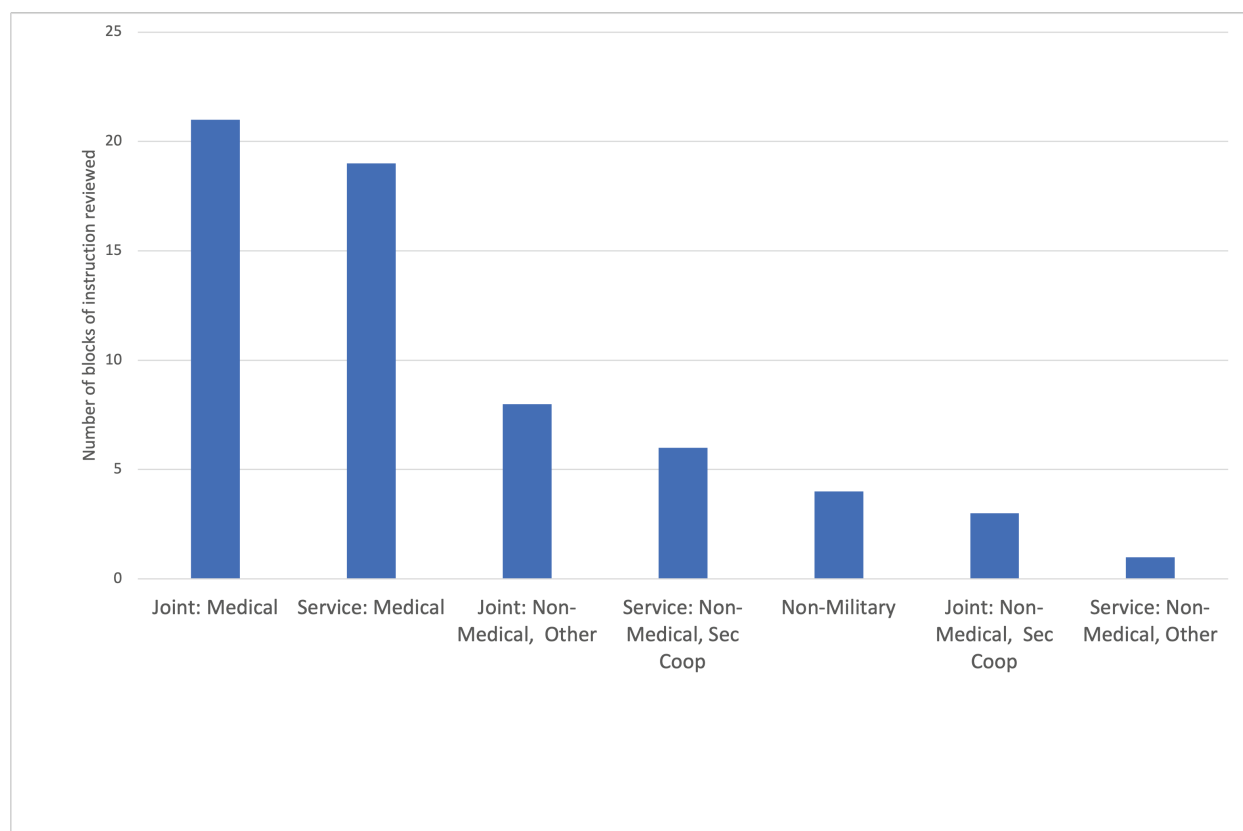
Other joint and service nonmedical institutions are less involved in GHE E&T. Joint military institutions, such as the National Defense University and the Center for Excellence in Disaster Management and Humanitarian Assistance, offer GHE-related courses that can provide important education in health strategy; joint, interagency, and multinational planning; and civil-military collaboration in natural disasters. Service nonmedical programs focused on security cooperation provide courses on planning and advising. For example, the Army offers a security cooperation planners course, while the Air Force provides courses for air and combat aviation advisors, all of which provide education in some competencies that are useful to GHE practitioners.

Civilian (nonmilitary) institutions offer a variety of programs and courses that are both GHE-specific and GHE-related. Some of these are specifically geared toward veterinarians and are recommended or required for the Army Veterinary Corps, such as the Veterinary Support to

Stability Operations course at the University of Georgia’s College of Veterinary Medicine. There were also some university programs recommended by GHE stakeholders that we were not able to analyze because of a lack of access to course curricula; these included courses in the Master of Science in International Agriculture program at the University of California, Davis, and Fordham University’s International Diploma in Humanitarian Assistance.

Finally, a handful of recommended courses were offered by joint security cooperation and other service institutions. The DSCU offers multiple courses in security cooperation; courses recommended by GHE practitioners included those on management, planning, oversight, and execution, as well as technology transfer. But there is no GHE-specific content offered as part of these security cooperation courses. Also recommended was an Air Force “field craft uncertain” course for advisors that instructs personnel in force protection, situational awareness, and other security-related tactics that would be important for GHE personnel in austere environments.

Figure 5.2. Number of Blocks of Instruction Reviewed, Categorized by Type of Education and Training Institution



The range of institutions offering curricula that can fulfill competency requirements of GHE practitioners and those requiring GHE knowledge suggests that an explicit division of responsibility among joint and service educational organizations might provide efficiencies,

allow these institutions to focus on their strengths, and open opportunities to expand GHE content when necessary.

Options for Expanding GHE-Specific Curricula and Establishing a Clear Division of Responsibility Among Providers

To what extent should GHE courses or course content be deliberately expanded, and to what extent should a clear division of responsibility between service and joint educational providers be established? Many GHE stakeholders highlighted the need to offer more course options for specialists and to insert GHE content into existing courses for nonspecialists (such as security cooperation planners) who may address GHE challenges in their assignments. However, multiple interlocutors in one-on-one discussions and in our workshops raised the absence of a formal requirement for GHE E&T (as opposed to recommendations of courses that GHE specialists could consider taking) in key defense policy guidance documents, such as DoD Instruction 2000.30, as an important obstacle to expanding curricula and motivating providers to accept and implement curricula based on a formal division of responsibility.⁶⁵ These stakeholders indicated that, without a formal demand signal expressed in CCMD requirements for GHE competencies, joint and service E&T institutions will not have the requisite incentive or push to dedicate additional resources (funding, faculty, curriculum capacity, etc.) toward expanding GHE content, the student populations who receive it, and the infrastructure to support it. Thus, a prerequisite to formulating and implementing the expansion of GHE content and identification of E&T providers is for GHE requirements to be formally set within DoD.

These findings led us to consider the following three options for expanding GHE curricula and explicitly dividing labor among educational providers:

- **Allow joint and service E&T providers to offer the current mix of GHE-specific and GHE-related courses.** This option would eschew higher-level policy intervention and continue the status quo with no formal division of curricular responsibility. The current mix already provides a diversity of course options for GHE community members with different career goals. But it could lead to duplication of educational effort and may not provide the level of GHE-specific courses and content that GHE specialists and other medical practitioners need to fulfill the requirements of the CCMDs and other sources of demand.
- **Focus joint E&T providers on expanding their GHE-specific courses with input from the services, and focus service providers on medical and health courses that are foundational for GHE.** An advantage of this option would be that it follows a de facto division of responsibility that largely exists now. At the same time, it would allow joint providers, such as CGHE, to expand and improve their course offerings. This option would rely, in part, on the development of joint competencies described in Chapter 4.

⁶⁵ Discussions with U.S. defense officials, February 19, 2021; March 15, 2021; and May 6, 2021; and RAND GHE E&T Workshop discussions, September 27 and 29, 2021.

Conversely, it may be insufficient in terms of covering curricula that would be specific to service missions, assignments, and processes.

- **Focus service E&T providers on offering GHE courses to their own specialists while directing joint institutions to add GHE content to courses designed for more-diverse student populations and wider missions.** This option allows the services to educate and train GHE specialists for service assignments while joint institutions would provide GHE knowledge to nonspecialists through GHE-related courses that currently lack GHE-specific content (e.g., DSCU would add GHE content to its security cooperation courses). But this option risks duplication of effort devoted to GHE-specific training for both joint and service assignments, loss of joint GHE expertise, and increased competition between GHE and non-GHE topics in joint course curricula with a finite capacity for topic coverage.

Stakeholder Feedback on Options

None of the GHE stakeholders participating in our workshops advised maintaining the current mix of GHE-specific and GHE-related courses and providers, as proposed in the first option. There was more support for the second and third options or some hybrid of the two. For example, a hybrid option might be more appropriate for veterinarians because the veterinary-specific training—which includes courses in civilian institutions—may already provide the needed vet-specific GHE content. With a requirement for joint GHE competencies, however, vets could have the justification and funding to attend joint GHE courses. Others suggested a hybrid because “we need . . . to get GHE injected into as many places as we can” and contended that joint courses should be expanded first, followed by further development of service courses.⁶⁶ There also was a recommendation to approach the issue holistically across the joint and service programs and not just to focus on the individual parts. One participant indicated that “having multiple entities creating courses with the same content is not a good use of time.”⁶⁷ Participants suggested that the services could work with CGHE to develop a joint course that could combine FOGHE I and II while allowing the services to supplement it with service-specific GHE content in their own courses.

Conclusion

Our research suggests that there are ample opportunities to inject GHE-specific instruction into existing GHE-related courses—those recommended by GHE stakeholders—should there be a decision to expand the types of military professionals who receive GHE E&T. And DoD may see efficiencies in corralling the multiple service, joint, and nonmilitary E&T providers that have developed curricula and course offerings on GHE-related knowledge and skills in a somewhat

⁶⁶ RAND GHE E&T Workshop discussions, September 27 and 29, 2021.

⁶⁷ RAND GHE E&T Workshop discussions, September 27 and 29, 2021.

uncoordinated way. To see even greater effectiveness and efficiency in GHE E&T, DoD might consider rebalancing instructional strategies, as discussed in the following chapter.

Chapter 6. Instructional Strategies

The final component of GHE E&T that we examined as part of our attempt to provide an empirical foundation for E&T improvement was the instructional strategies employed in GHE courses. Using the themes that emerged from our discussions and other research, we focused on two aspects of instruction: its overall orientation (whether primarily academic or practical) and its mode of delivery (whether primarily in-person or virtual). Following the pattern of Chapters 3–5, we begin this chapter by discussing our research findings with respect to instructional strategies, then we describe the options we presented to DoD GHE E&T during our September 2021 GHE stakeholder workshops for continuing or altering the current mix of academic or practical and in-person or virtual instruction, followed by stakeholder reactions.

Findings: Most GHE Courses Are Academic and Increasingly Virtual

Of the nearly 70 GHE-related and GHE-specific blocks of instruction that we reviewed for this report, more than 80 percent were judged to be primarily academic in orientation, including CGHE’s flagship FOGHE I course (see Figure 6.1). As we define the term, *academic* means focused on theoretical or abstract applications of essential GHE concepts, including employing real-world examples or reality-based scenarios as teaching tools. The aim of academic courses is to foster a general understanding of GHE elements, such as goals, policies, resources, missions, organizations, programs, strategies, and historical lessons, through classroom or online instruction. An example is the National Defense University’s Health Strategies elective concentration that is offered to 18–22 senior military officers, the majority of whom are medical and health professionals but about one-third of whom are line personnel. Besides providing an overview of what GHE is and is not, the course educates medical and line personnel on the size and scope of the DoD medical community and the variety of GHE tools that different service branches offer to combatant and component commands to aid them in achieving their operational and security cooperation objectives.⁶⁸

As Figure 6.1 shows, a smaller number of GHE courses include field, just-in-time, and/or readiness training. As we define it, *field training* occurs outside the classroom in a “field” setting that resembles situations faced by actual GHE practitioners or involves hands-on training in foreign environments as part of the curriculum. Some courses, such as the Military Tropical Medicine course offered by the Naval Medical Leader and Professional Development Command, include both academic and field modules. Air Force and Navy fellowships at CGHE and the Defense Security Cooperation Agency (DSCA) provide on-the-job experience in topics that are

⁶⁸ Discussion with U.S. defense official, January 7, 2021.

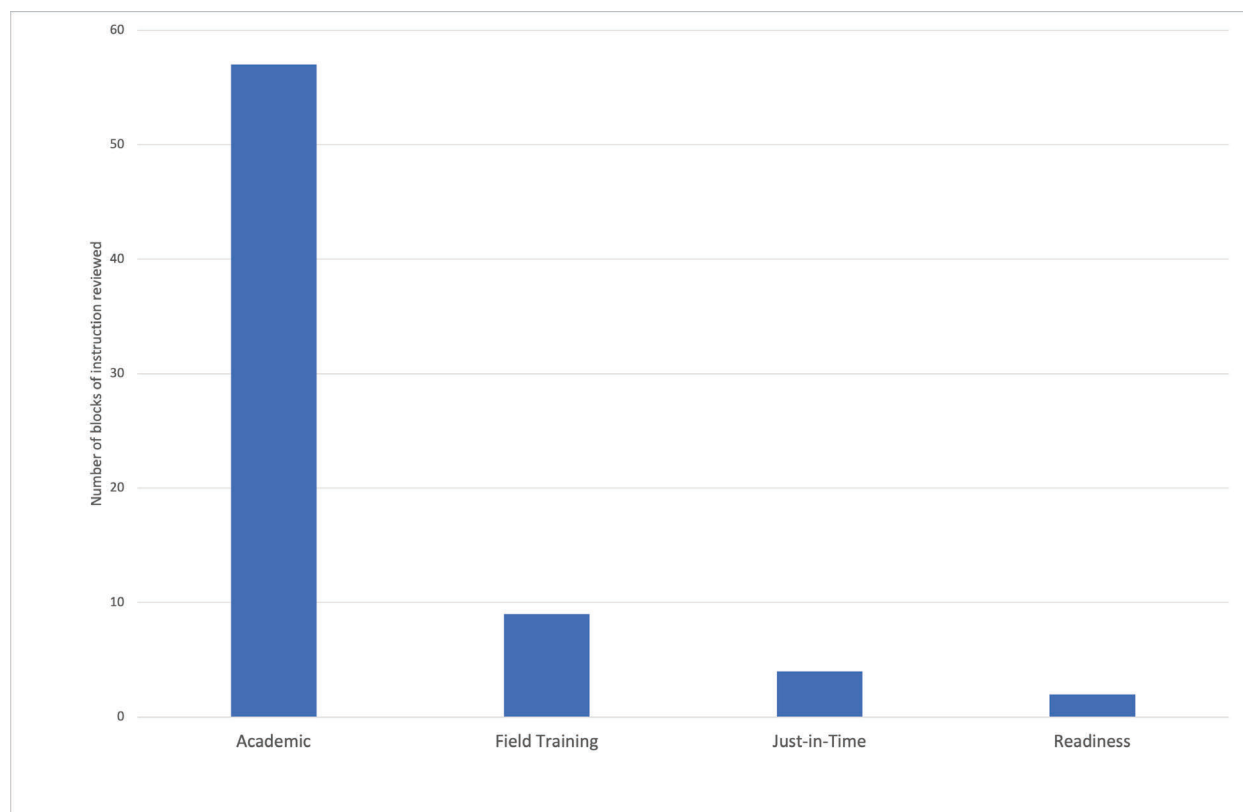
relevant to GHE to intermediate-level specialists.⁶⁹ Resourcing issues and COVID-19 restrictions have curtailed or eliminated several GHE field training opportunities in recent years, including the Air Force–sponsored Embassy Immersion Program, which one discussant described as “hugely effective” in familiarizing international health specialists with “how an embassy works.”⁷⁰ Just-in-time and readiness training are somewhat overlapping categories. According to our definitions, the former is practical GHE-related training provided to DoD personnel immediately prior to (or as soon as possible after) undertaking specific assignments or missions, whereas the latter refers to courses focused on helping DoD personnel ensure that service members are free from health-related conditions that could limit their ability to carry out their duties in a global environment. Much of the pre-deployment training for humanitarian and disaster assistance missions, such as the Air Force’s Pacific Angel operations with partner countries in the Indo-Pacific region, fits this bill.⁷¹

⁶⁹ Discussion with U.S. defense officials, August 21, 2020, and February 4, 2021.

