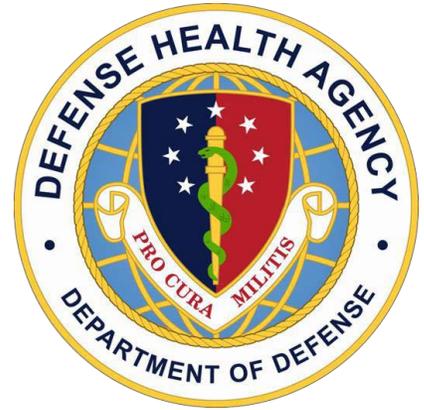


AFHSB



DEFENSE HEALTH AGENCY ARMED FORCES HEALTH SURVEILLANCE BRANCH

**Strategy
FY 2019-2021**

Global Emerging Infections Surveillance



03 May 2018

Executive Summary

In 1997, the Department of Defense (DoD) established the Global Emerging Infections Surveillance (GEIS) program following the release of Presidential Decision Directive, National Science and Technology Council-7ⁱ, that tasked DoD to improve infectious disease surveillance, prevention, and response capability to better protect the health of the military force. Since that time, GEIS has been a global leader in efforts to address militarily relevant infectious disease threats, informing force health protection (FHP) decision making. GEIS, a section of the Armed Forces Health Surveillance Branch, joined the Defense Health Agency's Public Health Division in 2015, and this organizational move has reinvigorated the role of GEIS as a Combat Support Agency. Since its inception, GEIS has focused on the rapid and accurate detection of infectious disease threats to DoD interests around the globe. The events of the past several years, including the emergence and spread of Ebola virus, Middle East Respiratory Syndrome, and Zika virus, have demonstrated the relevance of GEIS and its global collaborators.

The DoD force posture has evolved significantly since 1997 and the future operating environment highlights a shift from the static operational posture as in Iraq and Afghanistan to more sustained engagement and crisis response operations characterized by smaller tactical units operating in more austere environments without immediate access to large supporting elements like logistics bases and field hospitals. In 2015, the Joint Staff articulated the Globally Integrated Health Services requirement as a part of the *Joint Concept for Health Services*,ⁱⁱ which recommends that supporting DoD health agencies should increase flexibility, agility, and modularity in preparation for the changing force posture. Accordingly, the DoD comprehensive health surveillance network must shift to accommodate the evolving nature of the disease threat and the broader distribution of U.S. forces at risk globally. For infectious disease surveillance, this means providing timely, actionable information to decision makers to support this fluid operating environment, and GEIS must have the ability to be responsive to changing Geographic Combatant Command (GCC) needs. The network of DoD laboratories must be strategically positioned with critical capabilities to provide early, accurate detection of disease incidents and outbreaks in strategically relevant areas, and provide FHP decision makers with the threat information they need to protect the health of the force wherever they may be operating.

This Strategy describes how GEIS will support infectious disease surveillance and outbreak response to enhance FHP decision making in the current and future operating environments. GEIS will achieve this end state through direct support to the GCCs and the DoD laboratory network that operates globally to provide early detection, prevention, and response to infectious disease threats of military relevance. This Strategy will be executed through (1) global infectious disease surveillance to inform FHP decision making across the GCCs, (2) laboratory readiness to support global outbreak response efforts to understand infectious disease threats to U.S. forces, (3) coordination and collaboration between the GCCs, GEIS partner laboratory network, U.S. interagency, and international partners, and (4) efficient and effective program administration and management at all levels.



Background

Strategic Context

Department of Defense (DoD) Global Emerging Infections Surveillance (GEIS) was established in 1997 following the release of Presidential Decision Directive, National Science and Technology Council-7ⁱ, that tasked DoD to improve infectious disease surveillance, prevention, and response. Since that time, GEIS has been a global leader in efforts to address militarily-relevant infectious disease threats and inform force health protection (FHP) decision making. The events of the past several years, including the emergence and spread of Ebola virus, Influenza H7N9 virus, Middle East Respiratory Syndrome, and Zika virus, have demonstrated the relevance of GEIS and its global collaborators.

These threats and others continue to challenge global health security and increase health threats to U.S. interests including globally deployed service members. GEIS, a section of the Armed Forces Health Surveillance Branch, joined the Defense Health Agency's Public Health Division in 2015, and this organizational move has reinvigorated the role of GEIS as a Combat Support Agency. In direct coordination with Geographic Combatant Command (GCC) stakeholders, GEIS develops surveillance priorities and provides guidance and support to global DoD laboratory implementing partners who characterize and report on global infectious disease threats. GEIS then ensures dissemination of timely, actionable information for FHP decision making.

