What Every Airman Needs to Know about Medical Stability Operations

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The multidimensional complexity of stability operations has captured much attention in the Air Force. Key features of these operations include humanitarian relief, reconstruction of emergency infrastructure, provision of essential government services, and maintenance of a safe, secure environment. "Military health support" plays an everyday, vital role in each of these features.[1] Because stability operations call upon a wide array of unique Air Force capabilities, the service's future leaders will need an understanding of this aspect of agile combat support and building partnerships to effectively conduct not only these operations but also those involving airpower.

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In the context of past military campaigns, medical stability operations (MSO) may seem more appropriate for the Red Cross or the US Agency for International Development (USAID), not the Air Force or Department of Defense (DOD). The new MSO paradigm has vast breadth and many dimensions of support for wider national security goals. This article examines some historical successes involving MSOs and lessons learned. It then discusses the many dimensions of these operations, taken from DOD Instruction (DODI) 6000.16, *Military Health Support for Stability Operations*, which states that they shall "be explicitly addressed and integrated across all MHS [Military Health System] activities including doctrine, organization, training, education, exercises, materiel, leadership, personnel, facilities, and planning."[2] Using this framework, the authors hope to help future Air Force leaders better understand how the DOD implements this essential task, "a core U.S. military mission" with "priority comparable to combat operations," in the current operational environment and what to expect when confronted with the challenges associated with stabilization operations.[3]

These actions have a recent history as the leading part of the stability, security, transition, and reconstruction operations set of tasks.[4] In point of fact, they have a much longer history. Some authors have drawn analogies between modern-day stability operations and the eighteenth-century frontier campaigns as well as the nineteenth-century occupations of Mexico, the Philippines, and the former Confederate States. In 1966 Gen H. K. Johnson, the Army chief of staff, first used *stability operations* in a doctrinal context, describing them as a principal Army mission: the "employment of force to maintain, restore, or create a climate of order under which a government under law can function effectively."[5] In 1967 Army Field Manual 31-23, *Stability Operations: US Army Doctrine*, made this concept part of formal guidance. Describing medical support for stability operations, Col (later Maj Gen) Spurgeon Neel, USA, the US Military Assistance Command surgeon in Vietnam, wrote that "the keystone of the program is the development within the host nation's army of a medical training program which will yield a permanent increase in the degree of

medical self-sufficiency."[6] We now understand that MSOs and building partner-nation capacity are a responsibility not only of the Army or the Air Force but also of the entire US government, each focusing on its own role while acting to complement partner agencies. With this knowledge, we can now discuss how the DOD and Air Force implement MSO guidance in furtherance of agile combat support in today's complex world.

Doctrine

Many of the fundamental employment principles for MSOs are in place. Titles 10 and 22 of the *United States Code* have long provided guidance for building medical capacity in partner nations, such as the distribution of excess property and the functions of the international military education and training program, which has sponsored exchanges of subject-matter experts since 1961. National Security Presidential Directive 44, "Management of Interagency Efforts Concerning Reconstruction and Stabilization," 2005, authorized the Department of State as the lead US government agency for stability operations, with the DOD playing a supporting role. The resulting changes in defense doctrine have proven robust.

Joint Publication (JP) 3-0, *Joint Operations*, September 2006 (most recently updated in August 2011), led the way, and its direction is creating new joint, service, and command policy. JP 3-07, *Stability Operations*, September 2011, advises joint force commanders who integrate and synchronize stability operations with offensive and defensive combat operations that humanitarian needs may occur during any phase of these actions.

JP 4-02, *Health Service Support*, October 2006, a text of nearly 400 pages, now in revision, includes guidance for the medical component, advising personnel to think beyond force protection and issues dealing with the care of combat casualties in both the planning and execution of the stability operations mission. Health threats to the indigenous popu-

lation, multinational forces, US government employees, and contractors are part of the military mission, as is working with international organizations and nongovernmental organizations (NGO). Thus, military health services contribute to social, political, and economic stability.