⁷⁰ Discussion with U.S. defense official, January 14, 2021.

⁷¹ Discussion with U.S. defense officials, January 14, 2021, and January 26, 2021.

Figure 6.1. GHE Education and Training Blocks of Instruction, by Instructional Type



NOTE: Instructional types are not mutually exclusive (a course can have multiple types of instruction).

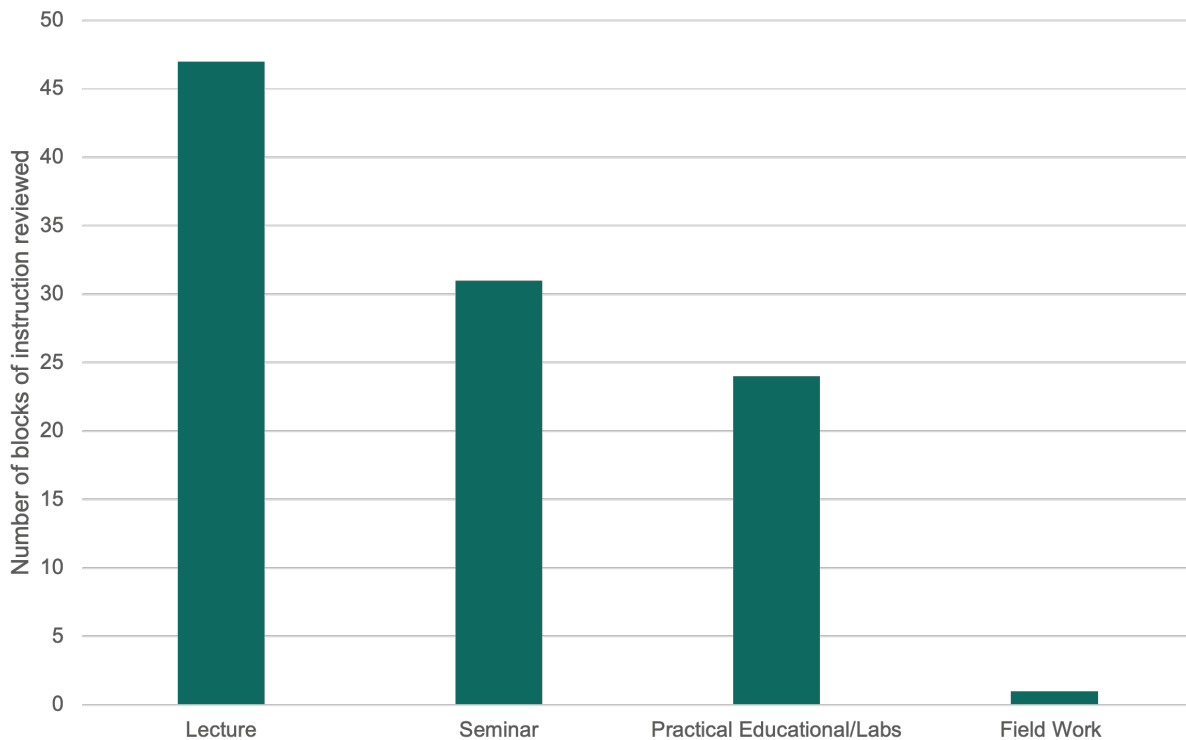
Because of the academic orientation of most GHE courses, lectures (lessons delivered by instructors or guest speakers) are the primary mode of GHE instruction, followed by seminars (structured group discussions) and practical exercises (see Figure 6.2). Despite the prevalence of the lectures, the GHE E&T experts tended to favor other learning methods. For one discussant, seminars offered the opportunity of bringing together a small group of students from different professional backgrounds who can learn from each other.⁷² Another discussant downplayed the importance of stand-alone, concept-based education for GHE practitioners. From his perspective, “the best way to do training is vignettes. You talk about concepts, then you give a real-world vignette.”⁷³ As an example, the HART courses recommended for Air Force international health specialists are almost entirely case study focused.⁷⁴

⁷² Discussion with U.S. defense official, January 8, 2021.

⁷³ Discussion with U.S. defense official, January 19, 2021.

⁷⁴ Discussion with U.S. defense official, March 30, 2021.

Figure 6.2. GHE Blocks of Instruction, by Instructional Method



NOTE: Instructional methods are not mutually exclusive (a course can have multiple methods).

Prior to the COVID-19 pandemic, a mix of in-person, remote, and blended GHE courses were available to DoD personnel. During the pandemic, however, most courses were offered remotely. Although the transition to all-virtual courses compromises important components of GHE professional development, such as field training and social networking, it has had positive benefits for many GHE instructors. For example, the Global Health Distance Learning Program at USUHS has for some time relied on remote means of instruction, such as asynchronous lectures and live weekly seminars. Aside from the ability to “reach students far beyond its physical campus . . . these technologies also make it so that faculty no longer must be on campus either,” creating opportunities for increased collaboration with partner-nation faculty and subject-matter experts.⁷⁵ Even prior to the COVID-19 pandemic, CGHE had “purposely sought remote options to reach more students where they live.” Since COVID-19, this process has accelerated, and CGHE instructors claim they “are not constrained by being in a specific place” and can now accommodate students in multiple remote locations.⁷⁶ Although a Joint Military

⁷⁵ Bradley Boetig, Josh Kumpf, Rahul M. Jindal, Lynn Lieberman Lawry, Lindsay Baines, and Thomas R. Cullison, “The USU Global Health Distance Learning Program: An International Educational Consortium for Global Health Engagement,” *Military Medicine*, Vol. 185, No. 1–2, January–February 2020.

⁷⁶ Discussion with U.S. defense official, November 23, 2021.

Operations Course official planned to continue teaching both in-person and remote courses, they acknowledged that hosting in-person classes was expensive and that virtual courses were cheaper and more manageable.⁷⁷ However, virtual courses are a mixed blessing for one HART course official: “Virtual has made us able to open [the HART disaster course] up to more people,” but “it’s very difficult to teach virtually” because it is harder for students and instructors to effectively interact. He sees the future of the course “as primarily in-person, with some virtual.”⁷⁸

Options: To What Extent Should GHE Instruction Be Academic vs. Practical or Online vs. In-Person?

Given the above findings on GHE instructional strategies from our subject-matter expert discussions and documentary research—specifically, that GHE courses are overwhelmingly academic and increasingly virtual—we developed the following three basic options concerning the extent to which GHE instruction should be academic versus practical or online versus in-person, which we presented to stakeholder representatives in our two workshops:

- **GHE E&T providers develop their own mix of online or in-person and academic or practical instructional approaches.** This option was intended as the status quo position: that is, it reflects the current DoD situation in which E&T providers are not given any jointly determined guidance or best practices on GHE instruction. One argument in favor of this option is the general observation that E&T providers are often the best judges of how courses should be taught, particularly when subject matter and student populations are as diverse as those in GHE courses. Also, there is insufficient evidence to say that GHE courses are not being appropriately taught or that better methods are available to instructors, and there is anecdotal information that certain GHE courses are quite popular. A contrary argument is that COVID-19 restrictions or a lack of time and funding have inhibited some providers from using preferred teaching methods, which (in some cases) had been effectively employed previously, and that authoritative guidance on the mix of online or in-person and academic or practical GHE instruction could prove helpful in inducing E&T provider organizations to improve their instructional strategies.
- **E&T providers encouraged to place more emphasis on online instruction.** One point in favor of this option is that the challenge of managing and executing GHE E&T during the COVID-19 pandemic has improved online teaching (at least from the standpoint of the administrators and instructors who spoke with us) and has allowed more students to be taught at lower cost (although a comprehensive comparative cost analysis of online and in-person GHE classes has not been conducted). Arguing against this option are the observations of GHE E&T providers that practical training and interactive learning are more easily accomplished in-person (although both can be done virtually in relatively

⁷⁷ Discussion with U.S. defense official, April 1, 2021.

⁷⁸ Discussion with U.S. defense official, March 30, 2021.

small classes with engaged instructors and with students focusing on realistic vignettes and relevant case studies).

- **E&T providers encouraged to place more emphasis on in-person, practical instruction.** Those subject-matter experts who agree with this approach find most GHE E&T to be overly academic and are not convinced that online instruction can fully satisfy training requirements, such as the ability to collaborate with various domestic and international partners or to operate in austere overseas conditions. The counterargument is that in-person, practical—especially, field—training is generally more expensive and challenging to deliver than virtual, conceptual education and may not be necessary for students for whom an awareness of GHE’s purpose, organization, and activities is the primary goal (i.e., non-GHE specialists). Among the challenges of overseas training rotations are “funding, health and security, trainee and site heterogeneity, supervision, trainee engagement, and burden on the host institution.”⁷⁹

Stakeholder Feedback on Options

Although few workshop participants addressed the topic of practical versus academic training and education, several of our discussants called for a more hands-on approach. For one discussant, the problem was not so much that the GHE academic instruction was poorly delivered or not needed, it was that DoD’s educational institutions were “not really providing any [GHE] practical training.”⁸⁰ According to another discussant, it was challenging to provide training in an educational setting and “prep folks for the ‘real world.’” He believed there was a “gap” when it came to training that offered students the opportunity to “learn about operating globally” and translating the skills they acquired “here at home to international.” These capabilities were hard to build through coursework, which is why he thought the field mission component of USUHS’s tropical medicine course was so useful “because it gives some folks their first real world practical experience in a setting outside of the U.S. that can be, for them, quite different from what they’re (used to).”⁸¹ However, for one workshop participant, it was not enough to provide practical training to medical and health professionals early in their careers. To meet the objectives of combatant commanders in particular partner countries, just-in-time training was needed that was tailored to the requirements of specific operations.

For the most part, workshop participants eschewed an either/or approach to in-person versus virtual instruction, preferring a hybrid instructional model that was tailored to the needs of particular target populations. As one stakeholder representative put it: “I like [in-person] classes for the networking portion [of GHE training and education]. A large part of the job is knowing who to reach out to in order to get the answer, especially those you can meet from different

⁷⁹ James D. Mancuso, Patrick W. Hickey, Rodney L. Coldren, Amy K. Korman, Lisa W. Keep, Robert F. DeFraités, Maria Smith, Luke J. Mancuso, and Jose L. Sanchez, “DoD-Supported Overseas Training Rotations in Tropical Medicine and Global Health, 2000–2015,” *Military Medicine*, Vol. 182, No. 3–4, March–April 2017.

⁸⁰ Discussion with U.S. defense official, November 17, 2020.

⁸¹ Discussion with U.S. defense official, November 20, 2020.

services.” Although “virtual is great to reduce costs . . . I think we should require people to be on video and participate.”⁸² Another workshop participant thought that joint and service GHE instruction should be conveyed differently. Because of their diverse population of students from different services, specialties, and cultures, “joint classes should be done in-person and focused to a large extent in building the ‘soft skills’ necessary for successful GHE.” She noted, “It is important for the Department of State folks to see [those of us from DoD]; it humanizes us to them. When they have a name to the face, it makes us seem less like disruptors.” By contrast, “service-specific classes,” for which the emphasis is on conveying information to personnel working in the same field and raised in the same military culture, can often be done virtually without deleterious effects.⁸³ However, one GHE instructor raised a caveat regarding virtual instruction: “People think virtual is easier, but it’s actually more work to do virtual courses” (at least, effective virtual courses). His view of hybrid GHE teaching was “in-person with a camera . . . If we can master that, it might be a happy medium to bring in people who might not have otherwise made it.”⁸⁴

Conclusion

In this chapter, we described our documentary and discussion-based research on the instructional strategies employed by DoD providers of GHE-specific and GHE-related E&T, and our main finding is that most GHE courses are academic (as opposed to practical) and increasingly virtual (as opposed to in-person). Although discussion and workshop input was relatively limited with regard to the appropriate mix of academic or practical and in-person or virtual instruction, discussants preferred a tailored learning approach, which included an expanded set of practical training opportunities in the form of field training, on-the-job training, and mission-oriented just-in-time training for those most responsible for planning and executing GHE activities. Discussants also favored a combination of in-person and virtual training that allowed for a significant amount of interaction between instructors and students, especially in the case of joint courses that involve students from different DoD and interagency communities.

⁸² RAND GHE workshop discussion, September 27, 2021.

⁸³ RAND GHE workshop discussion, September 27, 2021.

⁸⁴ Discussion with U.S. defense official, March 30, 2021.

