

FM 8-55

**PLANNING
FOR
HEALTH SERVICE SUPPORT**



HEADQUARTERS, DEPARTMENT OF THE ARMY

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PLANNING FOR HEALTH SERVICE SUPPORT

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PREFACE

This manual provides guidance to health service support (HSS) planners at all echelons of care within a theater of operations (TO). It contains a digest of the accepted principles and procedures pertaining to HSS planning. Information in this publication is applicable across the spectrum of military operations. It is compatible with the Army's combat service support (CSS) doctrine. Readers should have a fundamental understanding of Field Manuals (FMs) 8-10, 100-5, 100-10, 100-15, 100-20, 101-5, and 101-10-1/1 and -1/2. The planner must supplement or replace the data in this manual with any known factors to meet the needs of his particular situation.

The staffing and organizational structure presented in this publication reflect information in the most current living tables of organization and equipment (LTOE) as of calendar year 1992. However, staffing is subject to change to comply with manpower requirements criteria outlined in Army Regulation (AR) 570-2. Your table of organization and equipment (TOE) can be subsequently modified.

A series of FMs currently under development will provide techniques and procedures for specific HSS organizations and activities in the TO. These manuals will be published over the next several years.

This publication implements the following North Atlantic Treaty Organization (NATO) and American, British, Canadian, and Australian (ABCA) International and Quadripartite Standardization Agreements (STANAGs and QSTAGs, respectively):

NATO STANAG	ABCA QSTAG	TITLE
2068	322	Emergency War Surgery
	291	Interface of Medical Materiel Procedures
	815	Blood Supply in the Area of Operations
	909	Principles of Prevention and Management of Combat Stress Reaction
2135		Procedures for Emergency Logistic Assistance
2500		NATO Handbook on the Medical Aspects of NBC Defensive Operations— AMedP-6(A)
2873		Concept of Operations of Medical Support in Nuclear, Biological, and Chemical Environments—AMedP-7(A)
2874		Planning Guide for the Estimation of Battle Casualties (Nuclear)— AMedP-8
2939		Medical Requirements for Blood, Blood Donors, and Associated Equipment

The proponent of this publication is the United States (US) Army Medical Department Center and School (AMEDDC&S). Send comments and recommendations on Department of the Army (DA)Form 2028 directly to Commander, AMEDDC&S, ATTN: HSMC-FCD, Fort Sam Houston, Texas 78234-6123.

Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

CHAPTER 1

HEALTH SERVICE SUPPORT IN ARMY OPERATIONS**1-1. The Army's Keystone Doctrine**

Field Manual 100-5, the Army's keystone doctrinal manual, describes how the Army thinks about the conduct of operations. It is a condensed expression of the Army's participation in diverse environments in terms of what the force does in operations other than war (OOTW) and how the Army conducts war.

1-2. Range of Military Operations

a. The US seeks to achieve its strategic aims in three diverse environments.

(1) *Peacetime.* During peacetime, the US attempts to influence world events through those actions which routinely occur between nations. Typical peacetime operations include—

- Disaster relief.
- Nation assistance.
- Security and advisory assistance.
- Counterdrug operations.
- Arms control.
- Treaty verification.
- Support to domestic civil authorities.
- Peacekeeping.

(2) *Conflict.* Conflict is characterized by confrontation and the need to engage in hostilities short of war to secure strategic objectives. Although the American people, our government, and the US Army prefer peace, hostile forces may

seek to provoke a crisis or otherwise defeat our purpose of deterring war by creating a conflict. At the point where diplomatic influence alone fails to resolve the conflict, persuasion may be required, and the US could enter a more intense environment in which it uses the military to pursue its aim.

NOTE

The Army classifies its activities during peacetime and conflict as OOTW.

(3) *War.* The most violent and high-risk environment is that of war, with its associated combat operations.

b. Regardless of the specific type of operation, a return to the environment of peace is a major component of the desired strategic end-state.

1-3. Army Operations

a. Often the Army will find itself operating in all environments at once. The Army's mission is that of—

(1) Projecting land power to distant theaters, The Army supports power projection through force projection. This is a demonstrated ability to rapidly alert, mobilize, deploy, and conduct operations anywhere in the world. Forces are moved from the continental United States (CONUS) or a theater in response to requirements of war or OOTW. Force projection spans from mobilization and deployment of forces to distant theaters, to their redeployment to CONUS or their home theater and, subsequently, to their demobilization. Force projection involves the entire Army, as a forward presence or CONUS-based, both active

and reserve components, and supported by Department of Defense (DOD) civilians and civilian contractors.

(2) Conducting operations in several environments, sometimes simultaneously, and maintaining forces to operate across the spectrum of war and OOTW as part of joint and combined forces. The Army does not fight alone. It integrates its efforts in joint operations with its sister services, with other national agencies, and will usually be in conjunction with allies in operations outside the US.

(3) Supporting our allies in nation assistance and peacetime competition. Army forces routinely conduct peacetime activities outside continental United States (OCONUS) in OOTW as the potential for conflict escalates.

b. The Army must focus on deterring aggression through strength with a smaller force. It must also foster initiative in its leaders so that they will be able to adjust to the dynamics of the battlefield. It is important to realize that the Army's keystone doctrine discussed in FM 100-5 represents an evolution, not a revolution, in our military thinking.

1-4. Need for a Health Service Support System

a. The dynamics of our global responsibilities require a HSS system that is flexible to support the diversity of operations.

b. Providing comprehensive HSS to Army Operations requires continuous planning and synchronization of a fully integrated and cohesive HSS system. The system must be responsive and effective across the full range of possible operations. Medical unit commanders and HSS planners must be proactive in changing

situations, applying the medical battlefield rules as the situation requires.

1-5. Medical Battlefield Rules

a. The HSS planner and operator applies the following rules, in order of precedence, when priorities are in conflict:

(1) Maintain medical presence with the soldier.

(2) Maintain the health of the command.

(3) Save lives.

(4) Clear the battlefield.

(5) Provide state-of-the-art care.

(6) Return soldiers to duty as early as possible.

b. These rules are intended to guide the HSS planner to resolve system conflicts encountered in designing and coordinating HSS operations. Although medical personnel seek always to provide the full scope of HSS in the best manner possible, during every combat operation there are inherent possibilities of conflicting support requirements. The planner or operator applies these rules to ensure that the conflicts of HSS are resolved appropriately.

c. The rationale for the battlefield rules is based on prevention of disease and injury and the evolving clinical concept which demonstrates that with good medical care the trauma victim will probably survive the injury.

(1) Good medical care, to be precise, means that the injured soldier receives prompt

medical care: he is adequately resuscitated, he is stabilized, and stabilization is maintained during evacuation.

(2) The goal of resuscitation and stabilization is the restoration of vascular volume with adequate oxygen delivery to the cells. This condition means that the patient's bodily systems have available the amount of oxygen demanded to ensure viability. The patient can then be evacuated over a greater distance to a rearward medical treatment facility (MTF) with time being less of a major concern to save life or limb.

(3) Good medical care and stabilization prior to evacuation is a major aspect in determining whether the patient survives provided stabilization is sustained during evacuation. Early medical care with the ability to adequately stabilize must be available with less delay from the time of injury than it has ever been in the past. An enhanced capability to sustain stabilization during evacuation must also be provided.

d. By way of illustration, consider a rapid assault of short duration where the composition of the task force precludes deployment

of a definitive medical care facility. A medical support conflict now arises between supporting the commander's intent and providing optimal care to the soldiers. The conflict can be resolved appropriately by applying the battlefield rules. Planners must increase the medical presence with the soldiers to resuscitate casualties and maintain stabilization pending evacuation. Greater reliance on forward medical presence compensates for the inability to employ hospitals near the battlefield, supports the commander's intent, and still provides the patient with state-of-the-art medical care within the limitations imposed by the battlefield. The battlefield rules are thereby used as a means of conflict resolution.

1-6. The Health Service Support Planning Goal

The planner, by carefully applying medical doctrine and the principles outlined in this manual, will strive to provide the best possible HSS system for all Army operations. Proper planning enhances the capability of medical units to provide effective HSS which is a key factor in conserving combat power.

CHAPTER 2

HEALTH SERVICE SUPPORT ESTIMATES, PLANS, AND ORDERS**Section I. PRINCIPLES OF PLANNING****2-1. Health Service Support Planning**

a. Current HSS planning addresses the management of normal day-to-day operations, while short- and long-range planning cover projected operations of successively longer periods. Planning is a continuous process. The planner must remain sensitive to the demands for HSS based upon constantly changing situational and operational requirements. During current operations, staffs at all levels (especially higher command levels) must continuously plan for subsequent operations. Regardless of the type of military operation being supported or the level of command providing the support, HSS plans must be made. These plans may be either formal written plans or informal thought processes. Either plan must be well-communicated to be effective. The planner must proceed in an orderly, progressive manner to ensure maximum effort and completeness. The specific time required to plan varies with the type, size, and level of the command concerned. The amount of detail required to plan will also vary with the—

- Type of command.
- Experience of all personnel in the command.
- Complexity of the operation.
- Factors of combined, joint services, or interagency participation.
- Time available.

b. Planners must develop well-thought-out plans and validate the plans through field training exercises and command and staff simulations. The process of thinking through a plan

and conducting "What if?" drills by changing critical variables is especially useful. This process allows the HSS planner to envision potential results and to anticipate problems. Consequently, the planner can become proactive instead of being reactive. The proactive planner can eliminate potential problems before they cause adverse consequences. He has more time to accomplish the required synchronization to adjust operations when adverse consequences arise because he has anticipated problems and has already considered potential solutions. The proactive planner has more time to address unanticipated problems and more time to plan HSS for future operations.

c. Effective and timely planning is essential to operate successfully on the battlefield. Failure in the planning process will result in commanders, their staffs, and subordinate units finding themselves unprepared to function in military operations. The modern, mobile battlefield is the wrong place to be operating precariously. That approach will cost soldiers' lives. Planners must have the initiative to ask questions that may affect the performance of their units, and they must know their units well enough to answer questions when asked.

2-2. Planning Sequence

The planning sequence is a series of steps representing a logical progression of command and staff actions required to develop plans. The planning sequence attempts to prepare for all developments that can reasonably be anticipated. Although some actions ordinarily occur sequentially, others take place concurrently. Field Manual 101-5 provides an in-depth discussion of the planning process.

2-3. Current Plan

A plan developed in the planning sequence described in FM 101-5 is not necessarily implemented on completion. As new information becomes available or as events occur, the plan is reviewed and updated accordingly. This action continues until the plan is implemented or until no requirement exists for the plan.

2-4. Coordination of the Plan

a. Coordination is one of the most essential elements in successful planning. From the beginning, the planner must continuously coordinate the various types of operations with the commander and his assistants. With a knowledge of the mission, the current situation, and the objectives, the planner can better plan for the support that will be required. This method enables him to begin the planning for support early and allows him time for more thorough planning. He must ask questions such as, *What resources will I need to do the job? Where will Z obtain them?*

b. The planner must also coordinate with those staff representatives at the various headquarters who can furnish him needed information and who must coordinate their plans with his. He must begin early coordination in those areas requiring close HSS interface within the CSS community.

c. Building the HSS interface as part of the CSS community is critical. Health service support depends on the CSS system for a multitude of support services such as—

(1) Class I (Subsistence, including medical B rations and gratuitous health and welfare items).

(2) Class II (Clothing, individual equipment, tentage, tool sets and tool kits, hand

tools, and administrative and housekeeping supplies and equipment). This class includes items of equipment (other than principal items) prescribed in authorization/allowance tables, and items of supply (not including repair parts).

(3) Class III (Petroleum, oils, and lubricants [POL]: Petroleum fuels; lubricants, hydraulic and insulating oils, preservatives, liquid and compressed gases, chemical products, coolants, deicing and antifreeze compounds, together with components and additives of such products, and coal).

(4) Class IV (Construction: Construction materials including installed equipment and all fortification/barrier materials).

(5) Class V (Ammunition, individual small arms ammunition, and pyrotechnics for defense of self and patients).

(6) Class VI (Personal demand items).

(7) Class VII (Major end items such as vehicles and aircraft which are ready for their intended use).

(8) Class IX (Maintenance repair parts for associated support items of equipment [ASIOE]).

(9) Class X (Material to support nonmilitary programs).

(10) Other support services such as—

(a) Nonmedical transportation.

(b) Potable water resupply.

(c) Liquid waste disposal.

(d) Direct support(DS)/general support (GS) maintenance backup.

(e) Trash/solid waste disposal.

(f) Medical intelligence dissemination.

(g) Rear operations.

(h) Mortuary affairs.

(i) Site support by engineer units.

(j) Movement control.

(k) Reconstitution.

(l) Delivery of Class VIII supplies.

(m) Assistance in movement of medical units.

(n) Nonmedical augmentation, such as personnel and air and ground transportation from nonmedical units, to medical evacuation assets in mass casualty situations.

d. Commanders and staff (planners) within units must know how, when, and with whom to coordinate (synchronize) both internally and externally. Proficient synchronizers tend to think about what is happening and what will be happening two levels down, two levels up, and on each side.

e. Just as HSS commanders must be multifunctional to recognize CSS requirements, so too must future multifunctional CSS commanders recognize medical requirements to integrate CSS effectively across the spectrum of military operations. They will have to understand what the HSS system is all about as they will have an

inherent responsibility for ensuring that HSS is planned and provided in a timely, responsive, and effective manner.

2-5. Characteristics of the Plan

A good HSS plan—

- Provides for accomplishing the mission.
- Is based on facts and valid assumptions. All pertinent data have been considered for their accuracy, and assumption have been reduced to a minimum.
- Provides for the use of existing resources. These include resources organic to the organization and those available from higher headquarters.
- Provides for the necessary organization. It clearly establishes relationships and fixes responsibilities.
- Provides for personnel, materiel, and other arrangements for the full period of the contemplated operation.
- Provides for decentralized execution of the plan. It delegates authority to the maximum extent consistent with the necessary control.
- Provides for direct coordination during execution between all levels.
- Is simple. It reduces all essential elements to their simplest form and eliminates those elements not essential to successful action.
- Is flexible. It leaves room for adjustments because of operating conditions and, where necessary, stipulates alternate courses of action (COA).

- Provides for control. Adequate means exist, or have been provided, to carry out the plan according to the commander's intent.
- Is coordinated. All elements fit together, control measures are complete and understandable, and mutual support requirements are identified and provided for.

2-6. Planning Guidance

The commander provides planning guidance to the staff as required. The frequency, amount, and content of planning guidance will vary with the mission, time available, situation, information available, and experience of the commander and staff. The commander may choose to issue initial planning guidance to the staff when the mission to be supported is announced; however, he must take care not to unduly bias staff estimates. This guidance is used to direct or guide the attention of the staff in the preparation or revision of staff estimates and serves to expedite the decision-making process. Planning guidance should include all elements of the commander's intent.

2-7. Basic Planning Considerations

The commander's intent and the mission assigned to the combat forces must be the basic consideration of all components in their planning for HSS.

a. Health service support preparations and planning must be initiated early and designed specifically to support the operation.

b. Certain basic factors and premises must be used for sound HSS planning. Among the most important are—

(1) Preparing a HSS estimate and a concept of the HSS operation.

(2) Coordinating the efforts of the health services of the component forces to make maximum use of available resources.

(3) Planning to assure flexibility for unforeseen contingencies such as nuclear, biological, and chemical (NBC) and directed-energy (DE) warfare.

Section II. THE HEALTH SERVICE SUPPORT ESTIMATE

2-8. Surgeon's Responsibility

a. After the commander provides planning guidance, the surgeon should prepare estimates of requirements and descriptions of projects to be undertaken for establishing adequate HSS systems to support the mission. He prepares this in his role as a special staff officer. The surgeon makes a health service estimate that may stand alone, or that may be incorporated into the personnel estimate. This estimate forms the basis

for the subsequent HSS plan. All HSS possibilities that could affect the successful support of an operation must be considered. (See FM 8-42 for additional discussion.)

b. The surgeon must determine what basic load modifications are required, what additional people skills are required, and any mission unique training that must be conducted. The surgeon must know his intelligence element, how medical information requirements are made

known to the appropriate intelligence element, what medical intelligence is available, how medical intelligence is disseminated, and how to integrate intelligence in general and medical intelligence in particular into HSS operation plans (OPLANs)/operation orders (OPORDs). (See Appendix F and FM 8-10-8.)

c. The commander uses the HSS estimate, along with estimates of other individual staff members, in the preparation of his own estimate. He uses the information in the HSS estimate to select the best COA for the command, and for inclusion in the operational and logistics support plans.

d. After considering all the staff estimates, the commander completes his own estimate and makes his decision. In the case of a medical command (MEDCOM) or medical brigade headquarters, the estimate is made by the commander, assisted by his staff, and normally results in the publication of the HSS plan for the command. At lower echelons, the estimate is a continuous mental process integrated in the planning process.

2-9. Format for the Estimate

The process followed in preparing a HSS estimate of the situation is the same as that followed in preparing an operational estimate.

a. Staff estimates may be presented orally, or in writing. Often, only the staff officer's conclusions or recommendations are presented to the commander.

b. An example for a health service estimate is found in Appendix B. This format is applicable to any echelon of command and can be used under any operational condition. It is lengthy and includes many more details than may be needed in some situations. Each HSS planner

must vary it according to his needs. There is no beginning or end to the estimate. It must be continuously and constantly revised as circumstances change, so that planned support can be provided to the command from the time it is mobilized until it is inactivated.

c. The estimate is intended to be a timesaving and integral part of providing adequate support for all types of operations. If the estimate is prepared by the command surgeon (corps surgeon/corps support command [COSCOM] surgeon), it must support the tactical commander's intent. If prepared by a command such as a MEDCOM, medical brigade, or medical group, it becomes the estimate of the medical commander assisted by his staff. Normally, estimates at the division surgeon's level are not formal written documents; however, health service considerations may appear in a written personnel estimate prepared by the G1/S1 (Personnel/Adjutant, respectively). The commander or the staff officer should use the format as a guide and checklist.

2-10. Mission

a. The senior medical commander/command surgeon is responsible—

(1) For analyzing the mission of the command from the HSS perspective.

(2) For outlining the concept of HSS operations, assigning taskings, and providing guidance for a casualty care system in support of the commander's intent and concept of operations.

(3) For coordinating HSS with civil affairs, other Services, and/or alliance and coalition partners, and other government agencies.

(4) For coordinating HSS with host nations by providing medical liaison teams to countries with which the US has HSS agreements

or with relief agencies participating in the operation in concert with civil affairs.

(5) For anticipating the lack of HSS infrastructure in a host nation and determining the impact upon refugee management.

b. The HSS mission is the basis for the estimate and is stated clearly in paragraph 1 of the estimate. It always conforms to the operations in which the supported personnel are engaged. For example, the mission might be to *provide HSS to the 52d Mechanized Division in a deception operation on 10 and 11 June 92. The division attacks on 110310 June to secure high ground on Hills 123, 456, and 789. 3d Brigade makes the main attack on the west.* In another example, the mission may be to *save lives by providing basic medical care, medical evacuation, and preventive medicine (PVNTMED) sanitation enforcement and education.*

2-11. Situation and Considerations

The health service situation will consist of HSS facts, assumptions, and deductions that can affect the operation. In this logical and orderly examination of all the HSS factors affecting the accomplishment of the mission, the HSS planner must be familiar with the commander's intent. The information required includes medical intelligence which is obtained through supporting intelligence channels. (See FM 8-10-8 for a discussion on information requirements and priority intelligence requirements.) The planner must conduct a thorough evaluation of the enemy situation and the area of operations (AO) from the standpoint of their effects on the health of the command and HSS operations. These are enumerated as follows in paragraph 2 of the estimate:

a. *Enemy Situation.* From his specialized point of view, the surgeon must consider

the enemy's ability to adversely affect the HSS operations of the command.

(1) The enemy's attitude toward the Geneva Conventions could alter HSS if he is likely to attack the friendly HSS system, or if he is known to have attacked it. It could also determine the type of medical care friendly prisoners of war can expect.

(2) The enemy's strength, disposition, probable movements, logistic situation, and combat efficiency must be considered to estimate the number of patients requiring hospitalization and evacuation.

(3) The enemy's ability to inflict conventional and unconventional (NBC and DE warfare) casualties is a concern. The type of enemy weapons employed will influence the number and type of combat casualties. Heavy artillery bombardment, air attack, surprise weapons and tactics, and continuous operations increase battle fatigue casualties, while guerrilla or terrorist attacks cause other combat stress reactions. Supplementary hospitalization and evacuation resources may be required.

(4) The enemy's medical capabilities, sanitation discipline, and the health of potential enemy prisoners of war (EPW) can be expected to influence the command's medical work load as well as the EPW patient work load.

b. *Friendly Situation.* A preliminary estimate of medical work loads can be made when the friendly forces' strength, combat efficiency, position, weapons, and plan of action are compared with those of the enemy.

(1) This comparison considers the tactical plan of the commander to determine the location of areas of casualty densities and the best placement of HSS units.

(2) He must consider the enemy's ability to disrupt the rear operations of the command. Medical units in the rear must be incorporated into base clusters. Units must be positioned logically to ensure maximum security. These facilities are so numerous that in many cases the ideal type of security may not be available. The threat to these units must not be aggravated by positioning them near areas of high attack probability such as ammunition or nuclear storage facilities. To successfully defeat enemy deep operations, clear-cut lines of authority for security must be established. These lines of authority must be clearly identified at all echelons before any plans or operations are initiated. (See FM 100-15 or FM 71-100 for detailed discussions.) Field Manual 8-10 addresses Article 24 of the "Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field (GWS)." It also discusses US Army policy on the use of Article 24 personnel in perimeter defense.

(a) Article 24 of the GWS provides special protection for "Medical personnel exclusively engaged in the search for, or the collection, transport, or treatment of the wounded or sick, or in the prevention of disease [and] staff *exclusively engaged* in the administration of medical units and establishments. . . . [Emphasis added.]"

(b) The GWS does not itself prohibit the use of Article 24 personnel in perimeter defense of nonmedical units such as unit trains logistics areas or base clusters under overall security defense plans, but the policy of the US Army is that Article 24 personnel will not be used for this purpose. Adherence to this policy should avoid any issues regarding their status under the GWS due to a temporary change in their roles from noncombatant to combatant. Medical personnel may guard their own unit without any concurrent loss of their protected status.

c. *Characteristics of the Area of Operations.* The HSS planner should obtain medical

intelligence regarding the AO from the supporting intelligence element (FM 8-10-8). This information must be considered in the planning process. The characteristics of the AO influence the number of patients, as well as their collection and evacuation.

(1) *Terrain.*

(a) Topography has the same bearing on HSS planning as it does on tactical planning. Using terrain to one's advantage may reduce combat casualties therefore decreasing the anticipated patient work load.

(b) Natural conditions may favor large populations of arthropods (insects, arachnids, and crustaceans) which commonly are vectors of many diseases and therefore could directly increase the incidence of disease.

(c) Mountains, forests, and swamps can be expected to hamper HSS. Altitude exposure at high terrestrial elevations frequently results in reduced military performance and can result in acute mountain sickness. Transfer of patients from shore to ship is particularly dependent upon coastline and harbor conditions. Availability of roads, landing strips, and railroads will be important in developing evacuation alternatives. Terrain factors such as protection, shelter, and water supply are considered in consonance with evacuation alternatives and with the selection of medical treatment facility locations. Evacuation resources must be augmented when using difficult terrain.

(d) An increase in the hospital bed allocation should be considered if the terrain analysis suggests a significant increase in battle injury (BI), wounded in action (WIA), disease admissions, or difficulty in evacuating patients. Preventive medicine detachments should be tasked to reinforce forward deployed units if disease potential warrants.

(e) The duration of hazards from chemical-biological warfare agents may increase in the forest where the air is still and the foliage is thick.

(2) *Weather and climate.*

(a) Climate influences the incidence of frostbite, hypothermia, snow blindness, immersion injuries, sunburn, heat exhaustion, heatstroke, combat stress, and other medical manifestations that detract from combat unit effectiveness.

(b) Tropical, desert, and tundra conditions strongly favor the growth of arthropod populations that highly increase the incidence of disease casualties. Preventive medicine units become increasingly important under such adverse conditions.

(c) Humidity may affect storage life of medical supplies and equipment.

(d) Precipitation affects available water supply, may impact on hospital site selection, and may damage unprotected supplies. Rain and snow will have dramatic effects on roads, changing evacuation routes and increasing turnaround times.

(e) Temperature variations may require special protection of medical supplies and may increase patient load because of heat and cold injuries. Weather also impacts on the level of degradation incurred while in mission-oriented protective posture (MOPP) and thus has a direct impact on heat casualty volume. Additionally, requirements for medical facilities, supplies, and evacuation resources can be expected to increase. Because the rate of deterioration of health service logistics is influenced by both climate and weather, storage facilities must be estimated accordingly. Evacuation alternatives, particularly by air, will

be highly influenced by weather conditions. (See FM 1-230.)

(3) *Dislocated civilian population and enemy prisoners of war.*

(a) Wartime stress and physical damage can lead to rapid deterioration of urban and rural utilities such as electricity, water, and sewage services. Consequent increases in communicable disease could present a threat to which friendly forces are vulnerable. Enemy prisoners of war and refugee populations also tend to be sources of communicable disease. Because cities and towns tend to be located along axes of peacetime economic activity, they invariably confront CSS units moving on main supply routes (MSRs) and at crossroads of principal highways. Even if a disease outbreak is suspected, bypass of such areas is generally impractical. Refugee populations, if not properly managed by local authorities or military police, also tend to concentrate on major transportation routes.

(b) Civil Affairs (CA) and military police have the responsibility of working with the local authorities to manage the flow of refugees.

(c) Preventive medicine teams could be tasked to assist local authorities to reactivate essential civilian sanitary services, or to establish hygienic refugee assistance facilities.

(d) Veterinary units may be used to assist in the control of animal diseases that present a risk to the human population or to the agricultural economy. Veterinary units will also inspect subsistence fed to dislocated civilians and EPW to prevent foodborne diseases, as required. This will limit the impact these populations have on Army Medical Department (AMEDD) resources.

(e) *If resources permit*, MTF or medical treatment/holding cot allocations could

be increased to accommodate known or suspected outbreaks of disease.

(f) Class VIII and Class X materiel (materiel to support nonmilitary programs) could similarly be accumulated in anticipation of a larger demand.

(g) Increased evacuation and hospitalization requirements for dislocated civilian populations will be supported by local resources, nongovernmental organizations, and relief agencies, whenever possible. Coordination with these local medical agencies should be proactive and accomplished in concert with CA units. This should minimize the strain on military medical resources.

(4) *Flora and fauna.* Certain kinds of arthropods, animal diseases, and toxic plants encountered in the area may also contribute to the noneffective rate of the command. Orientation of personnel and safeguards against arthropods, animals, and vegetation may be necessary. Preventive medicine units can develop desired information. Veterinary units can evaluate the local crops and animals for availability and suitability as fresh food sources. As a TO expands and matures, more fresh food will be needed to support US Forces.

(5) *Disease.* The effects of major diseases are delayed because of incubation periods. Knowledge of potential losses to malaria, dengue, sandfly fever, typhus, and other endemic disease is invaluable in determining appropriate preventive and control measures. These measures include requirements for basic personal protective measures, immunizations, chemoprophylaxes, immunoprophylaxes, pest management, or other appropriate measures. Should time not allow for preventive measures, disease information will be essential in estimating disease rates and for projecting strength changes in maneuver units.

(6) *Local resources.* The HSS planner requires information concerning the availability from local sources of such items as food, ice water, pharmaceuticals, and medical gases (oxygen and anesthetics).

(a) Although other units of the command are responsible for procuring food and water, appropriate veterinary services or PVNTMED detachments are responsible for food wholesomeness, hygiene, safety, and quality assurance and for water treatment and storage.

(b) Availability of pharmaceuticals or medical gases in the area affects supply stockage levels and transportation required for the operation.

(c) The use of local facilities such as hospitals, medical clinics, dental and veterinary schools, and their associated staffs should be considered.

(d) The civil-military operations (CMO) staff can provide liaison with indigenous health professionals and organizations.

(7) *Nuclear, biological, and chemical and directed-energy weapons.* The numbers and types of NBC/DE casualties depends on the scenario. However, these weapons produce mass casualties (MASCAL) whenever they are used. (See FM 8-10-7.) The uncertainty concerning the numbers, types, and extent of injuries from NBC or DE weapons is made even more complex since injuries from more than one type of these weapons can affect the methods of patient treatment and prognosis. Another example is that acute ionizing radiation exposure increases the morbidity and mortality of virtually all patient types. Such insidious weapons and devices also produce a large number of patients with stress-related injuries whose symptoms may be difficult to distinguish from true signs of injury. Nuclear, biological, and chemical weapons may produce large numbers of

patients during a single attack so that medical units will have to face large peak patient loads. Directed energy weapons may also be used by the threat force. The effects could be severe on HSS operations.

(a) The CMO staff can identify nonmilitary organizations to support HSS operations under these conditions.

(b) The NBC and DE threat must be evaluated and included in the overall planning concept to determine how to counter it. All medical units must be prepared to execute coordinated MASCAL plans.

(c) Health service support units will not generally establish themselves in a contaminated environment. However, all units in the theater are at risk of attack. Furthermore, remaining or entering a contaminated area maybe required to provide HSS. Commanders must ensure that units and personnel are prepared to survive, defend, and continue operations in or near a contaminated area by instituting MASCAL standards for medical treatment. Presence of critical facilities such as nuclear power plants or chemical plants could impact on medical operations. The Bhopal and Chernobyl incidents are excellent examples of how these type facilities could affect medical operations.

(d) Veterinary service personnel will advise all DOD theater logistics units and user units on storing subsistence to prevent NBC contamination, on monitoring and detecting NBC contamination of rations and, when necessary, on decontaminating rations to ensure food safety.

(e) Preventive medicine units and all HSS personnel will be alert for abnormal disease patterns in order to detect NBC effects. The sick soldier or local population is likely to be the first indication of biological warfare use; rapid

identification may be critical to the survival of theater forces.

(f) The Area Medical Laboratory (AML) has special capabilities to support HSS units in NBC environments. The AML is described in Chapter 7.

d. *Strengths to be Supported.* The strengths to be supported are usually shown in a table in which the personnel strength is broken down into categories indicating the types and amounts of support to be required. These categories may include Army, Navy, Air Force, Marines, allies, EPW, indigenous civilians, detained persons, and civilian internees. Various experience rates are applied against these strengths to estimate the expected patient load. The detail in which the tabulation is prepared varies with the scope and type of the operation.

e. *Health of the Command.*

(1) An important consideration in making the estimate is the health of the command. The following factors affect casualty estimates and indicate command and medical measures that should be taken prior to each operation being planned:

- Acclimation of troops.
- Presence of disease.
- Status of immunizations and drug prophylaxis.
- Status of nutrition.
- Adequacy of clothing and equipment.
- State of fatigue, morale, unit cohesion, and training.

- Physical conditioning.
- Oral health fitness level.

(2) The planner is concerned with providing HSS regardless of patient origin. He is interested in all causes for patient admission, requirements for beds, geographic dispersion of patients, and the accumulation in medical work load. Combat commanders are primarily interested in assessing combat power from which they can develop alternatives for subsequent operations. The surgeon is best served by data expressed as "rates/1000/period," which simplifies planning for HSS. The commander can better evaluate alternative operational concepts if projected losses are expressed as "percentage reduction" in combat strength of combat units. Recognizing that major disease impacts are delayed because of incubation periods, knowledge of potential losses to malaria, dengue, sandfly fever, typhus and similar diseases is invaluable for—

- Phasing the proposed tactical operations.
- Managing individual replacements.
- Task organizing maneuver units for the next operation.

(3) Therefore, if disease is expected to exert a significant impact on the force, consideration should be given to projecting changes in the strength of subordinate components not only for disease and combat losses expected during the operation of concern but also for disease losses that will exert their operational impact during following periods. The return to duty (RTD) rate of WIA and disease and nonbattle injury (DNBI) cases is also of primary interest to the commander and staff.

f. Assumptions. An assumption is a supposition on the current or future course of events, assumed to be true in the absence of positive proof. Assumptions are sometimes necessary to enable the planner to complete the estimate of the situation and to decide on a COA to support the operation. In addition to a statement of facts, logical assumptions are included in this paragraph as a basis for development of the estimate. Subsequently, these assumptions may be deleted or modified as new information becomes available. Assumptions are usually restricted to higher levels of planning and normally apply only to factors beyond the control of friendly forces such as enemy capabilities and weather.

g. Special Factors. Factors that are not listed elsewhere or items of such importance to the particular operation that they merit special consideration are mentioned. For example, how patients suffering from combat stress may affect the operation is a consideration.

2-12. Health Service Support Analysis

The analysis in paragraph 3 of the estimate is a logical comparison of the estimated requirements of the command and the support means available for the operation.

a. Patient Estimates. Estimates of patients can be prepared from data compiled in paragraph 2 of the estimate. Patients are estimated as to number, distribution in time and space, areas of patient density, possible MASCAL, and lines of patient drift and evacuation. The surgeon can consult experience tables to assist him in determining requirements for the operation. From this data, hospital bed estimates can also be made. (See Chapter 5.)

b. Support Requirements. Requirements are calculated from the estimate of patients and the data contained in paragraph 2 of the

estimate. The planner should consider separately the requirements for the following:

- (1) Patient evacuation, medical regulating, and patient reporting and accountability (Chapter 4).
- (2) Hospitalization (Chapter 5).
- (3) Health service logistics, to include blood management (Chapters 6 and 8, respectively).
- (4) Medical laboratory services (Chapter 7).
- (5) Dental services (Chapter 9).
- (6) Veterinary services (chapter 10).
- (7) Preventive medicine services (Chapter 11).
- (8) Combat stress control (CSC) services (Chapter 12).
- (9) Area medical support (Chapter 13).
- (10) Command, control, communications, computers, and intelligence (Chapter 14).
- (11) Support to other Services (Chapters 2,6,8, and 10).
- (12) Others, as appropriate.

Neither the resources available nor the allotment of specified units should be considered at this stage in the analysis. Only the HSS resources REQUIRED to support the commander's operation plan are determined.

c. Resources Available. Having determined the HSS requirements, the surgeon then

considers the resources on hand or readily available to meet the requirements. See paragraph 3 of the estimate, Example B-1, Appendix B. Maximum use of available personnel and supplies promotes the overall effectiveness of the HSS of the command. To ensure all aspects of HSS are considered, review the following supporting categories:

(1) *Organic HSS units and personnel.* Medical units that are organic components of the command are listed and under each is a statement describing its location, strength, and readiness for action. Professional and specialty personnel capabilities must also be considered.

(2) *Attached medical units and personnel.* Medical units already attached and those that may be readily available, their locations, strengths, readiness, and professional and specialty personnel capabilities are considered.

(3) *Supporting medical units.* Consideration is given here to the evacuation and other support furnished by higher echelons as well as from the Air Force and the Navy.

(4) *Civil public health capabilities and resources.* Host-nation medical personnel and supplies reported by CA as available from civil public health must also be listed. Civilian medical facilities and personnel may be used in some cases to augment military facilities; in other cases, the surgeon may be requested to give them support. He should be acquainted with their potential. Cultural differences and medical care philosophies can impact on health care provided. Civil Affairs personnel assist in planning for the maximum of host-nation support. They also assist in carrying out host-nation agreements.

(5) *Indigenous or retained medical personnel.* Consideration is given to the use of indigenous and retained personnel and their

supplies in providing medical care for their respective categories of personnel.

(6) *Health service logistics.* The surgeon must consider supplies and equipment on hand, immediate resupply availability, the condition of this materiel, and the organization's capability to maintain it.

(7) *Medical troop ceiling.* The medical troop ceiling should be reviewed by the command surgeon to determine the possibility of securing additional medical support units. This action should be effected as early as possible to ensure the timely receipt of the required units. See Chapter 14 for a discussion of the medical troop ceiling.

d. Courses of Action. By taking into consideration all support requirements and resources available, the planner can then determine major problem areas and difficulties. Based on this determination, several possible COA can be developed and listed which will provide the necessary HSS. In this subparagraph, the planner lists these COA and considers policies, standing operating procedures (SOPS), and procedures that will accomplish the support mission. He limits himself to such considerations as—

- Centralization versus decentralization of HSS. (Will authority be delegated to the maximum extent consistent with the necessary control?)
- Dependence on evacuation by other Service components.
- Extent to which civilian and EPW labor will be used.
- Evacuation policies.

2-13. Evaluation and Comparison of Courses of Action

In paragraph 4 of the estimate, the planner evaluates and compares the various COA developed in paragraph 3. He does this by comparing the COA to determine which one CAN best BE SUPPORTED FROM THE HSS PERSPECTIVE. He lists those difficulties which will have different effects on each possible COA. This then enables him to evaluate these COA in terms of their inherent strengths and weaknesses. By next comparing the possible COA in the light of these strengths and weaknesses, he is able to identify further the basic advantages and disadvantages of each. He does not draw conclusions at this time, but defers this action until the comparison of all possible COA is completed.

2-14. Conclusions

a. Paragraph 5 of the estimate represents the end of the thought process of the estimate and is the basis for the development of the HSS plan. The statements represent the command surgeon's or medical commander's "decision" and serve as a guide to other staff members and/or subordinates in their planning.

b. The planner—

(1) Indicates whether the HSS mission for the operation can/cannot be accomplished,

(2) Indicates which COA can best be supported from the HSS perspective.

(3) Lists factors which may adversely affect the health of the command.

(4) Lists the limitations and deficiencies in the preferred COA that must be brought to the commander's attention.

(5) Includes a COA which is less than desirable, but which best supports the commander's operational mission with the most economical use of available HSS resources.

(6) Provides a general statement if the HSS mission cannot be accomplished.

c. Further details regarding general estimates of the situation are contained in FM 101-5.

2-16. Mission, Enemy, Terrain and Weather, Troops, and Time Available

The acronym METT-T (mission, enemy, terrain and weather, troops, and time available) is a useful tool to remember and organize planning considerations, particularly when the plan is not a

formal written plan, or when the planner does not have quick access to planning references.

a. Mission refers to the same responsibilities and considerations as discussed in paragraph 2-10.

b. Enemy refers to considerations discussed in paragraph 2-11a, enemy situation.

c. Terrain and weather refers to the considerations discussed as "characteristics of the AO" in paragraph 2-11c.

d. Troops refers to the friendly situation, paragraph 2-11b, and to the resources available, paragraph 2-12c.

e. Time refers to the amount of time available to formulate and execute the plan.

Section III. THE BASE DEVELOPMENT PLAN

2-16. A Base

a. A base is a locality from which an operation or activity is projected, or is to be projected. It varies in size and type and may range from a radar station to a base with complete ship repair facilities and cantonment facilities for the training and staging of several divisions of troops. The most complex type of base is one where the Army, Air Force, and Navy share a locality—

- That was recently the scene of intensive combined amphibious operations, or
- Where facilities are rapidly developed for support of continued tactical operations while still being subject to enemy attack.

b. By definition, base development is the acquisition, development, improvement, and

expansion (or rehabilitation) of facilities and resources of an area or location for the support of forces. This area may develop into an established communications zone (COMMZ).

c. Base development includes the provision of personnel and facilities required for construction, port operations, transportation, hospitalization, maintenance, communications, and all other activities involved in base operations. The theater OPLAN includes a logistics annex. This annex contains information and instructions concerning what is to be done in support of combat operations, but does not include detailed information as to the means for accomplishing these ends. This type of detailed information is contained in the base development plan (BDP). It ensures the timely availability of personnel, materials, and facilities required to support contingency plans or continued operations.

2-17. Planning Sequence

a. A planning sequence usually begins with the publication of a joint strategic capabilities plan by the Joint Chiefs of Staff (JCS) to the theater commander. The theater commander then issues a base development planning directive to his Service component commanders. This directive is based on the operational concept and the force structure. The directive includes selected base sites, assigned support missions, operational target dates, preliminary estimates, and instructions required for specific planning. When more than one Service component or when an allied service occupies or has a requirement for the same type of facilities on a base or geographical area, a joint BDP is required. This plan ensures interservice coordination and avoids duplication of effort.

b. A planning directive is provided to the appropriate Service component commanders early in the preparation of BDPs. This directive has no specific format, but may—

- Allocate responsibilities to the Service component commanders for projects and functions.
- Specify priorities and completion dates for projects.
- Specify construction standards.
- Allocate facilities and real estate to subordinate commands.
- Indicate the command structure and designate the commander or commanders charged with base development.
- Indicate the scope and magnitude of the logistic support capabilities of the base.

- Specify SOPs and directives to govern implementation of the plan.

2-18. The Plan

a. The BDP is the product of concurrent planning by the theater commander, the commanders of the component Services, and the theater Army (TA) commander. It is accomplished according to the planning directive. It is the governing instrument for planning and establishing a base. The plan is a compilation of all the information necessary for the theater commander and his staff to coordinate the efforts of subordinate commands in base development. It provides specific direction and includes all phases of concurrent planning undertaken by the subordinate commands concerned. The BDP sets forth the base facilities to be provided and the CSS function to be performed. It covers such matters as categories of construction, priorities, and restrictions on use of critical materials. Within a TO, the BDP is published in a standard format, as outlined in Joint Publication 4-01. It is issued as an appendix to the logistics annex of the OPLAN. The BDP serves as the mechanism by which requirements, identified in the logistic annex to the OPLAN, are converted into facilities, installations, and other construction requirements. As a starting point, the base developer must have information as to those requirements such as tons of dry cargo to be stored, gallons or barrels of petroleum to be moved, troops to be housed, and expected hospital patient load to include types of patients expected.

b. Using standard planning factors tempered by experience, these requirements become warehouses to be built, pipelines to be installed, troop camps to be established, and MTFs to be constructed. (See paragraph 2-21b.) Estimates of requirements are made in each of the functional areas of CSS, and the validity of the BDP will depend largely on the accuracy of these estimates.

If more precise information is available, planning factors in FMs 101-10-1/1 and 101-10-1/2 should not be used. In addition to determining construction requirements, the BDP provides the rationale for estimating construction cost, real estate acquisition requirements, and the size of the construction force. The BDP becomes the theater commander's construction directive when implemented. Normally, no major construction will be undertaken unless it is contained within the approved plan. The BDP may not be completely responsive to the situation as it actually develops. During the first few months of an operation, urgently needed construction should be accomplished without delay, but a comprehensive review of the plan will be required to evaluate how well the planner visualized the events that are actually taking place.

2-19. Theater Base Development Planning Staff

a. The TA commander forms a base development planning staff that is responsible for developing the BDP (or the Army's portion of a joint BDP) and for staff supervision in the execution of the plan on implementation. The planning staff will be provided representatives from—

- Service component commands (to include the TA MEDCOM).
- Theater Army general and special staff sections.
- Theater Army subordinate commands and agencies involved in base development planning and execution.

b. The mission of the base development planning staff is to develop the theater BDP for submission to and approval by the TA commander. This planning staff also provides advice and recommendations to the TA commander in all

matters pertaining to base development planning, programming, and execution.

2-20. Health Service Support Considerations

In planning the HSS portion of base development, the TA surgeon and his staff must consider the following basic factors:

a. *Mission.* The mission assigned to an advanced base serves as the basis for establishing the extent of development and the schedule of readiness for the medical facilities that are included in such development. Only those medical facilities that are essential for fulfillment of the HSS mission should be authorized.

b. *Degree of Permanence.* Plans provide for only the minimum medical facilities necessary consistent with the safety, health, morale, and protection of using forces. In a highly mobile situation, or for an operation of expected short duration, the requirement for new bases would be transitory in nature. Planning for such situations must consider, as a probability, the abandonment or the roll up of any facilities provided. Maximum effort, therefore, must be exerted to use all possible existing facilities to satisfy US forces' requirements. New facilities should consist of little beyond those which can be established by using units employing locally available materials. If ultimate peacetime use of the base is anticipated, initial development is planned for later incorporation into permanent base development.

c. *Limitations on Manpower, Supplies, or Equipment.* The theater commander usually has at his disposal only limited resources in manpower, supplies, and equipment. Because unloading capacities in objective areas are limited, strict control of shipping is established. All base development planning, including HSS, should

conform to those limitations established by overall tactical and logistical considerations.

d. Estimated Phased Population. To prepare the BDP, it is necessary to make estimates of the troop population at successive stages in the development of the base. These estimates must list the major units and headquarters, as well as accompanying units, including combat, combat support (CS), and CSS troops of all Services concerned. Initial estimates are revised to conform to troop lists as they become known. The recapitulation of troops is stated in the final plan.

e. Natural and Local Resources. Every effort is made to develop natural and local resources of an area to provide maximum effective support of military operations. Any exploitation of these resources which conserves medical personnel, supplies, equipment, or time must be given due consideration by the surgeon. All estimates should, as far as possible, be based on fact. Use of local civilian and EPW labor is included in this consideration. Planning for the use of local resources should be based on reliable information, preferably supported by on-site reconnaissance.

f. Areas Available for Development.

(1) Areas suitable for medical facilities in the objective area are usually restricted in size and number. This is particularly true in the immediate landing area and in the vicinity of ports and beaches. If base development involves more than one Service, consideration must be given to the allocation of areas or space/facilities required by each Service component for support. The joint BDP will include the assets and requirements of all Services involved. To the maximum degree possible, the facilities planned to meet the needs of one Service will be designed to accommodate similar or related requirements of the other Services operating in the same area. If the requirements of the Services are in conflict, the theater commander

reevaluates the requirements of each Service and allocates areas so as to ensure the most effective overall development of the base area.

(2) When information of the objective area is incomplete and the location of certain high priority installations such as airfields cannot be indicated definitely, the BDP should provide that all suitable sites found be reserved for the use of the Service concerned until they are released for other use. As a corollary, each Service makes early reconnaissance and releases all unsuitable sites at the earliest possible date.

(3) The possibility of the need for future expansion should be considered by the surgeon in studying available areas and in selecting and recommending facility sites.

g. Priority of Development.

(1) Determining priorities to develop bases is an intricate task. It involves compromise and reconciliation between operational and logistical considerations. After dates of operational readiness have been established, the base development planners ensure that required construction forces and supplies are provided in the objective area. Partial use of incomplete base facilities is usually necessary even though construction efficiency is consequently lowered and there is delay in final completion. Priority for development is established by balancing operational requirements against the construction program. While flexibility should be provided for contingencies, a decision on major changes should be reserved at the appropriate command level. This procedure will prevent hasty changes based on limited knowledge and/or consideration of the factors involved. The senior commander ashore must have authority to make necessary changes in the BDP in conformity with the tactical situation and physical conditions present in the objective area.

(2) Factors that may govern development priorities include—

- The urgency of meeting special operational requirements.
- The ease or difficulty of completing construction tasks for reasons other than enemy opposition.
- The anticipated interference by enemy operations with certain construction efforts.

h. Unloading Health Service Personnel, Supplies, and Equipment. Estimates of terminal capacity available for unloading health service personnel, supplies, and equipment in the base area are essential in determining the extent of the development possible during any given period of time. The surgeon must give further consideration to the availability of facilities to accommodate all health service resources.

i. Selection of Treatment Facility Sites. (See the hospitalization section in FM 8-10 and Training Circular [TC] 8-13.)

j. Deployment of Automatic Data Processing (ADP) Resources. (See Technical Bulletins (TBs) 18-13 and 18-106.)

2-21. Construction Requirements

a. Analysis of Construction Task. After the major elements of the BDP are reasonably firm, the planners can analyze the construction task. Although construction is a function of the engineers, using Services are responsible for making known their general construction requirements for facilities and installations and for assisting with construction plans. For example, the surgeon coordinates with the engineer in the construction of all MTFs. Much of the difficulty

encountered by construction forces is often due to a lack of complete planning or understanding of requirements. As changes in the situation develop, revisions in plans must be made so that actual needs are met, rather than those outlined in an outdated plan. Flexibility in such matters is important.

b. Medical Treatment Facility Construction.

(1) The nature of the support operation will dictate the standard or type of construction. Operations of short duration will require an austere type of construction. Support of long-duration operations will require the highest construction standards possible. Combat zone (CZ) MTFs must maintain the flexibility inherent in mobile and semimobile units. With the fielding of Deployable Medical Systems (DEPMEDS) equipment in both the CZ and the COMMZ hospitals, construction requirements are greatly reduced. However, the requirements for site preparations such as those listed below remain the same:

- Site preparation.
 - Trash and garbage pits.
 - Soakage pits or liquid disposal system.
 - Incinerators.
 - Protective trenches.
- Facilities such as showers, latrines, wash, and dining.
- Motor parking.
 - Landing zone.
 - Perimeter security.

- Fuel storage.
- Power generation equipment placement.

(2) The MTF planner must provide the engineer command with detailed and specific requirements for contaminated waste storage and disposal. Host nation or TO requirements may demand higher standards of construction in contaminated waste storage and disposal sites than are otherwise needed for the MTF itself. These specific needs must be provided to the engineer command early since they may require “design from scratch” facilities.

(3) In the absence of DEPMEDS-equipped hospitals, consideration should be given to the use of existing facilities in the areas which were originally designed as MTFs, or which are readily adaptable to use as a MTF. Attention to types of buildings, their potential patient capacity,

and their effective use prior to the conduct of an operation may result in the selection/use of facilities that will save precious time and resources.

c. Standards of Construction for Contingency Operations. Joint Publication 4-01 establishes the system for identifying construction standards. Construction standards are based primarily on the length of the contingency operation and are set by the theater commander. The following construction standards conform to JCS requirements and are included in the facility/installation descriptions printed in Technical Manual (TM) 5-301 and in the Theater Construction Management System (TCMS):

- Initial—less than 6 months.
- Temporary--6 to 24 months.

The two standards of construction are shown in Table 2-1.

Table 2-1. Construction Standards

	INITIAL	TEMPORARY
	EXPECTED DURATION	
	LESS THAN 6 MONTHS	6 TO 24 MONTHS
APPLICABILITY.	ALL FORCES DURING INITIAL DEPLOYMENT TO A THEATER OF OPERATIONS OR ON RELOCATION TO A NEW LOCALE WITHIN THE THEATER WHEN EXISTING FACILITIES ARE NOT AVAILABLE AT THE NEW SITE.	FORCES WHOSE MISSION ORIENTATION IS FIXED. FORCES SUBJECT TO RELOCATION PROVIDED CONTINUOUS USE OF THE FACILITIES WILL BE OBTAINED THROUGH UNIT ROTATION OR OTHER MEANS.
SPECIALIZED CONSTRUCTION SUPPORT.	CANTONMENT CLEARING AND GRADING FOR DRAINAGE AND FACILITY SITE. GRADING AND MINIMUM STABILIZATION OF ROADS. INSTALLATION OF TACTICAL BRIDGING AND RELOCATABLE PORT FACILITIES. CONSTRUCTION OF TACTICAL AIRFIELDS AND OTHER OPERATIONAL FACILITIES. CONSTRUCTION OF PROTECTIVE BARRICADES FOR POL; AMMUNITION STORAGE; AIRCRAFT PARKING; AND COMMAND AND CONTROL FACILITIES.	ENGINEERED SITE PREPARATION, INCLUDING BUILDING FOUNDATIONS OR CONCRETE SLAB FLOORS; PREFABRICATION OF BUILDING COMPONENTS; SUPERVISION OF BUILDING ERECTION; CONSTRUCTION OF ALL-WEATHER ROADS, FIXED BRIDGING, AND FIXED PORT FACILITIES; AND PAVING OF AIRFIELDS. INSTALLATION OF STEEL STORAGE TANKS AND PIPED SYSTEMS FOR POL AND WATER SUPPLY.

Table 2-1. Construction Standards (Continued)

	INITIAL	TEMPORARY
	EXPECTED DURATION	
	LESS THAN 6 MONTHS	6 TO 24 MONTHS
SHELTERS SUCH AS TROOP HOUSING, DINING FACILITIES, AND ADMINISTRATIVE BUILDINGS.	ORGANIC EQUIPMENT THAT CAN BE ERECTED BY USING ACTIVITIES.	SIMPLE WOOD FRAME STRUCTURES (OF EQUAL USE) USING LOCAL MATERIALS, AUSTERE PREFABRICATED BUILDINGS, AND RELOCATABLE BUILDINGS. CONSTRUCTION MATERIALS, BUILDINGS, AND TECHNIQUES ARE BASED ON A LIFE-CYCLE COMPARISON.
COLD STORAGE.	PORTABLE UNITS.	PORTABLE UNITS WITH SHED.
ELECTRICITY.	ORGANIC	ORGANIC AND/OR LOW VOLTAGE (440 VOLTS) GENERATORS AND DISTRIBUTION SYSTEMS, SOME CENTRAL POWER PLANTS; HIGH VOLTAGE DISTRIBUTION.
WATER.	ORGANIC EQUIPMENT.	QUARTERMASTER DELIVERED WITH LIMITED PIPED DISTRIBUTION TO MTFs, DINING FACILITIES, BATHHOUSES, AND HIGH-VOLUME USERS. SOME CENTRAL TREATMENT PLANTS; PIPED DISTRIBUTION.
SEWAGE.	PIT OR BURNOUT LATRINES. (IF LOCAL SEWAGE SYSTEMS ARE AVAILABLE AND SUITABLE [CAPACITY AND DRAINAGE], THEY MAY BE SUBSTITUTED OR USED TO SUPPLEMENT ORGANIC SOURCES.)	PIT OR BURNOUT LATRINES; WATERBORNE TO PRIMARY TREATMENT FACILITY FOR MTFs, DINING FACILITIES, BATHHOUSES, AND HIGH-VOLUME USERS.
SOLID WASTE (GARBAGE AND TRASH).	PIT OR TRENCH.	PIT OR TRENCH; LOCAL CONTRACTOR REMOVAL.
ROADS AND HARDSTANDS.	STABILIZED WITH LOCAL MATERIALS.	SOME PRIMARY ROADS PAVED; OTHER ROADS AND HARDSTANDS ALL-WEATHER WITH SELECTED BASE COURSE MATERIALS.
BRIDGES.	TACTICAL OR HASTY BRIDGING TECHNIQUES.	FIXED.
AIRFIELD PAVEMENTS.	TACTICAL SURFACING MATERIALS.	PAVED OR TACTICAL SURFACING MATERIALS.
LIQUID FUEL STORAGE AND DISPENSING.		
1. TERMINAL.	RELOCATABLE, NONRIGID STORAGE AND DISTRIBUTION.	RELOCATABLE, RIGID STORAGE AND DISTRIBUTION.

Table 2-1. Construction Standards (Continued)

	INITIAL	TEMPORARY
	EXPECTED DURATION	
	LESS THAN 6 MONTHS	6 TO 24 MONTHS
2. FORWARD.	RELOCATABLE, NONRIGID STORAGE AND DISTRIBUTION.	RELOCATABLE, RIGID STORAGE AND DISTRIBUTION.
3. PORT.	RELOCATABLE.	FIXED OR RELOCATABLE.

(1) Where specific types of construction are listed under a standard, they are intended to be illustrative of the quality of construction. Alternatives using native materials should be considered. Selection of materials and construction techniques should include consideration of the priority of the requirements, cost, climatic conditions, availability of material locally, availability and capabilities of construction activities, and transportation costs. The life-cycle cost of a relocatable facility should include the initial procurement costs, erection costs, and disassembly costs, as applicable (less the residual value of the components of materials recovered for reuse). Any equipment or quality of construction authorized under a lower standard may be used under a higher standard.

(2) Standards of construction relate to quality of the installations provided. The lower standard, "Initial," requires a minimum of engineer construction effort. "Temporary," the higher standard, may require buildings for some facilities, paved roads, and waterborne sewage. Within the standards, certain other choices are available such as whether to use wood or steel frame. The standard of construction will not be uniform throughout the theater; however, the theater commander may place a ceiling on construction at a specific level such as, *No construction authorized*

above temporary. Normally, each major project will have a standard allocated to it depending on the factors discussed below. As a general guideline, the most austere standard that will meet operational requirements and provide necessary facility life will be considered. Normally, no construction involving the expenditure of engineer effort will be authorized if the duration of the operation is expected to be less than 180 days. Obviously, exceptions to this policy may be made with regard to port facilities and lines of communication if construction rehabilitation is operationally necessary. It is entirely possible that agreements with the host nation may require construction to a higher standard than is justified by a strict analysis of the proposed operation. United States national policy may indicate that benefits will accrue through the construction of permanent facilities that will revert to the host government after the termination of hostilities.

(3) A lack of engineer troops and the requirement to provide facilities quickly may result in construction to a lower standard than desired. It is perfectly reasonable to construct to a low standard and then to upgrade the facilities as troops and time become available. Upgrading facilities to a higher standard is more costly than constructing to the higher standard in the first place, and this option may be foreclosed because of

fund constraints. Certain equipment such as computers, radars, and communication gear may require environmentally controlled conditions to ensure proper operation. Failure to construct the higher standard could result in the failure of this equipment to operate. Control of the construction effort is a matter for command emphasis. The natural desire of any commander assigned to a TO is to provide the best possible facilities for his personnel. Should all commanders be allowed to follow this desire, there would soon be no construction material available for operational projects. As a matter of policy, the theater commander should state that no construction will be authorized in the theater unless—

- It is contained in the approved BDP, or
- It is specifically approved by the theater commander as having overriding importance for mission accomplishment.

Upon initiation of the construction program, the base development planning staff will be charged with staff supervision over execution of the plan. Part of its responsibility will be to assure that construction assets are not channeled off into unauthorized projects. In line with this effort, tight controls will be placed on the issuance of construction material (Class IV) and on the use of engineer troops. Perhaps most important of all is the factor of self-discipline at all levels.

2-22. Responsibilities of the Health Service Support Planner

a. The fact that most construction is an engineer responsibility does not relieve the medical unit commander and his staff from any further action. *The HSS planner must incorporate the requirement for MTF construction and/or site preparation into the BDP.* There must be timely planning and coordination between the MTF, higher medical

headquarters, and the engineer units. The degree of participation by the MTF will depend on the size of the project. If a new facility and/or a major modification of an existing facility are needed, most of the planning and design will take place at a higher medical headquarters. However, the MTF commander and his staff, if in the TO, should be consulted during the predesign phases.

b. The degree of the MTFs participation during the construction phase greatly increases when major modifications to existing facilities or conversion of nonmedical permanent structures to medical facilities are programmed. Examples of major modifications include installation of central air conditioning, upgrading of water and sewage lines, addition of warehouses, modernization of operating rooms, or the conversion of existing buildings to MTFs. Special and extraordinary electrical requirements for hospital-peculiar equipment must be identified and made known to the engineer units during this phase of planning. These types of construction involve long-range planning. The initiation of a project begins with the submission of work requests by the MTF commander. The flow of work requests through command channels will vary in accordance with local procedures. Coordination is normally effected with the area coordinating committee. Construction specifications and rough drawings are prepared at the senior medical headquarters level and reviewed with the MTF commander and his staff prior to being forwarded through channels to the engineer command. The input of the medical unit commander and his staff is critical to the provision of adequate and appropriate health care facilities.

c. Final approval of the project is normally made by the TA commander, subject to the availability of funds, labor, and supplies. Final drawings and determination of whether to use civilian or military construction personnel is a responsibility of the engineer command. Final drawings are prepared in phases. Each phase is returned to the senior medical headquarters for

review. Each phase should also be reviewed with the MTF commander and his staff. Once construction starts, the project is under the supervision of the engineer command. The MTF commander, however, should forward progress reports and comments to his higher headquarters. Under no circumstances should the MTF commander try to make major job changes directly with the project engineer. Final acceptance of the project is normally a joint operation between the engineer command, the senior medical headquarters, and the MTF commander.

d. Determination of what constitutes major and minor construction will vary with the local policy. Of primary interest to the MTF commander is the fact that minor construction projects will involve a direct relationship between him and the engineers. Examples of minor construction include enlargement of rooms through the removal of walls and construction of small storage sheds. The job request originates with the MTF and is usually a responsibility of the Services section, Final approval rests with the

area commander and will depend upon the availability of funds, labor, and supplies.

e. The success of any construction project, whether major or minor, is greatly enhanced by the active interest and participation of the MTF commander and his staff in all phases of construction. The MTF commander should make every effort to be a member of the area coordinating committee. The MTF health service materiel officer should establish close relations with the officer in charge of engineer activities and/or the supporting engineer units.

f. To provide HSS, facilities of various types are needed. Health service support planners at senior medical headquarters are responsible for participating with the engineers and other Services in the construction of these facilities. This responsibility includes coordination with the commander, TA area command, transportation command, personnel command, and engineer command, and with the TA headquarters regarding suitable sites for medical facilities and installations.

Section IV. THE HEALTH SERVICE SUPPORT PLAN/ORDER

2-23. Preparation of the Plan

Before the HSS estimate is completed, the commander or the surgeon has started his preparation of the HSS plan. As each problem is recognized and solved, a part of the plan is automatically defined. These bits of fragmentary information should be disseminated to surgeons of subordinate and higher commands as early as possible to assist them in preparing their plans and estimates. Once the estimate is completed, it defines requirements, identifies resources, and determines policies and procedures. Now, specific responsibilities must be

assigned in the HSS plan. An example of a HSS plan is at Appendix C.

2-24. Responsibility

a. Each medical unit and medical headquarters involved in providing HSS must prepare its own plan. This plan will be based on the commander's intent and the OPLAN and/or the administrative/logistics (ADMIN/LOG) plan of the next higher headquarters.

(1) The OPLAN covers a single military operation or a series of connected military operations to be carried out simultaneously or successively. When the plan is put in effect, or executed, the plan becomes an OPORD.

(2) The ADMIN/LOG plan applies to CSS operations. It is based on the command's operations requirements. When put into effect, or executed, it is the ADMIN/LOG order. (See Figure 2-1 for an example of paragraph 5 of the ADMIN/LOG order.)

(3) See FM 101-5 for a detailed explanation of OPORDs, ADMIN/LOG orders, SOPS, fragmentary orders (FRAGOs), and warning orders. Field Manual 101-5 also provides a detailed discussion on annexes to orders.

b. The medical commander or surgeon must continually know and be familiar with the plans and general policies of the tactical commander to adapt HSS to changes. The medical commander must ensure that adequate resources are available for the successful accomplishment of the HSS mission.

2-25. Purpose and Scope

a. The HSS plan varies in its purpose and scope according to the size and complexity of the operation which it supports. *The HSS plan of a combat or CS battalion, for example, as a minimum includes the location of the patient collecting points and the battalion aid station (BAS). On the other hand, the HSS plan for a division considers more functions because of the greater extent of support responsibilities. Some examples of these responsibilities are the location of MTFs and the distribution and assignment of evacuation assets.*

b. The standard format of the plan is detailed and all-inclusive to fit the most complex

situation. This format is a checklist and guide; only those portions that apply are to be used. Subparagraphs that do not apply or are addressed in the tactical standing operating procedures (TSOPs) maybe omitted entirely and subsequent subparagraphs numbered accordingly. However, the planner must exercise caution in determining which subparagraphs are inappropriate to avoid an incomplete plan.

c. The OPLAN is used to prepare—

- The medical unit OPLAN or OPORD. (See Appendix C for an example.)