Globalization and the proliferation of technologies provide the opportunity for infectious disease threats to evolve or be created and to cross borders beyond formerly contained regions, whether in the natural environment or by intentional actions. The *Joint Concept for Health Services*ⁱⁱ describes the vision for meeting the health and medical needs in support of a joint force executing globally integrated operations. These operations will stress the ability of the Military Health System (MHS) to provide comprehensive FHP to a more globally distributed U.S. force, their families, and mission partners.

Strategic Guidance

Global infectious diseases have taken a prominent place in U.S. National Security policy in recent years. We have seen the inclusion of emerging infections and global health threats in the U.S. National Security Strategy, the launch of the Global Health Security Agenda (GHSA),ⁱⁱⁱ the release of a Policy Cable regarding Global Health Engagement from the Office of the Secretary of Defense, and the establishment of the MHS Center for Global Health Engagement at the Uniformed Services University of the Health Sciences^{iv} – all in the midst of outbreaks that challenge the health and security of under-governed regions and deployed forces to those regions. In 2017, the U.S. reaffirmed its commitment to the GHSA at the United Nations General Assembly^v. GEIS will leverage the aforementioned policy documents, Theater Engagement Plans, Department of State Mission Support Plans, and DHA Plans, as well as guidance from leadership in the MHS, GCCs, and DoD laboratories to shape its future operations.

GEIS Stakeholders

To achieve its goals, GEIS provides direct technical support to GCC-led international scientific coalitions and strategic engagement efforts that focus on infectious disease prevention, detection, and response. GEIS also supports a global network of highly qualified DoD Service laboratories positioned in key locations providing on-the-ground infectious disease surveillance and outbreak response. GEIS partners operate on the front lines of global infectious disease prevention, detection, and response and have built surveillance networks and relationships with the U.S. interagency and international partners that provide important information about circulating infectious disease threats to the force and shorten the response time to infectious disease outbreaks that may endanger the force.

Core GEIS partners that conduct ongoing infectious disease surveillance and response include:

- **Naval Medical Research Center (NMRC)**, including Naval Medical Research Unit (NAMRU)-2, NAMRU-3, NAMRU-6, and Naval Health Research Center (NHRC)
- **Walter Reed Army Institute of Research (WRAIR)**, including U.S. Army Medical Directorate-Armed Forces Health Research Institute of Medical Sciences (USAMD-AFRIMS), U.S. Army Medical Research Directorate (USAMRD)-Georgia, and USAMRD-Kenya
- **U.S. Air Force School of Aerospace Medicine (USAFSAM)**
- **Uniformed Services University of the Health Sciences (USUHS)**



FIGURE 1. GEIS Architecture

The Parthenon in Figure 1 depicts the strategic structure of GEIS pointing towards the overall goal of supporting FHP decision making. The rapid detection, characterization, and response to infectious disease threats improves prevention and mitigation while enhancing FHP decision making. These activities are enabled by global surveillance of militarily-relevant infectious disease threats, a ready laboratory network prepared to conduct outbreak response, coordination and collaboration with the GCCs and of the laboratory networks, and effective and efficient program administration and management. Conducting global infectious disease surveillance and response requires coordination and collaboration with partner nation militaries and civilians, populations that are secondary beneficiaries of GEIS efforts, which indirectly support global health security.