Chapter 7. Cross-Cutting Challenges and Opportunities

This chapter breaks from the pattern of the previous four chapters. Rather than focusing on particular components of GHE E&T, we discuss in this chapter the cross-cutting challenges and opportunities gleaned from the GHE literature and from our expert discussions and stakeholder workshops. On the one hand, there are several interrelated challenges that inhibit action on all of the dimensions of GHE E&T we have explored. These include the lack of CCMD and service requirements for expanded GHE E&T; differing degrees of support for GHE professional development among the services; insufficient assessment, monitoring, and evaluation expertise that would enable the GHE community to express the importance of its activities to achieving DoD objectives through data and analysis; and the lack of resources (both personnel and funding) devoted to GHE E&T. On the other hand, there are several opportunities that could be exploited by those advocating for improved GHE E&T, such as increased attention to DoD's role in global health, the popularity of GHE courses among DoD medical and health professionals, and greater willingness within DoD to think of GHE as an important tool for achieving departmental objectives.

Insufficient Policy Requirements

Many of the joint and service E&T providers indicated that the absence of formal requirements for GHE instruction to foster particular competencies within specific target populations from authorities within OSD, the CCMDs, and the services made it unlikely that GHE would be a priority for curriculum developers within DoD. As one discussant put it, "From my interaction with the Army and Navy and joint, they are very requirements driven, so if there is not a documented requirement for it, then it is rare you will have success developing a program for it."⁸⁵ That said, DoD's educational institutions will respond if the demand for GHE courses is clearly expressed by major stakeholders in terms of policy changes that "secure ongoing system-wide support" for training.⁸⁶

High student demand is insufficient to continue spending money on GHE elective courses; if a requirement cannot be found for them, "they'll go away."⁸⁷ However, there are differences of opinion among medical operators about whether GHE training should be required. Referring to a current GHE course offering, a discussant noted that "we enjoy the course, but it should be an

⁸⁵ Discussion with U.S. defense officials, May 6, 2021.

⁸⁶ Suzanne Leclerc-Madlala and Maysaa Alobaidi, "Sharpening Our Cultural Tools for Improved Global Health Engagement," *Joint Force Quarterly*, No. 82, July 2016.

⁸⁷ Discussion with U.S. defense official, November 23, 2021.

elective, not a requirement. [DoD medical professionals] have so many things going on.”⁸⁸ Nevertheless, another discussant said, it was important to goad commanders into doing the right thing to ensure the professional development of the force by requiring course attendance: “If you’re a medical group commander . . . someone says they want to send Captain So and So to [a CGHE course], the medical group commander may say ‘what will I get from that right now?’ But it will benefit the Air Force medical force later on.”⁸⁹

Varying Support for GHE Across DoD Levels and Components

Ultimately, arguments over funding or requiring GHE courses stem from varying support for GHE across various levels and components of DoD. According to one defense official, “there’s interest [in GHE training and education] from non-leadership elements of DoD who recognize its significance, but at the leadership level there’s not significant interest or awareness, which translates into under-investments.” Furthermore, leadership interest in expanding GHE E&T reportedly worsened during the COVID-19 pandemic. By contrast, we found that when the discussant had “taught [GHE] courses, no matter who the audience whether medics to [CCMD] surgeons, they’d name our courses as ones that should be mandatory for military folks.”⁹⁰ Among CCMD leaders, the degree of understanding regarding the importance of GHE and associated humanitarian assistance missions varied.⁹¹ For example, one defense official noted that “if you read the INDOPACOM [U.S. Indo-Pacific Command] strategy, there is no mention of humanitarian assistance; it isn’t a core competency or top priority,” although senior commanders have publicly acknowledged the value of such activities.⁹² Within the special operations community, it is challenging to keep international health specialists employed because many in the theater special operations commands either “do not know GHE exists” or do not recognize it as an important special operations forces activity.⁹³ With regard to expanded GHE training and education, “the appetite is not there with the [CCMDs] right now because they can’t focus on anything else besides the [COVID-19] pandemic.”⁹⁴

Each of the services has approached the issue of GHE training, education, and professional development in its own way. Established in 2001, the Air Force IHS program allows health service personnel to “apply for IHS special experience identifiers based upon past experience in global health activities, foreign language proficiency, cross-cultural skills, and completion of

⁸⁸ Discussion with U.S. defense official, November 25, 2020.

⁸⁹ Discussion with U.S. defense official, February 4, 2021.

⁹⁰ Discussion with U.S. defense officials, December 4, 2020.

⁹¹ Discussion with U.S. defense official, November 23, 2020.

⁹² Discussion with U.S. defense official, March 30, 2021.

⁹³ Discussion with U.S. defense officials, March 15, 2021.

⁹⁴ Discussion with U.S. defense official, November 23, 2021.

minimum training requirements.” More recently, the Navy has developed a GHE Additional Qualification Designator “to identify health professionals who meet certain competency requirements coupled with global health-related training, education, and experience.”⁹⁵ In their respective instructions, both programs recommend a variety of joint and service courses that help build identified specialist competencies and offer certain training and educational opportunities to novice and more-experienced GHE professionals, such as the Air Force’s IHS introductory course and the Navy Bureau of Medicine and Surgery’s humanitarian assistance and security cooperation fellowship program with DSCA.⁹⁶ Still, with the exception of the Air Force’s GHEOC, none of these courses or educational opportunities are considered mandatory for obtaining a specialist designation or progressing in the GHE field. And defense officials express skepticism that the services by themselves will establish such requirements, given cost considerations and competing priorities. As one official noted, “Every time you want to add training to an already robust training set of requirements, trying to make space for it is probably the biggest challenge.”⁹⁷ For its part, the Army has long been resistant to the concept of GHE, considering the activities covered by the term to be integral to its overall medical and health mission and thus not deserving of specialized training requirements (although GHE requirements have recently been created for certain Veterinary Corps assignments).⁹⁸ According to one former defense official, the Army’s reluctance to embrace GHE is a problem because Army officers dominate the ranks of planners within the CCMDs. If GHE “isn’t part of their portfolio and culture,” they will not think to include it in operational and security cooperation plans, limiting the demand for GHE practitioners and GHE E&T: “If you have a capability but no one asks for the capability, then you don’t really have a capability. The army planners just don’t see [the need for a GHE capability].”⁹⁹

Limited Ability to Demonstrate the Importance of GHE

The challenge for GHE capability-building runs deeper than a lack of appreciation for the mission set by certain DoD components. It lies also in the limited ability of GHE champions thus far to show the ways in which their recommended activities not only align with important CCMD objectives but are also instrumental to achieving them. CGHE has an assessment, monitoring, and evaluation component. It conducts research on how to operationalize militarily

⁹⁵ Thomas R. Cullison, Charles W. Beadling, and Elizabeth Erickson, “Global Health Engagement: A Military Medicine Core Competency,” *Joint Force Quarterly*, No. 80, January 2016, p. 60.

⁹⁶ Discussion with U.S. defense officials, August 21, 2020, and November 23, 2020.

⁹⁷ Discussion with U.S. defense officials, November 23, 2020, and December 18, 2020.

⁹⁸ Discussion with U.S. defense officials, November 20, 2020.

⁹⁹ Discussion with former U.S. defense official, January 7, 2021.

relevant goals and objectives and collect data for planning purposes, among other things.¹⁰⁰ Nevertheless, there is a dearth of planning, assessment, monitoring, and evaluation expertise among medical and health professionals serving on joint staffs within the CCMDs and higher-level DoD organizations. As one discussant put it,

We as a functional [GHE] community have to understand what the TCPs [Theater Campaign Plans] are and contain and then tailor the GHE menu to TCP priorities. [Too often] we say we've done this great program on 'x,' and it's very sound and great, but it just has nothing to do with any combatant command priority . . . It becomes a 'showing the flag effort' and not really a meaningful contribution to the TCP.¹⁰¹

In addition, the GHE community struggles to demonstrate the impact of the activities it engages in as compared to other defense capabilities, such as intelligence, surveillance, and reconnaissance. To address this deficiency, medical planners working on the Joint Staff–led annual joint assessment are attempting to describe capability gaps that create risks against which GHE might be an appropriate mitigation strategy for the CCMDs.¹⁰² But there is also a need for specific metrics and in-depth data analysis that demonstrates the value of GHE to the joint force. According to one subject-matter expert, “If we can’t measure what we’re doing and show the success of it, GHE will die.”¹⁰³

Lack of Resources (Personnel and Funding)

A lack of resources was considered a major challenge to expanding the number and scope of GHE courses by educational providers and consumers at the joint and service level, which likely is a consequence of the previously described E&T shortcomings. One discussant said that “it’s most likely someone will inherit [the task of GHE training and education] without additional bandwidth or funding . . . it’s such a huge undertaking, and it might take a while to get done. People are already stretched in terms of their bandwidth.”¹⁰⁴

Aside from the personnel costs associated with developing, teaching, and managing additional courses, there is the opportunity cost of taking an increased number of students from their regular jobs and, in the case of in-person training, the direct cost of travel and per diem expenses.¹⁰⁵ Financing for CGHE’s joint GHE courses has been a particular problem. For example, the rollout of the intermediate-level FOGHE II has reportedly been delayed in large part because of CGHE’s reliance on CCMD personnel “who don’t have the bandwidth” to aid in

¹⁰⁰ Center for Global Health Engagement, “Assessment Monitoring & Evaluation,” webpage, undated-b.

¹⁰¹ Discussion with U.S. defense officials, November 23, 2020.

¹⁰² Discussion with U.S. defense official, November 23, 2020.

¹⁰³ Discussion with U.S. defense official, January 15, 2021.

¹⁰⁴ Discussion with U.S. defense official, January 26, 2021.

¹⁰⁵ Discussion with U.S. defense official, January 22, 2021.

piloting the course.¹⁰⁶ More generally, CGHE, a component of USUHS, lacks sustained funding from either OASD Health Affairs or the services for its courses and finds it difficult to maintain its offerings on a year-by-year basis, given other organizational priorities, such as initiatives for combating COVID-19.¹⁰⁷ A sharp reduction in funding following the 2013 government shutdown and consequent sequestration legislation has also had a dramatic impact on DoD-supported overseas training rotations in tropical medicine and global health.¹⁰⁸ It may be a mistake, however, to expect service educational providers to fill gaps created by underfunded joint GHE and global health programs. A 2017 Air War College publication notes that although the Air Force is probably in the best position among the services with regard to E&T for IHSs, its IHS program lacks the “capacity” to expand much further.¹⁰⁹ More recently, a defense official expressed a concern that, with “the budget cuts and financial constraints” facing the services, GHE E&T is “the kind of program that I’d envision being cut first.”¹¹⁰

GHE Education and Training Opportunities

Although significant challenges confront those advocating for expanded specialist and nonspecialist GHE E&T related to limitations in dedicated funding, personnel availability, policy requirements, stakeholder interest, and planning, assessment, monitoring, and evaluation expertise, there are also opportunities that could be exploited if pursued in a concerted manner. First is the increased awareness of DoD’s role in global health in the wake of the COVID-19 pandemic, second is the interest expressed by DoD medical and health professionals in GHE courses, and third is DoD’s use of GHE as an important tool in achieving its objectives.

A 2021 report by the Center for Strategic and International Studies (CSIS) recognized the considerable capabilities that DoD offered to the civilian-led international COVID-19 response in the areas of logistics, biosurveillance, and infectious disease research, as well as the diplomatic relationships built up, in large part, through decades of global health engagements. The report calls for strategic planning to begin immediately on ways that DoD could contribute beyond the role that it already plays in the procurement and delivery of COVID-19 vaccines to combat the pandemic, internationally as well as domestically.¹¹¹ A 2022 CSIS report recommends the establishment of a GHE funding line with multiyear authorizations “to support ongoing DOD military-to-military and military-to-civilian health system-strengthening

¹⁰⁶ Discussion with U.S. defense official, December 4, 2020.

¹⁰⁷ Discussion with U.S. defense official, December 14, 2020.

¹⁰⁸ Mancuso et al., 2017.

¹⁰⁹ Min, 2017.

¹¹⁰ Discussion with U.S. defense officials, May 6, 2021.

¹¹¹ Cullison and Morrison, 2021.

activities.”¹¹² Although it is no substitute for formal written requirements in a hierarchical, mission-driven organization such as DoD, the apparently huge demand for GHE courses by a range of medical and health practitioners could be used to help justify and more securely fund GHE-related E&T. Reportedly, USUHS’s Global Health Distance Learning Program has a waitlist of hundreds of applicants for its courses even after scaling up enrollment.¹¹³ There also is high demand for CGHE’s introductory FOGHE I course. Despite trying to keep classes small during the transition to virtual learning following the COVID-19 pandemic, CGHE is now managing up to 50 people in its FOGHE course and still has a large waiting list.¹¹⁴ Finally, there is evidence of collaboration and accommodation on the part of important GHE stakeholders that offers hope that a joint approach to GHE E&T may be possible if carefully orchestrated and nurtured; this includes an informal attempt by CGHE and the service representatives to establish a common list of GHE competencies and the Army’s willingness to allow GHE skill identifiers in the Veterinary Corps and openness to discussing GHE competency requirements for planning positions on CCMD surgeons general staffs.¹¹⁵

Conclusion

In this chapter, we described several themes that emerged from our literature review and expert discussions that cut across the key dimensions of GHE E&T and pose several challenges to, as well as opportunities for, developing an effective and sustainable departmental E&T strategy, resulting in the right kind of courses and course content being available to the right personnel at the right time. Most of the challenges are interrelated and necessitate a concerted, strategic approach to overcome them, starting with policy requirements. Simply developing courses “hoping that students will come” is not a reasonable solution to the E&T problem; it requires first confronting the challenges that inhibit joint and service providers from delivering GHE instruction to all who need it. That said, DoD’s involvement in global health emergencies (such as the COVID-19 pandemic), the popularity of GHE courses within the DoD medical and health community, and increased interest in GHE among important stakeholders provide opportunities that could be exploited by those advocating for improved GHE E&T.

¹¹² Susan W. Brooks, Julie L. Gerberding, and J. Stephen Morrison, 2022 *Is the Year of Decision: CSIS Commission on Strengthening America’s Health Security*, Center for Strategic and International Studies, January 2022, p. 19.

¹¹³ Boetig et al., 2020; and discussion with U.S. defense official, November 17, 2020.

¹¹⁴ Discussion with U.S. defense officials, December 4, 2020, and November 23, 2021.

¹¹⁵ Department of the Army, Office of the Deputy Chief of Staff, G-1, 2020.