- The HSS annex to an OPLAN or order. (See Appendix C for an example.)

- Paragraph 4b or paragraph 5 of the ADMIN/LOG plan or order. (See Figure 2-1 for an example of paragraph 5, ADMIN/LOG order.)

2-26. Format

The plan must be in consonance with the format of the OPLAN. (In addition to the following, see Appendix C.)

a. *Heading.* The security classification is designated by the command headquarters and will be placed at the top and bottom of each page of the plan. Numbers and letters for identification and filing purposes are designated by the responsible headquarters. When reference is made to locations by map coordinates, maps are listed, including the applicable sheets. If no maps are referenced, this portion of the heading is omitted. The time zone applicable to the operation follows the references used in preparing the plan. Times in other zones are converted to the time zone of the current operation by using Figures 2-2 and 2-3. The phrase local should never be used.

5. Health Service Support

This paragraph contains information and instructions for supported units that prescribe the plan for evacuation and hospitalization of sick, wounded, or injured military personnel.

(This paragraph should be supported by an overlay.)

a. Medical Evacuation. This subparagraph should state routes, means, and schedules (if any) of evacuation and responsibilities. Evacuation and en route treatment policies should be included, when applicable. Specific policy for evacuation by air or ground methods and evacuation of NBC-contaminated patients is included. Information concerning medical evacuation request procedures and channels should be included if applicable and different from SOP. The evacuation policy may be included in this paragraph.

b. Medical Treatment Facilities. List of all appropriate treatment facilities (for example, troop medical clinics, aid stations, clearing stations, hospitals) belonging to or supporting organizations the order is written for, their locations, and times of opening or closing, if appropriate. Definitive treatment policies including treatment of contaminated casualties should be included.

c. Other Services. Include pertinent information on any other health service matters (for example, dental, preventive medicine, health service logistics and blood management, combat stress control, veterinary, medical laboratory, and area medical support). Include unit locations, support information, policies, and any others, as appropriate.

Figure 2-1. Example of paragraph 5, ADMIN/LOG order.

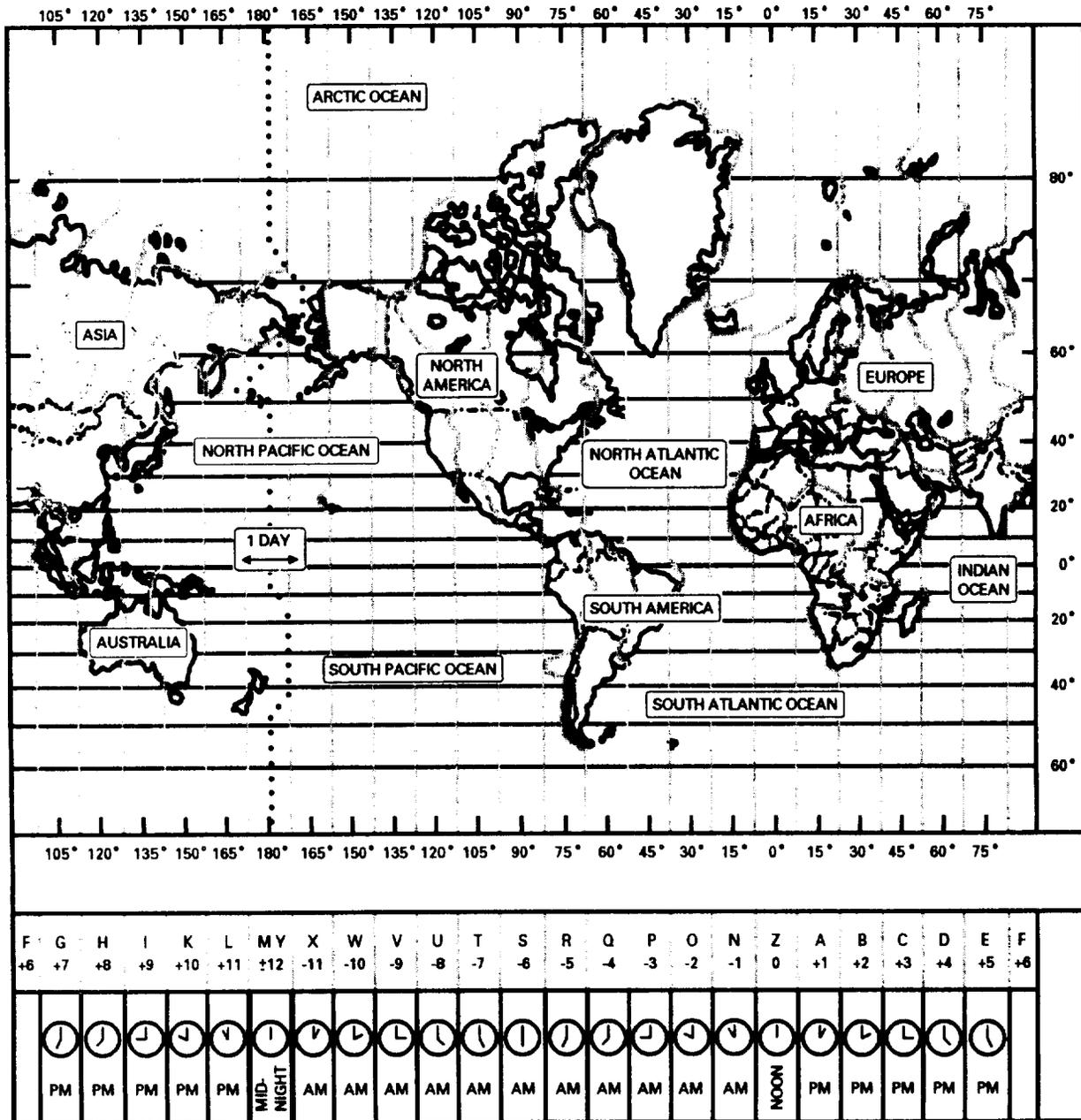


Figure 2-2. Time zone chart.

b. Task Organization. The task organization indicates how the command is organized to accomplish the mission. The task organization may appear after the time zone or in Annex A. If there are to be attachments for limited administration or control, this fact should be indicated in paragraph 1.

c. Body.

(1) *Paragraphs 1, 2, and 3 (situation/mission/execution).* The first three paragraphs follow the format of the OPLAN. They contain guidance for logical planning, are of assistance to subordinate HSS planners, and ensure conformity within the plan. (See Appendix C.)

(2) *Paragraph 4 (service support).* Paragraph 4 contains a statement of the CSS instructions and arrangements supporting the operation that are of primary interest to the units and formations being supported. (If lengthy, details may be included in an annex and referenced here.) Subparagraphs are titled "Supply," "Transportation," "Services," "Labor," and "Maintenance."

- The supply subparagraph outlines such matters as supply priorities for medical units and handling of hospital patient ration supplements. It addresses health service logistics organizations and gives locations. Locations may also be provided in a map overlay (as an annex to the plan). Information in this subparagraph may be simplified by making reference to SOPS that include required information.

- The transportation subparagraph considers the medical requirements for various means of supporting transportation and planned movements.

- The services subparagraph pertains to medical units and facilities such as mortuary services, laundry, bath, construction,

real estate requirements, and support from area personnel replacement units (*for RTD of personnel discharged from MTFs*). It also outlines the maintenance of Class VIII equipment and other items of equipment. It may also address minimal reequipping of RTD soldiers released from MTFs at Echelons III and IV. Minimal reequipping of RTD soldiers will consist of basic uniform items to protect the soldiers during transit to replacement companies.

- The labor subparagraph includes policies on the use of civilian or other labor personnel. Restrictions on the use of civilians, interns, and/or detainees will be in compliance with existing agreements or arrangements.

- The maintenance subparagraph includes priority of maintenance, location of facilities, and collecting points.

(3) *Paragraph 5 (patient evacuation, treatment and hospitalization, and other health services).*

- The evacuation subparagraph outlines the evacuation plans for all friendly forces to include Navy, Marine, Air Force, allies, and civilian personnel. Plans for medical evacuation of EPW are also included. Medical evacuation requirements and units available are listed to include their locations, missions, and attachments. The location of patient collecting points and ambulance exchange points are placed on overlays.

- The treatment and hospitalization subparagraph outlines policies and facilities/units, to include their locations, missions, and attachments. Locations may also be provided in a map overlay attached as an annex.

The other health services subparagraph includes the provision of the remaining HSS functions: medical laboratory

services; health service logistics, to include blood; dental services; veterinary services; PVNTMED services; combat stress control services; area medical support, and required command, control, communications, computers, and intelligence.

(4) *Paragraph 6 (miscellaneous).*

This paragraph is used to discuss any areas of support not previously addressed which may be required or needed by subordinate elements in the execution of their respective HSS missions. Examples of discussion points are command post locations, signal operations instructions, claims, special reports that may be required, joint agreements, and international or host-nation support agreements affecting HSS.

d. Ending. The ending of the plan contains the commander's or surgeon's (or other appropriate) signature, a list of annexes (if any), and the distribution. Annexes may include the task organization (unless included in the plan), medical overlay, PVNTMED, or professional annex, or similar data.

2-27. Modification

The commander or the staff surgeon at each level must modify his plans to fit each situation as it arises. He must remain constantly abreast of the

tactical situation. He must continue to plan for the next operation while operating the HSS for the current operation. Current tactical concepts emphasize flexibility with diversification of planning and operations. Accordingly, all HSS plans which support tactical operations must be flexible. They must have alternatives which can be used during the course of the operation in order to meet rapidly changing situations. Alternatives the commander is considering must also be considered by the surgeon. The surgeon must be in a position to receive information from medical elements under his control, or technical supervision so that he can direct changes and modifications in existing plans according to the requirements of the situation. In addition, the HSS planner must be alert to the magnitude of the problems which might confront him in NBC warfare. The unique conditions to be encountered in NBC warfare require a case-by-case analysis of each situation.

2-28. Execution of the Plan

Execution of the plan necessitates close, continuous, and effective interface between HSS and CSS system planners. The surgeon and all medical commanders must continuously monitor, direct, and control the HSS situation to ensure that the required support is provided the tactical commander.

Section V. JOINT HEALTH SERVICE SUPPORT PLANNING

2-29. Joint Task Force Operations

a. Joint Publication 1, Joint Warfare of the US Armed Forces, notes:

The nature of modern warfare demands that we fight as a team. This does not mean that all forces will be equally represented in each

operation. Joint force commanders choose the capabilities they need from the air, land, sea, space, and special operations forces at their disposal.

Generally, joint operations are directed by the Commanders in Chief (CINC) of the unified commands and executed by their subunified commands and Service components.

b. Some CINC, however, conduct operations within their area of responsibility (AOR) by activating joint task forces (JTFs). Joint task forces are established to accomplish specific, limited objectives that require the significant and closely integrated efforts of forces from two or more Services. The Commander, JTF (CJTF) is appointed by the CINC and exercises operational control (OPCON) over assigned and attached forces. The CJTF may wear an additional hat as the commander of a JTF Service component. Joint Publication 5-00.2 provides detailed guidance and procedures for forming, staffing deploying, employing, and redeploying a JTF for short-notice contingency operations.

c. A variety of scenarios exist that lend themselves to designating an Army corps commander as a CJTF. When this occurs, the corps surgeon becomes the surgeon and assumes responsibility for planning, coordinating, and controlling joint HSS within the CJTF joint operational area (JOA). Joint Publication 4-02 provides operational and organizational guidelines to meet the HSS requirements of combatant commands, JTFs, and Service components.

2-30. Joint Health Service Support Relationships and Responsibilities

a. The JTF surgeon is the principal advisor to the CJTF for all HSS matters. The JTF surgeon's office is normally built upon the Service staff of the JTF surgeon, augmented by HSS planners and operations officers from other Services. The JTF surgeon can expect to receive broad guidance and a general concept of medical operations from the unified command surgeon.

b. The JTF surgeon's office should be staffed to effectively facilitate joint planning and coordination of JOA HSS, standardization and interoperability, and integration within the overall joint operation.

c. Specifically, the JTF surgeon's office must be prepared to—

(1) Maintain liaison with component command surgeons and resolve HSS conflicts surfaced by JTF components.

(2) Provide detailed HSS guidance, assign HSS tasks, and develop the joint HSS concept of operations. In the interest of maximizing the use of potentially limited HSS resources, the JTF surgeon may direct joint use of HSS assets. For example, the JTF surgeon may direct the Navy component to provide all Echelon III hospitalization or the Army component to provide all rotary-wing aeromedical evacuation for the entire JTF. In these instances, joint staffing of units is normally not considered a prerequisite for their joint use.

(3) Consolidate component patient estimates, assess the sufficiency of the evacuation policy within the area of operations, and recommend changes if appropriate.

(4) Advise the CJTF on HSS aspects of combat operations; rest, rotation, and reconstitution policies; PVNTMED; and other HSS factors that could affect joint operations.

(5) Monitor JTF medical readiness to include component status of patient beds, health service logistics (including blood products), and staffing.

(6) Report JTF medical readiness status to the CINC in accordance with the unified commander's OPORD.

(7) Coordinate HSS provided to and received from allies or friendly nations.

(8) Coordinate medical intelligence support and identify medical essential elements of information (EEI) and requests for information (RFI).

(9) Prepare Annex Q for all JTF plans and orders. See Appendix C for an example format. Also, see Appendix C for an example checklist.

(10) Advise the CJTF on HSS aspects of the Geneva Conventions and the Law of Land Warfare.

(11) Supervise the activities of the Area Joint Medical Regulating Office (AJMRO) and Area Joint Blood Program Office (AJBPO).

d. The AJMRO functions as part of the JTF surgeon's office and manages the movement of patients to and between medical facilities within the JOA. The Joint Medical Regulating Office (JMRO) coordinates the movement of patients to CONUS with the Armed Services Medical Regulating Office (ASMRO). Specific functions of the JMRO/AJMRO are discussed in Chapter 4.

e. The AJBPO functions as part of the JTF surgeon's office and manages the theater blood program. Specific functions of the JBPO/AJBPO are discussed in Chapter 8.

2-31. Health Service Support Considerations in Joint Task Force Planning

a. The type of operations that may require the activation of a JTF are normally crisis or emergency situations for which there may not be an existing OPLAN. Joint crisis action planning (CAP) progresses through a logical sequence from problem recognition to the execution of an OPORD. There are six phases in the process; however, time constraints may force these phases to be compressed. The six phases are situation development, crisis assessment, COA development, COA selection, execution planning, and execution. The unified command will normally identify and activate the JTF during the COA development phase.

b. Upon JTF activation, the JTF surgeon begins operational planning. Specifically, the JTF surgeon should—

(1) Review unified command SOPs and OPORDs.

(2) Update and standardize HSS planning factors as required.

(3) Determine the extent of and initiate planning to medically support non-combatant evacuation operations (NEO). These operations may be conducted in the environments of conflict or war.

(4) Obtain and review medical threat and PVNTMED information pertinent to the operation. Identify additionally required medical EEI and RFI to the JTF intelligence section.

(5) Develop JTF medical policies and procedures.

(6) Coordinate with JTF operational planners during concept development and assess medical risks associated with alternate COA.

(7) Assess host-nation HSS availability.

(8) Develop and coordinate the JTF HSS concept with component and unified command surgeons. Plan for joint use of assets to ensure minimum essential hospitalization and evacuation support.

(9) Evaluate projected force deployment flow and ensure that timely and responsive HSS, including the theater aeromedical evacuation (AE) system, is available throughout the operation.

(10) Activate the AJMRO and AJBPO and disseminate medical regulating and blood management procedures.

c. During the operation, the JTF surgeon may be directed to begin planning follow-on civil-military, CA, or peacekeeping operations support. Joint HSS considerations for these operations will be discussed in other joint publications currently under development.

d. As the operation nears completion, the JTF surgeon should begin planning HSS for the redeployment of the JTF and/or transfer of HSS responsibilities to a follow-on subunified command.

Section VI. JOINT TASK FORCE CRISIS ACTION PLANNING FOR HEALTH SERVICE SUPPORT

2-32. Crisis Action Planning Phase I, Situation Development

Often, the JTF will not have been activated at this stage in the CAP process. However, if it has, the JTF surgeon should consider the following:

a. What type of military forces might be used to resolve the crisis or conflict, and how might they be supported medically?

b. If combined action is possible, what type of HSS could be required or provided by other nations?

c. What steps can be taken to collect additional medical information about the threat, crisis, conflict, or region?

d. How are medical requirements entered into the consolidated intelligence collection plan?

e. How will the communications system support the passing of medical information, reports, and requests?

2-33. Crisis Action Planning Phase II, Crisis Assessment

a. If noncombatant evacuation is required, consider the following:

(1) How many of the noncombatants are known to require medical care?

(2) Where are these noncombatants located? Is there a published plan addressing their collection prior to evacuation?

(3) Is a permissive or nonpermissive NEO anticipated? How best can it be medically supported?

(4) Are there any civilian casualty projections for NEO?

(5) What is the medical evacuation policy for NEO patients?

(6) Has direct liaison with embassy health officials been authorized and established?

(7) Has the Department of State authorized pets to accompany NEO evacuees? Are any animals prohibited from US entry by the Food and Drug Administration? What will be done with pets brought to evacuation control points?

b. If any humanitarian, civil, or security assistance medical requests have been made by foreign governments, how can they be supported?

c. Are there any treaties, legal agreements, host-nation agreements, or status-of-forces agreements between the US and foreign governments that are medically significant? Stand-

ardization agreements already in existence may be used to form the basis for detailed coalition agreements and procedures.

d. Are there any concept plans (CONPLANS) or OPLANs for the area or situation?

e. What type of foreign military or civilian infrastructure is established within the JOA? What and where are its key elements?

2-34. Crisis Action Planning Phase III, Course of Action Development

a. What specific HSS factors affect the actions under consideration?

b. What HSS assets are provided in the OPLAN?

c. Is available HSS adequate to support planned operations? If not, what additional assets are required? How will the JTF request them? Are all medical units, to include aeromedical evacuation liaison teams (AELTs) and aircrews, on the Time-Phased Force and Deployment List (TPFDL) and scheduled for timely arrival? See Appendix E for a discussion of the TPFDL.

d. If an intermediate staging base is required, what medical units should be positioned there?

e. What airfields are available for intratheater and intertheater AE?

f. Have medical personnel augmentation requirements been identified and requested?

2-35. Crisis Action Planning Phase IV, Course of Action Selection

No medical actions are required.

2-36. Crisis Action Planning Phase V, Execution Planning

a. Is the selected COA medically supportable with available HSS assets?

b. If not, will required HSS assets be available before mission execution?

c. If not, is the CJTF aware of the risks?

d. What is the status of communications? Have any dedicated or medically-unique nets, procedures, or requirements been identified?

e. Has sufficient coordination with joint/combined forces and the host nation been conducted?

f. Have medical sustainability and re-supply requirements been established? Are Class VIII channels established?

g. Is the HSS portion of the OPOD ready to be published? Does it address assistance to US nationals, civilian internees, detained civilians, displaced civilians, and EPW?

h. Is the JMRO/AJMRO fully functional?

i. Is the JBPO/AJBPO fully functional?

j. Is the AE system planning complete?

(1) Have primary and secondary aeromedical airfields been identified?

(2) Are sufficient assets planned for or in place (aeromedical evacuation control center [AECC], aeromedical evacuation control element [AECE], AELT, mobile aeromedical staging facility

[MASF], aeromedical staging facility [ASF], and AE crews)? See Chapter 4 for a discussion of these assets.

(3) Are AELTs located at key locations within each Service component's HSS system?

(4) Do Service components understand they are required to move patients to supporting MASFs? Will they be able to do so?

(5) Are sufficient items such as litters, straps, and blankets available?

2-37. Crisis Action Planning Phase VI, Execution

Once the plan is executed, the JTF surgeon and the JTF Service component surgeons monitor, direct, coordinate, and control the HSS situation to ensure that the required support is provided the CJTF.

SECTION VII. MEDICAL INPUT FOR THE JOINT TASK FORCE OPERATION ORDER

2-38. Medical Annex

Neither the unified command nor the JTF OPORD—developed in CAP—will be as comprehensive or detailed as an OPLAN developed by the deliberate planning process. However, the standard medical Annex Q provides an appropriate framework for the abbreviated JTF medical annex.

2-39. Guidance

The JTF basic OPORD will provide general medical guidance and the theater evacuation policy. It will note that detailed medical guidance will follow in a separately published Annex Q. To ensure rapid dissemination of these documents, they will usually be published via a Worldwide Military Command and Control System (WWMCCS) teleconference established for the operation.

CHAPTER 3

PLANNING AND EXPERIENCE CONSIDERATIONS

Section I. BASIC PRINCIPLES AND TERMS

3-1. Basic Requirements

The HSS planner must know the basic principles and terms used in patient classification and reporting to be able to use the formulas in Section II.

3-2. Casualty

A casualty is any person who is lost to the organization by reason of having been declared dead, wounded, injured, diseased, interned, captured, retained, missing, missing in action (MIA), beleaguered, besieged, or detained.

3-3. Battle Casualty

A battle casualty is any casualty incurred in action. *In action* characterizes the casualty status as having been—

- The direct result of hostile action,
- Sustained in combat or relating thereto, or
- Sustained while going to or returning from a combat mission provided that the occurrence was directly related to hostile action. Included are persons killed or wounded mistakenly or accidentally by friendly fire directed at a hostile force or what is thought to be a hostile force. However, not to be considered as sustained in action and thereby not to be interpreted as battle casualties are injuries due to the elements, self-inflicted wounds and, except in unusual cases, wounds or death inflicted by a friendly force while the individual is in absent-without-leave (AWOL) or dropped-from-rolls status, or is voluntarily absent from a place of duty. Battle casualties include the following:

a. Wounded in Action.

(1) This term describes a battle casualty other than “killed in action (KIA)” who has incurred an injury due to an external agent or cause. The term WIA covers all wounds and other injuries incurred in action whether there is piercing of the body, as in a penetrating or perforating wound, or none, as in the contused wound; all fractures, burns, blast concussions; all effects of biological and chemical warfare agents; and the effects of exposure to ionizing radiation, or any other destructive weapon or agent.

(2) A battle casualty who requires admission to an MTF or who dies of wounds after reaching an MTF is reported as WIA. Subsequent reporting as died of wounds (DOW) may be required. The WIA category includes the DOW received in action, but excludes the KIA.

(3) Individual medical records and morbidity reports received by The Surgeon General (TSG) include, in addition to WIA, all other individuals wounded or injured in action and treated at MTFs without requiring hospital admission. (This includes persons held and then RTD at MTFs forward of corps-level hospitals, as well as persons treated on an outpatient status—carded for record only [CRO].)

b. Died of Wounds Received in Action.
This term describes battle casualties who die of wounds or other injuries received in action after having reached an MTF. These cases differ from battle casualties who are found dead, or who die before reaching an MTF (the KIA group). The criterion is to reach an MTF while still alive. All cases counted as DOW received in action are also counted as WIA.

c. Killed in Action. This term describes a battle casualty who is killed outright, or who dies as a result of wounds or other injuries before reaching an MTF. It provides a basis for distinction between KIA cases and the DOW received in action cases. (It is often impracticable to determine if deaths in combat are instantaneous.) Killed-in-action cases are never included in the WIA category or in the DOW category.

d. Missing in Action. This term describes battle casualties whose whereabouts or fate cannot be determined and who are not known to be in an unauthorized absence status (desertion or AWOL). Missing-in-action casualties are not usually included in medical statistical records or reports received by TSG but are reportable to the Adjutant General (AG).

e. Captured. This term describes all battle casualties known to have been taken into custody by a hostile force as a result of and for reasons arising out of any armed conflict in which US Armed Forces are engaged. Captured casualties are not usually included in medical statistical records or reports received by TSG, but they are reportable to the AG.

f. Interned. This term describes all battle casualties known to have been taken into custody by a nonbelligerent foreign power as the result of and for reasons arising out of any armed conflict in which US Armed Forces are engaged. Interned casualties are not usually included in medical statistical records or reports received by TSG, but they are reportable to the AG.

3-4. Nonbattle Casualty

Nonbattle casualty describes a person who is not a battle casualty, but who is lost to his organization by reason of disease or injury, including persons dying from disease or injury, or by reason of being

missing where the absence does not appear to be voluntary, due to enemy action, or to being interned.

3-5. Patient

Patient is the generic term applying to a sick, injured, or wounded person who receives medical care or treatment from medically trained personnel who make medically substantiated decisions based on medical military occupational specialty (MOS)-specific training. A patient may be further classified as an outpatient or an inpatient.

a. Outpatient. Outpatient is the term applied to a person receiving medical/dental examination and/or treatment from medical personnel and in a status other than being admitted to a hospital. Included in this category is the person who is treated and retained (held) in an MTF other than a hospital.

b. Inpatient. Inpatient is the term applied to a person admitted to and treated within a hospital and who cannot be returned to duty within the same calendar day.

3-6. Medical Treatment Facility

The term medical treatment facility denotes a facility established for the purpose of providing health services to authorized personnel. It maybe but is not limited to an aid station, area support section (clearing station), a clinic, a dispensary, or a hospital.

3-7. Dental Treatment Facility

The term dental treatment facility (DTF) denotes a facility established for the purpose of providing dental services to authorized personnel. It maybe as large as a multichair facility established by an area support dental unit and staffed by a number

of dental officers and dental ancillary personnel, or as small as a single chair manned by a dental officer and a single assistant. Dental resources organic to hospitals and clearing stations constitute a DTF when operational, even though a part of an MTF.

3-8. Classification of Patients

For this discussion, patients mean only those cases who have been admitted to hospitals and who cannot be returned to duty within the same calendar day. Patients are classified according to the primary cause of initial admission to an MTF. They are reported to TSG in one of three major classifications: disease (DIS), nonbattle injury (NBI), or battle casualty (BI or WIA).

a. When a patient is admitted for unrelated conditions that require admission such as DNBI, the most serious condition present is used as the main cause of initial admission. This primary cause is used in determining the classification.

b. When a patient is admitted for several related conditions that require admission, the first condition in the chain of origin is used as the primary cause of admission. This condition governs the classification of the patient.

c. A patient who is admitted to an MTF for battle wounds or BIs but who also requires treatment for disease or NBI is, nevertheless, classified as a battle casualty.

d. The disease classification includes many disorders not commonly thought of as disease. All patients other than BI or WIA and NBI cases are classified as disease cases.

(1) Patients suffering from mental disorders developed under battle conditions are classified as disease casualties, not battle casualties. This includes those few cases of battle

fatigue and neuropsychiatric disorders which require hospitalization.

(2) Patients readmitted as the result of an old traumatism are considered as disease cases. An old traumatism is defined as a case readmitted for a condition that is a result of a previously recorded battle or NBI incurred in the military service. The term *traumatism* refers to a condition of ill health caused by an external agent. It includes conditions resulting from acute poisonings (even though taken internally) and from exposure to heat, cold, or light.

(3) Patients suffering from reactions to medication (other than acute poisoning) and patients admitted for complications from an injury incurred prior to entering the military service are classified as disease cases.

(4) Food poisoning cases or food infection cases, except when due to food containing nonbacterial poisons, are classified as disease cases.

(5) A battle casualty patient who is dropped from medical reports as a disposition to AWOL is, if readmitted, classified as a disease patient.

e. All traumatisms are classified as NBI *except* old traumatisms (as defined in above subparagraph), or BI or wounds (below subparagraph). Food poisonings or food infections due to food containing nonbacterial poisons are classified as NBI. Injuries due to the elements such as frostbite and immersion injury are considered to be NBIs even when incurred in combat areas. While these injuries, like battle fatigue, may be the direct consequence of enemy action, they can usually be prevented by self-aid/buddy aid or leadership measures.

f. For purposes of medical statistical reporting, a battle casualty patient (BI and WIA) is

any patient admitted to an MTF for treatment of injuries and/or wounds sustained either directly due to enemy action, or while engaged in combat and related thereto. A patient admitted as a battle casualty is reported as such so long as hospitalization is continuous and uninterrupted. Except for disposition by transfer to another MTF, discharge of a battle casualty patient from an MTF terminates his battle casualty status for medical reporting purposes.

g. Killed in action cases are reported separately from injured or WIA cases.

3-9. Patient Admission Rates

a. Admission rates are numerical expressions of the relative frequency with which patients are admitted to hospitals from a specified population over a designated period of time. The particular admission rates used in HSS planning represent average rates derived from similar experiences in similar operations or those developed by planners. The primary types of patients for which admission rates are used in an AO are WIA and DNBI. The admission rates usually are expressed as the number of admissions to a hospital per thousand average personnel strength per day. Thus, a hospital admission rate of 2.0 per thousand per day for WIA patients would mean that for every thousand personnel involved, two would become hospital patients each day from battle causes.

b. Admission rates contained in Chapter 5 reflect experience factors derived from past wars. Historical data on AMEDD losses are also contained in Appendix D.

c. The admission rate for disease is affected by seasonal variations, climate, and environmental factors. (See Chapter 11 for a detailed discussion on countering and monitoring health threats.)

3-10. Estimation of Probable Patient Work Load

a. Casualty rates vary from echelon to echelon. While a corps may be engaged in active fighting, one or more of its divisions may not be in contact with the enemy. Elements of corps troops serving in rear areas suffer relatively few casualties. While the strength of nondivisional corps troops may approximate the strength of a division, they consist of artillery, engineers, signal, and other support troops; the casualty rates for all of these are low compared with those of combat maneuver elements. These factors operate to reduce the casualty rates of a corps as a whole far below those of its divisions actively engaged with the enemy.

(1) As a rough estimate, it maybe stated that the WIA rate for a corps as a whole is about 25 percent less than the WIA rate for its component divisions.

(2) Likewise, the overall TO casualty rates are even lower than those of a corps. The WIA rate for the theater is roughly 20 percent lower than the WIA rate for a corps, and about 40 percent lower than that for a division. *These assumptions do not take into account NBC warfare or major enemy deep strikes.*

b. Estimation of probable casualty rates in advance is not a simple matter that can be reduced to a general formula.

(1) The first step in estimating probable casualty rates is to select a point of departure. This may be termed an average casualty day for the unit concerned.

(2) To this average casualty day must be applied the quantitative combined effect of all factors in each situation that may be expected to influence the casualty rate. The following are the more important of these factors:

(a) *Enemy capabilities.* These include all the resources and characteristics of the enemy that can be translated into casualties, such as—

- His numerical or relative strength.
 - The strength of his position (both existing terrain features and man-made improvements).
 - His weapons.
 - His air power.
 - His attitude.
- His morale and general combat efficiency.

(b) *Terrain.* Terrain is not to be confused with position. Open terrain that affords little cover or protection may favor one side depending upon the situation.

(c) *Own scheme of maneuver.* This is a most important factor. *Attack* is usually *more costly* than *defense*. Losses in defense are tempered by the type of defense, the degree of organization of the ground, and the relative combat strength, including the element of firepower. *Frontal attacks*, in general, *produce more casualties* in the attacking force than do *envelopments*. *Daylight retrograde movements are extremely costly*; when the retrograde movement becomes disorderly, losses may be staggering.

(d) *Relative firepower.* A preponderance of friendly firepower, especially in heavy weapons and air strength, will greatly decrease the capability of the enemy to inflict casualties by smothering his weapons. Conversely, *relative weakness in heavy firepower will increase casualty rates.*

c. In preparing estimates of patients, the planner must remember that disease incidence continues during combat and that soldiers may become careless at such times. The *admission rate during combat for DNBI may even rise* above the average for the following reasons:

(1) Necessity for haste causes a disregard of ordinary precautions.

(2) Fatigue not only causes actual disability but produces a state of mind that tends to exaggerate minor ailments and injuries. While careful sorting should prevent the evacuation of any great proportion of such cases, the operation of sorting alone places an additional burden on medical units.

d. The proportion of a command actively engaged in combat determines, to a considerable degree, the casualty rate of the unit as a whole.

(1) This proportion varies widely among units of different sizes and operations of different types. Local reserves of smaller units are ordinarily located so near the front line that their exposure to risk is at least comparable with that of other elements of the unit. On the other hand, reserves are ordinarily located well to the rear and outside the zone of greatest casualty incidence. Furthermore, reserves are committed to action by smaller units at more frequent intervals than by larger units. All this points to the *dangers in generalizations* in the estimation of casualties.

(2) Each situation must be studied and an estimate made for each major fraction of the command rather than one estimate for the command as a whole. This is to say that the HSS planner should base his estimate of probable casualties and nonbattle losses upon the experience of the corps or, better yet, of divisions as influenced by the situation confronting them at the time. For this reason, data in this manual and in FMs 101-10-1/1 and -1/2 should be used with extreme caution for planning purposes,

Section II. PATIENT RATE COMPUTATIONS

3-11. Rates

As used in military medicine, the term rate is a numerical expression of the number of times a particular event occurs in a specified population during a given period of time. Types of rates determined are admission rates, mortality rates, incidence rates (specific diseases), prevalence rates, medical noneffective rates, and case fatality rates. Through the use of rates, it is possible to make direct, ready, and meaningful comparisons of events related to different time periods and/or different populations.

3-12. Calculating a Rate

a. The following formula is used to calculate a rate:

$$\text{rate} = \frac{f \times \frac{T}{t}}{\frac{s}{k}} \quad \text{or} \quad \text{rate} = \frac{f \times T \times k}{t \times s}$$

where:

f = The observed frequency (such as the number of admissions and deaths).

t = The observed time period.

s = The observed strength or population.

T = The standard time period (per day, per month, per year).

k = A standard unit of population (per 100, per 1,000, per 10,000, per 100,000).

b. The value for *T* must always be expressed in the same unit that is used for the value of *t*. When it is necessary to be precise in computing an annual rate based upon a particular month's experience, the value of *T* will be 365 with the observed time period *t* as the specific number of days in the specific month (31, 30, 29, or 28). When dealing with rates used in military medicine, the most frequently used standard time period *T* is one year, which gives annual rates as the number per year. For some purposes, such as in planning and casualty studies, *T* is commonly used as one day, and the resultant rate is a daily one, or the number *per day*.

c. The *average* (or mean) strength *s* of the time period *t* in which the frequency of the event occurred should be used where practicable. Most frequently, in the rates used in military medicine, the standard unit of strength or population *k* is taken as 1,000.

3-13. Rates Defined

a. *Admission.*

(1) Admissions represent a general class of which there are many subclasses. Thus, in terms of the reason for admission to medical treatment, the rates may be based only on admissions due to—

(a) Disease (disease admission rate).

(b) Nonbattle injury.

(c) The combination of DNBI (all nonbattle causes admission rate).

- or
- (d) Battle injury and wound,
 - (e) A combination of all the foregoing causes (all causes admission rate).

(2) Similarly, an admission rate may be computed for the admissions due to a particular cause, such as some specific disease.

b. Mortality. The mortality (death) rate differs from the admission rate only in that the event which it measures is the number of deaths, rather than the number of patient admissions. Since the magnitude of the frequencies is less, a large standard unit of population *k* is used (10,000 or 100,000) more frequently than in the case of admission rates. The standard time period *T* will usually be a year.

c. Incidence. In an incidence rate, the event which is counted is the occurrence of a disease in a population free of the disease during a specific time span. The frequency of incidence here may differ from the frequency of admission due to this same disease since some cases so diagnosed may come from patients whose admission to an MTF is due to some other condition.

d. Prevalence. Prevalence rates measure the number of cases of a specified disease among a designated population at a particular time. They express the number of such cases per standard unit of population, usually per 1,000. They differ from the rates previously discussed in that the events so related are not occurring *over a period of time*, but rather the number of cases *at one time*. In actual practice, all of the observations on which a prevalence rate is based will sometimes not be made at one time or on the same day. The following formula is used in calculating the prevalence rate per 1,000:

$$\text{prevalence rate} = \frac{f \times k}{s}$$

where:

f = The number of cases of the specified kind found in the observed strength or population *s*.

k = The standard population (1,000).

e. Medical Noneffective. The non-effective rate, a measure very frequently used in military medicine, may be regarded as a special case of the prevalence rate discussed in above subparagraph. This rate measures the prevalence of noneffectiveness with noneffectiveness being defined as "excused from duty for medical reasons." This rate does not generally include time off for clinic visits and days off, other than hospitalization, for illness.

(1) The noneffective rate may be computed for all patients excused from duty for all causes, or it may be computed for particular groups such as all cases excused from duty due to disease (disease noneffective rate).

(2) The noneffective rate may be computed by using the same formula as shown for computing the prevalence rate but where *f* stands for the number of persons noneffective in the particular group being studied.

(3) An alternate method of computation is frequently used. It is based on the number of noneffectives on the average day during a particular period rather than on a count of the number of noneffectives as of one particular day.

(a) When the number of days lost in the period is used rather than the number of patients on the average day of the period, the following formula will be used:

$$\text{Noneffective rate} = \frac{\text{Noneffective days lost} \times 1,000}{\text{days in the period} \times \text{average strength}}$$

(b) The following relationship is another method to determine the noneffective rate:

$$\text{Noneffective rate} = \frac{\text{daily admission rate} \times \text{average days per patient}}{\text{average days per patient}}$$

f. *Case Fatality.* The case fatality rate is also called the case fatality ratio. It is a measure of mortality for a particular disease, injury, condition, or group of conditions. It shows the relationship of the number of deaths due to a particular cause to the number of cases of that particular condition among which the deaths occurred. This rate is ordinarily expressed as a percentage; that is, the number of deaths per 100 such cases.

(1) The following formula is used in calculating the case fatality rate:

$$\text{case fatality rate} = \frac{f \times k}{c}$$

where:

c = The number of cases of the kind studied.

f = The number of these cases that resulted in death.

k = The standard population (100).

(2) Case fatality rates may be computed for groups of conditions in the same manner as for specific diseases. One such frequently used measure is the case fatality rate for wounded- or injured-in-action cases. This measure indicates the chances of survival among those casualties who reach medical treatment.

CHAPTER 4

PATIENT EVACUATION AND MEDICAL REGULATING

Section I. EVACUATION POLICY**4-1. The Theater Evacuation Policy**

a. Before plans can be made to provide hospitalization and evacuation, there are certain problems which must be resolved by command decision. One such decision is the evacuation policy. It is established by the Secretary of Defense, with the advice of the JCS, and upon the recommendation of the theater commander. The policy establishes, in number of days, the maximum period of noneffectiveness (hospitalization and convalescence) that patients may be held within the theater for treatment.

b. This policy does not mean that a patient will be held in the theater for the entire period of noneffectiveness. A patient who is not expected to be ready for RTD within the number of days established in the theater evacuation policy is evacuated to CONUS or some other safe haven. This is done providing that the treating physicians determine that such evacuation will not aggravate the patient's disabilities or medical condition. Field Manuals 8-10 and 8-10-6 discuss the theater evacuation policy and the intratheater evacuation policy. Field Manual 8-10 also discusses the acceptable percentage of fill for available hospital beds.

c. The evacuation policy has different meanings for different personnel. For example:

(1) To the physicians and dentists engaged in direct patient treatment and decisions relating to patient disposition, it means that there is a maximum period within which clinical staffs may complete the treatment needed to return the patient to full duty within the theater. If the theater policy is 60 days and full RTD can be predicted within that time, the patient will be retained in the theater hospital system. If the

patient cannot be returned to full duty within 60 days, the patient will be evacuated out-of-theater as early as clinically prudent. Once the clinical judgment has been made, the patient should be allowed to recover enough to endure the evacuation.

(2) To the HSS planner, it means that he can compute the beds required in the theater if given the evacuation policy and other planning factors. (See Chapter 5.) This can be translated into the type, mix, number, and distribution of hospitals required in the theater.

(3) To the nonmedical logistician, it means, in part, that he can estimate his total obligation to support this system.

(4) To the United States Air Force (USAF) planner, it means that he can plan accurately for USAF AE requirements for both intra- and intertheater patient movements.

(5) Finally, to the HSS operator, it means that he has a management tool, which when properly adjusted and used, will provide the balance between patient care and tactical support requirements. The HSS operator will be able to tailor a HSS package specifically designed to handle patient work loads, with maximum benefit to the patients and with maximum economy of available resources.

4-2. Factors Determining the Evacuation Policy

The following factors are used in determining the evacuation policy:

a. Nature of Tactical Operations. A major factor is the nature of the combat operations.

Will they be operations of short duration and small magnitude? Will they be operations of long duration and heavy magnitude? Will NBC/DE weapons be employed? Will only conventional weapons be used? Is a static combat situation expected?

b. Number/Type of Patients. Another factor is the number and types of patients anticipated and the rate of patient RTD. Admission rates vary widely in different geographical areas of the world and in different types of military operations. Chapter 5 discusses historical data on admission rates under varying geographical, climatic, and organizational conditions.

c. Evacuation Means. An important factor is the means (volume and type of transportation) available for evacuation of patients from the TO to the CONUS.

d. Availability of Replacements. Another important consideration is the capability of CONUS to furnish replacements to the theater. For each patient who is evacuated from the theater to CONUS, a fully trained and equipped replacement must be provided. During a small-scale conflict overseas, CONUS replacement capability would be much greater when compared to a large-scale conflict such as World War II.

e. Availability of In-Theater Resources. Limitations of all HSS resources such as insufficient numbers and types of HSS units in the COMMZ to support the CZ and an insufficient amount of health service logistics and nonmedical logistics will have a definite impact on the evacuation policy. The amount and timing of engineering support is also a consideration. The more limitations (or shortages), the shorter will be the theater evacuation policy.

4-3. Impact of Evacuation Policy on Health Service Support Requirements

a. A short theater evacuation policy—

- Results in fewer hospital beds required in the theater and a greater number of beds required elsewhere.

- Creates a greater demand for intertheater Air Force evacuation resources. (A shortened intratheater evacuation policy would likewise increase the number of airframes required in the theater.)

- Increases the requirements for replacements to meet the rapid personnel turnover which could be expected, especially in combat units. (The impact this would have on both intra- and intertheater transportation and other requirements must also be considered.)

b. A longer theater evacuation policy—

- Results in a greater accumulation of patients and a demand for a larger HSS structure in the theater. It decreases bed requirements elsewhere.

- Increases the requirements for medical materiel and maintenance (health service logistics) and nonmedical logistics support.

- Increases the requirements for hospitals, engineer support, and all aspects of base development for HSS. (It demands the establishment of a larger number of hospitals in the COMMZ. Regardless of the construction stipulated, the number of man-hours and materials required must be considered.)

- Provides for a greater proportion of patients to be returned to duty within the theater, and thus reduces the loss of experienced manpower.

4-4. Adjustments to the Evacuation Policy

When patients are received at a rather constant rate, the evacuation policy at a specific echelon

may be adjusted to retain or RTD those patients who do not require specialized treatment in COMMZ general hospitals (GHs). However, when increased patient loads are anticipated, the intratheater evacuation policy must be adjusted to make additional beds available for current and anticipated needs. As a result, a larger proportion

of patients admitted in the CZ are evacuated to the COMMZ much earlier than under average conditions. The displacement of hospitals temporarily reduces the number of beds available and may result in a greater number of patients being evacuated out of the CZ during the period of relocation.

Section II. MEDICAL EVACUATION

4-5. Evacuation Tenets

a. Patient evacuation is the timely and efficient movement of wounded, injured, or ill persons from the battlefield and other locations to the MTFs. Evacuation begins at the location where the injury or illness occurs and continues as far as the patient's medical condition warrants or the military situation requires. Medical personnel provide en route medical care during patient evacuation.

b. Service component commanders are responsible for evacuation of patients within their AOR.

c. The unified commander is responsible for issuing procedures for evacuation of formerly captured or detained US military personnel.

d. The unified commander will issue procedures for evacuation of EPW and civilian internees, other detainees, and civilian patients. (See FM 8-10 for discussions on the Geneva Conventions. The Conventions contain many provisions which are tied directly to the HSS mission. Also, see AR 190-8 for disposition of an EPW after hospital care.)

(1) Sick, injured, or wounded EPW are treated and evacuated through normal medical channels, but remain physically segregated from US and allied patients. Helmets, gas masks, and

like articles issued for personal protection will remain in the possession of each individual. Enemy prisoners of war are evacuated from the CZ as soon as possible. Only those sick, injured, or wounded prisoners who would suffer a great health risk by being evacuated immediately may be treated temporarily in the CZ.

(2) The MTF commander is responsible for the treatment of sick, injured, or wounded EPW patients. The echelon commander is responsible for the security of EPW patients. (See FM 19-40 for further information concerning EPW evacuation and control. Also, see FM 19-4 for a discussion on EPW operations.)

e. Procedures and policies for evacuation of injured and sick military working dogs (MWDs) will be issued by the unified commander.

f. Army aeromedical evacuation units must be able to communicate with other Service hospitals.

4-6. Planning for Patient Evacuation

a. Planning patient evacuation involves considering all available forms of transportation and providing appropriate HSS personnel in the evacuation system to assure continuity of patient care. It also involves planning the routing, controlling evacuation movements, and planning the

location of evacuation facilities. Patient collecting points, ambulance exchange points, and an ambulance shuttle system (ambulance loading points, ambulance relay points, and ambulance control points) must be planned. Thorough investigation of all the available lines of communications is an essential prerequisite to such planning. Field Manual 8-10-6 provides a comprehensive discussion on medical evacuation in support operations across the operational continuum.

b. The AMEDD does not have dedicated fixed-wing aircraft for evacuation of patients from the CZ to the COMMZ or from the COMMZ to the CONUS. (See paragraph 4-23*a*, *b*, and *c*.) For additional means of evacuation, coordination must be effected with—

- The particular Service controlling aircraft and ships.
- The transportation command controlling the locomotive power for trains and other forms of transportation.

c. Coordination with other Services and commands is usually accomplished through medical regulating (MEDREG). The surgeon, however, must forecast the requirements for air and surface evacuation so that coordination for its procurement may be done in advance of the need. Aircraft are requested on the basis of anticipated needs and to meet emergencies such as those occurring in nuclear warfare where CZ hospitals are suddenly filled to capacity.

4-7. Evacuation Means

a. The USAF Airlift System is primarily responsible for moving patients from the CZ to the COMMZ, within COMMZ, and from COMMZ to CONUS. (See paragraph 4-24.) If movement requirements exceed the capability of the USAF AE system, the MEDCOM medical regulating

officer (MRO) may have to seek alternative modes of transportation. (See paragraph 4-17*h*.) He may task the MEDCOM's medical battalion (evacuation) (see paragraph 4-20) for movement of patients by Army aircraft or ground ambulances.

b. In addition to using ground evacuation when the USAF AE system cannot support the number of patients requiring air evacuation, there are other factors that may require the use of ground evacuation from the CZ to the COMMZ. Some reasons for evacuating patients by ground transportation are the following:

- (1) Tactical considerations that prevent the use of aircraft for patient evacuation during certain periods.
- (2) Patients who cannot be evacuated by air.
- (3) Weather conditions.
- (4) Lack of adequate or properly located airfields.
- (5) Insufficient numbers of aircraft available.

c. When patient evacuation by air from the CZ to the COMMZ is not possible or appropriate, field or bus ambulances from medical ambulance companies assigned to the medical battalion (evacuation) of the COMMZ medical brigade, MEDCOM, may be used.

d. If air or ground ambulances must be used to transport large numbers of patients to or within the COMMZ, the MEDCOM MRO must obtain clearance through the TA movement control center (MCC), which is an agency of the TA transportation command. This agency coordinates and controls the movement of Army aircraft and ground transportation within the theater. When capabilities are exceeded, the MCC coordinates requests for additional air and ground resources.

It also obtains the necessary clearances to support the mission from the CZ.

e. Modern warfare is likely to generate more casualties than the airlift system can handle. Surface evacuation is then a possibility. It is possible that, under certain circumstances, patients may be returned to CONUS by surface vessel rather than by air. Such transportation is the responsibility of the Military Sealift Command (MSC) (paragraph 4-23b). Deliberate planners should strive to make requirements estimates known so that MSC planners are able to provide medical evacuation. The MEDCOM MRO would

be responsible for coordinating the evacuation requirements. After coordination is complete, the MEDCOM establishes patient-holding facilities at COMMZ ports. Patients would be delivered to these facilities and held until loaded aboard designated ships. Once in CONUS, patients would normally be taken to the nearest Air Mobility Command (AMC) terminal for further airlift to destination hospitals.

f. Table 4-1 lists the types of transportation usually available to the AMEDD for the evacuation of patients within a TO and shows their patient-transporting capacity.

Table 4-1. Evacuation Capabilities (United States Forces)

	LITTER***	AMBULATORY***
USAF		
TRANSPORT AIRCRAFT		
C-130 HERCULES##	70	85
C-9A NIGHTINGALE*	40	40—15 LITTER PLUS 24 AMBULATORY
C-141B STARLIFTER##	103	147
C-5 GALAXY##		70
C-17A##		48 LITTER PLUS 44 AMBULATORY
CIVIL RESERVE AIR FLEET (CRAF)		
BOEING 767 (B-767)	111**	
US ARMY		
GROUND VEHICLES		
M886/893 TRUCK, AMBULANCE*	4	8
M1010 TRUCK, AMBULANCE, 1 1/4-TON, 4X4*	4	8
BUS, MOTOR, 44 PASSENGER*	18	37

LEGEND:

- * Requires on board medical attendant(s) and equipment.
- ** Configured for litter patients only.
- *** Maximum capacity litter or ambulatory.
- # Ambulatory figure for the UH-60A is 15 if the litter kit is not installed.
- ## Naval vessels and aircraft and Air Force cargo aircraft in most situations require on board medical personnel and equipment.
- ### Figures for litter and ambulatory patients are the same since all patients require a bunk.
- § These capacities require any Marines on board to be disembarked to shore.
- §§ These capacities will require Navy personnel augmentation packages (similar to the Army's Professional Officer Filler System [PROFIS]) on board. The majority of each of these capacities consists of overflow beds.

Table 4-1. Evacuation Capabilities (United States Forces) (Continued)

	LITTER***	AMBULATORY***
US ARMY (CONTINUED)		
M113 CARRIER, PERSONNEL (AMBULANCE)* (CAUTION: SPAWL LINER MUST BE REMOVED.)	4	10
M880/890 AND M1008 TRUCK, CARGO, 1 1/4-TON, 4X4/4X2	5	8
M996 TRUCK, AMBULANCE (HIGH MOBILITY MULTIPURPOSE WHEELED VEHICLE [HMMWV-MINI]) (NONEXPANDED)*	2	0
M996 TRUCK, AMBULANCE (HMMWV-MINI) (EXPANDED)*	2	6
TRUCK, CARGO, 2 1/2-TON, 5-TON, 6X6*	12	16
M997 TRUCK, AMBULANCE (HMMWV-MAXI)*	4	8
M998 TRUCK, CARGO/TROOP CARRIER, 1 1/4-TON, 4X4	3	5
FIXED-WING AIRCRAFT		
U-21 UTE	3	10
C-12 HURON		8
ROTARY-WING AIRCRAFT		
CH-47D CHINOOK	24	33
UH-60A/Q BLACKHAWK	6 LITTER PLUS 1 AMBULATORY	7#
UH-1H/V IROQUOIS	6	9
RAIL TRANSPORT		
PULLMAN CAR (US)	32	48
SLEEPING CAR (NATO/HOST NATION SUPPORT)	32	32
AMBULANCE RAILWAY CAR (NATO/HOST-NATION SUPPORT)	24	30
AMBULANCE RAILWAY CAR, PERSONNEL	21	21
RAIL BUS	40 LITTER PLUS 16 AMBULATORY	
US NAVY		
SHIPS AND WATERCRAFT		
T-AH 19, US NAVAL SHIP MERCY	1000###	1000###
T-AH 20, US NAVAL SHIP COMFORT	1000	1000
AMPHIBIOUS ASSAULT SHIP (LHD) (MULTIPURPOSE)	604	604
(CASUALTY RECEIVING SHIP [CRTS]) (RECEIVES BOTH HELICOPTER AND WATERBORNE CASUALTIES)##,###,5,55		
AMPHIBIOUS ASSAULT SHIP (LHA) (GENERAL PURPOSE)	367	367
(RECEIVES BOTH HELICOPTER AND WATERBORNE CASUALTIES)##,###,5,55		
AMPHIBIOUS ASSAULT SHIP (LPH) (HELICOPTER)	222	222
(CRTS)##,###,5,55		
AMPHIBIOUS TRANSPORT DOCK (LPD)##	14	14
(COULD BE DESIGNATED AS AN EMERGENCY OR OVERFLOW CRTS)		
DOCK LANDING SHIP (LSD)##,###,5,55	108	108
ONLY NEWER LSDS (CLASS 41 AND NEWER SHIPS) HAVE LIMITED POTENTIAL FOR USE AS EMERGENCY OR OVER- FLOW CRTS. THEY DO NOT HAVE DENTAL CAPABILITY.		

Table 4-1. Evacuation Capabilities (United States Forces) (Continued)

	LITTER***	AMBULATORY***
US NAVY (CONTINUED)		
AMPHIBIOUS CARGO SHIP (LKA)##	12	12
MEDICAL OFFICER ASSIGNED. COULD SUPPORT FLEET SURGICAL TEAM (21-PERSON MEDICAL AUGMENTATION TEAM). THE NUMBER OF POTENTIAL PATIENT CARE BEDS ARE LIMITED. NOT SUITABLE AS CRTS. NO DENTAL CAPABILITY.		
TANK LANDING SHIP (LST). EXTREMELY LIMITED MEDICAL CAPABILITY AND NO DENTAL CAPABILITY. THE LARGE TANK DECK (DESIGNED FOR VEHICLE STOWAGE) OFFERS POTENTIAL USE AS A CASUALTY TREATMENT SPACE IF AN APPROPRIATE SHELTER IS INSTALLED. THE OBVIOUS ADVANTAGE IS IN ITS ABILITY TO REACH THE BEACH. ELEMENTS OF A FLEET SURGICAL TEAM COULD BE USED TO PROVIDE PERSONNEL AND EQUIPMENT FOR THIS POTENTIAL USE. USED IN MASCAL SITUATIONS.		
AMPHIBIOUS COMMAND SHIP (LCC)	24	24
THE LCC HAS ADEQUATE MEDICAL FACILITIES TO CARE FOR EMBARKED PERSONNEL. ITS MISSION AND LIMITED BED CAPACITY PRECLUDE ITS USE AS A CRTS. THE AMPHIBIOUS TASK FORCE SURGEON, LANDING FORCE SURGEON, AND OTHER KEY MEDICAL STAFF OFFICERS ARE NORMALLY LOCATED ON AN LCC DURING OPERATIONS.		
ROTARY-WING AIRCRAFT		
CH-46 SEA KNIGHT**	15	25
CH-53D SEA STALLION**	24	55 WITH CENTER LINE SEATING INSTALLED
V22, OSPREY	12	24

Section III. CALCULATION OF PATIENT EVACUATION REQUIREMENTS

4-8. Methodology

This section presents a methodology for calculating the time and the number of units of transport required to evacuate a given number of patients, or to support a specific operation.

4-9. Time Factors

The following are time factors for evacuation of patients (including loading and unloading):

- a. *Litter Squads.*

(1) Average terrain, four-person squad—900 meters and return in 1 hour.

(2) Mountainous terrain, six-person squad—350 meters and return in 1 hour.

b. Ambulance (wheel and track vehicle). During combat in the division area—eight kilometers and return in 1 hour (optimal weather and terrain).

c. Aircraft.

(1) Helicopter—150 kilometers one-way in 1 hour (based on the operational capability and patient-loading ease of UH-1V/H helicopter).

(2) Transport—360 kilometers one-way in 2 hours (based on 1 1/2 hour mission for C-130E aircraft and 30 minutes patient-loading time).

(3) Army airplane—200 kilometers one-way in 1 hour (based on the operational capability of U-21 aircraft, including patient-loading time).

4-10. Computations

a. The following formulas may be used to calculate the time and the number of units of transport required to evacuate a given number of patients:

(1) *Time required:*

$$T = \frac{N \times t}{U \times n}$$

(2) *Units required:*

$$U = \frac{N \times t}{T \times n}$$

N = Total number of patients to be evacuated.

n = Number that can be transported in one load.

T = Total time.

t = Time required for one round-trip.

U = Number of units of transport (litters, ambulances, and aircraft).

b. The amount of evacuation resources required to support a specific operation may be calculated by using the following formula for either WIA or DNBI patients: (See paragraphs 4-11 and 4-12 for example problems and solutions.)

$$\frac{(A \times B)}{C} \times E = \text{ambulance requirements by type per day.}$$

where:

A = The total patients (WIA or DNBI) generated for a specific operation per day. This figure may be calculated using projected figures for the specific AO. Admission rates contained in Chapter 5 reflect experience factors derived from past wars. These figures may be used as bottom-line planning factors only.

B = The percentage of those patients in A, above, requiring evacuation. Normally, this figure will exceed 100 percent as a recognition of the fact that many patients will need to be moved more than once. The number of times a patient will be moved will depend on many factors. In assigning a specific percentage as a planning factor, the HSS planner must consider—

- Terrain.
- Force structure.

- Enemy weapons systems.
- Weather.
- Airfield or seaport locations.
- Other factors affecting patient flow.

C = The average number of patients moved by a means of evacuation. The figure will vary depending on the type of ambulance (ground or air), or the specific model of vehicle.

D = The average number of missions a particular evacuation vehicle can complete per day.

E = The dispersion allowance for the specific types of evacuation vehicles in the formula. The dispersion allowance is a recognition that a specific percentage of vehicles in the force will be unavailable for missions due to maintenance, crew rest, combat loss, or replacement lag time. The HSS planner will determine the specific percentage used by reviewing maintenance historical data and considering the threat in terms of the enemy, terrain, and weather. To convert the dispersion allowance into a factor, see Table 5-1, Chapter 5.

4-11. Example Problems

To determine the requirements for air or ground evacuation resources to support a specific operation, you, as the HSS planner, have determined information necessary to compute this problem. Complete the calculations for air *or* ground evacuation vehicles by using formulas provided in paragraph 4-10B. Compare the answers to the solutions provided in paragraph 4-12.

a. Using the information below, calculate air ambulance requirements. (See paragraph 4-10B for formula application.)

(1) Type of patients:

- DNBI 413.
- WIA 588.

(2) Patients by type requiring air evacuation:

- DNBI 120 percent.
- WIA 180 percent.

(3) Average number of patients per mission: 3.

(4) Average number of missions per helicopter per day: 11.

(5) Dispersion allowance: 30 percent.

b. Using the following information, calculate ground ambulance requirements:

(1) Type of patients:

- DNBI 413.
- WIA 588.

(2) Patients by type requiring ground evacuation:

- DNBI 130 percent.
- WIA 70 percent.

(3) Average number of patients per trip: 2.

(4) Average number of trips per day per ambulance: 6.

(5) Dispersion allowance: 35 percent.

4-12. Example Solutions

a. Calculate air ambulance requirements:

(1) Type of patients:

- $$\begin{array}{r} \text{DNBI } 413 \\ \times 1.20 \\ \hline 496 \end{array}$$
 Patients re-

quiring air evacuation.

- $$\begin{array}{r} \text{WIA } 588 \\ \times 1.80 \\ \hline 1,058 \end{array}$$
 Patients re-

quiring air evacuation.

- $$\begin{array}{r} \text{DNBI } 496 \\ \text{WIA } + 1,058 \\ \hline 1,554 \end{array}$$
 Total pa-

tients requiring air evacuation.

(2) $1,554 / 3$ patients per mission = 518 missions.

(3) $518 / 11$ missions per day = 47 helicopters.

(4) 47×1.43 dispersion factor = 67 helicopters.

b. Calculate ground ambulance requirements:

(1) Type of patients:

- $$\begin{array}{r} \text{DNBI } 413 \\ \times 1.30 \\ \hline 537 \end{array}$$
 Patients re-

quiring ground evacuation.

- $$\begin{array}{r} \text{WIA } 588 \\ \times .70 \\ \hline 412 \end{array}$$
 Patients re-

quiring ground evacuation.

- $$\begin{array}{r} \text{DNBI } 537 \\ \text{WIA } + 412 \\ \hline 949 \end{array}$$
 Total pa-

tients requiring ground evacuation.

(2) $949 / 2$ patients per trip = 475 trips.

(3) $475 / 6$ trips per day = 79 ambulances.

(4) 79×1.54 dispersion factor = 122 ambulances.

Section IV. MEDICAL REGULATING

4-13. Casualty Management System

Medical regulating is a casualty management system designed to coordinate the movement of patients from site of injury or onset of disease through successive echelons of medical care to an MTF that can provide the appropriate medical care and treatment. Prompt movement of patients to the required level of professional care is necessary

to avoid increased morbidity and mortality. See discussions in FMs 8-10, 8-10-3, and 8-10-6.

4-14. Planning for Medical Regulating

a. If patients occurred at regular intervals, in constant numbers, at predetermined locations, and with predictable injuries, their

evacuation would require little or no MEDREG. Since these circumstances never occur, MEDREG is a vital support factor which must be employed in the most effective manner possible.

(1) *Coordination.* The MEDREG system operates worldwide to regulate the movement of patients from the US Army, US Navy, and USAF to appropriate MTFs or medical treatment elements (MTEs). While the concept of MEDREG is simple, its execution becomes quite complex for the following reasons:

(a) It involves all three military services, thus requiring careful and detailed coordination.

(b) Patients require continuous medical care during all phases of evacuation.

(c) The AMEDD does not have its own long-range evacuation means; therefore, close coordination with the Services providing transportation is required.

(2) *Control.* The MEDREG system is under the technical control and supervision of MROs assigned to all medical command and control headquarters above battalion throughout the TA. These officers plan and coordinate with the various organizations and agencies who participate in the MEDREG system. Many factors must be considered in controlling the movement of patients. The primary factor is the tactical situation. Conditions are seldom static, and success in achieving the combat mission must remain the primary goal of both combat and CS units. Tactical MEDREG is controlled by Service MROs; theater MEDREG is controlled by the theater JMRO or AJMROs; and CONUS MEDREG is controlled by the ASMRO.

b. Patient management, therefore, is a dynamic decision-making process which must be applied throughout all echelons of medical care. It does little good to move a patient from one point to

another if the receiving point is not prepared to handle him. Effective patient regulating may prove to be as big a problem as medical evacuation. For example, patients may not be regulated to a 296-bed combat support hospital (CSH) with 150 empty beds. Why? There may be many factors that may impede this regulating. Other factors, in addition to the tactical situation, which influence the scheduling of patient evacuation include—

(1) Availability of transportation.

(2) On-hand patient mix, specialty capabilities, Class VIII status, medical equipment status, staffing status, associated supply items of other equipment status, pending displacement of MTFs, or locations of MTFs.

(3) The current bed status of MTFs (beds occupied/not occupied).

(4) Surgical backlog of each facility.

(5) Number and location of patients by diagnostic category.

(6) Location of airfields or seaports.

(7) Condition of each patient. (Is the patient sufficiently stabilized to withstand travel?)

