CBO TESTIMONY

Statement of
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on
the Wartime Mission of the
Military Medical System

before the
Subcommittee on Military Personnel
Committee on National Security
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NOTICE

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Mr. Chairman, I appreciate the opportunity to appear before this Subcommittee to discuss the medical mission requirements of the Department of Defense (DoD). My testimony will focus on the challenges facing DoD today in meeting both its peacetime and wartime missions. I will cover a range of issues, including:

- The readiness problems that DoD still faces, despite lower wartime requirements;

- The limited training for wartime that military medical personnel receive during peacetime; and,

- An alternative approach to meeting the wartime mission by integrating military medical care with the civilian sector.

BACKGROUND

Historically, the military medical establishment has had a twofold mission: wartime readiness, which means having the capability to meet the armed services' wartime medical needs; and providing medical care during peacetime to uniformed personnel and other eligible beneficiaries, including dependents of active-duty personnel, retirees, and their dependents and survivors.

During the Cold War, the size of the military's direct care system--military clinics, hospitals, and medical centers--was inadequate to meet either DoD's wartime or peacetime requirements. Wartime requirements, which were based on the scenario of an all-out conventional war in Europe, were almost three times greater than the capacity of the direct care system. To address that shortfall, DoD planned for substantial backup hospital capacity through contingency agreements with the Department of Veterans Affairs and civilian hospitals under agreement with the National Disaster Medical System. Demand for peacetime care also exceeded the capacity of the direct care system, leading dependents and retirees to rely increasingly on the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) to finance access to civilian care.

The end of the Cold War dramatically changed DoD's planning for wartime medical care, as documented in the department's recent Congressionally mandated study (referred to as the 733 study). Even after the loss of more than 10,000 beds through downsizing, the direct care system will retain about 18,000 beds, more than twice the capacity needed to meet the wartime requirement derived from two nearly simultaneous major regional conflicts. The peacetime demand for care, however, will continue to exceed the capacity of military hospitals, requiring augmentation from the civilian sector.

READINESS PROBLEMS

The decline in wartime requirements does not automatically imply that wartime medical readiness has improved. Instead, the lessons learned from the Persian Gulf War strongly indicate that the size of the military medical infrastructure is only one factor in determining wartime readiness. In a series of reports on the wartime medical performance of the three military services, the General Accounting Office (GAO) identified medical readiness problems in a number of areas. Among the major problems that GAO found were:

- Manpower-related problems, such as inadequate peacetime training of medical personnel for wartime;

- Problems of medical personnel management, such as the failure of personnel systems to identify medical personnel for assignment to active units and ensure that deployed units had an adequate number and mix of personnel;

- Equipment and logistical problems, including inadequacies in the supply of medical goods; and

- Problems in evacuating casualties from the front lines to supporting medical facilities.

DoD's RESPONSE TO READINESS PROBLEMS

Partly in response to the experiences of Operations Desert Shield and Desert Storm, in March 1995, DoD formally released its Medical Readiness Strategic Plan 2001. The report outlines nine areas of concern, including all of the problem areas cited by GAO, and sets forth objectives for addressing each of them. The Assistant Secretary of Defense for Health Affairs has directed that all "primary action offices" identified in the Medical Readiness Strategic Plan prepare implementation plans by the end of June 1995. Many of DoD's proposed solutions are already being carried out: the Army, for example, plans to work more closely with its reserves to ensure their availability in the event of wartime. Nonetheless, for a number of reasons, DoD's plan may fall short of ensuring that medical readiness problems will be resolved:

- The report does not clarify how much DoD spends on its medical readiness mission. Without such an accounting, the department and the military services cannot plan efficiently to improve their allocation of resources in wartime.

- The report recommends that continued evaluation and monitoring of readiness occur through collaborative and consultative efforts, such as the Defense Medical Readiness Council and the Tricare Executive Committee. Bodies like those may help to raise awareness of problems with wartime readiness and possible remedies for them. But there is no assurance that the Surgeons

General, whose departments retain independent control of medical personnel resources, will act on the recommendations of those consultative groups.

- Finally, DoD's plan fails to address the central cause of wartime readiness problems--namely, that the department places greater emphasis on meeting its peacetime mission than its wartime one.