Chapter 8. Developing and Implementing Policy Recommendations

In Chapter 1, we discussed our approach to assisting the GHE community to improve the E&T provided to DoD personnel. We indicated that the genesis of this report was the E&T-related JROC DCRs that stemmed from the 2018 GHE CBA. We also indicated that although the report would cover most of the topics recommended for review by the JROC, we would follow a research approach that addressed the E&T problem strategically, holistically, and practically. In other words, we would analyze the major elements of GHE E&T, develop and evaluate a range of options for improving GHE E&T, and present an integrated and sequenced set of recommendations that meet CCMD GHE priorities and that are supported by important GHE E&T providers.

Having presented our research methodology in Chapter 2, our findings with respect to major dimensions of GHE E&T in Chapters 3–6, and challenges to and opportunities for improvement in Chapter 7, we offer our policy recommendations and mechanisms for implementing them in this final chapter. First, we summarize our findings and stakeholder feedback with respect to target student populations, competencies and developmental pathways, courses and course providers, and instructional strategies, then we list the recommendations that flow from these findings and feedback. We suggest OPRs for implementing our recommendations—and, in some cases, OCRs—based on a combination of legal and policy jurisdiction, organizational interest, knowledge and experience, staff availability, and sponsor feedback. Finally, we present our overarching finding with respect to GHE force development and describe our concept and strategy for instilling greater integration and strategic direction into the GHE E&T process.

Target Student Populations

Finding: A Large Portion of the DoD Medical and Health Community Who May Become Engaged in GHE Activities Do Not Receive GHE-Specific E&T

As described in Chapter 3, many of the subject-matter experts recognized a need for providing a range of GHE instruction to a wide audience: that is, not only to GHE specialists but also to members of the larger medical and health community, as well as some nonmedical personnel, such as security cooperation officials and military leaders. They buttressed their view with examples of GHE courses that were in high demand by medical and nonmedical personnel in all services. Most prospective students have had formal access to these courses, but many could not attend because of space limitations, though the creation of additional virtual classes promises to provide opportunities to a larger pool of students than in the past.

GHE stakeholders who participated in our workshops in fall 2021 agreed that GHE-specific E&T should be provided to a wider group of students. In particular, they argued for greater emphasis on providing instruction to DoD medical and health personnel outside the GHE specialist community. In their view, however, the E&T needs of the aforementioned target populations are different. Specialists ought to receive more in-depth, tailored instruction, whereas other medical and health professionals should be provided early exposure to GHE via jointly developed instruction modules. Certain nonmedical or nonhealth personnel, such as security cooperation specialists, could be exposed to GHE through their professional military education programs.

Recommendations

The following recommendations to OSD, the Joint Staff, and joint and service GHE programs and medical E&T providers, made using our research findings and conversations with GHE stakeholders, are designed to expand GHE E&T opportunities for DoD personnel:

- OASD Strategy, Plans, and Capabilities should revise DoD Instruction 2000.30 to drive the requirement for providing and tailoring GHE E&T to the broader DoD health and security cooperation communities and to GHE specialists.
- The Joint Staff—with the support of DSCA, OASD Health Affairs, the National Defense University, and service war colleges and the endorsement of the GHE Council—should work to make GHE a “special area of emphasis” for joint professional military education, requiring the insertion of GHE content into security cooperation and leadership courses.
- CGHE should finalize and deliver an intermediate course (FOGHE II) for GHE specialists, and USUHS, the Defense Health Agency’s DMRTI, and the service medical E&T providers should jointly create GHE content for medical professional development E&T courses.

Competencies and Developmental Pathways

Finding: GHE Competencies Are Not Standardized Across the Services

As detailed in Chapter 4, our discussants mentioned a range of desirable GHE competencies, many of which are found in the Air Force IHS and Navy GHS program instructions. Among those who expressed an opinion, most agreed that a DoD-wide approach to competency development is needed, and our efforts at synthesizing what we have learned regarding competencies suggest this should be possible. Furthermore, there are many courses available to a wide range of DoD personnel that provide E&T in most, if not all, the competencies that our research suggests could be useful for GHE.

There was an apparent consensus among participants in our GHE stakeholder workshops that standardized DoD competencies should be defined through established DoD processes. Still, the services should be permitted to create additional service competencies that pertain to distinct functional activities, such as those carried out by the Army’s Veterinary Corps.

Recommendations

We recommend that major DoD GHE stakeholder organizations take the following steps to promote the development of joint and service GHE competencies and associated E&T:

- The Joint Staff Surgeon should direct the CCMD surgeons general, with the assistance of joint and service GHE experts, to identify and prioritize the joint GHE competencies—and constituent knowledge, skills, and abilities—required to support CCMD GHE efforts in accordance with U.S. Office of Personnel Management standards.¹¹⁶
- The service GHE programs should establish service-specific GHE competencies—and constituent knowledge, skills and abilities—in concert with service medical E&T providers.
- To ensure a clear demand for GHE competencies and GHE-trained personnel, the CCMD surgeons general should continue to incorporate GHE missions into Combatant Command Plan and Operational Plan medical annexes.
- Finally, the Defense Health Agency’s DMRTI should establish just-in-time GHE training for security cooperation and operations.

Finding: GHE Development Pathways Are Not Systematically Established

In Chapter 4, we noted that joint educational providers offer more recommended courses than do service providers in most competency areas. Also, the majority of courses cover a small number of competencies. Although GHE courses are available to those at all career stages, most appear to target the midcareer stage, and avenues for GHE professional development have not been fully fleshed out, even for specialists. Although service guidance for GHE specialists links competencies to courses, it does not specify the progression of required education, training, and experience.

Workshop participants recognized that the Air Force and the Navy had established programs to grow GHE professionals, whereas the Army did not, although the Veterinary Corps recently established a GHE program. Nevertheless, there was general agreement that the pool of GHE personnel was constrained by the small number of billets allotted to GHE specialists, as well as by the fact that most military members with a GHE designation¹¹⁷ do not remain continuously in GHE positions but return to jobs in their primary field in order to advance in rank. However, there was not a complete consensus on the desirability of developing GHE as a primary designation within the services. Given the close connection between GHE and security

¹¹⁶ The U.S. Office of Personnel Management has been using its Multipurpose Occupational Systems Analysis Inventory—Closed-Ended (MOSAIC) methodology to conduct occupational studies of federal government positions and functions for more than 20 years. See U.S. Office of Personnel Management, “Policy, Data, Oversight: Assessment & Selection,” webpage, undated. For more information regarding MOSAIC, see U.S. Office of Personnel Management, *Delegated Examining Operations Handbook: A Guide for Federal Agency Examining Offices*, June 2019.

¹¹⁷ In this case, *designation* is used generically to include Air Force Special Experience Identifiers, Navy Additional Qualifying Designator, and Army Additional Skill Identifiers, which indicate additional skills, training, and qualification that a service member may possess beyond their primary occupational specialization.

cooperation and the recent establishment of a security cooperation certification program, some thought it would be a mistake to develop a corps of GHE professionals in isolation from the security cooperation workforce; rather, the former should be more fully integrated into the security cooperation workforce through attendance at DSCU courses to expose them to general security cooperation concepts and practices and elevate the importance of GHE within DSCU's curriculum.

Recommendations

To encourage the institutionalization of GHE career development pathways via service and joint mechanisms, we recommend that

- the Army Surgeon General establish a program or programs for nonveterinarian Army personnel to develop GHE professionals
- CCMDs and the services (GHE program offices, SCC surgeons, and human resources commands) review their medical and health billets for GHE workforce relevance and determine required GHE competencies for these billets to meet CCMD requirements
- service GHE programs consider conducting a study on the career path and promotion potential of GHE assignments that considers the education and experience of GHE practitioners
- OASD Health Affairs and DSCU convene a joint working group to compare GHE and security cooperation professional development and determine whether a formal linkage is warranted.

Courses and Course Providers

Finding: Few Recommended Courses Have GHE-Specific Content, Limiting the Exposure of Nonspecialist DoD Personnel to GHE Concepts and Practices

In Chapter 5, we noted that approximately two-thirds of the medical and nonmedical courses we examined for this study were GHE-related: that is, they were recommended by GHE experts or E&T providers as useful in some way for GHE planning or execution, but they contained little or no global health or GHE-specific content. In answer to our question regarding the potential expansion of GHE-specific courses or course content, workshop participants indicated that the greatest need was in exposing a wide range of DoD medical and health professionals to basic GHE concepts during their regular professional military education. In other words, do not create additional courses but increase the GHE content of existing, mostly service-provided, courses by inserting jointly developed GHE materials into them. As for GHE specialists, their most pressing requirement was joint, intermediate-level instruction. Some workshop participants suggested that DSCU would be more likely to add GHE content to its curriculum if the CCMDs were to formally incorporate more GHE personnel into the security cooperation workforce.

Recommendations

To expand the number of DoD E&T courses with GHE content, we recommend that

- joint and service medical E&T providers establish a working group to determine gaps and overlaps in the GHE content of medical professional development (especially, medical planners') courses and consider course modifications that increase the medical community's exposure to GHE
- service GHE programs develop service requirements for basic and intermediate GHE instruction and determine appropriate delivery mechanisms
- in coordination with DSCA, CCMDs and services review medical and health billets for security cooperation workforce relevance, determine the security cooperation training necessary for these billets, and ensure all GHE professionals with security cooperation responsibilities are in the Security Cooperation Workforce Development Database.

Finding: There Is No Explicit Division of Curricular Responsibility Among Course Providers

In Chapter 5, we showed that joint medical providers offered the most GHE-specific E&T opportunities and that service medical providers largely offered foundational E&T courses with limited GHE-specific content. In addition, some joint nonmedical organizations offer non-GHE-specific courses that are nevertheless useful to GHE practitioners.

In general, participants in our stakeholder workshops said that creating GHE-specific courses should be a joint responsibility to avoid duplication of effort by multiple joint and service educational institutions. But assigning a large share of this responsibility to CGHE was problematic without formal service or joint requirements for the GHE courses. Most workshop participants seemed content with service providers continuing to focus on foundational medical and health E&T, with the proviso that they add joint GHE content to existing courses.

Recommendations

To establish a more explicit division of curricular responsibility among GHE E&T providers, we recommend that

- service GHE programs develop service requirements for joint basic and intermediate GHE E&T and determine appropriate delivery mechanisms
- CGHE and service GHE programs finalize and deliver basic and intermediate courses (e.g., FOGHE I and II and GHEOC) for GHE specialists in all services to meet jointly developed competency requirements
- joint and service E&T providers determine the GHE content in existing medical professional development courses and create additional content for these courses as needed.

All of these recommended steps determine whether additional resources are needed to ensure sufficient course offerings and qualified instructors.

Instructional Strategies

Finding: GHE Courses Are Mostly Academic

In Chapter 6, we classified more than 80 percent of the blocks of instruction we reviewed as academic, which we defined as courses that primarily focus on theoretical or abstract applications of essential GHE-related concepts. Lectures are the primary mode of instruction in GHE courses, followed by seminars and practical exercises. Only a small number of GHE-related courses include field training.

Workshop participants did not comment on the appropriate balance of academic and practical GHE instruction. However, our earlier subject-matter expert discussions revealed a desire for more practical, hands-on training once the COVID-19 pandemic has abated.

Recommendations

To better tailor GHE instruction to different target populations, we recommend that

- CGHE and the service GHE programs study the types of personnel (e.g., medical planners and operators) that would benefit from more practical training
- USUHS and DMRTI consider expanding their practical training offerings (e.g., field training, joint medical readiness training) based on the needs of the personnel identified in the previous recommendation's study.

Finding: GHE Courses Are Increasingly Virtual

As discussed in Chapter 6, a mix of in-person, remote, and blended courses were available to the GHE community until 2020. Not surprisingly, however, most GHE courses have been offered remotely since the COVID-19 pandemic began, and it is unclear how many will return to primarily in-person instruction following the pandemic. Our workshop stakeholders largely favored a hybrid model of in-person and virtual. They contended that in-person instruction (especially in a joint context) helps with networking and teaching the soft skills that are important to GHE. Virtual courses reduce financial costs and time expenditures and allow flexibility in scheduling, and the reduction in interactivity can be mitigated by requiring participants to appear on camera.

Recommendations

To help illuminate the right balance of virtual and in-person instruction in various contexts, we recommend OASD Health Affairs direct CGHE to dedicate Global Health Engagement Research Initiative funds to

- study the efficiency and effectiveness of virtual GHE course instruction during the COVID-19 pandemic
- compare the results to previous evaluations of in-person GHE courses and to the results of course satisfaction surveys from joint and service medical and health courses conducted in-person and online, prior to and following the COVID-19 pandemic
- recommend an appropriate steady-state mix of virtual and online GHE instruction provided by joint and service E&T institutions.

Integration and Implementation

Finding: GHE Has Been Conducted with Limited Strategic and Policy Integration of E&T Elements and Joint Development of E&T Policy

In Chapter 7, we highlighted significant interrelated challenges that inhibit the development of GHE E&T, including a lack of resources (personnel and funding), a lack of policy requirements, varying support for GHE among important GHE stakeholders, and an inability to demonstrate the importance of GHE to achieving DoD objectives. To a large extent, these deficiencies can be reduced to two strategic obstacles: (1) limited integration of GHE elements and (2) limited centralized direction on priorities and responsibilities. As one longtime GHE observer noted, DoD is pedaling “a GHE bicycle without any handlebars”: that is, without a formal guidance document, dedicated personnel, or dedicated resources.¹¹⁸ An earlier analysis of Navy GHE activities found them to be disconnected and unfocused.¹¹⁹ One expert we spoke with considered GHE to be unmoored from the larger security cooperation community.¹²⁰ As for GHE E&T, another discussant said that “there needs to be better organization with stakeholders dealing with smaller pockets of education and training,” along with specific funding and support from the CCMDs, the services, and OASD Health Affairs.¹²¹

Recommendations

To develop and implement an integrated, centrally managed GHE E&T strategy, we recommend that

- OASD Strategy, Plans, and Capabilities incorporate conceptual guidance on the need for GHE E&T that is tailored to different target populations into DoD Instruction 2000.30

¹¹⁸ Licina, Amspacher, and Francisco, 2020, p. 55.

¹¹⁹ Patricia Denzer, Susan Silverman, and Steven McGivern, *Navy Medicine Global Health Engagement Assessment*, Survivability/Vulnerability Information Analysis Center, TR-14-1695, September 29, 2013.