(8) Communications capabilities.

4-15. Wartime Regulating

a. The wartime regulating and/or evacuation of patients between the second and third echelons of care MTFs are the responsibility of the Service component (Army, Navy, or Air Force) commander. In the CZ, the Service components are responsible for evacuation of patients from an injury site to the nearest MTF.

b. In the CZ where patients are transferring between facilities of the same Service and

these facilities do not support other Services, the JMRO is not assigned regulating responsibility. (Component Service MTFs may be required to support patients from other Services in the CZ. Service MROS must, therefore, ensure there is secure communication and coordination between Service MROS in the CZ.) The regulating of casualties from the third to fourth echelon and the subsequent regulating from the theater to CONUS is accomplished jointly by JMRO and the ASMRO (paragraph 4-19).

4-16. Intratheater Medical Regulating

a. The medical brigade and group commanders assign missions to their subordinate hospitals and evacuation units in support of the committed divisions. This establishes an anticipated flow of patients from the division medical companies to the CSHs or mobile army surgical hospitals (MASHs) at the corps. Through periodic and “spot” reports, the medical brigade MRO, assisted by medical group MROs, further controls the movement of patients to prevent the overloading of individual hospitals.

b. The patient disposition and reports branch, division medical operations center (DMOC), division support command coordinates with the medical group MRO who regulates the patients from the division’s AO. The division tracks patients rather than regulates them. The exception to this is when the DMOC, in coordination with the medical group and medical brigade MROs, regulates patients directly to the MASH, but this is not a routine procedure.

c. The formal joint MEDREG system begins in the hospitals assigned to the corps.

(1) On a daily basis, physicians identify those patients who cannot be returned to duty within the established evacuation policy and are sufficiently stabilized to withstand movement to a COMMZ hospital.

(2) This information is reported by each patient care unit (ward) to the patient administrator (PAD).

(3) The PAD in each hospital normally performs the MEDREG function.

(a) He assembles all pertinent information from the patient-care units (wards) and transmits a consolidated report to the MRO of the medical group/brigade headquarters to which the hospital is attached. This report is, in effect, an evacuation request. It should contain, as a minimum, the following information.

- Number of patients by clinical service such as surgical, medical, and neuropsychiatric.
- Number of patients by transportability categories: litter and ambulatory.
- Patient status such as active duty (AD) military, US civilian, EPW, or noncombatant evacuees.

This required information identifies hospital bed requirements, clinical specialty requirements, loading configuration for transportation, special handling requirements of patients, and requested evacuation date and time.

(b) The PAD is also responsible for keeping his next higher MRO apprised of current beds available and clinical service status.

(4) The MRO at group headquarters—

- (a) Receives the reports from the attached hospitals.
- (b) Consolidates the reports.

(c) Designates patients to subordinate hospitals and tasks subordinate medical evacuation units for assets to transfer patients.

(d) Forwards a consolidated requirements report to the medical brigade MRO for coordination of MEDREG for patient evacuation from the medical group facilities to the supporting MTFs in the COMMZ.

(e) Indicates desired MASF for patients being evacuated via air transportation.

(f) Keeps the brigade MRO informed of current beds available and clinical service status.

(g) Monitors bed status reports from hospitals under his span of control.

(5) The MRO at the medical brigade headquarters in the CZ—

(a) Provides medical regulation of patient movement to and between *assigned and attached* MTFs, designates receiving hospitals, and notifies subordinate MROs who disseminate the information to the hospital PADs, or coordinate the evacuation resources for the transfer. If patients within the CZ are being regulated to other Service MTFs, an AJMRO will be established who will regulate patients between Service MROs.

(b) Consolidates the reports from all groups within the corps and transmits (submits) a consolidated report on the remaining requirements (those patients requiring regulating to COMMZ hospitals) to the MRO at the MEDCOM headquarters.

(c) Keeps the MEDCOM MRO informed of current beds available and clinical service status.

d. Medical regulating within the COMMZ is similar to the system described within the CZ. Attending physicians in field hospitals (FHs) identify patients to be evacuated to GHs, and PADs consolidate requests within their hospitals for submission to the medical brigade MRO. (The PAD is also responsible for keeping his next higher MRO informed of current beds and clinical service status.) Brigade MROs further consolidate the requests of patients requiring evacuation from subordinate hospitals and forward them to the MEDCOM MRO.

e. The MEDCOM MRO consolidates all reports of patients requiring evacuation from subordinate MROs and submits them to the JMRO. The JMRO consolidates the patient evacuation requests from all Services—Army, Navy, and Air Force—within the theater. He then compares the requests to the current bed status reports from COMMZ hospitals to identify receiving hospitals. (This comparison enables the JMRO to assure availability of adequate beds for current and anticipated needs, route patients requiring specialized treatment to the proper MTFs, and effect an even distribution of patients in COMMZ hospitals.) The JMRO designates MTFs in the COMMZ to receive the patients identified for intratheater evacuation. The JMRO will then notify the CZ medical brigade MRO and the COMMZ MEDCOM MRO of the regulating decision. The JMRO, therefore, regulates the flow of patients regardless of Service throughout the theater, assuring the efficient use of theater hospital beds.

f. Depending upon the distance between hospitals, patients may be evacuated by Army evacuation means, or by Air Force aircraft. The MEDCOM MRO coordinates through the AELT (paragraph 4-24b) to the AECC (paragraph 4-24a) for USAF evacuation flights from the CZ to the COMMZ. (See subparagraph 4-17 *f through l*. He coordinates Army medical evacuation by tasking subordinate evacuation units. Large ground movements must be coordinated through the MCC.

4-17. Intertheater Medical Regulating

a. Many of the patients treated at COMMZ hospitals are returned to duty within the theater. Others, however, cannot be returned to duty within the theater evacuation policy and must be evacuated to the CONUS. The reporting of these patients for evacuation is as previously described—from attending physician to patient administration officer, through the COMMZ brigade MRO to MEDCOM MRO, consolidated at each headquarters. The MEDCOM MRO submits the consolidated request for CONUS evacuation from the COMMZ hospitals to the JMRO.

b. The JMRO coordinates the evacuation requirements for CONUS beds with the ASMRO who is located in CONUS. Paragraph 4-19 discusses the ASMRO.

c. The ASMRO consists of representatives from the Army, Navy, and Air Force. The ASMRO will direct the distribution of patients into CONUS hospitals.

d. In the event no JMRO has been established because multiple services are not providing Echelon IVHSS, the MEDCOM MRO assumes the functions of the JMRO.

e. When the ASMRO provides the JMRO with CONUS hospital designations, the JMRO disseminates this information to the MEDCOM MRO (and to the MROs of other Service components).

f. The MEDCOM MRO requests air transportation through the AELT to the AECC for evacuation flights from the CZ to the COMMZ and from the COMMZ to the CONUS.

g. The AECC coordinates the AE requirements with aerial resupply missions into the CZ. To the maximum extent possible, retrograde

tactical aircraft are used for AE missions. When required, special mission aircraft may be allocated to accomplish the mission. After coordination is complete, the AECC furnishes detailed flight schedules to the MEDCOM through the AELT, indicating on-load and destination airfields, number of patients to be moved, and the Air Force mission numbers of the aircraft.

h. When the MEDCOM MRO receives the information from the AECC through the AELT, he, in turn, disseminates the information to subordinate MROs. If movement requirements exceed the capability of the AE system, the MEDCOM MRO may have to seek alternative modes of transportation.

i. Communications zone medical brigade and CZ medical brigade/group MROs inform their MTFs of the number of patients to be evacuated from each departure airfield, the mission numbers of the evacuation aircraft, and the arrival and departure time of the aircraft. They also designate ambulance units to support each hospital in moving the patients.

j. Each facility, supported by designated ambulance units, then moves its patients to the appropriate departure airfield(s). At designated corps airfields, the USAF AE squadron operates a MASF (subparagraph 4-24d) to hold patients pending loading on aircraft. These holding facilities are limited so the time frame during which patients must arrive at the MASF is generally limited to no earlier than 3 hours prior to the aircraft's arrival or no later than 1 hour prior to departure.

k. Once patients are delivered to the MASF (subparagraph 4-24d), the Air Force assumes control of them until they are off-loaded at the destination airfield. If for some unforeseen reason, AE aircraft is not available, the originating MTF will pick up the patient and provide medical care until the next scheduled flight. At the COMMZ airfield, the patients are off-loaded from the C-130

aircraft, placed on Army vehicles, and transported to the destination GH.

l. In the COMMZ, the Air Force operates an ASF (subparagraph 4-24e) at each AMC terminal used for AE. If for some unforeseen reason, AE aircraft is not available, the originating MTF will pick up the patient and provide medical care until the next scheduled flight. When the patients are delivered to the ASF, AMC assumes responsibility for their care.

m. On arrival in CONUS, patients will generally be held for 24 to 36 hours in the ASF at the aerial port of debarkation. Then they will normally be loaded aboard C-9 aircraft for further movement to destination airfields, where they will be met by medical personnel (of their respective Services, if possible) and moved by an appropriate means to their destination hospitals.

4-18. Joint Medical Regulating Office

a. The JMRC is a joint agency, consisting of elements of two or more Services, established to regulate the movements of patients, within a TO to MTFs having the capabilities to provide the necessary care. It also coordinates the movement of patients to CONUS with the ASMRO. The Defense Medical Regulating Information System (DMRIS) is used within the Pacific and European Commands to communicate patient regulating information to ASMRO. Many of the fixed MTFs in both theaters are connected to DMRIS to communicate with JMRO and ASMRO.

b. The JMRO functions as part of the unified command surgeon's section. It consists of a Medical Service Corps officer and enlisted administrative specialists from all Services. Composition varies from unified command to unified command. Personnel include both permanently assigned staff and Reserve augmentation and personnel provided by components. The com-

mand surgeon may establish subunified command JMROs and AJMROs to provide regional regulating.

c. Specified duties of the JMRO are as follows:

(1) To develop and recommend to the unified command surgeon overall policies, procedures, and guidance for reporting medical evacuation requirements.

(2) To maintain direct liaison with the ASMRO, MEDREG offices of component Services, transportation agencies which furnish evacuation transportation, and the component surgeons.

(3) To coordinate with the unified command surgeon in determining bed availability.

(4) To obtain reports of available beds from the surgeons of component Services accessible to the JMRO.

(5) To accept requests for beds from the Service regulating officers.

(6) To identify facilities to receive patients requiring medical care at another MTF.

(7) To coordinate with ASMRO for beds at CONUS MTFs for patients requiring movement out of the TO because estimated hospitalization will exceed the theater's established evacuation policy.

(8) To obtain, consolidate, and disseminate current and projected estimates of evacuation requirements within the joint force and to CONUS. In the COMMZ and CZ, the AJMRO needs the evacuation requirements. For CONUS-bound evacuees, the ASMRO and the Commander, JTF for CONUS Medical Mobilization, as a minimum, also need this information

to provide beds and transportation from the theater to CONUS medical facilities.

4-19. Armed Services Medical Regulating Office

The ASMRO is a joint agency operated by the Chief of Staff, USAF, as executive agent for the JCS, and subject to the direction, control, and authority of the JCS. The ASMRO performs a supporting role to the combatant commands.

NOTE

The ASMRO is pending reorganization under US Transportation Command (USTRANSCOM). When the reorganization is effected, it will be a direct

reporting unit of the USTRANSCOM. It will continue to perform a supporting role to the combatant commands.

b. The ASMRO regulates patients from TO based on requests from a JMRO or other designated reporting activity to CONUS MTFs capable of providing the required level of care. In making the regulating decisions, the ASMRO coordinates with the USTRANSCOM to make optimum use of transportation assets. The ASMRO is also responsible for MEDREG within CONUS. To accomplish the MEDREG mission, ASMRO maintains continuous liaison with the joint force JMRO. The ASMRO regulates patients using the DMRIS (in peacetime and wartime) and the automatic digital network (AUTODIN). When authorized by ASMRO, other means of communications such as facsimile and telephone may be used.

Section V. MEDICAL EVACUATION UNITS

4-20. Medical Battalion (Evacuation), TOE 08-446L000

a. Mission. This unit provides command and control of air and ground medical evacuation units within the TO.

b. Assignment. The medical battalion (evacuation) is assigned to the TA MEDCOM or corps medical brigade. It is normally further attached to the medical brigade in the COMMZ or medical group in the corps.

c. Capabilities. This unit provides—

- Command and control and supervision of operations, training, and administration of a combination of three to seven assigned or attached medical companies (air ambulances,

TOEs 08-447L100 [UH-1] and 08-447L200 [UH-60], and ground ambulance, TOE 08-449L000).

- Staff and technical supervision of aviation operations, safety, and aviation unit maintenance (AVUM) within attached air ambulance companies.
- Coordination of medical evacuation operations and communications functions on a 24-hour, two-shift basis.
- Medical supply support to attached units.
- Echelon I HSS and aviation medicine.

d. Basis of Allocation. One medical battalion (evacuation) is allocated per combination

of the following units: three to seven medical companies, air ambulance and/or ground ambulance.

**4-21. Medical Company (Air Ambulance)
(UH-1V or UH-60A Aircraft), TOE
08-447L100 and TOE 08-447L200**

a. Mission. The mission of the medical company (air ambulance) is to provide AE and support within the TO.

b. Assignment. The medical company (air ambulance) is normally assigned to the medical brigade and is normally further attached to the headquarters and headquarters detachment (HHD), medical battalion (evacuation).

c. Capabilities. This unit provides—

- Fifteen helicopter ambulances to evacuate patients consistent with evacuation priorities and operational considerations, from points as far forward as possible to Echelon II and III MTFs.

- Air crash rescue support, less fire suppression in combat search and rescue operations.

- Expeditious delivery of whole blood, biologicals, and medical supplies to meet critical requirements.

- Rapid movement of medical personnel and accompanying equipment and supplies to meet the requirements of MASCAL situations, reinforcement, and/or reconstitution, or emergency situations.

- Movement of patients between hospitals, ASFs, MASFs, seaports, or railheads in both the corps and COMMZ.

d. Basis of Allocation. This unit is allocated on the basis of—

- 1.0 per division supported.
- 0.333 per supported separate brigade or ACR.
- 1.0 per two divisions supported (general support).
- 1.0 per theater in support of hospital ships.

NOTE

Communications zone rules for allocation of units are derived from the CINC or theater commander based on the unit's mission requirements and geographical dispersion.

4-22. Medical Company (Ground Ambulance), TOE 08-449L000

a. Mission. The mission of the medical company (ground ambulance) is to provide ground evacuation of patients within the TO.

b. Assignment. The medical company (ground ambulance) is assigned to the medical brigade and further attached to an HHD, medical battalion (evacuation) for command and control.

c. Capabilities. This unit provides—

- Truck ambulances with a single-lift capability for evacuation of 160 litter patients or 320 ambulatory patients.

- Evacuation of patients from division medical companies to CZ hospitals.

- Evacuation of patients from area support medical companies to supporting hospitals.
- Reinforcement of division medical company evacuation assets when required.
- Reinforcement covering force and deep battle operations.
- Movement of patients between hospitals and ASFs, MASFs, seaports, or railroads in both the corps and COMMZ.
- Area evacuation support beyond the capability of the area support medical battalion.
- Emergency movement of medical supplies.

d. Basis of Allocation. This unit is allocated on the basis of—

- 0.333 per separate brigade or ACR.
- 1.0 per division supported.
- 1.0 per corps supported in the COMMZ.

4-23. United States Transportation Command

The USTRANSCOM, through its Service component commands, provides resources for medical evacuation of patients in support of the worldwide requirements of supported CINC.

a. Air Mobility Command. The AMC provides intratheater, strategic (or intertheater), and domestic AE support. The AMC is tasked to provide operational policies, doctrine, standards and evaluation, and training for the AE system. The AE system consists of three subsystems which

correspond to casualty flow patterns from initial point of injury to CONUS. Assets described in this paragraph can be established to support any of these subsystems, as needed.

(1) *Strategic (or intertheater) subsystem.* Strategic AE support normally provides patient evacuation between the TO and another theater or CONUS. Strategic AE may be accomplished using the retrograde portion of USTRANSCOM's assigned airlift missions by dedicated airlift if authorized by the supported CINC. Strategic AE may also be accomplished on dedicated CRAF B-767 aircraft activated as part of the AE segment of CRAF. The strategic AE subsystem will normally operate from primary C-141 support airfields.

(2) *Theater subsystem.* The theater AE subsystem provides evacuation of patients between MTFs within a theater. Theater AE moves patients to rearward MTFs, and/or to MTFs with a higher level of care. The AMC provides resources to establish theater capabilities or augment existing ones. The theater subsystem operates under the OPCON of the Air Force component commander. The theater AE subsystem normally operates from forward C-130 resupply airfields and can use either retrograde or dedicated airlift.

(3) *Domestic subsystem.* The domestic AE subsystem supports patient movement from strategic aerial ports of debarkation (APOD) to airfields nearest CONUS destination hospitals or from one MTF to another within CONUS.

b. Military Sealift Command. The MSC assists, as required, in arranging or providing patient movement by sea, or from and/or between ships at sea using organic assets of the ships. Embarked medical personnel are US Navy assets assigned to various naval medical units, none of which are part of MSC. Similarly, the US Navy hospital ships are operated by the Navy and are not MSC controlled.

c. Military Traffic Management Command. The Military Traffic Management Command (MTMC) assists, as required, in arranging or

providing patient movement from a reception airfield to a CONUS MTF, if the movement is not provided by the AMC domestic AE system.

Section VI. COMPONENTS OF THE AEROMEDICAL EVACUATION SYSTEM

4-24. Aeromedical Evacuation Elements

Aeromedical evacuation operations are conducted using the following six basic AE elements: an AECC, AECEs, MASFs, ASFs, AELTs, and AE crews. The AE system does not own any aircraft. Aeromedical evacuation movements are requested through the AECC and are entered into the theater airlift request system just like any other air movement requests. With the exception of ASFs, AE elements are capable of operations on any bare or unimproved air base or airhead if adequate base operating support can be furnished by the host Service. Elements of the AE system (with the possible exception of the ASF) are linked through a high frequency radio net.

a. Aeromedical Evacuation Coordination Center. The AECC is the operations center where overall planning, coordinating, and directing of AE operations are accomplished. The AECC collocates with the deployed tanker airlift control center (D-TACC), which is the senior airlift representative's command and control function for all airlift operations. The AECC coordinates and manages the AE system while the D-TACC or tactical air control center (TACC) (for intertheater) controls aircraft. The AECC merges patient movement requirements once a destination hospital is determined to identify AE aircraft missions needed. The AECC then coordinates with the D-TACC or TACC for airlift and communicates airlift schedules with supporting AE elements and MTFs. The theater AECC is initially staffed with personnel from the nearest AD AE squadron. Long-term manning of theater AECCs could include

a combination of AD and Air Reserve Component (ARC) (Air National Guard and Air Force Reserve) personnel. The personnel complement provides for continuous 24-hour operations. Specific responsibilities of the AECC include:

- (1) Advising the senior airlift representative on aeromedical issues.
- (2) Coordinating the selection and scheduling of theater airlift aircraft allocated for AE missions.
- (3) Monitoring AE crews.
- (4) Coordinating special medical equipment and supplies.
- (5) Maintaining statistical data and providing reports.
- (6) Monitoring resupply for subordinate AE elements.
- (7) Monitoring field maintenance support for assigned vehicles, aerospace ground equipment, and communications equipment.
- (8) Serving as the high frequency radio net control station.

b. Aeromedical Evacuation Control Element. The AECE is the functional manager for AE operations at a specific airfield. Aeromedical evacuation control elements come under the

OPCON of the AECC and are responsible for the following operations on a 24-hour basis:

(1) Exercising OPCON and crew management functions over all AE crews assigned, attached, or transiting its location.

(2) Supervising ground handling and on/off loading of casualties.

(3) Managing special medical equipment, supplies, and medical and AE kits, including tracking and resupply.

(4) Arranging for casualty in-flight food service.

(5) Coordinating mission preparation, including aircraft configuration and servicing for AE requirements.

(6) Maintaining communications with the AECC, supported ASF and/or MTF, and host base activities regarding mission tasking, casualty flow, and support. Various forms of communications are used, to include the integrated high frequency net, land lines, and couriers.

c. Aeromedical Evacuation Liaison Team. The AELT provides a direct high frequency radio communications link and immediate coordination between the user Service originating requirements for AE and the AECC. Aeromedical evacuation liaison teams are under the OPCON of the AECC or the AECE if a regional command structure is set up. They are normally located at the echelon of the user Service where patient movements are authorized. Depending on the tactical operation being supported, AELTs can be collocated directly with an MTF, or at any other level of command to ensure a smooth and coordinated patient flow into the AE system. In addition, the AELT can be used at any AE element as a communications team as operations dictate. The functions and responsibilities of the AELT include—

(1) Coordinating casualty movement requests and subsequent movement activities between the AECC and the user Service.

(2) Determining time factors involved for the user Service to transport patients to the designated staging facility.

(3) Determining requirements for special equipment and/or medical attendants to accompany casualties during flight.

d. Mobile Aeromedical Staging Facility. The MASF is a mobile, tented, temporary staging facility deployed to provide supportive patient care and administration. Each MASF is capable of routinely holding and processing 25 patients at any given time. It is not intended to hold patients overnight or for an extended period. Patients can generally be held from 2 to 6 hours. Normally, a MASF will be capable of cycling its patient load four times within a 24-hour period. It can, however, surge to six cycles in 24 hours for a limited time. Mobile aeromedical staging facilities are located near runways or taxiways of airfields or forward operating bases that are used by tactical airlift aircraft to resupply combat forces.

(1) Each MASF deploys with sufficient supplies and equipment to sustain its patient staging operation for 5 days. If it is to be deployed for a longer period or is expected to receive more patients than normal, it must be resupplied. The MASF is dependent upon the host base for food, potable water, billeting, POL, and other general support.

(2) Manning of the MASF typically includes flight nurses, AE technicians, and radio operators. The senior flight nurse serves as the officer in charge and functions under OPCON of the AECC or an AECE. There are no physicians assigned to a MASF. If a physician is needed, that requirement must be coordinated through one of the nearby MTFs. A MASF performs the following functions:

(a) Receives patients designated for AE from user Service forward medical elements. The MASF has no organic patient transportation capability; the user Service is responsible for patient transportation to and from the MASF.

(b) Provides supportive nursing care to casualties awaiting airlift.

(c) Prepares patient manifests (if not yet accomplished by the user Service), patient aircraft load plans, and other administrative support on a limited basis.

(d) Assists AE crews in configuring the aircraft to receive litter and ambulatory patients.

(e) Notifies AECC when an AE aircraft has departed.

(f) Functions as an AECE when an AECE is not collocated.

(g) Provides status/capability reports to the AECC.

(3) Mobile aeromedical staging facilities are neither staffed nor equipped to accomplish certain patient support activities. The originating MTF must provide the following minimum support:

(a) Transportation for patients to and from the airfield.

(b) Special supplies and equipment required for patients in flight.

NOTE

USAF elements do not accomplish blanket and litter exchange.

(c) Any required guards or attendants (medical or nonmedical).

e. Aeromedical Staging Facility. An ASF is a fixed medical facility (50 to 250 beds) located on or near an enplaning or deplaning air base or airstrip to provide patient reception, administrative processing, ground transportation, feeding, and limited medical care for patient entering, en route in, or leaving the AE system. Aeromedical staging facilities perform all of the functions of a MASF, except that they are not readily mobile. In addition, ASFs have physicians assigned.

f. Aeromedical Evacuation Crews. Aeromedical evacuation crews provide in-flight supportive nursing care aboard the evacuation aircraft. The crews are also responsible for ensuring the aircraft is properly configured and loaded. United States Air Force physicians are not part of a standard AE crew.

(1) While on a mission, each AE crew is a self-contained unit under the supervision of a flight nurse designated the medical crew director (MCD). While on a mission, the MCD is under OPCON of the AECC and is responsible for patient care and mission management in coordination with the aircraft commander. The MCD, in coordination with the AECC/AECE, is also responsible for scheduling the return of the AE crew to its originating location, as well as for securing and returning all associated medical supplies and equipment. When AE crew personnel are not on an operational mission, they are normally assigned to an AECE or MASF for OPCON and other crew management support functions.

(2) An individual AE crew normally consists of five personnel: two flight nurses and three aeromedical technicians. However, the crew may be tailored as the mission dictates, with additional crew members often assigned to missions with over 50 patients.

Section VII. THE INFORMATION MANAGEMENT SYSTEM

4-25. Theater Army Medical Management Information System

The Theater Army Medical Management Information System (TAMMIS) is the wartime baseline system for the Department of the Army. Adjustments may be made to meet Army, Navy, and USAF wartime requirements while ensuring compatibility between Services throughout the TO. The TAMMIS automates specific tasks to manage medical resources and medical materiel. Although the primary focus is to automate wartime operations, it also includes peacetime functions. The purpose is to support readiness missions while in garrison and during training exercises, thus ensuring a rapid transition from peace to war.

4-26. Medical Regulating Subsystem

The TAMMIS MEDREG subsystem assists the MRO in managing the evacuation of patients so that patient medical needs and movement requirements are most efficiently matched against available beds/resources. The MEDREG operates within the corps and at echelons above corps (EAC). Medical regulators at medical groups and brigades, MEDCOM, and the JMRO will use MEDREG to designate beds for patients and to coordinate patient movement within the theater. The JMRO (or the senior MEDREG activity in the theater) will also coordinate with the ASMRO to regulate patients to facilities outside the theater.

CHAPTER 5

HOSPITALIZATION

Section I. HOSPITAL BEDS

5-1. Considerations in Determining Bed Requirements

a. The theater evacuation policy affects the number of beds required to support the TO. A patient requiring 59 days of hospitalization also requires a bed and a medical staff for 59 days. He requires this whether the entire period is spent in the theater, or divided between 29 days in the theater and 30 days in CONUS. The most intensive and demanding medical requirements are experienced during the admission, the initial patient workup, and the resuscitative phase. These requirements remain a theater responsibility, regardless of the theater evacuation policy.

b. Specific clinical capabilities as well as the number of hospital beds and locations of the hospitals must be considered. Hospitals must have the clinical capabilities necessary to provide care for the expected number and types of patients generated in the TO. The locations of hospitals should be determined based on the specific clinical capability of the type hospital unit, the relative mobility of the unit, and the necessity to establish a logical progression of hospital facilities from the forward areas of the CZ to the rear of the AOR. The location of hospitals is further affected by the site selection and the critical time/distance factors. This means that the planner also has to consider the capabilities of the evacuation system when planning hospital support.

5-2. Factors Influencing the Number of Operating Beds

a. *Staffing.* The facility is staffed for operation based on its assigned beds under normal circumstances. Medical commanders at all levels recognize that staffing is a critical factor when considering the total number of operating beds.

Limitations on operating beds can arise from personnel shortages in any service of the hospital. For example, personnel shortages in the nursing service may require closure of a ward or several wards. Likewise, personnel shortages in the pharmacy, laboratory, and radiology services may so constrict the support provided that operating beds will be reduced. Often the type bed reported must be considered in relation to staffing. The number of beds on the *intensive* care ward will require the staffing of a proportionally larger team of physicians, nurses, and medical specialists; while a *minimal* care ward consisting of a larger number of beds may require a much smaller number of supervisory personnel and medical specialists.

b. *Logistical or Administrative Shortages.* Limiting factors on operating beds may arise from shortages in logistical support or administrative services. For example, there may be a deficiency within the utilities area. Electrical power, waste disposal means, water, or fuel maybe insufficient for hospital needs. An inadequate laundry service will place a tremendous handicap on the surgical service. A shortage of personnel in the food service branch will reduce the feeding capability. The shortage of a critical item of supply can impact adversely on patient care capability. Any of these or other problems may cause curtailment of services and a reduction in operating beds.

c. *Total Number of Operating Beds.* The total number of operating beds is based upon the commander's overall evaluation, to include—

- (1) Space limitations.
- (2) Staffing (to include specific-type bed requirements).
- (3) Logistical and administrative support.

d. Augmentation. A hospital can be augmented by other types of medical units (for example, a medical company, holding) and attachment of surgical service or medical service teams. (Paragraph 5-24c discusses the medical company's holding capability to be employed by platoon to expand a hospital's minimal care facilities.) This assumes that adequate space, ancillary services, logistical, and administrative

support are available to sustain the augmentation.

e. Designated Bed Capacity. The number of patient beds specified in a TOE is the actual number of beds a *stated type of MTF* is designed to provide. Whenever the basic capacities are modified by higher headquarters to either augment or diminish the bed capacity, the modified capacity then becomes the normal/designated bed capacity.

Section II. COMPUTER APPLICATION FOR HEALTH SERVICE SUPPORT PLANNING

5-3. Determining Requirements

The right type and number of medical units to conserve the fighting strength may be determined by using computer models. These models enable the HSS planner to analyze large volumes of data used in formulating the medical force structure. This data includes the population to be supported (CZ or COMMZ), available transportation assets, and the potential levels of combat intensity.

5-4. Computer Models Used

Army medical personnel currently use two large-scale computer models: the Patient Flow Model (PFM) and the Medical Planning Module (MPM).

a. The PFM is a computer program for simulating inpatient flow through a multiechelon evacuation system. It is used primarily in the programming and budgeting process. It is also used in the total Army analysis process to produce a required force structure for every other year.

(1) The data base for this process consists of scenarios for three TO. These scenarios include—

- The size of the combat force.
- The intensity of combat.
- The admission rates for wounds, diseases, and nonbattle injuries.
- The approved evacuation policies.

(2) The results of this process give the force structure analysts the projected number of MTFs required within the CZ and the COMMZ, as well as the expected number of admissions to hospitals, returns to duty, and evacuees.

b. The MPM is a major automated data program contained in Volume III of the US JCS Joint Operation Planning and Execution System (JOPES).

(1) The MPM helps the HSS planner determine the gross HSS requirements based upon variables input by the planner, including the forces-at-risk, casualty admission rates, and the evacuation policy. The module uses these variables

to calculate time-phased requirements for HSS, which include—

- Medical treatment facilities (beds and operating rooms).
- Whole blood and fluids.
- Class VIII supplies.
- Medical evacuation requirements.

(2) The MPM is designed to accept planner inputs directly into the module, perform the calculations, and produce the results in the JOPES-specified format for the HSS appendix. The MPM has some limitations. It does not address the types of MTFs that are actually required. It cannot quantify the adequacy of existing MTFs. It does not fully address Service-unique concepts of HSS. And, finally, the module cannot react to anticipated changes in environmental conditions and predict the impact on casualties' conditions and treatment requirements.

Section III. CALCULATION OF HOSPITAL BED REQUIREMENTS

5-5. Manual Procedure

Although there are two automated systems used for determining hospital bed requirements, the use of manual (stubby pencil) calculations is certainly justified in some circumstances and every HSS planner needs to understand the methodology used. This section presents a manual methodology based on the PFM for calculating the number of hospital beds required in the CZ, in the COMMZ, and in the entire TO.

5-6. Application of Methodology

a. The term *theater beds* includes both CZ and COMMZ *hospital* beds. The number of beds required to support a particular force depends on the following:

\tilde{Z} The projected daily average number of hospital admissions.

- The evacuation policy.
- The dispersion factor.

b. The projected daily average number of hospital admissions can be determined by

applying the applicable anticipated admission rates, based on previous combat experience modified to include new factors applicable to new conditions, to the unit strengths.

c. As a situation progresses, every echelon of command gradually builds up loss experience that more accurately reflects the current conditions. Even the most complete and accurate figures relating to past wars cannot be relied on as valid for any future war. With experience as a basis, good judgment and sound knowledge of principles are used to develop new experience tables applicable to new conditions.

d. Based upon the evacuation policy, the number of patients remaining in hospitals at the end of a given period of estimate (optimally 30 days) can be determined. (See Chapter 4 for a discussion on the impact of the theater evacuation policy on HSS requirements.) This calculation is made by applying an accumulation factor to the average daily admissions to determine how many patients will accumulate during the period of estimate. (See Table 5-5 for example accumulation factors.)

e. To meet the requirements of a dynamic and fluid battlefield, the hospitalization

system must maintain a certain flexibility. This flexibility is accomplished by moving hospitals to support expected lines of patient drift and areas of patient density. The percentage of all hospital beds required to remain empty to ensure flexibility is expressed as a dispersion allowance. This allowance is converted to a dispersion factor. It is then applied to the number of patients remaining at a particular level of hospitalization to allow for the dispersion of hospital beds. Dispersion factors are applied to a hospital's basis of allocation to allow operational opening and closing. (See Table 5-1 for dispersion factors.)

f. A similar methodology may be used to calculate patient dispositions. To determine patient dispositions, disposition factors are substituted for accumulation factors. Multiplication by a dispersion factor is omitted from this procedure. (See Table 5-5 for example disposition factors.)

g. Paragraphs 5-8 through 5-10 describe in detail the methodology for determining bed requirements for a TO, and paragraph 5-11 illustrates how the theater evacuation policy affects the CONUS bed requirements.

5-7. **Definition of Terms Used in Manual Methodology**

a. Levels of Hospitalization. For the methodology described here, the levels of hospitalization include the CZ, the COMMZ, and the CONUS. The CZ and COMMZ levels of hospitalization may be considered, in combination, as the theater level. Likewise, all TO, combined with the CONUS, constitute the total (worldwide) hospitalization system.

b. Periods of Estimate. These are consecutive periods (intervals) of time (in days), usually measured from the beginning of a military operation. Normally, the time period length for manual calculations is 30 days. Bed requirements

are normally calculated at the end of each time period.

c. Hospital Admission. This is the initial entry of an individual as an inpatient into a hospital for a single episode of illness or injury anywhere in the TO. If the same inpatient is discharged from a hospital and later readmitted for a different illness/injury or for a recurrence of the same illness/injury, the individual is counted as another separate admission.

d. Patient Admission Rate. This is the average daily number of admissions per 1,000 average daily strength for a specified portion of the population served and specified period(s). Separate admission rates are always provided for WIA patients and DNBI patients.

e. Accumulation Factor. Assuming a constant admission of one patient per day during a specific period of estimate (and none thereafter), this factor is the expected number of patients remaining (occupying beds) at a particular level of hospitalization at the end of each consecutive period. Accumulation factors are available for each patient classification (WIA and DNBI) and for different evacuation policies and will be presented in Tables 5-5 and 5-13.

f. Final or Intermediate Dispositions. Final dispositions are RTD, died in hospital (DIH), and disability discharge (CONUS level only). An intermediate disposition is a patient evacuation to the next level of hospitalization (or in some cases, another hospital at the same level).

g. Disposition Factor. Assuming a constant admission of one patient per day during a specific period of estimate (and none thereafter), the disposition factor is the expected number of patients receiving a particular type disposition from a particular level of hospitalization during each consecutive period. Types of disposition include returned to duty, DIH, evacuated, or

disability discharge (CONUS only). Disposition factors are also provided for each patient classification, for each disposition type, and for different evacuation policies in Tables 5-5 and 5-13.

h. Dispersion Allowance. This is the percentage of all hospital beds at a level of hospitalization that are required to remain empty to allow for necessary patient dispersion and hospital flexibility. A certain flexibility is needed to initiate hospital relocation using this uncommitted bed capacity or to absorb the sudden influx of patients generated by a MASCAL situation. Additionally, separation of patients for reasons of contagious disease, sex, type treatment (medical or surgical), and psychiatric problems, among others, creates a certain number of empty beds within the various wards of a hospital.

i. Dispersion Factor. This is a factor used in computing bed requirements. It is mathematically derived from the dispersion allowance. A dispersion factor equals 100 percent / (100 percent minus the dispersion allowance).

$$1.00 / (1.00 - DA) = DF$$

where:

DA = Dispersion Allowance

DF = Dispersion Factor

When multiplied by the calculated number of patients remaining, it yields the number of beds required to provide necessary dispersion. Corresponding to a dispersion allowance of 20 percent, the dispersion factor is 1.25 (Table 5-1). In determining the dispersion allowance, the planner must be continually informed as to both the existing and possible future tactical situations. The normal dispersion allowance/factor (20 percent/1.25) is based on World War II and the Korean Conflict and may have to be increased considerably for any future war. (In Vietnam, the dispersion factor was

40 percent to support unexpected surges in the casualty flow resulting from hostile actions.) (Paragraph 5-8a(5) [example problem] presents the dispersion allowances to determine dispersion factors for the CZ, COMMZ, and CONUS.) Due to increased exposure to deep penetrations and destruction of support areas by the enemy, MTFs may have to be small and well-dispersed. These contingencies will decrease the efficient use of beds and require the application of a greater dispersion allowance/factor for planning purposes. Normally, 80 percent occupancy of available beds is the operational maximum. This, therefore, equates to a 20 percent dispersion allowance.

Table 5-1. Dispersion Allowance /Factors Conversion Table

DISPERSION ALLOWANCE (PERCENT)	DISPERSION FACTOR
5	1.05
10	1.11
15	1.18
20*	1.25
25	1.33
30	1.43
35	1.54
40	1.67
45	1.82
50	2.00

* Allowances of less than 20 percent are not normally used in the theater except for EPW beds.

5-8. Example Problem

Table 5-2 shows the problem statement for the data needed prior to and during the example application of this methodology.

a. The given force for this problem is comprised of a corps consisting of three mechanized infantry divisions in a mature European theater.

Table 5-2. Example Problem Statement

	PERIODS (30 DAYS)	
	1ST AND 2D	3D AND 4TH
AVERAGE DAILY STRENGTHS		
COMBAT ZONE		
DIVISION TROOPS	32,000	48,000
NONDIVISION COMBAT TROOPS*	24,000	36,000
NONDIVISION SUPPORT TROOPS	20,000	30,000
COMMUNICATIONS ZONE		
NONDIVISION SUPPORT TROOPS	20,000	30,000
EVACUATION POLICIES		
COMBAT ZONE	7 DAYS	15 DAYS
COMMUNICATIONS ZONE	30 DAYS	60 DAYS
DISPERSION FACTOR**		
COMBAT ZONE	1.33 (25%)	1.33 (25%)
COMMUNICATIONS ZONE	1.25 (20%)	1.25 (20%)
CONTINENTAL UNITED STATES	1.11 (10%)	1.11 (10%)
ADMISSION RATES		
COMBAT ZONE		
DIVISION TROOPS/NONDIVISION COMBAT TROOPS		
WIA	1.54	4.37
DNBI***	2.41	4.09
NONDIVISION SUPPORT TROOPS (CORPS REAR AREA)		
WIA	.28	.28
DNBI***	1.87	1.87
COMMUNICATIONS ZONE		
WIA	.05	.05
DNBI***	.95	.95
* Use division admission rates since this most closely fits the situation.		
** Factor determined from Table 5-1 based on allowance given in problem statement.		
*** DNBI rate is the sum of the NBI and DIS rates from Table 5-4b.		

(1) The operational area (terrain) consists of plains. The time of the year is midwinter. Two of the divisions are in the theater. One division will arrive in theater on D+59.

(2) The current corps operations are defensive with offensive operations commencing on D+60 and planned through D+119.

(3) The CZ evacuation policies are 7 days for the first 60 days and 15 days for D+60 through D+119.

(4) The COMMZ evacuation policies are 30 days for the first 60 days and 60 days for D+60 through D+119.

(5) The dispersion allowance will be 25 percent for the CZ, 20 percent for the COMMZ, and 10 percent for the CONUS.

(6) Time period length is 30 days.

b. Determine the theater hospital beds required to support the given force from D through D+119. Also, determine how the theater evacuation policy impacts on CONUS bed requirements.

(1) The given information is graphically depicted in Table 5-3.

(2) The admission rates can be determined from Tables 5-4a through 5-4h based on the type units, theater, terrain, and climate given in the problem statement. In this case, you will use Table 5-4b.

(3) The DNBI rates on the example problem statement (Table 5-2) are the sum of the NBI and the DIS rates in the patient admission rate tables.

c. To solve this problem, you determine that the following rates best fit the problem statement. You choose—

- Mechanized defensive operations rates for periods 1 and 2 for the corps forward area (division troops and nondivision combat troops).

Ž Mechanized offensive operations rates for periods 3 and 4 for the corps forward area (division troops and nondivision combat troops).

- Nondivisional reserve operations rates for the corps rear area (nondivision support troops).

- Nondivisional inactive operations rates for the COMMZ (nondivision support troops).

Table 5-3. Example Preliminary Bed Requirement Information
(Problem Statement Graphically Depicted)

COMBAT ZONE (POPULATION SERVED)*										
PERIODS OF ESTIMATE**	INTRATHEATER EVACUATION POLICY (DAYS)	DIVISION TROOPS & NONDIVISION COMBAT TROOPS				NONDIVISION SUPPORT TROOPS				
		AVERAGE DAILY STRENGTH (1,000s)***	WIA ADMISSION RATE (PER 1,000)	DNBI ADMISSION RATE (PER 1,000)	AVERAGE DAILY STRENGTH (1,000s)**	WIA ADMISSION RATE (PER 1,000)	DNBI ADMISSION RATE (PER 1,000)	AVERAGE DAILY STRENGTH (1,000s)**	WIA ADMISSION RATE (PER 1,000)	DNBI ADMISSION RATE (PER 1,000)
1	7	56	1.54	2.41	20	.28	1.87	20	.28	1.87
2	7	56	1.54	2.41	20	.28	1.87	20	.28	1.87
3	15	84	4.37	4.09	30	.28	1.87	30	.28	1.87
4	15	84	4.37	4.09	30	.28	1.87	30	.28	1.87

COMMUNICATIONS ZONE (POPULATION SERVED)****					
PERIODS OF ESTIMATE**	THEATER EVACUATION POLICY (DAYS)	AVERAGE DAILY STRENGTH (1,000s)	WIA ADMISSION RATE (PER 1,000)	DNBI ADMISSION RATE (PER 1,000)	CONUS***** AVERAGE DAILY STRENGTH (1,000s)
1	30	20	.05	.95	0
2	30	20	.05	.95	0
3	60	30	.05	.95	0
4	60	30	.05	.95	0

* Dispersion factor is 25% (1.33).
 ** Thirty days each.
 *** Use the closest average daily strength for the population to be served during each period.
 **** Dispersion factor is 20% (1.25).
 ***** Dispersion factor is 10% (1.11).

Table 5-4a. Patient Admission Rates—Overall in World War II (WW II), Korean Conflict, and Vietnamese Conflict (Admissions per 1,000 Strength per Day)

OFFENSIVE OPERATIONS															
INFANTRY			MECHANIZED			ARMORED			NONDIVISIONAL						
WIA	NBI	DIS TOTAL	WIA	NBI	DIS TOTAL	WIA	NBI	DIS TOTAL	WIA	NBI	DIS TOTAL				
WW II—EUROPE (See Table 5-4b)															
3.04	.54	2.07	5.65	2.17	.43	1.61	4.21	1.29	.30	1.14	2.73	.39	.34	.99	1.72
WW II—ITALY (See Table 5-4c)															
1.97	.53	3.62	6.12	2.46	.52	2.60	5.57	2.93	.49	1.57	4.99	.40	.29	1.72	2.41
WW II—MIDEAST (See Table 5-4d)															
2.29	.38	1.58	4.25	2.30	.39	1.59	4.27	2.29	.38	1.58	4.25	.40	.35	1.25	2.00
WW II—CENTRAL AND SOUTH PACIFIC (See Table 5-4e)															
1.91	.28	.89	3.08	1.77	.25	.66	2.68	1.16	.21	.42	2.24	.63	.21	.55	1.39
WW II—SOUTHWEST PACIFIC (See Table 5-4f)															
2.08	.61	5.12	7.81	1.92	.54	3.79	6.24	1.75	.45	2.44	4.64	.99	.35	3.71	5.05
KOREAN CONFLICT (See Table 5-4g)															
.82	.62	1.05	2.49	.76	.55	.78	2.09	.69	.46	.50	1.65	.54	.40	1.74	2.68
VIETNAMESE CONFLICT (See Table 5-4h)															
.42	.15	.74	1.31	.39	.14	.55	1.08	.35	.11	.35	.81	.14	.15	.77	1.06

Table 5-4b. Patient Admission Rates—Europe, World War II
(Admissions per 1,000 Strength per Day)

TERRAIN AND CLIMATE	INFANTRY		MECHANIZED		ARMORED		NONDIVISIONAL	
	WIA	NBI DIS TOTAL	WIA	NBI DIS TOTAL	WIA	NBI DIS TOTAL	WIA	NBI DIS TOTAL
OFFENSIVE OPERATIONS								
MOUNTAIN-COLD	9.74	.96 4.85 15.55	6.86	.83 4.25 11.94	3.97	.68 3.64 8.29	.56	.26 1.01 1.83
PLAINS-COLD	5.31	.73 4.24 10.28	4.37	.57 3.52 8.45	3.41	.39 2.79 6.59	.38	.22 1.01 1.61
PLAINS-HOT	8.82	1.15 2.32 12.29	6.32	.75 2.59 9.66	3.80	.34 2.85 6.99	.49	.55 .90 1.94
DEFENSIVE OPERATIONS								
MOUNTAIN-COLD	7.48	1.92 2.24 11.64	5.55	1.38 2.12 9.04	3.61	.82 1.98 6.41	2.46	1.42 1.38 5.26
PLAINS-COLD	1.79	.64 2.35 4.78	1.54	.45 1.96 3.94	1.28	.24 1.55 3.07	.20	.33 1.11 1.64
PLAINS-HOT	4.58	.50 1.70 6.78	3.06	.41 1.64 5.10	1.52	.31 1.56 3.39	.12	.16 .48 .76
RESERVE OPERATIONS								
MOUNTAIN-COLD	.30	.51 1.49 2.30	.28	.45 1.11 1.84	.25	.38 .71 1.34	.13	.38 .91 1.42
PLAINS-COLD	.86	.52 2.43 3.81	.79	.44 1.81 3.03	.70	.34 1.18 2.22	.28	.38 1.49 2.15
PLAINS-HOT	1.74	.34 1.82 3.90	1.46	.31 1.38 3.15	1.17	.27 .93 2.37	.57	.25 1.12 1.94
PURSUIT OPERATIONS								
MOUNTAIN-COLD	3.62	1.75 1.99 7.36	3.57	1.06 1.70 6.32	3.50	.36 1.39 5.25	1.19	1.30 1.22 3.71
PLAINS-COLD	2.71	.60 1.67 4.98	2.46	.49 1.36 4.30	2.19	.36 1.03 3.58	.89	.44 1.03 2.36
PLAINS-HOT	1.47	.44 .73 2.64	2.28	.45 .67 3.40	3.08	.44 .60 4.12	.48	.33 .45 1.26
INACTIVE OPERATIONS								
PLAINS-COLD	.16	.32 1.15 1.63	.09	.27 .88 1.23	.01	.20 .59 .80	.05	.24 .71 1.00
PLAINS-HOT	.42	.25 .50 1.17	.54	.20 .45 1.19	.65	.14 .38 1.17	.14	.19 .31 .64
AIRBORNE OPERATIONS								
PLAINS-COLD	10.47	2.33 .66 13.46	0	0 0 0	0	0 0 0	3.44	1.72 .41 5.57
PLAINS-HOT	9.20	.25 1.02 10.47	0	0 0 0	0	0 0 0	3.03	.19 .63 3.85
AMPHIBIOUS OPERATIONS								
PLAINS-HOT	10.45	.28 .53 11.26	9.63	.25 .40 10.28	8.80	.21 .25 9.26	3.44	.21 .33 3.95
RIVER-CROSSING OPERATIONS								
MOUNTAIN-COLD	4.84	.83 3.17 8.84	6.58	.76 3.67 11.01	8.31	.68 4.15 13.14	1.59	.61 1.95 4.15
PLAINS-COLD	5.57	.52 3.02 9.11	5.14	.46 2.23 7.83	4.69	.38 1.44 6.51	1.83	.38 1.85 4.06
PLAINS-HOT	5.46	.51 2.32 8.29	3.80	.35 1.35 5.49	2.12	.18 .36 2.66	1.80	.38 1.42 3.60
MOUNTAIN-HOT	10.22	.64 6.24 17.10	9.42	.56 4.61 14.59	8.61	.47 2.97 12.05	3.36	.47 3.83 2.66

Table 5-4c. Patient Admission Rates Italy, World War II
(Admissions per 1,000 Strength per Day)

TERRAIN AND CLIMATE	INFANTRY		MECHANIZED		ARMORED		NONDIVISIONAL	
	WIA	NBI DIS TOTAL	WIA	NBI DIS TOTAL	WIA	NBI DIS TOTAL	WIA	NBI DIS TOTAL
OFFENSIVE OPERATIONS								
MOUNTAIN-COLD	4.68	.82 4.69 10.19	4.32	.72 3.47 8.50	3.94	.61 2.23 6.78	.07	.14 1.54 1.75
PLAINS-COLD	15.60	.71 4.79 21.10	14.38	.62 3.54 18.54	13.14	.52 2.28 15.94	5.13	.53 2.94 8.60
PLAINS-HOT	12.51	.71 2.18 15.40	11.53	.62 1.62 13.76	10.53	.52 1.04 12.09	.58	.32 1.39 2.29
MOUNTAIN-HOT	4.26	.62 3.61 8.49	4.44	.61 2.83 7.87	4.60	.58 2.04 7.22	.69	.41 1.45 2.55
DEFENSIVE OPERATIONS								
MOUNTAIN-COLD	.26	.25 1.49 2.00	.25	.22 1.11 1.57	.22	.18 .71 1.11	.19	.25 1.74 2.15
PLAINS-COLD	2.18	.55 4.57 7.30	2.02	.49 3.38 5.88	1.84	.41 2.18 4.43	.72	.41 2.81 3.94
PLAINS-HOT	.75	.58 2.64 3.97	.70	.51 1.96 3.16	.63	.43 1.26 2.32	.25	.43 1.62 2.30
RESERVE OPERATIONS								
MOUNTAIN-HOT	.45	.49 1.48 2.42	.42	.43 1.10 1.95	.38	.36 .70 1.44	.15	.36 .91 1.42
PLAINS-COLD	.19	.49 3.09 3.77	.18	.43 2.29 2.90	.16	.36 1.47 1.99	.06	.36 1.90 2.32
PLAINS-HOT	.14	.61 3.93 4.68	.08	.56 2.83 3.47	.01	.50 1.71 2.22	.05	.45 2.41 2.91
PURSUIT OPERATIONS								
MOUNTAIN-HOT	3.61	.62 2.51 6.74	3.33	.55 1.86 5.73	3.04	.46 1.19 4.69	1.19	.46 1.54 3.19
PLAINS-COLD	.63	.66 1.03 2.32	.58	.77 1.93	.53	.49 .49 1.51	.21	.49 .63 1.33
PLAINS-HOT	1.28	.54 1.46 3.28	1.46	.48 1.14 3.08	1.62	.41 .81 2.84	.42	.40 .90 1.72
INACTIVE OPERATIONS								
PLAINS-COLD	.52	.43 4.29 5.24	.81	.38 3.17 4.36	1.08	.32 2.04 3.44	.17	.32 2.63 3.12
PLAINS-HOT	1.15	.34 2.19 3.68	1.07	.30 1.62 2.99	.97	.25 1.04 2.26	.38	.25 1.34 1.97
AMPHIBIOUS OPERATIONS								
PLAINS-COLD	6.06	.27 1.30 7.63	5.59	.24 .97 6.79	5.10	.20 .62 5.92	1.99	.20 .80 2.99
PLAINS-HOT	16.05	1.36 6.30 23.71	14.79	1.19 4.66 20.63	13.51	1.00 3.00 17.51	5.38	1.01 3.87 10.26
RIVER-CROSSING OPERATIONS								
MOUNTAIN-COLD	1.78	.32 4.32 6.42	1.65	.29 3.20 5.13	1.50	.24 2.06 3.80	.59	.24 2.65 3.48
PLAINS-COLD	2.68	.71 4.39 7.78	2.48	.62 3.25 6.34	2.26	.52 2.09 4.87	.88	.53 2.70 4.11
PLAINS-HOT	5.64	.57 2.16 8.37	5.20	.50 1.60 7.30	4.75	.42 1.04 6.20	1.86	.42 1.33 3.61
MOUNTAIN-HOT	1.08	.33 2.88 4.29	1.00	.29 2.13 3.42	.91	.24 1.37 2.52	.36	.24 1.77 2.37

*Table 5-4d. Patient Admission Rates—Mideast Wars (Between Opposing Non-US Forces)
(Admissions per 1,000 Strength per Day)*

TERRAIN AND CLIMATE	INFANTRY		MECHANIZED		ARMORED		NONDIVISIONAL										
	WIA	NBI DIS TOTAL	WIA	NBI DIS TOTAL	WIA	NBI DIS TOTAL	WIA	NBI DIS TOTAL									
ALL OPERATIONS	2.29	.38	1.58	4.25	2.30	.39	1.59	4.27	2.29	.38	1.58	4.25	.40	.35	1.25	2.00	
DESERT-HOT																	

*Table 5-4e. Patient Admission Rates—Central and South Pacific, World War II
(Admissions per 1,000 Strength per Day)*

TERRAIN AND CLIMATE	INFANTRY		MECHANIZED		ARMORED		NONDIVISIONAL										
	WIA	NBI DIS TOTAL	WIA	NBI DIS TOTAL	WIA	NBI DIS TOTAL	WIA	NBI DIS TOTAL									
OFFENSIVE OPERATIONS	9.12	.46	2.20	11.78					3.00	.34	1.35	4.69					
MOUNTAIN-HOT																	
RESERVE OPERATIONS	.45	.26	3.93	4.64					.15	.19	2.41	2.75					
PLAINS-COLD																	
INACTIVE OPERATIONS	0	.27	.72	.99					0	.20	.44	.64					
MOUNTAIN-HOT									0	.05	.20	.25					
PLAINS-COLD																	
AMPHIBIOUS OPERATIONS	4.48	.43	.76	5.67					1.47	.32	.47	2.26					
MOUNTAIN-JUNGLE									1.86	.47	.39	2.72					
PLAINS-JUNGLE									4.20	.36	.44	5.00					
PLAINS-HOT																	

*Table 5-4f. Patient Admission Rates—Southwest Pacific, World War II
(Admissions per 1,000 Strength per Day)*

TERRAIN AND CLIMATE	INFANTRY		MECHANIZED		ARMORED		NONDIVISIONAL	
	WIA	NBI DIS TOTAL	WIA	NBI DIS TOTAL	WIA	NBI DIS TOTAL	WIA	NBI DIS TOTAL
DEFENSIVE OPERATIONS								
MOUNTAIN-COLD	4.13	.42 5.21 9.76					1.36	.31 3.20 4.87
MOUNTAIN-HOT	2.68	.49 4.64 7.81					.78	.38 4.00 5.18
PLAINS-HOT	3.65	.40 4.23 8.28					1.20	.30 2.60 4.10
MOUNTAIN-JUNGLE	1.61	.56 3.70 5.87					.53	.41 2.27 3.21
PLAINS-JUNGLE	4.16	2.05 2.29 8.50					1.37	1.52 1.41 4.30
RESERVE OPERATIONS								
PLAINS-COLD	0	.55 5.46 6.01					0	.41 3.35 3.76
AIRBORNE OPERATIONS								
MOUNTAIN-HOT	17.75	.61 2.50 20.86					5.84	.35 1.54 7.73
INACTIVE OPERATIONS								
PLAINS-COLD	0	.67 5.47 6.14					0	.50 3.36 3.86

Table 5-4g. Patient Admission Rates—Korean Conflict
(Admissions per 1,000 Strengths per Day)

TERRAIN AND CLIMATE	INFANTRY		MECHANIZED		ARMORED		NONDIVISIONAL									
	WIA	NBI DIS TOTAL	WIA	NBI DIS TOTAL	WIA	NBI DIS TOTAL	WIA	NBI DIS TOTAL								
OFFENSIVE OPERATIONS																
MOUNTAIN-COLD	3.54	1.40	1.67	6.61	3.27	1.22	1.24	5.72	2.98	1.08	.79	4.80	.19	.34	1.48	2.01
PLAINS-COLD	1.46	1.37	2.12	4.95	1.35	1.20	1.57	4.12	1.23	1.01	1.01	3.25	.48	1.01	1.30	2.79
MOUNTAIN-HOT	2.42	.75	1.58	4.75	2.24	.66	1.17	4.06	2.04	.55	.75	3.34	.07	.29	1.02	1.38
DEFENSIVE OPERATIONS																
MOUNTAIN-COLD	4.75	3.51	1.35	9.61	4.38	3.06	1.00	8.44	4.00	2.59	.64	7.23	.43	.41	1.62	2.16
PLAINS-COLD	.70	3.31	1.41	5.42	.65	2.88	1.05	4.48	.59	2.44	.67	3.70	.23	2.45	.87	3.55
PLAINS-HOT	8.03	.70	2.51	11.24	7.40	.62	1.86	9.88	6.76	.52	1.19	8.47	2.64	.52	1.54	4.70
MOUNTAIN-HOT	2.99	.86	2.28	6.13	2.76	.75	1.69	5.20	2.52	.63	1.09	4.24	1.47	.55	2.54	4.56
RESERVE OPERATIONS																
MOUNTAIN-COLD	.05	.56	1.18	1.79	.05	.49	.88	1.42	.04	.41	.56	1.01	.02	.41	.72	1.15
PLAINS-COLD	.29	1.11	1.40	2.80	.27	.97	1.04	2.28	.24	.82	.67	1.73	.10	.82	.86	1.78
PLAINS-HOT	.04	.38	.94	1.36	.04	.34	.70	1.08	.03	.28	.45	.76	.01	.28	.58	.87
MOUNTAIN-HOT	.07	.45	.92	1.44	.07	.40	.69	1.15	.06	.33	.44	.83	.02	.33	.56	.91
PURSUIT OPERATIONS																
MOUNTAIN-COLD	.64	1.85	1.33	3.82	.60	1.62	.99	3.20	.54	1.37	.63	2.54	.21	1.37	.82	2.40
PLAINS-COLD	.39	1.23	.89	2.51	.27	.84	.66	1.77	.13	.44	.42	.99	0	0	0	0
MOUNTAIN-HOT	1.40	.56	1.27	3.23	1.30	.49	.94	2.73	1.18	.41	.60	2.19	.60	.44	1.28	2.32
INACTIVE OPERATIONS																
MOUNTAIN-COLD	.15	.60	.89	1.64	.15	.53	.66	1.33	.13	.44	.42	.99	.01	.25	1.27	1.53
PLAINS-COLD	.07	.23	.46	.76	.07	.21	.35	.62	.06	.17	.22	.45	.02	.17	.28	.47
PLAINS-HOT	.14	.18	.32	.64	.14	.16	.24	.54	.12	.13	.15	.40	.05	.13	.20	.38
MOUNTAIN-HOT	.14	.24	.54	.92	.14	.22	.41	.76	.12	.18	.26	.56	.05	.18	.33	.56
AMPHIBIOUS OPERATIONS																
PLAINS-HOT	1.83	.18	.26	2.27	1.69	.16	.20	2.05	1.54	.13	.12	1.79	.60	.13	.16	.89
RIVER-CROSSING OPERATIONS																
MOUNTAIN-COLD	6.94	1.37	2.62	10.93	6.40	1.20	1.94	9.53	5.84	1.01	1.25	8.10	2.28	1.01	1.61	4.90
PLAINS-COLD	7.20	1.19	1.22	9.61	6.64	1.04	.91	8.58	6.06	.88	.58	7.52	2.37	.88	.75	4.00
PLAINS-HOT	3.32	.55	1.46	5.33	3.07	.49	1.08	4.63	2.80	.41	.69	3.90	1.09	.41	.90	2.40

Table 5-4h. Patient Admission Rates—Vietnamese Conflict
(Admissions per 1,000 Strength per Day)

TERRAIN AND CLIMATE	INFANTRY		MECHANIZED		ARMORED		NONDIVISIONAL									
	WIA	DIS	WIA	DIS	WIA	DIS	WIA	DIS								
ALL OPERATIONS	.42	.15	.74	1.31	.39	.14	.55	1.08	.35	.11	.35	.81	.14	.15	.77	1.06
JUNGLE-MOUNTAIN-HOT																

5-9. Methodology for the Combat Zone

a. Using Tables 5-2 and 5-5 (or appropriate actual figures), select the type CZ population to be served according to the expected admission experience of *division and nondivision combat troops* and *nondivision support troops*, the number of 30-day periods, and the evacuation policy for each period. Process for determining hospital beds required is described in paragraph 5-9b and c, below. (Table 5-6 shows the completed example calculations.)

b. Perform steps in paragraphs 5-9b(1) through (4) for WIA patients and then again for DNBI patients for each period of estimate.

(1) Use the example problem as shown in Table 5-2 (or appropriate actual figures) to obtain the total average daily CZ admissions (WIA or DNBI) for the current period of estimate. Multiply the average daily strength (for each type population served) by the corresponding admission rate (per 1,000 troops), then sum the results obtained for each population served separately (division and nondivision combat troops and nondivision support troops). (Table 5-7 illustrates the process used to obtain *time period 1 CZ average admissions*.) Check numbers obtained for correctness with numbers shown in the example solution in Table 5-6. Note that in Table 5-6, the totals reflected are broken down by patient classifications.

(2) Note that the period of estimate numbered "1" (7 days) in Table 5-6 corresponds to the current period in Table 5-5 (7 days). Whatever period of estimate you are computing becomes the *current period* and the *subsequent period* is "2" from Table 5-5. Locate the appropriate accumulation factor column (WIA or DNBI) in Table 5-5 by noting the evacuation policy for that current period of estimate. Various combination

sets of evacuation policies are identified. For subsequent consecutive periods, locate the appropriate evacuation policy combination which applies to your particular problem. (Table 5-8 illustrates the process used to obtain accumulation factors for period 1.)

(3) Using the same solution shown in Table 5-6 (or appropriate actual figures), obtain the number of current period admissions (WIA or DNBI) that are still remaining in the CZ hospitals at the end of the current period by multiplying the first accumulation factor by the total average-daily admissions in the current period. (Table 5-9

illustrates the process used to obtain the number of CZ patients remaining at the end of period 1.)

(4) Obtain the number of current period admissions (WIA or DNBI) that are still remaining in CZ hospitals at the end of the *next* period by multiplying the *second* accumulation factor by the total average daily admissions in the current period. (Table 5-10 illustrates the process used to obtain the number of CZ patients remaining at the end of period 2.) Continue this process for patients remaining at the end of other successive periods until all nonzero accumulation factors have been used.

