

Chapter 8

EXPEDITIONARY OPERATIONAL STRESS CONTROL IN THE US NAVY

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INTRODUCTION

The diversity of US Naval operations, which span air, land, and sea/subsea dimensions, places extraordinary demands on sailors and their families. Although the US Navy has traditionally been a deployed force, the global war on terror (GWOT) has added to the Navy's list of deployment-related stressors. Stress, as it is referred to in this chapter, is considered as a transactional model^{1,2} described as a general strain imposed by the operational milieu that disrupts the physical and psychological equilibrium of sailors, the outcome of which is mediated by a complex interplay between variables specific to the individual, the situation, and the dynamic interaction between the two.

The impact of operational stress upon sailors is manifested in the prevalence of mental health problems among sailors who routinely deploy upon operational platforms. For instance, a study of 782 active duty sailors and marines found the 1-year prevalence of any psychiatric illness to be 21% and

the lifetime prevalence to be 40%, based on structured computerized telephone interviews designed to make DSM-III-R (*Diagnostic and Statistical Manual of Mental Disorders*, 3rd edition, revised) psychiatric diagnoses.³ For those deploying to Operation Enduring Freedom and Operation Iraqi Freedom (OEF/OIF), the risk for having symptoms of either of two illnesses, posttraumatic stress disorder (PTSD) or major depressive disorder, is nearly the same: 20% of these service members reported symptoms of at least one of the two disorders, according to a report from the RAND Corporation's Center for Military Health Policy Research.⁴ The dual imperatives of mission effectiveness and moral responsibility for sailor health provide the impetus for the Navy Medicine Support Command to develop and implement programs based on a comprehensive operational stress control doctrine.⁵ Discussion of these efforts is the focus of this chapter.

STRESS INJURY CONTINUUM MODEL

Because stress injuries occur across a continuum of severity and settings, Navy stress control doctrine must encompass all sailors regardless of their duty, platform, or assignment (afloat and ashore), not just sailors in specific combat environs. Consequently, Navy leadership (in collaboration with the US Marine Corps) has developed an overarching operational stress control program applicable to the full panoply of Navy missions (see also Chapter 7, US Marine Corps and Navy Combat and Operational Stress Continuum Model: a Tool for Leaders). However, much of the seminal theory and applications for stress control in the military are, as one would expect, derived from stress control practices in the combat environment. In that vein, the doctrine being developed to forge broader Navy stress control initiatives into a more theoretically consistent and unified whole is adapted from the combat stress injury model explicated by Figley and Nash.¹ The starting point for this new paradigm in Navy stress control is the stress injury continuum (SIC) model (see Chapter 7, Figure 7-1 for a description of the model). This chapter will apply the SIC model as the rubric for interpreting extant and future Navy stress control programs.

Adopted because of its ability to educate, acculturate, and engage all sailors in stress control, the SIC paradigm highlights how the onus for stress control is shared among line-duty leadership (eg, squadron commanders, division officers, department heads), the individual sailor, and caregivers (eg, Navy Medicine personnel, the Chaplain Corps). The SIC model

charges unit leadership with ensuring that sailors are ready for deployment by fostering an atmosphere within commands that promotes mental health and resilience through realistic training, unit cohesion, and mission focus. Sailors who deploy should be competent, socially supported, and mentally prepared to encounter and adaptively cope with operational stressors.⁶ The SIC model contains five functions for leaders that encourage them to (1) strengthen the mental resiliency of sailors through realistic and purposeful training; (2) mitigate physiological stressors by maximizing sailors' access to proper sleep, exercise, and nutrition; (3) develop processes for the early identification of stress reactions and injuries; (4) encourage sailors to care for one another (eg, with "battle buddies"); and (5) remove barriers to care by supporting the transition of stress-injured sailors to higher levels of care and fostering stigma-free reintegration of stress-wounded sailors.

At the first stage of the SIC, sailors are prepared to confront stress. At the second stage, sailors are reacting to the unique operational stressors that challenge their physical and psychological equilibrium. The outcome of this reaction becomes a function of person, situation, and person-situation interactions that influence whether the reaction is mild, transient distress or impairment with associated anxiety, irritability, and unwanted behavioral change. However, each operational milieu has some degree of stress reaction that is normative, which makes distinguishing between normative and abnormal stress reactions a

critical consideration for leadership, caregivers, and individual sailors alike. Yet, at the reacting point in the continuum, individual sailors must assume primary responsibility for identifying whether they and their fellow shipmates are effectively coping with the strain of their deployment. Although stress reactions are considered normal reactions to high-stress environments, the severity, persistence, and impairment experienced by some sailors may transcend the reactions experienced by the majority of sailors when perceived through the eyes of leaders, shipmates, caregivers, or reacting sailors themselves.

Rather than establishing clear dividing points, the conceptualization of stress injury as a continuum acknowledges the complex interplay between sailors and situations that must be considered when attempting to ascertain whether an individual's stress reaction has surpassed the normative response and moved from stress reaction to the third stage in the SIC—stress injury. Use of the term “injury” here is important because it conveys to leaders the presence of a more serious threat to both the sailors' individual well-being and operational effectiveness. Sources of stress injury can include trauma from experiencing horror, terror, and helplessness during deployment; fatigue derived from accumulated deployment stressors; grief associated with the loss of a valued person or thing; and moral conflict in belief and value systems.¹

Although stress-injured sailors are still expected to

identify these injuries in themselves and others, Navy Medicine and caregivers begin to play a more prominent role in the stress injury phase of the continuum. At this phase, sailors are not expected to cope with their injury alone, but are empowered to seek help from caregivers, who are the primary support for prevention of permanent, debilitating stress injuries. Once a stress illness (behaviors that fall primarily within diagnostic categories such as PTSD, depression, anxiety, and addiction) is identified in a sailor, treatment becomes the primary responsibility of Navy Medicine. Implementation of the SIC model includes the expectation that all leaders, sailors, and caregivers will be able recognize and respond appropriately to sailors in distress.

The stress injury decision matrix (see Chapter 10, Figure 10-3) is an example of an SIC-based tool designed to help leaders, sailors, and caregivers determine if a sailor is ready, reacting, injured, or ill because of an operational or life stressor. The nascent state of SIC makes it difficult to ascertain the outcomes of the model as a doctrine for combat stress control. However, the model's multidisciplinary and theoretical nature, as well as the incorporation of multiple stakeholders, is a promising feature for establishing doctrine. The multifaceted nature of the SIC model also makes it an ideal context for integrating the various operational stress control programs currently in place.