JP 3-29, *Foreign Humanitarian Assistance*, 17 March 2009, directs the undersecretary for policy to oversee the Defense Security Cooperation Agency, which implements funding for the humanitarian assistance and international military education and training programs. One successful organization, the Defense Institute for Medical Operations, housed in San Antonio, Texas, under executive agency of the Air Force Medical Service, sponsors "train the trainer" courses for allied military and civilian medics on a wide range of topics, including disaster response and HIV/AIDS. In a classic example of building partner capacity, one of the authors of this article, Colonel Waller, taught regional disaster response with the institute's teams in South Africa and El Salvador. In the latter, a locally sponsored civil-military disaster exercise—the first of its kind in San Salvador—followed the course. When a devastating earthquake struck a few months later, these preparations saved many lives and allowed regional medical capabilities to handle the response without US or other outside manpower.[7]

DODI 3000.05, *Stability Operations*, further implements the new MSO doctrine: "Ensure DoD medical personnel and capabilities are prepared to meet military and civilian health requirements in stability operations."[8] This broad assignment includes four main tasks, mentioned in the opening paragraph of this article.

DODI 6000.16 clarifies the employment of military medical personnel, emphasizing the high priority of the MSO mission as well as the means of integrating it into the full spectrum of MHS activities and into a vital piece of the Air Force's agile combat support capability. A joint capabilities document titled *Stability Operations: Military Health System*, August 2008, which implemented the mission, lists 13 MSO capability areas.[9] One of the document's priority recommendations includes development of a doctrine, organization, training, materiel, leadership and

education, personnel, and facilities (DOTMLPF) change request for MSO and homeland defense / civil support, a task nearing completion. As the combatant commands (COCOM) and services rewrite their directives and instructions to comply with the new guidance, many issues remain. The new MSO mission must translate into training and budget priorities, not into an additional duty without additional funding or personnel. Other current tasks and expenses must take a lower priority to insert MSO skills into the mix of MHS competencies. When combat operations decrease in scope, some funding and manpower may become available. If not, Air Force line commanders, manpower leaders, and the senior MHS leadership will have to create efficiencies and innovations to fulfill their MSO mandate. The Air Force, possessing the most portable and agile medical assets of the three services, will confront some unique problems and play an essential role.

What activities would most likely build partnerships and partner capacity, enabling an allied country to respond to its own and regional contingencies? In 2007 a Joint Forces Command white paper described medical-capacity-building activities as "better than direct healthcare" and more effective in reaching bilateral strategic goals.[10] Paraphrasing senior DOD and State Department leaders, Col Sean Murphy and Col Dale Agner point to US government and DOD humanitarian activities as the best "dollar-for-dollar" actions for realizing national security goals overseas.[11] They advocate replacing the terms *building partnership capacity* or *medical diplomacy* with *cooperative health engagement*, which implies shared learning and a long-term friendly relationship with the host nation, rather than a temporary marriage of convenience. Cooperative health engagement can take place in a world where "ally" to "belligerent" and "secure" to "hostile" forms a continuum marked by both ambiguity and the daily movement of nations.

Hence, MSO doctrine must inform and influence policy and strategy actions. Future MSO doctrine needs to answer a number of questions: How much cultural knowledge should medical personnel bring to the various COCOMs and multinational exercises? Is proficiency in the

local language an essential requirement in every engagement; if so, how does the DOD best ensure that its operators acquire that proficiency? As the DOD and Air Force assess humanitarian efforts, what measures of effectiveness best capture the value of a mission? What public health indicators should drive our MSO priorities, and how country-specific should they be? How can battlefield lessons learned translate into better humanitarian assistance? The special forces medic model of blending into the community and building credibility with the host nation's citizenry has its successes and admirers, but according to Title 10, *United States Code*, humanitarian and civic assistance must not provide care for a host nation's military or paramilitary forces.[12] Can doctrine relieve and clarify this type of tension? The authors of this article know that building a partnership with host-nation officials while denying medical care from deployed Air Force personnel to them or their families constitutes a substantial quandary.

Doctrine alone will not translate into effective and efficient MSO capabilities. In spite of the new MSO employment principles, the US response to the earthquake in Haiti and the Continuing Promise deployments did not include public health planning and preventive medicine personnel, other than a few medics deployed for the health protection of US forces. Developing graceful, noncontroversial redeployments from humanitarian operations and an MSO exit strategy has proven a daunting challenge. Organizational and military cultural changes must take place in order to implement MSO doctrine effectively in future operations.

Organization

Once robust doctrine is in place, how will the DOD, Air Force, and the latter's MHS organize to conduct more effective MSOs? The DOD's regional COCOM headquarters are organized to support many legacy medical security cooperation activities, such as multinational exercises, humanitarian assistance missions, tropical disease laboratories, and the direct provisioning and teaching of medical care, including re-

cent, well-publicized humanitarian deployments of the USNS *Mercy* and *Comfort*.[13] However, the inability of the Department of Health and Human Services to sustain funding for a much-needed Central American Regional Medical Training Center in Panama and the negative publicity of an unfilled "promise" after Congress cut funding represent an unflattering example of unsustainable US medical engagement in partner nations, exemplifying the concerns noted by Murphy and Agner.