Table 5-5. Example Accumulation and Disposition Factors—Combat Zone*

CURRENT AND SUBSEQUENT PERIODS**	INTRA-THEATER EVACUATION POLICY (DAYS)	WOUNDED IN ACTION			DISEASE/NONBATTLE INJURIES				
		ACCUMULATION***	RETURN TO DUTY*	DIED IN HOSPITALS**	EVACUATED***	ACCUMULATION	RETURN TO DUTY	DIED IN HOSPITALS	EVACUATED
1	5	2.0265	.9736	.3243	26.6756	1.7676	5.7175	.0370	22.4779
2	5	0	.1034	.0177	1.9054	0	.5825	.0020	1.1831
1	7	3.1063	1.6371	.3660	24.9006	2.7768	8.6334	.0419	18.5479
2	7	0	.2524	.0250	2.8284	0	1.2336	.0031	1.5401
1	10	4.7076	2.4207	.3850	22.4867	4.2450	11.9923	.0463	13.7164
2	10	0	.5373	.0350	4.1353	0	2.4287	.0047	1.8116
1	15	6.6306	3.3581	.4053	19.6060	6.1563	14.5346	.0481	9.2610
2	15	0	1.1599	.0477	5.4230	0	4.0714	.0059	2.0790
1	5	2.0265	.9736	.3243	26.6756	1.7676	5.7175	.0370	22.4779
2	10	0	.2288	.0229	1.7748	0	.9886	.0026	.7764
1	7	3.1063	1.6371	.3660	24.9006	2.7768	8.6334	.0419	18.5479
2	15	0	.5210	.0323	2.5530	0	1.9036	.0038	.8694
1	10	4.7076	2.4207	.3850	22.4867	4.2450	11.9923	.0463	13.7164
2	15	0	.7796	.0401	3.8879	0	2.9169	.0050	1.3230
1	10	4.7076	2.4207	.3850	22.4867	4.2450	11.9923	.0463	13.7164
2	5	0	.1034	.0177	4.5865	0	.5825	.0020	3.6605
1	15	6.6306	3.3581	.4053	19.6060	6.1563	14.5346	.0481	9.2610
2	7	0	.2529	.0250	6.3527	0	1.2336	.0031	4.9196
1	15	6.6306	3.3581	.4053	19.6060	6.1563	14.5346	.0481	9.2610
2	10	0	.5393	.0350	6.0583	0	2.4287	.0047	3.7229

* Derived from the complete hospitalization and evacuation experience of all US Army WIA and DNBI patients admitted to hospitals in the Korean Conflict and all US Army DNBI cases admitted to hospitals in any overseas area during the same period.

** Thirty days each.

*** Accumulation of patients at end of period.

Return to duty dispositions during the period.

Died in hospital dispositions during the period.

Patient evacuation dispositions out of the CZ during the period.

Table 5-6. Example Calculations of Combat Zone Hospital Bed Requirements

PATIENT CLASS	PERIOD OF ESTIMATE	CZ AVERAGE DAILY ADMISSIONS		TOTAL X	CZ ACCUMULATION FACTORS FOR CONSECUTIVE PERIODS				CZ PATIENTS REMAINING AT END OF CONSECUTIVE PERIODS				
		EVAC	NONDIV		1	2	3	4	1	2	3	4	
WIA	1	7	86.24	5.60	91.84	3.1063	0	0	0	285.28	0	0	0
	2	7	86.24	5.60	91.84	3.1063	0	0	0	285.28	0	0	0
	3	15	367.08	8.40	375.48	6.6306	0	0	0	2,489.66	0	0	0
	4	15	367.08	8.40	375.48	6.6306	0	0	0	2,489.66	0	0	0
DNBI	1	7	134.96	37.40	172.36	2.7768	0	0	0	478.61	0	0	0
	2	7	134.96	37.40	172.36	2.7768	0	0	0	478.61	0	0	0
	3	15	343.56	56.10	399.66	6.1563	0	0	0	2,460.43	0	0	0
	4	15	343.56	56.10	399.66	6.1563	0	0	0	2,460.43	0	0	0
TOTAL PATIENTS REMAINING IN COMBAT ZONE HOSPITALS (FROM POPULATION SERVED)					763.89	763.89	763.89	763.89	4,950.09	4,950.09	4,950.09	4,950.09	
COMBAT ZONE DISPERSION FACTOR (1.33)(DISPERSION ALLOWANCE = 25%)					X 1.33	X 1.33	X 1.33	X 1.33	X 1.33	X 1.33	X 1.33	X 1.33	
COMBAT ZONE BED REQUIREMENTS AT END OF EACH 30-DAY PERIOD					1,016	1,016	1,016	1,016	6,584	6,584	6,584	6,584	

NOTE: The above example numbers must be substituted with actual numbers when calculating actual operational bed requirements. Total bed requirements rounded to next higher whole number.

Table 5-7. Example for Obtaining Combat Zone Average Daily Admissions

DAILY PATIENT CLASSIFICATION	PERIOD OF ESTIMATE (30 DAYS)	EVACUATION POLICY (DAYS)	AVERAGE DAILY STRENGTH (1000s)	X	ADMISSION RATE	=	TOTAL
WIA							
DIVISION AND NONDIVISION COMBAT TROOPS	1	7	56	X	1.54	=	86.24
NONDIVISION SUPPORT TROOPS	1	7	20	X	.28	=	5.60
					TOTAL		91.84
DNBI							
DIVISION AND NONDIVISION COMBAT TROOPS	1	7	56	X	2.41	=	134.96
NONDIVISION SUPPORT TROOPS	1	7	20	X	1.87	=	37.40
					TOTAL		172.36

Table 5-8. Example for Finding Accumulation Factors

PATIENT CLASSIFICATION	PERIOD OF ESTIMATE (30 DAYS)	EVACUATION POLICY (DAYS)	ACCUMULATION FACTORS
WIA	1	7	3.1063
	2	7	0
DNBI	1	7	2.7768
	2	7	0

Table 5-9. Example for Obtaining Total Combat Zone Patients Remaining (Period 1)

PATIENT CLASSIFICATION	PERIOD OF ESTIMATE (30 DAYS)	FIRST PERIOD ACCUMULATION FACTOR	X	TOTAL AVERAGE DAILY ADMISSION	=	CZ PATIENTS REMAINING AT END OF PERIOD 1
WIA	1	3.1063	X	91.84	=	285.28
DNBI	1	2.7768	X	172.36	=	478.61

Table 5-10. Example for Obtaining Total Combat Zone Patients Remaining (Period 2)

PATIENT CLASSIFICATION	PERIOD OF ESTIMATE (30 DAYS)	SECOND PERIOD ACCUMULATION FACTOR	X	TOTAL AVERAGE DAILY ADMISSION	=	CZ PATIENTS REMAINING AT END OF PERIOD 2
WIA	1	0*	X	91.84	=	0
DNBI	1	0*	X	172.36	=	0

* This example is to show process only. Since this is a zero, computation is not necessary.

(5) Using the same solution shown in Table 5-6 (or appropriate actual figures), add admissions remaining in CZ hospitals at the end of successive periods of estimate with any *previous* admissions still remaining in these hospitals at the end of the same successive periods. Disease and nonbattle injury results, as they are obtained, should be added at this point with WIA results to obtain total patients remaining in CZ hospitals. (Table 5-11 illustrates the process used to obtain

the total patients remaining in CZ hospitals for period 1.)

c. Obtain the CZ bed requirements using total WIA and DNBI requirements at the end of each 30-day period of estimate as follows: Multiply the total patients remaining figures derived earlier by the CZ dispersion factor as shown in Table 5-2. (Table 5-12 illustrates the process used to obtain total CZ bed requirements for period 1.)

Table 5-11. Example for Obtaining Total Patients Remaining in Combat Zone Hospitals (Period 1)

PATIENT CLASSIFICATION	PERIOD 1
WIA	285.28
DNBI	478.61
TOTAL	763.89

Table 5-12. Example for Obtaining Total Combat Zone Bed Requirements (Period 1)

	PERIOD 1
TOTAL PATIENTS REMAINING IN CZ HOSPITALS	763.89
CZ DISPERSION FACTOR	X 1.33
CZ BED REQUIREMENTS AT END OF FIRST 30-DAY PERIOD	1,016

5-10. Methodology for the Communications Zone

a. Using Tables 5-2 and 5-13 (or appropriate actual figures), select the COMMZ population to be served according to expected admission experience, the number of 30-day periods, and the evacuation policies for each period. Note that this has already been done for the CZ; therefore, only the COMMZ population is considered in this calculation. Process for determining hospital beds required in the COMMZ is described in paragraph 5-10b, c, and d, below. (Table 5-14 shows the completed example calculations.)

b. Perform steps in paragraphs 5-10b(1) through (5) for WIA patients and then again for DNBI patients (for the population to be served in the COMMZ).

(1) Use the example problem as shown in Table 5-2 (or appropriate actual figures) to obtain the total average daily theater admissions (WIA or DNBI) for the current period of estimate. Multiply the average daily strength (for each

population served) by the corresponding admission rate (per 1,000 troops). Note that a total for the CZ has already been obtained. (Table 5-15 illustrates the process used to obtain time period 1 theater average admissions.) Check numbers obtained for correctness with those numbers shown in the example solution in Table 5-14. Note that in Tables 5-6 and 5-14 the totals reflected are broken down by patient classifications (WIA/DNBI and not by the type of troop population.

(2) Note that the period of estimate numbered "1" (30 days) in Table 5-14 corresponds to the current period in Table 5-13. Whatever period of estimate you are computing becomes the current period and subsequent periods become 2 and 3, respectively. Locate the appropriate accumulation factor column (WIA or DNBI) in Table 5-13 by noting the theater evacuation policy for that current period of estimate. *Various combination sets of evacuation policies are identified.* For subsequent consecutive periods, locate the appropriate evacuation policy combination which applies to your particular problem. (Table 5-16 illustrates the process used to find theater accumulation factors for period 1.)

(3) Using the example solution in Table 5-14 (or appropriate actual figures), obtain the number of current period admissions (WIA or DNBI) that are still remaining in theater hospitals at the end of the current period by multiplying the first accumulation factor by the theater's total average daily admissions in the current period. (Table 5-17 illustrates the process used to obtain the number of theater patients admitted during and remaining at the end of period 2.)

(4) Obtain the number of current period admissions (WIA or DNBI) that are still remaining in theater hospitals at the end of the next period by multiplying the second accumulation factor by the theater's total average daily admissions in the current period. Carefully select the proper combination of evacuation policies reflecting current and consecutive period accumulation factors. Continue this process for patients remaining at the end of other successive periods until all nonzero accumulation factors have been used. In Table 5-14, the 30-day period (period 2), followed by a 60-day period (period 3), has a subsequent period additional accumulation factor of 2.6179 (WIA) and .9543 (DNBI) from the sixth combination in Table 5-13. (Table 5-18 illustrates the process used to obtain the number of theater patients remaining at the end of period 3.)

(5) Using the example solution shown in Table 5-14 (or appropriate actual figures), add admissions that are still remaining in theater hospitals at the end of successive periods of estimate

with any previous admissions still remaining in theater hospitals at the end of the same successive periods. Disease and nonbattle injury results, as they are obtained, should be added at this point with WIA results to obtain total patients remaining in theater hospitals. (Table 5-19 illustrates the process used to obtain the total patients remaining in theater hospitals for period 1.)

c. Using the example solution shown in Table 5-14 (or appropriate actual figures), obtain total patients remaining in COMMZ hospitals at the end of each successive period of estimate as follows: For each period, subtract patients remaining in CZ hospitals from all patients remaining in theater hospitals (that is, subtract the final results from the corresponding results of (5), above). If CZ hospital bed requirements are not calculated first, the CZ accumulation factors can be obtained from theater factors in Table 5-13. This can be done by subtracting equivalent CZ factors in Table 5-6 before calculating beds as in the sample in Table 5-14. (Table 5-20 illustrates the process used to obtain the total patients remaining in COMMZ hospitals for period 1.)

d. Obtain the COMMZ bed requirements at the end of each consecutive period of estimate as follows: Multiply the results of paragraph 5-10c, above, by the COMMZ dispersion factor (as shown in Table 5-2). (Table 5-21 illustrates the process used to obtain total COMMZ bed requirements for period 1.)

Table 5-13. Example Accumulation and Disposition Factors—Theater*

CURRENT AND SUBSEQUENT PERIODS**	EVACUATION POLICY (DAYS)	BASED ON THE ASSUMPTION OF ONE ADMISSION PER DAY OF THE SPECIFIED CLASSIFICATION OF PATIENTS DURING THE FIRST PERIOD OF ESTIMATE (30 DAYS AND NONE THEREAFTER).			WOUNDED IN ACTION			DISEASE/NONBATTLE INJURIES		
		ACCUMULATION***	RETURN TO DUTY	DIED IN HOSPITALS**	EVACUATED**	ACCUMULATION	RETURN TO DUTY	DIED IN HOSPITALS	EVACUATED	
										ACCUMULATION
1	15	9.5249	3.3581	.4053	16.7117	7.4828	14.5346	0.481	7.9345	
2	15	0	1.1599	.0477	8.3173	0	4.0714	.0059	3.4055	
1	30	15.0607	4.6585	.4146	9.8662	10.8494	16.1905	.0453	2.9108	
2	30	0	4.5875	.0684	10.4048	0	7.6175	.0077	3.2242	
1	60	20.5087	4.6586	.4146	4.4182	12.9982	16.1905	.0493	.7620	
2	60	4.4283	8.5607	.0763	7.4434	1.6680	9.5856	.0108	1.7338	
3	60	0	3.0868	.0871	1.3354	0	1.2479	.0029	.4172	
1	15	9.5249	3.3581	.4053	16.7117	7.4828	14.5346	0.481	7.9345	
2	30	0	2.7310	.0377	6.7362	0	5.6336	.0088	1.8424	
1	15	9.5249	3.3581	.4053	16.7117	7.4828	14.5346	0.481	7.9345	
2	60	1.8227	3.9242	.0597	3.7184	.6372	6.1329	.0076	.7051	
3	60	0	1.1526	.0030	.6671	0	.4665	.0010	.1697	
1	30	15.0607	4.6585	.4146	9.8662	10.8494	16.1905	.0493	2.9108	
2	60	2.6179	6.6269	.0725	5.7434	.9543	8.6518	.0093	1.2340	
3	60	0	1.5839	.0036	1.0304	0	.6558	.0015	.2969	
1	30	15.0607	4.6585	.4146	9.8662	10.8494	16.1905	.0493	2.9108	
2	15	0	1.1599	.0477	13.8531	0	4.0714	.0059	6.7721	
1	60	20.5087	4.6585	.4146	4.4182	12.9982	16.1905	.0493	.7620	
2	15	0	1.1599	.0477	19.3011	0	4.0714	.0059	8.9209	
1	60	20.5087	4.6585	.4146	4.4182	12.9982	16.1905	.0493	.7620	
2	30	0	4.5875	.0684	15.9528	0	7.6175	.0077	5.3730	

* Derived from the complete hospitalization and evacuation experience of all US Army WIA and DNBI patients admitted to hospitals in the Korean Conflict and all US Army DNBI cases admitted to hospitals in any overseas area during the same period.

** Thirty days each.

*** Accumulation of patients at end of period.

Return to duty dispositions during the period.

Died in hospital dispositions during the period.

Patient evacuation dispositions out of the CZ during the period.

Table 5-14. Example Calculations of Communications Zone Hospital Bed Requirements

PATIENT CLASS	PERIOD OF ESTIMATE	THEATER AVERAGE DAILY ADMISSIONS				TOTAL	THEATER ACCUMULATION FACTORS FOR CONSECUTIVE PERIODS				THEATER PATIENTS REMAINING AT END OF CONSECUTIVE PERIODS			
		EVAC	CZ	COMMZ	+		TROOPS	+	TROOPS	=	TOTAL	1	2	3
WIA	1	30	91.84	1.00		92.84	15.0607	0	0	0	1,398.24	0	0	0
	2	30	91.84	1.00		92.84	15.0607	2.6179	0	0	1,398.24	243.05	0	0
	3	60	375.48	1.50		376.98	20.5087	4.4283	0	0	7,731.37	1,669.38	7,731.37	1,669.38
	4	60	375.48	1.50		376.98	20.5087	20.5087	0	0	7,731.37	7,731.37	7,731.37	7,731.37
DNBI	1	30	172.36	19.00		191.36	10.8494	0	0	0	2,076.14	0	0	0
	2	30	172.36	19.00		191.36	10.8494	0.9543	0	0	2,076.14	182.61	0	0
	3	60	399.66	28.50		428.16	12.9982	1.6680	0	0	5,565.31	714.17	5,565.31	714.17
	4	60	399.66	28.50		428.16	12.9982	12.9982	0	0	5,565.31	5,565.31	5,565.31	5,565.31
							3,474.38				3,474.38	13,722.34		15,680.23
							-763.89				-763.89	-4,950.09		-4,950.09
							2,710.49				2,710.49	8,772.25		10,730.14
							X 1.25				X 1.25	X 1.25		X 1.25
							3,388				3,388	10,965		13,413

ALL PATIENTS REMAINING IN THE THEATER
 ALL PATIENTS REMAINING IN THE CZ HOSPITALS (FROM POPULATIONS SERVED)
 ALL PATIENTS REMAINING IN THE COMMZ HOSPITALS (FROM POPULATION SERVED)
 COMMZ DISPERSION FACTOR (1.25)(DISPERSION ALLOWANCE = 20%)
 COMMZ BED REQUIREMENTS AT END OF EACH 30-DAY PERIOD

NOTE: The above example numbers must be substituted with actual numbers when calculating actual operational bed requirements. Total bed requirements rounded to next higher whole number.

Table 5-15. Example for Obtaining Communications Zone and Theater Average Daily Admissions

COMMZ							
PATIENT CLASSIFICATION	PERIOD OF ESTIMATE (30 DAYS)	EVACUATION POLICY (DAYS)	AVERAGE DAILY STRENGTH (1,000s)	X	ADMISSION RATE	=	TOTAL
WIA	1	30	20	X	.05	=	1.00
DNBI	1	30	20	X	.95	=	19.00

THEATER		
AVERAGE DAILY ADMISSIONS		
	WIA	DNBI
CZ TROOPS (TABLE 5-7)	91.84	172.36
COMMZ TROOPS	1.00	19.00
THEATER TOTAL	92.84	191.36

Table 5-16. Example for Finding Theater Accumulation Factors

PATIENT CLASSIFICATION	PERIODS OF ESTIMATE (30 DAYS)	EVACUATION POLICY (DAYS)	ACCUMULATION FACTORS
WIA	1	30	15.0607
	2	30	0
DNBI	1	30	10.8494
	2	30	0

Table 5-17. Example for Obtaining Total Theater Patients Remaining (Period 2)

PATIENT CLASSIFICATION	PERIOD OF ESTIMATE (30 DAYS)	FIRST ACCUMULATION FACTOR	X	TOTAL THEATER AVERAGE DAILY ADMISSIONS	=	THEATER PATIENTS REMAINING AT END PERIOD 2
WIA	2	15.0607	X	92.84*	=	1,398.24**
DNBI	2	10.8494	X	191.36*	=	2,076.14**

* Includes COMMZ and CZ figures.
 ** For each current period you evaluate, you define what happens in it and in subsequent time periods. The next step gives an example of theater patients remaining in subsequent time period 3.

Table 5-18. Example for Obtaining Total Theater Patients Remaining (Period 3)

PATIENT CLASSIFICATION	PERIOD OF ESTIMATE (30 DAYS)	SECOND ACCUMULATION FACTOR	X	TOTAL THEATER AVERAGE DAILY ADMISSION	=	THEATER PATIENTS REMAINING AT END OF PERIOD 3
WIA	2	2.6179	X	92.84	=	243.05
DNBI	2	.9543	X	191.36	=	182.61

Table 5-19. Example for Obtaining Total Patients Remaining in Theater Hospitals (Period 1)

PATIENT CLASSIFICATION	PERIOD 1
WIA	1,398.24
DNBI	2,076.14
TOTAL PATIENTS REMAINING IN THEATER HOSPITALS	3,474.38

Table 5-20. Example for Obtaining Total Patients Remaining in Communications Zone Hospitals

	PERIOD 1
ALL PATIENTS REMAINING IN THE THEATER	3,474.38
ALL PATIENTS REMAINING IN CZ HOSPITALS	- 763.89
TOTAL PATIENTS REMAINING IN COMMZ HOSPITALS	2,710.49

Table 5-21. Example for Obtaining
Total Communications Zone
Bed Requirements

	PERIOD 1
ALL PATIENTS REMAINING IN THE COMMZ HOSPITALS	2,710.49
COMMZ DISPERSION FACTOR	X 1.25
COMMZ BED REQUIREMENTS AT END OF 30-DAY PERIOD	3,388

5-11. Methodology for the Continental United States

a. This methodology is presented to show how the conditions within the TO impact on bed requirements for CONUS. Some examples of these conditions are battle intensity, strengths, and evacuation policy. Using Tables 5-2, 5-22, and 5-23, categorize total hospitalization system population served according to expected admission experience. Note that categories have already been developed for that portion of the system's population residing in the theater (paragraph 5-10a). Normally, a HSS planner is only concerned with computing those CONUS requirements generated by operations in a particular theater. In such cases, assume there is no population to be served that resides outside the theater of interest. Process for determining hospital beds required is described in paragraph 5-11 b, c, and d, below, and graphically depicted in Table 5-23.

b. Perform steps in paragraph 5-11b(1) through (4) for WIA patients and then again for DNBI patients.

(1) Use the example problem as shown in Table 5-2 (or appropriate actual figures).

Obtain total average daily worldwide system admissions for the current period of estimate by multiplying the average daily strength (in thousands) of each category of population by the corresponding admission rate and then by summing the results for all population categories. Note that worldwide system subtotals (theater totals) have already been obtained (paragraph 5-10 b (1)). Also, note that CONUS is only serving requirements generated by this theater (see Table 5-23).

(2) Note that the period of estimate numbered "1" in Table 5-23 corresponds to the current period of estimate in Table 5-22. Since an evacuation policy is not applicable to the total hospitalization system, Table 5-22 need only provide a single column of accumulation factors for each patient type.

(3) Obtain the estimate of admissions remaining in hospitals anywhere at the end of the current period by multiplying the first accumulation factor by the worldwide system's total average daily admissions in the current period. Obtain the estimate of current period admissions remaining in hospitals anywhere at the end of the next period by multiplying the second accumulation factor by the worldwide system's total average daily admissions in the current period. Continue this process for patients remaining at the end of all subsequent periods.

(4) Accumulate admissions still remaining in hospitals anywhere at the end of the various periods of estimate with all previous admissions still remaining at the end of the corresponding periods. Note that DNBI results, as they are obtained, should be added here to WIA results.

c. Obtain the total patients remaining in CONUS hospitals at the end of each period of estimate as follows: For each period, subtract patients remaining in theaters from all patients remaining anywhere.

Table 5-22. Accumulation and Disposition Factors—Total Hospitalization System*

BASED ON THE ASSUMPTION OF ONE ADMISSION PER DAY OF THE SPECIFIED CLASSIFICATION OF PATIENTS DURING THE FIRST PERIOD OF ESTIMATE (30 DAYS AND NONE THEREAFTER).

CURRENT AND SUB-SEQUENT PERIODS**	WOUNDED IN ACTION			DISEASE/NONBATTLE INJURIES			
	ACCUMULATION***	RETURN TO DUTY*	DIED IN HOSPITALS#	ACCUMULATION***	RETURN TO DUTY*	DIED IN HOSPITALS#	DISABILITY DISCHARGE###
1	24.9269	4.6585	.4146	13.7602	16.1905	.0493	.00
2	16.2899	8.5607	.0763	4.1615	9.5856	.0108	.0023
3	11.1763	5.0915	.0161	2.1701	1.9687	.0038	.0189
4	8.5651	2.5657	.0107	1.3283	.8071	.0021	.0326
5	7.0059	1.4791	.0033	.8922	.3928	.0021	.0412
6	5.8345	1.0709	.0010	.6309	.2164	.0011	.0438
7	4.9412	.7688	0	.4520	.1328	.0028	.0433
8	4.2085	.5716	.0006	.3252	.0827	.0009	.0432
9	3.5763	.4302	.0024	.2344	.0527	.0021	.0360
10	3.0439	.3252	.0009	.1713	.0363	0	.0278
11	2.5614	.2512	.0021	.1226	.0241	0	.0246
12	2.1526	.1926	0	.0931	.0141	0	.0134

* Derived from the complete hospitalization and evacuation experience of all US Army WIA and DNBI patients admitted to hospitals in the Korean conflict and all US Army DNBI cases admitted to hospitals in any overseas area during the same period.

** Thirty (30) days each.

*** Accumulation of patients at end of period.

Returns to duty during the period.

Died in hospitals during the period.

Disability discharge during the period.

Table 5-23. Example Computation of Continental United States Bed Requirements

PATIENT TYPE	TOTAL SYSTEM AVERAGE DAILY ADMISSIONS PERIOD OF				TOTAL SYSTEM ACCUMULATION FACTORS FOR SUCCESSIVE PERIODS				TOTAL SYSTEM ACCUMULATION FACTORS PATIENTS REMAINING ANYWHERE AT END OF SUCCESSIVE PERIODS				
	ESTIMATE	THEATER	+ CONUS	= TOTAL X	1	2	3	4	=	1	2	3	4
WIA	1	92.84	0	92.84	24.9269	16.2899	11.1763	8.5651		2,314.21	1,512.35	1,037.61	795.18
	2	92.84	0	92.84	24.9269	24.9269	11.1763	11.1763		2,314.21	1,512.35	1,037.61	1,037.61
	3	376.98	0	376.98			24.9269	16.2899			9,396.94	6,140.97	6,140.97
	4	376.98	0	376.98				24.9269				9,396.94	9,396.94
DNBI	1	191.36	0	191.36	13.7602	4.1615	2.1701	1.3283		2,633.15	796.35	415.27	254.18
	2	191.36	0	191.36	13.7602	13.7602	4.1615	2.1701		2,633.15	796.35	415.27	415.27
	3	428.16	0	428.16			13.7602	4.1615			5,891.57	1,781.79	1,781.79
	4	428.16	0	428.16				13.7602				5,891.57	5,891.57
ALL PATIENTS REMAINING ANYWHERE:													
ALL PATIENTS REMAINING IN THEATER:													
ALL PATIENTS REMAINING IN CONUS:													
CONUS DISPERSION FACTOR: 1.11 (DISPERSION ALLOWANCE = 10%):													
CONUS BED REQUIREMENTS AT END OF EACH 30-DAY PERIOD:													
										4,947.36	7,256.06	19,050.09	25,713.51
										-3,474.38	-3,474.38	-13,722.34	-15,680.23
										1,472.98	3,781.68	5,327.75	10,033.28
										X 1.11	X 1.11	X 1.11	X 1.11
										1,635	4,198	5,914	11,137

NOTE: The above example numbers must be substituted with actual numbers when calculating actual operational bed requirements. Total bed requirements rounded to next higher whole number.

d. Obtain the CONUS bed requirements for each period of estimate as follows: Multiply the results of paragraph 5-11 c, above, by the CONUS dispersion factors (1.11).

5-12. Medical Services for Other Special Category Patients

In modern military operations, health care services may be required by a wide category of potential patients. These potential demands should be carefully considered in initial planning. Categories that require careful consideration include indigenous allies, friendly and unfriendly civilians, paramilitary organizations, representatives of various US agencies, US civilian contractor personnel, mercenary units employed by the allied forces, and so forth. As a general rule, any individual may be treated on a humanitarian basis, if space and staff are available. Fine lines of distinction often exist which must be clarified by the command. For example, wounded unfriendly civilians may be detainees, subject to restrictions and regulations which do not apply to EPW. See AR 190-8 for further information regarding detainees.

5-13. Medical Services for Prisoners of War

In accordance with the law of land warfare, EPW patients should be afforded the same level of medical care as patients of the detaining power. Seriously injured, sick, or wounded EPW will be evacuated through medical channels, but will be segregated from US and allied patients. Enemy prisoners of war will be evacuated from the CZ as soon as possible. They will not be hospitalized in hospital wards with US military prisoners. Except in emergencies, EPW will be hospitalized in housing equal to that used for US military personnel. Accountability and security of EPW and their possessions in MTFs are the responsibility of the echelon commander. Ambulatory EPW patients

will be processed through EPW channels following treatment. Qualified medical retained personnel (RP) will be used as much as possible in medical and hygiene work needed for the well-being of EPW. However, medical RP will belong to the same armed forces as the EPW.

5-14. Estimation of Enemy Prisoner of War Bed Requirements

Bed requirements for the total EPW patient load can be estimated grossly on the basis of 4 percent of the total EPW population at any given time multiplied by the appropriate dispersion factor. The dispersion factor would, however, be small since the EPW population is homogeneous and the geographic considerations favor stability of location. The proportion of total bed requirements that are made available for specialized care will depend upon local conditions. Provision is made for specialized treatment beds on the basis of medical intelligence reports of morbidity among enemy troops, diseases endemic to the AO, and type of injuries and wounds resulting from the tactical situation (see Tables 5-4 a through 5-4 h). Table 5-24 shows an example problem used in determining EPW beds based on 2100 EPW captured during a 30-day period by a division in attack of a defensive position with complete surprise attained.

Table 5-24. Estimate of Enemy Prisoner of War Bed Requirements

EPWs CAPTURED PER DIVISION IN A 30-DAY PERIOD	2100
MEDICAL PLANNING FACTOR (.04)	<u>X .04</u>
BEDS REQUIRED	84
DISPERSION FACTOR (LOWER) (1.05)	<u>X 1.05</u>
TOTAL EPW BED REQUIREMENTS	88

5-15. Statistics

Table 5-25 indicates estimated hospital admission rates for several geographical areas based on World War II, the Korean conflict, the Vietnam experience, and subsequent study of the world health situation. These rates should be used only as a basis for planning gross theater HSS. Each rate represents a first-year experience typical of the area involved. (When data are aggregated for greater or lesser periods, the same experience source produces significantly different rates.) The planner must modify these rates, using the latest pertinent medical intelligence data, and consider their historical bases before he applies them in developing HSS work loads and bed requirements for a specific plan or type of combat action.

days the patient spends in hospitals at lower levels. See Table 5-26 for the effects of reducing this policy.

Table 5-25. Rate of Admissions to Hospitals per 1,000 Strengths per Day

1	2	3
AREA	DISEASE AND NONBATTLE INJURIES	WOUNDED IN ACTION
NORTH AMERICA	1.36	0.55
EUROPE	1.62	0.55
NORTHEAST ASIA	2.07	0.37
SOUTHEAST ASIA	0.60	0.20
AFRICA	2.87	0.37
MIDDLE EAST	1.96	0.37
SOUTH AMERICA	1.72	0.37

5-16. Changes in Evacuation Policy

Changes in this policy affect hospital bed requirements. The number of days specified for a level of hospitalization includes the number of

NOTE: In using experience factors from TO, remember that WIA rates are not primarily related to geography. In using such rates for planning, the theater must be considered from the standpoint of the type of combat, size and organization of forces, and weapon employment.

Table 5-26. Effects of a Reduction in Theater Evacuation Policy on Bed Requirement in Continental United States

TYPE CASUALTY	60-DAY EVAC POLICY	-	30-DAY EVAC POLICY	=	DIFFERENCE	X	ADMISSION RATE**	X	AVG THEATER STRENGTH (1,000)	=	PATIENTS
DNBI	13.00*	-	10.85*	=	2.15	X	1.36	X	500	=	1,462
WIA	20.51*	-	15.06*	=	5.45	X	0.55	X	500	=	1,499
TOTAL PATIENTS										=	2,961
20% DISPERSION ALLOWANCE										=	X 1.25
TOTAL ADDITIONAL BEDS REQUIRED										=	3,701

* Accumulation factors from Table 5-13. (Figures have been rounded up.)

** Admission rates from Table 5-25.

Section IV. SUPPORT AGREEMENTS

5-17. Host-Nation Support

Wartime host-nation support will be planned to augment joint medical assets for patient care only when available, of acceptable quality, and documented in host-nation support agreements.

5-18. Joint Hospital Agreements

a. Health care facilities may provide service on a joint basis when directed by the

combatant, subunified, or task force commander to make maximum use of available beds and services, Joint staffing is not a prerequisite to joint use; however, staff augmentation from Service components may be required.

b. When one Service component receives personnel from another Service component, the establishing authority will specify the authority the gaining component will exercise such as OPCON. Administrative responsibility remains with the lending Service.

Section V. MEDICAL FORCE 2000 HOSPITALS

5-19. Hospitalization System

The four Medical Force 2000 hospitals are the MASH, the CSH, the FH, and the GH. The CSH, FH, and GH are designed using a four-module concept. This concept includes the hospital unit, base (HUB); hospital unit, surgical (HUS); hospital unit, medical (HUM); and hospital unit, holding (HUH). The base can operate independently, is clinically similar, and is located in each hospital as the initial building block. The other three mission-adaptive modules are dependent upon the base. This capability may be further enhanced by medical detachment augmentation.

a. Hospitalization Units at Echelon III. The MASH and the CSH are at this echelon. (The medical company, holding, is also found at this echelon. Paragraph 5-24c discusses this unit's capability to be employed by platoon to expand a hospital's minimal care ward facilities. However, these cots are not counted against hospital bed requirements.)

b. Hospitalization Units at Echelon IV. The GH and FH are at this echelon. The FH may also be employed in the CZ. The MASH, CSH, and medical company, holding, may also be deployed in the COMMZ to support rear operations or contingency operations.

5-20. Mobile Army Surgical Hospital, TOE 08-765L000

a. Mission. The mission of the MASH is to provide hospitalization for patients who require resuscitative surgical care and medical treatment to stabilize them for further evacuation to either CZ or COMMZ hospitals from the TO. Although the MASH is an Echelon III unit, it will be deployed as far forward as tactically feasible, preferably the division rear area. As the situation permits, part of the MASH may be deployed in the division support area or a brigade support area along with a divisional medical company to provide an early emergency surgical capability.

b. Assignment. The MASH is assigned to a Medical Brigade, TOE 08-422 L100/200. It may be further attached to a Medical Group, TOE 08-432L000.

c. Capabilities. This unit provides—

- Command and control and supervision of the hospital.
- Emergency medical treatment (EMT) Team A and Team B to receive, triage, and stabilize incoming patients.
- Initial resuscitative surgery and medical treatment for patients requiring stabilization prior to further evacuation.
- Three wards (10 beds each) providing preoperative and postoperative acute nursing care (encompasses both the hospital unit, surgical main [HUSM] [two 10-bed elements] and the hospital unit, surgical forward [HUSF] [10-bed]).
- Surgical capability based on three operating room (OR) tables for general, thoracic, and orthopedic surgical capacity of 60 OR table hours per day. (These hours encompass both the 20-bed HUSM [one table at 24 hours and one table at 12 hours] and the 10-bed HUSF [one table at 24 hours]).
- Echelon I care for organic personnel.
- Pharmacy, clinical laboratory, liquid blood, radiology, central materiel service, and nutrition care services.
- Patient administration, unit administration, religious support, food service, and health service logistics.

- A HUSF, TOE 08-577LA00 that can operate detached for up to 48 hours with the following capabilities:

- EMT Team B to receive, triage, and stabilize incoming patients.
- Surgical capability based on one OR table for a general surgical capacity of 24 OR table hours per day for up to two days.
- One ward providing preoperative and postoperative acute nursing care for up to 10 patients.

d. Dependency. This unit depends on—

- Medical Detachment, Surgical, TOE 08407L100, and Medical Detachment, Surgical (Airborne), TOE 08407L200, to increase capacity by 12 OR table hours per day.
- Hospital Unit, Surgical Forward, TOE 08-5771A00, to augment the emergency room, operating room, and acute care ward.

e. Mobility. The MASH is 100 percent mobile.

f. Basis of Allocation. Two MASHs are allocated per corps.

5-21. Combat Support Hospital, TOE 08-705L000

a. Mission. The mission of this 296-bed hospital is to provide resuscitation, initial wound surgery, and postoperative treatment. Patients are stabilized for further evacuation or they are RTD if they fall within the corps evacuation policy. This hospital is capable of handling all types of patients and will normally be employed in the corps area.

b. Assignment. The CSH is assigned to a medical brigade and maybe further attached to an HHD, medical group.

c. Capabilities. At full strength, this unit provides—

- Hospitalization for up to 296 patients. The hospital has—
 - Eight wards providing intensive nursing care for up to 96 patients.
 - Seven wards providing intermediate nursing care for up to 140 patients.
 - One ward providing neuro-psychiatric care for up to 20 patients.
 - Two wards providing minimal nursing care for up to 40 patients.
- Surgical capacity based on eight OR tables for surgical capacity of 144 OR table hours per day.
- Consultation services for patients referred from other MTFs.
- Echelon I HSS for organic personnel.
- Pharmacy, clinical laboratory, blood banking, radiology services, and nutrition care services.
- Physical therapy services including patient and staff care, injury prevention, health maintenance, and consultation.
- Medical administrative and logistical services to support work loads.
- Dental treatment to staff and patients and oral surgery support for military

personnel in the immediate area plus patients referred by the area HSS units.

d. Mobility. The CSH is 35 percent mobile.

e. Basis of Allocation. The CSHs are allocated based on 100 percent of the projected beds required in the CZ.

5-22. Field Hospital, TOE 08-715L000

a. Mission. This 504-bed facility provides hospitalization—

- For patients within the theater who require further stabilization prior to evacuation.
- For patients who will RTD within the prescribed theater evacuation policy.

The majority of patients within this facility will be in the reconditioning and rehabilitating category. The FH will normally be located in the COMMZ; however, circumstances may direct that this hospital be employed in the corps.

b. Assignment. The FH is assigned to a MEDCOM. It may be further attached to a medical brigade.

c. Capabilities. At full strength, this unit provides—

- Hospitalization for up to 504 patients. The hospital has—
 - Two wards providing intensive nursing care for up to 24 patients.
 - Seven wards providing intermediate nursing care for up to 140 patients.

- One ward providing neuro-psychiatric care for up to 20 patients.
- Two wards providing minimal nursing care for up to 40 patients.
- Seven patient support sections providing convalescent care for up to 280 patients.
- Surgical capability based on four operating tables for a surgical capacity of 48 OR table hours per day.
- Consultation services for patients referred from other MTFs.
- Echelon I HSS for organic personnel.
- Pharmacy, clinical laboratory, blood banking, radiology, and nutrition care services.
- Physical and occupational therapy services including patient and staff care, injury prevention, health maintenance, and consultation.
- Medical administrative and logistical services.
- Dental treatment to staff and patients and oral surgery support for military personnel in the immediate area plus patients referred by area HSS units.

d. Mobility. This unit requires organic vehicles to perform housekeeping functions. All movement requirements are the responsibility of theater transportation units.

e. Basis of Allocation. Field hospitals are allocated based on 70 percent of the projected hospital beds required in the COMMZ.

5-23. General Hospital, TOE 08-725L000

a. Mission. This 476-bed facility provides stabilization and hospitalization for general classes of patients. The GH serves as the primary conduit for patient evacuation to CONUS. The GH will be located in the COMMZ.

b. Assignment. The GH is assigned to a MEDCOM and maybe further attached to a medical brigade.

c. Capabilities. At full strength, this unit provides—

- Hospitalization for up to 476 patients consisting of eight wards providing intensive nursing care for up to 96 patients; sixteen wards providing intermediate nursing care for up to 320 patients; one ward providing neuro-psychiatric care for up to 20 patients; and two wards providing minimal nursing care for up to 40 patients.
- Surgical capability based on eight OR tables for a surgical capacity of 144 OR table hours per day.
- Consultation services for patients referred from other MTFs.
- Echelon I HSS for organic personnel.
- Pharmacy, clinical laboratory, blood banking, radiology, and nutrition care services.
- Physical and occupational therapy services including patient and staff care, injury prevention, health maintenance, and consultation.
- Medical administrative and logistical services.

- Dental treatment to staff and patients and oral surgery support for military personnel in the immediate area plus patients referred by the area medical units.

d. Mobility. This unit requires organic vehicles to perform housekeeping functions. All movement requirements are the responsibility of theater transportation units.

e. Basis of Allocation. General hospitals are allocated based on 30 percent of the projected hospital beds required in the COMMZ.

NOTE

Minimal reequipping of RTD soldiers from Echelons III and IV hospitals will consist of basic uniform items to protect the soldier during transit to replacement companies.

5-24. Medical Company, Holding, TOE 08-458L000

a. Mission. The medical company, holding, provides—

- Holding capability within the CZ for up to 1,200 minimal care patients.
- Minor medical treatment and physical rehabilitation for patients being held.

b. Assignment. The medical company, holding, is assigned to Medical Brigade, TOE 08-422L100 or 08-422L200. It is normally attached to the medical group within the CZ.

c. Capabilities. This unit—

- Provides five holding platoons, each capable of operating a holding facility with

240 supplemental cots for minimal care type patients. Platoons are organized consisting of six holding squads, each having a capacity of 40 patients, and one treatment squad.

- May be employed by platoon to expand hospital minimal care ward facilities.

- May be employed by platoon in conjunction with CSC squads to hold combat fatigue casualties.

- May be employed to augment USAF MASF.

- May be assigned responsibility for providing limited area HSS.

d. Mobility. This unit—

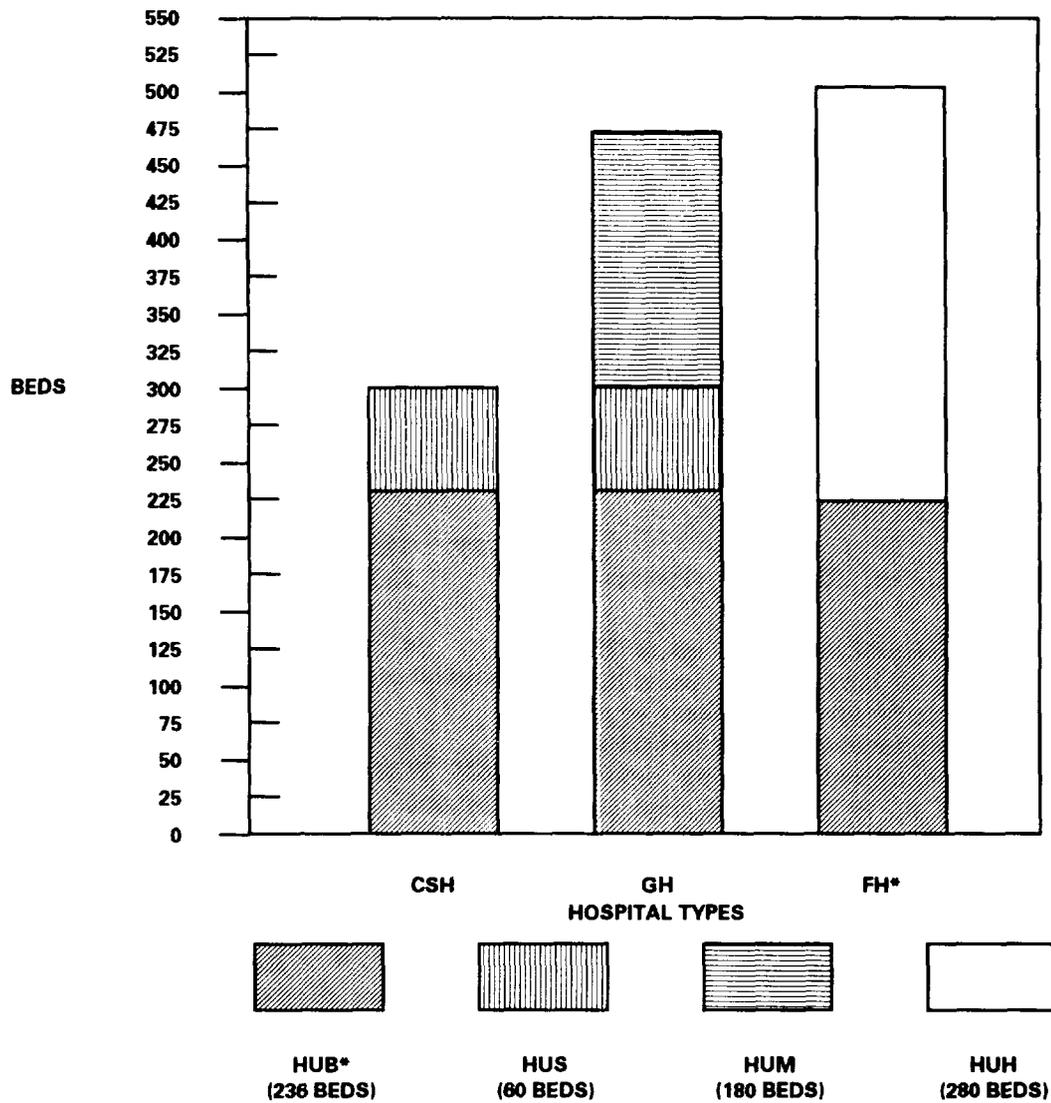
- Is capable of transporting 113,000 pounds (9,978.0 cubic feet) of TOE equipment with organic vehicles.

- Has 40,831 pounds (2,864.3 cubic feet) of TOE equipment requiring transportation.

e. Basis of Allocation. This unit is allocated on the basis of one per corps.

5-25. Various Hospital Configurations

As stated earlier, all of the hospitals, except the MASH, are configured using various combinations of the component hospital system. The CSH, the FH, and the GH consist of a base component which is clinically similar in all hospitals and one or more mission-adaptive component(s) to meet work load requirements. The components are the HUB, HUS, HUM, and HUH. Figure 5-1 depicts the component hospital system.



* ALTHOUGH THE HUB HAS 236 BEDS, WHEN IT IS USED AS THE BASE COMPONENT FOR THE FH, IT IS ONLY STAFFED TO PROVIDE HOSPITALIZATION FOR 224 PATIENTS. IN THE FH CONFIGURATION, THE HUB HAS TWO INTENSIVE CARE WARDS THAT PROVIDE CARE FOR UP TO 24 PATIENTS. BY CONTRAST, IN THE CSH AND GH CONFIGURATIONS, THE HUB HAS THREE INTENSIVE CARE WARDS THAT PROVIDE CARE FOR UP TO 36 PATIENTS. THIS IS THE REASON FOR THE 12-PATIENT DIFFERENCE IN THE FH CONFIGURATION.

Figure 5-1. Component hospital system.

5-26. The Hospital Unit, Base, TOE 08-736L000

a. Mission. The HUB provides hospitalization for patients within the CZ and COMMZ.

b. Assignment.

(1) The HUB, TOE 08-736L100, is organic to CSH, TOE 08-705 L000.

(2) The HUB, TOE 08-736 L200, is organic to FH, TOE 08-715L000.

(3) The HUB, TOE 08-736L300, is organic to GH, TOE 08-725L000.

c. Capabilities. This unit provides—

- Hospitalization for up to 236 patients consisting of three wards providing intensive nursing care for up to 36 patients, seven wards providing intermediate nursing care for up to 140 patients, one ward providing neuropsychiatric care for up to 20 patients, and two wards providing minimal nursing care for up to 40 patients.

- Surgical capability based on four OR tables for 48 OR hours per day.

NOTE

This capability does not apply to a HUB assigned to a FH.

- Consultation services for outpatients referred from other MTFs.

- Echelon I HSS for organic personnel only.

- Pharmacy, clinical laboratory, blood bank, radiology, and nutrition care services.

- Physical therapy support to patients.

- Medical administrative and logistical services to support work loads.

- Oral and maxillofacial services, oral surgical consultation and referral services to area support dental units, and general dental services for patients and staff.

- Occupational therapy support.

5-27. The Hospital Unit, Surgical, TOE 08-737L000

a. Mission. The HUS provides increased surgical capability to a HUB.

b. Assignment. A HUS is organic to a CSH, TOE 08-705L000, and to a GH, TOE 08-725L000.

c. Capabilities. As a component in the CSH or GH, this unit provides—

- Hospitalization for up to 60 patients consisting of five wards providing intensive nursing care.

- Surgical capability based on four OR tables for a surgical capacity of 96 OR table hours per day.

- Echelon I HSS, less dental, for organic personnel.

- Radiology augmentation services up to 60 patients.

- Medical administrative services.

d. Mobility. The mobility of the HUS is dependent on corps or TA transportation support.

e. Basis of Allocation. The HUS is assigned (a component) as follows—

- One per CSH, TOE08-705L000.
- One per GH, TOE 08-725L000.

5-28. The Hospital Unit, Medical, TOE 08-738L000

a. Mission. The mission of the HUM is to provide medical augmentation to a HUB.

b. Assignment. A HUM must be assigned to a GH, TOE 08-725L000.

c. Capabilities. As a component of the GH, this unit provides—

- Hospitalization for up to 180 patients consisting of nine wards providing intermediate nursing care.

Consultation services for outpatients referred from other MTFs.

- Pharmacy, clinical laboratory, and radiology augmentation services for up to 180 inpatients.

- Physical and occupational therapy augmentation support.

d. Mobility. The mobility of the HUM is dependent on corps or TA transportation support.

e. Basis of Allocation. One HUM is allocated per GH.

5-29. The Hospital Unit, Holding, TOE 08-739L000

a. Mission. The mission of the HUH is to provide hospitalization for patients returning to duty within the prescribed theater policy.

b. Assignment. The HUH must be assigned to the FH, TOE 08-715L000.

c. Capabilities. As a component of the FH, this unit provides—

- Hospitalization for up to 280 patients consisting of seven patient support sections providing convalescent care for up to 280 patients.
- Echelon I HSS, less dental, for organic personnel.
- Physical and occupational therapy support to patients.
- Medical administrative and logistical services.

d. Mobility. The mobility of the HUH is dependent on corps or TA transportation support.

e. Basis of Allocation. One HUH is allocated per FH.

5-30. Surgical Service Teams

a. Mission. The mission of these teams is to provide surgical augmentation to CZ and COMMZ hospitals.

b. Assignment. These teams are assigned to a MEDCOM, medical brigade, or a medical group and may be further attached to subordinate hospitals as required.

c. Detailed Characteristics of Teams.

(1) Medical Team, Head and Neck Surgery, TOE 08-527LA00.

(a) Capabilities. This team provides initial and secondary maxillofacial and ear, nose, and throat surgery in support of theater hospitals.

(b) Basis of allocation. This team is allocated as follows:

- .25 per CSH.
- .25 per FH.
- .25 per GH.

(2) Medical Team, Neurosurgery, TOE 08-527LB00.

(a) Capabilities. This team provides initial and secondary neurosurgery in support of theater hospitals.

(b) Basis of allocation. This team is allocated as follows:

- .37 per CSH.
- .37 per FH.
- .37 per GH.

(3) Medical Team, Eye Surgery, TOE 08-527LC00.

(a) Capabilities. This team provides initial and secondary ophthalmologic surgery in support of theater hospitals and consultative services as required on an area basis.

(b) Basis of allocation. This team is allocated as follows:

- .25 per CSH.

- .25 per FH.
- .25 per GH.

5-31. Medical Service Teams

a. Mission. The mission of medical service teams is to provide medical augmentation to CZ and COMMZ hospitals.

b. Assignment. These teams are assigned to a MEDCOM, a medical brigade, or a medical group and may be further attached to subordinate hospitals as required.

c. Detailed Characteristics of Teams.

(1) Medical Team, Pathology, TOE 08-537LA00.

(a) Capabilities. This team provides investigative pathology support. It can provide a limited investigative response to NBC agents and perform aviation pathology investigations of aviation facilities, to include examining forensic pathology cases of command interest.

(b) Basis of allocation. One team is allocated per theater.

(2) Medical Team, Renal Dialysis, TOE 08-537LB00.

(a) Capabilities. This team provides renal hemodialysis care for patients with acute renal failure and consultative services on an area basis.

(b) Basis of allocation. One team is allocated per theater.

(3) Medical Team, Infectious Disease, TOE 08-537LC00.

(a) *Capabilities.* This team provides infectious diseases investigative and consultative services to the hospital to which attached.

(b) *Basis of allocation.* This team is allocated as follows:

- .185 per CSH.
- .185 per FH.
- .185 per GH.

5-32. Medical Detachment, Surgical, TOE 08-407L100, and Medical Detachment, Surgical (Airborne), TOE 08-407L200

a. *Mission.* This unit provides a rapidly deployable initial surgical service forward in a division's AO.

b. *Assignment.* This unit may be assigned to MEDCOM, TOE 08111, Medical Brigade, TOE 08112, or Medical Group, TOE 08122, and attached to subordinate AMEDD command and control units as required by the nature of operations of the forces being supported.

c. *Capabilities.* This unit provides-

(1) Life- and limb-saving (initial) surgery in the CZ.

(2) Initial surgery forward in support of Echelon II HSS for a period of up to 48 hours.

(3) Initial surgery with its organic medical equipment set for up to 40 critically wounded/injured patients.

(4) Personnel augmentation to Echelon III hospitals when not task-organized to support Echelon II HSS.

(5) Preoperative and postoperative care to patients with the assistance of the patient holding squad when attached to Echelon II HSS units.

d. *Dependency.* This unit is dependent on—

(1) The unit to which it is operationally attached to provide sheltered working space, commonly used equipment such as patient holding medical equipment sets, and services such as food service, security, and unit maintenance.

(2) When attached to an Echelon II HSS unit, the surgical detachment is dependent upon that unit for food services, administration services, and local security. It is dependent upon division-level military police for response force operations when deploying into and moving through the division area.

(3) Appropriate units of the COSCOM for rigging when airdrop operations are required (airborne version only).

e. *Basis of Allocation.* One unit is allocated per division supported. (One of every four surgical detachments in a corps area will be airborne qualified.)

Section VI. SPECIAL PATIENT ADMINISTRATION FUNCTIONS

5-33. Initiating, Maintaining, and Disposing of Health Records

a. *Health Records of Deployed Soldiers.* The health record (HREC) is a permanent and

continuous file. Health records will be prepared and maintained for all active duty (AD) personnel; however, HRECs of deployed soldiers will not accompany them to combat areas. During mobilization, when processing soldiers for

deployment, the MTF and DTF will perform the following:

(1) Audit each soldier's HREC and record essential health- and dental-care information on DA Form 8007. This form is a single-page document that will be prepared for every soldier in CONUS and OCONUS and will replace the HREC during deployment. ADA Form 8007 should be initiated and/or updated during record screening. (The AMEDD officer in charge must ensure that any health problems of a newly arrived person are treated, and thus, that the person's HREC is reviewed when received.) The DA Form 8007 is intended for use until an electronic device that stores medical or dental, personnel, and finance data is fielded. The preparation and use of DA Form 8007 is applicable as well to civilian employees who may accompany deploying units. Units in the CONUS and OCONUS are encouraged to use DA Form 8007 during training exercises. (See AR 40-66 and AR 640-10.)

(2) If the HREC is not available, complete DA Form 8007 by interviewing the soldier and obtaining information from locally available data. An HREC may not be available for most Individual Ready Reserve, Individual Mobilization Augmentee, and retired personnel because these HRECs may remain on file at the US Army Personnel Center (USARPERCEN).

(3) Provide the completed DA Form 8007 to the soldier's command, or to the soldier if he is an individual replacement. The command or the soldier will hand off DA Form 8007 to the MTF in the AO responsible for providing primary medical care. That MTF will maintain DA Form 8007 in an outpatient field file for reference as needed. The field file will consist of, in part, DA Form 8007 and possibly SF 600, SF 558, SF 603, or DD Form 1380.

(4) The soldier's field file may be managed as a drop file (forms not attached).

(5) After deployment processing, the HREC and the dental record will be placed in the DA Form 201. The Military Personnel Records Jacket, US Army (MPRJ), to include medical records, will remain at the mobilization station at least 90 days after deployment before forwarding to the USARPERCEN, St. Louis, Missouri.

b. Forward Deployed Force. If the battle field situation permits, follow the procedures in 5-33a(1)-(4) described above. If not, consolidate HRECs in-country and process them when time permits.

c. Limited Contingency Operation. Retain the HREC at the MTF/DTF providing primary care. If the primary care facility closes, forward the HREC to the MTF indicated by the servicing medical department activity and dental activity. Should full mobilization occur, follow guidance in 5-33a(1)-(4) above.

d. Units That Do Not Process Through a Mobilization Station. For rapid deployment units that do not process through a mobilization station prior to deployment or otherwise do not have access to an MTF, procedures will be similar to those of a forward deployed force. See 5-33b above. Records will be consolidated by the unit and processed as time permits at the first MTF encountered during preparations for deployment or after deployment.

5-34. Procedures After Deployment

Procedures for filing and storing permanent HRECs after deployment will be as deemed appropriate by USARPERCEN.

5-35. Use of Field Files

a. If a soldier's primary MTF changes, the field file should be moved to the gaining MTF.

b. If a soldier requires admission to the hospital, every attempt will be made to forward the field file. The file will be returned to the soldier's primary MTF if disposition is return to duty.

5-36. Operation After Hostilities Cease

a. Field files will be used to update the original HREC after hostilities cease. This will be accomplished by the activity responsible for maintaining the record after demobilization such as—

- USARPERCEN for soldiers leaving the service, returning to reserve status, or who otherwise would be serviced by USARPERCEN.

- National Guard Bureau for soldiers who are returning to National Guard (NG) service.

- Medical treatment facility for soldiers remaining on active duty. Each MTF must request records from USARPERCEN for those soldiers who are assigned for support upon demobilization.

b. Identification entries on SF 600, SF 603, and DD Form 1380 for outpatient treatment will include at least the patient's name, grade, social security number, status (AD, Reserve, NG), permanent unit of assignment, and unit or home address.

6-37. Use and Disposition of Inpatient Treatment Records

a. An Inpatient Treatment Record (ITR) will be prepared for every bed patient. If the theater surgeon, or equivalent, determines that their use is temporarily inconsistent with combat operations, the Field Medical Card (FMC) maybe

substituted for the ITR until complete ITR usage can be established.

b. Inpatient Treatment Records will be prepared and maintained according to AR 40-66. Upon demobilization, ITRs remaining in the MTF will be retired according to guidance from the Chief, Patient Administration Division, Office of The Surgeon General.

5-38. Use of DD Form 1380

The DD Form 1380 is used to record data similar to that recorded on the ITR cover sheet. The FMC will be used by combat medics, aid stations, clearing stations, and treatment teams operating at nonfixed troop clinics for individuals working overseas, on maneuvers, or attached to commands moving between stations. It may also be used to record outpatient visits when the patient's HREC is not readily available. For preparation instructions, refer to AR 40-66.

5-39. Reporting Requirements

a. Timely reporting and dissemination of information to facilitate tracking of patients must be closely coordinated between the PAD, patient's unit, MRO, Adjutant General's office, and mortuary affairs.

b. Daily bed status reports contain the number of occupied and available beds by clinical specialty. Additionally, surgical backlog, in hours, as well as other work load information, is reported on at least a daily basis to the parent medical group, medical brigade, or MEDCOM. Based upon the tactical situation, more frequent reporting may be required. The bed status report is either transmitted directly by the PAD to a higher headquarters, or it may be consolidated within the MTF as part of the MTF daily medical situation report.

c. Admission and disposition (MD) reports will be prepared daily for each calendar day the MTF is in operation. Distribution of the AWI report will be locally determined based upon the recipient's demonstrated need to know.

d. DA Form 3647 and DA Form 2985 are all part of the Individual Patient Data System (IPDS) and will be prepared according to AR 40-66 and AR 40-400.

(1) DA Form 3647 and DA Form 2985 will be prepared for each patient admitted to a contingency MTF. The records generated from the 1st through the 15th day of the month must be transmitted no later than the last day of the month. The records generated from the 16th through the last day of the month must be transmitted no later than the 16th of the following month.

(2) These forms will be transmitted by priority mail to the Commander, US Army Patient Administration Systems and Biostatistics Activity, ATTN: HSHI-QPI, Fort Sam Houston, TX 78234-6070.

(3) The forms will be transmitted in register number sequence. Each transmittal will include all forms for all dispositions and carded for record only cases for that report period. A transmittal will not be delayed because of incomplete records. Negative reports are required for control purposes. Each transmittal will include a transmittal letter. See AR 40-400.

e. The DA Form 2789-R series is used for the Medical Summary Reporting System (MSRS). Each functioning MTF will prepare and submit the initial, monthly, and final DA Form 2789-R series per AR 40-400. One copy of the report will be submitted to the command surgeon's

office and one to the Patient Administration Systems and Biostatistics Activity, ATTN: HSHI-QBR, Fort Sam Houston, TX 78234-6070.

f. Casualty reporting will be accomplished according to AR 600-8-1.

g. The TAMMIS Medical Patient Accounting and Reporting (MEDPAR) subsystem will be used, when available, to support the automated management and reporting of patients within, around, and out of the TO. The MEDPAR operates within the corps and the EAC. Individual patient data are accumulated to determine the availability of medical resources and to support the personnel and casualty reporting system. The existence of MEDPAR does not eliminate the requirement for medical statistical reporting referenced above.

5-40. Medical Records and Forms for Enemy Prisoners of War and Retained Personnel

The medical records and forms used for hospitalization and treatment of US Army personnel (AR 40-66 and AR 40-400), together with those described in AR 190-8, will be used for EPW and RP personnel. They will be stamped properly with the letters EPW or RP at the top and bottom of each form. Medical and dental records will accompany persons when they are transferred.

5-41. Funds and Valuables

Patient funds and valuables will be identified and secured by a designated custodian for safekeeping during a soldier's hospitalization. Further information concerning the definition of funds and valuables and the actual process of securing these items may be found in AR 40-2.

CHAPTER 6

HEALTH SERVICE LOGISTICS

Section I. MISSION, POLICIES, AND RESPONSIBILITIES

6-1. Health Service Logistics Mission

a. Health service logistics is managed solely by the AMEDD. This gives the surgeon the ability to influence and control the resources needed to save lives. The health service logistics mission parallels and supports the surgeon's HSS mission, and in turn, the commander's mission. The health service logistics mission is to provide support where and when it is required in the fastest, most inexpensive, and most practical way possible. Health service logistics includes—

- Class VIII medical supplies (medical materiel to include medical peculiar repair parts used to sustain the HSS system).

- Optical fabrication.

- Medical equipment maintenance.

- Blood storage and distribution. See Chapter 8 for a discussion on blood management.

- New technology like oxygen generation, resuscitative fluids production, blood substitutes, and frozen blood.

b. The successful operation of the health service logistics system is directly dependent upon—

- Integration with the whole HSS effort.

- Supervision by *appropriate command surgeons*.

- Anticipatory and proactive support rather than reactive support.

c. Field Manual 8-10 discusses the specific characteristics which set the Class VIII system apart from other classes of supply. One such characteristic is the special protection afforded by the Geneva Conventions.

This paragraph implements QSTAG 291.

6-2. Interface of Medical Materiel Procedures Under the International Standardization Agreement

The United States, United Kingdom, Australia, and Canadian Forces have agreed to accept each nation's medical materiel procedures so that they interface within their national supply systems. The need for cross-supply may occur whenever multinational forces are present in a TO.

a. Use of cross-supply procedures can occur in some or all of the following areas:

(1) Requisitioning from depots.

(2) Return of materiel to depots.

(3) Acknowledgment of issue and receipt.

(4) Receipt and due-out transaction procedures.

(5) Serviceability classification.

(6) Repair and maintenance (within the health service logistics systems).

b. A health service logistics liaison will be established within the TO health service logistics system—

- To assist in establishing this interface.
- To develop specific cross-supply procedures.
- To provide other logistics assistance as required.

