Global Health Engagement

A Crucial Tool to Enable Health Service Support Prior to Conflict and Its Vital Implications for Irregular Warfare Campaigning

Col. Cynthia Facciolla, DVM, U.S. Army
Col. Bert Kinkead, U.S. Army, Retired
Maj. Christine Argueza-Prince, U.S. Army
Erik Glassman
Garfield Skyers

Irregular warfare (IW) is essential to any integrated deterrence campaign, anchoring our Nation's competitive advantage in peacetime while simultaneously priming the ability to sustain overmatch against adversaries during large-scale combat operations and multidomain operations (MDO). IW is defined in Joint Publication 1, *Joint Warfighting*, as "a form of warfare where states and non-state actors campaign to assure or coerce states or other groups through indirect, non-attributable, or asymmetric activities, either as the primary approach or in concert with conventional warfare," and there is a heightened demand for leveraging nonkinetic approaches across the conflict continuum to mitigate the probability of direct military intervention.[1] One such approach is through the U.S. military health system.

The unparalleled success of the U.S. military health system during the Global War on Terrorism (GWOT) marks its high caliber.[2] Deliberate, integrated efforts in medical intelligence and the protection warfighting function, among others, significantly reduced the burden of disease and nonbattle injuries. On the field, highly skilled providers enabled rapid access to damage control resuscitation and surgery and uncontested evacuation of casualties through the echelons of care.[3]

The operational environment (OE) at the time permitted the deployment of expeditionary medical capabilities, providing robust health service support and force health protection functions forward without the need to rely on local resources. When multinational capabilities were deployed, partner nations provided a commensurate standard of care, armed with years of experience built through interoperability between medical formations. The OE was conducive to healthcare delivery, data collection, aggregation, and performance improvement measures spearheaded by the Joint Trauma System and its predecessor, the Joint Theater Trauma System.[4]

The Health Service Support Challenges on the Future Battlefield

The future fight challenges the joint force to sustain GWOT-era standards of care and whole-of-force

Service members with Joint Task Force-Bravo, Soto Cano Air Base, Honduras, work with a member from Defensa Civil Colombiana to hand out preventive medicine during a global health engagement activity in Providencia, Colombia, 15 July 2021. Approximately twenty-five service members, including two civilian doctors, deployed to Colombia and conducted a medical readiness training exercise to provide expeditionary healthcare services to the island communities of Providencia and Santa Catalina Islands. (Photo by Tech. Sgt. Marleah Cabano, U.S. Air Force)

survivability in a nonpermissive and potentially denied, multidomain OE.[5] Imagine three scenarios:

- In conflict with a near-peer competitor, the United States finds itself conducting island-hopping operations like that seen in the Pacific theater during World War II. Operations are further complicated by the allegiances of regional actors whose interests may be intermeshed with those of the adversary.
- Small teams supporting IW objectives in a nonpermissive environment several borders away from advanced medical care take casualties.
- A novel pathogen in a region antagonistic to U.S. foreign policy objectives begins to spread.

These scenarios present critical areas of vulnerability in the current health service support (HSS) paradigm. Chiefly, contested logistics will be *status quo*, regardless of tactical-to-strategic proximity to the locus of conflict.[6] Today's construct compels a necessary pivot toward a globally integrated framework. Transformation must be explicitly grounded in system-wide scalability and resiliency to withstand any challenge presented by the adversary. The optimized HSS must be able to anticipate threats and respond effectively, considering the range of burdens that coalition forces may place upon it across the spectrum of conflict.

Security cooperation mechanisms currently executed across the world provide the opportunity to start setting conditions well ahead of crisis by building a network with the capabilities and capacity to maximize survivability and system-wide resiliency in the worst-case scenario. A robust security cooperation tool already integrated into combatant command campaign planning and theater cooperation strategies is global health engagement (GHE). GHE activities are defined in Department of Defense (DOD) Instruction 2000.30, *Global Health Engagement (GHE) Activities*, as "interaction between

individuals or elements of DOD and a PN's [partner nation] armed forces or civil authorities … to build trust and confidence, share information, coordinate mutual activities, maintain influence, and achieve interoperability in health-related activities."[7] Central to its application is their direct support of national security objectives and regional military strategy.

Why Global Health Engagement?

The proposed globally integrated HSS framework will meet the needs of the future when commanders, planners, and medical practitioners become masters of systems thinking. GHE is already well-aligned with the core tenets of MDO. As a formative tool, deliberate application of GHE has the potential to secure the scalability and resilience required of a future HSS, one that can sustain a calibrated force posture alongside partner nations, access and employment of multidomain formations across layered and compounding dilemmas, and the convergence of soft and hard power to overmatch the enemy.