Reversing priorities and placing greater emphasis on wartime would create many problems for the department. Beneficiaries other than active-duty personnel would be forced to rely more on civilian care, raising their costs and perhaps those of DoD. Access to care in military facilities might become more difficult. Productivity among military physicians might decline if their administrative responsibilities and patient loads increased as the result of assigning more medical personnel to wartime training. Nonetheless, dealing with those problems is a challenge that must be met if greater importance is to be attached to wartime medical readiness.

Expanding Tricare, as the department proposes, would only exacerbate those problems. Under Tricare, DoD plans to shift much of the health care for active-duty dependents from CHAMPUS to military facilities, probably shifting care for retirees away from military facilities and into CHAMPUS. Those plans may make it even harder for DoD to meet wartime medical requirements than it is today as the range of conditions seen by military physicians may tend to be narrowed.

OPPORTUNITIES FOR WARTIME TRAINING IN THE PEACETIME SYSTEM

Although today's military medical establishment is larger than needed to meet requirements for wartime, DoD supports maintaining the system at its current size with minor modifications. It argues that its medical centers--and to a lesser extent its hospitals and clinics--provide an excellent training ground for wartime. Preliminary findings by the Congressional Budget Office (CBO), however, indicate that the care furnished in military medical centers and hospitals in peacetime bears little relation to the war-related diseases and injuries that military medical personnel need to be trained to deal with in wartime.

The range of war-related injuries and illnesses that are likely to occur in a theater of operations can be divided into two categories of patient conditions:

- *Disease and nonbattle injuries* (DNBI), such as diarrhea, malaria, severe febrile illnesses and infections, or nonpsychotic mental disorders; and,

- *Combat-induced wounds or wounded-in-action* (WIA), such as open wounds and injuries from blunt and penetrating trauma, burns, or shock.

The mix of DNBI and WIA diagnoses that would need to be treated in an actual deployment can be expected to vary with the scale, duration, and location of

the deployment, as well as with the nature of the specific scenario. By way of illustration, DoD's planning scenario for two nearly simultaneous regional conflicts includes projections of wartime workload for ground forces of which about two-thirds consists of DNBI and the rest of WIA diagnoses.

CBO analyzed the match between the diagnoses used to describe DNBI and WIA conditions and the primary diagnoses among patients treated in military medical centers and hospitals. We used a method of comparison developed by the Naval Health Research Center and applied it to over 1 million records for patients in military medical facilities in 1993. The list of DNBI and WIA diagnoses, which the Defense Medical Standardization Board maintains, currently includes about 320 separate illnesses and injuries that are considered representative of disorders expected in operational theaters. That list is used to project medical requirements for both deployable medical systems and nontheater hospitalizations.

Disease and Nonbattle Injuries

Considerable overlap exists between the types of cases that military medical personnel treat during peacetime and the disease and nonbattle injuries that they could expect to treat during wartime.

- About 75 percent of peacetime primary diagnoses at military medical facilities match primary diagnoses on the DNBI list.

- The most common wartime diagnoses of DNBI conditions, however, do not appear frequently in the peacetime workload of military medical centers. About 10 percent of the 50 most common primary peacetime diagnoses match the 10 most frequent disease and nonbattle injury categories reported by U.S. Marines in Vietnam (the best data set available to the Naval Health Research Center).

On balance, those findings can be summarized as showing that peacetime care provides some training for wartime, but most of the care provided during peacetime is not relevant to even noncasualty wartime patient loads.

Wounded-in-Action

The value of peacetime practice is even more limited when applied to wounded-in-action conditions.

- Only about 5 percent of the primary diagnoses that military medical personnel treat during peacetime match a casualty-related diagnosis.

- None of the 50 most frequent peacetime diagnoses at military medical centers match a wounded-in-action condition.

In summary, based on a comparison of battle injury conditions with the diagnoses treated at military medical hospitals and medical centers, peacetime care gives military medical personnel almost no chance to practice their war-related skills and perform war surgery.

Those findings should not be surprising. After all, the diagnoses treated at military hospitals during peacetime reflect the health status and treatment of a wider mix of patients--young and old, male and female--living in far different circumstances than would be the case in wartime. Among the most frequent primary diagnoses at the medical centers, for example, were single infants born in hospital, without or by cesarean delivery; coronary atherosclerosis; chest pain; chemotherapy treatment; inguinal hernia; and cataracts.