The Army component surgeon's office in conjunction with the Theater Medical Materiel Management Center (TMMMC) will perform this function.

6-3. Policy and Responsibility

The TA commander is responsible for the development of supplies for TA forces and, when applicable, for Navy, Air Force, Marines, allied forces, and CA activities. The Army component commander must be prepared to provide medical supply, medical equipment maintenance, optical fabrication, and blood support as the single integrated medical logistics manager (SIMLM) in a TO. On the special staff of the TA commander is the TA surgeon. Normally, the MEDCOM commander or the senior medical commander in the

COMMZ functions as the TA surgeon. In that capacity, he—

- Provides medical staff advice to the commander and to other staff members in the development of the TA health service logistics system.
- Ensures that an adequate health service logistics system exists to meet the needs of the Service.
- Recommends policy and states priorities.
- Plans and supervises technical inspections of the system.
- Determines TA requirements for medical equipment and supplies.
- Exercises staff supervision over the requisitions, procurement, storage, maintenance, distribution, and documentation of Class VIII supplies and equipment.
- Provides support to other military Services and to civilian communities, as required. (The HSS for military operations is normally provided on an area basis and must be coordinated with the component Service. Requirements to support civilian communities are developed in coordination with the Deputy Chief of Staff for Host-Nation Activities.)

Section II THE HEALTH SERVICE LOGISTICS INFORMATION MANAGEMENT SYSTEM

6-4. Medical Logistics Subsystems

The TAMMIS includes medical logistics (MEDLOG) subsystems designed to provide support for field (TOE) medical units in peacetime

and wartime. The three subsystems listed below provide the TAMMIS medical logistics capabilities—

- MEDSUP-TAMMIS medical supply.

- MEDMNT-TAMMIS medical maintenance.
- MEDASM-TAMMIS medical assemblage management.

6-5. Theater Army Medical Management Information System, Medical Supply

a. The TAMMIS MEDSUP System automates the comprehensive management and requisitioning of medical materiel (Class VIII) required to support all medical units.

b. The MEDSUP system provides the user with automated capabilities in the following areas:

(1) Customer processing which enables the user to process customer requests.

(2) Requisitioning, receiving, and due-in items. This enables the user—

- To prepare and send requisitions to the supply support activity (SSA).

- To receive and process status and materiel receipts from the SSA.

(3) Maintaining local stocks, quality control, and reporting which enables the user—

- To manage stockage items and their levels.

- To maintain stock locations.

- To conduct physical inventories.

- To accomplish quality control and destruction actions.

- To produce the reports routinely required in the management of a medical supply account.

(4) Calling up national stock numbers, due in/out data, or transaction histories enabling the user to access a broad range of management data and permitting decision making.

(5) System setup/maintenance procedures allowing the user to build and update the—

- Supported customer file.
- Supporting activity file.
- Environmental data file.
- Local description data.
- Processing default data.
- Processing control data.

This capability also allows the user to perform system file maintenance.

(6) Reviewing exceptions referred to manager allowing the user—

- To view the total number of exception records that require manager action.

- To identify exceptions that are over 2 days old.

The system generates four types of exception records: due-in status, demand, receipt, and replenishment.

(7) User designed reports allowing the user to create, modify, delete, and print reports of own design.

6-6. Theater Army Medical Management Information System, Medical Maintenance System

a. The TAMMIS MEDMNT system supports the scheduled maintenance and repair of medical equipment essential for treating patients.

b. The MEDMNT system provides the user with automated capabilities in the following areas:

(1) Unit equipment file which allows the user to maintain maintenance records on supported medical equipment.

(2) Work order processing which allows the user to schedule, assign, update, complete, and report MEDMNT work orders and to track the status of equipment supported by MEDMNT personnel.

(3) Supply management which allows the unit to maintain stockage of the repair parts required to support the maintenance mission. This capability also allows the maintenance unit to interface with the supply system to request and receive materials and maintain status on ordered items.

(4) Periodic processing and reporting which provides a monthly maintenance performance report to be used by local management and/or higher commands.

(5) Command and control reporting which provides command interest information concerning scheduled and unscheduled maintenance. It also provides the commander with up-to-the-minute status of all readiness significant items of medical equipment.

(6) Maintenance system setup procedures which define the local environment used

to control system processing by identifying supporting activities, supported customers, and processing default data.

6-7. Theater Army Medical Management Information System, Medical Assemblage Management System

a. The TAMMIS MEDASM system is used to establish management visibility of unit assemblage components within medical assemblages.

b. The MEDASM system provides the user with automated capabilities in the following areas:

(1) Assemblage management process which includes a grouping of individual processes which are used to accomplish item management, allowance management, and quality control management. The result of the collective management of these individual areas allows accurate predictions of unit readiness based on asset availability.

(2) Request, receipt, and due-in management which includes separate processes which expedite ordering of shortage items, placing of orders on the correct supply source, recording receipts, and managing aged orders for required items.

(3) System setup procedures includes a group of processes which define the operating environment to the MEDASM system. These procedures describe the parent unit, its supported assemblages, sources of supply support, and routine ordering processes.

(4) User designed reports allow the user to create, modify, delete, and print reports of his own design.

SECTION III. THE HEALTH SERVICE LOGISTICS CONTINUUM

6-8. Request Flow in the Theater

a. Requests for medical materiel flow from Echelons I, II, and III HSS units to the medical battalion, logistics (forward) for issue.

(1) The combat lifesaver requests Class VIII supplies from the BAS. The aid station is responsible for having sufficient stock to resupply the combat lifesaver. Combat lifesavers in non-divisional units obtain Class VIII from the nearest medical unit capable of supporting them.

(2) The combat medic requests supplies from the BAS. This action is not a formal request so it can be oral or written. The requests are delivered to the BAS by whatever means are available. Usually this will be accomplished by the driver or the medic in the ambulance returning to the BAS with patients. Commonality of supplies between the combat medic and the ambulance equipment set may allow the ambulance crew to fill the combat medic's request from on-board stock. The ambulance crew can then replenish its stock upon returning to the BAS. Resupply to the combat medic can be by line item or by resupply packages.

(3) The forward deployed BASS of a division request their Class VIII from the medical company of a forward support battalion (FSB).

NOTE

While the medical company of the FSB can be used as a medical supply point, the limited manpower resources (one MOS 76J, medical supply specialist) of the medical supply section within the medical company limits the amount of supplies that can be handled.

(4) The division medical supply officer (DMSO) should anticipate requirements for the combat lifesaver, combat medic, and BAS allowing resupply PUSH packages to be forwarded to the maneuver battalion's trains area (preferred method). These packages should be small enough that they can be easily handled by one person.

(5) The medical platoon leader can enhance the resupply to the combat medics by forward locating materiel at patient collecting points using ambulances whenever possible. This method assumes a proactive standpoint on the part of the medical platoon leader in anticipating requirements to push supplies forward via ambulances returning to collecting points, assuming the availability of manpower. Ambulances should never go forward empty as it only takes a few minutes to place a box of Ringer's lactate solution or a couple of resupply packages into the back of an ambulance.

NOTE

The DMSO, in conjunction with the DMOC and the medical battalion, logistics (forward), plans for preconfigured packages. This ensures that the user receives what he needs and eliminates waste of medical and transportation resources.

(6) Medical companies of maneuver divisions request their Class VIII from the DMSO. The DMSO has the responsibility to provide medical supply support to all units within the division area. Requests may come by message with returning ambulances (ground or air), by land line, or through radio nets within the division,

(7) The DMSO requisitions Class VIII supplies from the medical battalion, logistics (forward). However, the medical battalion, logistics (forward) is responsible for anticipating requirements and pushing preconfigured resupply packages forward.

(8) Corps hospitals request Class VIII supplies from the medical battalion, logistics (forward).

(9) The medical battalion, logistics (forward) pushes resupply packages to Echelons I and II units and surgical squads/teams/detachments in the division. This battalion manages line item replenishment requests when the tactical situation permits.

b. Echelons above corps units request Class VIII from the medical battalion, logistics (rear). This unit will build preconfigured resupply packages based on the medical battalion's, logistics (forward) mission. It will PULL or PUSH resupply packages based on requirements.

c. The medical battalion, logistics (rear) either issues the item from stock or passes the requisitions for Class VIII through the TMMMC to a CONUS source. The TMMMC serves as the management interface with CONUS-based Class VIII national inventory control points (NICPs) and service item control centers (SICCs). Figure 6-1 illustrates the requisition flow in the TO.

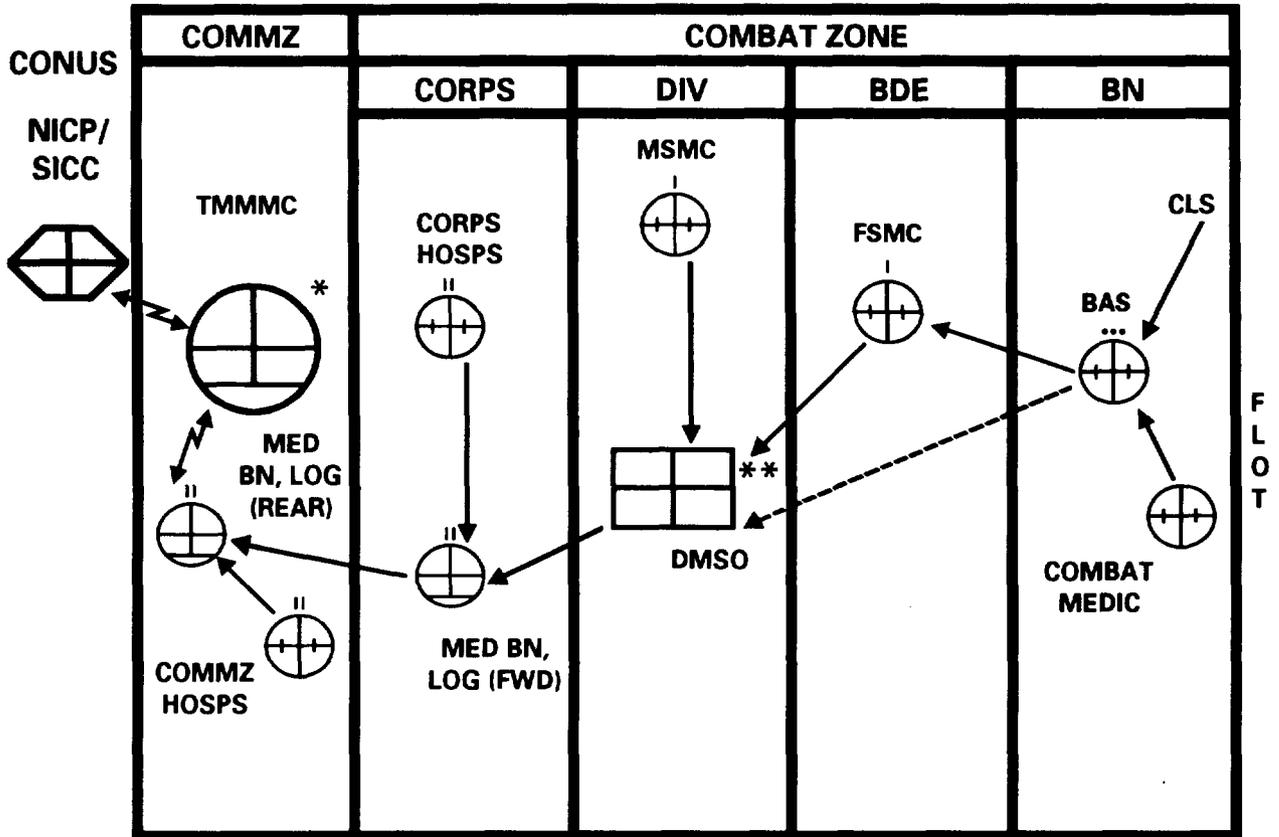
d. Replenishment requests for medical battalion, logistics (forward/rear) stocks follow the same procedure described above. The medical battalion, logistics (forward) handles resupply packages and throughput from CONUS. The medical battalion, logistics (rear) builds resupply packages primarily for Echelon I and II units and manages line-item replenishment requests for Echelon IV units.

6-9. Supply Flow in the Theater

a. Requests that are passed to CONUS sources from the medical battalion, logistics (rear) for those items that cannot be filled with on-hand stock for the medical battalion, logistics (forward) are normally filled via throughput. They are shipped from CONUS through the theater airhead/port directly to the requisitioning medical battalion, logistics with those designated for medical battalion, logistics (forward) not normally transhipped through a medical battalion, logistics (rear). Ultimately the materiel is forwarded to the supported corps and COMMZ medical units via COMMZ/corps transportation assets. See Figure 6-2 for an illustration of Class VIII supply flow in a TO. Figure 6-3 illustrates asset visibility and supply request management of a two-corps, six-division theater.

b. Medical materiel for the division will flow to the DMSO. Shipment of Class VIII into the division is coordinated with the corps MCC (CMCC) and division MCC (DMCC), Emergency resupply will be accomplished by air ambulance.

c. Resupply of the medical companies of the heavy or the light division is by the DMSO. The DMSO has the responsibility to provide medical supply support to all units within the division area. The preferred method for resupply is through unit distribution using division transportation assets. The DMOC has responsibility to plan the use of division transportation assets in coordination with the DMCC. Backhaul, using ground or air ambulances, is used in emergency situations as backup to move the medical supplies forward to the forward support medical companies in the brigade support area. From this point, medical supplies are carried forward using ambulances (air and ground) or other vehicles that are going forward to the BASS.



* COLLOCATED WITH MED BN, LOG (REAR)

** COLLOCATED WITH MED CO

LEGEND:

BN	BATTALION	MED	MEDICAL
BDE	BRIGADE	MGT	MANAGEMENT
CLS	COMBAT LIFESAVER	MSMC	MAIN SUPPORT MEDICAL COMPANY
CO	COMPANY	RONS	REQUISITIONS
DIV	DIVISION		
FLOT	FORWARD LINE OF OWN TROOPS		
FSMC	FORWARD SUPPORT MEDICAL COMPANY		
FWD	FORWARD		
HOSPS	HOSPITALS		
LOG	LOGISTICS		

RONS	←
RONS AND RONS MGT	←→
RONS (PREFERRED METHOD)	←---

Figure 6-1. Requisition flow.

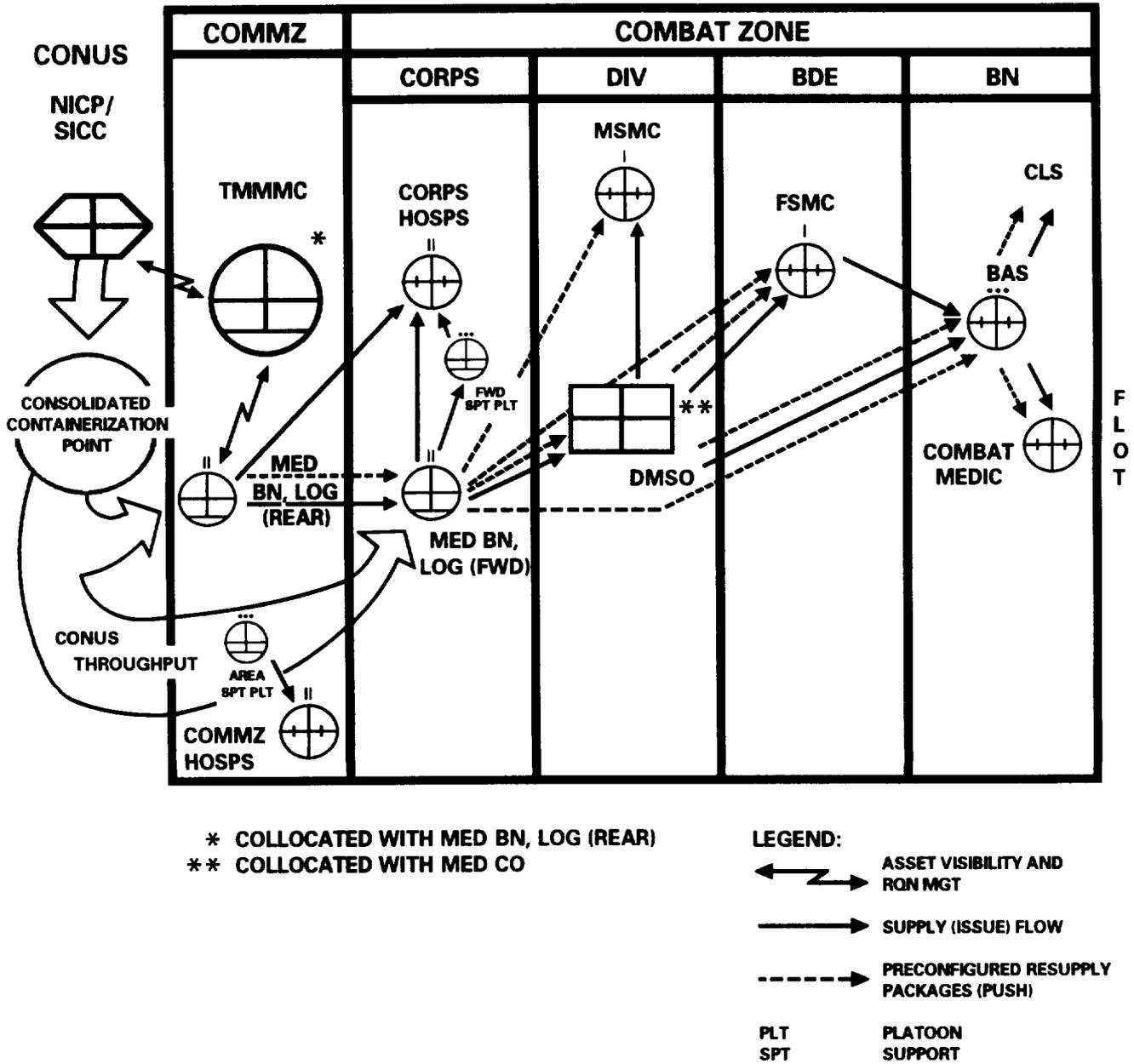


Figure 6-2. Supply (issue) flow.

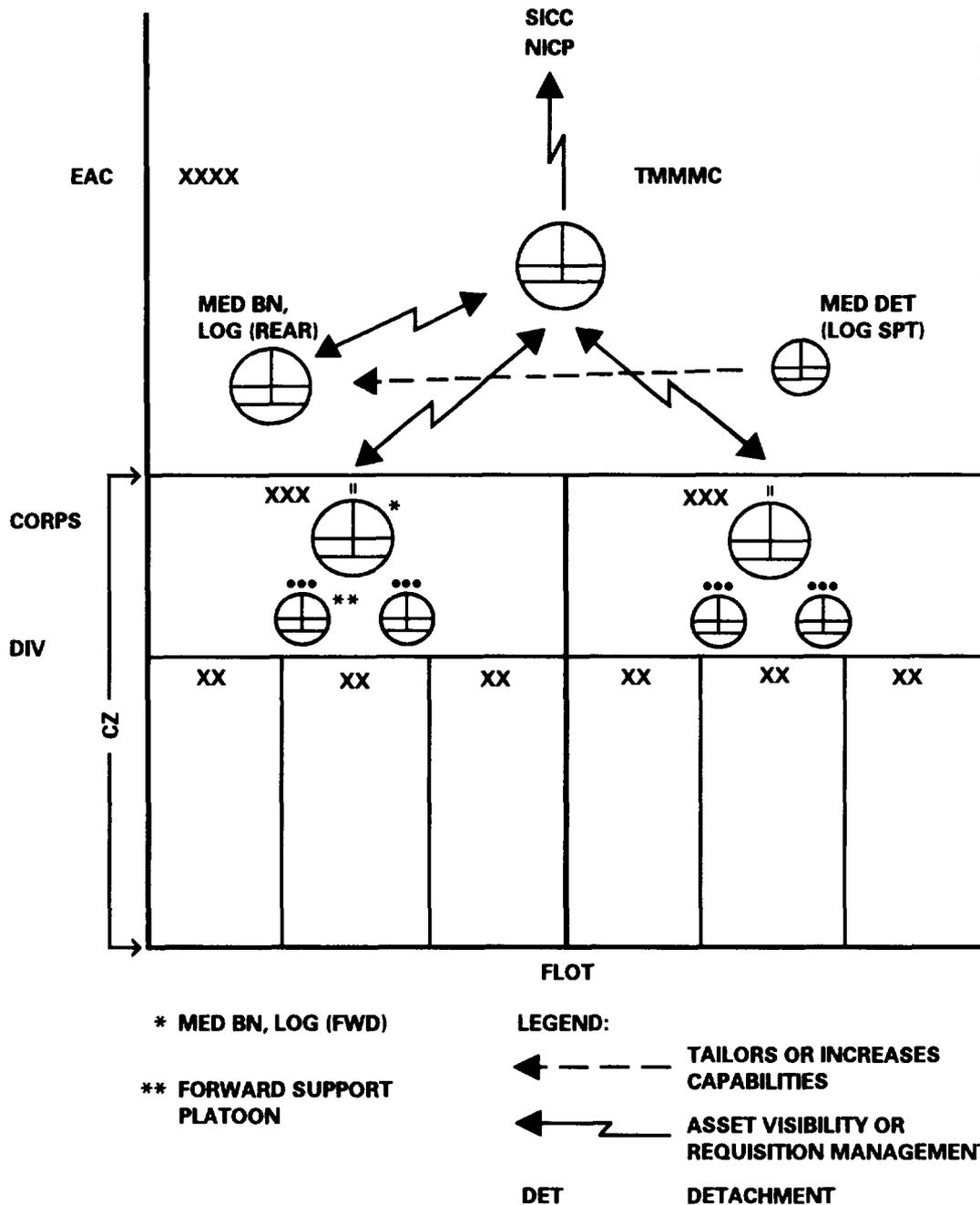


Figure 6-3. Asset visibility and supply request management of a two-corps, six-division theater.

Section IV. HEALTH SERVICE LOGISTICS THEATER REQUIREMENTS

6-10. General Requirements for a Developing or Mature Theater

a. The intense management of all aspects of health service logistics within a developing or mature theater is essential. It requires organic *command and control* to provide overall operational standardization, maintenance, and logistical support. Continuous logistics planning is required since requirements may change as the theater matures.

b. Analysis of past data and projected logistics requirements to support Army operations reveals a significant increase in the consumption of Class VIII materiel. Conservative estimates have raised the 0.35 pounds per man per day to 1.9 pounds per man per day, five times that experienced during World War II and the Korean Conflict. The increase in Class VIII supplies for soldiers is based on the expanded use of lifesaving resuscitative fluids and medical oxygen in the forward areas of the battlefield.

c. Health service logistics units will be modular in design with the flexibility, mobility, and capability to assemble, produce, process, move, and issue that amount of health service materiel to meet the operational objective of continuous operations. The medical battalion, logistics (forward) can echelon a platoon to the AO early. As the platoon cannot stand alone, it must be attached to a command and control unit. Health service logistic activities are described in Section XII of this chapter. *Resupply, follow-on resupply, resupply/throughput, and throughput* will be effected as follows:

(1) During the initial phases of conflict, resupply will be effected from war reserve stockpiles. These stocks are intended to fill the void created by the lag in establishing the functional pipeline from CONUS, or other sources outside the

theater. They are not intended for initial basic load. *Units must deploy with their basic loads* because health service logistics units are late deploying CSS units that carry *resupply loads—NOT INITIAL SUPPLY*. Units that deploy without their basic loads impair the theater resupply mission by depleting stocks projected for resupply.

(2) In the case of a developing (contingency) theater, *resupply* will be effected via initial preplanned supply support. The US Army Medical Materiel Agency (USAMMA) develops recommended lists for different scenarios.

(3) *Follow-on resupply* beyond war reserve stockpiles will also be included in initial preplanned supply support. Initial preplanned supply support will be identified in logistical plans to ensure continued *resupply* until normal requisitioning procedures are established. *Medical resupply* planning has to consider existing in-theater capabilities as well as deploying organizations tasked with a supply support mission.

(4) *Resupply/throughput* will normally be limited to Echelon III and IV HSS units, that is, to the medical logistics battalion or the major medical unit. Under certain conditions, *resupply/throughput* may be required directly to the division.

(5) *Throughput* of medical supplies will continue for the duration of the conflict. These medical supplies will be delivered by supporting corps or theater transportation assets directly to the medical battalion, logistics (forward) or medical battalion, logistics (rear).

6-11. Developing Theater Requirements

a. In the initial stages of a developing theater, arriving medical units, to include medical

battalions, logistics, will operate from their *pre-planned basic loads* and from any existing pre-positioned war reserve stockpiles. *To deploy with the necessary Class VIII materiel, the planner must possess a detailed understanding of each contingency plan and the type and number of units to be supported.*

b. Health service logistics planning for an initial period of operations may be based on *medical module (MEDMOD) resupply sets* such as trauma and sick call sets, *resupply by unit type (REBUT) computations*, and recommended stockage lists developed for the DMSO in the heavy and the light divisions and for hospitals. Preconfigured sets contain a specific number of Class VIII consumable days of supply. Durable and nonexpendable items must be requested separately. Planners will review operational requirements and add or delete items from sets as necessary. Preconfigured packages will predominately consist of high-consumption items.

(1) The preconfigured set concept is not restricted to standardized sets. It can apply to locally assembled collections of supplies in anticipation of unique contingency requirements. This concept is influenced by the projected usage rates and casualty estimates or the mission assigned. It can be as simple as a box of Ringer's lactate solution taped together with a box of starter sets.

(2) Preconfigured packages can be sent automatically by supply support activities at prearranged intervals (PUSH) or can be called for when needed (PULL). The key to using preconfigured sets successfully is planning, coordinating, more planning, and more coordinating.

(3) During initial planning when using resupply sets, an analysis of the climate and terrain, local acquisition, and throughput distribution should be made. This is necessary to ensure that the *resupply sets are supplemented* with items required at the specific geographic location.

- *Climate and terrain.* Special requirements may exist for operations in desert, mountain, jungle, or arctic conditions. Resupply sets, as normally configured, may not address all of a unit's needs under the above conditions. They may contain more than is required. Too much is wasteful of critical materiel and transportation resources and ties up the resupply pipeline. Therefore, close coordination with the appropriate staff is required to determine if specific items require addition, deletion, or quantity adjustment.

- *Local acquisition.* It may be possible to obtain commitments from host nations regarding specific items that will reduce support required from CONUS and/or reduce theater stockage requirements. Any medical items required to support operational requirements may be considered for host nation support *pending the command surgeon's approval.*

c. Preplanning should include coordination with all supporting health service activities.

d. When the logistics pipeline is established, line item requisitioning supports the theater.

6-12. Mature Theater Requirements

a. In-theater medical units and deploying *medical units sustain their operations with unit basic loads* and are resupplied from war reserve stockpiles. As the theater matures, levels of supply are established and normal replenishment based on demands will replace reliance on deployment loads and theater war reserves. *Resupply* to the theater is preplanned and defined in appropriate logistical plans. This *preplanned resupply* includes *shortfalls coexisting war reserves, follow-on resupply and buildup to approved theater stockage levels, and combat loss replacements.*

b. In-theater medical battalions, logistics (forward or rear) operate from stockpiles of war reserves and receive resupply from CONUS via preplanned supply increments or normal

requisitioning procedures. As corps are added to the theater, additional support units arrive and the health service logistics system expands to support changing requirements.

SECTION V. HEALTH SERVICE LOGISTICS COMPUTATIONS

6-13. Computing Days of Supply

a. Computing the days of supply (DOS) is a key factor in supply planning. Levels of supply express the quantity of supplies authorized to be on hand or on order in anticipation of demands. For most consumable medical materiel, the DOS concept is normally employed to determine medical materiel and medical repair parts stockage requirements.

b. The DOS method computes stockage requirements for a given number of days based on a daily usage or demand rate. In addition to medical materiel, the DOS method is used throughout the Army for other items that possess a short life, or that are critical, seasonal, or perishable. Successful use of the DOS concept requires demand history or the ability to forecast over the short run (6- to 12-month forecasting period).

c. Department of the Army Pamphlet (DA Pam) 710-2-2 contains specific details for DOS computations. Other supply planning, estimating, and computational guidance is contained in FM 101-10-1/1 and FM 101-10-1/2. The appropriate DOS levels may vary; however, the planner must keep in mind the levels are *situationally* and *operationally* dependent on the type of mission.

6-14. Theater Stockage Objective

Headquarters, DA, prescribes the DOS authorized for overseas armies. Days of supply are converted to numerical quantities of items. These quantities constitute the stockage objective; permit requi-

sitioning, inventory control, and movement planning; and form the basis of supply support. The theater stockage objective includes all required stocks except those in the hands of using units. The senior health service materiel officer in the theater recommends the theater stockage objective to the theater surgeon. Routinely, the theater stockage objective is 30 days at the medical battalion, logistics (rear) with 15 days stockage objective at each supported corps (medical battalion, logistics [forward]). The senior health service materiel officer continuously monitors the theater stockage objective and, if required, recommends that it be modified based on the situation or operation. A pounds-per-day-per-man consumption figure can be used for initial gross planning for transportation and storage estimates within the theater. However, this is not a precise planning method.

6-15. Requisitioning Objective

A unit's requisitioning objective (RO) consists of several stockage levels added together. The RO is the maximum quantity of an item that may be on hand or on order. The following formula is used to calculate the RO:

$$RO = OL + OST + SL$$

where:

- OL=Operation level. The OL is the quantity of stock required to sustain operations in the interval between receipt of a replenishment requisition and submission of another requisition.

- **OST = Order ship time.** The OST is the quantity of stock required to sustain operations between the time a replenishment requisition is submitted and the time the materiel is received and posted to the stock record account.

- **SL = Safety level.** The SL is the quantity of stock on hand to sustain operations in the event of demand rate increases or temporary interruptions to the supply pipeline. The SL for Class VIII will be determined by the appropriate command surgeon.

6-16. The Reorder Point

The reorder point (ROP) is the number of DOS expressed as a quantity of stock which in all cases is less than the RO. A replenishment requisition

should be submitted whenever the quantity of stock on hand and due in, less any due out, equals or is less than the ROP. The following formula is used to calculate the ROP:

$$\text{ROP} = \text{OST} + \text{SL}$$

NOTE

Since the DOS concept is based on demand history or forecasting or both, the planner must be careful when establishing levels for a changing situation where usage or consumption is likely to increase or decrease rapidly. In this case, an improperly established level could result in excess or zero balances and poor supply economy.

Section VI. MEDICAL ASSEMBLAGES

6-17. Management

Medical assemblages are classified service unique (major) or multiservice (minor).

a. A service-unique (major) medical assemblage is a grouping of medical and nonmedical items under a single stock number which is managed by the AMEDD and used primarily by the Army. These assemblages are identified by the Sets, Kits, and Outfits (SKO) National Stock Number and Title Only reflected in the Components of Sets, *Kits, and Outfits* printed in Volume II, Medical Sets, Kits, and Outfits of the DOD Medical Catalog (microfiche version).

(1) Components are initially authorized and published in DA supply catalogs (SC) 6545-8-XXX series and unit assemblage listings (UAL).

(2) Revisions to assemblage components are published annually in the DA Supply

Bulletin (SB) 8-75 series and are reflected in current year UAL.

b. A multiservice (minor) medical assemblage is a grouping of medical and nonmedical items under a single stock number which is managed by the Defense Medical Standardization Board (DMSB) and used by multiple services.

(1) Components are published in the DOD Medical Catalog (microfiche version), Volume H, Medical Sets, Kits, and Outfits.

(2) Revisions to assemblage components are published monthly in the DOD Medical Catalog, Volume II, Medical Sets, Kits, and Outfits.

6-18. Procedures

a. Requisition. Authorized service unique medical assemblages are requisitioned according to procedures contained in AR 40-61.

Authorized multiservice medical equipment sets are requisitioned through normal supporting Class VIII channels to the wholesale system. Equipment listed in the authorized column of the units' modified table of organization and equipment (MTOE) should be either on hand or on requisition according to AR 710-2.

b. Accounting. Property records are maintained for each authorized nonexpendable item according to AR 710-2. A quality control program must be established.

c. Maintenance. The commander of a unit issued a medical assembly is responsible for continuous maintenance and update of its components. To prevent loss of shelf-life items, commanders should ensure that stock rotation is accomplished where this capability exists. Normally, potency dated items are not packed with the assemblage but are maintained separately for management purposes. United States Medical Materiel Agency will furnish latest unit assembly

listings to commanders on request. These listings reflect the latest assembly configurations as authorized by The Surgeon General, Commanders should ensure that all newly authorized assembly components are promptly requisitioned. The official component listing of medical assemblages is listed in the supply catalog. Unit assemblage listings are updated annually by USAMMA. If there is a discrepancy between the supply catalog and the UAL, the UAL will be used since it contains the most current information. Detailed maintenance and surveillance procedures for medical assemblages are contained in TB Med 1 and TB 740-10.

NOTE

Service unique medical assemblages, if issued to Reserve units, will not normally contain components having a shelf life of 60 months or less. Reserve units must be prepared to requisition these items, if required, on deployment.

Section VII. MEDICAL EQUIPMENT MAINTENANCE

6-19. Purpose

The purpose of medical equipment maintenance is to assure that medical equipment is maintained in a mission-capable condition. Commanders at each level are responsible for the successful accomplishment of the maintenance requirements of their unit. In recent years, medical technology has advanced at a very rapid pace. As a result, maintenance actions required to support these technological advances have become more complex. In many cases, proper care and maintenance now require sophisticated test, measurement, and diagnostic equipment (TMDE), and advanced schooling for maintenance personnel.

a. Maintenance of an item includes—

- Inspecting.
- Testing.
- Servicing.
- Classifying.
- Adjusting.
- Aligning.
- Repairing.

- Rebuilding.
- Modifying.

b. The objectives of a maintenance program include—

(1) Prevention of equipment failures by timely and adequate scheduled services (preventive maintenance checks and services [PMCS]).

(2) Early detection and correction at the lowest level of repair capability or capacity.

(3) Minimizing requirements for new equipment.

c. Maintenance planning must be conducted concurrently with supply planning, as the two are closely related. An inadequate maintenance program will impose inordinate requirements on the supply system. A lack of proper prescribed load list (PLL) management causes great increases in maintenance turnaround time when repair parts are not available.

6-20. Policy

a. Medical equipment maintenance efforts are divided into two main areas:

(1) Scheduled periodic services. These services include—

- Preventive maintenance checks and services.
- Electrical safety inspections and tests.
- Calibration, verification, and certification (CVC).

Scheduled periodic services take precedence over all but emergency repairs. Preventive maintenance checks and services, performed principally at the operator level, are the heart of a maintenance system. Preventive maintenance is defined as the systematic care, servicing, and inspecting of equipment to maintain it in a standard serviceable condition and to detect and correct minor faults before they develop into major defects.

(2) Unscheduled repairs (remedial maintenance). These repairs will be performed only by or under the direct supervision of a health service maintenance technician or a medical equipment repairer (MER). Unscheduled repairs of an item consist of inspecting, classifying, testing, servicing, and all related actions necessary to return the item to a fully serviceable state. Unscheduled repairs include necessary calibrations and tests that are incidental to a repair action.

b. Medical equipment maintenance support must be provided as far forward as possible. Ideally, equipment items should be diagnosed and repaired on site if conditions permit, either by organic MERs or by mobile support teams (MSTs) from the supporting medical battalion, logistics. This policy eliminates time-consuming evacuation procedures and normally results in more rapid return of the equipment to the user. Considerations for employment of the forward support concept include—

- Mission statement, to include maintenance allocation charts.
- Availability of appropriate TMDE, tools, and repair parts.
- Requirements for special maintenance skills or specialized procedures.
- Size and/or transportability of the item requiring maintenance services.

6-21. Concepts

In addition to having a high degree of technological proficiency, maintenance managers must be capable of employing a variety of management principles to ensure that the maximum service possible is available to supported units. Techniques of production scheduling, production control, workflow analysis, and work area configuration must be analyzed and the best combination of the available resources selected to allow optimal use of the MER's technical skills. The high technology, critical life support nature of many medical equipment items requires a maximum managerial effort to ensure that life-sustaining equipment is fully mission capable when needed. To this end, the following concepts should be considered for maintenance planning purposes:

a. Forward Support. In a TO, diagnosis and repair of an item as far forward as possible is essential. Ideally, equipment items should be repaired on site if conditions permit either by organic MER's or by MSTs from the appropriate medical battalion, logistics. On-site repair reduces time-consuming and costly retrograde of equipment.

b. Evacuate. Selected end items and/or components will be evacuated to the supporting medical battalion, logistics when a lower echelon of maintenance cannot perform the required services, or when conditions do not permit on-site repairs. If within its capability, the supporting medical battalion, logistics will repair the item and return it to the user. Items that cannot be repaired will be further evacuated to a supporting activity. Uneconomically repairable items will be disposed of according to appropriate directives.

c. Discard. Certain items of medical equipment are designed and engineered to employ discardable "throw-away" components or modules. These components/modules should only be treated as discard items when—

- Specifically designated as such by the manufacturer or other competent authority.
- It is more economical to discard the items than to repair them.
- Repair times would significantly affect mission performance.

In many cases, the discard feature allows more rapid repair and return to operational status. Unserviceable "throw-away" items must be disposed of according to approved procedures.

d. Reparable Exchange. Reparable exchange will be used to the maximum extent possible to enhance the "fix forward" concept. Reparable exchange facilitates immediate replacement of defective modules and minimizes equipment downtime. Defective modules will be evacuated to supporting medical battalions, logistics, where an exchange for serviceable modules will occur and repair of the defective module will be made.

e. Cannibalization and Controlled Exchange. Authority for employing cannibalization and controlled exchange is contained in AR 40-61 and AR 750-1.

(1) Cannibalization is the authorized removal, under specified conditions, of items such as serviceable and unserviceable parts, components, and assemblies from uneconomically repairable materiel authorized for disposal. Removed items may be reused immediately in restoring one or more like items to a serviceable condition, or held in storage by support activities as an alternate parts source.

(2) Controlled exchange is the authorized removal, under specified conditions, of items such as serviceable parts and assemblies from unserviceable, economically repairable materiel. Removed items are to be reused

immediately in restoring a like item of materiel to a mission-capable condition.

f. Operational Readiness Float Program. The name and acronym Operational Readiness Float (ORF) Program replaces the name and acronym Medical Standby Equipment Program (MEDSTEP) found in earlier publications. The change is required so that the AMEDD's terminology can be consistent with that used by the Army at large. Operational readiness float assets include items, components, or assemblies used to provide supported activities with serviceable items in exchange for mission essential, economically repairable items. Operational readiness float assets are not intended to be used for equipment shortages, expansion of operational missions, or temporary loan requirements. Operational readiness float assets in the theater are located at medical battalions, logistics (forward and rear) and are used to satisfy requirements at all medical units in the theater.

g. Alteration/Modification. Alteration/modification of medical equipment is authorized only under certain conditions which will be announced in appropriate publications. Records of such alterations and modifications must be maintained. Army Regulations 40-61 and 750-10 contain additional guidance on equipment alteration and modification procedures.

h. Repair Parts Management. Careful selection and stockage of the correct quantity of repair parts are essential elements of any successful maintenance program. Field medical units are concerned with four categories of repair parts:

(1) Prescribed load list (unit-level maintenance function includes a mandatory parts list [MPL]).

(2) Nonstocked repair parts (all maintenance levels).

(3) Bench stock/common usage items (all maintenance levels).

(4) Authorized stockage list (ASL) (DS maintenance function).

Army Regulation 40-61, AR 710-2, DA Pam 710-2-1, and DA Pam 710-2-2 contain a detailed discussion of requirements and criteria for management of each of these categories of repair parts. A list of MPLs for medical equipment is published in the TB 8-6500-MPL. On request, the USAMMA national maintenance point (NMP) will construct and provide a recommended PLL based on equipment density for newly activated units and units having changes in assigned equipment.

6-22. Levels of Medical Maintenance

There are four levels of maintenance.

a. Unit Maintenance, Level 1. The intended purpose of unit maintenance (UM) is to sustain materiel readiness by performing scheduled services, minor repairs, and replacement of components. Unit maintenance is performed by equipment operators, users, assigned MERs, and/or MSTs.

(1) The responsibilities of the equipment operator/user include—

- Cleaning.
- Preventive maintenance checks and services according to AR 40-61.
- Replacement of operator-level components and accessories.
- Prompt reporting of equipment malfunction to the MER.

(2) The responsibilities of the MER include—

- Scheduling, performing, and documenting UM.
- Electrical safety inspections and tests.
- Calibration, verification, and certification services.
- Performing unscheduled maintenance (remedial repair).
- Maintaining unit-level repair parts (PLL, MPL, bench stick).
- Maintaining a file of operating and service literature for all assigned medical equipment.
- Performing preissue technical inspections on incoming medical equipment and condition coding medical equipment to be turned in.
- Notifying support maintenance activities of requirements and/or evacuating unserviceable equipment as appropriate to support maintenance activity.

b. Direct Support Maintenance, Level 2. The purpose of DS maintenance is to—

- Provide all authorized maintenance functions that exceed the authority, capability, or capacity of UM.
- Provide UM to medical units within the CZ without an organic capability.
- Repair Level 2 components and/or modules.
- Provide on site support to CZ medical units by means of MSTs.

- Provide technical assistance to supported units.

- Fabricate minor repair parts when required to meet operational readiness requirements.

- Notify the next higher maintenance support level of requirements and/or evacuate unserviceable equipment to a higher maintenance level.

c. General Support Maintenance, Level 3. The purpose of GS maintenance is to—

- Provide all authorized repair functions that exceed the authority, capability, or capacity of DS units.

- Provide UM to medical units within the COMMZ without an organic capability.

- Repair GS-level components and/or modules.

- Provide on-site support to COMMZ medical units by means of MSTs.

- Provide technical assistance to supported units.

- Fabricate repair parts when required.

- Notify the next higher maintenance support level of requirements and/or evacuate unserviceable equipment to a higher maintenance level.

d. Depot Maintenance, Level 4. The purpose of depot maintenance is to—

- Provide overhaul and rebuild of end items and components in support of the wholesale supply system and as repair and return actions.

- Perform special inspections, tests, and modification program actions.
- Perform maintenance services and functions for the wholesale supply system.
- Manufacture items and parts when required.
- Provide end items, components, and repair parts through established programs in support of both TOE and tables of distribution and allowances (TDA) medical units.
- Provide on-site MSTs on an “as required” basis.

6-23. Organization for Maintenance

a. In the CZ, the most forward provider of medical equipment services is the medical

equipment maintenance section of the main support battalion (MSB) of the division. The MERs of this organization normally provide UM support only to divisional units. Also located in the CZ are CSHs and MASHs with organic MERs. As with the MERs in the division, the corps TOE hospitals will normally provide UM support to their own organization and attached units. Area medical equipment maintenance support for units without organic MERs and DS maintenance, when required, is provided by the medical equipment maintenance section of the medical battalion, logistics (forward).

b. In the COMMZ, in addition to the medical battalion, logistics (rear), there are FHs and GHs, each with organic MERs. As in the corps, MERs assigned to these organizations normally provide UM for their own organization and attached units. Area medical equipment maintenance support for units in the COMMZ without organic MERs and DS/GS maintenance is provided by the medical battalion, logistics (rear).

Section VIII. OPTICAL FABRICATION SUPPORT

6-24. Support Responsibilities

More than one-third of all active military personnel require vision correction. Current support agreements require the Army to provide optical fabrication and repair services to the Air Force and the Navy. Other support agreements may require provision of these services to others such as the Coast Guard, the Red Cross, EPW, and allies.

6-25. Organization for Optical Support

a. The most forward provider of optical fabrication support capability of the CZ is the optometry section of the medical company, MSB. The optometry section provides fabrication of finished prescription single vision lenses and spectacles and repair services.

b. Area optical support within the CZ or COMMZ is provided by the optometry section of the medical battalion, area support.

c. For greater optical fabrication and resupply of the optical medical equipment sets, requisitions will be supported by the medical battalion, logistics (forward/rear).

6-26. Optical Fabrication Concept

Optical fabrication support is only for standard prescription eyewear. Prescription eyewear includes standard spectacles, aviation spectacles, protective mask inserts, and similar optical devices. Detailed procedures for preparation and submission of eyewear prescriptions are contained in

AR 40-63. Contact lenses, to include ancillary items such as saline solution and cleaners, may be required for stockage and issue to individuals, such as Apache and Comanche pilots, who are operators of targeting devices which preclude the use of regular spectacles.

6-27. Optical Supply Planning

Optical fabrication laboratory operating supplies are those consumable items, components, and

ancillary supplies used in the fabrication of prescription eyewear. The initial supply of consumable items incorporated in optical fabrication assemblages for medical TOE (nondivisional) units, except the medical battalion, logistics (forward), consists of those items required under average conditions for a period of 10 days. Authorizations for individual items are listed in the SC 6545-8-CL series. The initial allowance of consumable items for the optical section of the medical battalion, logistics (forward) consists of those quantities required under average conditions for a period of 15 days.

Section IX. CONSIDERATIONS IN HEALTH CARE LOGISTICS PLANNING

6-28. Planning Considerations

a. Adequate supplies, maintenance, transportation, and services are necessary for the HSS mission to be successful. Detailed planning principles are discussed in AR 40-61, Chapter 2 of this manual, FM 101-5, and FM 101-10-1/1 and 1/2. Logistics planners must fully understand these principles and must actively participate in the planning process.

b. Due to the technical nature of the health service logistics system, coupled with the likelihood of a rapidly changing battlefield, the planner must develop creative and flexible plans.

c. The planner must—

- Have a comprehensive understanding of the operational and tactical plans. Additional contingency missions beyond those for which a published plan exists may be assigned on a short- or no-notice basis.

- Have a thorough knowledge of the entire spectrum of the logistics system to include those organizations and activities responsible for specific aspects of support.

- Be aware of Joint Service support agreements.

- Be aware of host-nation support agreements.

d. The health service logistics planner determines requirements for the—

(1) Types of medical supplies needed.

(2) Supply procedures to be followed.

(3) Stock levels to be maintained.

(4) Sizes and locations of the health service logistics installations needed.

(5) Medical equipment maintenance procedures.

(6) Optical fabrication procedures.

(7) Production of medical-quality fluids.

(8) Production of medical oxygen.

(9) Disposal of unserviceable US equipment and supplies.

(10) Disposition of captured medical equipment and supplies.

e. These determinations are based on the health service estimate of the situation and METT-T.

6-29. Disposal Planning

a. Disposal instructions will be provided when medical materiel is determined to be unsafe or unsuitable for use by-

- (1) The Surgeon General.
- (2) US Army Medical Materiel Agency.
- (3) Defense Personnel Support Center.
- (4) Food and Drug Administration, or
- (5) Some other competent authority.

b. Excess, unserviceable, or unidentifiable medical materiel must be disposed of in accordance with ARs 40-5,40-61, 200-1; FMs 8-10 and 27-10; and the SB 8-75 series if it is not authorized for-

- (1) Return to either a MEDLOG battalion or a CONUS source.
- (2) Redistribution within the theater, or

(3) Retention at the MTF.

c. Inadequate supply controls and procedures often generate excess materiel. Logistics managers must implement measures to ensure that established levels are realistic and do not produce unnecessary excesses. Often, newly introduced items by the health care provider may render existing stocks obsolete or items of second choice. In these cases, close coordination between the logistics manager and the clinical staff on the use of existing stocks and authorized substitutions will eliminate or minimize creation of unnecessary excess from this source. Excess materiel at any level reduces mobility and increases accounting, storage, surveillance, and security requirements. Excess materiel must be reported to supporting medical battalions, logistics (forward and rear) for redistribution.

d. Many pharmaceutical items require advanced technology and production techniques. Accordingly, these items may pose serious environmental hazards if disposed of improperly. Other items of medical materiel maybe sensitive, pilferable, or subject to abuse and may also require controlled disposal methods. Economically recoverable precious metals constitute yet another category of materiel requiring special disposal techniques.

e. USAMMA SB 8-75-9 contain additional guidance on disposal techniques for specific medical materiel. These techniques are developed in coordination with the US Army Environmental Hygiene Agency. The US Government Environmental Protection Agency (EPA) and the Army Environmental Hygiene Agency have developed lists of hazardous pharmaceuticals and biological.

f. Disposal of medical materiel under combat conditions may require additional planning and/or coordination with the MEDLOG battalion(s) and engineer units. Authorized means of disposal

for medical materiel include, but are not limited to—

- Disposal in an authorized incinerator.
- Disposal in a sanitary landfill.
- Disposal in a hazardous waste landfill.
- Disposal in a sanitary sewer.
- Disposal by chemical treatment.

g. In all cases, current directives must be consulted prior to disposal action. These directives must take into account restrictions imposed by host nations and/or allied nations and United States and territorial governments.

6-30. Staff Relationships

a. The Health Service Logistics Officer. The health service logistics officer establishes communications and directs necessary coordination with supported HSS logistical organizations of all uniformed services and other federal agencies for which the AMEDD has area support responsibility.

b. The Transportation Officer. The health service logistics officer advises the transportation officer—

- In the transportation and dock storage of Class VIII materiel to preclude spoilage or deterioration in transit.

- In the supervision of the transportation of Class VIII.

c. The Engineer Officer.

(1) The health service logistics officer should review plans with the engineer officer for constructing facilities used for Class VIII supplies.

(2) The above step prevents potential problems resulting from improper construction.

d. The Civil Affairs Officer. The health service logistics officer advises the CA officer on Class VIII matters. He may be asked to furnish technical assistance or health service logistics personnel, or both, to that office to assist in the humanitarian effort.

e. The Chemical Officer. The health service logistics officer requests assistance from the chemical officer in developing threat assessments. This coordination is needed to determine the correct packaging and preservation methodology to protect medical materiel.

Section X. THE HEALTH SERVICE LOGISTICS ESTIMATE

6-31. Developing the Estimate

a. The basic HSS estimate of the situation discussed in Chapter 2 is used to develop specific information on health service logistics. This information can be—

(1) Presented in a separate paragraph.

(2) Included along with the medical and dental aspects in parts of paragraphs, or

(3) Presented as a separate appendage to the HSS estimate.

b. The format shown in subsequent paragraphs includes the major points to be considered in arriving at a logical conclusion.

c. The health service logistics planner should adapt this format to his particular situation. He should omit those portions which do not apply, or expand those which require more detail.

d. The plans and operations division of the surgeon's staff should not overlook the fact that the estimates and plans they prepare require definite data relating to health service logistics. These data should be provided by the staff health service logistics officer, who should be furnished sufficient information to guide him in preparing the health service logistics portion of the estimate or the plan.

6-32. Mission

The health service logistics mission will parallel and support the surgeon's mission, and in turn, the commander's mission. The unit's mission must be clearly understood.

6-33. Situation and Considerations

The health service logistics situation may comprise a few or many elements. Some of the principal ones are as follows:

a. *The Enemy Situation.* List the enemy capabilities that might affect the ability of the health service logistics system to accomplish its mission.

b. *The Friendly Situation.* The scope of health services logistics support to be planned is determined to a great extent by the following factors:

(1) *Casualty estimates (types and numbers and evacuation policy).*

(2) *Age of population supported.*

(3) *Number of MTFs.*

c. *Characteristics of the Area of Operations.* The following should be included:

(1) Factors in the basic HSS estimate of the AO.

(2) Statements concerning the population, health, and types of population in the AO.

(3) Detailed information concerning any disease which may pose a serious threat to the health of the command or other personnel in the AO and which may require specific Class VIII materiel.

d. *Strengths to be Supported.*

(1) Accurate data regarding the supported population, to include personnel strength of the Army, Navy, Air Force and Marines, allies, EPW, indigenous civilians, detained persons, civilian interns, and others, is required to determine Class VIII needed.

(a) *Medical materiel and equipment.* The Army is responsible for providing medical care and treatment as stated in 6-33d(1) and may become responsible for providing medical care or assistance to displaced persons, and refugees. In computing requirements for supplies and equipment needed to perform this function, full use should be made of all available intelligence data pertaining to estimates of the number of individuals for whom medical care must be provided and the incidence of disease among them. See FM 8-10-8 for additional discussion.

(b) *Supplies subject to capture.*

1. The Geneva Convention precludes willful destruction of medical materiel; therefore, when the capture of medical supplies by enemy forces is imminent, medical

materiel must not be purposefully destroyed. When a commander, because of military necessity, has decided to abandon patients, sufficient and adequate medical personnel and materiel must be left for the care of those abandoned patients. Under all other conditions, every attempt must be made to evacuate all medical materiel and equipment. Those that cannot be evacuated should be abandoned, but the abandonment of medical supplies is a command decision.

2. The destruction of supplies, other than medical, is also a command decision. Medical units should have an SOP for the evacuation and destruction of their own supplies and equipment (other than medical) based on command priorities.

(c) Medical materiel and equipment captured from the enemy.

1. Medical materiel and equipment captured from the enemy are considered to be neutral and protected property and are not to be intentionally destroyed. (See discussion in PM 8-10.) They are to be turned over to designated medical supply facilities. Adequate samples of all captured materiel and equipment must be preserved and reported according to FM 8-10-8. In the event that large amounts of enemy medical materiel and equipment are captured, it is frequently advisable to concentrate this materiel in one or more medical materiel installations where it may be examined for intelligence value and classified. The materiel is segregated and that of value is picked up in the theater if the designated facilities have the capability to store the supplies.

2. Since captured medical personnel are familiar with their medical materiel, the captured items are especially valuable in the treatment of EPW. Only after their needs have been fully met may such supplies be used to treat others. If these supplies are unfit for use or

not needed, they may be abandoned for the enemy's use. Under no circumstances will captured medical supplies be destroyed.

(2) Locations of personnel would be needed to determine the most appropriate location for units in the CZ and or the COMMZ.

(a) The general locations of medical materiel activities are chosen along the proposed axis of advance, However, consideration must be given to the—

tactical effort.

- Strategic and tactical effort.

and seaports.

- Location of airfields and seaports.

Ž Major usable transportation facilities.

(b) When selecting specific locations, however, one must consider such factors as--

• Adequate dispersion because of the threat.

Ž Defensibility of installations.

• Local roads.

• Disposition of troops.

Railsiding (situated beside a railroad track or right of way).

• Adequacy of local communication facilities.

• Existing buildings and utilities.

labor.

- Availability of local

NOTE

Under the provisions of the Geneva Convention, medical stocks must be stored and distributed separately from other classes of supply to be considered protected materiel. See FM 8-10 for a discussion.

(c) Medical supply installations should be near railheads, ports, airfields, and highways to minimize hauling. As transportation means are always at a premium, efficient methods should be employed to minimize unnecessary shipments, transshipments, and rehandling of medical supplies. So far as possible, shipments of medical supplies should be accomplished in one move and as far forward as possible. Movement of supplies through successive supply installations should be avoided. Health service logistics organizations will provide supply support using unit distribution. Supply point distribution can be considered as an alternative method of supply.

(d) The availability of transportation assets, both organic and support units, must be analyzed. Many Class VIII items are sensitive and special transportation and/or storage requirements exist, such as refrigeration, security, and flammable precautions. A sophisticated and responsive transportation system may lessen requirements for large safety levels and large storage areas. Field Manual 55-1 contains additional transportation planning guidance.

(e) Storage facilities for Class VIII supplies generally require 100-percent covered storage. Consideration must be given to any special climatic conditions such as desert,

mountain, jungle, or arctic. Existing buildings should be used to the maximum extent possible provided they offer required security, refrigeration, flammable protection, and controlled humidity and temperature storage. Preservation and packing procedures as prescribed in TB MED 1 must be followed to the fullest extent practical.

1. Overall space requirements are determined from logistical management data and from experience factors for handling medical supplies. Detailed space requirements should be based on specific assignments of support missions, supply levels to be carried, area and troops served, and types of supplies. Medical unit commanders and staff officers should have an appreciation of storage problems, particularly those pertaining to covered storage if they are to establish appropriate policies covering storage of medical supplies. See TB 740-10 for additional guidance.

2. Maximum use of storage space is basic to economical supply operations. Such factors as accessibility of stored medical supplies and maximum protection from deterioration, fire, weather, theft., rodents, and enemy action must be considered in ensuring efficient storage procedures.

(f) Accurate equipment density data throughout the supported area is essential to ensure adequate equipment repair capability. Equipment density data is also essential for medical unit reconstitution planning. Equipment density data affects the ORF program.

(g) Conservation of supplies and equipment should always be a matter of priority concern; however, under combat conditions, conservation of medical supplies becomes particularly critical. An austere environment requires that clinicians practice supply discipline. They must be prepared to work with and be supported by generic supplies. Lack of physician-preferred brands does

not constitute a patient risk. A lack of supply discipline may contribute to a strained health service logistics system which constitutes a risk to the patient. Unit assemblage listings must be updated, maintained, and enforced. supply discipline must be a command priority. Clinicians must be familiar with their unit's assembly listings.

(h) With certain restrictions, specified items and categories of items of medical supply are authorized for procurement locally within the theater. Procurement of certain medical supplies from non-US sources in overseas areas is not authorized unless specific prior approval of the command surgeon is obtained. Consideration in the procurement of medical items from local sources should include manufacturer technical know-how, sterilization techniques, raw material availability, and production capabilities. Because of the nature of most medical items (mainly drugs and surgical instruments), sound judgment must be exercised. The high standards established by the US Government make it difficult to consider the use of manufacturers in many areas of the world as possible sources of drug supplies. Drug standards vary in different countries, and, therefore, foreign drugs are used only in emergencies. In practice, locally procured materiel is identified and segregated from similar items of US manufacture. Quality control procedures must be followed as prescribed in TB 740-10, AR 40-61, and SB 8-75 series.

(i) *Time permitting*, inventories will be conducted in accordance with ARs 710-2 and 40-61. All effort should be made to reduce the occurrence of warehouse denials. Inventories tell what items are on hand, When it is not known that an item is available, then the item is not on hand.

(j) Medical supply activities will be located in areas where maximum security is provided. Such locations will be incorporated into rear operations plans for the CZ and COMMZ.

e. *Health of Troops in the Command.* (If applicable to this estimate.)

f. *Assumptions.* Assumptions necessary for completing the health service logistics estimate should be considered.

g. *Special Factors.* The particular operation being planned will have certain items of special importance. These items should be listed and taken into consideration by the planner.

6-34. Analysis

a. *Health Service Logistics Personnel Estimate.* A number of factors are involved in estimating the number and type of health service logistics personnel that will be required to support a particular operation.

- (1) Distribution of MTFs.
- (2) Extent of local procurement.

b. *Health Service Logistics Requirements.* The planner must estimate what the requirements will be for the situation. It is then necessary to compare this with what is available within troop ceilings.

6-35. Courses of Action

A careful comparison of the health service logistics requirements with the resources available enables the health service logistics planner to determine his major problems. This comparison subsequently enables him to develop all logical COA that will accomplish the mission. The COA are expressed in terms of what, when, where, how, and why.

6-36. Evaluation and Comparison of Courses of Action

a. Once COA have been enumerated and described, it is necessary to analyze and compare them to determine which one should be used. There are two steps in the process which should be followed:

(1) Determine and state those anticipated difficulties or difficulty patterns that will have an equal effect on the COA

(2) Evaluate each COA against each significant difficulty or difficulty pattern to determine strengths and weaknesses inherent in each COA.

b. Having determined the specific strengths and weaknesses inherent in each COA, the health service logistics planner must compare the COAs to determine significant advantages and disadvantages of each. He then decides which COA promises to be most successful in accomplishing the mission with the least amount of problems.

6-37. Conclusions

After review and analysis of all possible COA, the planner is able to make a number of possible conclusions in relation to the mission to be accomplished.

a. The mission can or cannot be supported based on preceding paragraphs of the estimate. If the mission cannot be supported, a full justification for inability to support must be given.

b. The preferred COA can be identified in terms of health service logistics support to be provided.

c. The disadvantages of the COA not selected can be identified.

d. Deficiencies in the preferred COA must be brought to the attention of the commander; deficiencies should be enumerated and briefly discussed.

Section XI. THE HEALTH SERVICE LOGISTICS PLAN

6-38. Developing the Plan

The health service logistics plan is a part of the HSS plan and is included in it or, if very detailed, appended to it. It bears the same relationship to the health service logistics estimate that the HSS plan does to the HSS estimate. When approved, it—

a. Becomes a directive to health service logistics officers in subordinate commands.

b. Serves as a guide to them in working out the details of their particular functions within health service logistics support of the command.

6-39. Format for the Health Service Logistics Plan

a. General Supply. (Provide special instructions applicable to medical units.)

b. Medical Supply. (Provide special procedures applicable to this operation.)

(1) Requirements.

(2) Procurement.

(3) Storage.

(4) Distribution.

(5) Transportation.

c. Medical Equipment Maintenance Support. (Include in separate subparagraphs the location, mission, hours of opening or closing of MEDMNT, and/or optical repair teams, unless they are included as attachments to health service logistic units.)

d. Optical Support.

e. Medical Supply Installations. (Give the locations, mission, hours of opening and closing, and troops supported for each health service logistics installation. An overlay may also be used for clarity.)

(1) Health service logistics units must remain flexible to meet changing situations. A rapidly changing military situation may make it necessary that alternative health service logistics plans, procedures, and operations be formulated. In certain instances, it may be advisable to establish duplicate records, especially when automated procedures are used, to serve as a backup system. Supply levels in the CZ must be kept to a minimum to allow for the mobility required to support a rapidly changing battlefield. An inventory management process is necessary for recording

supplies received and inventory control. By contrast, supply levels in the COMMZ will likely be higher to support the entire depth of the battlefield.

(2) The extent of the area for which plans are made influences health service logistics troop planning in several ways. A large number of MTFs widely dispersed in the AO would require more health service logistics, for example, than if there were fewer and more centralized MTFs.

f. Policy Statements.

(1) A statement of the local procurement inspection policy.

(2) A statement of the captured medical supplies inspection policy.

(3) A statement of the NBC contaminated Class VIII inspection policy.

g. Salvage of Medical Equipment and Supplies.

h. Civilian Medical Supplies.

i. Other Supply Matters.

Section XII. MAJOR HEALTH SERVICE LOGISTICS ACTIVITIES

6-40. Health Service Logistics in the Combat Zone

In future conflicts, the DMSO may be the highest level of health service logistics support in the theater. Resupply to the DMSO may be sporadic during the first 5 to 15 days of a conflict with limited access to pre-positioned stocks. The DMSO or the medical supply officer for the separate brigade medical company provides medical supply, medical maintenance, and optical fabrication support to the organic medical companies within

the division/separate brigade. The preferred method of distributing Class VIII supplies within the division is by unit distribution using division transportation assets coordinated through the MCC and operations section of the MSB.

a. The DMSO normally provides this support to divisional or brigade units only, unless specifically tasked otherwise.

b. Although the division surgeon (with the assistance of the DMOC) plans for HSS, the

DMSO executes health service logistics plans. He exercises his responsibilities by—

- Procuring, receiving, storing, and issuing Class VIII supplies.

- Coordinating with the supported elements to determine requirements for Class VIII materiel and liquid blood and to determine when they should be shipped.

