Chapter 16

COMBAT STRESS CONTROL AND FORCE HEALTH PROTECTION

JAMES W. STOKES, MD; HARRY GREER, MD; AND PAUL S. HAMMER, MD

J.W. Stokes; Colonel, Medical Corps, US Army; Combat Stress Control Program Officer, Behavioral Health Division (MCHO-CL-H), Health Policy and Services, US Army Medical Command, 2050 Worth Road, Fort Sam Houston, TX 78234-6010

H. Greer; Captain, Medical Corps, US Navy; Instructor, Defense Medical Readiness Training Institute, Fort Sam Houston, TX

P.S. Hammer; Commander, Medical Corps, US Navy; Staff Psychiatrist, Mental Health Department, Naval Medical Center, San Diego, CA 92136

INTRODUCTION

Preventive Medicine and Combat Stress Control (CSC) are recognized as important, autonomous military medical functional areas by the US Army and by the Department of Defense. They are now combined under the umbrella concept, or battlefield operating system, of "Force Health Protection." Both are ultimately the responsibility of the commander and the noncommissioned officers (NCOs) at all echelons. The general medical personnel in units serve as monitors, advisers, educators, and action teams to correct identified problems. The unit chaplains provide important support because of their access to the service members and the confidential nature of their discourse. But those personnel have their own urgent primary duties demanding their attention in combat and other high-risk missions. Preventive medicine personnel and the mental health personnel assigned to CSC duties both have force health protection as their primary mission.

The CSC operational concept and published Army doctrine[1–3] define CSC as primary, secondary, and tertiary prevention to be conducted in support of command in the military unit context by members of the five mental health professional disciplines and their enlisted assistants. Department of Defense Directive 6490.5 directs the US military services to ensure

> appropriate prevention and management of Combat Stress Reaction (CSR) casualties to preserve mission effectiveness and warfighting, and to minimize the short- and long-term adverse effects of combat on the physical, psychological, intellectual and social health of all Service members.[4(p1)]

The directive mandates training of all ranks in the CSC principles appropriate to their rank and responsibilities, including primary, secondary, and tertiary prevention.

In both the Marine Corps and the Army, preventive medicine and mental health are intrinsic parts of the force structure. Unfortunately, these two disciplines, in both the civilian world and in the military, often find it difficult to work as a team. Mental health workers need training in epidemiology and familiarization with sanitation, environmental hazard monitoring, and vector and infectious disease control. Preventive medicine workers need some training in community mental health. Both need training in risk communication. It is often the case that deployed senior preventive medicine assets are located at the corps or higher levels and the mental health personnel are at the subordinate division level. Preventive medicine officers, therefore, may have the responsibility to see that mental health programs are effective. This pattern is also consistent with that found in most civilian health departments. It is important, then, that preventive medicine physicians understand principles involved in mental or behavioral health promotion.

As with preventive medicine in general, preventive stress control must be applied across the full continuum of operations, from garrison and peacetime training to the battlefield. The best preventive interventions and training must be made before the units are involved in high-stress, high-risk action.

COMBAT STRESS CONTROL'S RELATIONSHIP TO PREVENTIVE MEDICINE IN THE OPERATIONAL SETTING

Good preventive medicine discipline usually means good stress control. Effective camp hygiene and preventive medicine measures imply strong, concerned, caring leadership, good buddyship, mentoring of new arrivals by veterans, and effective initial training. Strong preventive medicine discipline gives each unit member pride, a sense of professionalism and competence, and trust in leaders and comrades. (An exception may be when the good preventive medicine discipline is one positive effect caused by a martinet who is in other ways mistreating personnel.) Pride, professionalism, and trust in leaders and comrades are strong protections against becoming a stress casualty.

Conversely, poor preventive medicine discipline often implies poor stress control. Inadequate preventive medicine measures suggest inadequate unit training or ignorant, uncaring or preoccupied (perhaps overstressed) leaders, buddies, and veterans. Those factors are predictive of stress casualties, as well as of diseases and nonbattle injuries.[5] Low-grade illnesses and injuries further sap energy and self confidence, leading to stress, disease, and nonbattle injury casualties. The remaining unit members see their comrades evacuated and replaced by strangers who are at higher risk from stress, and demoralization can build on demoralization.

Physical threats identified in the medical threat assessment are also stress threats. Unfamiliar harsh climates or terrain, dangerous fauna or flora, and warnings of exotic diseases cause stress and anxiety unless service members are confident in their

protective measures. The threats posed by nuclear, biological, and chemical warfare agents can produce current and long-term stress, as illustrated by the concerns about illnesses in veterans of the Persian Gulf War.[6] Rumors about the protective measures can arouse fears of side effects such as impotence, sterility, genetic damage, and autoimmune diseases, among other disabilities. Anthrax immunization and prophylactic and pretreatment medications, such as anti-malarials or pyridostigmine for nerve agent, are two examples of such fears from the Persian Gulf War. These fears can cause high-risk behaviors, such as noncompliance with the protective measures. Service members have even accepted court martial or resigned from the service rather than take required anthrax vaccinations.[7–9]

The stress threat can increase the preventive medicine threat. Mission tempo, arousal, and anxiety decrease sleep and cause fatigue. Sleep debt and fatigue disturb immune system function, so susceptibility to illnesses increases.[10] Distraction or fatigue causes decreased attention to safety, hygiene, and other self care, increasing the risk of disease and nonbattle injury. This process can result in an "evacuation syndrome," as overstressed service members unconsciously commit the same negligence that they saw got others "honorably evacuated" from greater danger.[11] The extreme version is deliberate, self-inflicted illness or injury, a form of malingering.