EXPEDITIONARY MEDICAL PLATFORMS

As alluded to in the SIC model, the Navy as an organization assumes two primary roles in combatting stress: (1) preventive consultation and (2) care provision. To keep sailors ready, preventive consultation with line leadership supports development of command policies and procedures that both prepare sailors to face the mental rigors of deployment, and identify, help, and reintegrate sailors who have experienced stress injuries and illness. The more traditional role involves direct healthcare service provision to those with stress injuries and the treatment of those diagnosed with stress illness. Because of the quantity of medical personnel, expeditionary medical platforms offer perhaps the widest range of Navy preventive and direct care services in deployed environments. Expeditionary platforms in the Navy consist of fleet hospital ships and expeditionary medical facilities (EMFs). These platforms are a mixture of specific capabilities that ensure mission flexibility within the logistical constraints of the deployed environment. Expeditionary combat and operational stress control platforms must be capable of performing missions that range from combat service support in GWOT

to humanitarian assistance and disaster response. Serving as major instruments of diplomacy, these expeditionary platforms have taken Navy Medicine into Afghanistan, Iraq, and Kuwait while simultaneously providing preventive medicine, combat medical support, health maintenance, medical intelligence, operational planning, and mental health services to military personnel.

Hospital Ships

The fleet of hospital ships consists of the USNS *Mercy* and USNS *Comfort*, which are home ported on the west and east coast of the United States, respectively. The hospital ships have inpatient capabilities comparable to major medical facilities ashore. They each have 12 fully equipped operating rooms, a 1,000-bed hospital facility, radiological services, a medical laboratory, a pharmacy, an optometry laboratory, a computed tomography scanner, and two oxygen-producing plants. Both have a flight deck capable of landing large military helicopters, as well as side ports to take on patients at sea.

Expeditionary Medical Facilities

EMF facilities are designed to approximate the same capabilities as fleet hospital ships, yet maintain a smaller logistic footprint with high mobility. EMFs are fully modular, task-organized structures that can be set up in as little as 48 hours. As EMFs continue to evolve, they will provide more robust medical care for major conflicts, low-intensity combat, operations other than war, and disaster/humanitarian relief operations. As modular expeditionary units, EMFs may be employed

independently or in combination with the theater's joint health system for evacuation, medical logistics, medical reporting, and other functions.

Taken together, hospital ships and EMFs are unique among forward-deployed operational stress control platforms with respect to the medical nature of their mission. Perhaps the greatest strength of these platforms is that they include high concentrations of caregivers, providing a versatile mixture of expertise and resources that can anchor both ends of the SIC model.

COMBAT AND OPERATIONAL STRESS CONTROL ELEMENTS

The three combat and operational stress control elements discussed in this section—(1) the Special Psychiatric Rapid Intervention Teams (SPRINT), (2) the carrier psychology program, and (3) the Operational Stress Control and Readiness (OSCAR) program—have arisen within the last 30 years as outgrowths of a larger trend within the US armed services to institutionalize the integration of medical health expertise within operational units. In relation to the SIC model, all three programs are oriented to intervene between the stress injury and illness phases of the continuum. However, the carrier psychology program, and the OSCAR program in particular, also play roles at the readiness end of the stress reaction continuum, through the use of operationally embedded caregivers to provide training and preventive consultation to leaders in supporting individual sailor readiness.

Special Psychiatric Rapid Intervention Teams

History

In 1975 a collision occurred between the USS *Belknap* and the USS *John F Kennedy*, resulting in a significant loss of life and extensive damage to both ships. Subsequently, in 1977, a Navy liberty launch collided with another ship in the Barcelona harbor. In both incidents, the vessels involved were home ported on the east coast, and the psychiatry department at Portsmouth Naval Hospital (now Naval Medical Center, Portsmouth) in Virginia received a significant number of patients presenting with stress symptoms related to the incidents. It became apparent to Navy Medicine that a plan for early intervention to avoid stress illness was needed. The same concepts developed to treat stress in combat were modified for use in early intervention with disasters at sea; the result was the birth of the Special Psychiatric Rapid Intervention Teams—"SPRINT."

Composition and Mission

In 1983 SPRINT teams were formally chartered as one of the Navy's Mobile Medical Augmentation Readiness teams. Navy SPRINT teams are formally organized at Bethesda, Maryland; Portsmouth, Virginia; and San Diego, California. Some informal teams are located at various overseas locations. Since their inception, SPRINT teams have not only provided intervention in maritime mishaps, but also supported military operations other than war, military contingency operations, terrorist attacks, and natural disasters. Each team consist of two psychiatrists, two clinical psychologists, one or two chaplains, two or more psychiatric nurses, one or two clinical social workers, and four or more hospital corpsmen psychiatric technicians. An officer is designated as the team leader, and a senior psychiatric technician serves as the leading petty officer. The SPRINT team's mission is to be trained and immediately available in the event of a contingency to (a) assess the psychological effects of traumatic stress, (b) offer direct support to individuals and units affected by the event, (c) identify and refer those needing psychiatric treatment, and (d) consult with commanders and leaders to mitigate the negative impact of the event. From the SIC perspective, SPRINT teams become involved at the reacting stage, the goal being to prevent sailors from moving further along toward the injured and ill end of the spectrum. Teams also provide support to families of active duty members.

Unit leaders are responsible for bringing SPRINT teams into the picture. The teams have limited equipment consistent with their goal of being a rapid-reaction force. Rapid fielding requires that the requesting command or agency provide logistical support (berthing, messing, communications, transportation, etc) to the team. Thus, SPRINT teams are deployable worldwide within 24 hours' notice. Examples of prior SPRINT deployments include Hurricanes Andrew, Ivan, and Katrina; the terrorist attack on the USS *Cole*;

the TWA [formerly Trans World Airlines] Flight 800 disaster; a civilian airline crash in Guam; and severe flooding and landslides in Central America. SPRINT teams also supported the guard force in the early days of the detainee mission at Guantanamo Bay, Cuba. In addition to high-profile events, SPRINT teams also regularly respond to smaller-scale events such as work-related accidents that result in the death of a crewmember, suicides, and aircraft mishaps.

Intervention Strategies

SPRINT does not adhere to any specific professional doctrine on intervention methodology. However, team members are expected to be competent in their respective disciplines and well versed on the latest information in crisis intervention techniques and treatment strategies for acute stress and PTSD. This allows the teams the flexibility to adapt their responses to the demands of a particular situation while ensuring that their methodology is based on best practices and, when possible, evidence-based science. During the 1980s and 1990s, the critical incident stress management (CISM) technique was developed to help emergency service workers, such as firefighters, paramedics, and police officers, address particularly stressful events. Attempts were made to adopt CISM for use in military interventions, but its use has since been officially discouraged because it has not been proven effective in controlled trials, and some evidence shows that it could potentially be harmful.⁷⁻⁹

Instead, the current focus is on providing command consultation, psychoeducational intervention, and psychological first aid. The team assists the command in developing a strategy to mitigate the impact of the event on the entire organization; provides timely, targeted, and useful information for command members; briefly contacts as many potentially affected individuals as possible; and supports individuals in acute distress. Every attempt is made to avoid early labeling or diagnoses, even for individuals demonstrating significant stress reactions. Rather, affected individuals are encouraged to mobilize their own and community resources to enhance recovery and restore functioning. SPRINT teams generally provide support rather than treatment. A benefit to adopting the support role is that the teams generally do not contribute documentation to medical records, thereby offering a higher level of confidentiality. It is thought that such confidentiality can reduce the potential stigma associated with seeking mental healthcare.