- Developing and maintaining authorized stockage levels of contingency medical supplies. These levels should be based upon transportation and storage constraints, as well as characteristics of the AO.

- Managing the division's health service logistics quality control program.

- Supervising the unit medical equipment maintenance program.

- Monitoring the division medical assemblage management program.

- Coordinating logistical planning for the assembly, packing, and delivery of standard medical supply sets and locally developed, unit-peculiar resupply bundles.

- Establishing and operating a division Class VIII supply point.

c. The reconstitution duties of the DMSO include—

- Reconciling by brigade the shortages in each medical company and treatment platoon as reported by the commander, platoon leader, or the battalion headquarters element.

- Coordinating with the DMOC to determine and acquire the number of medical assemblages required to ensure units maintain medical readiness.

- Coordinating with the medical battalion, logistics (forward) to monitor the status of requisitions for medical assemblages due in.

- Coordinating through the DMOC—

- With the DMCC for movement of bulk medical supplies or medical assemblages from the DMSO to forward units when backhaul would be inadequate. (The DMOC directs quick fixes using available assets and controlled exchanges for medical equipment to maximize the capability of returning trained soldiers to duty.)

- With the CMCC for delivery of supplies from the MEDLOG battalion to the DMSO.

- To alert the appropriate company when modular systems are due to arrive,

- To distribute modular medical assemblages to the units based on guidance from the DMOC. (The DMSO coordinates with the DMCC, through the DMOC, for transportation assets to deliver modular medical assemblages to the unit being reconstituted.)

- To prepare the critical items listing and consolidate the critical shortages by brigade.

NOTE

Differences between health service logistics units discussed in FM 8-10, dated 1 March 1991, and those discussed in this chapter resulted from experience gained during Operation Desert Storm/Desert Shield, Operation Provide Comfort, and Total Army Analysis projections.

6-41. The Medical Battalion, Logistics (Forward), TOE 08-485L0

a. Mission. The mission of this organization is to provide Class VIII supplies, optical fabrication, medical equipment maintenance support, and blood processing, storage, and distribution to divisional and nondivisional units operating in the corps. In a single corps theater, this organization must be prepared to function as the SIMLM for the theater.

NOTE

AS OF THE PUBLICATION DATE OF THIS MANUAL, FROZEN BLOOD WAS NOT AN ASSIGNED MISSION.

b. Assignment. This unit is assigned to the corps under the command and control of the Medical Brigade, TOE 08-442L00.

c. Concept of Operations. This unit is the single point of contact for medical logistics support for the corps. It should be located near major lines of communication (sea or air) to ease transportation requirements for incoming shipments and facilitate distribution of materiel. The modular nature of this organization allows it to be incrementally introduced in the theater with the supported forces. Forward support platoons of the distribution company should be deployed early to coordinate support to a DMSO and prepare to receive pre-positioned stocks and resupply from CONUS.

(1) Supply support. Levels of supply at the medical battalion, logistics (forward) are kept to a minimum to permit relocation on a rapidly changing battlefield. Replenishment requests from supported units that are not filled from on hand stock will be passed to the supporting

supply source. This supporting supply source may be a medical battalion, logistics (rear) or the CONUS base. Unit distribution using corps transportation assets will normally be used to move the medical supplies forward to the divisions, separate brigades, armored cavalry regiments (ACRs), and Special Forces groups (SFGs).

(2) Medical equipment maintenance services. The medical battalion, logistics (forward) provides medical equipment maintenance services to supported units in the corps. It provides unit level maintenance to units in the corps without organic medical equipment specialists. It provides DS maintenance to medical units in the corps. This level of maintenance is directed toward repair and return of equipment. Mobile support teams will provide these services as far forward as the tactical situation permits. The medical battalion, logistics (forward) maintains a limited ORF of critical items.

(3) Optical services. Optical fabrication requirements beyond the extremely limited capabilities of the main support medical companies and the medical battalion, area support are provided by the medical battalion logistics (forward). This organization provides spectacle frame repair, fabrication of prescription lenses and spectacles, and fabrication of protective mask inserts.

(4) Blood processing, storage, and distribution. This organization receives, stores, packs for distribution, and distributes blood and blood products. A detailed discussion of the concept of support is provided in Chapter 8.

d. Capabilities. This unit—

(1) Provides command and control, staff planning, supervision of operations, and administration of assigned or attached units engaged in providing Class VIII supplies, optical fabrication, medical equipment maintenance

support, and blood processing, storage, and distribution.

(2) Provides Class VIII supply based on a consumption rate of 1.9 pounds per man per day, theater stockage objective of 30 days, and 15 days of supply in each supported corps.

(3) Provides Class VIII supply, optical fabrication, and medical equipment maintenance support, and blood processing, storage, and distribution to a maximum force of a two to three division equivalent-size corps.

(4) Receives, classifies, and issues up to 141.5 (maximum) short tons of Class VIII supplies per day. (This organization can support a corps force consisting of 74,470 soldiers based on its processing capability, consumption rate of 1.9 pounds per man per day, and the theater stockage objective. These factors may change based on a number of variables. However, the actual methodology explained in the notes, below, will remain the same.)

NOTE

For example a corps force consisting of 74,470 soldiers to be supported requires 70.75 short tons per day (74,470 troops X 1.9 pounds per man per day/ 2,000 pounds [to arrive at short tons]) to be issued to the force. The medical battalion logistics (forward) is required to receive 70.75 short tons per day to replace the stock issued. The medical battalion, logistics (forward) would be at its limit to support the corps.

(5) Provides storage of up to 707.5 short tons of Class VIII supplies based on an average order ship time of 5 days.

NOTE

Based on a 15-day stockage level in a corps with 5-days of that stockage level being order ship time, the operating and safety levels to be stored would be 10 days. Using the data in the note above, the unit stores 707.5 short tons (70.75 short tons per day X 10 days).

(6) Provides unit medical equipment maintenance for units without organic capability and DS medical equipment maintenance to corps and divisional medical units.

(7) Provides for blood processing, storage, and distribution within the corps. Distributes blood products to division medical units.

e. Basis of Allocation. One medical battalion, logistics (forward) is allocated per corps or three division equivalent-size force. One additional medical battalion logistics (forward) is allocated to support each additional increment of 100,000 joint service population.

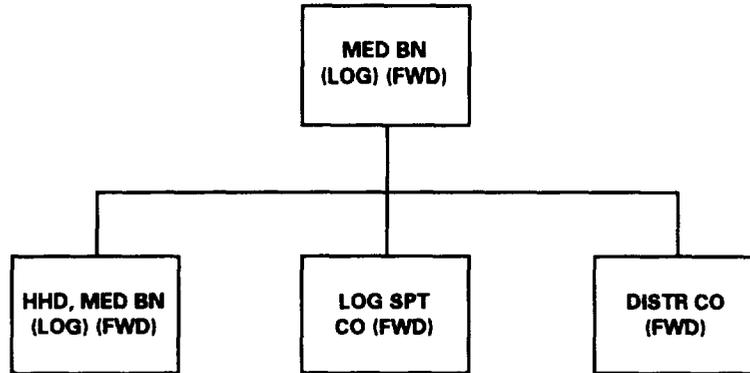
f. Organic Units. This organization has three organic units.

(1) Headquarters and Headquarters Detachment.

(2) Logistics Support Company (Forward).

(3) Distribution Company (Forward).

See Figure 6-4 for an organizational diagram of the medical battalion, logistics (forward).



LEGEND:

DISTR DISTRIBUTION

Figure 6-4. Schematic of medical battalion, logistics (forward).

6-42. Headquarters and Headquarters Detachment, Medical Battalion, Logistics (Forward), TOE 08-486L0

a. Mission. The mission of this unit is to provide command and control and administrative and logistics support to assigned and attached units.

b. Concept of Operations. This unit will usually be employed with the logistics support company to plan and direct the execution of the health service logistics mission.

c. Capabilities. This unit—

(1) Provides command and control, staff planning, and supervision of operations and administration of assigned or attached units.

(2) Provides unit maintenance for nonmedical equipment of assigned and attached units.

(3) Maintains a consolidated property book for assigned units.

(4) Coordinates with corps transportation assets for the routine delivery of Class VIII supplies.

(5) Coordinates with the medical battalion (evacuation) for transportation assets (aeromedical or ground ambulance) for the emergency delivery of Class VIII supplies.

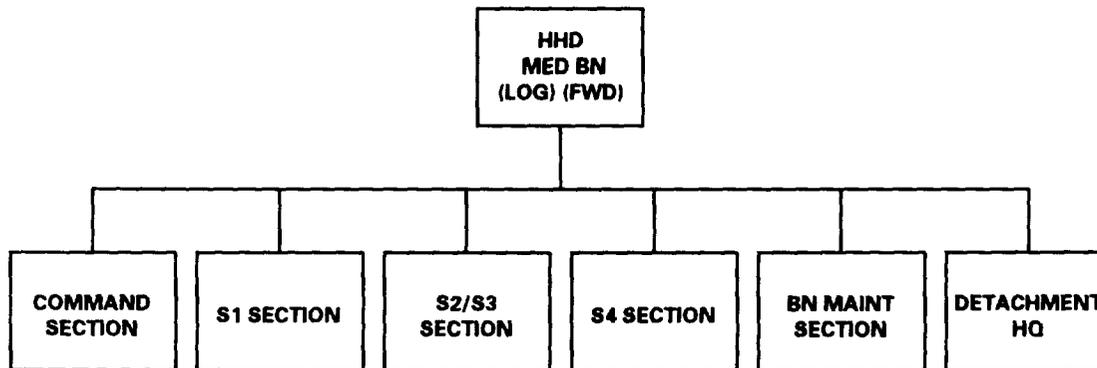
d. Dependency. This unit is dependent on the Logistics Support Company, TOE 08-487L0, for food service.

e. Basis of Allocation. One unit is allocated per medical battalion, logistics (forward). See schematic of this unit in Figure 6-5.

6-43. Logistics Support Company, Medical Battalion, Logistics (Forward), TOE 08-487L0

a. Mission. The mission of this organization is—

- To execute the planned support of the corps in the areas of Class VIII supplies,

**LEGEND:**

HQ HEADQUARTERS
MAINT MAINTENANCE

Figure 6-5. Schematic of headquarters and headquarters detachment, medical battalion, logistics (forward).

optical fabrication, medical equipment maintenance support, and blood processing, storage and distribution.

- To be prepared to support medical units of other Services in the corps area, as directed.

b. Concept of Operations. This unit executes the medical logistics mission as directed by the headquarters element.

c. Capabilities. This unit—

(1) Receives, classifies, and issues up to 119.5 short tons of Class VIII supplies per

(3) Receives and distributes preassembled modules (PUSH packages) for resupply in support of divisional and nondivisional units in the supported corps.

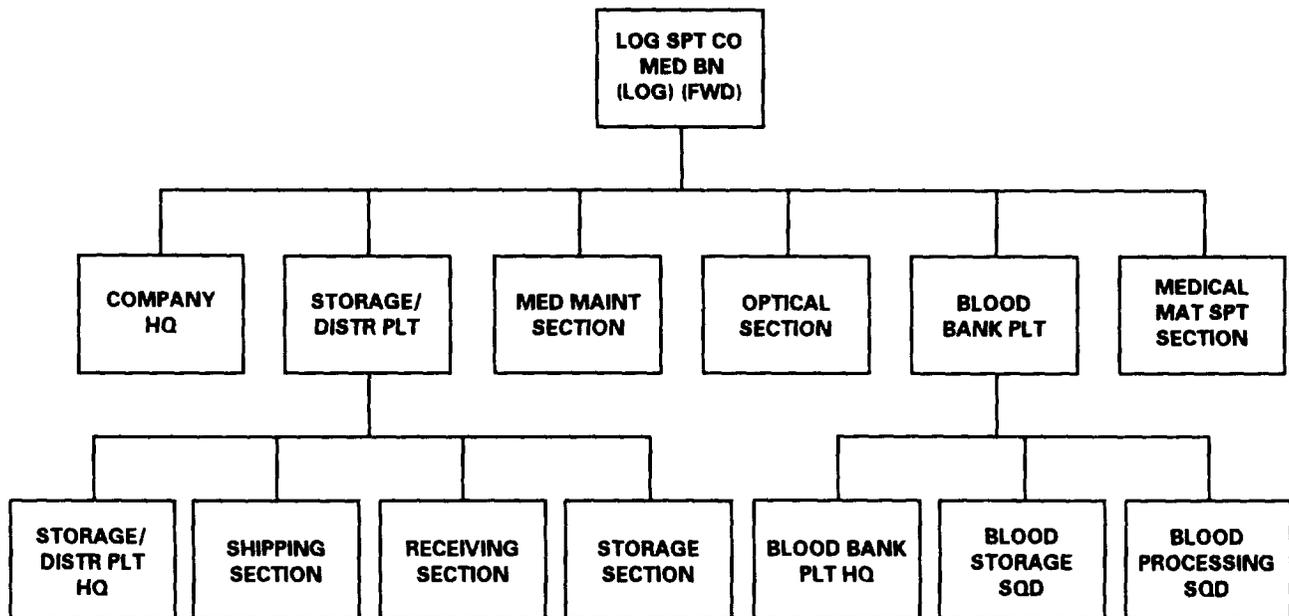
(4) Provides unit medical equipment maintenance for units without organic capability and DS medical equipment maintenance through MSTs.

(5) Provides for blood processing, storage, and distribution within the corps. Distributes blood products to division and nondivisional medical units.

(6) Provides optical lens fabrication.

d. *Dependency.* This unit is dependent on the Headquarters and Headquarters Detachment, Medical Battalion, Logistics (Forward), TOE 08-486L0, for UM on nonmedical equipment.

e. *Basis of Allocation.* One logistics support company is allocated per one Medical Battalion, Logistics (Forward), TOE 08-485L0. See schematic of this unit in Figure 6-6.



LEGEND:

MAT **MATERIEL**
SQD **SQUAD**

Figure 6-6. Logistics support company, medical battalion, logistics (forward).

6-44. Distribution Company, Medical Battalion, Logistics (Forward), TOE08-488L0

a. *Mission.* The mission of this organization is to provide Class VIII support to divisional and nondivisional medical units operating in the supported operational area.

b. *Concept of Operations.* This unit employs a company headquarters and organic

forward support platoons to provide Class VIII support on an area basis. This unit provides limited Class VIII supply support for high volume consumables and facilitates the support of DMSOs and corps forces deployed in the division area of operations. This unit provides unit medical equipment maintenance to units not otherwise provided support and has limited DS medical equipment maintenance service for units within its area.

c. *Capabilities.* This unit—

(1) Receives, classifies, and issues up to 22 short tons of Class VIII supplies per day (11 short tons per platoon).

(2) Provides storage for up to 22 short tons of Class VIII supply (11 short tons per platoon).

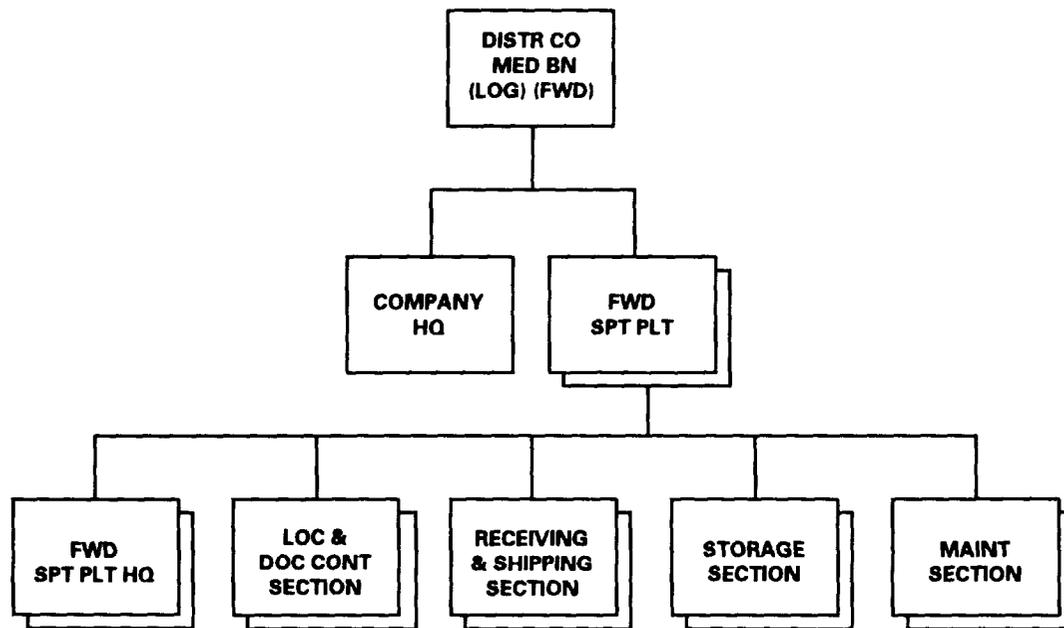
(3) Provides, through MSTs, unit medical equipment maintenance to units not otherwise provided such support and limited DS medical equipment maintenance on an area basis.

d. *Dependency.* This unit depends on—

(1) Headquarters and Headquarters Detachment, Medical Battalion, Logistics (Forward), TOE 08-486L0, for unit maintenance on nonmedical equipment.

(2) Logistics Support Company, TOE 08-487L0, for food service, when collocated. Food service support must be coordinated for an element operating independently.

e. *Basis of Allocation.* One distribution company is allocated per Medical Battalion, Logistics (Forward), TOE08-485L0. See schematic of distribution company in Figure 6-7.



LEGEND:

CONT	CONTROL
DOC	DOCUMENT
LOC	LOCATOR

Figure 6-7. Distribution company.

6-45. The Medical Battalion, Logistics (Rear), TOE 08-696L0

a. Mission. The mission of this organization is to provide Class VIII supplies, optical fabrication, medical equipment maintenance support, and blood processing, storage, and distribution to echelons above corps units and the medical battalions, logistics (forward) for nonthroughput requirements. This organization must be prepared to function as the SIMLM for a joint theater.

b. Assignment. This unit is assigned to a MEDCOM, TOE 08-611L00.

c. Concept of Operations. The medical battalion, logistics (rear) is the single point of contact for medical logistics support for the theater providing support to both EAC units and medical battalions, logistics (forward). The medical battalion, logistics (rear) is normally located near major lines of communication (sea or air) to ease transportation requirements for incoming shipments and facilitate distribution of materiel.

(1) *Supply support.* Levels of supply at the medical battalion, logistics (rear) are greater to permit support of a rapidly changing battlefield. Replenishment requisitions from supported medical battalions, logistics (forward) that are not filled from on hand stock will normally be throughput from the CONUS base or other supporting supply source bypassing the medical battalion, logistics (rear). Resupply for EAC units and requests from medical battalion, logistics (forward) filled from on hand stock will normally be distributed on a unit distribution basis using theater transportation assets.

(2) *Medical equipment maintenance services.* The medical battalion, logistics (rear) provides unit maintenance to those EAC units with medical equipment without organic capability. It also provides DS maintenance to EAC units. This unit provides GS medical equip-

ment maintenance to the theater. Mobile support teams will provide these services as far forward as the tactical situation permits. The medical logistics (rear) battalion maintains an expanded ORF of critical items. Normally, an excessive maintenance backlog at any unit, regardless of extent of repairs required, will be resolved by support from the next higher echelon, either by sending MSTs forward or by evacuation. In this regard, the medical battalion, logistics (rear) may expect to provide backup support to both the medical battalion, logistics (forward) and other EAC-supported units as required.

(3) *Optical services.* Optical fabrication requirements beyond the capabilities of the medical battalion, logistics (forward) and EAC treatment facilities are provided by the medical battalion, logistics (rear). This organization provides spectacle frame repair, fabrication of prescription lenses and spectacles, and fabrication of protective mask inserts.

(4) *Blood processing, storage, and distribution.* This organization receives, stores, packs for distribution and distributes blood and blood products.

d. Capabilities. This unit—

(1) Provides command and control, staff planning and supervision of operations, and administration of assigned or attached units engaged in providing Class VIII supplies, optical fabrication, medical equipment maintenance support, and blood processing, storage, and distribution.

(2) Provides Class VIII supply based on a consumption rate of 1.9 pounds per man per day; theater stockage objective of 30 days; and 15 days of supply in each supported corps.

(3) Provides Class VIII supply, optical fabrication medical equipment maintenance

support, blood processing, storage, and distribution to a maximum force of a three corps equivalent-size force.

(4) Receives, classifies, and issues up to 384.8 (maximum) short tons of Class VIII supplies per day. (This unit can support a force consisting of 202,500 soldiers.)

NOTE

For example a theater force consisting of 202,500 soldiers to be supported requires 192.4 short tons per day (202,500 X 1.9/ 2,000 pounds) to be *issued* to the force. The medical battalion logistics (rear) is also required to *receive* 192.4 short tons per day to replace the stock issued. The medical logistics battalion (rear) would be at its limit to support this theater.

(5) Provides storage of up to 1725.5 short tons of Class VIII supplies based on an average order ship time of 10 days.

NOTE

Based on a 15-day stockage level in a corps, a 30-day stockage level at theater and 10 days of that stockage level being order ship time, the operating and safety levels to be stored would be 20 days. Using the data in the note above, the unit stores 1725.5 short tons (192.4 short tons per day X 20 days -[3 corps X 707.5 short tons stored in each corps]).

(6) Provides unit medical equipment maintenance for EAC units without organic capability and DS medical equipment maintenance

to EAC units and added support to corps medical battalions, logistics (forward).

(7) Provides GS medical equipment maintenance to the theater.

(8) Provides for blood processing, storage, and distribution within the EAC and added support to corps medical battalions, logistics (forward).

e. Basis of Allocation. One medical battalion, logistics (rear) is allocated per theater supported. One additional medical battalion, logistics (rear) is allocated to support each additional increment of 250,000 joint service population. See a schematic of the medical battalion, logistics (rear) in Figure 6-8.

f. Organic Units. This organization has three organic units.

(1) Headquarters and headquarters detachment.

(2) Logistics support company (rear).

(3) Distribution company (rear).

6-46. Headquarters and Headquarters Detachment, Medical Battalion, Logistics (Rear), TOE 08-686L0

a. Mission. The mission of this unit is to provide command and control and administrative and logistics support to assigned and attached units.

b. Concept of Operations. This unit will usually be employed with the logistics support company to plan and direct the execution of the health service logistics mission.

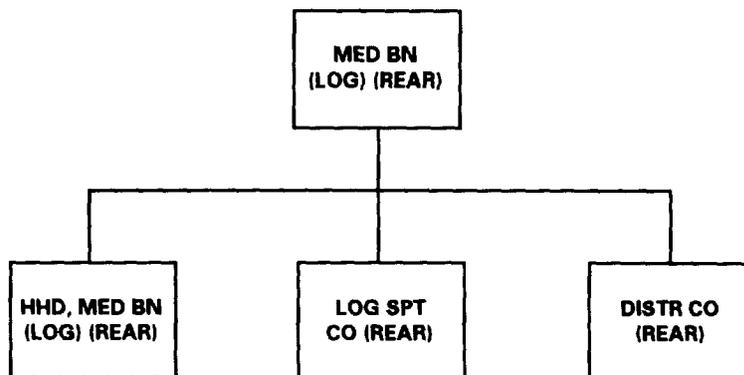


Figure 6-8. Medical battalion, logistics (rear).

c. *Capabilities.* This unit—

(1) Provides command and control, staff planning, supervision of operations, and administration of assigned or attached units.

(2) Provides unit maintenance for nonmedical equipment of assigned and attached units.

(3) Maintains a consolidated property book for assigned units.

(4) Coordinates with theater transportation assets for the routine delivery of Class VIII supplies.

(5) Coordinates with the medical battalion (evacuation) for transportation assets (aeromedical or ground ambulance) for the emergency delivery of Class VIII supplies.

d. *Dependency.* This unit is dependent on the Logistics Support Company, TOE 08-697L0, for food service.

e. *Basis of Allocation.* One HHD is assigned per medical battalion, logistics (rear). See schematic of the HHD in Figure 6-9.

6-47. Logistics Support Company, Medical Battalion, (Logistics) (Rear), TOE 08-697L0

a. *Mission.* The mission of this organization is—

- To execute the planned support of the theater in the areas of Class VIII supplies, optical fabrication, medical equipment maintenance support, and blood processing, storage and distribution.

- To be prepared to support medical units of other Services in the theater area, as directed.

b. *Concept of Operations.* This unit executes the medical logistics mission as directed by the headquarters element.

c. *Capabilities.* This organization—

(1) Receives, classifies, and issues up to 351.8 short tons of Class VIII supplies per day.

(2) Provides storage for up to 1692.5 short tons of Class VIII supply.

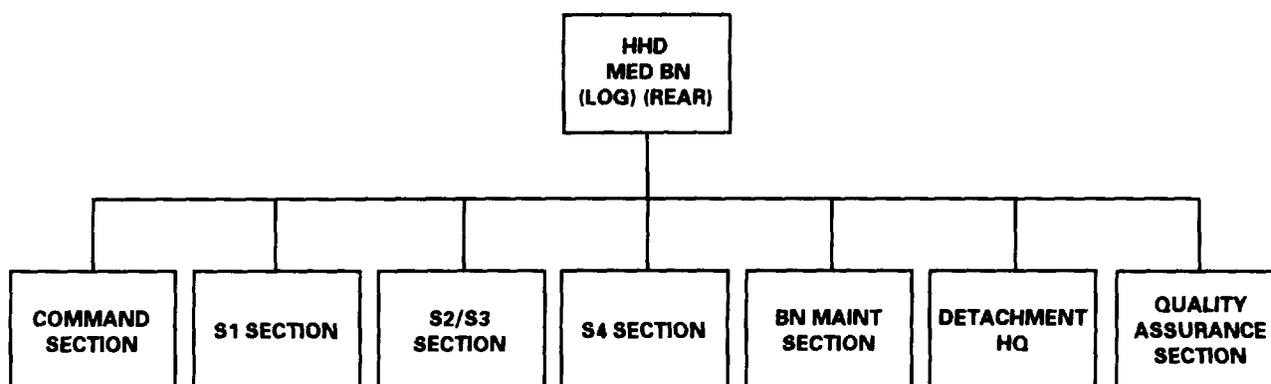


Figure 6-9. Headquarters and headquarters detachment, medical battalion, logistics (rear).

(3) Receives, assembles, and distributes preplanned modules (PUSH packages) for resupply in support of corps and EAC units in the theater.

(4) Provides optical lens fabrication.

(5) Provides unit medical equipment maintenance for EAC units without organic capability and DS medical equipment maintenance to EAC units and added support to corps medical battalions, logistics (forward).

(6) Provides GS medical equipment maintenance in the theater.

(7) Provides for blood processing, storage, and distribution within the EAC and added support to corps medical battalions, logistics (forward).

(8) Provides food service support for the medical battalion, logistics (rear), TOE 08-695L0.

d. Dependency. This unit is dependent on the Headquarters and Headquarters Detachment, Medical Battalion, Logistics (Rear), TOE 08-696L0, for UM on nonmedical equipment.

e. Basis of Allocation. This unit is allocated on the basis of one per medical battalion, logistics (rear). The schematic of the logistics support company, medical battalion, logistics (rear) is in Figure 6-10.

6-43. Distribution Company, Medical Battalion, Logistics (Rear), TOE 08-698L0

a. Mission. The mission of this organization is to provide Class VIII supplies and medical equipment maintenance support to EAC units operating in the supported operational area.

b. Concept of Operations. This organization employs a company headquarters and organic forward support platoons to provide Class VIII support on an area basis in the theater. This unit provides limited Class VIII supply support for high-volume consumables and facilitates the support of EAC units and corps forces in the area of operations. This unit provides unit maintenance to units not otherwise provided support and has limited DS medical equipment maintenance service for units within its area of operations.

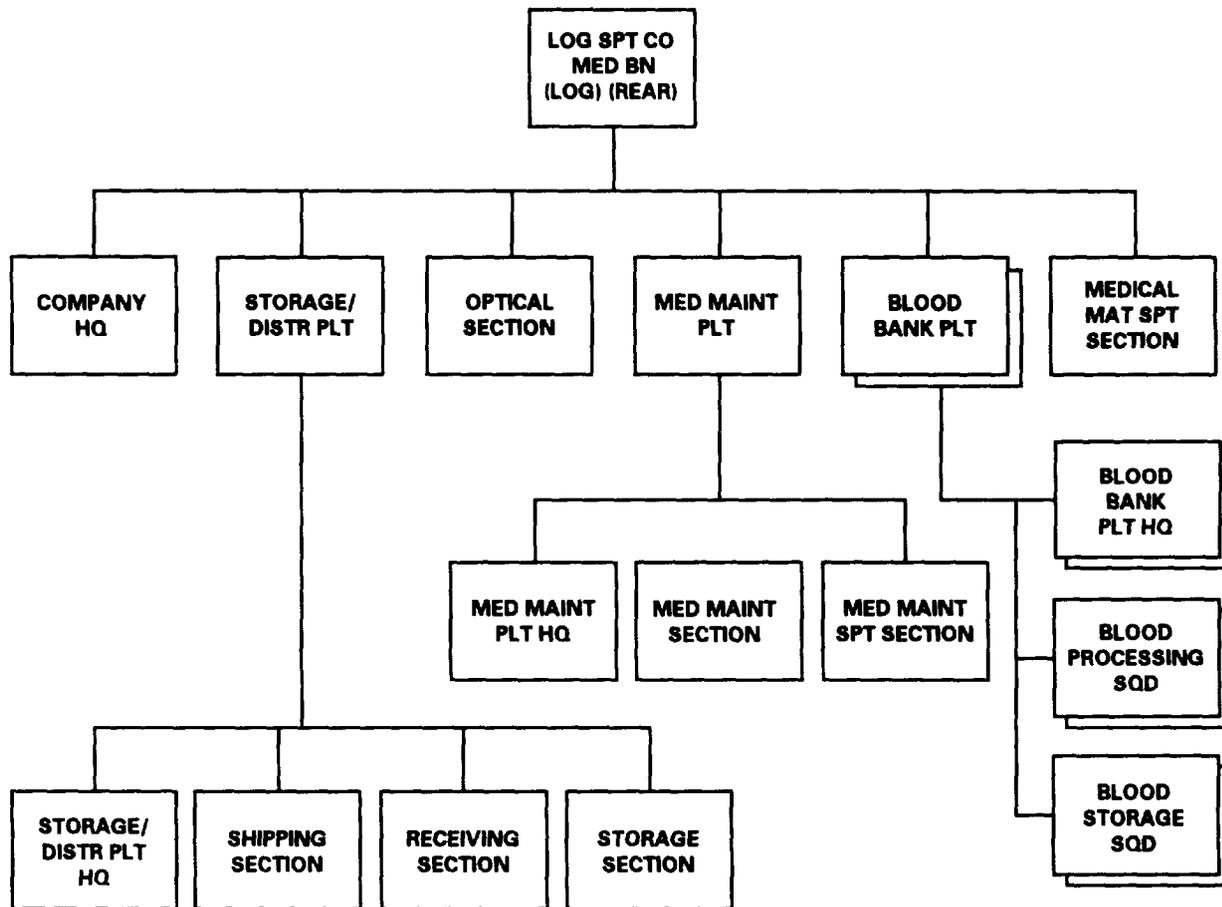


Figure 6-10. Logistics support company, medical battalion, logistics (rear).

c. *Capabilities.* This unit—

(1) Receives, classifies, and issues up to 33 short tons of Class VIII supplies per day (16.5 short tons per platoon).

(2) Provides storage for up to 33 short tons of Class VIII supply (16.5 short tons per platoon).

(3) Provides, through MSTs, unit medical equipment maintenance to units not

otherwise provided such support and limited DS medical equipment maintenance on an area basis.

d. *Dependency.* This unit depends on—

(1) Headquarters and Headquarters Detachment, Medical Battalion, (Logistics) (Rear), TOE 08-696L0, for unit maintenance on organic nonmedical equipment.

(2) Logistics Support Company, TOE 08-697L0, for food service, when collocated.

Food service support must be coordinated for an element operating independently.

e. Basis of Allocation. This unit is allocated on the basis of one per medical battalion, logistics (rear). See the distribution company's organizational diagram in Figure 6-11.

6-49. Theater Medical Materiel Management Center, TOE 08-897L0

a. Mission. The mission of this organization is to provide centralized, theater-level inventory management of Class VIII materiel, medical equipment maintenance, optical fabrication, and blood support to the theater.

b. Assignment. This unit is assigned to the senior medical command and may be attached

to medical battalion, logistics (rear) for administrative and logistics support.

c. Concept of Operations. The TMMMC provides centralized control over the medical logistics support of the theater. This unit coordinates prioritization of scarce medical materiel, medical maintenance, and optical fabrication assets in the theater.

d. Capabilities. This unit—

(1) Monitors the operation of health service logistics units in the theater which may include joint forces if a SIMLM mission has been assigned.

(2) Monitors the receipt and processing of Class VIII requisitions from health service logistics units.

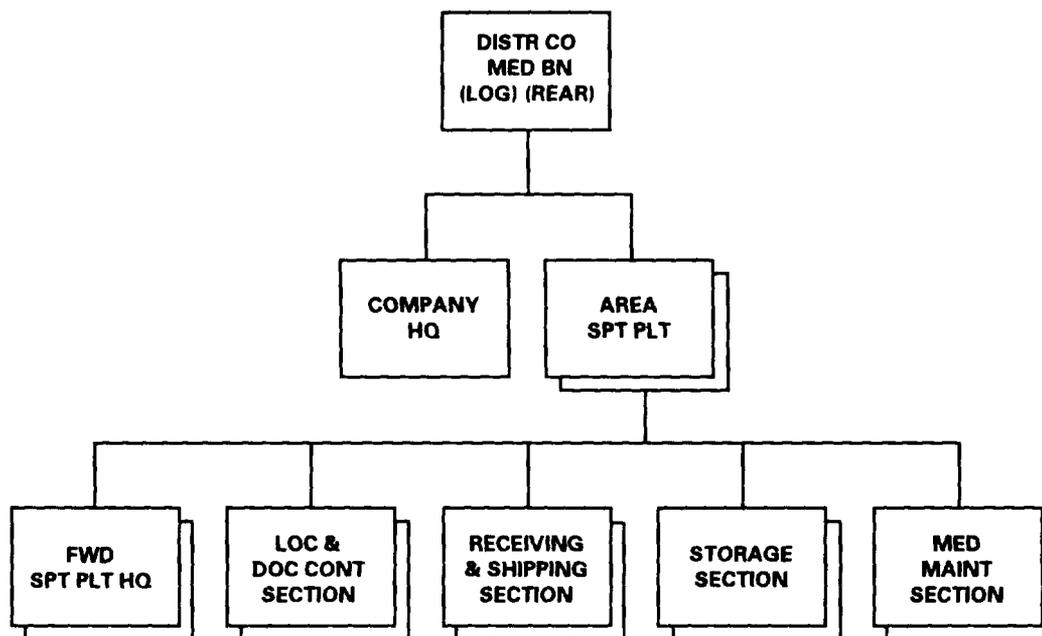


Figure 6-11. Distribution company, medical battalion, logistics (rear).

(3) Reviews and analyzes demands and computes theater requirements for Class VIII supplies, medical equipment, optical fabrication, medical equipment maintenance, and blood processing, storage, and distribution.

(4) Monitors and evaluates the work load, capabilities, and asset position of the supported medical battalions, logistics (forward and rear) and recommends cross-leveling of work load or resources to achieve compatibility and maximum efficiency.

(5) Implements plans, procedures, and programs for medical materiel management systems.

(6) Provides medical materiel management data and reports required by higher theater commands and services.

(7) Functions as the management interface with CONUS-base Class VIII NICPs and SICCs.

(8) Manages critical items and analyzes production capabilities.

(9) Disseminates medical quality control information throughout the theater.

(10) Provides logistics assistance to medical battalions, logistics (forward and rear). Much of this assistance will be provided on site at the medical battalions, logistics to improve communications, automation, and transportation interfaces.

(11) Provides logistics assistance to TOE hospitals within the theater to help improve logistics support to and within the hospitals.

(12) Coordinates for the return to theater of medical evacuation equipment from CONUS.

e. Dependency. This unit is dependent on the existing area support system to provide for the exchange of information within the theater and to CONUS. The communications exchange requirements include but are not limited to high volume data, voice, facsimile, and message traffic. This unit is dependent on the medical battalion, logistics (rear) for organizational maintenance on all organic equipment and the Logistics Support Company, TOE 08-697L0, for food service support, when collocated.

f. Basis of Allocation. This unit is allocated on the basis of one per theater supported. See the TMMMC's organizational diagram in Figure 6-12.

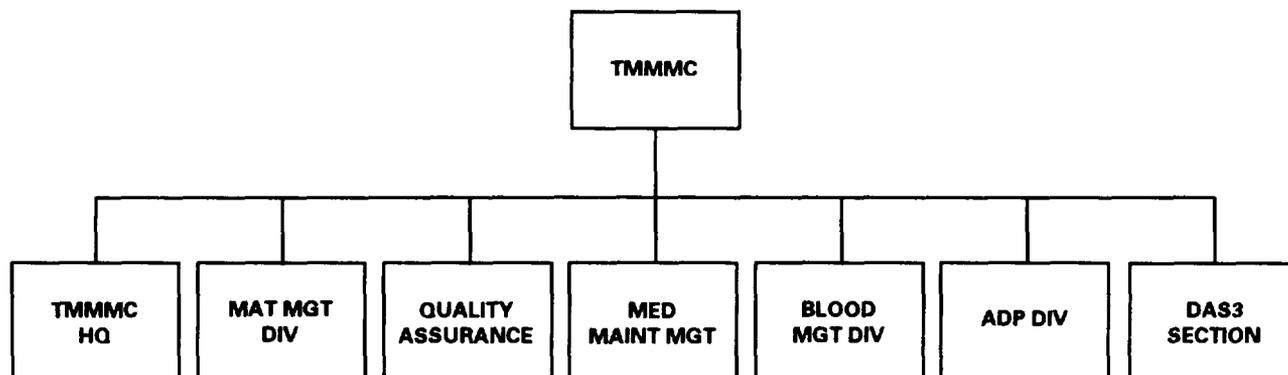
6-50. The Medical Detachment (Logistics Support), TOE 06-909L0

a. Mission. The mission of this unit is to provide Class VIII supply, optical fabrication, and medical equipment maintenance augmentation capability to a medical battalion, logistics (forward or rear) where work load or special operations require an increment of less than a battalion-size unit.

b. Assignment. This unit is attached to a medical battalion, logistics (forward), TOE 08-485L000, or a medical battalion logistics (rear), TOE 08-695L000.

c. Concept of Operations. This unit provides a modular unit to incrementally increase the capability of a medical battalion logistics. This unit may be deployed early in an operation to coordinate support to a DMSO and prepare to receive pre-positioned stocks and resupply from CONUS.

d. Capabilities. This unit provides augmentation to the unit of attachment for Class VIII supplies, optical fabrication, and medical equipment maintenance support.



LEGEND: DAS3 DECENTRALIZED AUTOMATED SERVICE SUPPORT SYSTEM

Figure 6-12. The Army theater medical management materiel center.

e. *Basis of Allocation.* This unit is allocated as follows:

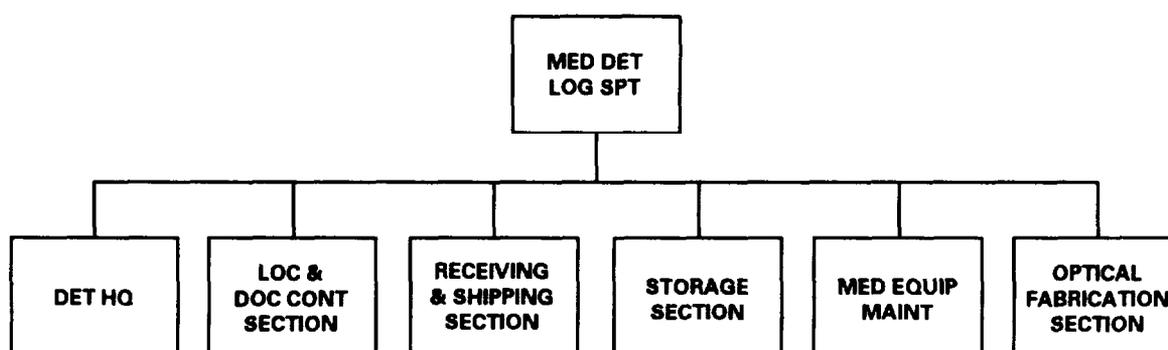
(1) One per division, ACR, or separate brigade not supported by a medical battalion, logistics (forward).

(2) One per 25,000 Joint Service population in CZ to include corps (rear).

(3) One per 50,000 joint service population in COMMZ.

(4) One per medical battalion, logistics (forward) supporting a three-division corps.

See the medical detachment, logistics support, organizational diagram in Figure 6-13.



LEGEND: EQUIP EQUIPMENT

Figure 6-13. Medical detachment, logistics support.

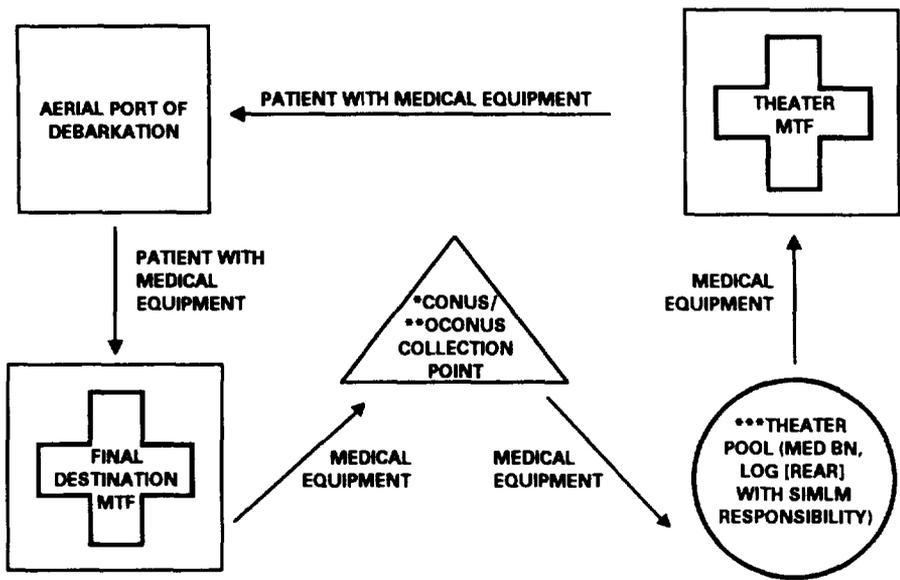
Section XIII. PREVENTING MEDICAL EQUIPMENT SHORTFALLS

6-51. Aeromedical Evacuation Equipment Shortfalls

The senior surgeon and logistics planner should recommend to the theater commander the procedures to be used to ensure that medical equipment that leaves the TO during patient evacuation does not cause a critical shortfall in equipment availability. Prior planning for replacement and adequate in-theater stockage levels of these items is necessary.

6-52. Procedure

The originating MTFs equipment travels with the patient to the destination MTF. The equipment is then returned to the TO equipment pool through a CONUS/OCONUS collection point. The CONUS/OCONUS collection point performs any necessary cleaning and maintenance. The TO equipment pool redistributes the equipment based on requisitions from theater hospitals. This system addresses critical AE equipment such as ventilators, suction apparatus, and pulse oximeters using the SIMLM. Figure 6-14 depicts this procedure.



- * TOBYHANNA ARMY DEPOT
- ** US ARMY MEDICAL MATERIEL CENTER, EUROPE/16TH MEDICAL BATTALION (LOGISTICS)
- *** CENTRAL RECEIVING COLLECTING POINT FOR MEDICAL EQUIPMENT RETURNED TO THE THEATER

LEGEND:
EQUIPMENT FLOW →

Figure 6-14. Medical equipment flow.

CHAPTER 7

MEDICAL LABORATORY SERVICES**7-1. Purpose**

The function of medical laboratory services in HSS operations is to analyze body fluids and tissues, or to identify microorganisms as an adjunct in the diagnosis and treatment of patients and in the prevention of disease. Additionally, management of blood and blood components are critical tasks requiring medical laboratory and health service logistics assets. Refer to Chapter 8 for a detailed presentation of blood management planning. The scope of laboratory services is limited by the equipment and personnel available. As in many HSS functions, each successive echelon of care includes a new increment of medical laboratory capabilities which distinguishes it from the lower echelon of care.

7-2. Planning for Laboratory Services

a. During peace, in a world of advancing scientific technology, clinicians and laboratorians are dependent on ever-changing state-of-the-art equipment. During war, the HSS planner must assure that dependable, but limited laboratory support, is available to support the medical mission. The major problem will be for medical and paramedical personnel to transition rapidly from a high technology peacetime existence to a wartime environment.

b. Officer and enlisted laboratory personnel are a diverse group of individuals with a broad range of education and experience in a variety of laboratories ranging from small dispensary laboratories to sophisticated medical center clinical or research facilities. In addition to the active forces, many of the wartime laboratory personnel assets will come from the civilian sector (National Guard and Reserve forces). The planner

must consider the diversity of personnel qualifications and experiences when developing requirements for realistic laboratory training programs. The HSS planner must—

- Understand the current concepts for the allocation of medical laboratory assets.
- Define, in general terms, the capabilities of those assets.
- Examine the factors that may impact upon laboratory resources.
- Determine mechanisms to maintain responsive, effective, and efficient support of the HSS mission.

c. Paragraphs 7-3 through 7-6 describe the capabilities of medical laboratories that are organic to MTFs in the TO. These facilities are staffed and equipped to provide the laboratory procedures shown in Tables 7-1 through 7-5. Capabilities of the AML, TOE 08-657 L000, are discussed in paragraph 7-6. Personnel, supply, and maintenance support is obtained through the corps medical groups and through medical brigades in the COMMZ.

7-3. Echelon I Support

By doctrine, there is no Echelon I medical laboratory support. Blood or blood components are not administered at Echelon I. Given the anticipated nature of the modern battlefield, medical laboratory personnel or material resources are not available or needed at this level. On an area basis, medical laboratory support for personnel is available at Echelon H. Some laboratory information such as throat cultures and analysis results will be presented to physicians at this echelon.

Table 7-1. Medical Laboratory Procedures, Biochemistry

DESCRIPTION	AREA	SPT	SQUAD	MASH	CSH	FH	GH
PERFORM BLOOD GAS ANALYSIS				X	X	X	X
PERFORM ELECTROLYTE LEVELS (NA, K, CL, CO2)				X	X	X	X
DETERMINE TOTAL SERUM PROTEIN					X	X	X
DETERMINE SERUM CREATININE					X	X	X
DETERMINE SERUM AMYLASE					X	X	X
DETERMINE SERUM AST ACTIVITY					X	X	X
DETERMINE SERUM ALT ACTIVITY					X	X	X
DETERMINE SERUM CK ACTIVITY					X	X	X
DETERMINE SERUM GLUCOSE				X	X	X	X
DETERMINE SERUM UREA NITROGEN				X	X	X	X
DETERMINE SERUM T. BILIRUBIN					X	X	X
DETERMINE SERUM CALCIUM					X	X	X
DETERMINE CSF GLUCOSE					X	X	X
DETERMINE CSF PROTEIN					X	X	X
DETERMINE URINE PROTEIN						X	X
DETERMINE URINE GLUCOSE						X	X

Table 7-2. Medical Laboratory Procedures, Hematology/Urinalysis

DESCRIPTION	AREA	SPT	SQUAD	MASH	CSH	FH	GH
PERFORM WHITE CELL COUNT		X		X	X	X	X
PERFORM COMPLETE BLOOD COUNT (RBC, WBC, HGB, HCT)				X	X	X	X
DETERMINE HEMATOCRIT	X			X	X	X	X
DETERMINE WBC DIFFERENTIAL	X			X	X	X	X
DETERMINE PROTHROMBIN TIME					X	X	X
DETERMINE PARTIAL THROMBO- PLASTIN TIME (APTT)					X	X	X
PERFORM CSF CELL COUNT AND DIFFERENTIAL				X	X	X	X
PERFORM URINALYSIS (DIPSTICK)	X			X	X	X	X
PERFORM URINALYSIS (MICRO- SCOPIC)	X			X	X	X	X
PERFORM PLATELET ESTIMATE	X			X	X	X	X
PERFORM PLATELET COUNT				X	X	X	X
DETERMINE FIBRINOGEN LEVEL						X	X
DETERMINE FIBRIN SPLIT PRODUCTS						X	X

Table 7-3. Medical Laboratory Procedures, Microbiology /Serology

DESCRIPTION	AREA	SPT	SQUAD	MASH	CSH	FH	GH
PERFORM OCCULT BLOOD TEST		X			X	X	X
PERFORM THICK & THIN SMEARS FOR MALARIA		X			X	X	X
PERFORM GRAM STAINS		X		X	X	X	X
PERFORM RPR TESTS (SYPHILIS)					X	X	X
PERFORM IM TESTS (INFECTIOUS MONONUCLEOSIS)					X	X	X
EXAMINE FECES FOR OVA, CYSTS, AND PARASITES					X	X	X
PERFORM KOH PREPS				X	X	X	
PERFORM PREGNANCY TESTS					X	X	X
PERFORM URINE CULTURES (COLONY COUNTS & SUSCEPTIBILITY)					X*	X	X
PERFORM WOUND CULTURE SUSCEPTIBILITY					X*	X	X
PERFORM BLOOD CULTURE & SUSCEPTIBILITY						X	X
PERFORM SPUTUM CULTURE & SUSCEPTIBILITY						X	X
PERFORM STOOL CULTURE & SUSCEPTIBILITY						X	X
PERFORM CSF CULTURE & SUSCEPTIBILITY						X	X

Table 7-3. Medical Laboratory Procedures, Microbiology/Serology (Continued)

DESCRIPTION	AREA	SPT	SQUAD	MASH	CSH	FH	GH
PERFORM CULTURE & SUSCEPTIBILITY FOR GONORRHEA					X*	X	X
PERFORM THROAT CULTURES					X*	X	X
PERFORM MICROSCOPIC EXAMS FOR ACID-FAST BACTERIA						X	X
IDENTIFY ANAEROBES						X	X
*Requires Microbiology Augmentation Set							

Table 7-4. Medical Laboratory Procedures, Blood Bank

DESCRIPTION	AREA	SPT	SQUAD	MASH	CSH	FH	GH
PERFORM BLOOD GROUP AND TYPE (ABO, RH)				X	X	X	X
PERFORM BLOOD CROSSMATCHES					X	X	X
THAW FRESH FROZEN PLASMA					X	X	X
ISSUE PLATELET CONCENTRATE					X	X	X

Table 7-5. Medical Laboratory Procedures, Anatomic Pathology/Cytology

DESCRIPTION	FH	GH*	AML**
PERFORM BONE MARROW SPECIMEN ANALYSIS		X	X
PERFORM HISTOLOGICAL/SURGICAL EXAM		X	X
PERFORM FORENSIC AUTOPSIES			X
PERFORM GYNECOLOGIC CYTOLOGY EXAMS		X	X
PERFORM NON-GYN CYTOLOGY EXAMS		X	X

* Requires pathology augmentation team.

** Limited capability. Unit does not routinely provide support for direct individual patient care.

7-4. Echelon II Support

a. Echelon II medical laboratory support is the responsibility of personnel assigned to the treatment platoon of a medical company. A medical laboratory specialist in the area support squad performs limited laboratory procedures in DS of advanced trauma management (ATM) activities. These procedures include: hematocrit, white blood cell (WBC) count, WBC differential, platelet estimate, urinalysis, and gram stain. As the situation permits, additional tests such as occult blood determinations or malarial smears (thick and thin preps) may be performed.

b. At Echelon H, resources consist of medical laboratory specialists and field laboratory equipment organic to the following units:

(1) Medical companies in FSBs/MSBs assigned to the division support command.

(2) Medical companies in support squadrons of ACRs or separate maneuver brigades.

(3) Medical companies of area support medical battalions (corps or COMMZ).

c. Augmentation of laboratory capabilities at this echelon is not anticipated during combat operations. To increase available services, as the situation permits, diagnostic specimens may be collected and transported to higher echelon medical laboratories.

7-5. Echelon III Support

a. Personnel resources in the laboratory section of the MASH (30 bed) are extremely austere. In the CSH, a clinical laboratory officer, medical laboratory specialists, and NCO personnel are assigned. A variety of standardized manual and semiautomated laboratory equipment is found in Echelon III MTFs.

b. Although similar laboratory equipment and tests are available at each type of hospital in the CZ, laboratory methodology and staffing are

tailored to satisfy the unique missions of the CZ hospitals.

(1) Mobile army surgical hospital units primarily function within the rear area of the division or the forward edge of the corps. Movement of MASH units is expected to occur quickly and frequently. As the situation permits, part of the MASH may deploy in the brigade support area (BSA) collocating with a divisional medical company to provide an early emergency surgical capability. The MASH provides hospitalization for those patients who cannot tolerate or survive evacuation to the next level of hospitalization. At the MASH these patients receive surgical and resuscitative intervention to stabilize and prepare them for further evacuation to another MTF providing more definitive medical care. The intratheater evacuation policy (Chapter 4) for MASH units is expected to be short compared to the theater evacuation policy. The MASH is expected to surgically stabilize and prepare patients for movement to other CZ or COMMZ hospitals within a maximum 24 to 36 hours after surgery. The focus of laboratory activities at a MASH during active support of Army Operations is directed toward critical services required to support surgical and resuscitative intervention. Such services will normally be limited to provision of liquid blood (limited to Group O packed cells), performance of blood group and type procedures when required, WBC counts and differentials, hematocrits, blood gas analysis, electrolytes, and urinalysis (see Tables 7-1 through 7-4).

(2) Combat support hospital units function in the corps area and maybe required to move frequently. The patient capacity of the CSH is much larger than the MASH, but the CSH's work load requires much less surgical intensive care per capita than the MASH. The number of laboratory staff in the CSH is appropriately greater, and a larger variety of more technically demanding laboratory tests maybe performed (see Tables 7-1 through 7-4), At this level, blood group/

type and crosshatch procedures with issuance of group-specific packed cells are used; previously frozen blood maybe employed; platelet concentrates and fresh frozen plasma are available; a wider variety of clinical chemistry tests are performed; coagulation tests are performed; and additional parasitological, serological, or bacteriological procedures are supported. Once again, the extent of laboratory support available is dictated by the patient work load experienced and the degree of mobility expected.

(3) In summary, within CZ hospitals, the extent of medical laboratory services is influenced by—

- The tactical situation.
- The mission of the hospital.
- The patient work load.
- The types of patient conditions and injuries.
- The units mobility requirements.

7-6. Echelon IV Support

a. The number, size, and mix of hospital units located in the COMMZ are influenced by—

- The size and geographical location of the TO.
- The number of troops assigned to the theater.
- The expected patient work load.
- The expected duration and intensity of the conflict.

The overall medical threat will influence the scope of laboratory services required.

b. Echelon IV medical laboratory personnel resources include medical laboratory specialists and NCOs, clinical laboratory officers, and pathologists. At this echelon, a wider variety of laboratory equipment and tests are available than those found in the CZ.

c. In the FH, microbiological services are greatly expanded compared to CSH units. These hospitals provide reconditioning and rehabilitation of patients who can RTD within the theater evacuation policy. The majority of patients are in the convalescent care category. Although limited in staffing, a greater number and wider variety of laboratory tests are available than in the CSH or MASH (see appropriate Tables 7-1 through 7-4).

d. The laboratory in the GH is the most complex and sophisticated hospital laboratory in the theater. In addition to medical laboratory specialists and NCO personnel, a clinical laboratory officer, a microbiologist, and a biochemist are assigned to the unit. The GH may be augmented with additional staff, such as a medical team, pathology, and equipment to provide a greater range of medical laboratory services. (Chapter 5 discusses the medical team, pathology.) Laboratory personnel assigned to the GH may serve as consultants to personnel assigned to other hospitals in the CZ or COMMZ and may provide staff functions to higher headquarters in the TO.

e. The AML, once fielded, will be assigned to a MEDCOM or medical brigade on a one per theater basis. This high-technology, hospital-independent laboratory will be established in the field or military operations on urbanized terrain in proximity to the senior medical command element. Unlike laboratories organic to hospitals, the AML performs medical laboratory procedures for the evaluation of environmental issues and

functions with a broader scope related to the health of the TO armed forces as a whole.

(1) The AML may be task organized for deployment in the theater as required. The unit is composed of highly sophisticated technical equipment and highly trained personnel including doctoral scientists, pathologists, clinical laboratory officers, and medical laboratory NCOs and specialists. The AML will have the following sections:

- Headquarters Section.
- Biochemistry Section.
- Anatomic Pathology Section.
- Microbiology Section.
- Veterinary Laboratory Section.
- Environmental Health Section.
- Epidemiology Section.

(2) The AML will—

- Provide laboratory analysis and scientific assessment of battlefield health hazards to include NBC, DE, and endemic threats.
- Thoroughly integrate its analytical resources to assess the total battlefield health environment (individual patient care is not directly supported).
- Task organize a multi-disciplined team from within its own resources to support military contingency operations, civic action programs, and humanitarian support missions.

- Analyze samples to assist in treatment of biological and chemical casualties.

- Perform—

- Investigative biochemical and toxicological analyses.

- Microbiological identification and characterization.

- Serological testing related to diagnoses and prevention of disease.

- Analyses of food items suspected of contamination.

- Radiological health hazard analyses and assessments.

- Detection and diagnoses of zoonotic diseases.

- Gross and anatomic pathology support to include aerospace and forensic pathology studies.

- Epidemiological analyses and assessments.

- Entomological analyses and limited pesticide adequacy assessments.

- Evaluation of environmental samples and clinical specimens for NBC contamination.

(3) The AML will require high technology identification kits and monitoring devices. Organic equipment is highly sophisticated and will require significant logistical support for continued operation. The unit has the ability to send a small task-oriented team forward into the corps area for short periods to investigate unique command medical problems. Samples beyond the

analytical capabilities of the laboratory or samples requiring analytical confirmation by more sophisticated means will be forwarded to CONUS.

(4) The HSS planner must consider the following limitations of the AML:

- The unit is designed for a flexible response to the needs of the theater. It can be task-organized for 24-hour per day operations, but has very limited mobility. The assigned TOE organic vehicles will be required for task organization of teams and administration and logistical functions.

- The unit requires good lines of communication, both forward into the theater, and back to CONUS. The unit is dependent upon reagent quality water, electrical power, refrigeration, and responsive supplies.

- The unit must be accessible by air and ground transportation to receive samples and specimens from throughout the theater.

7-7. Theater Laboratory Support Procedures

a. Tables 7-1 through 7-5 depict the medical laboratory testing capabilities at various echelons of care.

b. The HSS planner must be prepared to respond to changes in tactical plans and operations. Increased patient work load caused by battlefield events, changes in evacuation policies, deteriorating environmental conditions, or outbreaks of disease, may drastically affect the laboratory support required.

c. The planner must maintain flexibility and respond to changing needs with the available medical resources. Echelon II laboratory support from the medical battalion, area support and

Echelon III laboratory support from CSH and MASH units may need to be adjusted for short

periods of time to concentrate personnel and equipment at the point of critical need in the HSS plan.

CHAPTER 8

BLOOD MANAGEMENT**Section I. BLOOD PROGRAMS****8-1. The Armed Services Blood Program**

The Armed Services Blood Program (ASBP) provides transfusion products, when required, to members of the US armed forces located anywhere on earth. Through the joint efforts of the US Army, US Navy, and USAF, (tri-Service) blood or blood products can be collected, processed, and shipped to military MTFs throughout the world. Planning for effective management of blood and blood products is a continuing, dynamic process requiring a coordinated highly responsive system that extends from the battlefield to CONUS. The system will ensure that viable blood products are available for transfusion when and where required.

8-2. Armed Services Blood Program Office

The Armed Services Blood Program Office (ASBPO) (Figure 8-1) is chartered by DOD to coordinate the provision of blood products throughout the Services to meet medical requirements during national emergencies, or for overseas military operations. It is under the policy guidance of the Assistant Secretary of Defense (Health Affairs).

b. The ASBPO is organized to coordinate and monitor the blood programs of the Army, Navy, USAF, and each unified and specified command. The ASBPO coordinates standardized policies and procedures for collection of blood and operation of the Services' blood programs. It provides specifications on the essential characteristics of required blood program equipment to the DMSB. The ASBPO performs as the DOD liaison with other federal, civilian, and allied agencies concerning blood-related matters.

c. The individual Service components in support of the ASBPO are responsible for the following:

(1) The Army maintains OPCON of the ASBPO and provides funding, personnel, facilities, and supplies. If military blood requirements exceed capabilities, the Army provides funds for procurement of blood from civilian sources.

(2) The USAF designates the locations of Armed Services Whole Blood Processing Laboratories (ASWBPLs) at CONUS air terminals. The USAF also coordinates the tri-Service staffing and the operational funding of ASWBPLs for the shipment of blood and blood products to locations OCONUS. Additionally, the USAF operates and staffs blood transshipment centers (BTCs), the initial receiving points for blood entering the AO at most major overseas military airfields.

d. Upon mobilization or during periods of increased blood needs for military operations, the ASBPO directs the Services to meet required quotas for blood or blood products to be shipped to designated ASWBPLs.

8-3. Service and Command Blood Programs

a. The US Army, US Navy, USAF, and unified and specified commands maintain separate command blood programs to meet normal peacetime requirements. To meet ASBPO requirements, the Services direct expansion of their blood donor operations (collection, processing, and shipment of blood). When required to meet operational needs, donor centers and designated CONUS MTFs rapidly expand their blood collecting capabilities. As necessary, additional donor centers are opened.

b. Each unified command has a separate integrated system for providing blood products to the various Service component MTFs. The unified command Joint Blood Program Office (JBPO) serves as the overall blood manager within each

command. In support of unified command OPLANs, ASBPO sets quotas for shipments of liquid and frozen blood products from CONUS ASWBPLs to the respective commands. Frozen blood products

may be pre-positioned in designated unified commands in sufficient quantity to support blood requirements during the initial days of an armed conflict.

