Naval Aircrewman (Helicopter) 2nd Class Jansen Schamp, assigned to Dragon Whales of Helicopter Sea Combat Squadron 28, reassures family after rescue from Pine Forrest Elementary School shelter, once flood waters from Hurricane Harvey reached its grounds, Vidor, Texas, August 31, 2017 (U.S. Navy/Christopher Lindahl)

Military Health System Preparedness in Humanitarian Action

By Paul L. Reed and Thomas D. Kirsch

The Department of Defense (DOD) will continue to have a more prominent and active role in support of disaster relief operations due to the increasing frequency and severity of disasters worldwide. The late summer and fall of 2017 brought one of the most devastating seasons of disaster due to a series of massive storms in the United States. Hurricanes Harvey, Irma, and Maria resulted in widespread and complex destruction affecting hundreds of thousands of lives from Texas to the Caribbean. The response efforts were far-reaching and involved a spectrum of local, state, territorial, and Federal agencies as well as nongovernmental organizations, and the scope of the crises required the response of the U.S. military. In its capacity as a supporting agent to the civil authorities overseeing the predominantly domestic response, the U.S. military contributed thousands of personnel for months, many of whom were engaged in direct clinical care and medical evacuation of patients or supporting health systems' recovery efforts. This need for defense support to civil authority (DSCA) in domestic disasters is occurring in increasingly complex

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circumstances, along with analogous humanitarian assistance and disaster relief activities overseas.

The 2017 hurricane season was not an anomaly but part of a trend of increasingly frequent disasters on our country and the world. The past 5 years alone have yielded domestic and international disasters and humanitarian crises of increasing scale that have been born of conflict, migration, and emerging infectious diseases, as well as the more familiar geologic and climatic events. Today, DOD is called on to assist in the largest public health crisis the world has known since the influenza pandemic in the early part of the 20th century. There could not be a situation better defining the requirement for an "all hands on deck" approach to health engagement in the context of an all-encompassing humanitarian crisis than the current coronavirus disease 2019 (COVID-19) pandemic response.

Each of these disasters—from Syrian and Yemeni wars, to Ebola, Zika, and coronavirus outbreaks, to the earthquake in Nepal and the hurricanes in the United States and Caribbean—has resulted in human suffering manifesting in large part in terms of medical and public health needs. The joint community of responders, including U.S. and foreign militaries, is continuously struggling with how best to be prepared for and respond to these health needs in a crisis.

Readiness of defense forces encompasses a broader set of missions than ever before in the history of militaries. The complexity of military operations across the spectrum is enormous, as are the expectations for individual readiness to ensure mission success. Commensurate with the demand for a broad expansion of military professionalism is the implicit requirement for disaster expertise within the military medical corps, such that personnel are well trained and experienced to deliver capabilities to meet the medical and public health needs in all-hazards disaster situations. The requirement is implicit because within DOD policy and doctrine there is little explicit reference to standards for manning, training, and equipping personnel to meet the mission of humanitarian assistance and disaster relief (HA/DR) health engagement. In an article published in 2016 in *Joint Force Quarterly* (*JFQ*), Frank C. DiGiovanni—who was then the director of force training in the Office of the Assistant Secretary of Defense for Readiness—articulated well that "there has been progress made to provide training opportunities for U.S. forces on HA/DR topics. However, this training is neither institutionalized nor standardized across DOD and more needs to be done."[1]

Precedents in myriad domestic and international operations have offered innumerable lessons learned, theoretically affording more effective defense support to civil authorities and inculcation of U.S. military operations into international humanitarian efforts. Experiences in HA/DR overseas missions—such as Operation *Unified Response* (earthquake in Haiti, 2010), Operation *Tomodachi* (earthquake and tsunami in Japan, 2011), Operation *United Assistance* (Ebola epidemic in West Africa, 2014), as well as responses to domestic disaster events such as the 2017 hurricanes (Texas, Florida, Puerto Rico, and U.S. Virgin Islands) and the current COVID-19 pandemic—have demonstrated a wide-ranging potential demand on military public health and medical personnel.[2] This demand establishes a tacit requirement across functional areas of expertise for military organizations and professionals, from commanders to logisticians, from planners to engineers and air crews and beyond. Implications for the military health sector are perhaps even more imperative, particularly given the medical and public health needs for expanding and ongoing issues of displaced persons, complex crises, and the potential for the next large-scale infectious disease outbreak.[3] DOD policy, doctrine, and operational standards have evolved to enable more effective preplanned domestic DSCA and foreign disaster relief operations.[4] Although policies and doctrine have matured, progress has been limited in standardizing competencies and training to ensure their consistent adoption across DOD. This is particularly true for military medical personnel and the medical/public health competencies they require to participate in HA/DR operations. Such competencies have been defined in the disaster medicine literature for civilian disaster/humanitarian planners, managers, and responders, though they are not codified in DOD doctrine.[5]