Combat stress or boredom stress can result in high-risk behaviors such as substance abuse, fighting, and unsafe sexual fraternization, which also contribute to preventable diseases and injuries.[1,11] Unless preventive actions are taken at the early signs, these behaviors can escalate quickly to misconduct stress behaviors that demand disciplinary action for breaches of military regulation or criminal acts. Post-traumatic and postdeployment stress can continue this negative interaction long after the operation is finished and contribute to medical as well as psychiatric symptoms and diagnoses.

THE PSYCHOLOGICAL RESPONSE TO THE COMBAT ENVIRONMENT

The combat environment is associated with a variety of psychological stresses. Some of the psychological stressors inherent in the physical and social aspects of the combat environment are listed in Exhibit 16-1.

Anxiety, anger, fear, guilt, envy, suspiciousness, and frustration are all normal emotional reactions. In the average environment, the higher-functioning individual is expected to cope with feelings without pathological responses. In the combat environment, however, even higher-functioning people may fail to cope and manifest adjustment disorders with exaggerated emotional responses, instability, rage outbursts, withdrawal, isolation, impulsive behavior, alcohol and substance abuse, or poor judgment. On the clinical level, service members may exhibit anxiety and depressive conversion reactions, dissociative reactions, acute stress reactions, subsequent post-traumatic stress disorders, and even brief reactive psychoses. The real task, then, of any stress control effort is to attempt to prepare individuals and commands to cope with the psychological environment without debilitating psychological responses.

EXHIBIT 16-1

PSYCHOLOGICAL STRESSORS INHERENT IN THE COMBAT ENVIRONMENT

Separation from familiar psychological support systems
Isolation from information
Mistrust of the information received from higher authority
Fear of physical hazards and enemy action
Fear of physical mutilation or death
Fear of the loss of emotionally close peers
Fear of failure and loss of self-esteem
Fear of social embarrassment and of loss of community status
Anger and envy toward those seen as better off
Anger toward those seen as failing to give needed support
Anger over physical discomfort or privation
Anger over perceptions that one is being used or manipulated
Anger toward the enemy and their real or seen atrocities
Anger over the death or injuries of peers
Anger over the "rules" and their seen unfairness
Guilt over leaving dependents without support
Guilt over the injuries or death of peers
Guilt over real or imagined failure to accomplish a mission

STRESS, ANXIETY, AND FEAR

Some of the earliest literature in psychology and psychiatry attempted to develop a scientific picture of anxiety. One theory of anxiety sees anxiety developing in stages and posits that as individuals grow and develop, they are able to perceive more complex threats to their emotional and physical

well-being.[12] A closer look at the tenets of this theory may be helpful in understanding CSC.

The first anxiety is postulated to occur in infants and is one of being or not being. The second level of anxiety is separation anxiety. The feeling of being lost or completely alone can produce an intense and uncomfortable feeling of anxiety in most people. The theory describes children as learning to cope with separation anxiety by identifying and incorporating a psychological picture of the parent into their own makeup. Children also learn to take their security with them symbolically and to maintain contact at a distance. Knowledge of these mechanisms can be used in a program of prevention.

The next level of anxiety concerns being in control of self. This level is related to the anxiety we all experience over failure to control our own bodily functions, such as excretion. This anxiety, as we get older, evolves into anxiety over being able to control the immediate environment in terms of personal security. Mastery of this anxiety as a child is by achieving physical control of one's own body, by growing competence to provide for one's own basic needs, and by learning to communicate basic needs effectively to an immediate care giver. In later life, the need to master this anxiety may be expressed symbolically. The emphasis Marines place on never being without their rifles may be a symbolic way of their feeling safe and in control.

Anxiety about physical injury or mutilation and its social consequences is the next level. Mastery of this anxiety is by identification with individuals and institutions that are seen as powerful and invulnerable. The connection to the efforts of all services to promote identification with the institution, such as uniforms and flags, is obvious. Less obvious is the use of special unit identifiers and uniform items to promote a feeling of invulnerability to injury in the individual.

Higher levels of anxiety have been described,[13] such as fear of loss of personal competence in a higher skill or anxiety over social embarrassment or loss of status. Most institutions use these anxieties to maintain cooperation and productivity in the organization. These are the anxieties mastered by getting certifications or good grades or by earning special recognition, awards, or promotions. In real life, all of these psychological mechanisms operate simultaneously and may frequently reinforce each other.

Fear is anxiety with the threat of immediacy. Fear is accompanied by a psychological press to action. Fear is a healthy protective emotion when individuals possess the equipment, competence, and freedom of action that allows them to cope effectively with the immediate threat. When individuals lack or are deprived of the capacity or option to protect themselves, they usually exhibit desperate or destructive behavior or pathological withdrawal. It is important for the command to recognize that pathological reactions to fear are more of a failure of the organization to prepare the individual than a characteristic of the individual.

Shame is a fear of loss of love. This emotion is more complex than anxiety or fear and represents an incorporation psychologically of a parent figure who represents love and approval to the individual. Higher-functioning social organizations and individuals operate on this level most of the time. The resulting positive emotions are pride and self-esteem.

Guilt is a fear of punishment. Internalized, this may become a punitive, self-destructive emotion leading to self-destructive actions. Guilt can lead to evasive and deceptive behavior and is often expressed by anger. Organizations that use punishment as a means control are often faced with the constant acting-out of angry, aggressive behavior. The preoccupation of an individual or an organization with blame or punishment can bring paralysis as the organization becomes focused on the past and individuals become defensive, fearing being the scapegoat. An example of the destructive effects of an organizational system based on punishment is the "better weasel" principle: in organizations that use negative reinforcement, those individuals most adroit at avoiding punishment—the better weasels—will rise to the top of the hierarchy.

COPING WITH EMOTION

From an early age, individuals learn psychological mechanisms that help them cope with emotions.[12] Some of the earliest and most primitive are denial, projection, and incorporation. Higher-level coping involves identification, sublimation, rationalization, and intellectualization. The highest level of coping is adaptation. All of these mechanisms may be used simultaneously by an individual and, with some modification, may describe the coping of an organization. An understanding of these mechanisms underpins the techniques of preventing maladaption to stress.