In addition to maintaining expertise in intervention theory and techniques, SPRINT team members must be proficient serving in diverse operational settings,

including surface ships, submarines, and aviation platforms; ground-centric Seabee and marine operating areas; and joint service operations. Team members must also be knowledgeable and comfortable in dealing with various Navy systems, organizations, and structural issues that affect how well a command withstands the impact of a stressful event. Most SPRINT responses are short-term (often only 1 day), but have lasted up to 6 months. In virtually all cases, SPRINT teams work closely with local resources, and turn over functions to the local resources as the situation permits.

Training for SPRINT teams involves a variety of approaches. New members always participate in SPRINT missions under instruction before leading missions. Psychiatric residents and psychology interns are encouraged to participate, under supervision of experienced team members. Psychiatric technician students also receive training in disaster and trauma response. Teams conduct regular refresher training in combat and operational stress first aid (COSFA),¹⁰ and many team members also receive familiarity training in CISM (although CISM's use is discouraged, commanders and others often ask about it, and knowledge of the technique can help to educate them). SPRINT teams remain active during wartime, because natural disasters, maritime accidents, and other noncombat stressful events continue during war, although staffing can be a challenge. The concepts, skills, and techniques developed through the Navy SPRINT teams' experiences in peacetime are invaluable for informing and educating the wider Navy mental health community as a whole and contributing to the overall improvement of stress intervention and treatment of the operating forces.

Carrier Psychology Program

History

Since the mid-1990s, psychologists and psychiatric technicians have served as permanent members of ship's company on all US Navy aircraft carriers. Before the initiation of the carrier psychology program, 25 to 30 sailors were medically evacuated (medevaced) from a carrier for mental health reasons during a 6-month deployment.¹¹ Since the inception of the program, the number of medevacs has averaged fewer than five per deployment. In 2001 the average fuel/transportation cost of a medevac from a deployed carrier was estimated to be \$4,400, suggesting that a typical deployed psychologist saves the Navy at least \$110,000 per deployment in prevented medevacs alone.¹¹ "Prevented medevacs" are defined as situations in which sailors are retained onboard, but due

to serious psychological difficulties, would likely not have been retained in the absence of a psychologist. Moreover, this figure ignores the immeasurable costs of losing personnel with valuable experience, and the lowered morale among remaining crew members who are forced to perform extra work to make up for unexpected personnel shortages. Nor does the figure include the cost of providing escorts for medevaced personnel. Additionally, nondeployed carriers report an average of 2.8 prevented medical evacuations per month, thus this cost savings extends throughout the carrier training cycle.

There are numerous examples of this cost savings. Aboard the USS *John F Kennedy* in 1999, 28 sailors were medevaced for psychological problems during a 6-month Mediterranean deployment. In 2001, on the ship's first deployment with a psychologist, there were no psychological medevacs.¹² Similar results were seen aboard the USS *Carl Vinson* in 1999¹¹ and the USS *Enterprise* in 2001.¹³ More recent data continue to support this trend. Through 2006 and 2007, the estimated number of prevented medevacs from deployed carriers averaged slightly more than four per month. (All statistics are derived from monthly reports made by each carrier psychologist; the data are maintained by the Navy clinical psychology community.)

Prevention of Chronic Psychological Problems

Embedded mental health providers are in the unique position of being able to identify problems at early stages in the SIC. By staying abreast of morale and remaining vigilant about the level of stress among unit personnel, carrier psychologists can intervene before problems become severe, either by reaching out to individuals or groups at particularly high risk for mental health problems, or by advising the command on policies to enhance a unit's overall psychological readiness. For many psychological disorders, most notably PTSD, early identification and treatment is essential to avoiding long-term difficulties.

One of the best ways to prevent pathology before it occurs is through education. In this role, carrier psychologists also buttress the work of unit leaders, who ultimately bear the responsibility of readiness within the SIC model. Carrier psychologists and shipboard psychiatric technicians conduct an average of 4.5 prevention-oriented classes per month. Such classes are designed to help service members identify growing psychological problems at an early stage (yellow and orange zone) before they become debilitating. Embedded psychologists can also prevent serious problems from developing through frequent interaction with unit leadership. Carrier psychologists conduct over 40 consultations per month with representatives of their

patients' chains of command. These consultations are intended to educate the command, but also to discuss strategies for preventing a worsening of symptoms.

Sailors who are reacting, injured, or ill constitute a considerable responsibility for carrier psychologists and their staff. Carrier psychologists report an average of 105 patient contacts per month, so they are well utilized in the caregiving role. No doubt contributing to the high utilization of carrier psychologist is the fact that they live and work among their patients, frequently encountering them throughout the workday, observing them performing their jobs and interacting with peers. As shipmates, they are able to obtain an in-depth understanding of their patients' daily lives. Given this regular presence, unit members are more likely to utilize mental health services than they would if obtaining such care required a trip to a mental health clinic at a medical facility.

Stigma Reduction

Of all factors obstructing the provision of effective mental healthcare to military personnel, the most powerful may be the lingering perception within many military units that seeking psychological treatment is a sign of personal weakness, or that such care will harm one's military career. One of the major findings of the 2007 Department of Defense (DoD) task force on mental health¹⁴ was that significant stigma remains associated with seeking mental healthcare in the military. A key recommendation, deemed "crucial to the psychological health of service members," was that "the military services should embed mental health professionals as organic assets in line units."^{15(p4)}

Three obvious benefits of the SIC model in the carrier psychology program are apparent. First, the familiarity between sailors and the ship's psychologist reduces the stigma associated with seeking help, making it more likely for a sailor to ask for help before a stress injury becomes a stress illness. Second, the proximity of mental health services reduces the temporal distance between recognition of stress injury symptoms and access to care, lessening the need for medical evacuations of sailors who have developed debilitating stress illnesses. Third, psychologists detailed to a carrier are able to support the line leadership in developing a mentally ready force.