HA/DR preparedness (or, in DOD parlance, "readiness") for the U.S. military and DOD has far-reaching implications, but there are many gaps across this spectrum of capabilities. Some of these gaps have been addressed in consideration of professional development, particularly regarding senior leaders.[6] Currently, however, there is not a formal path for military medical personnel toward professional development in the area of disaster medicine and public health skills.

The National Center for Disaster Medicine and Public Health (NCDMPH), an interagency organization housed at the Uniformed Services University, conducted a study to more specifically assess what current education and training opportunities within DOD might meet presumptive medical and public health competencies for personnel involved in disaster preparedness and response, as may or may not be defined in DOD policy, doctrine, and real-world precedents. NCDMPH documented and categorized the variety of education and training opportunities that have relevance to medical and public health topics in disasters to help inform future efforts intended to systematically address personnel requirements in this mission set for DOD. Ultimately, the findings of the survey of education and training opportunities demonstrated that there is an abundance of chemical, biological, radiological, nuclear, and explosives content relative to all other HA/DR focus areas; that DOD largely focuses education and training on developing military leaders across the continuum from individual unit–level leadership to executive-level commanders; and that available trainings are mostly Service-specific and do not reflect a greater strategy or unity of effort despite the extent to which joint military operations are the rule in HA/DR and DSCA operations.[7]

Naval Aircrewman (Helicopter) 2nd Class Logan Parkinson, rear center, prepares passengers inside MH-60S Sea Hawk from Helicopter Sea Combat Squadron 22, attached to USS *Wasp*, for evacuation from the island of Dominica following landfall of Hurricane Maria, September 24, 2017 (U.S. Navy/Taylor King)

The Military Health System: Integral to Joint Force HA/DR Operations

DOD has established itself as a conspicuous and responsible organization in support of domestic and international HA/DR. Decades of evolving U.S. whole-of-government strategy building toward more accurate, timely, and effective disaster response have led to mature DOD policy defining roles and responsibilities across the Services and various other subordinate agencies of the department.[8] However, the following points warrant further strategic- and policy-level considerations within the Military Health System (MHS):

- The ever-increasing health implications of all types of disasters, including complex crises and the dire considerations acknowledged in a pandemic infectious disease outbreak now being realized, emphasize the importance of effective preparedness and response capabilities within the military health sector.
- This requirement, though not codified in DOD doctrine and in the absence of a systematic approach to professional development, is being increasingly realized for U.S. military medical personnel, no more so than today.
- The U.S. military and DOD should assess MHS requirements for medical and public health response to large-scale disasters and develop a concomitant set of recommendations for joint force development.

Dialogue and debate continue around future implications for MHS to include the question of a large-scale application of military medical practitioners toward direct care of civilians in the context of an overwhelming pandemic. The 2019 U.S. Government Global Health Security Strategy explicitly states:

For an emergency response, [DOD will] *provide assistance and support in coordination with [the U.S. Agency for International Development's Office of U.S. Foreign Disaster Assistance] or* [Health and Human Services'] *Assistant Secretary for Preparedness and Response. In general, this involves providing unique response capabilities, such as logistics, transport, security, and medical evacuation and treatment, when critical capacity gaps cannot otherwise be easily filled by other departments and agencies.*[9]

Despite the maturation of overarching DOD DSCA and HA/DR strategy

and policy, as well as the breadth of real-world experience realized by tactical- and operational-level actors, DOD doctrine has not yet defined clear, universal standards for education and training of HA/DR personnel in this space. DiGiovanni, in his 2016 *JFQ* article, entreated for standardization of qualifications for humanitarian assistance and disaster relief and a systematic approach toward a skills identifier for forces. He acknowledged then that "training for Phase 0 activities and disaster relief remains limited and fragmentary."[10] That remains true for the MHS today despite the ongoing realities.