The assistant secretary of defense for health affairs has created a Medical Stability Operations Working Group (MSOWG), which is building MSO competency requirements that will drive organizational changes in the MHS. The international health specialist (IHS) initiative of the Air Force Medical Service, now 10 years old, is a notable organizational success, formed from the vision of Lt Gen Paul K. Carlton Jr., former Air Force surgeon general. That initiative has placed a cadre of language-skilled and culturally competent medical personnel at each of the regional COCOMs to facilitate coalition and humanitarian activities.[14] IHS teams have proven their value in the Indian Ocean tsunami relief, establishment of the Iraq Ministry of Health, and dozens of multilateral exercises in every theater. The MSOWG recommended implementation of a similar triservice organizational capability. Moreover, the Public Health Service is forming international field coordination elements in response to demands for some international capacity building and humanitarian assistance, with emphasis on US territories and friendly partner nations.

Coordination of efforts between military services and the regional joint headquarters has proven problematic—witness the health-related missions executed with a partner nation by one MHS organization without the knowledge of another military agency working concurrently in the same region. Recognizing a need for improved coordination and communication, the MSOWG recommended organizational improvements to narrow this gap.

The relationship between the DOD and international civil-military humanitarian coordinating groups, such as the United Nation's (UN)

Interagency Standing Committee, embodies another area of concern for nimble MSO organizational capability. Both that committee and a consortium of the US Institute of Peace, DOD, and USAID have published consensus standards on civil-military relationships in stability operations. US Southern Command established an exchange position at USAID in 2007 to help remedy some of the communication and synchronization issues. The DOD's Office of the Assistant Secretary of Defense for Health Affairs, International Health Division, has a Department of State liaison detailed to that office, along with a full-time NGO specialist, in an effort to enhance interagency discussion and coordination. The DOD's organizational reengineering efforts may be well served by similar cooperation with other agencies in areas such as training.

Training

Historically, military humanitarian missions were often considered deployments for training, and at times regional strategic goals in the theater security cooperation plan received less than adequate attention. Clearly, DODI 3000.05 should put this type of behavior to rest by directing the COCOMs to integrate stability operations concepts and activities into training, exercises, and all types of planning. The instruction directs the undersecretary of defense for personnel and readiness to share stability operations training with other US government agencies, allies, and NGOs, and to include language and cultural proficiency in those training activities. Gaps in implementation remain, however, as reflected by the newly updated version of the joint military training directive (DOD Directive 1322.18, *Military Training*, 13 January 2009), which does not mention stability operations.

The emphasis on changes in training under MSOs does not involve a giant step for Air Force medical personnel. After all, humanitarian work often motivates young people to enter the health career field, and military health care providers commonly use some of their leave or off-duty time to volunteer their services for humanitarian activities in the local community or abroad. Thus, to include MSO missions as

part of their duty represents a continuation of their avocation and a retention incentive for many of these personnel.[15]

However, even with all this action taking place, much of the legacy annual training needs updating. Predeployment training, which implements many MSO concepts, requires greater attention. Training should include the needs of the host nation's citizenry in terms of public health and preventive medicine. As a first step, medical personnel supporting the embedded training teams and provincial reconstruction teams (PRT) in Afghanistan have undergone both general and region-specific predeployment training in MSOs. The North Atlantic Treaty Organization's (NATO) Training Mission and Combined Security Transition Command–Afghanistan has engaged the Center for Disaster and Humanitarian Assistance Medicine at Bethesda's Uniformed Services University in MSO training, building capacity within the medical sectors of the Afghan national army and police.

Much of the work done under an effective MSO model—the DOD HIV/AIDS Prevention Program—managed by the Navy and concentrated in 26 African partner nations, entails military-to-military assistance and training to develop new programs tailored to local cultures and conditions. This nation-specific process has led to greater ownership and acceptance by partner nations, as attested by the program reviews.[16]

In another MSO illustration, Murphy and Agner describe the model success of the DOD's Combat Casualty Care Course in Chile. Chilean navy physicians took training from US Air Force personnel and taught their new skills to both civilian colleagues and fellow military physicians from 15 nearby nations. Course graduates from several countries later deployed together to an earthquake response in Pisco, Peru, where they provided interoperable medical services.[17] This training in South America also creates capacity to support peacekeeping operations all over the world. Many countries in South and Central America have used this training on such deployments. The fact that it took more than 10 years to get this program in Chile on solid footing emphasizes the long-term relationships essential for MSO success.