The future OE is mired by challenges faced by today's IW medical practitioners. Anticipation of compounded threats presented by adversaries and actors in the battlespace necessitates a synchronous execution of medical intelligence preparation of the environment, expert medical care, force health protection, and expeditious evacuation of casualties in complex and possibly contested OEs. The potential for both mass casualties and prolonged evacuation delays, if the environment becomes kinetic demands a scalable holding capability that can provide prolonged casualty care with limited resources.[8] Leveraging GHE as a shaping function to address these challenges provides longitudinal opportunities to conduct medical preparation of the environment throughout the competition continuum. These shaping efforts build system-wide resilience both through enhancing partner-nation capability and capacity and integrating the partner-nation resources into U.S. health service support plans.

GHE operations, activities, and investments (OAI) provide proactive and enduring opportunities to gain access and placement, project U.S. presence, build deep trust with critical partners, optimize partner-nation health systems, and develop coalition force interoperability in personnel, training, doctrine, and equipment. They allow the assessment and development of networks at the tactical and operational levels that can be leveraged when traditional medical support options are not available. Getting there requires persistent efforts to understand cultural and societal norms and how they impact the provision of healthcare. By building deep trust and lasting partnerships, the joint force can evolve to uphold the levels of patient care and survivability previously seen during the GWOT era.

GHE enables IW through global health diplomacy by addressing dilemmas that impact individual to population health, both military and civilian. They consider that the burden of sustaining life during MDO requires carefully calibrated postures of public health, patient care, and logistics. OAI in GHE answers the call to transform the current HSS framework into a system of systems compatible with the tenets of MDO.

Historical Examples of Success

The African Peacekeeping Rapid Response Partnership. The African Peacekeeping Rapid Response Partnership (APRRP) is an ambitious initiative that aims to improve the peacekeeping capabilities of African nations.[9] To support this mission, Uniformed Services University's Center for Global Health Engagement (CGHE) has stepped up to provide much-needed assistance by developing the capacity of African partner countries to rapidly deploy and maintain level 1 and level 2 medical treatment facilities that meet the UN standard.[10] The APRRP program, led by CGHE, achieves this by providing training and educational activities, as well as practical exercises, to partner nations in Uganda, Rwanda, Senegal, and Ghana. By equipping these nations with the tools they need to respond to emergencies and crises quickly and effectively, both APRRP and CGHE are actively contributing to the creation of more resilient health systems and promoting stability in conflict-affected regions.

Training and support are critical components of the APRRP program. Over sixty training courses have been conducted in Rwanda, Uganda, Senegal, and Ghana using a train-the-trainer model to ensure sustainability. This approach enables the local healthcare providers to impart knowledge to their peers and colleagues, ensuring that the program's benefits extend far beyond the initial training sessions. The successful delivery of level 2 hospitals and training facilities in partner nations is a testament to the program's achievements. Positive outcomes

Burkinabé soldiers transport a patient during tactical combat casualty care training, part of Flintlock 2019 at Camp Zagre, Burkina Faso, on 27 February 2019. Flintlock is U.S. Africa Command's premier special operations forces exercise in Africa. (Photo by Nathan Herring, U.S. Africa Command)

have been observed in Rwanda, Senegal, Ghana, and Uganda, where the program has helped improve healthcare systems and emergency response capabilities.

African Partnership Outbreak Response Alliance. The African Partnership Outbreak Response Alliance (APORA) is a collaborative initiative that aims to strengthen Africa's capacity to prepare for, detect, and respond to outbreaks and potential pandemics.[11] The alliance brings together African Union member states, regional economic communities, and partners to improve health security and promote regional and global health. Currently, twenty-six different countries are engaged. APORA is committed to developing effective communication channels, sharing information and best practices, and enhancing laboratory and surveillance systems to ensure timely and coordinated responses to public health emergencies. This partnership is a crucial step in building a more resilient and sustainable health system in Africa, which is essential to ensuring the health and well-being of people across the continent.