Within the bounds set by patient conditions, military medical facilities do in fact provide effective training. For example, the medical centers serve as excellent training grounds for residents in graduate medical education (GME) programs, including some training relevant to wartime readiness. But to the extent that it crowds out other training, the treatment they provide during peacetime makes it

difficult for many medical residents to gain adequate training for war-related conditions.

STRONG AREAS OF TRAINING

Notwithstanding the results of CBO's analysis, within the military system there are programs in which military medical personnel receive more intensive exposure to battle-related diagnoses.

Integration with the Trauma System

Two facilities--Brooke Army Medical Center and the Air Force's Wilford Hall Medical Center--are a part of the emergency trauma system in the city of San Antonio, Texas. As a result of that unique, if informal, relationship between the military and civilian communities, the Brooke and Wilford Hall emergency rooms routinely receive a substantial number of civilian patients with blunt and penetrating injuries. Treating those injuries contributes strongly to wartime preparedness. Military medical personnel also learn other skills that are transferable to a wartime scenario, such as becoming familiar with treatment in emergency conditions; working in a chaotic environment; setting priorities, organizing, and treating a large volume of

patients efficiently; and evaluating critically injured patients quickly and providing rapid intervention.

Training Residents for Wartime

During their residency, many military physicians receive a form of training that is similar to the training at Brooke and Wilford Hall. Residents in the military's GME programs, for example, receive trauma training in both the military's medical facilities and civilian facilities. Many civilian facilities serve as clinical training sites for physicians from all three services in their residency programs. The Air Force has at least six such affiliations with civilian facilities, the Navy has seven, and the Army has 13. Of those 26 civilian hospitals, many meet the criteria of the American College of Surgeons for a Level 1 trauma center (for example, they are capable of providing comprehensive emergency care 24 hours a day) and thereby provide training in an intense environment. On balance, however, all of those programs train military physicians only during their residency. Once physicians complete residency, their exposure to war-related diagnoses is usually restricted to the caseload that they encounter in military hospitals. There are, of course, exceptions to that statement. At Wilford Hall, for example, staff surgeons may take a refresher course in trauma and critical care called TRACCS (Trauma Refresher and Critical Care).

Military medical departments also rely on course work to teach both their staff physicians and their residents to care for injured patients. Advanced Trauma Life Support (ATLS) is one such course used to teach military medical providers how to care for casualties during the "golden hour," or early phase of treatment. Although ATLS emphasizes emergency life-saving skills for treating injured patients, one of the major criticisms of the course is that it emphasizes skills for dealing with civilian trauma over those needed to deal with combat or military trauma. Several suggestions for improving the course center on the need to make ATLS more specific to military medical providers by training them in the skills needed to perform war surgery and by using simulated casualty populations based on actual combat casualties instead of civilian trauma victims. But because ATLS is a course that is controlled by the American College of Surgeons, DoD would have little control over changing its design.

AN ALTERNATIVE APPROACH TO TRAINING FOR WARTIME

Under DoD's plans for its military medical system, the opportunity for most military medical providers to prepare for the wartime mission will continue to be limited. Peacetime patient loads in the future will be similar to those of the past, and thus they will bear little resemblance to battle casualties and not much more to other war-related diagnoses based on actual combat experience in Vietnam. More relevant

experience might come from treating military personnel in connection with peacetime operations--for example, recent deployments of personnel to Panama, Somalia, and Haiti. Nevertheless, because those operations fortunately have resulted in few casualties, they have offered limited training for military medical providers in the area of combat casualty care. Even so, such operations might provide medical personnel with more training in treating DNBI conditions than they would derive from normal peacetime caseloads.

Shock Trauma Centers

A different approach to wartime training would be to build on the experience at Brooke and Wilford Hall. As part of the San Antonio civilian trauma system, those hospitals provide their personnel with ongoing trauma training and an opportunity to practice wartime surgical skills that would not necessarily be available from a population of peacetime military beneficiaries. The military medical departments could decide more generally to establish affiliations with civilian trauma centers throughout the country. Current residency programs in which military physicians work in civilian hospitals could provide the basis for more extensive links between the military and civilian systems.

To determine the match between injuries treated at a typical shock trauma center and those sustained in battle, CBO analyzed cases treated at the R Adams Cowley Shock Trauma Center in Baltimore, Maryland, during fiscal year 1993. (Incidentally, we would like to acknowledge at this time the extensive support from the staff of the center that we received in conducting the analysis.) The Baltimore center is a Level 1 facility capable of providing emergency care around the clock; thus, it receives a large volume of trauma patients. It also enjoys a statewide reputation and receives patients from outside its immediate urban area.