Denial may be understood by thinking of infants turning away from food that they do not want to eat even though the food meets their nutritional needs. Psychologically, denial means turning away

from perceptions and thoughts that are unpalatable, even if the individual needs to know the truth (eg, the alcoholic who denies that he or she has a problem). Projection may be understood as "the devil made me do it." This blaming of others is a very common defense. In organizations where projection is used by the majority of individuals, scapegoatism, with its associated paranoia and suspiciousness, is common. Identification is usually a healthy way to adapt, but it can be a problem when someone identifies with a negative role model. Incorporation is an uncritical identification with an individual or group—the individual swallows the "whole party line." Incorporation can be the basis for cults. Some of the worst atrocities of warfare have been committed by individuals who incorporated uncritically a group identity. Examples include the Japanese Army in the rape of Nanking (1937 to 1938), German SS and Wehrmacht units in the Soviet Union in World War II, and Serbs, Croats, and Muslims engaged in ethnic cleansing in the Balkans before World War II and in the 1990s.

The higher levels of coping include rationalization and intellectualization. Rationalization involves convincing oneself that the threat is exaggerated or manageable without real evidence or study. That is, we tell ourselves what we want to hear. Intellectualization is a bolstering of our rationalizations with internal and often philosophical arguments. In organizations, these types of defenses can produce a dream-world atmosphere at headquarters, with no one willing to accept or cope with an unpalatable reality.

PATHOLOGICAL REACTIONS TO STRESS

The essence of stress prevention from a military standpoint is to keep individuals as functional as possible in the face of stress. When the individual fails to cope with psychological stress, a number of pathological reactions can occur. They have in common some loss of functional efficiency. In the most

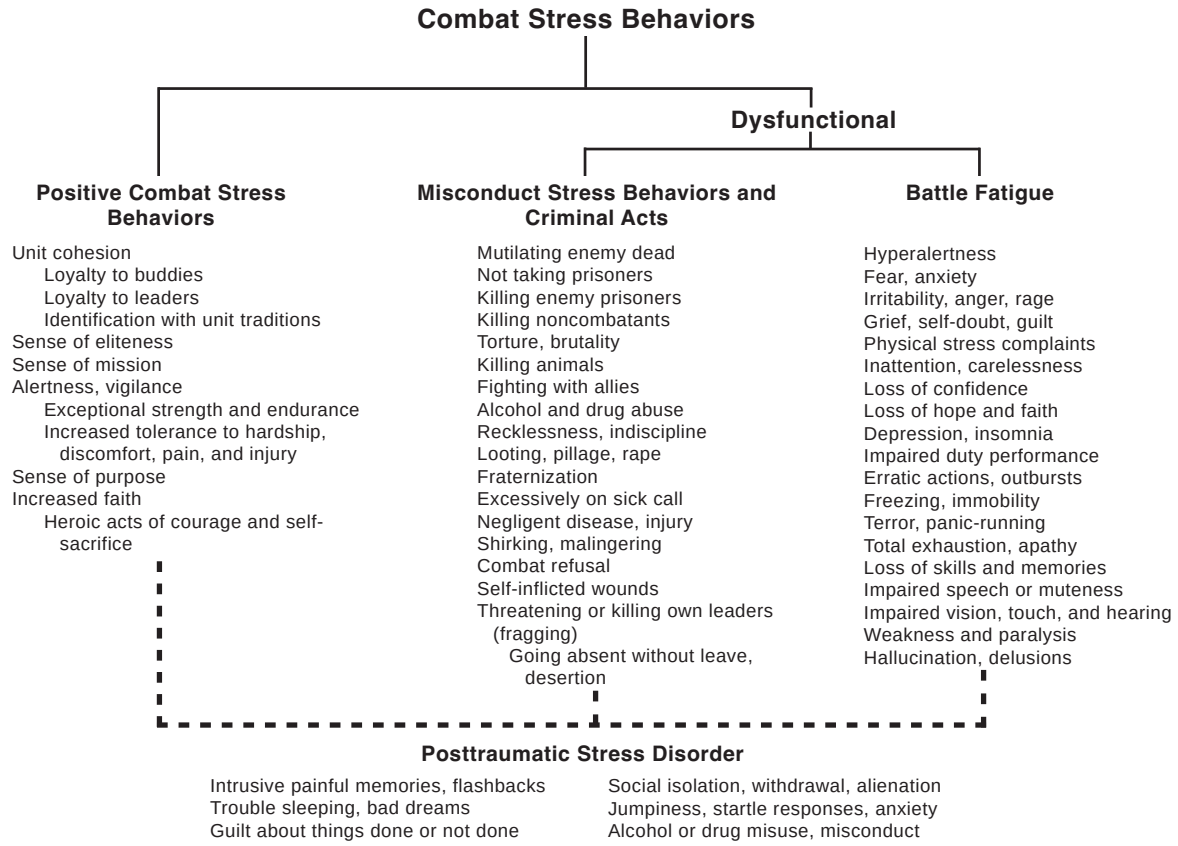

Fig. 16-1. Symptoms of combat stress behaviors.
Source: Department of the Army. *Leaders' Manual for Combat Stress Control*. Washington, DC: DA; 29 September 1994. Field Manual 22-51.

extreme cases, the individual is lost to duty entirely.

Figure 16-1 lists symptoms of battle or contingency fatigue, misconduct stress behaviors, and post-traumatic stress. The table also lists the positive combat stress behaviors that bring out heroic behavior and can protect service members (somewhat) against becoming stress casualties during battle. The positive stress behaviors do not protect against the misconduct stress behaviors unless leadership and unit identity make clear the standard and rigorously enforce it. No amount of combat stress can be allowed to justify or excuse criminal misconduct. The positive combat stress behaviors also do not in themselves confer immunity against post-traumatic stress. For example, death or mutilation of beloved comrades is an especially long-lasting and painful trauma. Immunization against stress requires special stress control actions, including debriefings, memorial services, justly awarding special recognition for valor, and long-term social validation of the value of the sacrifices.