¹²⁰ Discussion with U.S. defense official, August 21, 2020.

¹²¹ Discussion with U.S. defense officials, December 4, 2020.

- the GHE Council, representing major stakeholders from across DoD, develop and publish a tiered implementation framework for GHE education, training, and professional development.

Establishing a GHE Education and Training Concept

As a distillation of the GHE literature and our discussions with GHE stakeholders and subject-matter experts, Figure 8.1 presents a conceptual perspective on GHE E&T linkages that could serve as a focal point for more-detailed discussions on tailoring GHE E&T to different target populations. This concept is composed of three key dimensions:

1. a multilayer pyramid, consisting of different potential target audiences for GHE E&T, with GHE specialists at the top and all members of the military at the bottom
2. a desired level of exposure to GHE-related E&T, ranging from low at the bottom of the pyramid to high at the top
3. the E&T focus that might be appropriate for each target student population.

To illustrate, we assume that most members of the military require only a low level of exposure to GHE, equating to a general awareness of DoD's GHE mission, which could be acquired through their basic military education. However, GHE specialists need to be steeped in the full range of GHE competencies, which could entail years of professional development and on-the-job E&T. Other potential target groups—from medical and civil affairs operators, to U.S. embassy-based ODC chiefs and defense attachés, to senior military leaders and decisionmakers, to CCMD and SCC security cooperation and exercise planners, to joint and service medical planners—would presumably require an intermediate, albeit differentiated, level of exposure to GHE E&T, which could be provided by a variety of DoD institutions and courses. Thus, medical planners may need a relatively high level of GHE E&T exposure, received through service and/or joint medical planners' courses, in order to design GHE-related medical plans and missions.

In contrast, medical or civil affairs operators may require relatively less GHE exposure, which could be obtained during their regular professional military education or in the form of just-in-time training, in order to execute GHE activities or operations. We also recommend that certain nonmedical or nonhealth groups be considered for an intermediate level of GHE instruction. ODC chiefs and attachés may need to understand the role of GHE in achieving objectives in their assigned partner countries, military leaders and decisionmakers may need to appreciate the importance of GHE in achieving operational and strategic objectives, and security cooperation and exercise planners may need to be able to incorporate GHE into security cooperation and exercise plans. Acquiring this kind of knowledge and skill could be obtained through overseas assignment training at DSCU, in command and staff and war college courses, and in security cooperation and operational planners' courses, respectively.

Figure 8.1. Linkages Among Key Dimensions of GHE Education and Training



NOTE: SC = security cooperation.

Developing a GHE E&T Implementation Framework

Developing and disseminating a DoD concept of GHE E&T dimensions and interrelationships is an important step in establishing a more integrated plan of action, but more-practical steps need to be taken as well so that the recommendations addressed earlier in this chapter can be successfully implemented. Figure 8.2 shows our framework for organizing our GHE E&T policy recommendations into an understandable and practicable implementation strategy that OASD Strategy, Plans, and Capabilities, as the chair of the GHE Council, could review and refine before presenting it to the other members of the council for their approval. This framework is based primarily on sequential logic (that is, what logically needs to come before something else because of a dependency relationship) and secondarily on presumed policy preferences (for example, regarding the importance of targeted student groups or of creating new E&T courses rather than improving existing courses).

For simplicity's sake, we have binned our more than two-dozen recommendations into four major sequential categories (which we call *tiers*) and two to four subcategories. See Appendix F for a complete list of recommendations by tier, along with recommended OPRs, OCRs, and potential implementation challenges.

In Figure 8.2, the orange-colored Tier 1 is reserved for near-term recommendations: that is, things that ideally should be done before GHE E&T is further developed. From our perspective, there is a danger of putting the cart before the horse when it comes to GHE E&T in terms of trying to develop additional GHE courses and content before a clear demand signal exists. As a result, it becomes difficult to convince major stakeholders to move forward, given multiple competing priorities and limited resources. From our research, we determined that creating a demand signal entails (1) establishing high-level E&T policies, (2) defining stakeholder roles and responsibilities, (3) setting requirements for E&T positions and personnel, and (4) making plans for GHE activities and operations that require trained GHE practitioners. See Table F.1 for specific demand-creating recommendations in the areas of policy, roles and responsibilities, requirements, and planning.

The green medium-term implementation tier contains recommendations that have to do with expanding and refining the GHE professional development system. For the most part, these are things that can be done concurrently with E&T development, although our research indicates they are necessary to ensure that the right E&T is provided to the right students at the right time in their careers. Recommendations in this category are geared toward (1) developing joint and service GHE competencies, (2) linking competencies to required E&T courses and providers, and (3) expanding and refining developmental pathways, especially for GHE specialists. See Table F.2 for specific professional development recommendations.

The blue medium-term tier contains our recommendations for E&T course development. We have labeled these recommendations as *core* because of their connection to E&T-related DCRs found in the 2018 GHE CBA. Essentially, this tier involves first conducting a detailed inventory of relevant courses, building on our work, then resetting and tailoring courses, as necessary, for GHE specialists, other medical and health personnel, and certain nonmedical personnel, such as security cooperation planners and senior military leaders. In addition, we have recommended a course-related initiative that may be useful for all target groups. See Table F.3 for course-related recommendations.

The red Tier 4 includes longer-term recommendations that are useful but not essential to the progress of GHE E&T (in particular, improvements to existing GHE instruction). These recommendations have been subdivided into two categories: (1) those pertaining to the evaluation of GHE instructional methods and (2) those focused on incorporating desired improvements into GHE courses. See Table F.4 for specific instructional strategy recommendations.

Figure 8.2. GHE Education and Training Implementation Framework

Tier 1 Near Term (Need to do prior to E&T development)	<u>Create demand signal for GHE E&T:</u> 1. Establish policies 2. Define roles and responsibilities 3. Set requirements 4. Make plans for GHE activities and operations
Tier 2 Medium Term (Can do along with E&T development)	<u>Expand/refine GHE professional development system:</u> 1. Develop joint and service GHE competencies 2. Link competencies to required E&T courses and providers 3. Establish developmental pathways
Tier 3 Medium Term (Core E&T)	<u>Inventory, reset, and tailor E&T courses:</u> 1. For specialists 2. For other medical/health personnel 3. For nonmedical/health personnel
Tier 4 Longer Term (Useful but not essential to E&T)	<u>Make improvements to GHE instruction:</u> 1. Evaluate GHE instructional methods 2. Incorporate improvements into courses

Conclusion

This chapter presents our policy recommendations for improving GHE E&T using the research findings derived from our literature review, subject-matter expert discussions, course assessments, and stakeholder workshops. We have taken a strategic, holistic, and practical approach to developing our research findings and associated recommendations—with areas of inquiry ranging from target student populations, to GHE competencies, to professional development requirements, to E&T provider organizations, to GHE courses and course content, to instructional strategies—rather than a narrower, tactical approach aimed at simply addressing the DCR actions for expanded GHE E&T. We did this because we perceived that further course development was unlikely to succeed without establishing demand for GHE E&T. We also considered that a successful rollout of new courses or course content requires a better understanding of the kind of GHE E&T that is needed by different groups of DoD personnel, as well as the organizations that are best suited to providing it.

Beyond classifying our findings and recommendations by major components of GHE E&T, we attempted in this chapter to integrate these components into a concept that describes the desired level of exposure to GHE E&T by target student population and the nature of the needed E&T instruction. In addition, we proposed a framework for implementing our recommendations based on sequential logic and the priorities of major GHE stakeholders. We are hopeful that the

integration concept and implementation framework will form the basis for a community consensus regarding an GHE E&T strategy, endorsed by the GHE Council, that will garner widespread support and sustained resource commitments from the joint force and the services.

Appendix A. Literature Review Method

The aim of our literature review was to synthesize current research that is relevant to our study and develop areas of inquiry for primary data collection and analysis. To this end, we had two specific focuses: (1) an overview of current E&T practices (i.e., who is engaged in GHE E&T activities and to what effect) and (2) the strengths, limitations, and areas for improvement related to GHE E&T.

To answer our research questions, we designed and carried out an analytical review of the peer-reviewed literature using techniques of the PRISMA systematic review protocol, which is used widely for literature reviews and designed to consolidate research that is specific to a given topic.¹²² PRISMA outlines a set process of (1) identifying studies, (2) screening for duplicates, (3) determining eligibility, and (4) including for review.

Identifying studies consists of searching key databases using a set search strategy. Because GHE E&T is a field both of research and of practice, the literature search included a mix of academic and gray databases. These were identified by the study team, with the help of subject-matter experts. This effort resulted in four sources to identify our literature for review: (1) a review of GHE E&T provider websites, (2) a compilation of literature we were already aware of, (3) a systematic search and screening of literature through main databases, and (4) snowball identification from literature and from discussions with subject-matter experts. Peer-reviewed papers were found through searches in five databases, coupled with snowball methodology. We searched through the Defense Technical Information Center, ProQuest, PubMed, CGHE, USUHS, and Web of Science.

We used the following terms in our searches: “global health engagement”; (medical diplomacy) OR (health diplomacy) AND (military); (security cooperation) AND (global health OR medical); (humanitarian assistance and disaster relief) AND (military); (military) AND (medical diplomacy OR health diplomacy); “security cooperation” AND (“health” OR “medical”). Search terms were tested for whether they resulted in relevant documents. Several key words were excluded because the results they produced were too broad: specifically, (military) AND (health engagement); Global health Capacity-building; Global health engagement; and Humanitarian action health. The date range of articles was 2010 to 2020. The publication date was constrained to 2010 to October 2020.

The identification, screening, and eligibility of each paper proceeded as follows. We screened publications by reading the title, abstract, or summary to remove duplicates, non-

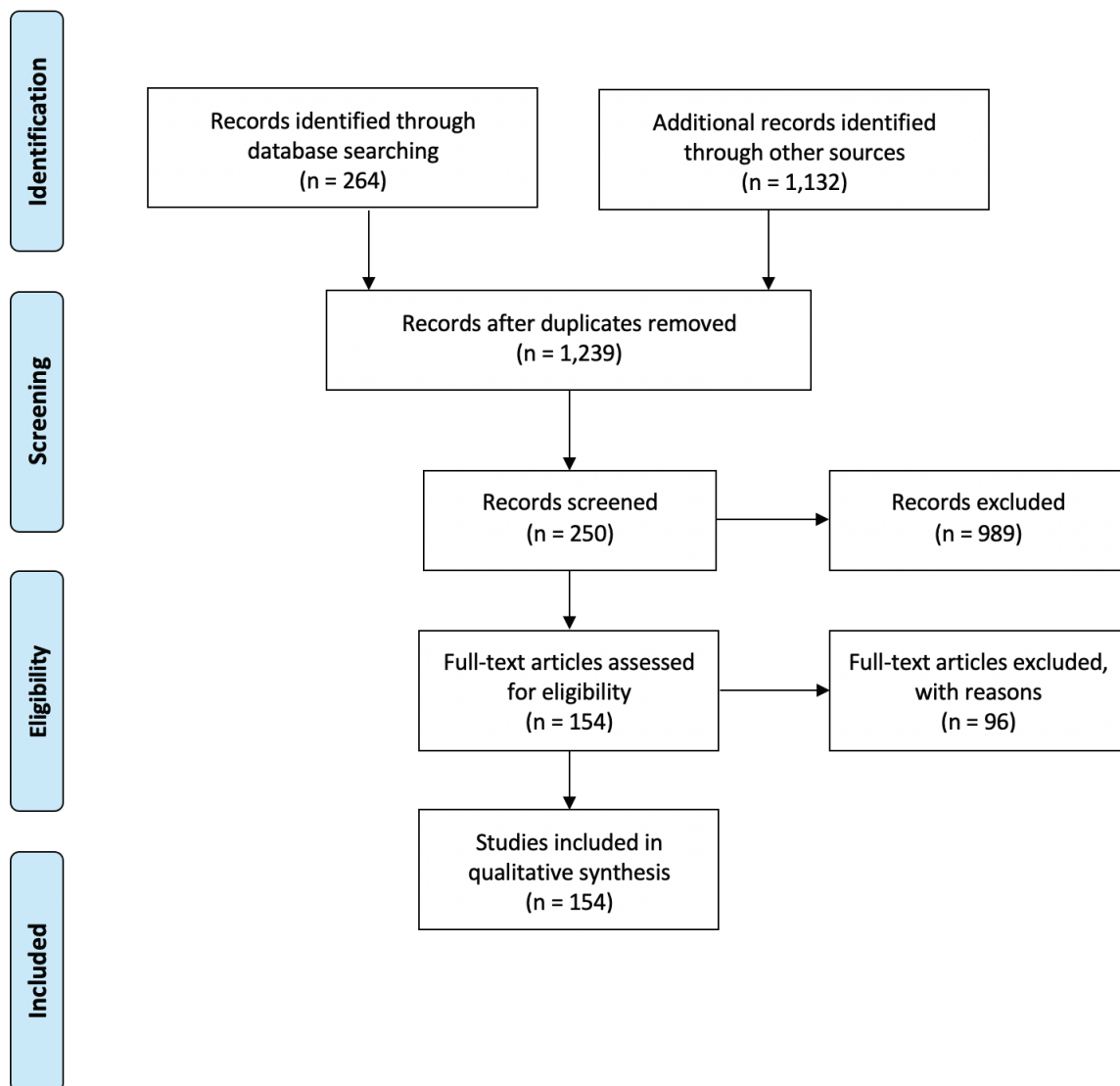
¹²² Matthew J. Page, Joanne E. McKenzie, Patrick M. Bossuyt, Isabelle Boutron, Tammy C. Hoffmann, Cynthia D. Mulrow, Larissa Shamseer, Jennifer M. Tetzlaff, Elie A. Akl, Sue E. Brennan, et al., “The PRISMA 2020 Statement: An Updated Guideline for Reporting Systematic Reviews,” *BMJ*, Vol. 372, No. 71, 2021; and Mark Petticrew and Helen Roberts, *Systematic Reviews in the Social Sciences: A Practical Guide*, Blackwell Publishing, 2006.

English reports, and papers that did not relate to global health engagement. Potentially relevant publications were read in full.

Figure A.1 shows the result of this process. The figure shows that 1,396 articles were identified, resulting in 1,239 after duplicates were removed, 250 after initial and 54 after full-text screening. This resulted in 54 studies for final inclusion.

