Air Force pararescuemen assigned to 83rd Expeditionary Rescue Squadron load simulated casualties on board CH-47F Chinook, flown by members of Army Task Force Brawler, during personnel recovery exercise, Afghanistan, March 6, 2018 (U.S. Air Force/Gregory Brook)

The Future Joint Medical Force Through the Lens of Operational Art

A Case for Clinical Interchangeability

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Today there is little dispute over the constant nature of war. Over time and throughout history, however, the character of war has been fluid. In a recent strategic assessment, General Joseph F. Dunford, Jr., former Chairman of the Joint Chiefs of Staff, described the future security environment as both complex and uncertain, with adversarial competition and overt conflict being transregional, multidomain, and multifunctional in nature.[1] The joint force has adapted to keep pace with this new character of war, although doing so has been no easy feat. The U.S. military has been challenged recently by burgeoning and worsening regional instability driven by both state and nonstate actors. The United States can justifiably expect contested domain dominance in any future military operation. Additionally, the current operational tempo—with no clear end in sight—is affecting the

Marine aids Royal Thai sailor with simulated casualty while participating in mass casualty evacuation drill during exercise Cobra Gold 2020, at Hat Yao Beach, Sattahip, Kingdom of Thailand, February 27, 2020 (U.S. Marine Corps/Hannah Hall)

military's equipping, training, and modernizing posture. Indeed, the Department of Defense (DOD) has prioritized pressing readiness issues—namely lethality and modernization, among others.

These collective problem sets drove the Joint Staff to implement the doctrinal approach of globally integrated operations.[2] The key concept is central to the name: integration. Under this construct, an employed joint force must quickly integrate capabilities across all domains and organizations, implement global agility while operating in small footprints, exercise flexibility, leverage partners, enable speedy decisionmaking, and operate with disciplined discrimination to decrease unintended consequences.

Politically, the American population has tolerated the fiscal cost of conflicts for the past two decades, in large part because U.S. interests were safeguarded while human casualties remained low. This latter point proved paramount to maintaining the American will to endure, as the collective population agonized over every warfighter lost in combat.

The joint health enterprise (JHE)—commonly referred to as the military health system (MHS)—has been key in driving recent combat casualty rates to the lowest in the Nation's history. However, with the advent of a new, uncertain future security environment, the JHE faces potentially overwhelming obstacles that threaten a reversal. It therefore must contemplate national strategic redirection through novel and innovative means.

In the 2017 National Defense Authorization Act (NDAA-17), Congress not only acknowledged military medicine's unmatched wartime successes,[3] but also conveyed deep frustration with the MHS overemphasis on the peacetime health care delivery benefit at the expense of a strengthened operational joint medical force readiness.[4] This comprehensive reform was informed by the 2015 Military Compensation and Retirement Modernization Commission Report, which recommended DOD ensure Servicemembers receive the best possible combat casualty care while also increasing access to and value of home station health care.[5] This report also affirmed that joint military readiness must be proficient in delivering both routine health care and combat casualty care in operational environments.[6] A former Deputy Secretary of Defense recently directed the Under Secretary of Defense for Personnel and Readiness, with Joint Staff support, to work with the Services to develop an implementation plan to meet NDAA-17 MHS reform requirements. His intent was to reform the MHS from a collaborative Service-centric health system to a

high-performing integrated health system focused on joint readiness.[7] This process has continued through several NDAA iterations intended to shape the future direction of DOD medicine.

The Operational Environment

In anticipated conflicts of the future, geographic distance will pose an operational challenge. To expand its reach against widely dispersed unconventional military threats, the joint force has leveraged small, disaggregated unit employments. Ground commanders have had to optimize their warfighting capacity through modular, tailored employments and effective use of partner capabilities.

The future security environment will impact the joint medical force in this same way. The force therefore must support warfighters through globally integrated health services (GIHS)—the strategic management and global synchronization of joint medical assets.[8] Key to this approach is the Services' collective ability to deploy tailorable, interoperable, and networked medical forces. In turn, these joint medical forces must efficiently and effectively combine and synchronize their capabilities to best support joint operations. Medical support, like logistic support, must factor in geographical considerations as much as—if not more than—the size of the joint force's population at risk.