Mild stress reactions include chronic feelings of anxiety with disturbances of sleep, impulsiveness, frequent startle reactions, and an increase in "neurotic" behavior, such as obsessiveness or compulsive rituals. Panic and freezing are severe reactions to anxiety. More complex reactions may occur with long-term stress. These reactions frequently result from mixtures of anxiety, anger, fear, guilt, and shame. They may include irritability, explosive rages, despondency, social isolation, excess drinking, and diverse psychophysiological reactions. Psychophysiological responses include appetite disturbances, headaches, upset stomach, irritable bowel, and insomnia or hypersomnia. Physical discomfort, fatigue, heat or cold, and physical loss of function (eg, overuse syndromes) exacerbate the stress and may be hard to distinguish from the effects of psychological stress. Prolonged and severe stress coupled with fatigue and the wear and tear of a harsh environment may produce in the individual the complex entity of acute combat/operational stress reaction.

PRIMARY PREVENTION

As with other aspects of preventive medicine, primary prevention is concerned with preventing the occurrence of disease or disability that may become evident either immediately or not until after weeks, months, or years. CSC primary prevention involves the effort to monitor, identify, modify, avoid, or reduce stressors before they cause dysfunction, just as preventive medicine seeks to do the same with pathogens before they cause disease, and build stress-coping skills within individuals.[3] Effective CSC starts with good mental health in garrison during peacetime.

One approach to primary prevention is to screen service members to identify those at high risk of becoming stress or psychiatric casualties, then either strengthen their resistance or remove them from danger. CSC personnel can provide advice regarding "immunizing" service members from the pathological dimensions of stress by progressive exposure to stressors in realistic training and measuring the effects of such efforts. They can also advise on how to promote unit cohesion and to provide education on stress management, stress control techniques, mental hygiene, and other protective issues. CSC personnel, especially the enlisted specialists, talk routinely with service members at squad and crew level, "taking the pulse of the unit" through informal or structured group interviews. Short questionnaire surveys can also be used. CSC personnel also facilitate or provide "preventive maintenance." This includes encouraging and mentoring small unit leaders to conduct their own debriefings after any difficult or unsuccessful action. End-of-tour debriefings, which summarize, clarify, and give closure to the minor as well as major irritations and emotionally charged memories of the deployment, should be done at the team level before the redeployment home. Closure ceremonies, memorial services, and fair allocation of awards and decorations should be encouraged. Briefings and discussions that give realistic expectations of the common frictions of reunion with families and coworkers, and skills to cope with them, should also be encouraged and facilitated.

A mnemonic for primary prevention of stress reactions is "C4 times two," with the obvious reference to the primary combat casualty care course. This model is based on well-established principles but not on an empirical test—that remains for future research. The eight Cs are confidence and competence, communication and coordination, community and cooperation, and comfort and concern. The first word in these mnemonic phrases pertains to the individual and the second to the organization. The job of the preventive medicine officer or the mental health team is to teach these principles at both the individual and organizational level.

Confidence and Competence

First, individuals need to see their training as a means of developing their ability to survive and

their confidence in themselves. Individuals should be instructed to take a personal interest in the training and be assertive about asking questions, as well as requesting clarification and demonstration. For this to be successful, the trainers need to be encouraged to develop a partnership with each student and to use consistent and skillful positive reinforcement. The trainer must demonstrate appropriate confidence and trust in the trainee and see the trainee's competence as a compliment to the trainer. The trainer becomes a role model and a nonpunitive parent figure, with whom the trainee identifies and from whom the trainee seeks approval. These are basic principles applied by flight instructors with great success. A challenge for preventive medicine and mental health is to apply these same principles in teaching medical and command personnel.

Communication and Coordination

Fundamental to building self-esteem and in bonding the individual to the goals of the group is feeling included and worth talking to. Communicating feelings and attitudes in an appropriate way is a skill that can be taught. People fail to communicate for many reasons, including lack of verbal facility, learned fear and anxiety, remembered embarrassment, and nonverbal or direct messages from an authority figure that suppress communication. While teaching communication may be perceived as effete sensitivity training, accident studies among air crews reveal that failure to communicate is a major "human factor" in aircraft accidents.[14] Commanders must realize that to get a group to act as a coordinated whole, two-way, effective communication is essential. For example, peers and commanders need to listen for clues that an individual is considering suicide. Studies have shown that up to 80% of individuals who kill themselves have given indications of their intent to peers or supervisors.[15]

Community and Cooperation

"Being in the same boat" and "misery loves company" are trite sayings, but they are also true. Each service member should be highly encouraged to be part of a group. Sports, religious services, and other opportunities to share interests foster community. Most military organizations do a good job of building community among service members, but the individual is frequently torn between loyalty to family and loyalty to the unit. The command should be encouraged to secure the cooperation and loyalty of the unit members' spouses. While intense family-like bonds in a unit can be troublesome, these same feelings can be the best protection against psychological deterioration in a stressful situation, whether in combat or in garrison.

Comfort and Concern

Comfort is not considered a major military virtue; however, taking care of oneself is very important in a combat environment. The length of time that an individual can remain effective partly depends on the level of comfort that can be achieved in the combat environment. Psychologically, a child learns early to trust the people who are concerned for his or her comfort. Lack of concern for comfort is frequently one of the most deeply felt resentments. Furthermore, learning to take care of oneself and learning to suffer as little as possible in objectively difficult circumstances is a source of pride and self-esteem. The commander who shows a genuine concern for the comfort of the service members and who shares the necessary discomforts will be able to ask for and receive a greater level of sacrifice in the face of danger.