To extract information and synthesize the articles selected for final inclusion, we used the same coding framework for the thematic areas for structuring subject-matter expert discussions. This ensured that discussion and documentary results complemented each other. We used new information from the review to inform our discussions and vice versa, completing the process until no new information emerged. At this point, we considered the literature review complete.

Figure A.1. PRISMA Flow Chart



SOURCE: Adapted from Page et al., 2021.

Appendix B. Discussion Protocols and Respondent List

Discussions were designed to build on the results of the literature review and provide additional information otherwise not available in the literature. We used the results of our literature review to develop a discussion protocol for our GHE E&T subject-matter experts and to identify respondents. Our discussion protocol is included below, and Table B.1 shows the number of discussion participants. As the discussion protocol shows, given the lack of evaluations of GHE E&T in the literature, questions focused on both identification and overview of courses, what was and was not working well in GHE E&T, and areas for improvement. We aimed for a broad representation of stakeholders involved in GHE E&T from different branches of the military and from different GHE E&T providers. We were able to achieve these aims, as our list of respondents indicates. In total, we spoke with 83 respondents during 48 individual and group discussions, each approximately 30 to 60 minutes in length.

RAND NDRI Study: GLOBAL HEALTH ENGAGEMENT – IMPROVING SUPPORT TO COMBATANT COMMANDS

Education & Training Discussion Protocol

1. Introduction and verbal consent

Thank you for taking the time to speak with us today. We're from the RAND Corporation, a nonprofit, nonpartisan institution that conducts research on behalf of the U.S. government, private institutions, and foreign governments. With your permission, I'll begin by introducing the members of the RAND study team, providing you with some background on our research study, and giving you an opportunity to ask any preliminary questions before we start our discussion. My name is _____. I will lead the discussion today. My colleagues, _____, will assist me in conducting the discussion. _____ will be taking notes but will only be sharing our notes with members of our team. The principal investigators for the study are Dr. Trupti Brahmhatt and Dr. Jennifer Moroney.

The study came about as a result of the 2018 GHE Capability Based Assessment (CBA) to facilitate efficient conduct of GHE activities and is sponsored by the Office of the Assistant Secretary of Defense for Health Affairs (OASD/HA). OASD/HA asked RAND to assess Global Health Engagement (GHE) education and training, technology platforms, and funding mechanisms to help DoD synchronize GHE training and education and enable long-term GHE capability development for the Combatant Commands (CCMDs). Our project monitor in the Health Affairs office is Dr. Chris Daniel, the senior advisor for Global Health Engagement.

We selected you in consultation with our sponsor because of your experience in [military health education, military education or security cooperation education]. Although we believe your insights will be quite valuable, you are of course free to decline to participate in the discussion, decline to answer any question, and to provide the level of detail you feel is appropriate.

You should also know that while we will be taking notes during the discussion, your responses will remain anonymous. We will be presenting themes and variation in responses across discussions in our study report for OASD/HA. We may include some direct quotes but will not be attributing them to anyone by name or position in a way that would directly identify you.

Do you have any questions at this time? Would you like to continue with the discussion?

2. Background questions

We would like to begin by asking some questions about your GHE-related experience.

- a. Would you please indicate the major DoD (or other USG or non-USG) organization you currently belong to (e.g., OSD, Joint Staff, Geographic Combatant Command, Service headquarters)?
- b. Would you please describe your current position as well as any GHE-related responsibilities or interests related to this position?
- c. How many years of GHE-related experience do you have? Would you briefly describe this experience?
- d. Have you received any GHE-related training and education? If so, who was the provider? In what ways has this training and education helped you in carrying out subsequent GHE responsibilities? In what ways has it been insufficient? Examples would be helpful

3. Training and education questions

We would now like to ask you some questions related to the training and education of DoD personnel in GHE topics.

- a. What types of courses are offered by your institution that include GHE content?
 - i. To what extent is GHE emphasized in these courses?
 - ii. What specific GHE knowledge and skills are focused on?
 - iii. What kinds of students attend these courses?
 - iv. How often are these courses offered?
 - v. What is their duration?
 - vi. Are there any pre-requisites?
 - vii. Are they offered online, in-person, both?
 - viii. What are the backgrounds of course instructors?
 - ix. What instructional strategies are used?

- b. Are you familiar with other GHE-related courses offered by other DoD institutions? If so, how would you compare what they offer to your institution's course offerings, e.g., with respect to course content, students, etc.?
- c. What opportunities and challenges, if any, exist to offering appropriate GHE-related training and education to different groups of DoD personnel? To what extent can these opportunities be exploited and challenges overcome? If so, how?

4. Concluding questions

As we wrap up, we would now like to ask you:

- d. Is there anything else we did not cover that we should consider?
- e. Are there any other individuals or organizations you feel we should speak to who have good visibility on these issues and could provide valuable insights for our study? Would you kindly provide their contact information?
- f. Is there any documentation you could share with us that you think would be relevant, particularly, GHE-related course descriptions, syllabi and other instructional materials?

Table B.1. GHE Education and Training Discussion Count, by Organization

Organization Type	Number of Discussions
OSD, Defense Health Agency, DSCA	8
CCMD	15
Service headquarters or global health office	5
Regional or functional component	28
USUHS, CGHE	9
Service medical department or school	6
Joint Staff	1
Service nonmedical professional military education	4
Joint nonmedical professional military education	4
Other	3
Total	83

Appendix C. Data Collection and Analysis Process

We designed the data collection and analysis process to ensure that the research questions could be answered and recommendations could be made. Analysis occurred as data was collected using a coding frame. A standardized set of broad coding categories was used for the literature, discussions, analysis of course materials, and our stakeholder workshops, and specific subcategories were developed for each of these four sources of data. This allowed the synthesis of multiple sources of data along the main lines of inquiry and allowed us to capture distinct information for each data source. Multiple members of the study team engaged in data analysis, and an interrater reliability process was performed to ensure coding consistency and to develop inclusion and exclusion guidelines for each of the coding categories. Tables C.1 and C.2 show the links between the objectives, questions, coding categories, and sources of data.

Table C.1. Linkages Between Research Questions and Coding Categories

Question	Coding Categories
1. Which DoD populations need GHE competencies, and why?	a) GHE competencies b) DoD GHE E&T target populations
2. What GHE competencies do each of these populations need?	a) GHE competencies b) DoD GHE E&T target populations
3. How does each population develop and expand needed competencies throughout their careers through GHE E&T?	b) DoD GHE E&T target populations
4. Which institutions are or could be responsible for GHE E&T for DoD populations?	c) GHE E&T providers f) GHE course target population and competencies
5. What curricula do or could these institutions offer?	d) GHE courses
6. What instructional strategies are being employed for GHE E&T by these institutions?	e) GHE course level and instructional approach
7. What are the challenges to providing GHE E&T to these populations, and how might they be overcome or mitigated?	g) GHE E&T challenges h) GHE E&T recommendations

Table C.2. How We Used the Data Sources for Each of the Study's Lines of Inquiry

Coding Category	Literature	Discussions	Course Materials	Stakeholder Workshops
a) GHE competencies	X	X	X	X
b) DoD GHE E&T target populations	X	X	X	X
c) GHE E&T providers	X	X	X	X
d) GHE courses	X	X	X	X
e) GHE course level and instructional approach			X	X
f) GHE course target population and competencies			X	X
g) GHE E&T challenges	X	X		X
h) GHE E&T recommendations	X	X		X

Appendix D. GHE Course Descriptions

Our GHE course review was designed to understand the world of GHE courses. Table D.1 shows a list of courses selected for review. These courses were identified through the literature review, subject-matter expert discussions, and a web search of identified GHE E&T providers. Courses were selected for review if they fell under one of the following four course types:

1. GHE-specific (course materials mention GHE as the primary focus of instruction)
2. global health-specific (course materials mention global health as the primary focus of instruction)
3. GHE-related, medical and health (medical and health courses recommended by GHE experts or E&T providers as useful for GHE planners or practitioners)
4. GHE-related, nonmedical or nonhealth (nonmedical or nonhealth courses recommended by GHE experts or E&T providers as useful for GHE planners or practitioners).

Inclusion and exclusion criteria were created for each of these four categories (Table D.2).

The identified courses were then analyzed. As with the literature review, we collected two categories of information: (1) basic background information about the course and (2) analytic and assessment criteria. The basic information we collected included source, course title, course acronym, course description, course website, whether the course was discontinued or in development, name of institution and school or center providing the course, and name of the program. The analytic criteria we used included type of institution, type of education or training, level of GHE-specific content of the course, whether the course was identified as GHE-relevant instruction, course length and credit, whether the course is part of a series, stage of career at which the course was taken, population receiving the course, instructional approach, competencies covered, and GHE area covered in the course. These categories were developed based on our literature review and discussions with subject-matter experts. As with the other sections, we included inclusion and exclusion criteria to guide our analysis. We contacted the points of contact listed for the courses for which information was unavailable online.

Table D.1. Courses Identified for Review with Relevant GHE Education and Training Material

Course Title	Name of Institution	Name of School
Air Advisor A Course	Air Force	Expeditionary Operations School
Combat Aviation Advisors Mission Qualifier Course	Air Force	U.S. Air Force Special Operations School Language and Culture Center located on Hurlburt Field, Florida
Air Advisor Initial Qualification Course	Air Force	Air Education and Training Command
Air Advisor International Advisor Course C	Air Force	Air Education and Training Command
Air Advisor International Advisor Course B	Air Force	Air Education and Training Command
Global Health Engagement Orientation Course (formerly IHS Orientation Course)	Air Force	International Health Specialist Program
Security Cooperation Management Policy, Programs, and Planning Course	DSCU	
Joint Humanitarian Operations Course	U.S. Agency for International Development	Office of U.S. Foreign Disaster Assistance
Humanitarian Assistance Response Training (Disaster)	Center for Excellence in Disaster Management and Humanitarian Assistance	
Humanitarian Assistance Response Training (Conflict)	Center for Excellence in Disaster Management and Humanitarian Assistance	
Health and Humanitarian Action in Emergencies	Center for Excellence in Disaster Management and Humanitarian Assistance	
Civil-Military Coordination	United Nations Office for the Coordination of Humanitarian Affairs, Center for Excellence in Disaster Management and Humanitarian Assistance	
Health Emergencies in Large Populations	Center for Excellence in Disaster Management and Humanitarian Assistance, International Committee of the Red Cross	
Field Craft Uncertain	Air Force	Expeditionary Operations School
Global Health Strategies for Security	USUHS, U.S. Agency for International Development	CGHE
Global Health 1 – “Fundamentals of Global Health”	USUHS	School of Medicine
Global Health 2 – “Advanced Concepts in Global Health”	USUHS	School of Medicine
Global Health 3 – “Global Health Engagement”	USUHS	School of Medicine
Practical Monitoring and Evaluation	USUHS	School of Medicine
Medical Anthropology	USUHS	School of Medicine

Course Title	Name of Institution	Name of School
Global Health Seminar	USUHS	School of Medicine
Public Health Issues of Disasters in Developing Countries	USUHS	School of Medicine
International Diploma for Humanitarian Assistance	Fordham University	School of Medicine
Security Cooperation Management Action Officer Course	DSCA	
Intermediate Security Cooperation Planning, Oversight, and Execution	DSCA	
International Programs Security Requirements Course	DSCA	
Introduction to Technology Transfer Plans, Operations, and Medical Intelligence Course	U.S. Navy	
	USUHS	School of Medicine
	USUHS	Institute of International Humanitarian Affairs
Fundamentals of Global Health I	USUHS	CGHE
Engagement Course, Level 1	University of Georgia	DSCU
Medical Stability Operations Course	U.S. Navy, USUHS	Navy Medical Leader and Professional Development Command
Veterinary Support to Stability Operations	Collaborative study by researchers from George Washington University, Navy Medical Leader and Professional Development Command, and Armed Force Health Surveillance Center	CGHE
Military Veterinary Medical Course	USUHS	CGHE
Military Tropical Medicine Course	USUHS	College of Veterinary Medicine
Research, Partnerships, and Field Diplomacy in Global Health	USUHS	
Health Context Analysis	Army War College	
GHE component of Military Contingency Medicine Course (Operation Bushmaster)	USUHS	Navy Medical Leader and Professional Development Command
Women, Peace and Security	University of California, Davis (multiple)	
Medical Humanitarian Assistance Course	National Defense University	CGHE, School of Medicine
Army Security Cooperation Planners Course	National Defense University	CGHE, School of Medicine
Multiple courses	National Defense University	CGHE, Department of Military Emergency Medicine
Multiple courses	USASOC	CGHE
NDU 6056: Leadership Perspectives in Health Strategy: Solving Wicked Strategic/Global Health Problems	Defense Health Agency	Department of Pediatrics

Course Title	Name of Institution	Name of School
NDU 6075: Health Strategy as a Foundation for National and Global Security	Defense Health Agency	Peacekeeping and Stability Operations Institute (PKSOI)
Joint, Interagency, and Multinational Planner's Course	Air Force Research Laboratory, 711th Human Performance Wing	School of Medicine
Special Operations Civil Affairs Medical Sergeants Course	Air Force Research Laboratory, 711th Human Performance Wing	Plant Sciences Department
Joint Medical Operations Course-Basic	Air Force Research Laboratory, 711th Human Performance Wing	National Defense University
Joint Medical Operations Course-Advanced	Air Force Research Laboratory, 711th Human Performance Wing	National Defense University
Global Medicine Symposium	Air Force Research Laboratory, 711th Human Performance Wing	Joint Forces Staff College
Air Force Operational Medicine 101	Air Force Research Laboratory, 711th Human Performance Wing	U.S. Army John F. Kennedy Special Warfare Center and School
Air Force Operational Medicine 102	Air Force Research Laboratory, 711th Human Performance Wing	DMRTI
Aerospace & Operational Medical Executive Symposium	Air Force Research Laboratory, 711th Human Performance Wing	DMRTI
Contingency Preventive Medicine	Air Force Research Laboratory, 711th Human Performance Wing	USAFSAM
Operational Entomology	Air Force Research Laboratory, 711th Human Performance Wing	USAFSAM
Flight Nurse and Aeromedical Technician Course	Air Force Research Laboratory, 711th Human Performance Wing	USAFSAM
Critical Care Air Transport Team Course (Initial and Advanced)	Air Force Research Laboratory, 711th Human Performance Wing	USAFSAM
Bioenvironmental Engineering Readiness and Deployment Skills	Air Force Research Laboratory, 711th Human Performance Wing	USAFSAM
Bioenvironmental Engineering Apprentice	Air Force Research Laboratory, 711th Human Performance Wing	USAFSAM
Bioenvironmental Engineering Officer Advanced	Air Force Research Laboratory, 711th Human Performance Wing	USAFSAM
Bioenvironmental Engineering Officer	Air Force Research Laboratory, 711th Human Performance Wing	USAFSAM
Occupational Health Measurements	Air Force Research Laboratory, 711th Human Performance Wing	USAFSAM
Bioenvironmental Engineering Radiation Skills	Air Force Research Laboratory, 711th Human Performance Wing	USAFSAM
Bioenvironmental Engineering Comprehensive Medical Readiness Program	Air Force Research Laboratory, 711th Human Performance Wing	USAFSAM
HAPSITE Workshop	Air Force Research Laboratory, 711th Human Performance Wing	USAFSAM