Operational Stress Control and Readiness (OSCAR)

History

OSCAR teams and carrier psychologists share many of the same preventive medicine and direct caregiving roles in addressing mental health issues

across the spectrum of the SIC. The OSCAR concept was begun in 1999 and piloted as the 2nd Marine Division's operational stress control and restoration program in 2000. Early OSCAR teams included mental health professionals, corpsmen, chaplains, and Marine Corps staff noncommissioned officers in a fully integrated multidisciplinary team. In 2004 the Marine Corps collaborated with the Navy Bureau of Medicine to authorize a 2-year pilot of OSCAR across all three active Marine divisions. Staffing of the OSCAR teams was tenuous due to competing wartime demands for scarce mental health resources, but the pilot team performed well, proving to be a valuable asset to Marine Corps leadership. In 2006 the Center for Naval Analyses¹⁶ evaluated the efficacy of the OSCAR pilot and summarized the model as follows:

Applying a *community mental health* model to the expeditionary and forward placed nature of Marine life, and taking account of Marine culture, OSCAR is an *organic* program embedded in the units it serves, *expeditionary* (accompanying the unit throughout the deployment cycle), *multidisciplinary* (incorporating a team approach), *preventative* (stressing the full range of primary, secondary, and tertiary prevention measures), and *therapeutic* (providing appropriate mental health services).^{16(p1)}

The center deemed the OSCAR pilot and model successful in reaching target audiences and capable of producing expected outputs. OSCAR was recommended for continuation and expansion beyond the active Marine divisions to the air wings, logistics groups, and possibly the drilling reserves.

In 2006 and 2007, the Marine Corps sponsored several working groups to further develop OSCAR capabilities and requirements, with representation from stakeholders including Marine Corps health services, religious programs, training and education, and the operating forces. Optimal OSCAR capabilities were developed. In acknowledgment of the core Marine Corps concept that combat and operational stress control is primarily a leadership responsibility, and should be focused on force preservation and readiness through prevention and early identification more than treatment, the OSCAR program was moved from health services to the Combat Operational Stress Control Program under the deputy commandant for manpower and reserve affairs.

Despite the 2007 DoD report¹⁵ recommending that operational psychological health professionals be embedded in line units, staffing of OSCAR teams by the Navy remained on an ad-hoc basis because of other pressing needs for mental health resources across the system. Sustaining OSCAR became increasingly difficult without a formal requirement from the Marine

Corps. In response, the commanding generals of the three Marine expeditionary forces (MEFs) wrote to the commandant of the Marine Corps, stating, "We need . . . OSCAR teams across the three MEFs. We must fully staff, fund, and equip the OSCAR program as soon as possible to support current combat operations."¹⁷ A formal request for OSCAR staffing was sent by the Marine Corps to the Navy in early 2008. Within a few months, the Navy approved funding to permanently staff OSCAR in the Marine divisions and regiments, both active and reserve, starting in 2010.

Capabilities

OSCAR teams provide the following capabilities for operational commanders:

- psychological health surveillance of unit members and units as a whole;
- preventive psychological health training and education when and where needed;
- early interventions to promote recovery in individuals and units from traumatic stressors or losses;
- clinical mental healthcare services in forward operational environments where such services would otherwise be unavailable;
- professional coordination of comprehensive mental healthcare services in garrison before and after deployments to ensure readiness;
- support of spiritual fitness of operational forces throughout the deployment cycle through partnerships between religious ministry and mental health personnel; and
- psychological health support for unit medical and religious ministry personnel who are at high risk for stress-related problems.

OSCAR capabilities are critically dependent on teams being organic, that is, embedded within operational units, much like the traditional model of Navy hospital corpsmen. By placing OSCAR teams within units, team members can fully learn and appreciate the specific missions and cultures of the units they support throughout the deployment cycle: before, during, and after deployment.

The ultimate objectives of OSCAR capabilities in operational units are (a) enhanced readiness, (b) reduced stress-related decrements to mission effectiveness, and (c) enhanced long-term health and well-being of marines, sailors, and their families. OSCAR teams provide psychological health training to marines and Marine leaders, and reduce the stigma associated with receiving mental healthcare. They can assist leaders and marines with informal "hallway consultations"

on symptoms and complaints to encourage early mitigation of stress and to promote the earliest interventions when necessary. Team members also serve unit leaders as advisors on how to prevent stress, monitor the psychological health of their units, and take necessary actions to promote healing. Compared to mental health services provided at medical treatment facilities, OSCAR is much more focused on prevention and population-based mental health than on individual clinical care, relying on familiarity between marines and mental health professionals established prior to deployment and maintained through and after deployment. The goal is to increase psychological health awareness and break down barriers to seeking mental healthcare.

Team Design

Marine Corps OSCAR teams provide two licensed mental health professionals and two psychiatric technicians per regiment, or approximately one licensed professional and one psychiatric technician per 2,500 marines. According to the 2007 DoD task force on mental health report to Congress:

Determining the proper ratio of embedded providers to service members would require additional research; however, evidence from site visits suggested that the Army's ratio of one psychologist or social worker and one psychiatric technician per 5,000 service members is probably not sufficient.^{14(p17)}

A team is also attached to each division to provide services to independent battalions and oversight to the regimental OSCAR teams. OSCAR teams are part of each commander's special staff, reporting to the command surgeon. Several different clinical specialties are utilized on OSCAR teams, with a typical team configuration as follows:

- one prescribing, licensed, independent mental health practitioner (psychiatrist, prescribing psychologist, or psychiatric nurse practitioner);
- one nonprescribing, licensed, independent mental health practitioner (psychologist or licensed clinical social worker); and
- two psychiatric corpsmen.

Although still not an ideal ratio of providers to marines to meet the intent of close proximity, familiarity, and trust, this configuration affords OSCAR team members a much larger presence than previously possible. The use of other unit medical professionals, such as physicians and more numerically abundant corpsmen, as OSCAR extenders through training and consultation with team members may be another avenue to improve OSCAR efficacy. The goal is to eventually place teams in all operating units, not only infantry regiments but also air wings and logistics groups.

Although OSCAR may be the newest combat and operational stress control program, it has clearly established itself as an integral component in the Navy's mental health support to the Marine Corps. The SIC model itself is an outgrowth of experiences derived from OSCAR operations. The conceptual link between OSCAR and the SIC model is clear: a shared responsibility between unit leadership and medical/chaplain's corps. This interaction fosters hardiness and resilience within the individual marine, who ultimately must bear the burden of combat and operational stress exposure. Consistent with the core values of the Marine Corps, personal responsibility is a critical component for maintaining mental health readiness, whereas leadership assumes responsibility for cultivating mental health resilience, and medical personnel and chaplains help restore mental health if stress injury or illness overcomes the individual.

EMERGING CHALLENGES FOR OPERATIONAL NAVY MEDICINE

The US military forces have been strained by the GWOT.⁴ Despite being a service dedicated to control of the seas, the Navy has stepped forward to share the burden of this prolonged conflict and continues to play a substantial role in ground operations for OIF and OEF. However, the allocation of Navy personnel to ground combat operations remains a nontraditional deployment, resulting in special challenges to combat and operational stress control programs based on the SIC model. Two of the more vexing challenges are detailed below. The first challenge is to provide care for Navy personnel individually assigned to augment positions within combat-deployed Army units, a duty referred to as "individual augmentation" (IA). The second deals with the development of a program to care

for a force of medical professionals who, as the OSCAR section explicates, are in high demand, and as a result have sustained a high operational tempo and been exposed to elevated levels of combat.