Special operations forces engagement in Laos. In the mid-sixties, a group of Special Forces (SF) soldiers with the Military Assistance Advisory Group Laos conducted a mission to escort a Vietnamese French Foreign Legion surgeon throughout southern Laos to bolster support for the Laotian king. This team was a led by an SF medic and included several Royal Laotian Army medics and SF operational detachment alpha (ODA) team members. This ad hoc surgical team visited small Laotian hamlets that were loyal to the Laotian king to treat their sick and wounded. The Pathet Lao, the Viet Minh, the Khmer Rouge, and other opposition forces harassed and raided these hamlets for food, medical supplies, and anything of value. The ODA provided security while the SF medic and the Laotian medics

assisted the surgeon in treating the remote jungle hospital patients. The SF medic sedated surgical patients, often for amputations, with ether.

Initially, the local populace had very little access to medical supplies and medication because they were constantly harassed by opposition forces, but the SF ODA used their multinational contacts to procure French, Indian, and even some U.S. medications and supplies for the surgeon and SF medic. They paid their contacts to procure the medical supplies, who would cache them on the shelves with Burmese and Thai doctors, dentists, veterinarians, and pharmacies in or near Laos and then deliver them to the team as required. Despite being held up several times, the medical team was never robbed. The local populace joined the effort and stored bandages and medical comfort items for the recovering patients.

Ultimately, the efforts of the SF ODA/Laotian medical team saved the lives of two U.S. service members and forty-to-fifty Laotians, which helped sway the allegiance of the populace back to the king. The network they developed opened channels for intelligence exchange and patient evacuation, and it overcame contested logistics for their unit and higher headquarters.

Integrating GHE into IW Campaigning

GHE serves as a strategic enabler for IW campaigning, enabling the creation of globally integrated health service support, building toward integrated deterrence through health diplomacy, and countering near-peer competitor malign attempts at health diplomacy. Achieving maximum strategic effects requires an in-depth understanding of the existing healthcare infrastructure and delivery mechanisms across the region, including the interface of socioeconomic, political, and cultural impacts on the healthcare system. The depth of understanding required cannot just be a snapshot in time but must be longitudinally evaluated and updated. We propose two lines of effort to build this understanding:

- healthcare system data information fusion, and
- building GHE competencies across formations to leverage "every soldier a sensor."

Progress in these two lines of effort will help the surgeon's cell better advise the commander on how to apply and then sequence GHE in time and space to seamlessly enhance IW campaign plans.

Building a Common Operating Picture and the Need for Information Fusion

The first step in the process is to build a comprehensive understanding of the healthcare system and potential variables that may influence the provision of health to military and civilian stakeholders in the region. A detailed, iterative study that accounts for political, military, economic, social, informational, and infrastructure impacts on the delivery of healthcare provides the framework to build partner capability and capacity and must go much deeper than the traditional hospital assessment to include all ten medical functional areas.[12] Processes to develop and fuse medical intelligence to conduct this study need to be standardized across the services and integrated into intelligence preparation requirements across warfighting functions. This integration can be challenging as medical intelligence tends to be more frequently gathered through publicly available information and then supplemented with intelligence gathered from sensitive means.

There are several considerations in doing so. Every soldier has the potential to purposely or incidentally gather medical information that can be used to feed the common operational picture. By providing soldiers with the necessary training and tools to identify and report medical information effectively, we can ensure that relevant data is captured and reported. We need to look beyond those with specific medical competencies and engage with civil affairs and the security force assistance brigades.

Currently, relevant medical information is scattered across multiple DOD entities within the interagency and the private sector. This results in duplicative efforts and negatively impacts relationships with partner-nation institutions. To address this, we need to create a shared repository that can collate and store medical information. By doing so, we can eliminate duplicative efforts and improve the overall quality of medical care provided to soldiers. Additionally, we need to create a mechanism to deconflict efforts and synchronize OAIs among stakeholders with similar missions to gather and share information. Synchronization will require the development of cross-domain solutions to allow for the fusion of publicly available information and sensitive intelligence and transitioning the data to a format used by ground force commanders.

Army Spc. William Gonzalez, a military policeman with Joint Task Force Bravo (JTF-Bravo), talks with local children during a global health engagement activity in the Chiantla region of Guatemala on 13 December 2021. Personnel from JTF-Bravo deployed to Guatemala to provide medical and veterinary care to populations in hard-to-reach areas of the country. (Photo by Staff Sgt. Adam R. Shanks, U.S. Air Force)

To ensure the enduring presence in a region required by great power competition, we need to build, then iteratively update and evaluate the HSS area study. This approach will ensure that medical resources are deployed efficiently and effectively. It will also help ensure that medical personnel are trained and equipped to respond to the unique challenges presented by a specific region.