In 98 percent of the cases treated at the Baltimore center, the primary diagnoses matched those found on the Defense Medical Standardization Board's list of battle injury or casualty-related diagnoses. That finding suggests that of the roughly 20,000 injuries treated at the Baltimore center, more than 19,500 would provide a military medical provider with training in a war-related condition. To treat an equivalent number of diagnoses typical of battle injuries within the peacetime military direct care system, physicians would have to treat nearly 400,000 patients. Not only the nature of the medical training, but also the intensity of exposure to conditions typical of wartime, are obviously much greater in the Baltimore center than in virtually any military facility.

The R Adams Cowley Center, like other shock trauma centers, uses many techniques learned from military experiences in wartime, and its conditions of practice

replicate many of the aspects of wartime medical practice: an unpredictable patient load, a high incidence of life-threatening conditions in which timely treatment is literally vital, and--as noted--diagnoses similar to those experienced in wartime. Those similarities have not gone unnoticed; the Baltimore center currently serves as a clinical training site for military personnel in residency training programs.

Military Training at Shock Trauma Centers

CBO's analysis suggests that Level 1 shock trauma facilities are likely to provide the best wartime training in trauma care and casualty-related diagnoses for many military medical personnel. The Army is currently considering one way to establish affiliations with such facilities. The Army's proposal envisions a voluntary program in which a range of medical personnel--rapid deployment physicians, general or specialized surgeons from all services (including reserves), senior medics, and nurses--would train in trauma centers, together with trauma center staff, to maintain their clinical competence in trauma surgery. Assignment to a trauma center could be for as little as one month every few years, several weeks per year, or several shifts per month.

Throughout the United States, there are about 140 facilities with a major Level 1 shock trauma center in over 60 of the largest cities. Each year, those facilities could provide training in combat readiness for more than 1,500 medical personnel,

assuming that about 12 military medical personnel are rotated annually at each facility. Over a three-year period, more than 4,500 medical providers--and perhaps even all of the surgeons the services will need for wartime medical readiness--might have the opportunity for wartime training. Equally important, refresher training could be carried out on a rotating basis. The details of any such plan, such as the length of individual rotations, would obviously depend on both the needs of the services to train their personnel and the needs of the civilian shock trauma centers.

Effects on Peacetime Medical Care

The approach outlined here would have undeniable consequences for the military's ability to provide medical care in peacetime. Assigning a significant number of medical personnel to shock trauma centers would limit the amount of care that military hospitals could provide and thus would force beneficiaries into increasing reliance on CHAMPUS or other sources of care. The Army has proposed adjusting the schedules of medical personnel and using reservists to maintain the amount of care military facilities provide. However, even if such proposals were carried out, they could mean some disruption in the doctor/patient relationship.

Beyond those effects on the delivery of health care, such an approach would impose budgetary costs. Additional rotations of personnel through shock trauma

centers would entail travel, per diem, and housing expenses, some or all of which might be defrayed by the hospitals benefiting from the services of military medical personnel. If the productivity lost in military facilities was not restored, CHAMPUS costs would rise as beneficiaries sought care in the civilian sector. Those increases in cost would occur at a time of tightening defense budgets.

WARTIME MISSIONS ONLY

More generally, the difficulties posed for DoD by any training program that takes personnel out of its medical facilities raises the basic challenge of how to balance the wartime and peacetime missions. In the past, the department has not been able to do that well. Even its own Medical Readiness Strategic Plan underscores DoD's tendency to meet the peacetime mission at the expense of wartime preparedness.

Underlying the approach just outlined--that is, to integrate military medical training with civilian shock trauma centers for many medical personnel--is the assumption that wartime medical readiness should be the primary objective of DoD's medical planning. To avoid compromising the wartime mission, DoD needs the flexibility and resources to train medical personnel for wartime needs, even at the possible expense of providing peacetime care. Training in shock trauma programs or field medical training programs would improve wartime medical readiness. Achieving

those goals, however, might require redefining DoD's peacetime mission and providing health care for many military beneficiaries in other ways.