Individual Augmentation

Although the percentage of sailors assigned to IA duty constitutes approximately 3% of active and reserve duty assignments in the US Navy, the cumulative effect of these deployments has created over 46,000 combat veteran sailors through 2006, with over 7,000 sailors being added to this total annually.¹⁸ The relative obscurity of this duty warrants a description

of the IA deployment cycle and the Navy combat and operational stress control programs currently in place to address the unique and diverse mental health needs of “sandbox sailors.”

Training and Deployment Cycle

As implied by their name, IA sailors prepare, deploy, and redeploy alone, and for the most part, outside Navy chains of command. Thus, standard Navy medical programs designed to monitor and treat mental health problems are not routinely accessible to IAs during many of the most critical points in their deployments. Before IAs deploy, Navy Medicine personnel conduct a mandatory predeployment health assessment (PDHA). The form used to conduct the PDHA is DD2795. The mental health aspect of the screening consists of the question, “During the past year, have you sought counseling or care for your mental health?” If this question is answered in the affirmative, the physician or healthcare specialist conducting the PDHA may refer the sailor to a mental health provider. Depending on the outcome of the mental health referral, the individual conducting the PDHA can classify the member as either deployable or nondeployable. Once deemed deployable, the IA detaches (either in a temporary duty status or as a permanent change of station, depending on the specific assignment) from the parent command and travels alone to a Navy mobilization processing site for final health, administrative, and legal processing. After spending a week at the processing site, sailors essentially leave Navy culture as they travel to their next destination, which for most is Navy IA combat skills training.

There, a cadre of Army drill instructors teach IAs elementary combat skills such as basic marksmanship, field medical procedures, rules of engagement, convoy operations, and codes of conduct to prepare the IA for integration into an Army-centric combat environment. In addition, most combat gear is provided at this training. Most Navy IAs receive the same training regardless of the duties they will perform when attached to their respective Army unit in theater. Although this broad-based training is beneficial because of the possibility of being remissioned (sometimes more than once) during an IA assignment, some of the missions now taken on by the Navy require competencies that can only be achieved by years of experience.

One such example is detainee operations; although sailors with specific master-of-arms (equivalent to the Army’s military police) training are prepared for this duty, the majority of sailors conducting these missions are trained for unrelated positions, such as culinary specialists, machine mates, or yeomen. Within the typical 60-day IA training period, instruction relevant

to guard force operations takes 17 days (with a capability for 4 additional days). A lack of confidence in performing a job can increase overall anxiety, and experience and training improve the ability to modulate combat stress (hence the dictum, “fight like you train, train like you fight”). An Army study¹⁹ found that at the start of OIF, 70% of soldiers deploying to Iraq were not psychologically prepared to experience combat trauma.

To address this shortcoming, Navy Medicine has introduced a combat stress component to IA training, the goal of which is to cultivate cognitive coping strategies consistent with Kobasa’s stress hardiness cognitive style,²⁰ characterized by (a) recasting challenges as opportunities for growth, (b) a commitment to self-improvement, and (c) the development of internal locus of control (ie, the ability to control events that affect one’s life). Evaluating the influence of this component is essential to refining and maintaining IA combat stress coping training, especially because the empirical data evaluating the efficacy of predeployment stress control programs are inconclusive.²¹

The IA deployment phase starts with transportation to the theater of operations for additional field-based combat skills training for 3 to 4 days. Then the IA platoon is disbanded and individuals are transferred to their ultimate combat duty stations, where, except for rest and recreational leave (up to 14 days), the IAs remain for the duration of their 6-, 9-, or 12-month obligation. At their combat duty station, IAs are under the authority of the requesting service (primarily the Army, although the Marine Corps also utilizes IAs). If necessary, the IA seeks healthcare services, including mental health, from the parent command. However, Navy combat and operational stress control programs reenter the picture as soon as the IA returns to the continental United States. As the IAs transit from their OEF/OIF deployment, they pass through the Navy’s Warrior Transition Program (WTP).

The WTP addresses the “four Rs” of operational stress control: (1) *reassurance* that the IAs’ response to their deployment is nonpathological; (2) *rest* to compensate for the high operational tempo associated with 14-hour (or more) days, 6 to 7 days a week; (3) *replenishment* in terms of time to leisurely eat and shower; and (4) *restoration* of confidence.⁶ Relieving the sailors of their bulky combat gear and completing customs inspections in advance also contribute to rest and replenishment, while reassurance and restoration are initiated with combat stress briefs delivered by mental health and faith-based caregivers. More than a prudent use of logistics, the act of gear turn-in (off-loading of “battle rattle”) and the surrendering of issued weapons (after one last ritualistic cleaning) are as symbolic as they are practical. The sudden

absence of weapons may produce anxiety, which can be addressed by caregivers as part of the preparatory framework for returning home.

The impetus for this program can be found in the postdeployment experiences of combat veterans like those described in Jonathan Shay's seminal volume, *Achilles in Vietnam*.²² In his book, Shay explored the need for leadership to provide a sanctioned time for "mutual support and communal reworking of combat trauma,"^{22(p61)} which was part of "the long trip home" in World War II but tragically absent in Vietnam. Rather than screen for, or immediately address, combat stress reactions (eg, PTSD), a goal of WTP is to give IA sailors "permission" to grieve and acknowledge the toll of their deployment, while also celebrating successes and gains made during the deployment. These efforts are to help IAs begin integrating potentially fragmented and disassociated deployment experiences into a more coherent and integrated self-script or schema. By institutionalizing time for the IA to acknowledge the psychological effect (positive and negative) of deployment, it is hoped that WTP will reduce the perception of organizational stigma that service members consistently cite as a barrier to accessing mental healthcare.²³ Mental health services are readily accessible during the WTP process.

Analogous to the "third location decompression" process practiced by North Atlantic Treaty Organization countries, WTP takes place at temporal and geographical distance from the deployment site (the potential source of trauma), making it much different from critical incident stress debriefing approaches, which have been found to be ineffective or even detrimental to mental health.⁷⁻⁹ WTP is more consistent with end-of-tour unit debriefings shown to improve perceptions of organizational support.²⁴ Nevertheless, because IAs do not participate in WTP with their combat comrades-in-arms, but with other IAs from different deployment locations and experiences, it remains to be seen whether group debriefing works for the IA population. Following WTP, which lasts 3 days, IAs are flown directly home. Upon arrival at their destination airport, parent commands of some IAs may provide formal homecoming ceremonies that help foster reintegration. However, for many IAs, their mission often ends how it started—in isolation.