Building Competencies Across Medical Formations

Successfully sequencing GHE OAIs into IW campaigns and executing relevant activities at the tactical level requires the development of separate sets of competencies within Army medicine. First, all engaged need a baseline understanding of public health development and global health. Building this core competency for operations in environments where traditional force health protection and preventative medicine resources may be unavailable will be critical to mitigating the impacts of disease and nonbattle injury. The Consortium of Universities for Global Health publishes a subject-matter expert consensus, an open-source tool kit that can be integrated into qualification, sustainment, and predeployment training.[13] Building these competencies enhances the tactical-level execution of GHE.

Global health education for medical providers should include considerations of tropical and arctic medicine. Disease and nonbattle injuries frequently provide a more significant force health protection risk than enemy action. When confirmatory and definitive laboratory testing for infectious disease and CBRN agents may not be available in the operationally or clinically relevant time frame, this knowledge allows the IW medical practitioner to integrate partner nation or regional sampling and testing capabilities into force health protection planning. The APORA is a perfect example of how to integrate GHE into setting the

theater in areas where outbreaks of high-consequence infectious diseases occur and partner-nation capability and capacity are insufficient to protect the population.

Next, we need to build a cadre of dedicated, trained planners with competencies in special operations forces health service support, medical intelligence, medical logistics requirements, IW, and population-level global health. These planners require experience in the career field, cultural awareness that comes from deployments outside of declared theaters of armed and active conflict, and broadening assignments outside of the conventional medical planner role. An initial and sustainment curriculum that builds and maintains the ability for one person to function as an integrator of disparate sets of knowledge, skills, and abilities must also be developed.

Formalizing a Sustainable Process

Success across lines of effort requires persistent presence in potentially contested locations globally. Persistent presence by not just U.S. forces but the same care providers longitudinally allow for the profound trust that serves as the foundation of partnerships to develop. Resource constraints across formations make actually doing so daunting but not impossible. Whole-of-government commitment to IW campaign execution, to include those agencies focused on nonkinetic effects, makes doing so possible. No single focal point to synchronize efforts, delivering and not just discussing unity of action, is the primary hurdle to success.

This gap further affects the ability to build medical resilience and global health service support integration required to maintain healthcare in the most complex operational environments. Changes in legislation and policy that facilitate the integration of medical considerations into significant long-term security cooperation initiatives provide an avenue to address this gap.

There needs to be synchrony among funding lines available to sustain the longevity of GHEs in specific areas of interest. This makes it challenging to ensure that medical resources are deployed sustainably. To address this, we need to establish a mechanism to synchronize funding lines and ensure that medical resources are deployed in a way that is both sustainable and effective. By doing so, we can ensure that medical resources are available when they are needed most and that soldiers receive the care they need to complete their missions successfully.

Conclusion

Tying back to the three scenarios we proposed at the beginning of the article, the common theme is that the future battlefield will necessitate the provision of health service support and force health protection in contested and denied environments. Doing so necessitates leveraging allies and partners to build a globally integrated healthcare system well before the transition from a contested to a denied operational environment. GHE, when incorporated into IW campaigns, provides both a nonkinetic line of effort for IW and the means to conduct medical preparation of the environment. Operational- and tactical-level medical preparation of the environment through the synchronized application of GHE drives reaching and maintaining integrated deterrence and furthers Army medicine's ability to care for sick and injured warfighters throughout the continuum of conflict in the contested and denied environments of the future battlefield. ■

Notes

1. Joint Publication 1, *Joint Warfighting*, vol. 1 (U.S. Government Publishing Office [GPO], 27 August 2023 [CAC required]), II-7.

2. Sharon Edwards and Jason Smith, "Advances in Military Resuscitation," *Emergency Nurse* 24, no. 6 (2016): 25–29, https://doi.org/10.7748/en.2016.en1630.

3. Kyle Remick et al., "Transforming US Army Trauma Care: An Evidence-Based Review of the Trauma Literature," *U.S. Army Medical Department Journal* (2010): 4–21.

4. For more information, see Joint Trauma System, accessed 22 January 2025, https://jts.health.mil/.

5. Jennifer M. Gurney et al., "The 'Survival Chain': Medical Support to Military Operations on the Future Battlefield," *Joint Force Quarterly* 12 (1st Quarter, 2024): 94–99, https://ndupress.ndu.edu/JFQ/Joint-Force-Quarterly-112/Article/Article/3679354/the-survival-chain-medical-support-to-military-operations-on-the-future-battlef/.

6. Charles R. Hamilton, "Prepare to Be Contested, Period," *Army Sustainment* 56, no. 1 (Winter 2024): 4–5, https://alu.army.mil/alog/ARCHIVE/PB7002401FULL.pdf.