Table D.2. GHE Course Inclusion and Exclusion Criteria

Category Name	Definition	Includes	Excludes
GHE-specific	Course materials mention GHE as the primary focus of instruction	CGHE's Fundamentals of Global Health Engagement courses, Air Force International Health Specialist course	Global health or other medical and health courses in which GHE is not the primary focus (may mention GHE or include a short GHE module)
Global health-specific	Course materials mention global health as the primary focus of instruction	USUHS's Fundamentals of Global Health Engagement courses	Courses in which GHE (rather than global health) in general is the primary focus; medical and health courses in which global health is not the primary focus
GHE-related (medical/health)	Medical and health courses recommended by GHE experts or E&T providers as useful for GHE planners or practitioners	Navy's Plans, Operations, and Medical Intelligence Course, USAFSAM's Contingency Preventive Medicine course	Medical and health courses that have not been recommended by GHE experts or E&T providers as useful for GHE planners or practitioners; courses that explicitly focus on GHE or global health
GHE-related (nonmedical/health)	Nonmedical or nonhealth courses recommended by GHE experts or E&T providers as useful for GHE planners or practitioners	Joint Forces Staff College's Joint, Interagency, and Multinational Planner's Course, DSCU's Security Cooperation Management Policy, Programs, and Planning Course	Nonmedical or nonhealth courses that have not been recommended by GHE experts or E&T providers as useful for GHE planners or practitioners; courses provided by joint or service medical and health institutions

Appendix E. Stakeholder Workshops on Findings and Recommendations

The two stakeholder workshops were designed to support the facilitation of the analysis process and ensure that the resulting findings and recommendations of the study were valid, complete, and useful for decisionmaking and policy improvement. We developed the workshop following an initial analysis of literature, discussions, courses, and competencies as a way of moving the draft findings and recommendations toward finalized findings and recommendations.

We followed a common structure for both workshops. Ahead of the workshops, we gave participants a short read-ahead explaining the workshop's aims and procedures. We began both workshops with a reiteration of the workshop's aims and procedures before providing a short overview of the study (including the study's purpose, objectives, and areas of inquiry). Next, we offered a series of short presentations on the main findings that were used as the basis for discussions on draft recommendations. We concluded with a wrap-up during which we summarized the main workshop decisions and asked for any final comments from participants. We took notes during the workshop, which we used to develop workshop summaries of the main points of discussion related to findings and recommendations.

DoD Global Health Engagement Education and Training

Read-Ahead

RAND's National Defense Research Institute is conducting an analysis of Global Health Engagement (GHE) education and training for the Office of the Assistant Secretary of Health Affairs (OASD/HA) in support of its DOTmLPP-P Change Recommendation implementation efforts. Specifically, OASD/HA asked RAND to assess GHE education and training institutions—as well as the students they serve, competencies they develop, courses they take, and instructional strategies they employ—to help DoD synchronize GHE education and training and enable long-term GHE capability development for the Combatant Commands. Our project monitor in the Health Affairs office is Dr. Chris Daniel, the senior advisor for Global Health Engagement.

As part of our research, we have conducted a series of discussions in which many of you have participated. We have also conducted an extensive review of the literature relevant to GHE education and training and analyzed available materials on dozens of DoD and some non-DoD courses recommended as elements of a GHE-oriented curriculum. The purpose of this conference call is to bring together key stakeholders to discuss our findings and get feedback on potential options to improve the quality, availability and delivery of GHE education and training to different DoD student populations through Joint and Service institutions and programs at a reasonable cost in time and resources and without unnecessary duplication of efforts.

You should know that while we will be taking notes during the discussion, your responses will remain anonymous. Our notes will not be shared outside of our project team. All RAND reports are non-attributional and will not mention your name, office, or position.

During the conference call, we will first present a summary of the findings from our discussions, literature review, and course assessments—and a range of options for improving GHE education and training based on our research and analysis. We will then ask participants from each invited DoD organization if they would like to comment on the presented options (as well as other options we have not considered) relating to targeted student populations for GHE education/training, GHE competencies and education/training pathways, institutional providers of GHE education/training courses, and GHE course instructional strategies. We are interested in getting both a Joint and Service perspective on these topics as they pertain to GHE programs and the broader medical/health and security cooperation communities.

If you are comfortable speaking directly to the group, we would be happy to give you the opportunity to speak on any topic that you wish to discuss. You may also reach out to us separately with additional feedback.

At the conclusion of the conference call, RAND facilitators will summarize the discussions in each topical area and allow participants to raise any final points they might have related to GHE education and training.

Thank you in advance for your participation!

GHE Education and Training Conference Call

September 27, 2021 12:30-1:45 PM ET

September 29, 2021 2:00-3:15 PM ET

Agenda

1. **Welcome and Introduction** — Dr. Daniel (3 minutes)
2. **GHE study purpose, sources and methods** — RAND (12 minutes)
 - See slides 3-6 of the brief.
3. **Findings and options related to student populations targeted for GHE education/training** (12 minutes)
 - RAND presents findings and facilitates discussion on options (slides 7-8 of the brief)
 - Joint and Service GHE program directors and education/training providers invited to comment on options for targeting different populations of DoD military and civilian personnel with GHE-related training and education.

4. **Findings and options related to GHE competencies and education/training pathways** (12 minutes)
 - RAND presents findings and facilitates discussion on options (slides 9-10 of the brief)
 - Joint and Service GHE program directors and education/training providers invited to comment on options for developing Joint and/or Service GHE competencies and educational/training pathways for different populations of DoD military and civilian personnel.
5. **Findings and options related to institutional providers of GHE education/training courses** (12 minutes)
 - RAND presents findings and facilitates discussion on options (slides 11-12 of the brief)
 - Joint and Service GHE program directors and education/training providers invited to comment on options for designating Joint, Service and/or non-DoD institutions as responsible for delivering GHE-related courses or course content for different DoD military and civilian student populations at different points in their careers.
6. **Findings and options related to GHE course instructional strategies** (12 minutes)
 - RAND presents findings and facilitates discussion on options (slides 13-14 of the brief)
 - Joint and Service GHE program directors and education/training providers invited to comment on options for delivering GHE-related education and training instruction to DoD military and civilian personnel who are undertaking, or who are intending to undertake, different GHE-related assignments or missions.
7. **Wrap up** (12 minutes)
 - RAND provides summary of discussion and solicits additional feedback on future E&T options
 - We welcome comments from all participants.

Appendix F. GHE Education and Training Implementation Framework

This appendix provides a detailed description of our framework for implementing the GHE E&T policy recommendations discussed in Chapter 8. In addition to recommended actions, the framework contains the potential benefits of these actions, OPRs and OCRs for these actions, and possible implementation challenges; these elements are grouped into four tiers according to sequential logic and GHE stakeholder preferences. Tier 1 includes near-term recommendations for overall policy and requirements changes. Tier 2 includes medium-term competency and professionalization recommendations. Tier 3 includes medium-term course development recommendations. Tier 4 includes longer-term recommendations related to instructional methods.

Creating a Demand Signal for GHE Education and Training in the Near Term

Table F.1 lists our Tier 1 near-term policy recommendations, which are designed to create a demand signal for GHE E&T. Each recommendation in the leftmost column of the table has been grouped according to whether it is primarily concerned with (1) establishing policies, (2) defining roles and responsibilities, (3) setting requirements, or (4) making plans. In addition, we have linked each recommendation to one or more benefits (column 2 from the left), OPR and OCR (column 3), and implementation challenge (column 4) based on our research and previous knowledge about DoD. In terms of general GHE policy, we recommend that OASD Strategy, Plans, and Capabilities—in coordination with OASD Health Affairs and the Joint Staff Surgeon, among others—incorporate E&T into DoD Instruction 2000.30 in order to drive the requirement to provide and tailor GHE E&T to the broader DoD health and security cooperation communities and to GHE specialists. The Joint Staff Surgeon and the services (with help from CGHE, the service GHE programs, and others) should also assign roles and responsibilities for developing GHE competencies. We also recommend that OASD Health Affairs and the services take the lead in establishing responsibilities for providing GHE-specific instruction at different stages of medical professional development E&T. In our view, these three related policy and roles and responsibilities recommendations are essential steps to creating GHE E&T opportunities for more DoD personnel and competency-based GHE instruction. Potential challenges to implementation include the number of stakeholders involved and possible resistance by some stakeholders who may be reluctant to take up responsibilities that do not match their priorities and/or require additional resources.

Setting requirements for GHE E&T entails first reviewing CCMD and SCC medical and health billets for GHE workforce relevance and determining necessary E&T. For CCMD billets, this should be the primary responsibility of the CCMD Surgeons General, in coordination with the Joint Staff Surgeon and OASD Health Affairs. For SCC billets, the SCC Surgeons General should take the lead in coordination with the CCMD Surgeon General and the service GHE programs. These two recommendations have several important benefits: reinforcing the importance of joint GHE competencies and driving associated E&T, encouraging the institutionalization of GHE development pathways within DoD, and validating and reinforcing the importance of incorporating GHE content into relevant DoD E&T courses. Aside from the multiple stakeholders involved, a potential challenge for the SCC recommendation is that it is not a joint medical or health responsibility (though the CCMDs should have considerable influence over the SCCs if they choose to exercise it).

Reviewing CCMD and SCC medical and health billets for security cooperation workforce relevance—and ensuring that all GHE professionals with security cooperation responsibilities are in the security cooperation database—should help to validate and reinforce the importance of incorporating GHE content into relevant DoD courses, such as those offered by DSCU.

Continuing to ensure that GHE missions are incorporated into CCMD campaign and operational plans is another important step in establishing the demand signal for GHE-trained personnel, which could, in turn, expand the range of DoD E&T courses with GHE content. Planning for GHE missions is the responsibility of the CCMD Surgeons General, with assistance from the Joint Staff Surgeon and J5 (Strategy, Plans, and Policy).

Table F.1. Tier 1 (Near-Term) GHE Education and Training Recommendations

Recommendation	Benefit	OPR/OCR	Implementation Challenge
1. Establish policies			
Revise DoDI 2000.30 to incorporate GHE E&T policies	Drive requirement to provide/ tailor GHE E&T to broader DoD health and security cooperation communities as well as to GHE specialists	OPRs: OASD/SPC OCRs: OASD/HA, J5, JSS, Service GHE programs, CGHE	Multiple stakeholders
2. Define roles and responsibilities			
Establish responsibilities for identifying and prioritizing GHE competencies	Promote development of effective E&T by targeting standardized joint competencies	OPRs: JSS, services OCRs: CCMD SGs, J5, OASD/HA, service GHE programs, CGHE, OPM	Multiple stakeholders; potential stakeholder resistance
Establish responsibilities for providing GHE instruction tailored to different target populations	Create GHE E&T opportunities for relevant DoD personnel	OPRs: OASD/HA, services OCRs: Service GHE programs, CGHE, DHA/DMRTI	Multiple stakeholders; potential stakeholder resistance
3. Set requirements			
Review CCMD med/health billets for GHE workforce relevance and determine required GHE E&T for these billets	Reinforce importance of joint GHE competencies and drive associated E&T; encourage the institutionalization of GHE development pathways within DoD	OPR: CCMD SGs OCRs: JSS, OASD/HA, service GHE programs	Multiple stakeholders
Review SCC med/health billets for GHE workforce relevance and determine required GHE E&T for these billets	Reinforce importance of GHE competencies and drive associated E&T; encourage the institutionalization of GHE development pathways within DoD	OPRs: SCC SGs OCRs: CCMD SGs, service GHE programs	Multiple stakeholders; not joint med/health responsibility
Review CCMD med/health billets for SC workforce relevance, determine required SC E&T for these billets, and ensure all GHE professionals with SC responsibilities are in SC database	Validate and reinforce importance of incorporating GHE content into relevant DoD E&T courses	OPRs: CCMDs OCR: DSCU, service GHE programs	Multiple stakeholders
Review SCC med/health billets for SC workforce relevance, determine required SC E&T for these billets, and ensure all GHE professionals with SC responsibilities are in SC database	Validate and reinforce importance of incorporating GHE content into relevant DoD E&T courses	OPRs: SCCs OCR: DSCU, service GHE programs	Multiple stakeholders; not joint med/health responsibility
4. Make plans for GHE activities and operations			
Incorporate GHE missions into CCP and OPLAN medical annexes	Reinforce requirement for GHE competencies and drive associated E&T	OPRs: CCMD SGs OCRs: JSS, J5	Multiple stakeholders

NOTE: DHA = Defense Health Agency; HA = Health Affairs; JSS = Joint Staff Surgeon; OPLAN = operation plan; SC = security cooperation; SGs = surgeons general; SPC = Strategy, Plans, and Capabilities.

Expanding and Refining the GHE Professional Development System in the Medium Term

Table F.2 lists the Tier 2 (medium-term) E&T-related recommendations associated with expanding and refining the GHE professional development system, including (1) developing joint and service GHE competencies, (2) linking competencies to required E&T courses and providers, and (3) establishing developmental pathways. We have proposed two recommendations to promote the standardization of GHE competencies: (1) identifying and prioritizing joint competencies required to support CCMD GHE efforts in accordance with U.S. Office of Personnel Management standards and (2) establishing or revising service-specific GHE competencies. We suggest the CCMD Surgeons General as the OPR for the first recommendation and the Joint Staff Surgeon and OASD Health Affairs, among others, as OCRs. Primary responsibility for enacting the second recommendation should lie with the SCC Surgeons General in coordination with the service medical E&T providers. Execution challenges for both recommendations include the fact that multiple stakeholders are involved in the process and that implementation responsibilities are divided between joint and service institutions.