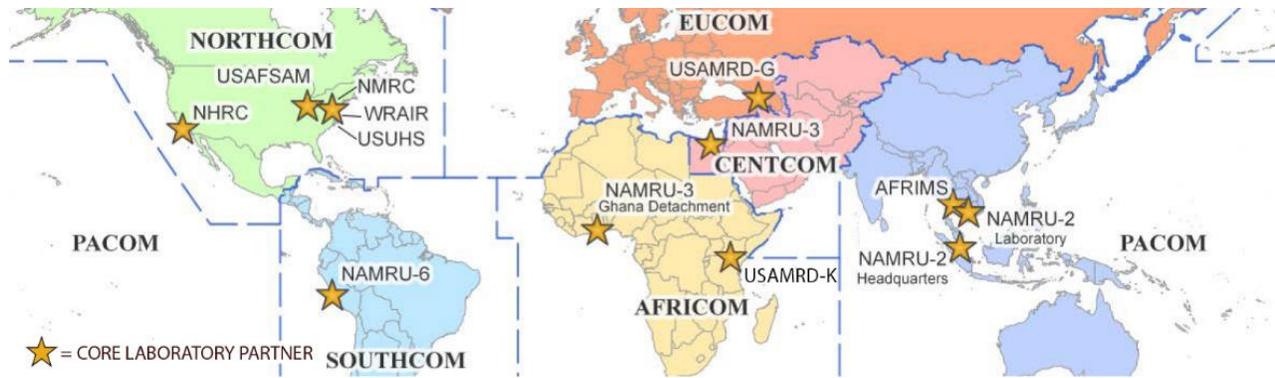


FIGURE 2. GEIS Core Laboratory Partners

Strategy

This Strategy drives a GEIS program that will evolve to be more agile and responsive to meet the challenges of the future security environment and provide focused and actionable infectious disease surveillance and outbreak response information to DoD FHP decision makers. GEIS will maximize its activities by balancing surveillance for infectious disease threats affecting U.S. service members while also monitoring for potential threats in foreign military and civilian, animal, and vector populations in current or future U.S. military areas of operation that may not be captured by traditional Service-level preventive medicine assets. GEIS surveillance activities will leverage existing DoD or partner nation capabilities or capabilities being built by other DoD or U.S. government agencies. In order to minimize cost and maximize geographic collection efforts, GEIS surveillance goals will be met using a prioritized approach to determine when to conduct advanced characterization activities.

End State: Enhanced FHP decision making across the GCCs

Ways:

- **Support a global laboratory network poised to prevent, detect, and respond to infectious disease threats**

GEIS will continue to support DoD laboratory stakeholders throughout the world to prevent, detect, and respond to infectious disease threats. The rapid and accurate detection of infectious disease threats is the principal activity supported by GEIS. Prompt detection of potential health threats enables earlier employment of available prevention and response measures, including vaccines, therapeutics, and personal protective equipment. These measures, when implemented early, improve FHP and enable operational freedom of movement and access in under-governed territories. In addition, longstanding GEIS-supported influenza surveillance efforts provide data used in the Food and Drug Administration's annual selection of the seasonal influenza vaccine strains.

- **Promote GCC regional infectious disease threat priorities and strategic objectives through active collaboration**

The GEIS program advances GCC campaign plans, lines of effort, and end states by providing direct technical support to GCC-led international scientific coalitions and strategic engagement efforts. GCCs leverage GEIS' vast partnerships with DoD, U.S. interagency, international, and non-governmental collaborators and knowledge of global infectious disease surveillance to engage with priority countries and partners. GEIS participation enhances GCC engagements, facilitates information sharing, supports global health security, and ultimately better informs FHP decision makers.

Means:

- **Conduct surveillance of militarily relevant infectious disease threats to inform FHP decision making across the GCCs**

GEIS will continue to support surveillance and outbreak response efforts in four infectious disease Focus Areas in concert with GCC priorities: (1) Antimicrobial Resistant Infections (AMR), including Sexually Transmitted Infections (STI), (2) Enteric Infections, (3) Febrile and Vector-borne Infections (FVBI), and (4) Respiratory Infections (RI). Of paramount interest within these Focus Areas is rapid detection and advanced characterization of endemic, emerging, and novel threats to the force, including vectors and reservoirs of infectious disease transmission. Supported activities will also include the study of clinical and epidemiological characteristics of infectious disease and associated risk factors, especially those that provide timely, actionable findings to DoD stakeholders, as described in each Focus Area Roadmap.

- **Provide support to outbreak response in order to better understand and mitigate the infectious disease threats to U.S. forces**

GEIS will continue to support DoD laboratory outbreak preparedness and response activities, including epidemiological and laboratory response. GEIS partners should continue to maintain laboratory readiness to respond to outbreaks, including at laboratories that provide reach-back support and those in the field, at the front line of response. Readiness may include pre-positioning of supplies, and training of in-house response personnel. Precedence will be given to outbreak response activities that involve outbreaks in the U.S. military, either on deployment or on training activities. Outbreak response assistance requested by a partner nation will be supported contingent upon appropriate approvals and in accordance with statute.