Isolation Issues

In Vietnam, soldiers trained with one group of people, deployed alone to serve a 1-year combat tour in units of ever-changing composition, and returned home alone to either finish their service commitment or integrate into a new unit.²² By the 1980s a renewed

appreciation for the protective nature of unit cohesion had arisen:

One of the most significant contributions of World War II and modern warfare was the recognition of the sustaining influence of the small combat unit on the individual member. . . . Interpersonal relationships develop among soldiers and between them and their leaders. . . . It is these relationships which, during times of stress, provide a spirit or force which sustains the members as individuals and the individuals as a working, effective unit.^{19(pl-1)}

Recent data indicate that unit cohesion can help reduce factors that place service members at risk for combat-stress-induced mental disorders such as PTSD. Brailey et al²⁵ evaluated the contribution of unit cohesion to the prediction of PTSD symptoms in a sample of 1,579 nondeployed US Army soldiers. Next to predeployment life trauma, the degree of unit cohesion was the best predictor of predeployment PTSD symptoms.²⁵ A diagnosis of PTSD or other psychological illness prior to deployment has been shown to put service members at increased risk for future development of PTSD.²⁶ In another study,²⁷ a comprehensive metaanalysis of 39 military samples prior to OEF/OIF indicated that unit cohesion was a significant predictor of well-being among a host of other outcomes such as individual performance, job/military satisfaction, retention, and readiness.

Despite the general consensus that mental health in combat-deployed units is bolstered by the social support structures that emerge within cohesive units that train, deploy, and return together, the IA deployment has exposed a new generation of service members to the isolation of Vietnam-style individual deployments. Adding to this problem is the IA's loss of service and professional identity. Data clearly support a link between job satisfaction and work-related stress.²⁸ A common frustration voiced by IAs is dissatisfaction with the substance of their mission—work that may not utilize their hard-earned Navy designation or operational specialty. Also sometimes lost when sailors go on IA duty is respect for their rank. Each service emphasizes ranks differently. For instance, once enlisted sailors pin on the coveted anchors of a chief petty officer at E7, they become "khaki" (the same uniform officers wear) and are afforded great respect and autonomy within the Navy. However, many IAs indicate that the social status given to E7s in the Navy is equivalent only to that given to an E9 sergeant major in the Army. Data indicate that loss of social rank status is detrimental to mental health and a source of both psychological and physiological stress.²⁹

Unfortunately, due to the nascent nature of IA deployment, little or no data are publicly available

to evaluate the relative contributions of absent unit cohesion, low job satisfaction, and loss of social rank status in the prediction of combat-related stress reactions. One of the few studies to compare the mental health status of Navy IAs to nondeploying sailors¹⁸ found that in both the enlisted and officer ranks, sailors deployed to an IA billet exhibited significantly more mental health problems, but only if that deployment was to a hostile combat zone. This finding suggests that deployments to the Army have the greatest impact within the combat zone, highlighting the interaction between combat exposure and type of deployment.

Administrative issues can also cause stress for Navy IAs. The handoff from Army to Navy at the end of a deployment is not always well coordinated, and because many Army units are unfamiliar with writing evaluations, fitness reports, or awards for Navy personnel, recognition for IA duty can be lacking (if evaluations and fitness reports are not in a Navy format, they are not accepted by the Navy Bureau of Personnel for inclusion in the service record). The Navy also reviews awards given by the Army, and has occasionally refused to accept or downgraded these awards, with a significant impact on the IA's morale.

An additional issue is family support. Although deployed Army units have robust family support programs, these programs are generally not designed to cross service lines and include the families of assigned Navy personnel. For IAs who are transient between permanent commands, the family may be left with little support. Thus, an area for further attention is ensuring that the families of deployed IAs receive appropriate support and information from the Army unit's family support system.

Adding to problems caused by the unique risks of combat and operational stressors for IA soldiers is the logistical distance between these sailors and the traditional Navy medical infrastructure. Navy Medicine personnel have limited opportunities to share the SIC model with the IA's Army leadership, and thus the model's emphasis on the interaction between unit leadership and caregivers to develop mental health resiliency is difficult to carry out. New initiatives based on IA duty continue to emerge, such as GWOT Support Assignment orders, wherein GWOT requirements are folded into normal permanent change-of-station orders. In response, Navy Medicine has initiated the development of combat and operational stress control programs tailored to meet the evolving needs of the IA mission, with programs at both the predeployment and postdeployment phases that introduce sailors to resilience-inducing cognitive coping skills and provide institutionally sanctioned time to grieve and begin the healing process. However, access to IAs in the combat

zone remains a challenge to Navy Medicine and its health surveillance programs.

Care for the Caregiver

Mission and Personnel

Navy caregivers include a broad range of professional and paraprofessional personnel charged with providing care and support to wounded, ill, and injured sailors and marines. Navy caregivers assume a number of roles, both traditional and nontraditional, including corpsmen, chaplains, substance abuse counselors, recovery coordinators, case managers, nurses, clinical support staff, and physicians. Some are civilians and some are contractors.

Operational and occupational stress faced by caregivers is cumulative and extends across the deployment cycle. The acute injuries and chronic illnesses of war are treated across a continuum of care, from the front to hospitals and outpatient centers in the United States. For instance, a corpsman who tended to wounds in Iraq in July may be dressing wounds in San Diego, California in January. Dwell time (ie, the amount of time between deployments) does not necessarily include a respite from exposure to the wounds of war for caregivers. As a result, caregivers have an especially abbreviated opportunity for rest, replenishment, and restoration. The consequences of untreated cumulative stress can result in medical errors; somatic complaints such as changes in eating habits, gastrointestinal distress, headache, fatigue, and sleep disorders; change in work habits such as tardiness and absenteeism; mental and emotional difficulties such as memory disturbances, anger, self-doubt, isolation, and impaired judgment; and accidents.³⁰⁻³²

Navy Medicine caregivers are usually deployed as IAs to the combat zone, the exceptions being caregivers who are assigned to embedded duty within operational units (eg, hospital ships, EMFs, SPRINT teams, OSCAR teams). Uniformed caregivers selected for IA duty typically possess specific skill sets that are synergized to form an operational field medical asset. Personnel with combat-essential skills (Fleet Marine Force corpsmen, surgery, anesthesia, critical care, mental health) are particularly likely to deploy, often making multiple deployments within a given tour of duty. IA medical personnel are selected from hospitals and clinics around the world, given "just in time" training, and then configured with other caregivers to form a functional unit. At the end of their deployment, caregivers return as individuals to their hospitals and clinics. The protective connectedness of unit cohesion is lost when they leave their parent command and again when they leave their operational

unit. Even more stress may be encountered by those who joined preexisting deployed units, a situation that makes “fitting in” even more difficult.