The recent deployment of medical personnel in the Mongolian military to the UN peacekeeping operation in Darfur, Sudan, stands as another MSO success. The Air Force component of Pacific Command (PACOM), through its IHS team, coordinated Mongolia's purchase of a portable Air Force hospital equipment package and trained personnel in operating the equipment, providing Mongolia with an opportunity for both positive international recognition and deployment funding from the UN. Certainly, all parties benefited from this activity—a model for future MSO efforts in training as well as in educational activities.

Education

A number of educational courses support MSOs, most prominent among them the Medical Stability Operations Course, a three-day event sponsored by the Defense Medical Readiness Training Institute in San Antonio. The institute has taught the Combat Casualty Care Course to thousands of Air Force and other military medical personnel for decades. Having a combined lecture and small-group-discussion format, the MSO course introduces military officers to their MSO roles. The Department of State's Office of the Coordinator for Reconstruction and Stabilization offers several training courses in reconstruction and stabilization. The Uniformed Services University of the Health Sciences in Bethesda, Maryland, which teaches a variety of MSO-related courses, has included some MSO concepts in its medical school, nursing, and graduate curricula for decades. NATO's Marshall Center in Germany makes available a three-week course in security, stability, transition, and reconstruction for US as well as allied officers and civilians. A three-day medical mentor training course has become part of combat skills training at the Joint Readiness Training Center at Fort Polk, Louisiana, for all DOD medical advisers deploying to Afghanistan. These offerings reflect the diversity of courses and robust efforts to build effective MSO education.

The new joint Military Education and Training Center in San Antonio has invited foreign students to participate, as has the new Aero-

space Training Center at Wright-Patterson AFB, Ohio, which will host the Advanced Aerospace Medicine for International Medical Officers Course. Both centers seek international exchanges for staff. These examples indicate that the DOD is moving in the right direction with regard to cooperative health engagement and better MSO education, both of which can lead to more productive MSO exercises.

Exercises

Many of our annual multination exercises of long standing have emphasized MSO skills since the Cold War days. The authors are familiar with such exercises as the African MEDFLAG, Caribbean New Horizons, Philippine Balikatan, and Cobra Gold in Thailand.[18] These four illustrate bilateral exercises with robust MSO planning and activity, often including some teaching and medical civic action project providing direct care to a host nation's indigent citizens. Although these exercises carry out their primary purpose of bilateral military training, they are not sufficient by themselves to build public health capacity in partner nations.[19]

COCOMs and service components have begun to realign their exercises with MSO capacity-building goals within their areas of responsibility. For example, European Command has recently revamped its MEDCEUR exercise to focus on training both US and coalition forces in disaster-response operations. The Pacific Angel exercise includes flying a Pacific Air Forces (PACAF) medical-subject-matter exchange team into remote areas to provide training requested by host nations, thereby fulfilling both the training and engagement requirements of the exercise in a single effort.

Medical exercises, both inside the DOD and in the civilian community, need to emphasize strategic outcomes and significant long-term effects—not just the simpler indicators of progress. For example, if improved public health is a regional security goal, then simply measuring the number of immunizations is not sufficient to establish progress

toward that objective. One must measure disease rates specific to those immunizations and improved overall public health months or years later—as entities such as the World Health Organization often do.

Better measurement of the effect of MSO humanitarian activity offers several benefits both currently and for future endeavors. Planning ahead for real-time data collection and analysis may allow appropriate midcourse corrections while the mission is in progress. Outcomes can help commanders prioritize future activities, based on the value demonstrated. These efforts can deconflict activities of other US agencies and NGOs, providing quantifiable results with a transparency that can become an effective tool against extremism. Additionally, some of these measurement efforts offer insight into the materiel requirements for MSO activities.