The Problem

Limited resources, unmet requirements, and the accompanying geographic combatant command (GCC)–Service tensions are not uncommon operational challenges. When viewed separately, medical operations are no different. The Joint Concept for Health Services highlighted this dilemma in its problem statement: "How can the joint force provide comprehensive health services to deployed forces in an operating environment characterized by highly distributed operations and minimal, if any, pre-established health service infrastructure?"[9]

At the root of the GCC–Service tension are the ground commanders' requests for minimum-sized medical units capable of surgical resuscitation. Anything more than this small size would often be larger than the unit being supported. Even with the ad hoc creation of smaller surgical teams, the Services have strained to meet increasing operational demand. This gap has created contentious sourcing efforts and, at times, unfilled, validated requirements. This shortfall has also proved unacceptable to the collective endstate. The GCCs have exercised innovative approaches to mitigate this lack of contingency surgical support, including increasing the time standards for evacuation, partnering with coalition medical assets, and canceling specific military operations.

Another source of Service tension is the concomitant requirements of delivering health care at home stations and providing operational medical support in deployed settings. In fact, Congress has acknowledged this dichotomy, noting that peacetime health care comes at the expense of medical force readiness.[10] In NDAA-17, Congress conveyed its concern that the Services were risking their medical relevancy to operational readiness. As mentioned, the Services' lack of agility to tailor small-unit capabilities has threatened their ability to use limited resources to meet an ever-increasing demand.

Directed NDAA-17 reforms, albeit culturally challenging, have presented the Services the opportunity to rightsize their force structure for the specialties and capabilities forecast to meet current and future joint force requirements. This ongoing opportunity lends itself to improving global force management processes, with more agile business rules friendlier to tailoring of forces into small-unit employments.

The Art: Innovative Means of Integration

The JHE's strategic endstate is a high-performing integrated military health system. In turn, the joint force implements GIHS as the desired military endstate. Service surgeons general take this concept into account when executing their respective roles to recruit, organize, train, and equip medical forces for deployment. Ultimately, the joint medical force provides a fully capable, integrated, and synchronized medical capability to meet the commander's operational needs.

Integration is the most critical component to optimize operations and capacity. Three distinct, invaluable ways to deliver effective integration are *interoperability*, *interdependence*, and *interchangeability*.

Joint Publication 3-0, *Joint Operations*, defines *interoperability* as the ability to act together coherently, effectively, and efficiently to achieve tactical, operational, and strategic objectives.[11] For the joint medical force, interoperability occurs at all three spheres of influence—tactical, operational, and strategic—and is guided by joint planning and standardization.

Interdependence is the purposeful reliance by one Service on another Service's capabilities to maximize the complementary and reinforcing effects of both—that is, synergy.[12] Joint interdependence is essential for joint effectiveness. A good example of interdependence is the continuum of care, in which ground-based hospitalization is interdependent with Air Force strategic patient movement capabilities. Essentially, interdependence obviates the need for each Service to be self-sufficient, thus eliminating costly redundancy.

Although *interchangeability* is not a doctrinal term, in the military setting, the word can be described as an innovative and agile way to readily exchange forces that possess equivalent capabilities—that is, capable of changing places. Indeed, the authors' contention is that health professionals in uniform are among the closest thing to a military commodity. (Another example is the military Catholic priest: the uniform does not matter; mass will always be the same.) Within military medicine, clinicians train to the same national standards in their respective internships, residencies, and fellowships. Clinical knowledge, skills, and abilities are the same for any specialist or subspecialist, regardless of underlying Service affiliation.