Trauma Exposure and Intervention Strategies

Providing care in a combat zone increases the likelihood of experiencing direct and secondary exposure to traumatic injuries. Direct exposure constitutes the threat to physical safety from direct and indirect fire, as well as the plethora of fatigue-inducing operational stressors. Secondary trauma can be encountered by working in close contact for extended periods of time with wounded, ill, and injured sailors, the result to caregivers being a phenomenon known as occupational or compassion fatigue. In relation to the SIC model, direct and secondary trauma can, individually or in tandem, contribute to full-blown stress illnesses for Navy caregivers. Stress injury and illnesses can affect mission effectiveness in the form of medical errors, job dissatisfaction, and poor retention.³³

Part of the responsibility for enhancing the resilience of Navy caregivers rests with the leadership of Navy Medicine itself. Actions are underway within Navy Medicine to implement training based on the SIC model to run through all phases of training for Navy medical personnel. The core leader functions have been applied to day-to-day clinical leadership activities as well as facilitating the transition of Navy Medicine personnel in and out of different operational settings. One key point the SIC model should impart to the leaders of caregivers is that their roles and work environments are inherently stressful, and that stress reactions are common. Many leaders recognize that initial stress reactions increase caregivers’ energy and focus their attention on critical changes in a patient’s condition, while sustained stress causes a degradation of performance. Leaders should be aware that in caregivers’ work environments, occupational stress is endemic and may go unrecognized because such reactions become normalized. A difficult challenge to the leaders of caregivers is reintegrating individually deployed staff into a cohesive unit that did not deploy; the IA caregiver faces the dual task of reintegration while simultaneously letting go of relationships formed during deployment.

The traditional work-stress-response paradigm in both civilian and Navy literature has several common elements: know the sources of job stress, know the signs and symptoms of stress, take care of oneself, and seek help when there is the beginning of impairment in daily life.⁵ There are several significant barriers to self-help for caregivers. First, endemic job stress produces some level of stress symptoms in all workers, so that moderate and high stress appear normal. Second,

early stress symptoms such as fatigue, impaired sleep, and confusion decrease the self-awareness necessary to initiate self-care. Third, caregivers are “other focused” and may consider self-care unnecessary or antithetical to their goals.

When intervention is necessary, the “five Cs” of COSFA¹—cover, calming, connectedness, capacity, and confidence—can prove especially helpful. Using the COSFA model, caregivers are encouraged to focus on other caregivers and their shipmates: facilitating connectedness and accessing the healing capability of unit cohesion requires breaking the “code of silence” by asking coworkers questions about their stress coping. Most caregivers do not feel comfortable approaching their peers with questions and concerns about the peer’s behaviors. The typical, “How are you doing?” is usually met with a response of, “Fine.”

A strategy for facilitating connectedness is based on role expectations of shipmates and uses an “OSCAR” acronym (Exhibit 8-1). The OSCAR communication strategy encourages shipmates to address coworker behavior in five steps. First, observe the behavior, particularly signs of possible impairment, such as poor concentration, looking tired, falling asleep during change of shift, or irritability. Second, state the observation. The observation must be overtly stated because decreased self-awareness is one of the early casualties of a stress reaction. Third, clarify one’s role. The roles of shipmate, subordinate, supervisor, friend, and spouse help show why the behavior is being addressed, and help determine which options should

EXHIBIT 8-1

OPERATIONAL STRESS CONTROL ASSESSMENT AND RESPONSE COMMUNICATION

Observation: actively observe behaviors; look for patterns.

State observations: focus all attention on the behaviors; just the facts without interpretations or judgments.

Clarify role: state why you are concerned about the behavior, which validates why you are addressing the issue.

Ask why: seek clarification; try to understand the other person’s perception of the behaviors.

Respond: clarify concern if indicated; discuss desired behaviors; state options in behavioral terms.

be used for the shipmate. Fourth, ask the shipmate for personal perception of what the behaviors are. Often, the act of talking about the behavior will allow the individual to clarify how a problem is affecting work behavior. Fifth, respond with guided options that are intended to facilitate change or offer to help the shipmate connect with other resources, such as a leader, chaplain, financial counselor, the Navy-Marine

Corps Relief Society, or mental healthcare.

Despite the increased risks of sustaining stress injuries when deployed or in the course of day-to-day work, Navy caregiver duty can be extremely rewarding and satisfying. The Navy “care for the caregiver” concept, based on the SIC model, encourages caregivers to use the same skills they developed to help their patients for helping each other.

SUMMARY

The SIC model represents an ambitious attempt to assimilate the disparate conceptual frameworks of various stress control programs within the Navy, each of which has its own unique history, into a single yet comprehensive operational stress control paradigm. Within this model, three major stakeholders are responsible for supporting sailors and marines faced with the inevitable challenge of sustained operations: (1) leadership, (2) the service member, and (3) the caregiver. Leadership establishes the foundation for effective combat stress control by cultivating a command climate that recognizes the importance of mental health, institutionalizes stress resilience training, and removes barriers to care for those who experience stress reactions and develop illness or injury. Individual service members trained in stress resilience should be capable of developing their own individual stress coping strategies, identifying when their stress reactions are beyond their coping capacity, and knowledgeable and comfortable enough with the care options available to easily seek help when needed. Caregivers must actively pursue a consultative role, working to support the leadership in stress control efforts, yet remaining vigilant to identify sailors who react adversely to stress, and providing quality care to those whose stress reactions lead to illness and injury.

Expeditionary medical platforms, such as hospital ships and EMFs, provide a large, forward-deployed medical capacity for applying the SIC model. However, combat stress control program elements such as SPRINT, carrier psychologists, and OSCAR teams are the best embodiment of the SIC model. In fact, the SIC model itself is an outgrowth of OSCAR philosophy. Unfortunately, both the forward-deployed medical platforms and combat stress control elements are straining to adapt to the burgeoning demands of

GWOT that have focused pressure on caregivers themselves, and taken sailors outside of the Navy sphere of influence during the course of IA duty assignments. Building upon the successes of the combat stress control program elements described in this chapter, which arose to meet specific operational demands, Navy medicine can again rise to meet the challenge of caring for combat deployed sailors.

A consistent theme in this chapter has been the utility of mobile and expeditionary Navy Medicine assets. Despite the necessity and quality of the centralized Navy medical capacity, it has been recognized that delivering care within deployed units has reduced the stigma associated with seeking help for stress-related illness. Moreover, the benefit is reciprocal: proponents seem to agree that caregivers themselves benefit from the social cohesion of serving within a unit, a situation that appears to improve caregivers’ credibility as well as their overall ability to intervene and treat stress-related injuries.