Materiel

Materiel requirements for MSOs are substantial and different from those used in combat operations. An MSO-capable medical force depends upon portability and reliability, qualities of Air Force medical assets that have traditionally set the standard for the DOD. Further reengineering for current operations and miniaturization of medical gear will enhance the performance of MSO materiel. The NGO humanitarian community has set a high standard in the materiel area with the internationally accepted Sphere Project standards, which apply to many MSO tasks.[20]

The effective use of Chinook helicopters in Pakistan, following the severe earthquake there in 2005, produced one of the most successful public relations scenarios in the history of military humanitarian operations. The Chinooks moved heavy loads of humanitarian and medical materiel as well as injured patients over mountain passes blocked by debris from landslides. The subsequent publicity did a great service to US security efforts in the region.[21]

Another "good news story" about medical materiel involves the Chilean air force's success with its deployable hospital, created by using the US Air Force's portable hospital and some NATO standard gear as a model. That unit has deployed to nearby nations after an earthquake, a supermarket fire, and a mass-casualty bus accident, each accompanied by resounding beneficial effects for patients, diplomacy, and the training of hospital personnel.

These two examples provoke some concern about the DOD's materiel capabilities. We must improve MSO interoperability with allied nations, making it as seamless as possible. The urgency of an effective crisis response (often called the "golden hour" in medicine) must drive greater innovations in portability for MSO teams, probably including the pre-positioning of some relief supplies near known areas of risk. Long-term storage of relief supplies will require that the DOD study the safety of extending the shelf life of disposable medical supplies, whose current expiration dates often are not set by scientific studies. Regional security priorities and political relationships, as well as the vulnerability of our specific coalition partners to crises, will create priorities for some of these MSO materiel tasks.

The Air Force has recently developed the next generation of expeditionary medical support, known as the health response team. This unit packages all of the deployment lessons learned, along with lessons from PACAF's humanitarian-assistance rapid-response team, which has deployed from Guam's contingency response group. The health response team utilizes a modular package that can respond, for a limited time, to any humanitarian activity, disaster response, or full kinetic engagement, thus allowing US personnel to take what they need, and no more, for each operation. The Air Force medical service is working to make one available for each COCOM, in addition to filling Air Force–specific requirements. Proper utilization of this unique asset will create new MSO issues for future Air Force leaders.

Leadership

The MHS faces a significant task in developing leadership for MSOs. Many current leaders grew up in the Cold War, an era often marked by bipolar competition and bereft of General Johnson's stability operations doctrine of 1966. Deployments for humanitarian missions were seen as tools against a monolithic Soviet enemy and its surrogates. The era of complex emergencies, highlighted by the movie *Blackhawk Down* and the failure of US forces in Somalia in 1993, startled policy makers, who had not planned for such incidents.

Despite this history, MSO leadership enjoyed some bright moments. Many people considered PACOM's humanitarian response to the Indonesian tsunami, the relief mission occasioned by the earthquake in Pakistan, and the response to the Japanese tsunami/nuclear disasters as well-led operations and models for future action.[22] PACAF's IHS team, in support of PACOM, played a key role in the former missions, putting the right skills in the right place at the right time. If we wish to have a sustainable, cost-effective humanitarian impact, we need this capability in future operations worldwide.

To translate these lessons and many others into knowledge and skills for future Air Force leaders, National Defense University and the services' war colleges are actively engaging their students—our current and future leaders. Air University hosts the Air Force Culture and Language Center, which offers elective familiarization courses in strategically important languages, with the intent of deliberately developing future leaders with cultural competence and proficiency in key languages. In addition to the fortunate few who can attend these schools, we need other MSO leaders with equal competence. Consequently, the Pentagon's MSOWG is defining requirements for developing MHS leadership. Furthermore, the Defense Institute of Medical Operations and the Defense Medical Readiness Training Institute, mentioned above, emphasize the grooming of leaders in two flagship courses: (1) Leadership Course in Disaster Public Health and Public Health System Management and (2) Leadership Course in Regional Disaster Response and

Trauma Systems Management. By using these tools with proper diligence and time, the DOD can cultivate the requisite leaders, who must produce the right personnel mix for robust future MSOs.

Personnel

Senior line leaders, such as Gen Michael Ryan, former Air Force chief of staff, have advocated greater language and cultural competency for over a decade. Both the short-tour rotation cycle and the efficiency-report-driven culture that primarily rewards short-term success can work against the long-term requirements of a mature MSO program. Relationships with some partner nations may not thrive under these constraints. If the DOD is to place stability operations on the same priority level as combat operations, as mandated by the new DODIs, it needs to adjust some personnel policies for medical manpower. New job requirements will create new education and training requirements. Coordination of simultaneous programs in personnel and education in this time of high operations tempo will prove daunting.

For a decade, the Air Force's IHS billets, both officer and enlisted, have survived the stresses of headquarters manpower ceilings and the demands of combat operations at each of the regional commands. IHS personnel who served on the Coalition Provincial Authority's liaison advisory team at Iraq's newly reconstructed Ministry of Health rendered invaluable service at a critical time and made themselves available on short notice. Having a trained and accessible cadre of subject-matter experts enhanced our broader security goals.