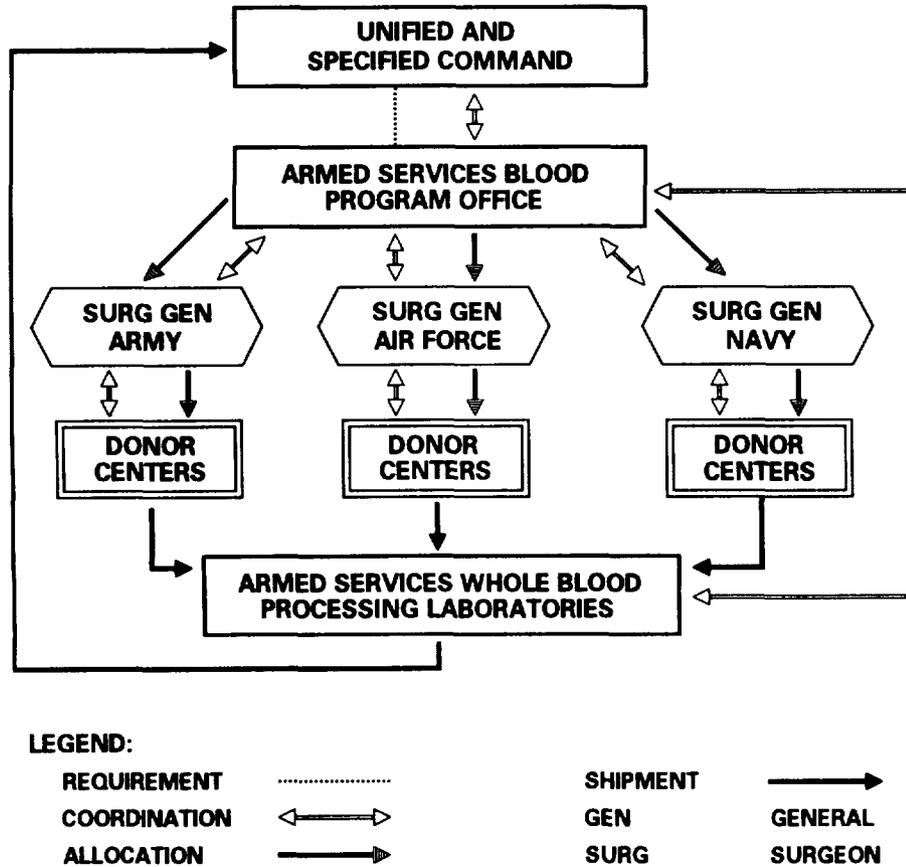


Figure 8-1. The Department of Defense Armed Services Blood Program.

8-4. Joint Blood Program Office

a. The JBPO of a unified command is under the staff supervision of the command surgeon. This office is responsible for the joint blood program management in the TO. The organization of the JBPO depends on the overall command mission. Personnel are assigned from all components

as necessary to meet the blood operational requirements. The functions of the JBPO include—

- Enforcing the ASBP policies.
- Coordinating component blood programs, blood product requirements, and capabilities within the TO.

- Advising the theater commander on all matters pertaining to theater blood management activities.

- Managing the theater wartime blood distribution system.

- Providing managerial and technical oversight of all DOD military blood activities within the AOR.

- Planning and executing joint blood program exercises.

- Developing the concept of operations for the blood program and writing supporting OPLANs using command mobilization planning factors.

- Evaluating blood donor centers and BTCs to ensure compliance with policies, standards, and regulations of the ASBPO, JBPO, Food and Drug Administration (FDA), and American Association of Blood Banks (AABB).

- Maintaining direct liaison with the ASBPO.

- Establishing and coordinating the AJBPOs as necessary.

b. The unified command surgeon may direct the establishment of AJBPOs to provide regional blood management in the TO. An AJBPO would likely be established upon activation of a JTF as outlined in the respective OPLAN/OPORD. The functions of an AJBPO are similar to a JBPO, but for a more limited AOR. The AJBPOs will—

- Coordinate blood requirements of all MTFs in the AOR regardless of Service component.

- Develop supporting plans for military operations.

- Provide operating instructions for donor recruitment, collection, processing, and distribution of blood and blood products within the AOR.

- Evaluate host-nation capabilities for blood product support of US forces requirements.

- Coordinate and request assistance from the JBPO when unable to meet local requirements within existing capabilities.

8-5. Army Blood Program (Theater Army)

a. Within the TO, the TA commander is responsible for the Army Blood Program. The TA surgeon is responsible for staff supervision of the program, and the blood bank officer assigned to the TMMMC is responsible for its management.

b. The management and distribution of Class VIIIb (blood and blood products) is a function of the JBPO *within the theater*. The JBPO is supported by Service health service logistics personnel to accomplish this mission.

(1) In the mature theater, blood management is based on resupply of liquid red blood cells (RBCs) and fresh frozen plasma (FFP) from the CONUS donor base.

(2) In a developing theater, during the buildup period, immediate blood requirements may be provided by pre-positioned frozen blood products. These stocks are designed to meet initial blood requirements until the logistical system can deliver liquid blood to the TO.

c. Liquid and frozen blood products enter the theater through the USAF BTCs for further distribution to Army blood bank platoons assigned to the medical battalion, logistics (forward or rear). Army MTFs are supplied required blood products

from the blood bank platoons. However, MASH units operating in divisional areas and the Echelon II MTFs are supplied by the forward supply

platoon (FSP) of the medical battalion, logistics (forward). Liquid blood products are issued as required down to Echelon II medical units.

Section II. BLOOD SUPPORT IN THE CONTINUUM OF CARE

8-6. The Army Blood Support System

Blood and blood product support to the TO is provided by echelon as follows:

a. Echelon I. No blood or blood product support is provided at this echelon.

b. Echelon II. Blood storage and transportation refrigerators are used by the FSP to provide Group O RBCs to Echelon II medical units. The FSP is supplied by the blood bank platoon assigned to the corps medical battalion, logistics (forward).

c. Echelon III.

(1) Each MASH stores liquid blood products. The MASH is limited to Group O RBCs ONLY. Each CSH stores liquid (ABO group-specific) RBCs, FFP, and platelets. Each Echelon III hospital has emergency blood collection capability, but does not currently have the capability to perform serological testing such as hepatitis and the human immunodeficiency virus (HIV) on donor units. Echelon III hospitals are routinely supplied with blood by a blood bank platoon assigned to the medical battalion, logistics (forward).

(2) The blood bank platoon (forward) is resupplied from a supporting USAF BTC or by a medical battalion, logistics (rear). The blood bank platoon (forward) leader serves as the corps blood program officer. He manages blood and blood products through a system of blood-specific report formats (see Section V) in conjunction with the Defense Blood Standard System (DBSS). The

blood platoon leader may also be appointed as the AJBPO and may be responsible for blood management on an area or geographical basis.

d. Echelon IV.

(1) Each FH and GH stores liquid (ABO group specific) RBCs, FFP, and platelets. Blood distribution and reporting is similar to that for Echelon III hospitals.

(2) The blood bank platoon assigned to the medical battalion, logistics (rear) is resupplied from a supporting USAF BTC. The platoon leader may also serve as the TA blood manager until the TMMMC is operational.

e. Level V. The Army blood support system is an integral part of the ASBP. Upon mobilization, donor centers and MTFs increase their blood drawing capabilities as directed by the Army Blood Program Officer. Additional donor centers are opened as required. All of these facilities draw, process, and prepare blood and blood products for shipment to ASWBPLs who send the blood to the TO.

8-7. Theater Army Blood Capabilities

Theater Army blood capabilities are listed by echelon of care.

a. Echelon I. Blood products: None.

b. Echelon II.

(1) Blood products: Group O RBCs. Table 8-1 illustrates blood products that are available to the theater, and Table 8-2 lists blood transfusion practices by echelons.

(2) Methods of operation: Blood storage and transportation refrigerators will be used to transport blood from the FSP to Echelon 11 medical units. The FSP will be resupplied by the blood bank platoon at the medical battalion, logistics (forward) using iced blood boxes.

(3) Organization: Medical battalion, logistics (forward) personnel handle the distribution of blood to the division.

(4) Transportation: Division and corps transportation assets, as well as ground and aeromedical evacuation assets, will be used to transport blood.

c. Echelons III and IV.

(1) Blood products:

(a) Red blood cells: Liquid (ABO group specific) RBCs will be available at the CSH, FH, and GH. At the MASH, *only* liquid Group O RBCs will be available.

(b) Fresh frozen plasma: Available at the CSH, FH, and GH.

(c) Platelet concentrate: Available in limited quantities at the CSH, FH, and GH. Platelets will be provided by emergency blood collection at the MTF or by the blood bank platoon.

(2) Methods of operation:

(a) MASH: Blood bank capabilities are limited to—

- Storing 200 to 240 units of liquid Group O RBCs.
- Collecting and processing (ABO and Rh only) a limited number of units of whole blood on an emergency basis.

(b) Combat support hospitals, FHs, and GHs: Blood bank capabilities in these units will allow for—

- Storing liquid RBCs, FFP, and platelets.
- Performing cross-match procedures.
- Thawing FFP for transfusion.
- Emergency collection of a limited number of units of whole blood.

(c) The blood bank medical laboratory procedures performed by echelon are listed in Chapter 7.

d. Additional Requirements. As directed by the JBPO, the TA may be required to provide blood and blood products support to other Services or allied MTFs in its geographical area.

Table 8-1. Blood Products (Class VIIIb) Available to the Theater

PRODUCT	UNIT OF ISSUE	STORAGE	SHELF LIFE FOR TRANSFUSION	ECHELON AVAILABILITY	BLOOD GROUP AVAILABILITY			
					O±	A±	B±	AB±
LIQUID RBCs	APPROX 250 mL	35 DAYS	35 DAYS	II & III (MASH) III (CSH) & IV	100% 50%	— 40%	— 10%	— —
FROZEN/DEGLYCEROLIZED RBCs	APPROX 250 mL	21 YRS	3 DAYS (POST-WASH)	III & IV	100%	—	—	—
FFP	APPROX 250 mL	3 YRS	24 HRS (POST-THAW)	III & IV	—	50%	25%	25%
PLATELET CONCENTRATE	APPROX 60 mL	5 DAYS	5 DAYS	III & IV	* —	* —	* —	* —

LEGEND:

APPROX mL APPROXIMATELY MILLILITER

* Will be provided by blood bank platoon and/or MTFs by in-theater blood collections.

Table 8-2. Blood Transfusion Practices by Echelon

ECHELON (E)	BLOOD PRODUCT	ABO & RH GROUP	TRANSFUSION SERVICE PROCEDURES	STORAGE CAPACITY	BLOOD RESUPPLY
I	NONE	—	—	—	—
II	RBCs	O RH +/-	ABO GROUP DONOR RBCs**	50 UNITS RBC PER FIELD MED REFRIGERATOR	IIIE BSU
III D304*	RBCs	O,A,B RH +/-	ABO & RH GROUP PATIENT AND DONOR RBCs**	480 UNITS LIQUID RBC	IIIE BSU

Table 8-2. Blood Transfusion Practices by Echelon (Continued)

ECHELON (E)	BLOOD PRODUCT	ABO & RH GROUP	TRANSFUSION SERVICE PROCEDURES	STORAGE CAPACITY	BLOOD RESUPPLY
III D304* (CONTINUED)			MAJOR SIDE IMMEDIATE SPIN CROSSMATCH		
III D404*	RBCs	O,A,B RH +/-	SAME AS D304	475 UNITS FZ 480 UNITS LQ	IIIE BSU
	FFP	A,B,AB RH +/-	NONE	20 UNITS	IIIE BSU
	PLATELET CONCEN- TRATE (PLT)	O,A RH +/-	NONE	NA	IIIE BSU OR MTF
IV	SAME AS D404	SAME AS D404	SAME AS D404	SAME AS D404	IVE BSU
* Capability to collect and perform the ABO and RH group determination on 180 units of whole blood for extreme emergencies. D304 is liquid-only DEPMEDS module. D404 is hybrid liquid (LQ)-frozen (FZ) DEPMEDS module. D405 is a frozen blood augmentation set that converts the D304 to the D404 capability.					
** Not necessary if ASWBPL has verified the ABO group.					

8-8. Blood Supply from Continental United States

a. The CINC of the unified command determines the blood requirements and transmits requests to ASBPO. The ASBPO allocates requirements to each of the Services based on operational requirements and the available donor base (the current allocation formula is Army—33 percent, Navy—33 percent, USAF—33 percent).

b. Each Service blood program officer assigns quotas (number of units by ABO/Rh group) to their major Army command (MACOM) or major commands (MAJCOMs). Donor centers and MTFs operating blood collection sites are given quotas by

their MACOM or MAJCOM for shipment of blood and blood products to a designated ASWBPL. Current DOD policy requires shipment of *only packed RBCs* with at least 50 percent of the units from Group O donors. Whole blood is not shipped.

c. At the ASWBPL, the ABO and Rh group of the shipped units are reconfirmed. Blood boxes are packed and iced, palletized, and shipped to requesting overseas commands via the USAF BTCs.

d. The BTCs—

 Z Receive blood products shipped to the theater from ASWBPLs or other BTCs.

- Receive and store up to 7,200 units of RBCs for further distribution to appropriate command facilities as directed by the JBPO or AJBPO.
- Perform quality control checks of blood shipments ensuring maintenance of

appropriate temperature ranges during shipment and check products for gross evidence of contamination or cellular destruction.

- Resupply blood products to supported blood bank platoons of the medical battalion, logistics (forward and rear) under the direction of the receiving JBPO or AJBPO.

Section III. PLANNING FOR EFFECTIVE BLOOD MANAGEMENT

8-9. Coordination

Continual planning for mobilization and other contingencies enable the Services to rapidly respond to situations requiring blood support. Planning for effective blood management is a continuous process.

a. A coordinated effort between the theater JBPO and the theater J3 (Operations and Plans) is required for successful planning. Operational plans dictate blood management strategy. Some issues include: Will blood be required immediately upon arrival of the combat units? Should blood be brought into the area with the initial medical units? Where will the air terminals be located?

b. The receipt, storage, and distribution of blood products require special consideration and procedures to ensure coordinated effort to maximize use of communications, storage facilities, and transportation.

c. Location of BTCs depends on the location of major air terminals and on the OPLANs. Blood storage capability at a BTC may be expanded to meet overall command requirements. Knowledge of the available Army blood bank platoons and the types and locations of the MTFs in the CZ is necessary for proper planning.

d. Timely communication with the next higher level of support usually ensures that

adequate supplies of blood and blood products are available as required.

8-10. Blood Planning Factors

a. Blood shipped into the AO will be packed RBCs only. Fresh frozen plasma and platelet concentrate will also be available. Subject to availability, RBCs shipped from CONUS are packed with the following unit group distributions:

BLOOD GROUP DISTRIBUTION

O Rh Positive	40%
O Rh Negative	10%
A Rh Positive	35%
A Rh Negative	5%
B Rh Positive	8%
B Rh Negative	2%

b. The primary use of RBCs is to provide oxygen carrying capability to the traumatized patient. Volume expansion is adequately accomplished with crystalloid and colloids. In the severely traumatized patient, the need for coagulation factors may arise. In such cases, component therapy using FFP and/or platelets will be available at hospitals other than the MASH units.

c. Blood planning factors are programmed in the Medical Planning Module by the

Joint Data Systems Support Center and subsequently used by the respective unified command medical planners to generate daily blood product requirements for the theater.

d. Initial blood planning factors to determine the estimated total blood product requirements for the TO as established in unified command OPLANs are listed in Table 8-3.

Table 8-3. Blood Planning Factors

BLOOD COMPONENT	PLANNING FACTOR
RED BLOOD CELLS	*4 UNITS FOR EACH WIA AND EACH NBI CASUALTY INITIALLY ADMITTED TO A HOSPITAL
FRESH FROZEN PLASMA	0.08 UNITS FOR EACH HOSPITALIZED WIA OR NBI
PLATELET CONCENTRATE	0.04 UNITS FOR EACH HOSPITALIZED WIA OR NBI

* For blood planning purposes, only count the WIA or NBI once in the system, not each time the patient is seen or admitted.

e. Except in extreme emergencies, blood shipped from CONUS will reduce the requirements to collect blood in the theater during an armed conflict. Capabilities to collect and process blood in the theater are limited. Emergency collection capabilities exist at all DEPMEDS-equipped MTFs and blood bank platoons. Currently, this capability is the only source for providing platelets. The planner must realize that corps facilities do not have the personnel, supplies, or equipment for extended donor operations or for serological testing, such as HIV and hepatitis.

8-11. Computing Initial Blood Requirements

a. The expected admission rates per day are critical in initial planning. These rates, along with the blood planning factors in Table 8-3, will provide the planner with an INITIAL estimate of daily blood requirements. A sample calculation is shown in Figure 8-1.

b. The reaction time of the ASBPO or other supporting JBPO must be considered. Optimally, receipt by the requesting command of blood or blood products for sustainment of operations should take no longer than 72 hours. Most MTFs should plan to keep a 3-day supply of blood on hand. Most blood supply units should have a 5-day inventory goal. Realistically, a planner may expect a 4- to 5-day resupply response time from outside the theater dependent on several factors such as—

- Availability of air transportation.
- Location of the operational needs.
- Need for the products to be received at the BTC.

c. Currently, the planner can expect RBCs to be at least 8 to 10 days old upon receipt. Blood collected in CPDA-1 (an anticoagulant

preservative solution) and stored at 1° to 6° C expires 35 days after collection. This leaves an effective shelf life of 25 to 27 days for use within the TO.

d. Once located in the operational area, it is necessary for the JBPO to maintain current information on combat situations and on the anticipated actions of friendly and enemy forces. The best source of this information is the theater

J2 (Intelligence). As required, the planner can anticipate increasing requirements for the operational area as a whole, or he may relocate resources within the operational area to support localized operations. A good reporting and inventory control system is crucial: How much blood is in the command? Where is it concentrated? Is it where the “action” is? Should blood or blood components be relocated?

EXPECTED INITIAL ADMISSION RATE FOR WIA AND NBI = 8 PER 1,000 PER DAY

TOTAL PERSONNEL = 10,000

RBC PLANNING FACTOR = 4 UNITS

FORMULA:

$(\text{TOTAL PERSONNEL} / 1,000) \times \text{ADMISSION RATE PER DAY} \times \text{FACTOR} = \text{BLOOD OR BLOOD COMPONENT PER DAY}$

EXAMPLE:

$(10,000 / 1,000) \times 8 \times 4 = 320 \text{ UNITS OF RBCs PER DAY}$

Figure 8-2. Sample calculations for initial blood requirements.

8-12. Host-Nation Support

The Armed Forces Medical Intelligence Center, the theater’s J2, J3, and J5 (Civil Affairs), and the unit’s intelligence element will provide valuable information concerning the willingness and ability of the host country to provide blood bank support. This support could take the form of additional units of blood or RBCs, additional refrigerated storage space such as large capacity walk-in refrigerators in local hospitals or hotels, ice-making capability, or sources for dry ice to store FFP or frozen RBCs.

b. Blood bank platoons and MTFs, along with units involved primarily with storage and shipment of blood and blood components, must develop alternative sources for ice and refrigeration in case of equipment failure. Options include other military units in the area or host-country sources.

8-13. Logistical Considerations

a. After decisions have been made concerning the locations of the blood bank platoons and the concept of operations for blood support, plans must be coordinated to effect the timely movement of blood and blood products throughout the TO. Prior planning must be accomplished with the Joint Movement Control Office to set up procedures for emergency movement of blood. Specific information required when shipping blood by air includes: weight, number of units, and number of boxes (see Table 8-4). Planners must keep in mind that blood and blood products maybe distributed on an area basis to other Services and allied MTFs.

b. Various modes of transport/delivery systems are available to move blood within the theater.

(1) The following modes may be used to transport blood from the BTC to the blood bank platoon:

(a) Air (Air Force, corps, or medical assets).

(b) Helicopter (sling load): UH-1—1,200 units of blood; UH-60—4,800 units of blood.

(c) Ground (corps or HSS assets).

(d) Parachute.

1. Low-altitude parachute extraction system (LAPES)—4,800 units of blood.

2. Cargo delivery system (CDS)—1,440 units of blood.

3. Naval emergency air cargo delivery system (NEACDS)—1,440 units of blood.

(2) The following modes may be used to transport blood from the blood bank platoon to the MTF:

(a) Air (corps or medical assets): UH-1—900 units of blood; UH-60—1,500 units of blood.

(b) Ground (corps or medical assets).

c. After transportation requirements and priorities have been established, planning considerations must be given to maintaining adequate levels of required supplies for the planned operational scenario. Examples of required supplies include—

- Blood bags with the appropriate anticoagulant preservative solutions.
- ABO and RH grouping antisera.
- Test tubes.
- Blood shipping boxes.
- Plastic bags.
- Adequate supply office for maintenance of required blood storage temperature during transit.

Table 8-4. Maximum Capacities for Blood Product Shipments

1. Pallet, 463L.

a. Mission/capabilities.

(1) Provides one standard size pallet capable of transporting 120 boxes containing a maximum of 3,600 units of human packed RBCs.

(2) The 463L standard pallet measures 108 x 88 x 4 inches. The maximum loaded height is 96 inches and the maximum allowable weight is 8,000 pounds. An unloaded pallet with cargo net weighs 354 pounds.

b. Characteristics of loaded pallets.

Table 8-4. Maximum Capacities for Blood Product Shipments (Continued)

(1) A loaded pallet with 120 boxes filled with 30 units each of RBCs weighs 5,394 pounds and has a volume of 442 cubic feet. The boxes are stacked 4 boxes wide x 5 boxes long x 6 boxes high. Total capacity is 3,600 units of RBCs.

(2) A loaded pallet with 120 boxes of FFP weighs 4,680 pounds and has a volume of 442 cubic feet. Total capacity is 2,880 units of FFP.

2. Insulated Blood Shipping Containers.

a. Specifications.

- (1) National Stock Number (NSN) 8115-00-935-9761.
- (2) Empty weight is 9 pounds.
- (3) Cubic feet is 3.5.
- (4) Exterior dimensions—19 inches long x 18 inches wide x 16 inches high.
- (5) Interior dimensions—15 inches long x 14 inches wide x 11 inches high.

b. Capacity.

- (1) Liquid (nonfrozen) RBCs and 14 pounds of cubed and glistening wet ice.
 - (a) 30 Units of RBCs: weight—41 pounds.
 - (b) 20 Units of RBCs, plus 24 administration sets: weight—40 pounds.
 - (2) Frozen plasma and 20 pounds of coarsely broken dry ice (solid state CO₂): 24 units of FFP weighing 39 pounds.
-

Section IV. BLOOD MANAGEMENT ACROSS THE SPECTRUM OF OPERATIONS

8-14. Operations Other Than War

a. *Peacetime.* Blood support will be provided by the blood bank platoon of the medical battalion, logistics (forward). This unit is deployed as necessary based upon requirements for blood and blood products. The blood bank

platoon requires support from the senior medical command and control headquarters. Additional blood support may be provided by hospitals in the TO.

b. *Conflict.* Blood support will come from the blood bank platoons in the medical

battalions, logistics (forward) and (rear). These platoons will be deployed with the battalions. Deployed hospitals can provide only emergency blood collections (180 units).

8-15. War

Blood support will be the same as in conflict, above. However, when personnel are placed in MOPP, the NBC environment will have a detrimental impact on blood banking capabilities. All procedures may be performed until MOPP 4 is reached. After MOPP 4 is reached, procedures requiring intricate manual manipulations such as deglycerolizing, thawing, and crosshatching procedures will be difficult. Chemically-protected overwraps for the standard liquid blood shipping container are available (blood box liner, NSN 6530-01-325-4360) and should be used to cover all unprotected boxes of blood in the event of a possible chemical attack.

This paragraph implements STANAGs 2939 and 2135 and QSTAG 815.

8-16. Allied Support Agreements.

The exchange of blood stocks, supplies, and equipment between US forces and those of allied forces is established under bilateral and/or multilateral blood assistance agreements.

a. In Europe, STANAG 2939 establishes technical standards for blood, blood donors, and associated equipment. Blood requirements which exceed normal national blood supply capability can be requested from NATO nations using procedures contained in STANAG 2135.

b. The aim of QSTAG 815 is to establish a policy for blood supply in the AO in which members of two or more participating nations are deployed.

8-17. Blood Support for Enemy Prisoners of War

a. The Army irresponsible for providing medical care and treatment for EPW. The Army may become responsible for providing medical care or assistance to displaced persons, refugees, civilian internees, and detained personnel. Articles 13 and 130 of the Geneva Convention Relative to the Treatment of Prisoners of War do not prohibit the maintenance of lists of the blood types of prisoners of war who have volunteered to furnish blood. There is nothing improper in accepting donated blood from EPW. To perform this function, available intelligence data should be used in computing requirements for blood support, supplies, and equipment needed. The decision to use donated blood from EPW to treat US casualties, though not a violation of the Geneva Conventions, would also be dependent upon available medical intelligence data concerning the incidence and prevalence of infectious diseases in the EPW population.

b. Blood stocks, supplies, and equipment captured from the enemy are considered to be neutral and protected property and are not to be intentionally destroyed. The blood materiel should be turned over to a designated blood bank platoon. Since captured medical personnel are familiar with their blood supplies and equipment, the captured items are especially valuable in the treatment of EPW. The blood bank platoon will use these blood supplies to support the MTF assigned responsibility for the care and treatment of EPW. Use of these captured items for EPW and the indigenous population helps to conserve other blood stocks, supplies, and equipment.

Section V. BLOOD REPORTING SYSTEM

8-18. Purpose

The purpose of the standardized blood reporting system is to project blood requirements, request blood, report blood inventories, and provide information on the overall blood element operations of all Services in the TO. The ASBPO has developed the contingency blood reports and use of the US Joint Message or Message Text Format(USJMTF). The two standard joint message text format reports used to report blood program operations are—

- The Blood Report (BLDREP).
- The Blood Shipment Report (BLDSHIPREP).

8-19. Use of the Blood Report

a. The BLDREP provides a standardized message format that is used to report blood

inventories, request blood, and project requirements. The BLDREP in its full or abbreviated form is used throughout all echelons of the blood management system.

b. All MTFs, including Echelon II, will use the standard BLDREP format. The Joint Interoperability of Tactical Command and Control (JINTACC) Automated Message Preparation System (JAMPS) and the Message Text Format Editor (MTFE) are two software programs that may be available to automate the BLDREP formatting. (The DBSS will eventually provide the capability to generate these reports.)

c. Depending upon the situation, telephonic BLDREP or written BLDREP delivered by courier maybe used in the TO. To help reduce the length of the messages, a master menu of blood report codes has been standardized as listed in Figure 8-3.

MANAGEMENT:

- A. Joint Blood Program Office (JBPO)
- B. Area Joint Blood Program Office (AJBPO)
- C. Armed Services Whole Blood Processing Laboratory (ASWBPL)
- D. Blood Donor Center (BDC)
- E. Blood Products Depot (BPD)
- F. Blood Transshipment Center (BTC)
- G. Blood Supply Unit (BSU)
- H. Medical Treatment Element (MTE)
- I. Naval Vessel (NV)

PRODUCTS:

- J. Red Blood Cells (RCZ)
- K. Whole Blood (WBZ)
- L. Frozen Red Blood Cells (RCF)
- M. Fresh frozen plasma (PFF)
- N. Frozen Platelets (PCF)

PRODUCTS (Continued):

- O. To Be Determined
- P. To Be Determined

BLOOD GROUPS:

- Q. Random Group and Type O,A,B
- R. Random Group and Type O,A
- S. Random Type O
- T. Random Type A
- U. Random Type B
- V. Random Type AB

TIME FRAME:

- W. Required within 12 hours
- X. Required within 24 hours
- Y. Required within 48 hours

MISCELLANEOUS:

- Z. Not applicable or see remarks

Figure 8-3. Blood report master menu.

d. The Theater Army Blood Program manager may assign brevity codes and designate those lines to be utilized in daily reporting. Locations of activities will be reported *only* on the *first* report or upon relocation.

e. Requests for RBCs should normally be based on a random distribution of blood groups (that is, 40 percent O positive, 10 percent O negative, 35 percent A positive, 5 percent A negative, 8 percent B positive, 2 percent B negative). At Echelons 111 and IV, ABO and Rh group-specific RBCs should be transfused whenever possible. Certain designated MTFs will require Group O RBCs only. Upon activation, each MTF should request a base load of blood components.

f. Medical treatment facilities should submit a daily BLDREP to their blood supplier. A complete BLDREP should reflect the following:

- Line 1: Day-time-zone of BLDREP.
- Line 2: Reporting unit's name or designator code.
- Line 3: Reporting unit's activity brevity code letter.
- Line 4: Unit location in latitude/longitude (LAT/LONG), universal transverse Mercator (grid) (UTM), or place name.
- Line 5: Naval Vessels ONLY: Projected location in LAT/LONG or place name for delivery of blood products.
- Line 6: Naval Vessels ONLY: Estimated time of arrival (day, time, time zone, month, and year at the projected location).
- Line 7: Name or designator code of the unit or activity reporting the status of blood supplies if other than message originator.

- Line 8: Reporting unit's activity brevity code letter if other than message originator.

- Line 9: Number and code of each blood product on hand. (Include blood and blood products set up for transfusion.)

- Line 10: Number and code of each blood product required. (Daily request should be the number of units of blood/blood products needed to replace what was used over the 24-hour reporting period.)

- Line 11: Estimate of total number of blood products by group to expire in next 7 days. (This becomes extremely important when scheduled combat operations are delayed or extended and when using frozen blood.)

- Line 12: Estimate of total number of blood products by group required for resupply in the next 7 days. (This number is normally 7 times the amount of blood product transfused during the past 24 hours. However, this number should reflect future combat operations. Offensive operations will result in increased blood utilization versus defensive operations. Close coordination between intelligence/operations centers and blood managers is essential.)

- Line 13: Narrative. The number of units received, transfused, shipped, destroyed, and expired within past 24 hours. Also, include any information that would have an impact on your blood mission such as loss of refrigeration or storage capability, or shortage of typing sera.

- Line 14: Message hour-minute-zone when required.

- Line 15: Authentication in accordance with JTF procedures.

NOTE

Lines 4 through 8, 14, and 15 are not normally used and can be deleted at the discretion of the Theater Army Blood Program Manager. An example of a completed BLDREP is shown in Figure 8-4.

g. Transmission of the BLDREP.

(1) *Method.* Message is the primary method with voice as alternate (see Figure 8-5). Communications capabilities of originator and addressee, as well as urgency of the message subject/text material, will determine the method. Messages should be sent as IMMEDIATE because of very short blood expiration dates. Correct plain language addresses from a current directory must be used. The BLDREP maybe transported by courier if that is more practical and expedient. When the DBSS is implemented, it will be possible to transmit unclassified reports between organizations.

(2) *Frequency.* Required as follows unless otherwise directed:

(a) Medical treatment facility (including Echelon II) to blood supplier: daily as of 2359Z; report required not later than 0400Z.

(b) Forward blood supplier to blood bank platoon: daily as of 2359Z; report required not later than 0400Z.

(c) Blood bank platoon to an AJBPO: daily as of 2359Z; report required not later than 0400Z.

(d) Blood transshipment center to an AJBPO: daily as of 2359Z; report required not later than 0400Z.

(e) Area Joint Blood Program Office to JBPO: daily as of 0400Z; report required not later than 0800Z.

(f) Joint Blood Program Office to ASBPO: daily as of 0800Z; report required not later than 1200Z.

h. Blood report policies are listed below:

(1) Information copies should be kept to a minimum and be specifically required by the respective OPLAN. Increased quantities of information copies overload the message channels.

(2) If an AJBPO is not established, the blood bank platoon and BTC will report directly to the JBPO.

(3) The addressee will normally be the next higher organization level with whom the reporting unit (originator) is authorized direct communication: MTF to blood supplier; blood supplier to AJBPO; blood supplier to JBPO (if AJBPO not established); BTC to AJBPO; BTC to JBPO (if AJBPO not established); AJBPO to JBPO; JBPO to ASBPO.

(4) A blood supply unit of one Service may receive BLDREPs from an MTF of another service when the blood supply unit is in an area support role.

(5) All BLDREPs should be classified at the lowest level required to meet operational constraints.

(6) Each MTF including those at Echelon II will submit a BLDREP to the supporting blood supplier, as required.

(7) The forward blood supplier will submit a BLDREP to a blood bank platoon, as required.

(8) The blood bank platoon will submit a BLDREP to an AJBPO on the status of blood components in the blood bank platoon, as required. The report will reflect the blood bank platoon's inventory and anticipated blood requirements.

(9) The BTC blood manager will submit a BLDREP to an AJBPO on the status of blood components in the BTC.

(10) The AJBPO will submit a BLDREP to the JBPO on the status of blood components in the BTCs and blood supply bank platoons, as required.

(11) The JBPO will submit a consolidated BLDREP to the ASBPO on the status of blood components in each Unified Command Joint Blood Program area.

FM: MEDICAL TREATMENT FACILITY (ELEMENT)
 TO: BLOOD SUPPLIER
 INFO: AS DETERMINED BY COMMAND OPLAN
 CLAS
 OPER/DESERT SHIELD//
 MSGID/BLDREP/32CSH/110100ZJAN92//
 ASOFTDG/102359ZJAN92// (Line 1)
 REPUNIT/32CSH/H// (Lines 2,3)
 BLDINVT/-/100JS/80JT/20JU/50MV// (Line 9)
 BLDREQ/-/50JSX/40JTX/10JUX/25MVY// (Line 10)
 BLDEXP/-/25JS/5JT// (Line 11)
 BLDEST/-/700JQ// (Line 12)
 CLOSTEXT/RECEIVED-50JS 50JT/TRANS-
 FUSED-60JS 40JT/EXPIRED-10JS/SHIPPED-0/
 REFRIGERATOR NEEDS REPAIR// (Line 13)

REPORT EXPLANATION:
 LINE 1: BLOOD REPORT AS OF 2359Z 10 JAN 92
 LINES 2,3: REPORTING UNIT IS 32D CSH, H CODE = MEDICAL TREATMENT FACILITY
 LINE 9: ENDING INVENTORY = 100 UNITS OF RANDOM TYPE O, 80 UNITS OF RANDOM TYPE A, AND 20 UNITS OF RANDOM TYPE B RBCs. CSH HAS 50 UNITS OF FFP
 LINE 10: THE CSH NEEDS 50 UNITS OF RANDOM TYPE O, 40 UNITS OF RANDOM TYPE A, AND 10 UNITS OF RANDOM TYPE B RBCs WITHIN THE NEXT 24 HOURS AND 25 UNITS OF FFP WITHIN 48 HRS
 LINE 11: CSH HAS 25 UNITS OF RANDOM TYPE O AND 5 UNITS OF RANDOM TYPE A RBCs EXPIRING IN THE NEXT 7 DAYS
 LINE 12: CSH NEEDS 700 UNITS OF RANDOM GROUP AND TYPE O, A, AND B RBCs WITHIN THE NEXT 7 DAYS
 LINE 13: CSH RECEIVED 50 UNITS OF RANDOM TYPE O AND 50 UNITS OF RANDOM TYPE A RBCs, TRANSFUSED 60 UNITS OF RANDOM TYPE O AND 40 UNITS OF RANDOM TYPE A RBCs, EXPIRED A TOTAL OF 10 UNITS OF RANDOM TYPE O RBCs, SHIPPED NO BLOOD PRODUCTS DURING THE PAST 24 HOURS, AND HAS A BLOOD BANK REFRIGERATOR THAT NEEDS REPAIR.

Note: Random group means 50 percent O cells, 40 percent A cells, and 10 percent B RBCs. Random type means 85 percent Rh positive and 15 percent Rh negative RBCs.

Figure 8-4. Example blood report.

BLUE THIS IS RED	BLOOD REPORT OVER	LINE 10	50JSX, 40JTX, 10JUX, 25MVY
GO AHEAD RED		LINE 11	25 JS, 5 JT
THIS IS RED	IMMEDIATE UNCLASSIFIED	LINE 12	700JQ
LINE 1 152359Z		LINE 13	RECEIVED 50JS, 50JT/TRANSFUSED 60JS, 40JT/ EXPIRED 10JS, SHIPPED 0/REFRIGERATOR NEEDS REPAIR
LINE 2 32 CSH			
LINE 3 H			
LINE 9 100 JS, 80 JT, 20JU, 50MV		OVER	

Figure 8-5. Example voice blood report.

8-20. Use of the Blood Shipment Report

a. The BLDSHIPREP provides a standardized message format that is used worldwide in the ASBP to report blood shipments.

b. The respective JBPO, in lieu of standard nomenclature, may assign brevity codes for individual component blood program elements. The JAMPS and the MTFE may be available to automate the BLDSHIPREP formatting. (The DBSS will eventually provide this capability.) To help reduce the length of the messages, a master menu of BLDSHIPREP codes has been standardized. These codes are the same as used for the BLDREP (see Figure 8-3).

c. A completed BLDSHIPREP should reflect the following:

- Heading of Message: From and to addresses, information copy addressee, message classification, operation name, report identification, date/time of message, references to other messages.

- Line 1: ASOFDTG Day-time-zone of the blood shipment.

- Line 2: Name, designator code, and activity brevity code of reporting unit.

- Line 3: Location of reporting unit.

- Line 4: Blood product codes/number of units shipped/total number of units shipped.

- Line 5: Blood shipment or air-bill control numbers/aircraft flight number/estimated time of arrival at destination/number of boxes shipped.

- Line 6: Contact name from shipping location (rank, phone number, location).

- Line 7: Additional closing comments (CLOSTEXT) such as when the blood will require icing.

- Line 8: Message downgrading instructions.

d. An example of a completed BLDSHIPREP is shown in Figure 8-6.

```

FM: CDR USAMEDDAC FT CAMPBELL KY/HSLBB//
TO: ASWBPL MCGUIRE AFB NJ//
INFO: CDRUSAHSC FT SAM HOUSTON TX/HSCL-C//
CLAS
OPER/DULL BRASS//
MSGID/BLDSHIPREP/FT CAMPBELL BDC/100122ZJAN92//
REF/A/CDRUSAHSC/090300ZJAN92/-/NOTAL//
ASOFDTG/100001ZJAN92//
REPUNIT/CMBC FT CAMPBELL KY//
ISHIPD
/BP/OPOS/ONEG/APOS/ANEG/BPOS/BNEG/ABPOS/ABNEG//TOTCTBP//
/J / 160 / 140 / 32 / 40 / 20 / 8 / 0 / 0 // 400 //
BLDSHIP/AB12134/DELTA732/101500ZJAN92/14//
POC/ZIELMANSKI/LTC/512-756-7782/-/CAMPBELL KY//
CLOSTEXT/BLOOD ICED 130001ZJAN92/CMBC SHIPMENT NO1//
DECL/OADR
    
```

Figure 8-6. Example blood shipment report.

CHAPTER 9

DENTAL SERVICES

Section I. CONCEPT FOR DENTAL SERVICE SUPPORT

9-1. Dental Mission

The dental mission in a TO is to conserve the oral health of the soldier by—

- Preventing oral disease.
- Promoting dental health.
- Providing dental treatment to eliminate or reduce the effects of dental disease and injury.
- Providing early treatment of severe oral and maxillofacial injuries for casualties that must be evacuated.

9-2. Dental Support in the Continuum of Care

The EAC discussed in FM 8-10 includes dental care beginning at Echelon II through Echelon IV. Each higher echelon reflects an increase in capability, but can perform the functions of each lower echelon. Field Manual 8-10-19 provides a comprehensive discussion of dental support.

9-3. Categories of Dental Care

Dental treatment is classified into four categories: emergency, sustaining, maintaining, and comprehensive. These categories are not absolute in their limits; however, they are the general basis for the definition of capability at the various echelons of HSS. Each category is successively greater in service provided and corresponding resources required to provide that service. Sustaining care is capable of less definitive treatment than maintaining care, but requires less equipment and

is more suited to use farther forward in the battlefield where weight and mobility are greater concerns. Conversely, maintaining care provides a much wider spectrum of services, but is far more resource dependent and less suited to use in a rapidly moving scenario. Again, categories of dental care are not intended as absolute boundaries. They are better thought of as additive zones with each higher category including the capability of those lower ones. Of the four categories of care, only the first three—emergency, sustaining, and maintaining—are available in the TO.

a. Emergency Care. Emergency dental care is given for relief of oral pain, elimination of acute infection, control of life-threatening oral conditions (hemorrhage, cellulitis, or respiratory difficulties) and treatment of trauma to teeth, jaws, and associated facial structures. Consistent with the HSS tenet of return to duty, this care is expeditious and is available throughout the TO. It is the most austere type of care and is even available to soldiers engaged in tactical operations. Common examples of emergency treatments are simple extractions, antibiotics, pain medication, and temporary fillings.

b. Sustaining Care. Sustaining care is the dental treatment necessary to intercept potential emergencies. This type of care is essential for prevention of lost duty time and preservation of fighting strength. Soldiers with potential dental emergencies should be provided sustaining care as the tactical situation permits (see FM 8-10-19 for a discussion of dental classifications). Common examples of sustaining care procedures are basic restorations, extractions, interim pulpal therapy (pulpectomy), treatment of periodontal conditions, and simple prosthetic repairs. Sustaining dental care is consistent with Echelon II HSS. Dental modules organic to divisions, separate brigade

medical companies, area support medical companies, SFGs, and forward treatment sections of area support dental units are equipped to provide sustaining care.

c. Maintaining Care. Maintaining care is intended to maintain the overall oral fitness of soldiers at a level consistent with combat readiness. Soldiers who have oral conditions that, if not treated or followed up, have the potential but are not expected to result in dental emergencies within 12 months should be provided maintaining care as the tactical situation and availability of dental resources permit. Maintaining care is the highest category of care available in the TO and is provided by area support dental

units. The scope of services includes restorative, exodontic, minor oral surgical, periodontics, endodontics, prosthodontic, and preventive procedures.

d. Comprehensive Care. Comprehensive dental care consists of those highly specialized procedures normally accomplished in fixed facilities in CONUS. Examples are reconstructive maxillofacial surgery, maxillofacial prosthodontics, and extensive oral rehabilitation and dental restoration. Though usually not available in the TO, comprehensive care is nevertheless a critical part of the dental continuum of care which extends from forward areas of the CZ, through the COMMZ, to the CONUS base.

Section II. ORGANIZATION OF FIELD DENTAL SUPPORT

9-4. Unit Dental Support

Unit dental support is provided by dental personnel organic to Echelon II medical units. Dental modules are organic to the area support squads in the medical companies of divisions, separate brigades and ACRs, and the medical element of the SFG. Dental modules are also found in the area support squads of the area support medical company (ASMC) located throughout the CZ and COMMZ. The dental modules which are the basis of unit dental support have the capability to provide sustaining care as discussed in Section I. Their primary objective, however, is to return the soldier to duty as rapidly as possible consistent with the tactical situation. At times, circumstances may allow provision of expedient emergency care only, while at other times circumstances may allow the full range of sustaining care.

9-5. Unit Dental Support Organization

a. Dental modules are organic to the area support squad in the medical companies of

each division, separate brigade/ACR, SFG, and area support medical battalion (ASMB). Each division has one major (MAJ), area of concentration (AOC) 63B (comprehensive dentist), in the dental module of the MSB medical company and a captain (CPT), AOC 63A (general dentist), in the dental module of each FSB. A MOS 91E10 (dental specialist) is also assigned as part of each of these modules.

b. The modules in separate brigade/ACR medical companies and SFGs have a CPT, AOC 63A, and a MOS 91E10. Similar to the division, the dental modules in separate brigades/ACRs are in the area support squads of the medical company/troop at the support battalion/squadron. The dental module in the SFG is located in the medical platoon of the service companies.

c. Each unit support dental officer also functions as the dental surgeon for his supported unit—a special staff position. In the division, the comprehensive dentist, AOC 63B, of the main support medical company is the division dental surgeon.

9-6. Unit Dental Support Concept of Operations

a. Unit dental personnel are not present in sufficient numbers to provide dental care to all the members of their supported units on a continuous basis without support from area support dental units. Therefore, depending on the situation, it may be necessary to return personnel to their units with other than definitive treatment (for example, temporary as opposed to permanent restorations). The primary concern of unit dental personnel is to return the soldier to duty as expeditiously as possible in a condition to continue his duties. Unit dental support relies on corps-level area dental support units for provision of higher categories of care (maintaining). Modules of area dental support units also augment or reconstitute unit dental elements when necessary.

b. Dental casualties in maneuver battalions are evacuated from forward areas to the BAS. Here they are evaluated and, if required, are further evacuated to the division clearing station of the medical company to be seen by the dental officer assigned to the area support squad. This officer will examine the patient and provide treatment necessary to return him to duty. If the treatment required is beyond the capability available, the patient will be evacuated or referred to the supporting corps area dental support or hospital unit, consistent with the patient's condition and the tactical situation.

9-7. Hospital Dental Support in Corps and Communications Zone

Hospital dental support is provided by dental personnel organic to the CSH, TOE 08705L; the FH, TOE 08715L; and the GH, TOE 08725L. Under MF2K, the MASH has no capability for dental support. Prior to the L-edition TOE, the dental sections organic to the hospitals were different from one type hospital to another. Under

the L-edition TOES, all hospital dental sections are identical.

9-8. Hospital Dental Support Organization

a. The primary mission of hospital dental sections is to minimize loss of life and disability resulting from severe oral and maxillofacial injuries and wounds. When casualty care work load permits, dental resources provide dental treatment to hospital patients and staff. In addition, treatment is provided to patients referred by other dental and medical facilities when required oral and maxillofacial care is beyond the capability of the referring facility,

b. All three types of hospitals with organic dental capabilities (CSH, FH, and GH) are organized under the modular concept. (See Chapter 5 for a discussion of the modular concept.)

c. The dental capability of all three hospitals is found in the HUB.

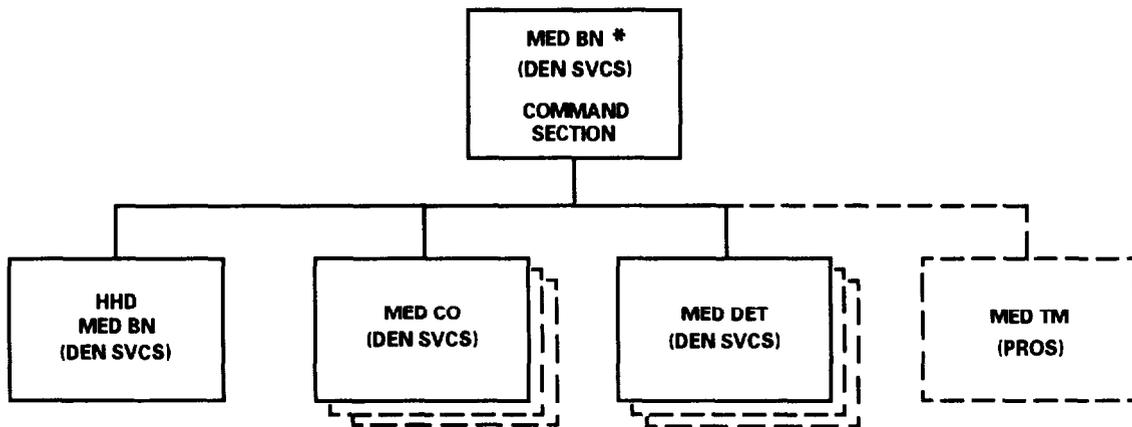
d. The maxillofacial surgery capability in these hospitals can be augmented by attaching a Medical Team, Head and Neck Surgery, TOE 08527LA. As with other units under the modular concept, the dental sections of the different hospitals are interchangeable.

9-9. Area Dental Support

Area dental support is provided by dental personnel and equipment organized into dental service units capable of providing all categories of dental care up to and including maintaining care. These units are the Medical Company (Dental Service), TOE 08478L; Medical Detachment (Dental Service), TOE 08479L; and Medical Team (Prosthetics), TOE 08588L. They are usually assigned to and under the command and control of the

medical battalion (dental service) (see Figure 9-1). As the name suggests, area dental support is provided within a designated geographic AOR. However, within this AOR, area dental support units may be tasked to provide DS to unit or hospital dental support elements. They may also

be tasked to reconstitute unit dental support modules with like modules from within their own unit. Area dental support represents a major share of the dental capability within the TO. The remainder of this section will focus primarily on area dental support and the units which provide it.



*COMMANDS AND CONTROLS FROM 3 TO 8 ASSIGNED OR ATTACHED DENTAL UNITS

LEGEND:

DEN DENTAL
 PROS PROSTHODONTICS
 SVCS SERVICES

Figure 9-1. Medical battalion (dental service).

9-10. Headquarters and Headquarters Detachment, Medical Battalion (Dental Service), TOE 08476L

a. *Mission.* The HHD provides command and control to assigned and attached dental organizations. (This unit also provides administrative, logistics, and personnel support to the headquarters and technical guidance to subordinate units on medical equipment maintenance and Class VIII supply.)

b. *Assignment.* This unit is assigned to MEDCOM, TOE 08611L; Medical Brigade, TOE 08422L; or Medical Group, TOE 08432L.

c. *Capabilities.* This unit provides—

- (1) Command and control of three to eight assigned or attached dental units.

(2) Allocation of dental resources (personnel and equipment) to ensure adequacy of dental service to all units within the assigned AOR.

(3) Technical expertise, coordination, and support to subordinate units for accomplishing their medical equipment maintenance and Class VIII supply.

(4) Current information concerning the dental aspects of the CSS situation to higher headquarters.

d. Basis of Allocation. One unit is allocated for each three to eight subordinate dental service organizations.

e. Mobility. This unit is capable of transporting 50 percent of its personnel and equipment in a single lift using organic vehicles.

9-11. Medical Company (Dental Service), TOE 08478L

a. Mission. This unit provides emergency, sustaining, and maintaining dental care.

b. Assignment. This unit is assigned to the HHD, Medical Battalion (Dental Service), TOE 08476L.

c. Capabilities. This unit provides maintaining care, including prosthodontic specialty care, for 20,000 troops or sustaining care for 30,000 troops on an area basis. It is composed of from one to eight field DTFs, consisting of one or two base DTFs providing maintaining care, and up to six dental treatment modules which can reinforce or reconstitute the division dental modules, when necessary, or provide sustaining care for small or forward troop concentrations. The unit also provides unit maintenance of organic equipment for the HHD, Medical Battalion (Dental Service),

TOE 08476L. The medical company, dental service is capable of augmenting the ATM capabilities of other MTFs during MASCAL situations.

d. Basis of Allocation. One for each 20,000 troops supported. See the medical company (dental service) organizational diagram in Figure 9-2.

e. Mobility. This unit is capable of transporting 50 percent of its personnel and equipment in a single lift using organic vehicles.

9-12. Medical Detachment (Dental Service), TOE 08479L

a. Mission. This unit provides emergency, sustaining, and maintaining dental care.

b. Assignment. This unit is assigned to the HHD, Medical Battalion, (Dental Service), TOE 08476 L000.

c. Capabilities. This unit provides maintaining care for 8,000 troops, or sustaining care for 12,000 troops on an area basis. It is composed of from one to four field DTFs. These DTFs consist of a base DTF that provides maintaining care and up to three dental treatment modules to reinforce or reconstitute the division dental modules, when necessary, or to provide sustaining care for small or forward troop concentrations. This unit is capable of augmenting the ATM capabilities of other MTFs during MASCAL situations.

d. Basis of Allocation. One for each 8,000 troops supported. See the medical detachment, dental service in Figure 9-3.

e. Mobility. This unit is capable of transporting 50 percent of its personnel and equipment in a single lift using organic vehicles.

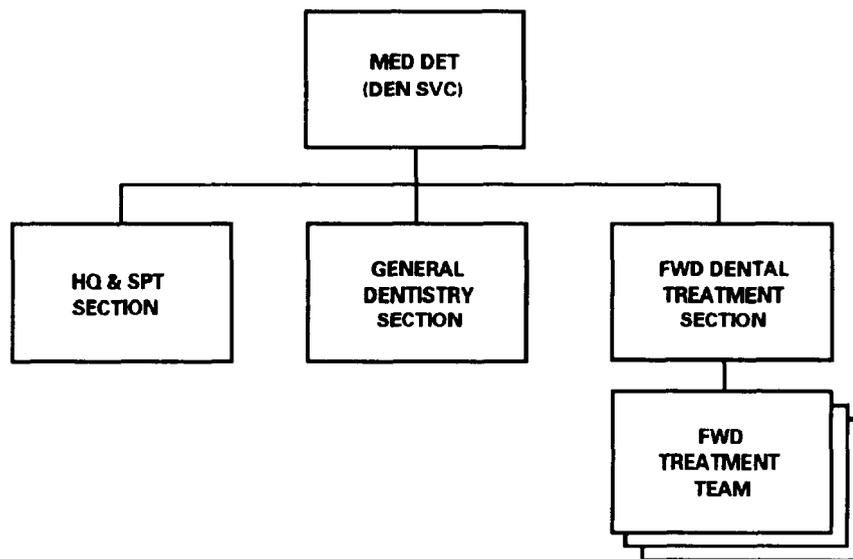


Figure 9-3. Medical detachment (dental service).

Section III. DENTAL STAFF

9-14. Dental Surgeon

Coordination of the collective efforts of unit, hospital, and area dental support activities with the overall HSS operation is accomplished through dental representation on appropriate command and control staffs, usually in the form of a command dental surgeon. The dental surgeon is a *special staff officer* under the coordinating staff supervision of the S1/G1). In the medical brigade, the dental surgeon is a separate TOE position. In divisions, this position is filled by the comprehensive dental officer, AOC 63B, assigned to the MSB of the division support command (DISCOM). A dental unit commander who also serves as dental surgeon is described as being *dual-hatted*. In some cases, the dental surgeon position is not clearly identified and becomes an ad hoc arrangement. Staff

advocacy is a critical element in the development of a coordinated dental service support system throughout the TO.

9-15. Responsibilities

a. The dental staff officer provides input to the commander on policy, procedures, and plans that concern oral health and dental care. He prepares the dental estimate and assists in preparing the dental portion of the HSS OPLAN. He assists in writing the dental support portion of OPORDs. He provides technical guidance on dental matters to subordinate dental resources. He monitors the oral health of the supported population, the readiness of unit dental assets, and the tactical and strategic situation of supported units. He also

assesses HSS plans to determine dental resource requirements. Specific duties may include surveillance of—

(1) The oral health and dental readiness of supported units.

(2) Severe oral and maxillofacial surgery cases in hospitals.

(3) Status of dental resources in the AOR.

(4) Operational requirements of supported troops (for example, number and types of units supported or in the AOR; number of troops in supported units or AOR; tactical and strategic situation; location and distribution of supported units; and expressed needs of commanders).

(5) The provision of dental services to EPW, refugees, and others.

b. The dental staff officer also serves as advisor to the commander on dental matters. On the basis of the information from surveillance, he will make recommendations concerning oral health and dental delivery for plans, OPORDs, and policy.

9-16. Dental Staff Officer Positions

a. Division. The senior dental officer in a division is assigned to the MSB. In addition to his patient care responsibilities, he acts as the division dental surgeon and exercises technical supervision over the dental assets in FSBs of the division. Dental officers in the FSBs serve as dental surgeons to the supported maneuver brigades.

b. Separate Brigades, Armored Cavalry Regiments, and Special Forces Groups. The dental

officer in the medical element of these units also serves as dental surgeon for the parent unit.

c. Medical Brigade (Corps: TOE 08422L1; COMMZ: TOE 08422L2). A dental surgeon, colonel (COL), AOC 63R, is located in the headquarters company, command section. He exercises technical control over dental assets in hospitals and dental units subordinate to the medical brigade. Dental surgeons of corps medical brigades are dual-hatted as the corps dental surgeon and provides technical supervision for unit-level dental support (in divisions, separate brigades, and ACRs), as well as for dental assets assigned within the brigade. The medical brigade dental surgeon is complemented by a senior dental noncommissioned officer (NCO) (MOS 91E50) assigned to the security, plans, and operations section.

d. Medical Command (MEDCOM: TOE 08611L). There are three dental staff officers in the headquarters company.

(1) The MEDCOM dental surgeon, a brigadier general (BG), AOC 00B, establishes and disseminates Army theater policy on dental matters. He exercises technical control over all dental units in the TO through the medical brigade dental surgeons. He directs the dental services element of the headquarters and provides dental staff support to the MEDCOM commander.

(2) The MEDCOM assistant dental surgeon, COL, AOC 63R, is located in the dental services element of the headquarters. He assists the MEDCOM dental surgeon by recommending policies and procedures and providing dental coordination with other staff elements.

(3) The MEDCOM preventive dentistry officer, lieutenant colonel (LTC), AOC 63H, supports the MEDCOM dental surgeon and assistant dental surgeon in all staff actions. Specific duties include—

- Providing oral health surveillance information in support of policy and procedure development,

- Developing plans and orders concerning oral fitness and preventive dentistry programs.

- Recommending treatment policies.

- Developing programs for dental support of humanitarian and civic action operations.

Section IV. THE DENTAL ESTIMATE OF THE SITUATION

9-17. Factors and Premises

a. The primary consideration in dental planning is the development of a dental estimate of the situation. To do this effectively, dental staff officers must have access to the necessary details of operational planning. This information will enable them to coordinate the dental plan with the OPLAN so that the required dental support will be provided. The dental surgeon must have knowledge of the policies established by the commander. He must also know the commander's decisions on new situations for which a policy has not been established. All planning must be based on accurate information as to the status of the dental health of the troops so that those in greatest need are provided for first.

b. When possible, dental services must also be coordinated with those of the Navy and the Air Force to effect unity of effort and make the best use of available resources through such actions as shared use of DTFs or designated AOR.

9-18. Development of the Estimate

a. The dental estimate is a logical thought process used by the dental surgeon to—

- Decide what has to be done to accomplish the dental mission.

- Consider all aspects affecting the dental situation. Some examples are—

- Population to be supported.
- Category of dental care to be provided.

- Availability and source of fuel.

- Availability of electrical power to supplement the power sources available to the dental unit.

- Availability of water to support dental treatment.

- Climatic conditions which adversely affect dental materials.

- Flexibility of plans to support alternate roles for dental personnel and/or MASCALS.

- Maintenance support for medical/dental equipment.

- Participation by dental personnel in rear area protection. (See FM 8-10 for information on the effects of the laws of land warfare on HSS.)

b. The estimate is a checklist of steps used to plan dental service. Circumstances vary with the type of the command, but the fundamental steps of the thought process in preparing the estimate remain unchanged: the mission, the situation and considerations, the HSS analysis, the evaluation and comparison of COA, and the conclusions. (These steps are discussed separately in paragraphs 9-19a through 9-19e below.)

c. Normally, the dental surgeon begins his estimate based on available tactical and administrative information. When he does this, his estimate is well under way by the time the commander's guidance is announced. Waiting to start the estimate until the commander provides his guidance may delay dental planning.

d. Preparation of the dental plan may begin before the dental estimate is completed. As each problem is recognized and solved, a part of the dental plan is automatically formulated. As soon as these fragments of information are accumulated, they should be passed on to subordinate dental surgeons and commanders to help them prepare adequate implementing plans. (See Appendix B for the suggested format for the dental estimate.)

9-19. Format

a. *Mission.*

(1) The dental mission is stated in the first paragraph. Like the mission of the HSS estimate, it is always stated in terms of the tactical situation. Broadly speaking, the mission of all dental units is to provide dental service to the troops which they support. The mission of the troops served determines the general type of dental operations. This mission will guide the dental surgeon—

- In changing and adjusting the dental support as required.

- In granting priorities to combat troops and others as the need arises.

(2) A clear statement as to what type of operation is to be supported must be included; for example, "To provide dental support to the Thirtieth US Army in offensive operations to the east to seize Euralandia." The mission is the primary guiding consideration for the remainder of the dental estimate. It must be stated as clearly and as concisely as possible. If several categories of personnel are to be provided different types of dental service, the fact should be stated in this paragraph. The estimated duration of the operation will be included.

b. *The Situation and Considerations.*

The situation and considerations are stated in paragraph 2 of the dental estimate. The various factors affecting the dental service of the particular operation are given. Those facts, assumptions, and deductions that can influence the dental staff officer in choosing the best way to accomplish his mission are set forth in an orderly manner. Paragraph 2 is broken down into factors or elements selected by the dental surgeon as important to the situation. The consideration of each factor or element divides itself into a statement of facts as known and a deduction from these facts.

(1) *The enemy situation.* Information for this part of the estimate is provided by the Assistant Chief of Staff (Intelligence) (G2). When the estimate is written, a brief summary or reference to the latest periodic intelligence report may be sufficient. Considered here will be the enemy's—

- Strength and disposition,
- Combat efficiency.
- Capabilities that might affect ability of the dental service to perform its mission.

- Logistics situation.
- State of health.
- Weapons.

(2) *The friendly situation.* Information for this portion is obtained from the commander's planning guidance and the Assistant Chief of Staff (Operations and Plans) (G3). It includes—

- Strength and present disposition of the troops to be supported.
 - Combat efficiency.
 - Present and projected operations, if known.
 - Logistics situation.
 - Weapons.

(3) *Characteristics of the area of operations.*

- Terrain.
- Weather.
- Civilian population.
- Flora and fauna.
- Local resources.
- Other.

(4) *Strengths to be supported.* This information is obtained from the G1. Consideration is given to the following:

- The present dispositions of administrative units and installations (other than

logistical or CA) for which dental support must be provided.

- Availability of troops to receive dental care and units phasing into the area, including the flow of replacements.

- Projected developments within the personnel field which may influence dental support of the operation (for example, sudden changes of troop strength, or institution of a rest and rehabilitation leave policy).

- Dental requirements for the estimated number of Army, Navy, Air Force, Marines, allied personnel, EPW, indigenous civilians, detainees, and civilian interns.

(5) *Oral health of the command.* (This includes at least dental conditions of arriving troops and preparation of replacements for overseas movement [POR] dental requirements.)

(6) *Assumptions.* Assumptions may be required in the preparation of an estimate, but they should be eliminated or modified as appropriate when factual data and specific planning guidance become available.

(7) *Special factors.* At this stage of the dental estimate, it is advisable to link the current dental situation with all that has been considered above. This should include the strength, location, and mission of the dental units available; quality and status of training of dental units; local civilian dental personnel available; attitudes and capabilities of the civilian population; buildings and utilities; construction and use of existing facilities; base development; degree of permanency; and back-up support such as CONUS-based area dental laboratories.

c. Dental Support Analysis. The analysis (paragraph 3 of the dental estimate) is a logical comparison of the estimated dental requirements

of the command with the dental resources available for support of the operation. Under each of the following subheads and for each COA, the requirements, availability, or capability will be determined and any limiting features indicated.

(1) *Dental service personnel estimate.*

(2) *Patient estimates.*

(3) *Support requirements and resources available.*

(a) *Supply.* The dental surgeon considers here whether normal supply requirements are being met for this operation, or whether certain supply shortages are causing a reduced capacity of dental units to perform their mission. He also considers any unusual supply requirements for this particular operation. Since the dental service is not primarily responsible for its supply requirements, the command surgeon must be informed. Providing him this information is the responsibility of the dental surgeon. Therefore, any equipment or supply discrepancies which are likely to influence the successful accomplishment of the dental mission should be immediately brought to the attention of the command surgeon.

(b) *Transportation.* Transportation requirements are determined for the different COA chosen. The necessary mobility to exploit opportunities to furnish dental treatment wherever and whenever it can have its maximum effect must be considered. The availability of additional transportation, if required, is considered. The vehicle status of the individual dental units is a big factor. For example, if several vehicles of a dental unit are deadlined for maintenance, this unit may need additional transportation; whereas, if priority were to be given to the repair of those vehicles, no additional transportation would be needed. The actual condition of the roads

and bridges may be a limiting factor on the transportation means available to move the dental units and supplies.