7. DOD Instruction 2000.30, *Global Health Engagement (GHE) Activities* (Office of the Under Secretary of Defense for Policy, 12 July 2017), 19, https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/200030_dodi_2017.pdf.

8. Mason H. Remondelli et al., "Casualty Care Implications of Large-Scale Combat Operations," *Journal of Trauma and Acute*

Care Surgery 95, no. 2S Suppl 1 (2023): S180–S184, https://doi.org/10.1097/TA.0000000000004063.

9. "From Inception to Achievement: African Peacekeeping Rapid Response Partnership-Medical Program [APRRP]," Center for Global Health Engagement, accessed 22 January 2023, https://cghe.usuhs.edu/sites/default/files/media/documents/aprrp_medical_exsum_r508.pdf.

10. "Levels of Medical Facilities in Peacekeeping Operations," Epomedicine, 23 February 2018, https://epomedicine.com/blog/levels-medical-facilities-peacekeeping-operations/.

11. Amber J. Rollings et al., "Evaluation of a Multisectoral Health Security Alliance Program Through Perceptions of Member States: African Partnership Outbreak Response Alliance (APORA)," *Military Medicine* 190, no. 1-2 (January/February 2025): 324–32, https://doi.org/10.1093/milmed/usae125.

12. Field Manual 4-02, *Army Health System* (U.S. GPO, November 2020), 1-4. The ten medical functional areas are medical command and control, medical treatment, hospitalization, medical evacuation, dental services, operational public health, combat and operational stress control, veterinary services, medical logistics, and medical laboratory services.

13. "Global Health Competencies Toolkit," Consortium of Universities for Global Health, accessed 21 January 2025, https://www.cugh.org/online-tools/competencies-toolkit/.

Col. Cynthia Facciolla, DVM, U.S. Army, is an Army veterinarian who served at various echelons of Army special operations from 2010 to 2024, including combat deployments in support of Operation Enduring Freedom in Afghanistan and the Philippines. Her conventional Army assignments include veterinary preventive medicine instructor at the Fort Liberty, North Carolina; in the Veterinary Readiness Activity, Fort Eisenhower, Georgia; as a team leader in the 106th Medical Detachment (Veterinary Service Support), Yongsan, Korea; and as the officer in charge of the 29 Palms Veterinary Section in California. She received her Doctor of Veterinary Medicine, a Master of Veterinary Preventive Medicine, and a Master of International Agriculture Development from the University of California, Davis. She has participated in global health engagements in Central America, Asia, and Africa with the DOD, the U.S. Agency for International Development, and nongovernmental organizations.

Col. Bert Kinkead, U.S. Army, retired, is the strategic medical planner for the U.S. Army Special Operations Command. He commanded the 3rd Medical Command (Deployment Support) (Forward) during Operation Enduring Freedom 1 and Operation Iraqi Freedom 1. He also has commanded the 6th Medical Battalion, the 706th Main Support Battalion, and the Fort Detrick Garrison, and he served as the deputy commander of the 44th Medical Command. His first assignment in the Army was as a Special Forces medical sergeant (18D) serving in Operation White Star in Laos.

Maj. Christine Argueza-Prince, U.S. Army, is the chief of operational public health at 1st Special Forces Command, serving as principal staff action officer for medical intelligence, global health engagement, and force health protection. She leads the optimization of medical command-and-control technology solutions for Army special operations and the integration of women, peace, and security initiatives into health security cooperation. She earned her Bachelor of Arts in Biology from Hood College, Master of Science in Public Health from the University of North Carolina-Chapel Hill, and a Master of Military Arts and Science in Strategic Studies from the U.S. Army Command and General Staff College. She has led and coordinated multiechelon force health protection and global health engagement activities across the Middle East, Southeast Asia, and South America.

Erik Glassman is a global health engagement (GHE) planner assigned to Headquarters, Department of the Army, Office of the Surgeon General. In that role, he supports policy and capability development for GHE across Army Medicine. Additionally, he represents Army Medicine in DOD-wide policy and knowledge management groups. He has a background as a medic; in medical operations planning; and in chemical, biological, radiological, and nuclear defense response.

Garfield Skyers has served as global health engagement (GHE) program manager for the past two years. Has extensive background GHE execution and has develop significant experience in the oversight, planning, and execution of GHE activities, and is responsible for shaping Army GHE policies and representation at GHE forums. He recently completed the Uniform Services University Global Health and Global Heath Engagement certificate program.

US ISSN 0026-4148