The MSOWG is beginning to make this successful concept a joint effort of the Air Force, Army, and Navy to produce global health specialists trained in interagency knowledge, regional political realities, and cultural/language skills—individuals who would greatly enhance MSO capabilities. How will the Air Force's and its sister services' personnel systems handle this change? Past history tells us that it won't be easy

and that the uniqueness of the mission may necessitate some changes in the services' current promotion systems.

Standing up the human capital to meet the MSO mission's requirements is best done in synchrony with doctrine and educational programs rather than sequentially. Clearly, the mandate to support this mission involves significant human resources in the era of stability operations. Further, we cannot have personnel in place to perform MSOs without the right facility mix for these new missions.

Facilities

Facilities for effective MSO will reflect innovations and capabilities not available to Cold War–era medical personnel, such as portability and stand-alone reliability. Shelters built by the DOD, either for crises or deliberate action in a long-term, complex environment, must be culturally appropriate, have the support and "ownership" of the host community and nation, and address commonsense public health and hygiene issues. The DOD also should work with host-nation governments and NGOs with a long-term commitment to sustain the facilities.

The role of PRTs and the analogous use of funding for commanders' emergency response programs have come under some criticism by members of the humanitarian community, many of whom believe that the distinction between humanitarian workers and PRTs has blurred, with unintended consequences. This argument has some validity, but in a low-security environment, the choices may come down to PRT facility or no progress at all—clearly a difficult decision.

Concerning humanitarian actions in uncontested environments, all stakeholders must agree on the site and style of a new facility. Similarly, the effort must be long lasting. In an MSO era, we must reengineer shelters from outdated Cold War–era packages. In the 1990s, Colonel Waller deployed with a New Horizons RED HORSE exercise team to a Caribbean nation, observing that the public health hospital there had lost its roof in storms seven times during the previous 20 years, often replaced

at the expense of US taxpayers. The next roof should be sustainable (i.e., built to survive most hurricanes), one of the most basic lessons of MSOs. Having a durable facility will help both of our nations concentrate on other priorities, such as better planning for future needs.

Planning

The military's medical planning community can support effective execution of MSOs. Medical planners require innovative, collegial teamwork with the line community, partner nation, and other stakeholders. Inclusion of a specific MSO annex greatly enhances the theater security cooperation plan, an annual priority list for each COCOM, written in the past at European Command, Southern Command, and Pacific Command, and currently in preparation at Africa Command. Such a plan has a long history of including a separate preventive medicine annex, which focuses on protecting the health of US forces—not on MSOs. The new MSO annex, which addresses both the protection of the force's health and long-term public health goals of partner nations, will help with regional priorities for the supporting components. Other organizations and countries will better understand the overall direction of the plan and its medical support when the priorities of the MSO annex are known.

Deliberate and crisis-action plans should respect all stakeholders—including the host nation's ministry of health, the embassy staff, and, especially, health care providers at the deployment site, who provide continuity of medical care after an MSO activity. Plans must also address the long-term impact and legacy of the proposed mission. We must build partner nation capacity without discrediting the host nation's medical providers, and any host-nation public health metrics considered during the planning of mission priorities must be as accurate as possible. Most importantly, planners must address the development of local human capital to provide enduring health care and to teach others to do the same in a self-sustaining, locally resourced, and

culturally appropriate cascade. Rather than displace local capability, MSO must build capable partners.

Conclusion

The dimensions of MSOs are as wide as the security challenges that face our nation and world in the twenty-first century. As this article has demonstrated, these operations reach into each element in the spectrum of military tasks—doctrine, organization, training, materiel, leadership and education, personnel, facilities, exercises, and planning—in varied and important ways.