To perform the next step of linking competencies to required courses and course providers, we recommend that the service GHE programs take the lead, with support from CGHE, in developing service requirements for joint basic and intermediate GHE E&T and in determining appropriate delivery mechanisms. The major aim of this recommendation is to promote effective E&T targeted to joint and service-specific GHE competencies and tailored to each student's expected level of responsibility. Possible challenges include the multiplicity of stakeholders involved and the potential for stakeholder resistance to the idea of establishing GHE course requirements.

To execute the final step of establishing developmental pathways, we first recommend that the Army Surgeon General establish a program for nonveterinarian Army personnel to develop GHE professionals, especially for joint assignments, with the assistance of the Army SCCs and other service GHE programs. Possible obstacles to achieving this goal include the fact that the OPR is a service that has previously shown resistance to the establishment of a GHE specialty program, as well as the relatively large resource requirements associated with initiating and sustaining such a program. We also recommend that the service GHE programs consider conducting a study on GHE career paths and the promotion potential of GHE assignments that considers the education and experience of GHE practitioners. Finally, we recommend that OASD Health Affairs and DSCU convene a working group that includes representatives of the Joint Staff Surgeon's office and the service GHE programs to compare GHE and security cooperation professional development programs, criteria, and requirements to determine whether formal linkages are warranted.

Table F.2. Tier 2 (Medium-Term) GHE Education and Training Recommendations

Recommendation	Benefit	OPR/OCR	Implementation Challenge
1. Develop Joint and Service GHE competencies			
Identify and prioritize the joint GHE competencies—and associated knowledge, skills and abilities—required to support CCMD GHE efforts in accordance with OPM standards	Promote effective E&T by targeting joint (as well as service-specific) competencies	OPRs: CCMD SGs OCRs: JSS, OASD/HA, J5, CGHE, service GHE programs	Multiple stakeholders
Establish or revise service-specific GHE competencies as identified and prioritized	Promote effective E&T by targeting service-specific (as well as joint) competencies	OPRs: Service GHE programs OCRs: Service medical E&T providers	Multiple stakeholders; not joint medical/health responsibility
2. Link competencies to required E&T courses and providers			
Develop service requirements for basic/intermediate GHE instruction and determine appropriate delivery mechanisms	Promote effective E&T by tailoring it to students' expected level of responsibility; encourage the institutionalization of GHE development pathways	OPRs: Service GHE programs OCR: CGHE	Multiple stakeholders; not joint medical/health responsibility; potential stakeholder resistance
3. Establish developmental pathways			
Establish program for non-veterinarian Army personnel to develop GHE professionals, especially for joint assignments	Encourage the institutionalization of GHE development pathways within DoD	OPR: Army SG OCRs: ASCC SGs, Other Service GHE programs	Not joint medical/health responsibility; potential stakeholder resistance; relatively large resource requirement
Consider conducting a study on GHE career paths and promotion potential of GHE assignments that accounts for the education and experience of GHE practitioners	Encourage the institutionalization of GHE development pathways within DoD	OPR: Service GHE programs OCRs: CGHE	Relatively large resource requirement
Convene joint WG to compare GHE and SC professional development, determine whether formal linkage is warranted	Encourage the institutionalization of GHE development pathways within DoD	OPRs: OSD/HA, DSCU OCRs: JSS, service GHE programs	Multiple stakeholders; not fully joint medical/health responsibility

NOTE: ASCC = Army service component command; OPM = U.S. Office of Personnel Management; WG = working group.

Inventorying, Resetting and Tailoring GHE Education and Training Courses in the Medium Term

Table F.3 lists our medium-term E&T course development recommendations, which involve first conducting a detailed inventory of relevant courses (building on our work), then resetting and tailoring courses, as necessary, for different target populations. With regard to GHE specialists, we recommend that CGHE, with the assistance of the service GHE programs and DSCU, finalize arrangements for and deliver an intermediate-level course or courses, requesting additional resources if needed. Not only would this create GHE E&T opportunities for more DoD personnel, but it would also encourage the institutionalization of career pathways within DoD. Working against this goal are the involvement of multiple stakeholders and the relatively large resource requirement. To create GHE opportunities for the larger community of medical

and health personnel and to expand the range of DoD courses with GHE content, we recommend that USUHS, the Defense Health Agency's DMRTI, and the service medical and health schools (with support from CGHE and the service GHE programs) establish a working group to determine the GHE content in DoD medical professional development E&T courses. Once this is done, we recommend that USUHS and DMRTI, on the one hand, and service medical E&T providers, on the other hand, create GHE content for their respective joint and service medical professional development courses, with the assistance of CGHE and the service GHE programs. Of course, expanding the GHE curriculum in multiple venues will pose challenges, such as dealing with numerous stakeholders (both service and joint) and acquiring additional resources. For medical and health personnel, we also recommend that DMRTI establish just-in-time GHE training for security cooperation and operational missions in coordination with the CCMDs and the services. Finally, we have two course-related recommendations aimed at nonmedical health personnel: (1) DSCU (working with OASD Health Affairs, the Joint Staff Surgeon, and the service GHE programs) should insert GHE content into selected security cooperation courses, and (2) the National Defense University and the service war colleges (working with the aforementioned OCRs) should insert GHE content into their senior military leader courses. To facilitate the development and refinement of GHE courses for all target groups, we suggest that the Joint Staff—with the support of DSCA, OASD Health Affairs, the National Defense University, and the service war colleges and with the endorsement of the GHE Council—make GHE a “special area of emphasis” for joint professional military education.

Table F.3. Tier 3 (Medium-Term) GHE Education and Training Recommendations

Recommendation	Benefit	OPR/OCR	Implementation Challenge
1. For specialists			
Finalize and deliver basic and intermediate courses (e.g., FOGHE 1 and 2 and GHEOC) for GHE specialists in all services to meet jointly developed competency requirements; request additional resources if needed	Create GHE E&T opportunities for more DoD personnel; encourage the institutionalization of GHE development pathways within DoD	OPR: CGHE OCRs: Service GHE programs, DSCU	Multiple stakeholders; relatively large resource requirement
2. For other medical/health personnel			
Establish WG to determine gaps and overlaps in the GHE content of medical professional development (especially, medical planners') E&T courses	Create GHE E&T opportunities for more DoD personnel; expand the range of DoD E&T courses with GHE content	OPRs: USUHS, DHA/DMRTI, service medical E&T providers OCRs: CGHE, service GHE programs	Multiple stakeholders; not fully joint medical/health responsibility
Create additional GHE content for joint medical professional development E&T courses as needed; request additional resources if needed	Create GHE E&T opportunities for more DoD personnel; expand the range of DoD E&T courses with GHE content; contribute to a more explicit division of responsibility among E&T providers	OPR: USUHS, DHA/DMRTI OCRs: CGHE, Service GHE programs	Multiple stakeholders; relatively large resource requirement
Create joint GHE content for Service medical professional development E&T courses; request additional resources if needed	Create GHE E&T opportunities for more DoD personnel; expand the range of DoD E&T courses with GHE content; contribute to a more explicit division of responsibility among E&T providers	OPRs: Service medical E&T providers OCRs: CGHE, service GHE programs, DHA/DMRTI	Multiple stakeholders; not joint medical/health responsibility; relatively large resource requirement
Establish just-in-time GHE training for SC, operations	Create GHE E&T opportunities for more DoD personnel; expand the range of DoD E&T courses with GHE content; contribute to a more explicit division of responsibility among E&T providers	OPR: DHA/DMRTI OCRs: CCMDs, services	Multiple stakeholders; relatively large resource requirement
3. For nonmedical health personnel			
Insert GHE content into courses for SC planners in the GCCs and embassies; request additional resources if needed	Create GHE E&T opportunities for more DoD personnel; expand the range of DoD E&T courses with GHE content; contribute to a more explicit division of responsibility among E&T providers	OPR: DSCU OCRs: OSD/HA, JSS, Service GHE programs	Multiple stakeholders; not joint medical/health responsibility; relatively large resource requirement
Insert GHE content into senior military leader courses; request additional resources if needed	Create GHE E&T opportunities for more DoD personnel; expand the range of DoD E&T courses with GHE content; contribute to a more explicit division of responsibility among E&T providers	OPR: NDU, service war colleges OCRs: OSD/HA, JSS, service GHE programs	Multiple stakeholders; relatively large resource requirement
4. For all target groups			
Make GHE a "special area of emphasis" for joint professional military education, requiring the insertion of GHE content into security cooperation and leadership courses	Create GHE E&T opportunities for more DoD personnel; expand the range of DoD E&T courses with GHE content; contribute to a more explicit division of responsibility among E&T providers	OPR: Joint Staff OCRs: DSCA, OASD Health Affairs, NDU, service war colleges, GHE Council	Multiple stakeholders; competing educational priorities; relatively large resource requirement

NOTE: NDU = National Defense University.

Making Improvements to GHE Instruction in the Longer Term

Table F.4 contains our Tier 4 (longer-term) recommendations that have to do with making improvements to existing GHE instruction. These recommendations relate to our findings on practical versus academic instruction and virtual versus in-person instruction. We organized our implementation strategy into two sequenced categories: (1) evaluating GHE instructional methods and (2) incorporating improvements into courses. In our research, we did not find a lot of evidence for determining the right balance of practical and academic or virtual and in-person E&T, though we found a great deal of interest in attempting to find that balance. Therefore, we started with two investigatory recommendations: one that would attempt to determine the types of GHE personnel who would benefit from more practical, hands-on training, and another that would determine the efficiency and effectiveness of virtual GHE course instruction. We think that both initiatives could be conducted by CGHE and the service GHE programs, with help from other joint and service GHE stakeholders. The number of these stakeholders could be an implementation challenge, as could the cost of an in-depth study of virtual versus in-person training, prior to and following the COVID-19 pandemic. After absorbing the results of these studies, the GHE community could move on to making actual improvements to GHE instruction: by expanding practical training along the lines of USUHS's Operation Bushmaster and achieving a better balance of virtual and in-person instruction, depending on the type of course and the intended audience. We identified USUHS and DMRTI as OPRs for instituting additional practical GHE training and CGHE for recommending the right virtual versus in-person instructional balance, with the support of the same group of GHE stakeholders mentioned above.

Table F.4. Tier 4 (Longer-Term) GHE Education and Training Recommendations

Recommendation	Benefit	OPR/OCR	Level of Difficulty
1. Evaluate GHE instructional methods			
Determine the types of GHE personnel that would benefit from more practical, hands-on training	Enable appropriate balancing of academic and practical GHE instruction	OPRs: CGHE, service GHE programs OCRs: USUHS, DHA/DMRTI, CCMD SGs, SCC SGs	Multiple stakeholders
Determine efficiency and effectiveness of virtual GHE course instruction during COVID-19 period and compare the results to previous evaluations of in-person GHE courses, as well as the results of course satisfaction surveys from joint and service medical/health courses conducted in-person and online, pre- and post-pandemic	Enable appropriate balancing of virtual and in-person GHE instruction	OPR: CGHE OCRs: USUHS, service medical E&T providers, DHA/DMRTI	Multiple stakeholders; relatively large resource requirement
2. Incorporate improvements into courses			
Expand practical training (e.g., Operation Bushmaster, field training) based on needs of GHE personnel	Enable appropriate balancing of academic and practical GHE instruction	OPRs: USUHS, DHA/DMRTI OCRs: CGHE, service GHE programs	Multiple stakeholders; relatively large resource requirement
Recommend appropriate steady-state mix of virtual and on-line GHE instruction provided by joint and service E&T institutions	Enable appropriate balancing of virtual and in-person GHE instruction	OPR: CGHE OCRs: USUHS, service GHE programs, service medical E&T providers, DHA/DMRTI	Multiple stakeholders; potentially large resource requirement (if recommendations adopted)

Abbreviations

CBA	capabilities-based assessment
CCMD	combatant command
CGHE	Center for Global Health Engagement
COVID-19	coronavirus disease 2019
DCR	DOTmLPF-P Change Recommendation
DMRTI	Defense Military Readiness Training Institute
DoD	U.S. Department of Defense
DOTmLPF-P	Doctrine, Organization, Training, materiel, Leadership and education, Personnel, Facilities, and Policy
DSCA	Defense Security Cooperation Agency
DSCU	Defense Security Cooperation University
E&T	education and training
FOGHE	Fundamentals of Global Health Engagement
GHE	global health engagement
GHEOC	Global Health Engagement Orientation Course
GHS	global health specialists
HART	Humanitarian Assistance Response Training
IHS	international health specialist
JROC	Joint Requirements Oversight Council
OASD	Office of the Assistant Secretary of Defense
OCR	Office of Coordinating Responsibility
ODC	office of defense cooperation
OPR	Office of Primary Responsibility
OSD	Office of the Secretary of Defense
SCC	service component command
USAFSAM	U.S. Air Force School of Aerospace Medicine
USUHS	Uniformed Service University of the Health Sciences

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The importance of global health to U.S. national security was brought into sharp relief when the coronavirus disease 2019 (COVID-19) pandemic expanded exponentially in 2020 and inflicted serious and prolonged harm to the world's populations, economies, and political systems. For many national security experts, this recognition of global health's importance coincided with a belief in the value of U.S. Department of Defense (DoD) global health engagement (GHE), which encompasses a range of sometimes overlapping activities in the areas of force protection; humanitarian assistance and foreign disaster relief; nuclear, chemical, and biological defense; and building partner capacity and interoperability. However, DoD is constrained in its ability to conduct GHE activities by limitations in the way the department, as a whole, organizes, manages, and resources GHE activities and develops its workforce for GHE.

Using a systematic review of the GHE literature, discussions with more than 80 subject-matter experts and officials, a review of materials from nearly 70 GHE-relevant blocks of instruction, and two GHE stakeholder workshops, the authors developed key findings and policy recommendations with respect to target student populations, GHE competencies, professional development pathways, GHE courses and course providers, and instructional strategies. In addition, they developed a concept for integrating the major GHE education and training components and a prioritized framework for implementing the policy recommendations. This report should be of interest to members of DoD's GHE community, as well as officials and policy analysts in the larger DoD medical/health and security cooperation communities.

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