Each section of this chapter represents cumulative knowledge gleaned from professional training, reviews of the literature, and most importantly, first-hand experiences with Navy combat and operational stress control programs. This chapter should also alert readers to areas where data are needed to evaluate whether the programs discussed are effective in managing combat and operational stress. Despite the myriad models and approaches described, Navy combat and operational stress control programs in their present state are a mission-centered collection of efforts that reflect the multifaceted and dynamic issues associated with stress control in combat and operational environments. The SIC model is a bold, yet necessary, attempt to weave these programs’ elements into an overarching Navy combat stress control philosophy.

REFERENCES

1. Figley CR, Nash WP, eds. *Combat Stress Injury: Theory, Research, and Management*. New York, NY: Routledge; 2007.
2. Stokes AF, Kite K. On grasping a nettle and becoming emotional. In: Hancock PA, Desmond PA, eds. *Stress, Workload, and Fatigue*. Mahwah, NJ: Lawrence Erlbaum Publishers; 2001: 107–132.

3. Gunderson E, Hourani LL. The epidemiology of mental disorders in the US Navy: the neuroses. *Mil Med.* 2001; 166:612–620.
4. Tanielian T, Jaycox L. *Invisible Wounds of War: Psychological and Cognitive Injuries, Their Consequences, and Services to Assist Recovery.* Santa Monica, Calif: RAND Corporation; 2008.
5. Cooper CL, Cartwright S. A strategic approach to organizational stress management. In: Hancock PA, Desmond PA, eds. *Stress, Workload, and Fatigue.* Mahwah, NJ: Lawrence Erlbaum Publishers; 2001: 235–248.
6. Lewis SJ. Combat stress control: putting principle into practice. In: Britt TW, Castro CA, Adler AB, eds. *Military Life: The Psychology of Serving in Peace and Combat.* Westport, Conn: Praeger Security International; 2006: 121–140.
7. McNally RJ. Psychological debriefing does not prevent posttraumatic stress disorder. *Psychiatric Times.* 2004;21(4).
8. McNally RJ, Bryant RA, Ehlers A. Does early psychological intervention promote recovery from posttraumatic stress? *Psychol Sci Pub Int.* 2003;42:45–79.
9. Rose S, Bisson J, Churchill R, Wessely S. Psychological debriefing for preventing post traumatic stress disorder (PTSD). *Cochrane Database of Systematic Review.* 2001;4. Art No. CD000560.
10. Nash B, Watson P, Litz B. USN-USMC combat and operational stress first aid (COSFA). Paper presented at: US Marine Corps Combat Operational Stress Control Conference; August 12–14, 2008; San Diego, Calif.
11. Wood DP, Koffman RL, Arita AA. Psychiatric medevacs during a 6-month aircraft carrier battle group deployment to the Persian Gulf: a Navy Force Health Protection preliminary report. *Mil Med.* 2003;168:43–47.
12. Smith D. Taking it to the fleet. *Monitor Psychol.* 2002;33:52–53.
13. Jones DE, Lee JJ. Take the tough cases to sea. *Proceedings.* 2002;128:61–64.
14. US Department of Defense. *An Achievable Vision: Report of the Department of Defense Task Force on Mental Health.* Falls Church, Va: Defense Health Board; 2007.
15. US Department of Defense. *Plan to Achieve the Vision of the DoD Task Force on Mental Health: Report to Congress September 2007.* Washington, DC: DoD; 2007.
16. Harris DM, Edwards JD. *A Preliminary Evaluation of the OSCAR Pilot Program.* Alexandria, Va: Center for Naval Analyses; 2006. Report CRM D0013962.A2/Final.
17. US Marine Corps. *Tri-MEF Combat Operational Stress Conference.* Camp Pendleton, Calif: I, II, and III Marine Expeditionary Forces. Letter to the Commandant, 12 September 2007. Available at: <http://www.mca-marines.org/Gazette/PDF/USMCLetterPP.pdf>. Accessed March 30, 2009.
18. Andres JM. *Effects of Navy Individual Augmentee Deployments on Mental Health Outcomes* [master's thesis]. Monterey, Calif: Naval Postgraduate School; 2008.
19. US Army Office of the Surgeon General. *Operation Iraqi Freedom Mental Health Advisory Team Report, 16 December 2003.* Washington, DC: OTSG; 2003.
20. Kobasa SC. Stressful life events, personality, and health: an inquiry into hardiness. *J Pers Soc Psychol.* 1979;37:1–11.
21. Sharpley JG, Fear NT, Greenberg N, Jones M, Wessely S. Pre-deployment stress briefing: does it have an effect? *Occup Med (Lond).* 2008;58:30–34.
22. Shay J. *Achilles in Vietnam: Combat Trauma and the Undoing of Character.* New York, NY: Atheneum; 1994.
23. Hoge CW, Castro CA, Messer SC, McGurk D, Cotting DI, Koffman RL. Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *N Engl J Med.* 2004;351:13–22.

24. Adler A, Suvak M, Litz B, et al. A controlled trial of group debriefing in the military: preliminary findings. Poster session presented at: 38th Annual Meeting of the Association for Advancement of Behavior Therapy; August 2004; New Orleans, La.
25. Brailey K, Vasterling JJ, Proctor SP, Constans JI, Friedman MJ. PTSD symptoms, life events and unit cohesion in US soldiers: baseline findings from the neurocognition deployment health study. *J Trauma Stress*. 2007;20:495-503.
26. Ozer EJ, Best SR, Lipsey TL, Weiss DS. Predictors of posttraumatic stress disorder and symptoms in adults: a meta-analysis. *Psychol Bull*. 2003;129:52-73.
27. Oliver L, Harman J, Hoover E, Hayes S, Pandhi N. A quantitative integration of the military cohesion literature. *Mil Psychol*. 1999;11:57-83.
28. Ostroff C. The relationship between satisfaction, attitudes, and performance: an organizational level analysis. *J Appl Psychol*. 1992;77:963-974.
29. DeVries AC, Glasper ER, Detillion CE. Social modulation of stress responses. *Physiol Behav*. 2003;79:399-407.
30. Jacobson BH, Aldana SG, Goetzl RZ, Vardell KD, Adams TB, Pietras RJ. The relationship between perceived stress and self-reported illness-related absenteeism. *Am J Health Promot*. 1996;11:54-61.
31. Barger L, Cade BE, Ayas NT, et al. Extended work shifts and the risk of motor vehicle crashes among interns. *N Engl J Med*. 2005;352:125-134.
32. Gaba DM, Howard SK. Patient safety: fatigue among clinicians and the safety of patients. *N Engl J Med*. 2002;347:1249-1255.
33. Waterman AD, Garbutt J, Hazel E, et al. The emotional impact of medical errors on practicing physicians in the United States and Canada. *Jt Comm J Qual Patient Saf*. 2007;33(8):467-476.