Working With Units

Primary prevention involves incorporating the "C4 times two" principle into the everyday fabric and function of the unit. The essence of primary prevention is behavioral and attitudinal changes on the part of a large number of individuals. How to accomplish these changes is neither obvious nor easy. One strategy is to target specific groups. In a division, groups to be targeted ought be the general staff, senior staff NCOs, unit staff, unit commanders down to company level, and division medical personnel. The most difficult part is developing credibility with these groups. Prevention is often ignored or neglected because it is difficult to get busy people's attention when talking about problems that have not yet occurred. Leaders are often preoccupied with current problems and will practice denial if they cannot see that a problem is close at hand. Breaking through that denial is difficult enough with such preventive problems as food and water sanitation or infectious disease prevention, but it is even more difficult with prevention of stress casualties and psychiatric casualties. This is why the force health protection team that combines personnel from mental health and preventive medicine must invest a large amount of time lay-

ing the groundwork for their consultation. They must sell themselves and their function to the units they serve. This groundwork involves three steps. The team must first have a deep and thorough understanding of the unit they serve. In the second step, the team must develop a sense of membership and identity with that unit. The third and last step is doing the actual force health protection work. When the first two steps are completed, the team will be able to deliver their force health protection message in a way that the unit can hear, understand, and implement.

The First Step (Understanding the Unit)

The first task of clearly understanding the type of unit the team serves goes far beyond mere knowledge of the mission, table of organization, standard operating procedures, and operating functions of the unit. It involves knowledge and respect for the history, traditions, customs, and personality of the unit. The team must seek a depth of understanding of the unit that enables them to communicate and gain cooperation easily. It has been the experience of medical officers and NCOs involved in prevention that their credibility and hence effectiveness has depended on spending time in the field with the various units. Further, they had to be seen as competent in the field as far as military skills were concerned. Acquiring field competence involves more than going to a week-long school; it involves a dedication to pursue and practice these skills on a daily basis. It also involves a personal commitment to physical fitness, beyond that involved in merely passing the semiannual physical fitness test.

The Second Step (Identifying With the Unit)

An attitude of participation and membership in the unit is key for those providing mental health services. The force health protection team must become a part of the unit, and the unit should think of the team members as "one of us." If this does not happen, the force health protection team finds itself on the outside, resented by the command as yet another advisor telling them how they should do their job. The force health protection team must be seen as an ally, not as enemy or an irrelevant entity making demands from on high.

In developing this sense of understanding and membership, there is one vital consideration to be kept in mind. The underlying principle that allows a unit to function in combat is trust. Members of a unit must trust one another with their lives. If a force health protection team is to work effectively with a unit, then they too must earn the trust of that unit and the trust of the commander. Trust and credibility are established as the team works to develop and implement a comprehensive preventive mental health plan for the unit.

The Third Step (Doing the Work)

In actually providing force health protection services, the team must convince the various commanders to allot training time to mental health promotion in an already very crowded training schedule. To get this time, the force health protection personnel must prove their worth and the worth of the training to the various commanders. One way to do this is to make themselves available to commanders for consultation on specific problems. For the mental health members of the team, usually this will involve seeing suicidal individuals or helping with individuals who have mental health or family problems. These cases can provide opportunities to suggest training staff and subordinate commanders in prevention, as well as to increase rapport between team members and the unit. The team should develop information handouts that explain the concepts of prevention to unit leaders and presentations (ie, "road shows") complete with audiovisual aids and handouts that can be presented with little notice. Above all, the team must be alert for opportunities to reach out to help the unit.

There is a strategy to using educational opportunities as a way of gradually approaching a higher level of trust and influence in the unit. Giving a class is not merely an opportunity to present the preventive medicine and stress control information. It is an opportunity to become known, to be seen as a useful resource, and to foster the process of integration of the team into the unit. Giving standalone, unintegrated classes is not adequate. To be effective, the team must develop a specific and comprehensive preventive plan tailored to the needs of the unit they serve. The necessity for this can be seen in the frustration some military leaders have experienced in attempting to grapple with suicide prevention, alcohol abuse, and other problems—difficult mental health and social problems that have plagued US society for years. Commanders have attempted to solve these problems by attacking them with the same vigor they would attack an enemy on the battlefield, but they have been frustrated by the vague and ethereal nature of these is-

sues, lack of measurable progress, and continued worsening of the problems despite their best efforts. The Marine Corps has developed programs to address these sorts of problems.[16] Exhibit 16-2 is a more detailed example of how one such primary prevention program developed and how it addressed mental health problems to encourage lifestyle changes and practice true primary prevention in the areas of nicotine addiction, nutrition, alcohol abuse, and suicide prevention.

EXHIBIT 16-2

AN EXAMPLE OF A MARINE CORPS PRIMARY PREVENTION PROGRAM

The development of a comprehensive preventive mental health program for the First Marine Division will be used as an example. The commanding general of the division was highly receptive to preventive mental health measures in general and having his division psychiatrist focused on prevention in particular because of the problem all Marine commands in southern California were having with suicides. The commander's support was crucial in establishing the program.

The program developed on two fronts: having the division psychiatrist become more fully integrated into the daily lives of the units and developing teams of chaplains and peer Marines led by the psychiatrist to provide stress management education and a network for support and referral.

The division psychiatrist became a "circuit rider," spending most of his time out at the units introducing himself to the commanders and offering to consult on individual cases and to provide lectures on appropriate topics at maintenance stand-down periods. He went out to the field with units and provided quick, convenient care for Marines. Being in the field also gave the psychiatrist the opportunity to educate the leaders. He became their unit psychiatrist, and they confided in him with their difficult issues.