MSOs are establishing a new paradigm for the military services to utilize their medical resources effectively and execute stability operations in furtherance of national security objectives. The Air Force can resource its medical personnel—critical and sometimes unique MSO assets—to execute these missions successfully. MSOs offer essential support to agile combat support and building partnerships, two of the Air Force's core functions. The complexity and spectrum of the work involved in performing effective MSOs will challenge the DOD and its MHS in diverse and sundry ways. The authors believe that the Air Force is up to the task, but the solution sets are neither trivial nor automatic. They demand continuous and evolving doctrine, education, resourcing, and application of lessons learned from current and past operations. ✪

Notes

1. Joint Publication 3-0, *Joint Operations*, 11 August 2011, http://www.dtic.mil/doctrine/new_pubs/jp3_0.pdf.
2. Department of Defense Instruction (DODI) 6000.16, *Military Health Support for Stability Operations*, 17 May 2010, [1], http://www.dtic.mil/whs/directives/corres/pdf/600016p.pdf.
3. Ibid.
4. The update of DODI 3000.05, *Stability Operations*, 16 September 2009, http://www.dtic.mil/whs/directives/corres/pdf/300005p.pdf, replaced the 2006 version (stability, security,

transition, and reconstruction operations). The Department of State prefers the term *reconstruction and stabilization*.

5. Andrew J. Birtle, *U.S. Army Counterinsurgency and Contingency Operations Doctrine, 1942–1976* (Washington, DC: Center of Military History, US Army, 2006), 421, http://www.history.army.mil/html/books/us_army_counterinsurgency/CMH_70-98-1_US%20Army_Counterinsurgency_WQ.pdf.

6. COL Spurgeon P. Neel, "The Medical Role in Army Stability Operations," *Military Medicine* 132, no. 8 (August 1967): 605.

7. Rasa Silenas et al., "US Armed Forces Medical Operations other than War," *International Journal of Risk Assessment and Management* 9, no. 4 (2008): 367–75, http://www.inderscience.com/search/index.php?action=record&rec_id=20414&prevQuery=&ps=10&m=or.

8. DODI 3000.05, *Stability Operations*, 10.

9. The 13 areas include medical communications and information management (MCom), health risk management (HRM), health risk assessment (HRA), medical command and control (MC2), medical intelligence (MI), medical logistics (ML), medical planning (PLAN), combat casualty care and patient transport (CC), patient movement (PM), mental health support (MH), health risk communication (HRC), international health and cultural preparedness training and education (TE), and veterinary service support (VS).

10. Joint Forces Command, *Emerging Challenges in Medical Stability Operations*, white paper (Norfolk, VA: Joint Forces Command, 4 October 2007), "Introduction," 4.

11. Col Sean Murphy and Col Dale Agner, "Cooperative Health Engagement in Stability Operations and Expanding Partner Capability and Capacity," *Military Medicine* 174, no. 8 (August 2009): iii–x.

12. Title 10, *United States Code*, chap. 20, sec. 401.

13. The DOD tropical disease laboratories are the Naval Medical Research Units in Jakarta, Indonesia; Lima, Peru; and Cairo, Egypt; and the Armed Forces Research Institute of Medical Sciences in Bangkok, Thailand.

14. Lt Gen Paul K. Carlton Jr., "New Millennium, New Mind-Set: The Air Force Medical Service in the Air Expeditionary Era," *Aerospace Power Journal* 15, no. 4 (Winter 2001): 8–13, http://www.airpower.au.af.mil/airchronicles/apj/apj01/win01/win01.pdf.

15. LTC Jeff Drifmeyer, COL Craig Llewellyn, and LCDR David Tarantino, "Humanitarian Service and Recruitment and Retention of Uniformed Services Medical Personnel," *Military Medicine* 169, no. 5 (May 2004): 358–60.

16. "Country Reports," DOD HIV/AIDS Prevention Program, Naval Health Research Center, accessed 7 December 2011, http://www.med.navy.mil/sites/nhrc/dhapp/countryreports/Pages/default.aspx.

17. Murphy and Agner, "Cooperative Health Engagement," iv–v.

18. Colonel Waller, one of the authors of this article, participated in each of these four long-standing military exercises, which have humanitarian assistance and medical components. MEDFLAG, which has occurred annually since 1987, typically as one to several three-week events per year, focuses on disaster response training, medical collaboration, and provision of care to host-nation citizens. The exercise rotates to a different African host nation each year. He took part in Uganda and Cameroon exercises during a tour of duty in US Air Forces in Europe. Balikatan, meaning "shoulder to shoulder" in Tagalog, has occurred during most years since the early 1980s. The exercise remains bilateral, medical participation representing only a portion of it, including collaboration and exchange of medical experts and

provision of care to the host nation. Colonel Waller led a portable Air Force hospital, which saw more than 14,000 patients in a rural site in Luzon during a late 1980s exercise. The New Horizons exercise is dominated by engineering and infrastructure improvements in multiple Caribbean nations each year, but medical participation does occur. Colonel Waller led a small medical team to the island nation of Saint Kitts as part of New Horizons in the late 1990s. The Cobra Gold bilateral exercise in Thailand began in 1982 and became multilateral in 1994. Medical participation is a minor but important part of this interoperability exercise. The portable hospital commanded by Colonel Waller deployed to Cobra Gold in the late 1980s.