Military doctrine does not consistently define HA/DR competencies or the prioritization of training in a systematic way in order to develop the military medical and public health workforce. Rather, training and education in these relevant topics are more often directed toward enhancing force health protection considerations or merely applied toward select individual specialty qualifiers, such as public health emergency officers.[11] This deters any effort to establish a sustainable and comprehensive cadre of HA/DR experts in MHS. Yet the nature of real-world opportunities for U.S. military personnel to engage in disaster response, especially large-scale international humanitarian assistance operations, demands a large number of well-trained personnel at various levels (policy, strategy, operational, and tactical). Personnel across a wide range of functional areas are also required, not the least of whom are those professionals in the public health and medical fields. It is naive to assume that even well-educated, trained, and field-experienced military health professionals would have the knowledge, skills, and abilities to translate their capabilities to a disaster scenario, either domestically or internationally. The effective delivery of disaster medicine and public health services necessitates specialized understanding of the nuanced approach to such environments.

A recent survey of extant education and training opportunities in DOD yields evidence of clear deficiencies in such areas as sufficient joint training inclusive of varying implementing roles and adequate coverage of topics dealing with core public health and medical HA/DR competencies. DOD would benefit from creating a comprehensive view of health and medical HA/DR training requirements so that they could be applied to force development. Doing so would improve the preparedness of DOD's public health and medical workforce for the growing role they will likely play in HA/DR missions.

Conclusion

The world is experiencing an increase in the frequency and severity of disasters due to ever more complex human and environmental factors. We currently face the greatest public health threat recent generations around the world have ever known. This reality demands that the joint community of responders evolves and matures to address the effects on the health of the world's citizens. DOD will continue to have an important role in HA/DR operations domestically and globally, including medical and public health response capabilities, as it is being called on today. We are likely to continue to have unanticipated events that will challenge the military health sector in predictable and unpredictable ways. Extant education and training opportunities for relevant HA/DR curricula within DOD would not prima facie address such likely personnel requirements.

A Joint Staff–recommended change in 2011 regarding doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy, derived from a capabilities-based assessment focusing on Joint Force Health Protection Emerging Mission Sets, acknowledged the requirement for "both wide scale and specific training for MHS personnel."[12] However, there was no specific reference to disaster medicine and public health competencies. Subsequently, little if any effort has been directed toward a systematic approach to define the competencies necessary for the MHS or the curricula to achieve them. To ensure that U.S. forces are adequately prepared for these missions, a capabilities-based analysis specifically addressing HA/DR requirements for the U.S. MHS that leverages established competencies for disaster medicine and public health should be undertaken. From that, education and training could be devised to address gaps in knowledge, skills, and abilities. This would ensure that when our nation, or the world, turns to DOD for help in responding to a large-scale HA/DR incident, as it is today, the department is ready to respond in order to save lives. **JFQ**

Notes

[1] Frank C. DiGiovanni, "A Way Ahead for DOD Disaster Preparedness," *Joint Force Quarterly* 82 (3rd Quarter 2016), 47–53.

[2] Alistair D.B. Cook, Maxim Shrestha, and Zin Bo Htet, *International Response to 2015 Nepal Earthquake Lessons and Observations*, NTS Report No. 5 (Singapore: Centre for Non Traditional Security Studies, October 2016), available at <www.rsis.edu.sg/wp-content/uploads/2016/10/NTS_Report_5_Nepal_final_revised_Oct.pdf>; E. Liang Liu et al., "Dallas MegaShelter Medical Operations Response to Hurricane Harvey," *Disaster Medicine and Public Health Preparedness* 13, no. 1 (February 2019), 90–93; James M. Shultz et al., "Risks, Health Consequences, and Response Challenges for Small-Island–Based Populations: Observations from the 2017 Atlantic Hurricane Season," *Disaster Medicine and Public Health Preparedness* 13, no. 1 (February 2019), 5–17; Lori Upton et al., "Health Care Coalitions as Response Organizations: Houston After Hurricane Harvey," *Disaster Medicine and Public Health Preparedness* 11, no. 6 (December 2017), 637–639; Daniel C. Wiggins, "A Case Study of the United States Military's Response to the 2014 Ebola Epidemic" (MMAS thesis, U.S. Army Command and General Staff College, 2016), available at <https://apps.dtic.mil/dtic/tr/fulltext/u2/1020383.pdf>.