One issue clearly surfaced as a major concern to many leaders—the problem of manipulative suicidal ideation. No other problem caused more consternation, frustration, and bad feeling between the commands, patients, and mental health professionals. After extensive study and trial and error, the division psychiatrist developed an education strategy for leaders. A presentation on personality development and personality disorders was developed for senior NCOs and officers. This lecture acknowledged the difficulties and frustrations leaders experienced in having Marines with personality disorders and offered specific, practical tips on how to handle their behavior. It became a very popular lecture and became a regular part of the 1st Sergeant's Course. Another presentation, this one targeted at NCOs, compared mental fitness with physical fitness and so correlated mental health with something comfortable and familiar to Marines.

Chaplains had been the de facto mental health representatives for each unit, but under this program chaplains became members of teams that included the division psychiatrist and peer Marines trained in critical event debriefing, peer counseling, and stress management. This trained peer is able to get past the "image armor" of Marines and get them to talk about a stressful incident or hear a presentation on stress management. A group of trained peers took on the task of educating the rank and file and was much more effective than those who had traditionally been assigned that task, the psychiatrist and the unit chaplain.

As this new approach was brought to bear on the problem of suicides, the concept of suicide prevention was changed from crisis intervention referral to stress management and stress prevention. Large-scale suicide prevention lectures were no longer given. Instead, trained peers gave presentations designed to improve coping skills in small unit classes with homogeneous groups. NCOs were targeted because they have the most influence over junior Marines. Marines who experienced this new approach felt that it was much more useful than the large classes. They felt free to discuss their concerns regarding mental health prevention issues in a more supportive and open atmosphere, thus decreasing the stigma associated with mental health issues. Psychiatric preventive mental health was made relevant and palatable to the Marines through the concept of comprehensive stress management. This approach also had the advantage of assuming and encouraging health rather than focusing on treating disease.

—Dr. Hammer

SECONDARY PREVENTION

To fulfill the second priority of CSC—secondary prevention—CSC personnel train leaders, chaplains, and medical personnel to make very early identification of dysfunctional stress reactions in individuals and organizations. Those front-line resources, supported by CSC personnel (when available), intervene at the duty site and treat the overstressed service member as close to the unit as feasible to maximize rapid return to duty. This far-forward intervention limits contagion of stress symptoms.

A very useful guide for preventive mental health surveillance of individuals presenting for primary care is contained in the report of the US Preventive Services Task Forces.[17] Teaching primary care health providers to diagnose and do basic early interventions is a major challenge for preventive medicine.

Surveillance

Preventive medicine, because of its roots in infectious disease, can provide credibility for the mental health providers when they interact with primary health care providers. Preventive medicine officers can also lend the mental health components support through surveillance and the presentation of epidemiologic data to commanders. One example would be seeing that the major commanders and health care providers are aware of the periodic DoD Survey of Health-Related Behaviors Among Military Personnel.[18] This regular report can dramatically show how preventable mental health problems and substance abuse saps manpower and efficiency from the force. Inclusion of alcohol screening data and behavioral incidents in the regular ongoing surveillance program can further support preventive mental health efforts by keeping primary care providers and commanders constantly aware of these losses.

Department of Defense Directive 6490.5, *Combat Stress Control Programs*, directs that the services shall collect combat (and operational) stress casualty rates separate from the neuropsychiatry and disease and nonbattle injury rates.[4] The two categories of Combat/Operation Stress Reactions and Psychiatric Mental Disorders are now included on the Joint Weekly DNBI Report.[19]

Specific Populations and Problems

The presence of women in an expanding range of military roles presents a new and challenging problem in the mental health area. Each service's medical department needs to be sensitive to women presenting with stress or post-traumatic stress disorder symptoms masked as somatic complaints. Many of these individuals may need specialized psychological treatment not available in a deployment environment. With sensitivity and support, though, they can complete a deployment successfully before receiving more definitive treatment.

Sexually transmitted diseases have been seen traditionally as preventive medicine problems, with emphasis on treatment and prevention. On deployment, the perception of what is acceptable behavior may be distorted. Further, alcohol and peer pressure may compromise individuals' expectations of themselves. Dangerous or injudicious sexual behavior involving commercial sex workers, pressure on female peers for sex, and even unusual or deviant sexual behavior may result. The medical departments should help the commands in dealing with these behavior problems to prevent the adverse consequences. This should involve a structured counseling program. Every individual should be educated regarding appropriate and safe sexual behavior. The occurrence of an STD should trigger a specific and documentable intervention modeled after the evaluation of an alcohol incident. (In many cases it will also be an alcohol incident.) Here again the attitude of commanders and the cooperation between mental health teams and preventive medicine assets is very important.

A few individuals will develop serious mental illness during the course of any deployment. These individuals should be identified and referred for psychiatric care. Many of these individuals can be treated as outpatients and can continue with their duties, depending on the operational situation. Some will, of course, be unfit and require evacuation, hospitalization, and administrative action to release them from service.

TERTIARY PREVENTION

The third priority of CSC is tertiary prevention or rehabilitation of manifest problems to prevent worsening and chronic disability. Established cases are provided with aggressive treatment to prevent chronic disability. This treatment is best provided at successive echelons of care in the combat zone (and communications zone, when present), before evacuation to the United States. This has the lowest priority of CSC activities, however, and may often be deferred until patients arrive at US facilities.

COORDINATING PREVENTIVE MEDICINE AND COMBAT STRESS CONTROL EFFORTS

Preventive medicine detachments and teams and CSC detachments and teams share similar territories and have common operational problems. Both CSC and preventive medicine personnel serve as advisers, consultants, and assistants to the chain of command. It is the commanders who have primary responsibility for controlling stress and for preventive medicine measures; many of preventive medicine's and CSC's recommendations are basic tenets of good leadership. Leaders under stress must focus on their primary operational mission, sometimes to the unintentional detriment of preventive medicine or CSC concerns, so the personnel from these areas serve as the system's institutional memory or "conscience."