- **Enhance coordination and collaboration efforts between the GCCs, GEIS partners, the U.S. interagency and international partners to improve efficiency and effectiveness**

In order to ensure that GEIS continues to provide valuable information for FHP decision making, and does so in the most cost effective and efficient manner, GEIS will continue to devise innovative ways to collaborate with all partners. Through the GEIS-supported effort with the USUHS

Center for Global Health Engagement, GEIS will hold periodic meetings with the GCCs and interagency partners conducting infectious disease surveillance to better understand GCC priorities and address gaps. GEIS-supported DoD laboratory collaborations, such as the Next Generation Sequencing and Bioinformatics Consortium, will be sought to galvanize the DoD laboratory community towards a collective goal to support FHP decision making through advanced pathogen characterization and pathogen discovery. Through continued implementation of the Data-to-Decision initiative, GEIS will work across the DoD laboratory community to highlight results from GEIS-funded efforts to inform GCC FHP decisions. GEIS will continue to support the GCCs by providing subject matter expertise and support to their engagements, events, and activities to enhance information sharing and ultimately better inform FHP decision making and global health security in their respective areas of responsibility.

- **Optimize return on investment through improved program administration and management**

The GEIS program office and all GEIS-funded partners have a role in optimizing the return on investment, which is ultimately the provision of information to enhance FHP decision making in the most cost effective manner. The GEIS program office will continue to implement its priority program administration and management goals with the publication of this Strategy and the development of products that improve the GEIS business cycle (e.g., Focus Area Roadmaps, GCC Alignments, proposal review process, reporting requirements, workplan template, , request for proposals, etc.). All GEIS partners are welcome to provide feedback on products that guide administration of the GEIS program and are expected to adhere to published requirements regarding use of GEIS funds and reporting.

Conclusion

The publication of this Strategy establishes a framework to guide GEIS partner surveillance and response activities around the globe. It will be reviewed annually, in collaboration with the GCCs and GEIS partners, to ensure that it remains relevant to the challenges of the future security environment and serves to guide focused and actionable infectious disease surveillance and outbreak response activities that support DoD FHP decision makers globally.

Appendix. Glossary of GEIS Terms

Competed Proposal: Proposal submitted by GEIS partners for work in response to a Request for Proposals, distinct from sustained workplan projects in that it may not be appropriate to conduct regular, ongoing surveillance in this area but it fills a current surveillance need

Core GEIS Laboratory Partners: DoD laboratories that conduct sustained surveillance projects supported by GEIS

GEIS Partners: All DoD laboratories that conduct surveillance projects, in workplans or competed projects, supported by GEIS

GEIS Strategy: This document, which outlines the three-year plan for GEIS; reviewed annually and updated as necessary

Focus Area Roadmap: Document that describes Focus Area (e.g., Enteric Infections) surveillance priority efforts for funding over a three-year time frame; reviewed annually and updated as necessary

Force Health Protection (FHP): Measures to promote, improve, or conserve the behavioral and physical well-being of DoD personnel to enable a healthy and fit force, prevent injury and illness, and protect the force from health hazards (see [JP 4-02 Joint Health Services](#))

Request for Proposals: Document released by the GEIS program office annually to solicit annual surveillance projects as competed proposals or workplan projects

Stakeholders: Includes DoD Stakeholders [Office of the Secretary of Defense (OSD), Defense Health Agency (DHA), Geographic Combatant Commands (GCCs), Office of the Joint Staff Surgeon (OJSS), GEIS partners, and other DoD entities] and U.S. interagency, international, and non-governmental entities

Sustained Projects: GEIS-funded projects that address infectious disease concern(s) that benefit from regular, ongoing surveillance

Workplan: Document that captures Core GEIS Laboratory Partner sustained projects, updated and reviewed annually during the proposal review process

i Clinton WJ. Presidential Decision Directive *NSTC-7*. Federation of American Scientists. 1996.

ii The *Joint Concept for Health Services (JCHS)* describes in broad terms the Chairman of the Joint Chiefs of Staff's vision for what the future Joint Force will need to have from its collective medical enterprise in order to support Globally Integrated Operations.

http://www.jcs.mil/Portals/36/Documents/Doctrine/concepts/joint_concept_health_services.pdf?ver=2017-12-28-162027-633

iii Global Health Security Agenda Website: <https://ghsagenda.org/>; DoD and Global Health Engagement: <https://health.mil/Military-Health-Topics/Health-Readiness/Global-Health-Engagement>

iv Center for Global Health Engagement. Uniformed Services University. <https://www.usuhs.edu/cghe>

v Implementing the Global Health Security Agenda: Progress and Impact from U.S. Government Investments: <https://www.ghsagenda.org/docs/default-source/default-document-library/global-health-security-agenda-2017-progress-and-impact-from-u-s-investments.pdf?sfvrsn=4>