[3] The Centre for Research on the Epidemiology of Disasters, *The Human Cost of Weather-Related Disasters 1995–2015* (Geneva: United Nations Office for Disaster Risk Reduction, 2015), 1–30, available at <www.unisdr.org/files/46796_cop21weatherdisastersreport2015.pdf>; Kellie Moss and Josh Michaud, *The U.S. Department of Defense and Global Health: Infectious Disease Efforts* (Menlo Park, CA: The Henry J. Kaiser Family Foundation, 2013), 1–42, available at <www.kff.org/wp-content/uploads/2013/10/8504-the-u-s-department-of-defense-and-global-health-infectious-disease-efforts.pdf>; Christopher Watterson and Adam Kamradt-Scott, "Fighting Flu: Securitization and the Military Role in Combating Influenza," *Armed Forces & Society* 42, no. 1 (2015), 145–168.

[4] Department of Defense (DOD) Directive 5100.46, *Foreign Disaster Relief* (Washington,

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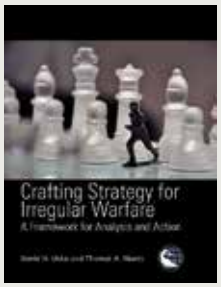

The 2018 National Defense Strategy calls to downgrade terrorism as a national security priority in favor of "inter-state strategic competition." Many interpreted the statement as signifying a return to "conventional combat," yet a closer reading suggests that even state-based competition is likely to be "irregular." The effort to understand this approach has generated new jargon—"hybrid war," "the gray zone"—yet the United States and the West in general struggle to overcome their entrenched presumptions about war. Such confusion constitutes an upstream source of analytical friction with implications for how strategy is conceived and implemented. This paper presents an analytical framework to assess and respond to irregular threats. Though terminological precision and analytical frameworks are no panacea for the malaise facing Western strategy, it is an indispensable starting point for all that must follow.

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DC: DOD, 2012), 1–11, available at <www.hsdl.org/?view&did=715470>; DOD Instruction (DODI) 2000.21, *DOD Support to International Chemical, Biological, Radiological, and Nuclear (CBRN) Incidents* (Washington, DC: DOD, 2017), 1–13, available at <www.hsdl.org/?view&did=800803>; DODI 3025.24, *DOD Public Health and Medical Services in Support of Civil Authorities* (Washington, DC: Office of the Under Secretary of Defense for Policy, 2017), 1–16, available at <www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/302524_dodi_2017.pdf>; DODI 6200.03, *Public Health Emergency Management Within the Department of Defense* (Washington, DC: DOD, 2012), 1–42, available at <www.hsdl.org/?view&did=714594>.

[5] Italo Subbaro et al., "A Consensus-Based Educational Framework and Competency Set for the Discipline of Disaster Medicine and Public Health Preparedness," *Disaster Medicine and Public Health Preparedness* 2, no. 1 (April 2008), 57–68; Lauren Walsh et al., "Core Competencies for Disaster Medicine and Public Health," *Disaster Medicine and Public Health Preparedness* 6, no. 1 (March 2012), 44–52.

[6] *Department of Defense Support to Foreign Disaster Relief (Handbook for JTF Commanders and Below)* (Washington, DC: DOD, 2011).

[7] Paul Reed, Jaimie Laib, Kandra Strauss-Riggs, and Thomas D. Kirsch, "Humanitarian Assistance and Disaster Relief Competencies and Training Pertinent to the Military Health System," *Journal of Military Learning* (April 2020), 19–35, available at <www.armyupress.army.mil/Journals/Journal-of-Military-Learning/Journal-of-Military-Learning-Archives/April-2020/Reed-Mil-Health-System/>.

[8] DOD Directive 5100.46, 1–11; DODI 2000.21, 1–13.

[9] *United States Government Global Health Security Strategy* (Washington, DC: The White House, 2019), 1–32, available at <www.hsdl.org/?view&did=825023>.

[10] DiGiovanni, "A Way Ahead for DOD Disaster Preparedness," 47–53.

[11] Air Force Instruction 10-2519, *Public Health Emergencies and Incidents of Public Health Concern* (Washington, DC: Headquarters Department of the Air Force, June 26, 2015), 1–3, available at <https://fas.org/irp/doddir/usaf/afi10-2519.pdf>; DODI 6200.03, 1–42; Department of the Navy, Bureau of Medicine and Surgery Instruction 6200.17A, *Public Health Emergency Officers* (Washington, DC: Headquarters Department of the Navy, March 7, 2011); Army Regulation 525–27, *Army Emergency Management Program* (Washington, DC: Headquarters Department of the Army, March 29, 2019), 1–31, available at <https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/ARN4163_AR525-27_FINAL.pdf>.

[12] *Joint DOTMLPF Change Recommendation for Joint Force Health Protection Emerging Mission Sets* (Washington, DC: The Joint Staff, 2011), 1–100.