19. Recently in a initial exercise-planning conference, discussion about building a school in a tropical partner nation did not address basic public health items such as toilets, sinks, and mosquito screening of the windows. More than a century after learning about the necessity of these items during the Panama Canal excavation, we should certainly include them as part of the standard construction template for such scenarios—but we do not.

20. Sphere Project, *Humanitarian Charter and Minimum Standards for Humanitarian Response* (Rugby, UK: Practical Action Publishing, 2011), http://www.sphereproject.org/.

21. Bret Stephens, "Chinook Diplomacy," *Wall Street Journal*, 22 December 2005.

22. CDR Dave Tarantino, "Asian Tsunami Relief: Department of Defense Public Health Response; Policy and Strategic Coordination Considerations," *Military Medicine* 171, supplement (October 2006): 15–18.

Col Stephen Waller, MD, USAF, Retired

Colonel Waller served in a variety of command, planning, and health care provider roles for over 30 years. He led the Department of Ophthalmology at Wilford Hall Medical Center, Lackland AFB, Texas, where he performed the first laser refractive surgery in an Air Force facility. His team there developed a portable eye surgery capability that has since treated over 70,000 patients and performed 6,000 surgeries on deployed exercises, primarily in the Southern Command area of focus. For this work, they received the secretary of defense's Installation Excellence Award in 1999. A graduate of Air Command and Staff College and Air War College, Colonel Waller, who attained the designation of international health specialist, is currently an associate professor of preventive medicine at the Uniformed Services University of Health Sciences in Bethesda, Maryland.

Lt Col Jose Fonseca, USAF, Retired

Lieutenant Colonel Fonseca retired from active duty after honorably completing a 23-year career as a Biomedical Science Corps officer. He served his last four years at Headquarters US Southern Command, where he led various aspects of medical security cooperation. Directly upon his retirement, he served under a grant to the Henry M. Jackson Foundation as assistant professor of preventive medicine at the Uniformed Services University (USU). As part of a team of faculty experts, he developed expanded public health curricula for graduate programs in humanitarian assistance, disaster response, and global health. Lieutenant Colonel Fonseca received his master's degree in public health from USU in 2003, completing the international health concentration and a 12-month practicum in various agencies dedicated to global health.

Col Joseph Anderson, USAF, MC

Colonel Anderson is the director of the Global Health Division, an assistant professor of preventive medicine, and the director of the Air Force International Health Specialist Program in the Department of Preventive Medicine and Biometrics at the Uniformed Services University of the Health Sciences, Bethesda, Maryland. He directs an academic program leading to the degree of Master of Public Health with a concentration in international health. Colonel Anderson coordinates and instructs international health specialist courses as well as mentors candidates for the Master of Public Health degree on research projects. He is currently detailed to the Office of the Undersecretary of Defense for Personnel and Readiness in the Training Readiness and Strategy Division as the associate director for interagency and deployment training. He has commanded medical units at the squadron and group levels in the continental United States, overseas, and in a combat zone. A chief flight surgeon with over 850 hours in 25 airframes, Colonel Anderson is board certified in family medicine and aerospace medicine.

Col James Fike, USAF, MC, Retired

Colonel Fike (BS, Brigham Young University; MD, George Washington University) is a private consultant in global health, working in travel and tropical medicine as well as health care technologies in the humanitarian assistance and disaster response environments. Board certified in internal medicine and qualified in aerospace medicine, he has extensive experience in operational, wilderness, tropical, and travel medicine. Recently retired from the Air Force, he spent the last 11 years of his career within the Air Force International Health Specialist Program in a variety of positions, including director of the program and consultant in international health to the Air Force surgeon general. While on active duty, Colonel Fike served at all levels, tactical through strategic, both as a clinician and as a subject-matter expert in medical stability operations.

Col Sean Murphy, USAF, MC

Colonel Murphy (USAFA; MS, National War College; MD, Uniformed Services University of the Health Sciences) is the deputy assistant surgeon general for health care operations. He is board certified in pediatrics and is qualified in aerospace medicine. He has commanded at the flight, squadron, and group levels in both the deployed and home station environment. Colonel Murphy has served at the joint combatant command level as the command surgeon for US Southern Command and previously as the command surgeon for Pacific Air Forces.

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