Preventive medicine and CSC units share many characteristics. Both are small, dispersed, mobile teams that are dependent on their changing host units for logistical and administrative support. Both need to travel to visit units, inspect and survey, and give constructive feedback to commanders. They may both be put at risk by their movement and must provide their own security. Preventive medicine and CSC teams need operational intelligence about what is going to happen. Both need data about the occurrence of specific types of casualties, and both contribute input to statistical databases.

One lesson learned from operations in the Persian Gulf, Somalia, Haiti, and Bosnia is that preventive medicine and CSC should work closely with each other. (In Somalia, preventive medicine and CSC personnel were greeted with "Here comes the Bugs and Hugs team.") Personnel from the two disciplines can watch for each others' indicators and share observations of relevance. They should cross-train in each other's basic data collection techniques or temporarily cross-attach personnel between teams, so one team can serve both functions on a single site visit. They can cover for each other's interests at daily staff meetings when it is contrary to the mission for both small teams to have a representative present.

BRIEF REVIEW OF EACH SERVICE'S COMBAT STRESS CONTROL ORGANIZATION

Military organization is always a moving target, but it is useful to examine the CSC assets of each service, how they are deployed, and how they interact with their preventive medicine colleagues. The numbers and distributions of specialists related here were current as of 2000.

US Army

The US Army Medical Department's organizational and operational concept for CSC, like that for preventive medicine, requires basic coverage of all units that may be at risk, plus flexibility to concentrate additional resources to deal with shifting workloads and unpredictable eruptions. The first line of defense to assist commanders with basic force medical protection from combat and operational stress is the team of a behavioral science officer and an enlisted specialist, with a HMMWV (high mobility, multi-wheeled vehicle), in each combat maneuver brigade. The officer can be either a clinical psychologist or a social worker. This team should work out of the medical company, throughout the brigade support area, and forward to units in relatively safe locations; it interacts with all the unit leaders, chaplains, and medical teams. Unlike the preventive medicine sergeant at the brigade echelon, this Mental Health Section provides direct clinical evaluation and care to those soldiers who need it, preferably while they are still in their units. A similar two-person officer and enlisted team may be available at the area support medical companies in the corps and communications zone. At the division support medical company in the division rear (and in the area support medical battalion headquarters further to the rear), the officer in the Mental Health Section is a psychiatrist. The psychiatrist provides additional diagnostic and treatment capabilities and technical supervision for the brigade mental health teams and general medical personnel throughout the division.

The additional flexibility required by the CSC concept is provided by CSC teams from medical CSC detachments or a medical CSC company allocated to the corps or the echelon above corps. One CSC detachment is normally allocated per division. These units provide CSC Preventive Teams, which come forward as far as the maneuver brigades, preferably before combat commences, to augment the mental health sections. The preventive teams have a social worker and a psychiatrist (or psychologist), two enlisted specialists, and HMMWV. The CSC Restoration/Fitness Team has a psychiatric clinical nurse specialist, a psychologist (or psychiatrist), an occupational therapist, five behavioral science specialists and two occupational therapist NCOs, and

two vehicles. They bring tents, cots, and equipment to hold up to 50 stress casualties. They normally reinforce the division support medical company or an area support medical company but can send personnel further forward, especially to support units undergoing reconstitution after heavy attrition. Task-organized elements of the company or detachment also can collocate with combat support hospitals to provide tertiary prevention treatment (called "reconditioning") for stress casualties who do not return to duty within 3 days. With an additional 1 to 2 weeks of treatment outside of hospitals, many of these soldiers may return to duty in the theater rather than be evacuated to the United States.

The Army's medical headquarters, which provides command control in the corps, has mental health staff officers and NCOs to monitor the daily reports of the CSC units, as well as the general medical and preventive medicine surveillance statistics. They coordinate the redistribution of the mobile CSC teams to cover the shifting workload. Operational Stress Assessment Teams deployed from the Walter Reed Army Institute of Research, Silver Spring, Md, also may deploy into the theater to conduct questionnaire and interview surveys to assess stressors and stress for the Department of Army and the local commander. It is part of the CSC concept to strengthen the linkage between the Operational Stress Assessment Teams, the corps medical commands, the organic Mental Health Sections, and mobile CSC unit teams. Further development of automated data processing and the Theater Medical Information Program will greatly enhance capabilities for getting trends in stressors and stress and providing commanders with useful and timely recommendations on how to correct the problems.

The concept of having behavioral health expertise organic to the maneuver brigades, to serve as sensors, mentors, first responders, and receptor sites for reinforcing mobile CSC teams, is being incorporated into Army doctrine. The future operational concept for force health protection may integrate combat stress control, preventive medicine, veterinary teams, an area medical laboratory, epidemiology, and operational stress assessment teams under a single Medical Force Protection headquarters in the corps, both in garrison and on deployment.

US Navy

The US Navy deploys Special Psychiatric Rapid Intervention teams (SPRINT) from shore hospitals to assist command, survivors, and families after shipboard accidents, air crashes, and other highly traumatic events. Personnel are chosen for each specific mission from a roster of psychiatrists, psychiatric nurses, other mental health officers and technicians, and chaplains. They are not equipped to live and operate in the field environment. The neuropsychiatric service personnel aboard a hospital ship or in a Fleet Hospital ashore can function in the preventive mode; during the Persian Gulf War, one of the hospital ships sent a SPRINT to the amphibious assault ship *Iwo Jima* following a fatal boiler explosion. Recently, a clinical psychologist has been deployed on 6-month sea duty aboard the air craft carrier in some large task forces, to work primarily in preventive activities.[20]

US Marine Corps

Marine Corps medical support is provided by the Navy. Marine divisions have a division psychiatrist and psychiatric technician in the division surgeon section of the headquarters. The two surgical support companies of the medical battalion in the division's Force Service Support Group each have had a clinical psychologist assigned on mobilization. The Marine Corps has requested that the Navy provide a Combat Stress Platoon to the medical battalion. This could allocate one psychiatrist, two psychologists, and three psychiatric technicians to each "surgical company," which replaces the collection and clearing company in support of each brigade. However, these billets are not filled before deployment, and their future is uncertain.