The Size of the Direct Care System

One element of DoD's wartime mission is to maintain the peacetime health of the active-duty population. That responsibility is widely recognized, for example, as part of the structure of DoD's Tricare proposal. However, peacetime care--even for active-duty personnel--might be provided more efficiently in civilian facilities than in military ones. If so, that alternative could well affect the size of the military's direct care system.

If the only requirement of the military medical system was its wartime mission, DoD could decide to downsize the system to only 11 hospitals with about 5,500 wartime beds in the United States, based on the department's recent 733 study and supporting analysis by RAND. Moreover, if it put into effect such an aggressive downsizing plan, DoD could then decide whether to convert to clinics the military medical centers and hospitals slated for closure. One factor in the decision would be the amount of care needed by active-duty personnel in each geographic area; if the active-duty presence was large enough, the department might find it less costly to keep a facility open than to obtain care through arrangements with civilian providers.

Given the current geographical distribution of active-duty personnel, care for almost one-third of them could be provided at the 11 military hospitals remaining open to meet wartime medical requirements. The majority of the active-duty population would then receive its inpatient care in civilian hospitals. Based on today's per capita costs, the cost of care for active-duty personnel would probably be less than $3.0 billion. Other military beneficiaries--active-duty dependents and retirees and their families--would receive all of their care from civilian providers, perhaps under an approach such as the Federal Employees Health Benefits alternative discussed in CBO's recent testimony before this Subcommittee.

Improving Affiliations with the Civilian Sector

DoD has always relied on the civilian medical sector, both to meet part of the wartime requirement and to provide a substantial portion of the peacetime care that military beneficiaries other than active-duty personnel demand. Placing primary emphasis on meeting the wartime mission, however, would require strengthening affiliations with civilian hospitals--to provide better wartime training, employ military medical personnel who are not training in shock trauma units, and meet some of the requirements for caring for active-duty personnel. Such working relationships could allay any concerns about providing care for uniformed personnel outside the military's direct care system. In addition, military medical personnel assigned to civilian

hospitals could be exposed to a wider range of patient conditions that would improve their training in DNBI diagnoses.

The British Defense Medical Services, which is about to establish military units within civilian hospitals, offers one model for strengthening ties between military and civilian hospitals. Based on this concept, DoD could establish similar arrangements with civilian hospitals where military medical personnel would work and train together as a team. In those military managed units, military personnel could continue to provide care to active-duty personnel but could gain and maintain experience in handling complex cases by serving civilians too.

In that model, the units managed by the military would be staffed by military medical personnel who were not otherwise employed at the military's own medical facilities or on a training rotation or exercise. In keeping with the concept developed in the United Kingdom, those units could also be staffed and managed on a tri-service basis, thereby providing realistic joint training and introducing flexibility that DoD might need in adjusting to a smaller military medical system.

A collateral benefit of that approach might be found in easing the dislocation caused by wartime deployments. At present, reserve units are called up to provide care in military facilities ("back-fill") when active medical units are deployed. That situation is at times disruptive for beneficiaries as well as reservists: patients may

have to develop relationships with new doctors and reservists are forced to relocate. Many of those problems could be avoided by locating military-managed units in hospitals where reserve personnel also work.

CONCLUSION

In both today's hearing and the preceding one, CBO has focused on problems with the current military medical care system and alternatives to it that offer the prospect of resolving those problems. Today, and in the past, DoD's approach to the conflict between the demands of wartime medical readiness and the peacetime provision of care has been to decide in favor of the peacetime mission. As GAO has documented--and DoD has agreed--that approach has resulted in problems with wartime readiness. DoD's plans do not seem likely to resolve the inherent tension between what are, at times, two competing missions.

Alternatives are available to the department to improve wartime readiness. One promising approach would rotate military medical personnel through civilian shock trauma centers, in which the conditions of patients resemble those that military physicians would encounter in wartime much more closely than do the diagnoses found in treating military beneficiaries. A parallel approach would strengthen affiliations with civilian hospitals by both employing military medical personnel and

providing care for part of the active-duty population. Adopting those approaches would require the department to decide unambiguously that wartime medical readiness was the first and overriding imperative of the military medical system.

Having made that decision, DoD could proceed to size and structure its medical establishment to meet wartime needs. As we testified before this Subcommittee, doing so could lead to annual savings that would be more than sufficient to pay for the added costs of wartime readiness training, as well as to cover care from civilian providers for military beneficiaries who could no longer rely on the military's direct care system.