Service medical assets can and should operate interchangeably whenever and wherever appropriate to support the mission at hand. Although the environment and operational conditions differ among the Services' primary warfighting domains, this situation could be easily overcome through predeployment training. Any Army, Navy, or Air Force clinician could execute his or her clinical skills in any warfighting domain under appropriate operational command and control. Rather than the requirement to permanently assign clinicians to a particular Service or medical unit, clinicians would simply augment to a Service-aligned medical unit most appropriate for the warfighting domain. The guiding precept should be to avoid unnecessarily aligning clinical assets by Service to that of the supported operational force, since doing so adds complexity without any accompanying advantage.[13] This recommendation is not a new operational concept for medical assets; its overwhelming success has been best demonstrated in North Atlantic Treaty Organization (NATO) Role III settings—that is, military treatment facilities—both at home station and while deployed.[14]

To achieve GIHS, a joint medical force must operate with a baseline of common knowledge, skills, and abilities (KSAs) that enable all three methods of integration described above. These common clinical KSAs do not limit Services from having additional Service-unique KSAs. Other means to achieve global integration include joint developed medical leaders; interoperable Service capabilities guided by common standards and procedures; extensive interagency, multinational, and private partnerships; cross-domain synergy through joint medical force development; and global coordination.

The Risk

Strategically, interchangeability effectively provides depth by increasing supply-side capacity—that is, the number of clinical capabilities available for deployment. Even within the theater of operations, integrated formations give operational commanders agility and timely maneuverability. Alternatively, relying solely on doctrinal unit employment through a formal request for forces may well prove untimely for the joint force.

This type of Service-agnostic clinical employment flexibility may introduce operational risks. At the tactical level, Service-unique characteristics make wholesale integration impractical. The joint force could mitigate risk by aligning medical units to the Service typically affiliated with the intended warfighting domain, namely, Army with land, Navy with sea, and Air Force with air. Tactically, sound command and control of these units would be delivered by Service-aligned leadership; it is only the clinical expertise that is interchangeable in this model. Practically speaking, over time, NATO Role II settings—surgical resuscitation sites—may represent common use of clinically interchangeable capabilities among the Services.[15]

Cultural resistance to change is another risk to the future joint medical force. Without transformation, however, the force faces a future of irrelevance to the warfighter of tomorrow. If this force is not ready or able to tailor itself to meet inherent requirements, it risks not integrating effectively, which threatens mission failure: higher casualties and jeopardized strategic security objectives. At a time of a supply-demand mismatch among deployable surgical resuscitative capabilities, it is imperative for the military medical community to explore and adapt innovative ways to support the employed joint force and its populations at risk.

Future military operations require modular surgical resuscitative capabilities to support small, widely dispersed, and disaggregated unit deployments. Current integration efforts and associated mitigations are not enough to meet the joint force need. Even when considering all available clinical assets within the three Services, there remains an overwhelming supply-demand mismatch among military medical assets. Because clinical skills and competency standards are the same across the board, Service force providers should combine specialized medical and surgical assets in an interchangeable fashion to meet deployment requirement demands. This interchangeability could positively address risk concerns and provide commanders in the field with the comprehensive medical services they need to fight and win. **JFQ**

Notes

[1] Joseph F. Dunford, Jr., "Strategic Challenges and Implications," *Joint Force Quarterly* 83 (4th Quarter 2016), 2–3.

[2] *Capstone Concept for Joint Operations* (Washington, DC: The Joint Staff, 2012), iii.

[3] *National Defense Authorization Act for Fiscal Year 2017 Report (to accompany S. 2943)*, Senate Committee on Armed Services, S. Rep. 114-255, 114th Cong., 2nd sess., 2016, 173, available at <www.congress.gov/congressional-report/114th-congress/senate-report/255/1?overview=closed>.

[4] Ibid.

[5] *Report of the Military Compensation and Retirement Modernization Commission: Final Report* (Washington, DC: Department of Defense, January 2015), 4.

[6] Ibid., 58.

[7] Ibid., 7.

[8] *Joint Concept for Health Services* (Washington, DC: The Joint Staff, 2015), ii.

[9] Ibid.

[10] *National Defense Authorization Act for Fiscal Year 2017 Report*, 173.

[11] Joint Publication (JP) 3-0, *Joint Operations* (Washington, DC: The Joint Staff, 2013), GL-10.

[12] JP 1, *Doctrine for the Armed Forces of the United States* (Washington, DC: The Joint Staff, 2017), I-2.

[13] Ibid., III-6.

[14] See "Chapter 16: Medical Support," in *North Atlantic Treaty Organization* [NATO] *Logistics Handbook* (Brussels: NATO, October 1997), available at <www.nato.int/docu/logi-en/1997/lo-1610.htm>.

[15] Ibid.