US Air Force

The Air Force 50-bed Air Transportable Hospital included a Combat Stress Unit of up to two officers and two enlisted personnel. These teams deployed with their hospitals to Saudi airfields during the Persian Gulf War and to several humanitarian assistance missions. The Air Force is moving toward the concept of the Expeditionary Air Force, which will replace the fixed structure of the old hospitals with a modular design (often compared to Lego blocks). This will allow the assembly of a flexible medical support tailored to the specific situation. Two types of modular stress control teams have been organized and trained and are available from fixed Air Force hospitals for rapid deployment to augment any type of field medical facility, including a mobile air staging facility or an Army CSC element. The Mental Health Rapid Response Team consists of a clinical psychologist, a social work officer, and an enlisted technician; they have only light

equipment and provide preventive interventions and outpatient counseling. The Mental Health Augmentation Team has a psychiatrist, three psychiatric nurses, and two technicians. It deploys with a pallet of tents, cots, and supplies to join a Mental Health Rapid Response Team and provide a holding treatment facility, as well as more preventive assets. In addition to these teams, which are designed for deployments of up to 90 days, Air Force medical facilities also maintain Critical Incident Stress Management Teams of mental health personnel and chaplains who are on call to provide preventive interventions following crashes or other disasters.

SUMMARY

The military operations of the United States over the next 20 years cannot be predicted with great precision, but it is safe to predict that they will usually be joint operations under the Combined Combatant Commands. They are likely to continue to include training exercises with our coalition allies, humanitarian assistance and disaster relief, peace support and peace enforcement, and other stability operations but may escalate to major theater wars that may involve weapons of mass destruction. There is also the mission of federal military support to US civilian authorities in the event or threat of disaster or terrorist attack with chemical, biological, or radiation agents. While some of these diverse military operations may allow ample planning time, and even become routine, others will be contingency operations requiring haste and perhaps secrecy in the planning. Most will be conducted under the scrutiny of the worldwide media and commented on over the Internet. American and world society will continue to hold the US military to a very high standards for protecting its own personnel and other innocent people involved in the operation against both immediate and long-term harm from toxic exposures, diseases and other injuries, and the consequences of harmful psychological stress. The consequences of stress will include acute performance breakdown and misconduct stress behaviors, as well as post-traumatic stress disorder and undiagnosed chronic physical syndromes. To meet the challenge across this broad continuum of operations and problems and to do so efficiently in a resource-constrained situation, preventive medicine and CSC must forge a close, working alliance.

REFERENCES

1. Department of the Army. *Leaders' Manual for Combat Stress Control*. Washington, DC: DA; 29 September 1994. Field Manual 22-51.

2. Department of the Army. *Combat Stress Control in a Theater of Operations: Tactics, Techniques, Procedures*. Washington, DC: DA; 29 September 1994. Field Manual 8-51.

3. Department of the Army. *Planning for Health Service Support*. Washington, DC: DA; 9 September 1994. Field Manual 8-55.

4. Department of the Army. *Combat Stress Control (CSC) Programs*. Washington, DC: DA; 23 February 1999. Department of Defense Directive 6490.5.

5. Manning FJ. Morale and cohesion in military psychiatry. *Military Psychiatry: Preparing in Peace for War*. In: *Textbook of Military Medicine*. Washington, DC: Office of the Surgeon General and the Borden Institute; 1994.

6. Stokes JW, Banderet LE. Psychological aspects of chemical defense and warfare. *Mil Psychiatry*. 1997;9:395–415.

7. Airman is ousted as rebellion against anthrax vaccine grows. *New York Times*. March 11, 1999. National Desk Section.

8. Marine convicted in anthrax-shot case. *New York Times*. June 20, 1999. National Desk Section.

9. Funk D. Some continue to balk at anthrax shot. *Army Times*. February 22, 1999.

10. Khansari DN, Murgo AJ, Faith RE. Effects of stress on the immune system. *Immunol Today*. 1990;11:170–175.

11. Jones FD, Sparacino LR, Wilcox VL, Rothberg JM, Stokes IW, eds. *War Psychiatry*. Part 1. In: *Textbook of Military Medicine*. Washington, DC: Office of The Surgeon General, US Dept of the Army, and Borden Institute; 1995.

12. Freud A. Baines C, trans. *The Ego and the Mechanisms of Defense*. London: Hogarth Press; 1968.

13. Erickson E. *Childhood and Society*. New York: Norton; 1950.

14. Ciavarelli A. *Human Factors*. Monterey, Calif: School of Aviation Safety, Naval Postgraduate School; 1995. Available at http://web.nps.navy.mil/~avsafety/courses/

15. Schneidman ES. A conspectus of the suicidal scenario. In: Maris RW, ed. *Assessment and Prediction of Suicide*. New York: Guilford Publications; 1992.

16. US Marine Corps. *US Marine Corps Semper Fit Program Manual*. USMC: 2000. MCO P1700.29.

17. US Preventive Services Task Force. *Guide to Clinical Preventive Services*. 2nd ed. Baltimore: Williams & Wilkins; 1996.

18. Bray RM, Froutil LA, Wheeles SC, et al. *Department of Defense Survey of Health Related Behaviors Among Military Personnel*. Research Triangle Park, NC: Research Triangle Institute; 1995.

19. Joint Chiefs of Staff. *Deployment Health Surveillance and Readiness*. Washington, DC: JCS; 4 Dec 1998. Memorandum.

20. Paige-Dobson B. Personal communication, 1997.