(c) *Services.* Information received from other special staff officers regarding the location, capabilities, and limitations of their services and various COA are analyzed. For example, it is determined which organizations are best located and capable of providing the necessary logistical support, such as rations, administration, and motor maintenance, for dental units.

(4) *Medical evacuation and hospitalization.* This includes a consideration of diseases likely to affect the operation, status, and capability of the hospital dental service; any unusual requirements for head and neck surgery teams; and plans for medical evacuation and hospitalization (extent and locations).

(5) *Miscellaneous.*

(a) Included here are any special or unusual considerations which might affect the ability to accomplish the mission. The dental staff officer should consider at least the following factors when evaluating and determining the troop requirements for the dental service:

- Determining the functions and tasks to be performed.
- Determining the quantitative work load.
- Selecting the type of dental unit(s) having the capabilities required.
- Calculating the number of dental units required, including any augmentation required.
- Providing adequate command and control. For example, an insular or

circular theater may require only one battalion headquarters, while a broad or elongated theater might function more effectively with two battalion headquarters.

(b) The dental surgeon must consider not only the dental units organic to or attached to the command, but also those dental units supporting the command such as the CONUS-based area dental laboratories, the supporting Navy or Air Force dental units, or available host-nation dental support. He must review the dental troop ceiling to determine the possibility of securing additional units, if required. Securing additional dental units must be considered early to ensure adequate dental service when needed.

(c) When required to provide dental support for indigenous personnel, the dental surgeon should consider using locally trained dental personnel and locally procured dental supplies, if available. Likewise, the provision of dental support to EPW personnel should be accomplished using captured health care personnel and supplies, if available. Use of indigenous personnel and captured dental supplies to provide care to EPW will promote maximum effectiveness of the Army Dental Service in providing care to US Army troops and will conserve scarce resources.

(6) *Dental courses of action.* From the foregoing comparison of requirements versus means, the dental surgeon has determined what the major dental problems will be. He must now develop the general COA which are available to combine these two elements and provide proper dental support for the operation. The general policies and procedures that will do the job best are listed here. A comparison of the various COA listed is not made in this paragraph, but in paragraph 4 of the dental estimate.

d. Evaluation and Comparison of Dental Courses of Action. Paragraph 4 of the dental estimate contains a dental evaluation of the COA

under consideration. The outstanding dental elements and the controlling limiting features considered in paragraph 2 of the estimate are listed. The COA listed at the end of paragraph 3 are then compared with one another in the light of these major dental elements, and advantages and disadvantages of each are noted. Conclusions are not drawn at this step but are deferred until the evaluation of all COA in the light of the controlling dental elements is complete.

e. Conclusions.

(1) The conclusions of the dental surgeon are set forth in paragraph 5 of the dental estimate. This paragraph provides the decision of the dental surgeon and corresponds with the decision paragraph of the commander's estimate, but the paragraph is designated as "conclusions" rather than "decision" due to the dental surgeon's position as special staff officer of the command.

(2) This paragraph provides the staff and the commander with a statement as to whether the operation can be supported with an adequate dental service. If it cannot, a clear outline of the reasons must be given. The dental surgeon makes a general statement here of the COA that will best support the commander's mission with the maximum economy of dental means. Economy of dental means, while secondary to provision of good dental support, is of extreme importance both to the dental surgeon and to his commander. It helps to ensure dental resources for the next operation.

(3) This decision or conclusion of the dental surgeon guides subordinate dental surgeons in their planning. Listed in this paragraph also are the unavoidable dental limitations or deficiencies that must be recognized by everyone associated with the dental service of the command. Such a listing will ensure coordinated efforts by all to reduce the effects of such limitations.

Section V. THE DENTAL PLAN

9-20. Development of the Plan

a. After determining the nature and extent of the dental problem (the dental estimate), the procedures to be followed, and the requirements for additional dental support, the final stage is the fixing of responsibility for dental functions and services. This is done by considering the resources available to each subordinate tactical and dental unit commander and the tasks to be performed.

b. The statement of dental support and service policies and the specific fixing of responsibilities for dental functions is the generally accepted form in which the dental plan is presented. Dental plans are not usually formal or written at echelons lower than medical command/medical brigade level. Regardless of whether or not the plan is written in detail and published, the dental surgeon should carry out the planning procedure to ensure that all pertinent points are covered.

9-21. Format for the Dental Plan

a. The dental plan is a part of the HSS plan and is included in it or, if very detailed, appended to it. It bears the same relationship to the dental estimate that the HSS plan does to the HSS estimate. A standard format for the dental plan is of value as a checklist for any dental surgeon arranging dental support of a military operation. This format also facilitates use of the information it contains by lower echelons.

b. Appendix C provides a suggested format for the dental plan. Each operation may require a special tailored plan to meet the requirements of a specific tactical operation. Dental

surgeons may develop checklists to ensure all pertinent areas are considered. Essentially, the dental plan will be divided into the following six parts:

(1) *Assignment of responsibilities.* (A separate subparagraph is included for each unit giving location, mission, and attachments if indicated.)

(2) *Prevention.* (Identify preventive measures to be performed by the individual, troop units, and dental units to reduce dental casualties.)

(3) *Treatment.* (Include types of dental care to be provided and prioritization of treatment.)

(4) *Alternate wartime role.* (Establish guidelines for dental personnel to support hospital units when required by heavy patient loads.)

(5) *Reporting.* (Include basic information to be reported, such as number of patients seen, type of care provided, and patient dental classification. This information is reported from the DTF through the dental operational chain of command. This information is essential for planning and resource allocation. Commanders and dental staff officers at all levels evaluate this information, identify trends, and make operational decisions accordingly.)

(6) *Miscellaneous dental matters.* (Include specific clinical protocols appropriate for the situation such as "definitive crown and bridge procedures will not be initiated.")

CHAPTER 10

VETERINARY SERVICES

Section I. BASIS FOR VETERINARY STAFF PLANNING**10-1. The Army Veterinary Service**

The Army Veterinary Service is the sole source of veterinary support to all DOD Services and agencies and selected other US government agencies such as the State Department or the US Department of Agriculture. The Army Veterinary Service is responsible for food safety, veterinary PVNTMED programs, and veterinary medical care of animals.

10-2. Veterinary Service Planning

a. As a functional area of HSS, veterinary service has an important role in formulating the HSS for the TO. The veterinary staff officer must be included in early stages of planning. Veterinary service officers are assigned to the MEDCOM, medical brigades, CA units, and SFGs.

b. The staff veterinarian advises all uniformed Services and other federal agencies on matters pertaining to—

(1) *Food wholesomeness, hygiene, safety, and quality assurance.* The Army Veterinary Service provides food inspection services to the Defense Logistics Agency and CSS logistics units. These services include sanitary inspections and approval of subsistence sources and storage facilities, procurement, and surveillance inspections of foodstuffs throughout the TO. The Veterinary Service advises theater logistics units on storing subsistence to prevent NBC contamination, on monitoring and detecting NBC contamination, and, when necessary, on decontaminating rations to ensure food safety.

(2) *Veterinary care and treatment of government-owned and indigenous animals.* Military working dogs and other government-

owned animals are provided direct veterinary care and treatment. When directed, veterinary care and treatment are provided to indigenous animals as part of an approved civic action program. Veterinary care of government-owned animals varies from limited/emergency care to definitive veterinary care and hospitalization. The level of veterinary care depends upon mission requirements, the size of the TO, and the type of veterinary units available.

(3) *Veterinary preventive medicine.* Prevention and control programs are established to protect service members from zoonotic and foodborne diseases.

(4) *Publication of the Directory of Sanitarily Approved Food Establishments for Armed Forces Procurement.* The senior veterinary organization with a staff veterinarian in theater will publish this directory. If a staff veterinarian is not present, the medical detachment, veterinary service will publish this directory. Only food from establishments listed in the directory may be procured for US Forces in a TO.

(5) *Mobilization for military working dogs.* Assessment of acclimation and acclimatization times by veterinary staff will affect which working dogs should be deployed. The veterinary staff guidance will be part of predeployment processing of MWDs. All Services will coordinate with the appropriate Veterinary Corps officer in their area regarding MWD mobilization. Veterinarians will be consulted on kenneling, feeding, utilization, and health care for MWDs being mobilized. The USAF and MWD Program Manager will coordinate all MWD activities with the US Army Veterinary Service to ensure that the health and welfare of these animals are maintained.

c. Planning for veterinary support should include—

- (1) The mission of the command.
- (2) The concept of the operation.
- (3) The type and duration of the operation.
- (4) The estimated strength of US Army, USAF, US Navy, and US Marine Corps (USMC) personnel in the TO.
- (5) The organization of the theater to include USAF, US Navy, and USMC units and other organizations requiring veterinary support.
- (6) The Class I policy and stockage levels for the theater.
- (7) The means of shipping Class I supplies.
- (8) The estimated MWD strength in the theater.
- (9) The proposed use and location of government-owned and/or indigenous animals.
- (10) The size and type of civic action programs to support the local population, EPW, and animals.
- (11) The NBC threat in the theater.

d. The mission of the command is basic to veterinary planning since the mission determines the scope and duration of the operation. If the mission requires long, detailed operation of many months, the veterinary planning must be more extensive. If the supported combat force is small and will use operational rations for a limited operation, then the need for veterinary services may be rather limited.

e. Various types of operations will influence veterinary planning. If the mission is to support an amphibious landing under strong enemy resistance and supplies are to be landed in small amounts at various locations, veterinary planning and coordination will need to be more extensive and detailed. A mission to support a normal port with dock facilities will not require nearly as much planning. The size of the theater forces also influences veterinary planning.

f. The joint MWD strength of a theater must be reported.

(1) The individual Services (US Army, USAF, US Navy, and USMC) are to periodically update information on projected MWD strengths during their mobilizations. This information is to be reported to the Army Veterinary Service.

(2) Veterinary planners need accurate MWD strengths to provide the necessary organization to support the animals during mobilization.

(3) Veterinary manpower requirements must reflect the required support needed for DOD MWDs.

10-3. Staff Relationships

a. *The Logistics Officer.*

(1) The Army Veterinary Service establishes communications and coordination with supporting logistics officers of all uniformed Services and other federal agencies within the AO. This coordination includes the procurement, distribution, and storage of subsistence for DOD personnel and MWDs.

(2) The veterinarian serves as technical advisor to the logistician on matters

relating to subsistence and directs veterinary personnel in support of the subsistence mission. Veterinary personnel—

- Ensure food safety and wholesomeness of food products from origin through the forward ration break points.

- Inspect and approve sources of subsistence within the TO.

- Determine that food procured in the theater complies with contractual requirements of type, class, grade, and packaging and packing.

- Perform sanitary inspections of food processing and storage facilities to minimize losses through spoilage and contamination.

- Ensure food is stored and transported in a manner to prevent NBC contamination. After use of NBC agents by the threat, assist in monitoring and detecting NBC-contaminated subsistence, make recommendations for decontaminating subsistence, and monitor NBC decontamination of subsistence.

(3) Veterinary units provide area support to Class I (subsistence) units such as depots, supply points, ports, and forward ration break points.

(4) Veterinary medical care for government-owned animals includes procurement physicals, assistance in transportation, animal husbandry training, and health maintenance at the using organization level. Veterinary units provide area support to all units with assigned government-owned animals.

b. The Transportation Officer.

(1) The veterinarian advises the transportation officer on—

- The transportation and dock storage of subsistence to preclude spoilage and deterioration.

- The transportation of animals.

(2) The veterinary unit provides support to the transportation terminal command at ports and/or beaches or both where subsistence is received. The unit inspects the subsistence and the transportation assets carrying it.

c. The Engineer Officer.

(1) The veterinarian will review plans with the engineer officer for constructing facilities used to—

- Store subsistence.

- Process subsistence.

- Shelter animals.

(2) This review prevents potential sanitary problems resulting from improper construction.

d. The Civil Affairs Officer

(1) The veterinarian advises the CA officer on all veterinary matters and may furnish technical assistance or veterinary personnel to assist in—

- Rehabilitation of the civilian livestock industry.

- Establishment or reestablishment of the civilian veterinary service.

- Reopening veterinary schools and colleges.
- Reestablishment of livestock sanitary control regulations.
- Supplying veterinary drugs, biological, and instruments.
- Providing national food inspection service.

(2) The veterinarian also implements veterinary PVNTMED programs to prevent and control zoonotic disease in the local population and the threat of potential biological or chemical agent contamination of the food or water supply.

The Military Police /Security Police Officer.

(1) The veterinarian needs to know the number and location of all MWDs in the TO. With this information, he can coordinate routine veterinary care for the dogs and ensure the dogs are being properly housed and fed.

(2) The veterinarian advises the military police officer on the proper care, feeding, and housing of dogs in the TO. The military police officer will be advised as to where military police units can obtain veterinary care for their dogs.

(3) The military police officer needs to coordinate with the veterinarian when there is a change in the dog population, their locations, and their missions.

Section II. THE VETERINARY ESTIMATE

10-4. Developing the Estimate

a. The basic HSS estimate discussed in Chapter 2 is used to develop specific information of a veterinary nature. Circumstances vary with the type of command, but the fundamental steps of the thought process in preparing the estimate remains unchanged: the mission, the situation and considerations, the HSS analysis, the evaluation and comparison of COA, and the conclusions. This information can be—

- (1) Presented in a separate paragraph.
- (2) Included along with the medical and dental aspects in parts of paragraphs, or
- (3) Presented as a separate appendage to the HSS estimate.

b. The format shown in Appendix B includes the major points to be considered in arriving at a logical conclusion.

c. The veterinary service planner should adapt this format to his particular situation. He should omit those portions which do not apply, or expand those which require more detail.

d. The plans and operations division of the surgeon's staff should not overlook the fact that the plans and estimates they prepare require definite data relating to the veterinary service. These data should be provided by the staff veterinarian. The surgeon should provide the staff veterinarian sufficient information to guide him in preparing the veterinary portion of the estimate or the plan.

10-5. Mission

The veterinary mission will support the surgeon's mission and the commander's mission. The veterinary mission consists of the following:

- a. To conserve the fighting strength of US Forces by ensuring the safety and wholesomeness of subsistence.
- b. To provide veterinary medical care to all government-owned animals in the TO. This includes preventive care, medical and surgical care, treatment, and hospitalization of sick or wounded animals.
- c. To inspect captured foodstuffs to ensure its safety and wholesomeness for feeding to EPW and local populations.
- d. To examine and treat captured animals.
- e. To establish veterinary public health programs to control and prevent the transmission of animal disease to humans.

10-6. Situation and Considerations

The veterinary situation is comprised of many elements. The principal ones are-as follows:

- a. *The Enemy Situation.*
 - (1) State the extent and status of the threat concerning zoonotic animal diseases.
 - (2) List the enemy capabilities that might affect the ability of the Veterinary Service to accomplish its mission.
 - (3) State the NBC threat and its affect on supplying subsistence to US Forces.

b. *The Friendly Situation*

(1) *Size and posture of the Class Z (subsistence) supply system.* The size, number, and location of depots, supply points, and other Class I points will be very important.

(2) *Type of rations to be used.* Rations such as meal(s), ready to eat (MRE) and T-rations require less manpower to inspect than A-rations, which include perishable foods. The procurement of rations from within a TO will greatly increase the number of veterinary assets needed.

(3) *Status of Class Z supplies.* The amount of subsistence available within the theater, the availability of subsistence resupply, the dispersion of subsistence within the theater, and the level of NBC protection afforded subsistence supplies must be considered.

(4) *Strength and disposition of government-owned animals.* Veterinary units need to know the number and locations of all government-owned animals in a theater to establish the appropriate veterinary support.

(5) *Status of veterinary supply.*

(6) *Number and extent of civic action programs.*

c. *Characteristics of the Area of Operations.* The following should be included:

(1) Factors from the basic HSS estimate of the AO that affect the veterinary mission and support.

(2) Statements concerning the local food supply system and its capability to support US Forces.

(3) Statements concerning the population, health, types, and disposition of animals

(domestic and wildlife) in the AO. (How do these affect the commander's mission and the veterinary mission?)

(4) Detailed information on zoonotic diseases posing a serious threat to the health of the command or the local population in the AO.

(5) The location, quality, and quantity of indigenous veterinary services.

(6) The presence of animal diseases capable of severely disrupting the local economy or having an impact on the US or its allies if introduced into those counties. For example, the introduction of foot-and-mouth disease into an area because of military operations could devastate the agricultural economy of that country. There are many animal diseases in this category.

d. Strengths to be Supported. (Normally, a table is prepared that includes food inspection support and animal support, if applicable.)

(1) Personnel strength of the Army, Navy, USAF, USMC, allies, EPW, indigenous civilians, detained persons, civilian interns, and others would be required to determine food inspection assets needed.

(2) Animals used by all Services would receive veterinary medical care from the Army veterinary service.

(3) Numbers of animals and locations would be needed to determine the most appropriate locations in the CZ and the COMMZ for support to be provided on an area basis.

e. Health of Animals in the Command. (If applicable to this estimate.) Here the veterinarian is concerned with the origin of animals being used in the theater, the presence of disease, status of immunizations, status of diagnostic tests,

status of nutrition, care and management, and fatigue.

f. Assumptions. Assumptions necessary for completing the veterinary estimate should be considered.

g. Special Factors. The particular operation being planned will have certain items of special importance. These items should be listed and taken into consideration by the veterinary planner.

10-7. Analysis

a. Veterinary Units Estimate. A number of factors are involved in estimating the number and type of veterinary service personnel that will be required to support a particular operation.

(1) Distribution of Class I installations.

(2) Distribution of subsistence (perishable and nonperishable).

(3) Extent of local procurement.

(4) Extent of inspection of indigenous foods for indigenous personnel (if applicable).

(5) Estimate of animal casualties (if applicable).

(6) Evacuation of animal casualties (if applicable).

b. Veterinary Support Requirements. The veterinarian must estimate what the requirements will be for the situation. These requirements are calculated from the factors listed in paragraph 10-6a through g. Specific areas to be considered include—

- (1) Food inspection.
- (2) Veterinary PVNTMED and veterinary public health.
- (3) Veterinary supply.
- (4) Veterinary treatment.
- (5) Evacuation.
- (6) Other (civil-military).

c. Veterinary Resources Available. Having determined the requirements for veterinary personnel, it is then necessary to compare this with what is available within troop ceilings. Veterinary assets may be available from several sources.

- (1) Assigned veterinary TOE units to include those units organic to medical groups.
- (2) Veterinary personnel in CA units and SFGs.
- (3) Staff veterinarians in MEDCOMs and medical brigades.
- (4) Area medical laboratories.

d. Courses of Action. A careful comparison of the veterinary requirements with the veterinary resources available enables the veterinary planner to determine his major problems. This comparison subsequently enables him to develop all logical COA that will accomplish the mission. *Courses of action* are expressed in terms of what, when, where, how, and why.

10-8. Evaluation and Comparison of Courses of Action

a. Once COA have been enumerated and described, it is necessary to analyze and

compare them to determine which one should be used. There are two steps in the process which should be followed:

- (1) Determine and state those anticipated difficulties or difficulty patterns that will have an equal effect on the COA.
- (2) Evaluate each COA against each significant difficulty or difficulty pattern to determine strengths and weaknesses inherent in each COA.

b. Having determined the specific strengths and weaknesses inherent in each COA, the veterinary service planner must compare the COA to determine significant advantages and disadvantages of each. He then decides which COA promises to be most successful in accomplishing the mission with the least amount of problems.

10-9. Conclusions

After review and analysis of all possible COA, the planner is able to make a number of possible conclusions in relation to the mission to be accomplished.

a. The mission can or cannot be supported based on preceding paragraphs of the estimate. If the mission cannot be supported, a full justification for inability to support must be given.

b. The preferred COA can be identified in terms of veterinary support to be provided.

c. The disadvantages of the COA not selected can be identified.

d. Deficiencies in the preferred COA that must be brought to the attention of the commander; deficiencies should be enumerated and briefly discussed.

Section III. THE VETERINARY PLAN

10-10. Purpose of the Veterinary Plan

The veterinary plan is a part of the HSS plan and is included in it or, if very detailed, appended to it. It bears the same relationship to the veterinary estimate that the HSS plan does to the HSS estimate. When approved, it—

- Becomes a directive to veterinarians in subordinate commands.
- Serves as a guide to them in working out the details of their particular functions within the veterinary service of the command.

10-11. Format for the Veterinary Plan

a. In the HSS plan, include a paragraph devoted to the veterinary service. (See Appendix C.) Essentially, it will be divided into five parts:

- (1) Food inspection service.
- (2) Evacuation of government-owned animals.
- (3) Hospitalization of government-owned animals.
- (4) Veterinary outpatient service.
- (5) Veterinary support to humanitarian civic-action programs.

b. The food inspection portion of the veterinary plan includes—

- (1) A statement of the procurement inspection policy.

(2) A statement of the captured ration inspection policy.

(3) A statement of the NBC-contaminated ration inspection policy.

(4) A list of the veterinary food inspection units which gives their location, mission, hours of opening and closing, and their attachments.

c. When MWDS are present, the following will be included:

(1) A statement of the evacuation policy for MWDS.

(2) Evacuation requirements for MWDS and the units participating in this function. (Animals subjected to NBC agents will require specialized treatment or euthanasia.) Separate subparagraphs are included giving location, mission, and attachments of each subordinate evacuation unit.

d. Regarding hospitalization of military and/or indigenous animals, subparagraphs are included for each veterinary treatment facility. The location, mission, hours of opening and closing, and attachments are also listed.

e. When veterinary outpatient service is to be furnished for military and/or indigenous animals, separate subparagraphs describing the location of each facility, its mission, and the hours of opening and closing are included.

f. When veterinary support of humanitarian civic action programs has been authorized, separate subparagraphs identify—

(1) Each veterinary unit providing support.

(2) Each unit's AOR.

(3) The type and extent of veterinary support to be provided.

(4) The availability of veterinary biological, drugs, and supplies if not normally maintained by the unit.

(5) Necessary coordination with civil affairs units, when required.

Section IV. VETERINARY TROOP PLANNING

10-12. Veterinary Service Troop Requirements

In determining the number of requirements for specific types of veterinary units, the principal factors which must be considered are the mission, troop strength, animal strength, nature of the operation, and the extent and geographical location of the area.

a. Mission. All logistical planning (including veterinary) is based on the mission of the command. The ultimate objective is considered by each service as it makes plans to support adequately the tactical units. Constant coordination between tactical and logistical planners is, therefore, essential.

b. Troop and Animal Strength. The primary planning factor for veterinary food inspection and public health teams is the troop strength to be supported. Likewise, animal strength is the basis for allocation of veterinary medicine detachments. Once the troop and animal strengths to be supported have been determined, the veterinary planner can begin estimating the requirements for veterinary service units. In addition to the veterinary animal medicine detachments, there are certain units/activities which have organic veterinary service personnel. These are primarily veterinarians on the surgeon's staff at various levels. They also include those

assigned to area medical laboratories, SFGs, and CA units.

c. Nature of the Operation. When the operation is a lengthy one in which troops will be stationed in an area having a good livestock or poultry industry, local procurement of food of animal origin must be considered. If, on the other hand, the operation is a short over-the-beach operation in which operational rations (Bs, Ts, or MRE) are to be issued, then the need for food inspection service may be very slight.

d. The Extent and Geographical Location of the Area. The extent of the area for which plans are made influences veterinary troop planning in several ways. A large number of small Class I installations widely dispersed in the AO would require more veterinary support, for example, than if these installations were larger and more centralized.

10-13. Basis of Allocation for Veterinary Service Teams

For initial planning to determine the number and type of units required, the basis of allocation is used. The basis of allocation gives guidance for all DOD units. Local appraisal by planners should be used if considerable USAF, Navy, or USMC personnel are also in the AO. For example, most

fixed Air Force installations require at least one veterinary officer and one enlisted animal specialist.

10-14. Medical Detachment, Veterinary Service (Headquarters), TOE 08-409L000

a. Mission. The mission of this unit is to provide command and control, administrative assistance, and technical guidance of assigned and attached veterinary units in the TO.

b. Assignment. This unit is assigned to a Medical Brigade (Corps), TOE 08-422L100, or Medical Brigade (COMMZ), TOE 08-422L200. This unit may also be directly assigned to a MEDCOM, TOE 08-611L00.

c. Capabilities. This unit—

- Provides command and control of all veterinary functions within the AO and implements veterinary policies established by the medical brigade or MEDCOM.

- Establishes communications and directs necessary coordination with supported logistical organizations of all DOD Services and other federal agencies, military units resourced with government-owned animals, host-nation public health officials, and the State Department.

- Coordinates required veterinary support with host-nation public health officials.

- Monitors and evaluates environmental and zoonotic diseases and food safety data to include those foods exposed to NBC agents. Apprises the medical brigade/MEDCOM commander of those factors posing a potential adverse effect on the overall HSS mission.

d. Basis of Allocation. One unit is allocated per four to eleven veterinary detachment-size units.

e. Mobility. This unit is capable of transporting only 30 percent of its equipment, supplies, and personnel in a single lift using its authorized organic vehicles.

10-16. Medical Detachment, Veterinary Service, TOE 08-417L000

a. Mission. The mission of this unit is to provide veterinary services for all branches of the uniformed Services throughout the TO. These services include—

- Sanitary inspections of approved commercial food processing or storage facilities.

- Procurement and surveillance inspections of foods.

- Environmental and zoonotic disease surveillance.

- Limited emergency veterinary care for government-owned animals.

- Limited civic action programs.

- Veterinary PVNTMED.

- Public health functions.

- Wholesomeness determination of food in an NBC environment.

b. Assignment. This unit is assigned to a Medical Brigade (Corps), TOE 08-422L100, or Medical Brigade (COMMZ), TOE 08-422L200. The unit may be placed under the command and control of the Medical Detachment, Veterinary Service (Headquarters), TOE 08-409L000. This unit may also be assigned to a MEDCOM, TOE 08-61 1L000.

c. Capabilities. This unit—

- Provides command and control of all veterinary functions within the AO and implements veterinary policies established by the medical brigade/MEDCOM until such time that the theater progresses to a level requiring assignment of the Medical Detachment, Veterinary Service (Headquarters), TOE 08-409L000.

- Provides a highly flexible organization consisting of six mobile veterinary service support squads which can operate independently. Each squad maintains 100 percent mobility at all times to ensure mission completion. Squads can be task-organized across squad lines or subdivided to meet a variety of functional scenarios within the stated mission. They are equipped to meet the travel requirements dictated by the assigned mission.

- Provides inspection services for commercial food sources in support of procurement organizations, publication and distribution of a directory of approved establishments, and inspection of all government food storage facilities.

- Provides inspections of all food at time of receipt. Performs surveillance inspection of all foods in storage and at time of issue or resale.

- Monitors and evaluates environmental and zoonotic diseases and food safety data to include data on foods exposed to NBC agents. Apprises the medical brigade/MEDCOM commander of those factors posing a potential adverse effect on the overall HSS mission.

- Provides limited veterinary care to DOD units with government-owned animals and veterinary support for civic action programs.

- Establishes communications and directs necessary coordination with supported

logistical organizations of all DOD Services and other federal agencies, military units resourced with government-owned animals, host-nation public health officials, and the State Department.

- Coordinates veterinary support for military units with government-owned animals.

- Coordinates required veterinary support with host-nation public health officials.

- Performs unit maintenance on organic equipment.

d. Basis of Allocation. This unit is allocated as follows:

(1) One per every 70,000 Army personnel in the CZ.

(2) One per every 140,000 Army personnel in the COMMZ.

(3) One per every 70,000 Navy, USMC, and USAF personnel in the CZ.

(4) One per every 140,000 Navy, USMC, and USAF personnel in the COMMZ.

e. Mobility. The headquarters section is capable of transporting only 30 percent of its equipment, supplies, and personnel in a single lift using its authorized organic vehicles. Each of the six squads is 100 percent mobile with its authorized organic vehicles.

10-16. Medical Detachment, Veterinary Medicine, TOE 08-418L000

a. Mission. The mission of this unit is to—

- Provide definitive comprehensive veterinary medical care to government-owned animals.

- Provide veterinary support for civic action programs.

- Conduct veterinary PVNTMED to control zoonotic diseases.

- Conduct public health functions in support of the overall HSS system.

b. Assignment. The unit is assigned to a Medical Brigade (COMMZ), TOE 08-422 L200. It may be placed under the command and control of the Medical Detachment, Veterinary Service (Headquarters), TOE 08-409L000, or a Medical Detachment, Veterinary Service, TOE 08-417 L000. This unit may also be assigned to a MEDCOM, TOE 08-611 L000.

c. Capabilities. This unit provides—

- Comprehensive veterinary medical care to government-owned animals. This includes long-term hospitalization for MWDs.

- Comprehensive veterinary medical care in support of civic action programs.

- A mobile team deployable to high-casualty areas for short durations.

- Procurement physicals of military animals to include MWDs.

d. Basis of Allocation. One unit is allocated per 200 MWDs in support of all branches of the uniformed Services.

e. Mobility. This unit is capable of transporting only 30 percent of its equipment, supplies, and personnel in a single lift using its authorized organic vehicles.

10-17. Medical Detachment, Veterinary Service (Small), TOE 08-419L000

a. Mission. The mission of this unit is to provide veterinary services for all branches of the uniformed Services and other federal agencies throughout the TO. These services include—

- Sanitary inspections of approved food source facilities.

- Procurement and surveillance inspections of foods.

- Environmental and zoonotic disease surveillance.

- Wholesomeness determination of food in NBC environment.

- Limited veterinary care for government-owned animals.

- Civic action programs.

- Veterinary PVNTMED.

- Public health functions.

b. Assignment. This unit is assigned to a Medical Brigade (Corps), TOE 08-422L000, or a Medical Brigade (COMMZ), TOE 08-422L200. It may be placed under the command and control of the Medical Detachment, Veterinary Service, TOE 08-417L000, or Medical Detachment, Veterinary Service (Headquarters), TOE 08-409L000. This unit may also be assigned to a MEDCOM, TOE 08-611L000.

c. Capabilities. The unit—

- Provides inspection services for commercial food sources in support of procurement organizations; publishes and distributes the directory of approved establishments (if it is the

senior veterinary unit in the TO); and provides inspection of all government food storage facilities.

- Provides inspections of all food at time of receipt.

- Performs surveillance inspection of all foods in storage and at time of issue or resale.

- Monitors and evaluates environmental, zoonotic disease, and food safety data, to include data on foods exposed to NBC agents. Apprises the medical brigade/MEDCOM commander of those factors posing a potential adverse effect on the overall HSS mission.

- Provides limited veterinary care to government-owned animals in DOD units.

- Provides veterinary support for civic action programs.

- Maintains 100 percent mobility within the unit at all times to meet the travel requirements dictated by the assigned mission.

- Establishes communications and directs necessary coordination with supported logistical organizations of all uniformed Services, other federal agencies, and the State Department.

- Coordinates veterinary support for military units with government-owned animals.

- Coordinates required veterinary support with host-nation public health officials.

d. Basis of Allocation. This unit is allocated as follows:

(1) One per every 10,000 Army personnel in the CZ.

(2) one per every 20,000 Army personnel in the COMMZ and supported in the CZ.

(3) One per every 10,000 Navy, USMC, and USAF personnel in the CZ.

(4) One per every 20,000 Navy, USMC, and USAF personnel in the TO.

NOTE

For every Medical Detachment, Veterinary Service, TOE 08-417 L000, subtract seven Medical Detachments, Veterinary Service (Small), TOE 08-419L000, from the total force requirement. Both of these units are allocated based on the same workload. Therefore, the medical detachment, veterinary service equals to seven medical detachments, veterinary service (small). To avoid replication, the medical detachment, veterinary service will be used as appropriate instead of seven medical detachments, veterinary service (small).

e. Mobility. This unit is 100 percent mobile using its authorized organic vehicles.

CHAPTER 11

PREVENTIVE MEDICINE SERVICES

Section I. THE MEDICAL THREAT

11-1. The Preventive Medicine Mission

Preventive medicine is the most effective, least expensive means of providing the combat commander with the maximum number of healthy, combat-effective soldiers.

11-2. The Medical Threat

a. Historically more soldiers have been rendered noneffective from DNB1 than from injury received as a direct result of conflict. In most US conflicts, three times as many soldiers have been lost to DNB1 than to enemy action. Although disease is no longer expected to be the major cause of death in combat areas, it still accounts for the vast majority of combat noneffectiveness.

b. In past conflicts, preventable diseases have severely tied combat operations. Among the diseases historically impacting combat operations are diseases transmitted by arthropods (malaria, dengue, and typhus) and diseases associated with poor sanitation and personal hygiene (hepatitis, cholera, typhoid, and dysentery). Preventable nonbattle injuries (cold and heat injuries) have also adversely impacted upon past combat operations. At certain times, the occurrence of preventable diseases and nonbattle injuries has rendered major units combat noneffective.

11-3. Categories of the Medical Threat

Disease and nonbattle injuries account for the vast majority of combat noneffectiveness. The militarily significant DNBI can be reduced to the following broad categories:

- a.* Heat injuries caused by heat stress and insufficient water consumption.
- b.* Cold injuries caused by combinations of low temperatures, wind, and wetness.
- c.* Diseases caused by arthropod/animal bites or environmental conditions.
- d.* Diarrheal diseases caused by—
 - Drinking contaminated water.
 - Eating contaminated foods.
 - Not practicing good individual and unit PVNTMED measures.
- e.* Diseases, trauma, or injuries caused by physical or mental unfitness.
- f.* Occupational injuries caused by carbon monoxide, noise, blast overpressure, and solvents.
- g.* Disease resulting from altitude exposure at high terrestrial elevations.

11-4. The Medical Threat and the Military

Because of the mobility and dispersion of modern fighting forces, individual soldiers and small units must take action to protect themselves against the medical threat. Health service support planners must work closely with PVNTMED personnel who can provide assistance in identifying general and AOR-specific health threats and the appropriate PVNTMED measures to counter

them. In all instances, key PVNTMED assets should be deployed early in order to begin countering and monitoring the health threats. They must coordinate with logistical elements of the force to ensure that adequate supplies of materials are available to counter the medical threat. Specific examples are the provision of—

- Large amounts of water to combat the threat of heat injury and provide for personal hygiene. Joint planning factors indicate that as much as 20 gallons per man per day will be required during operations in hot weather environments. Medical units will require additional amounts of water for patient care activities.

- Adequate changes of socks and clothing to prevent cold injuries caused by wet clothing.

- Skin and clothing application insect repellents, aerosol insecticides, and bed nets for the individual; and pesticides and associated equipment for field sanitation teams and PVNTMED units to prevent arthropod-borne disease.

- Iodine tablets and calcium hypochlorite to maintain water potability.

- Adequate fresh air ventilation in confined vehicles and in maintenance and sleeping areas. Proper ventilation prevents carbon monoxide poisoning and possible death.

- Adequate hearing protection to ensure no immediate hearing loss by impact noise and to decrease the amount of temporary hearing threshold shift, which affects the soldier's ability to discriminate combat significant sounds.

- Adequate vision protection to prevent traumatic eye injury from DE weapons and sighting devices, secondary projectiles, and accidental blunt trauma.

11-5. The Individual Soldier and the Medical Threat

The individual soldier must initiate PVNTMED measures such as—

a. Protection against heat by—

- Drinking sufficient amounts of water at frequent intervals.

- Using the correct work/best cycle as directed by his leader.

- Eating all meals to replace salt.

- Recognizing the risk associated with wearing of MOPP clothing, body armor, or when operating inside armored vehicles.

- Modifying the uniform as directed/authorized by the commander.

b. Protection against cold weather by—

- Drinking plenty of water to replace loss of fluids during periods of strenuous exercise.

- Wearing uniform in loose layers to retain body heat.

- Washing the feet daily and keeping them dry by changing socks several times a day.

- Keeping the body warm by exercising the trunk and limbs. Exercising feet, hands, and face to increase circulation.

- Using care when handling fuels.

- Avoiding skin contact to cold metal in cold climates.

by—
c. Protection against biting arthropods

- Using uniform as a barrier.
- Using insect repellent on exposed skin.
- Taking antimalarial pills or tablets or other chemoprophylaxis as prescribed.
- Using a bed net.
- Maintaining good personal hygiene.
- Keeping uniform clean.
- Using clothing application insect repellent on battle-dress uniforms.

d. Taking precautions to prevent diarrhea by—

Not buying food, drink, or ice from civilian vendors unless approved by command authority.

Using treated water. When not available, treating water by using iodine tablets, chlorine ampules, or other approved disinfectants, and as a last resort by boiling it.

- Washing hands.
- Washing food utensils.
- Burying waste.

e. Maintaining physical and mental fitness by—

- Exercising.

- Preventing skin infections by practicing good personal hygiene and washing the body as often as possible.

- Preventing dental disease. (See Chapter 9.)

- Preventing genital and urinary tract infections. (See FM 21-10.)

- Practicing sleep/rest discipline.

- Improving resistance to stress. (See Chapter 12.)

f. Preventing injury by—

• Ensuring adequate ventilation while in closed spaces such as when firing weapons inside a personnel carrier.

- Wearing hearing protection while associated with source of noise (that is, aircraft, tactical vehicles, and all calibers of weapons).

- Wearing eye protection when potentially exposed to sources of traumatic injury such as DE sighting devices and weapons, secondary projectiles, and accidental blunt trauma.

g. Taking precautions to prevent diseases and illnesses as deemed appropriate by the medical threat.

11-6. The Small Unit Commander and the Medical Threat

a. The small unit commander can reduce the medical threat to companies, troops, batteries, and small detachments by initiating and enforcing measures beyond the capability of the individual. As a minimum, the unit commander will—

- Assess the medical threat and its potential impact on the mission.

- Appoint, equip, and train a unit field sanitation team to provide advice on the implementation of PVNTMED measures. Organic or attached medical personnel will be used to compose the unit field sanitation team according to AR 40-5. If medical personnel are not available, appointed team members will be trained by supporting PVNTMED assets. See FM 21-10, FM 21-10-1, and the AMEDD exportable field sanitation training module.

- Incorporate PVNTMED measures into the unit SOP.

- Maintain adequate PVNTMED supply levels.

- Maintain immunizations and prophylaxes to preserve health and prevent the spread of disease.

- Motivate subordinates to practice PVNTMED measures.

- Enforce PVNTMED practices; for example—

- Bury or burn waste to prevent rodent and arthropod harborages and breeding sites.

- Obtain food from approved sources.

- Prevent food contamination during storage and preparation.

- Ensure the consumption of adequate quantities of food and water.

- Initiate control measures recommended by PVNTMED personnel to reduce disease vectors.

- Ensure that continuous medical surveillance for selected health threats of PVNTMED importance is accomplished and reported to higher headquarters routinely.

b. The small unit commander can motivate subordinates to practice PVNTMED measures by—

(1) Tasking the company headquarters to—

- Obtain potable water in adequate amounts only from approved sources.

- Obtain antimalarial pills or tablets or other required chemoprophylaxis from medical personnel and enforce consumption of these pills or tablets as prescribed.

- Utilize field laundry facilities to ensure clean uniforms.

- Identify carbon monoxide exposure areas.

- Provide adequate quantities of eye and hearing protection where required.

(2) Tasking the field sanitation team to—

- Perform sanitation duties as specified by the unit SOP.

- Check the unit's water containers for adequate amount of chlorine, and disinfect the water if necessary.

- Monitor the accomplishment of PVNTMED measures.

- Control arthropod and rodents in unit areas.

(3) Requiring subordinate leaders, field sanitation team personnel, and soldiers to report potential problems on PVNTMED concerns in a timely manner.

(4) Tasking the platoon leaders to—

- Enforce an acclimatization period before engaging in activities.
- Enforce water consumption and work/rest cycles.
- Provide areas for relief from the heat or cold.
- Ensure proper construction and maintenance of latrines and urinals.
- Ensure proper construction of handwashing devices and showers.
- Enforce the use of individual PVNTMED measures among their troops.
- Ensure proper ventilation to protect soldiers from carbon monoxide asphyxiation.
- Enforce use of hearing and eye protection among troops.
- Enforce sleep discipline.

(5) Tasking assigned medical personnel to conduct medical surveillance and report significant medical events through the chain of command to higher headquarters.

11-7. Echelon II Preventive Medicine Support

The Echelon II PVNTMED sections of the divisions, separate brigades, and ACRs are

responsible for—

- Assessing the medical threat and determining PVNTMED measures.
- Advising commanders and staffs of PVNTMED requirements.
- Coordinating with logistical elements for required support of PVNTMED materials.
- Training, monitoring, and providing technical assistance to unit field sanitation teams.
- Monitoring the training of all individuals in personal PVNTMED measures.
- Conducting surveys, inspections, and control activities.
- Conducting and coordinating the medical surveillance for selected diseases of PVNTMED importance; compiling and reporting data to higher headquarters; and investigating significant medical occurrences.

Although the composition of these PVNTMED elements are specified by the TOE, they may be tailor-made to provide selected PVNTMED expertise to investigate and provide solutions to significant PVNTMED problems/issues by augmenting or changing the officer expertise available. For example, for disease outbreak investigations, community health nurses, or additional PVNTMED officers maybe added at any level to assist in the investigation. Likewise, nuclear science officers maybe added to investigate radiation problems such as nuclear contamination of food/water supplies.

11-8. Echelons III and IV Preventive Medicine Support

At Echelons III and IV, additional PVNTMED support is provided by small, mobile PVNTMED

detachments; the PVNTMED section organic to the ASMB; elements from the AML, and PVNTMED staff sections at the medical brigade/group level. Augmentation of Echelons III and IV PVNTMED assets will be determined at the appropriate command level based on mission requirements.

a. Preventive Medicine Detachments.

There are two detachments which usually provide PVNTMED support within the corps/COMMZ on an area basis; however, they can operate in divisional rear areas to supplement division PVNTMED capabilities. In addition, some detachments may be assigned to support specific needs which present potentially significant disease threats to combat forces such as EPW camps and refugee relocation centers.

(1) Medical detachment, preventive medicine (entomology), TOE 08-499L000.

The mission of this unit is to provide PVNTMED support and consultation in the areas of entomology, DNBI prevention, field sanitation, sanitary engineering and epidemiology to minimize the effects of vectorborne diseases, enteric diseases, environmental injuries, and other health threats on deployed forces in the CZ and COMMZ.

(a) Assignment. This unit is assigned to a medical brigade or a medical group, and normally attached to an ASMB.

(b) Capabilities. This unit—

- Provides surveillance and control of disease vectors and reservoirs in assigned areas, to include area and aerial spraying.
- Monitors pest management, field sanitation, water treatment and storage, waste disposal, and DNBI control practices of units in assigned areas. Provides advice and training as necessary.

- Investigates and evaluates pest management, sanitation, water supply, and waste disposal practices; and other environmental health-related problems. Recommends corrective measures as necessary.

- Conducts medical surveillance activities in the AOR, to include coordinating, compiling, analyzing, and reporting medical surveillance data to assist in evaluating conditions affecting the health of the supported force.

- Conducts epidemiological investigations.

- Collects environmental samples and specimens and performs selected analyses or evaluations to assist in assessment of the medical threat.

- Coordinates NBC-related biological specimen collection and evaluation with treatment, NBC, laboratory, and intelligence personnel. (See FM 34-54.)

- Divides into three teams, as necessary, to perform assigned missions.

- Monitors casualties, hospital admissions, and reports of autopsy for signs of chemical or biological warfare agent use.

(c) Basis of allocations. One unit is allocated per 45,000 personnel and one per 100,000 EPW.

(d) Mobility. This unit requires 100 percent of its TOE and supplies to be transported in a single lift using its authorized organic vehicles.

(2) Medical detachment, preventive medicine (sanitation), TOE 08-498L000. The mission of this unit is to provide PVNTMED

support and consultation in the areas of DNBI prevention, field sanitation, entomology, sanitary engineering, and epidemiology to minimize the effects of environmental injuries, enteric diseases, vectorborne disease, and other health threats on deployed forces in the theater.

(a) *Assignment.* This unit is assigned to a medical brigade, TOE 08-422L000, or a medical group, TOE 08-432 L000. It is normally attached to an ASMB, TOE 08-455 L000, or other medical units.

(b) *Capabilities.* The capabilities of this unit are similar to those of the Medical Detachment, Preventive Medicine (Entomology) with the exception of area and aerial spraying and mass delousing.

(c) *Basis of allocation.* One unit is allocated per 22,500 personnel and one per 50,000 EPW.

(d) *Mobility.*

1. This unit is capable of transporting 12,000 pounds (882.0 cubic feet) of TOE equipment with organic vehicles.

2. This unit has 4,366 pounds (244.4 cubic feet) of TOE equipment requiring transportation.

3. This unit requires 100 percent of its TOE equipment and supplies to be transported in a single lift using its authorized organic vehicles.

b. *Preventive Medicine Section, Medical Battalion, Area Support.* Preventive medicine support is also provided by the PVNTMED section of the medical battalion, area support. The medical battalion, area support, includes a PVNTMED section which is capable of providing PVNTMED support and advice similar to that described above

for the PVNTMED detachment (sanitation). It can be augmented by PVNTMED detachments.

(1) The staffing of this section permits it to have a more extensive capability than the PVNTMED detachments in epidemiological (infectious disease) investigations and sanitary engineering support. The PVNTMED section will ensure that continuous medical surveillance in the AO for selected health threats of PVNTMED importance is accomplished and that data is compiled, analyzed, and reported to higher headquarters on a routine basis. Support provided by this section in these areas is in coordination with PVNTMED detachments and other medical or nonmedical units within the medical battalion, area support.

(2) As PVNTMED detachments are normally attached to a medical battalion, area support, this section assumes technical supervision of the attached detachments to coordinate assignment of specific missions. Preventive medicine detachments are attached to, rather than being organic to, the ASMB.

c. *Area Medical Laboratory Preventive Medicine Support.* Chapter 7 provides a discussion on the AML. The emphasis of the AML is on evaluation of the total health environment in the TO. The AML provides support for PVNTMED operations primarily in the areas of epidemiological (infectious disease) investigations, entomological laboratory analysis, radiation protection/analysis, sanitary engineering, and industrial hygiene. It has the following related capabilities:

(1) To analyze and evaluate food, drinking water, and waste water samples.

(2) To identify pests and assess the efficacy of pesticides.

(3) To receive, compile, and analyze theaterwide medical surveillance data and determine disease and other health threat trends

to minimize the effect of DNBI on mission accomplishment.

(4) To determine the frequency and distribution of infectious agents and disease.

(5) To provide related consultative services.

11-9. Command and Control

a. Command and control of PVNTMED operations is characterized by centralized command at the medical group/brigade and decentralized operations through attachment of PVNTMED

assets to supported units. This provides the medical commander the flexibility to tailor PVNTMED support to meet specific mission requirements. For example, a disease-related threat may be greater in areas where there are large troop concentrations (embarkation and debarkation marshaling areas) and unit PVNTMED measures are not adequately being applied or enforced. Hence, such areas may require additional PVNTMED support although requirements for other HSS may not be very significant.

b. Typical command and control relationships for PVNTMED detachments/elements are shown in Figure 11-1.

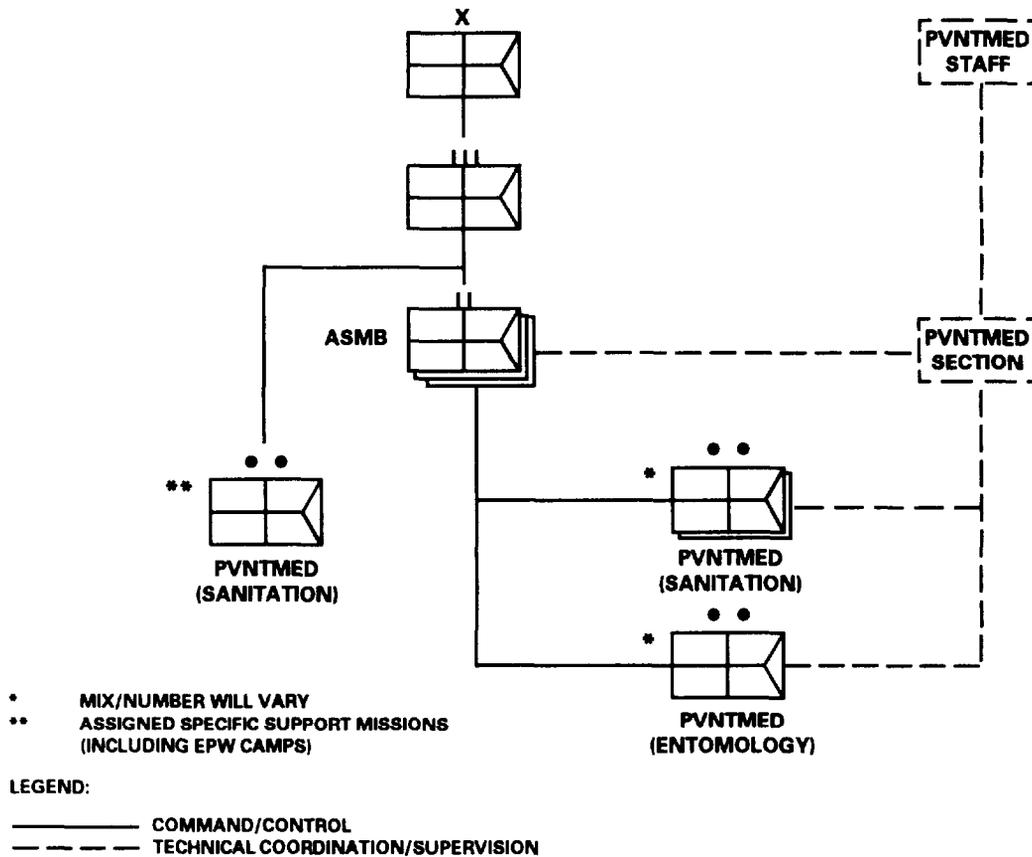


Figure 11-1. Command and control, preventive medicine.

(1) The medical group/brigade's PVNTMED staff advises the commander on the effective use of assigned PVNTMED assets and on any augmentation of these assets as deemed necessary. In addition, the staff establishes PVNTMED policies and provides technical advice to assigned units.

(2) preventive medicine detachments are normally attached to an ASMB to provide PVNTMED support on an area basis within the ASMB assigned in the AO. The ASMB PVNTMED staff advises the ASMB commander on the required additional PVNTMED support within the ASMB AO and allocates geographical AORS to the attached PVNTMED detachments. The staff is the technical link between the medical group/brigade and detachments for technical coordination of PVNTMED-related requirements, problems, and issues. Figure 11-2 illustrates a typical laydown of PVNTMED support in the Corps/COMMZ.

(3) preventive medicine detachments that are assigned specific support missions (EPW or refugee relocation centers) will likely remain under the direct control of the medical group and be attached to the support unit (military police or EPW unit) for administrative and logistical purposes only.

11-10. Operational Concept

Preventive medicine personnel must be prepared to follow an aggressive plan of action characterized by—

a. Preemptive Action. Preventive medicine personnel must take preemptive action. Tasks will be initiated on presumptive information to reduce or eliminate the medical threat before it can manifest itself.

Example 1: Suppress mosquitoes near troop assembly areas without waiting for

laboratory confirmation that the mosquitoes are vectoring disease.

Example 2: Brief commanders on the potential for and effects of adequate sanitation in their unit area before the first case of diarrhea appears.

Example 3: Suppress arthropod vectors along routes of march in advance troop movements.

Example 4: Brief commanders on the results of inadequate protection from carbon monoxide, eye or ear injuries, and safety hazards.

b. Priority to Combat Elements. Generally, soldiers deployed for action have an increased vulnerability to the medical threat. Tactical dispersion places them largely on their own, using PVNTMED measures against the medical threat. Preventive medicine personnel will find many occasions when the tactical situation will permit them to provide support to eliminate the medical threat. Preventive medicine personnel must seek such opportunities and give priority to combat elements.

Example: When given the choice to check the water point of a mechanized infantry unit defending an area along a river or to check the dining facility sanitation at the division finance company, priority of support will be given to the mechanized infantry unit.

11-11. Coordination

Preventive medicine resources are the eyes and ears of the unit commander in identifying and evaluating the medical threats. Without the ability to coordinate with unit commanders, staff agencies, and commanders of line and support units, the medical threat will go uncorrected.

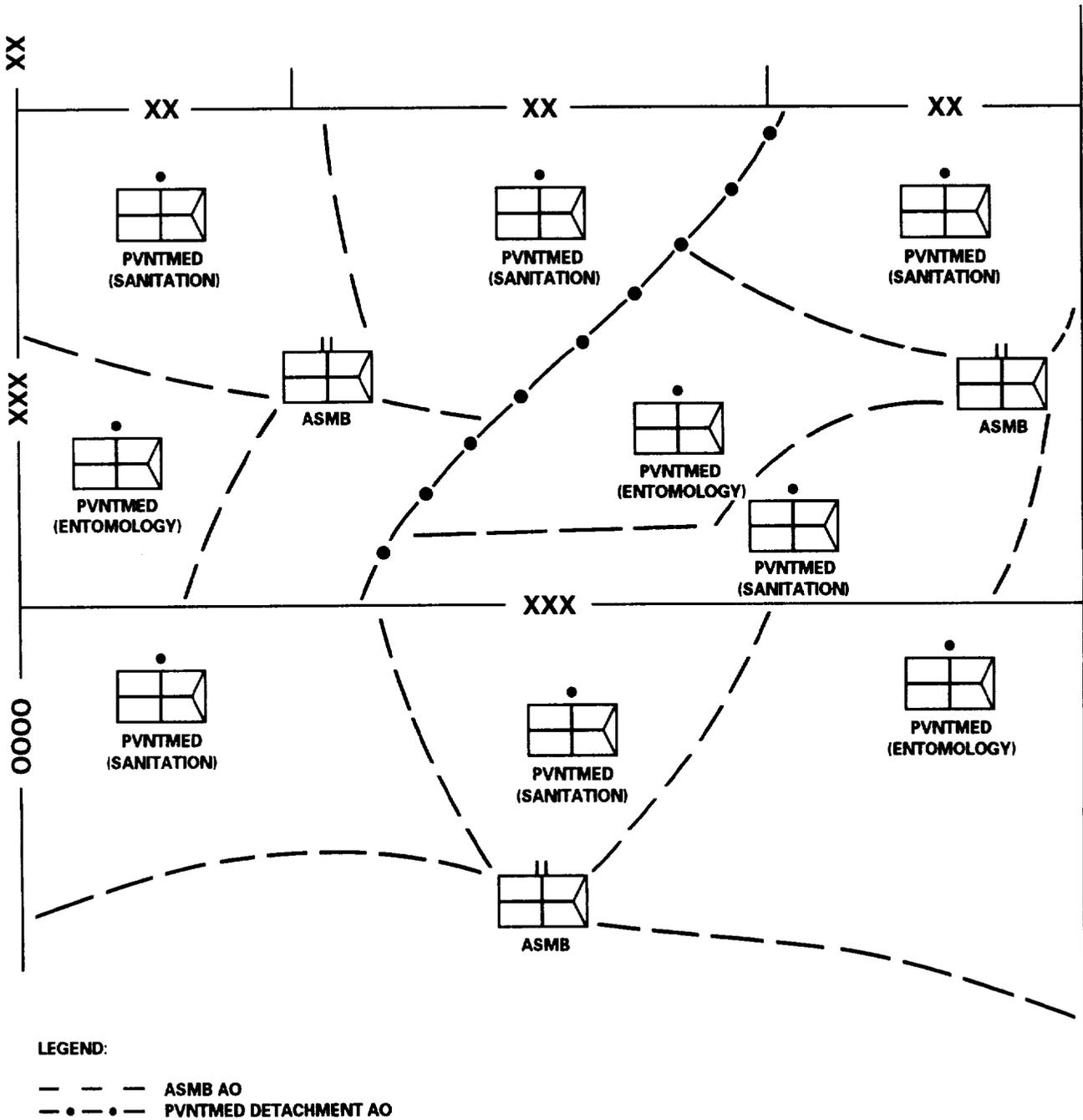


Figure 11-2. Preventive medicine area support, corps / COMMZ (typical laydown).

Some examples of the many types of units and activities of interest to PVNTMED personnel are

listed in Table 11-1; this is not an all inclusive list.

Table 11-1. Units and Activities of Preventive Medicine Significance

ITEM OF INTEREST	LOCATION		PREVENTIVE MEDICINE SIGNIFICANCE
	DIVISION	CORPS	
1. MANEUVER COMPANIES	HIGHLY DISPERSED AND CONCEALED.		ITEMS OF INTEREST 1 THROUGH 3 CONTAIN—
2. MANEUVER BATTALIONS	HIGHLY DISPERSED AND CONCEALED.		<ul style="list-style-type: none"> ● COMBAT SOLDIERS SUBJECT TO THE MEDICAL THREAT.
3. MANEUVER BRIGADES	IN THE MAIN BATTLE AREA AND IN THE RESERVE AREA.	IN RESERVE.	<ul style="list-style-type: none"> ● FIELD KITCHENS THAT MAY BE THE SOURCE OF DISEASE. ● MEDICAL COMPANIES THAT KNOW HOW MUCH PREVENTABLE DISEASE IS OCCURRING. ● UNIT HEADQUARTERS THAT KNOW THE LOCATIONS OF SUBORDINATE UNITS REQUIRING PREVENTIVE MEDICINE SUPPORT.
4. MAIN SUPPLY ROUTE (MSR)	ROADS THROUGH BRIGADE SUPPORT AREA AND DIVISION SUPPORT AREA.	ROADS THROUGH THE CORPS SUPPORT AREA.	TOWNS AND VILLAGES CAN HAVE DISEASES WHICH WILL BE SPREAD ALONG ANY MSR.
5. AIRFIELDS	USUALLY NEAR DIVISION SUPPORT AREA.	STAGING AREAS ON EXISTING AIRFIELDS AND TACTICAL AIRFIELDS.	AIRFIELDS CONTAIN THE AIRCRAFT USED IN AERIAL INSECT CONTROL MISSIONS. THE SUPPLY POINTS AT AIRFIELDS CAN BE THE FOCUS OF DISEASE SPREAD. THE USAF WEATHER STATIONS CAN PROVIDE INFORMATION USEFUL FOR CONTROL OF HEAT OR COLD INJURY AND FOR AERIAL CONTROL OF INSECT DISEASE VECTORS.
6. WATER POINTS	NEAR BRIGADE SUPPORT AREA.	NEAR BASE CLUSTERS.	ADEQUATE QUANTITIES OF POTABLE WATER ARE REQUIRED TO SUSTAIN TROOPS.
7. ICE PLANTS	VILLAGES.	VILLAGES.	VILLAGE ICE PLANTS USED FOR PRODUCTION OF ICE FOR USE BY US SOLDIERS.

Table 11-1. Units and Activities of Preventive Medicine Significance (Continued)

ITEM OF INTEREST	LOCATION		PREVENTIVE MEDICINE SIGNIFICANCE
	DIVISION	CORPS	
8. RATION BREAKDOWN AND STORAGE FACILITIES/POINTS	BRIGADE SUPPORT AREA. DIVISION SUPPORT AREA.	BASE CLUSTERS.	BULK STORAGE SITES, REFRIGERATION SITES, AND TRANSPORTATION UNITS ALL HANDLE POTENTIALLY HAZARDOUS PERISHABLE FOODS WHICH CAN CAUSE DISEASE.
9. FIELD DINING FACILITIES	BATTALION TRAINS.	BASE CLUSTERS.	KITCHENS AND SERVING/DINING AREAS CAN ALL BE SOURCES OF DIARRHEAL DISEASE.
10. ENEMY PRISONER OF WAR FACILITIES*	DIVISION REAR AND BACK. COLLECTION POINTS FORWARD.		ENEMY PRISONER OF WAR COLLECTION POINTS AND INTERNMENT FACILITIES CAN BE SOURCES OF COMMUNICABLE DISEASE.
11. REFUGEE CAMPS*	DIVISION REAR OFF MAJOR SUPPLY ROUTE.	CORPS REAR OFF MAJOR SUPPLY ROUTE.	FORWARD TACTICAL SUPPORT COMPANY, REAR AREA SUPPORT COMPANY, AND REFUGEE CAMPS CAN BE THE SOURCE OF COMMUNICABLE DISEASE.
12. HOSPITAL DISPENSARIES	BRIGADE SUPPORT AREA. DIVISION SUPPORT AREA.	BASE CLUSTERS.	OUTPATIENT INFORMATION ON INCIDENCE OF PREVENTABLE DISEASE SUPPLIES FOR PREVENTIVE MEDICINE PERSONNEL.
13. MAINTENANCE FACILITIES	BRIGADE SUPPORT AREA. DIVISION SUPPORT AREA.	BASE CLUSTERS.	VEHICLE REFIT/REPAIR, EQUIPMENT REPAIR, AND RETROGRADE CARGO SITE (ALL OF THESE CAN HAVE HAZARDOUS OCCUPATIONAL EXPOSURES).
14. LAUNDRIES	BRIGADE SUPPORT AREA. DIVISION SUPPORT AREA.	BASE CLUSTERS.	FIELD LAUNDRY REQUIRED TO PROVIDE VERMIN-FREE CLOTHING EXCHANGE.

* MAY SERVE AS FOCAL POINTS FOR RESERVOIRS OF VECTORBORNE DISEASES OF MILITARY IMPORTANCE SUCH AS MALARIA, DENGUE, OR LEISHMANIASIS. IF THESE AREAS ARE NOT TARGETED FOR PREVENTIVE MEDICINE SUPPORT OPERATIONS, INTERFACILITY TRANSMISSION OF VECTORBORNE DISEASES WILL COMPROMISE THE CAPABILITIES OF MEDICAL PERSONNEL AND OTHER PERSONNEL IN THE SURROUNDING AREA.

Section II. THE PREVENTIVE MEDICINE ESTIMATE

11-12. The Process

The PVNTMED estimate provides effective HSS to the fighting force. This estimate process is a doctrinally approved framework used to logically consider all the elements employed in combating the medical threat. *The estimate process is only a tool.* The HSS planner must use his professional judgment and common sense to omit nonapplicable portions. He must expand those areas that require more detail in subsequent phases of the operation. Figure 11-3 depicts the PVNTMED estimate process.

Example: The MEDCOM PVNTMED officer, the ASMB PVNTMED staff officer, and the divisional PVNTMED officer will have vastly different aspects to consider when making their respective estimates.

11-13. References

General staff and logistical planning guidance for support of the PVNTMED mission is best derived from current doctrine and experience. Preventive medicine reference information can be found in AR 40-5; FMs 8-10, 8-10-8, 8-33, 8-42, 8-250, 10-52, 21-10, and 21-10-1; and technical bulletin medical (TB MED) series books such as TB MED 530 and TB MED 577.

11-14. The Estimate

a. Mission Analysis. The planner must use the HSS plan from higher headquarters to determine *specified tasks* which apply to PVNTMED. Next, he uses the HSS plan and the operational plans of the units supported to determine if there are any *implied tasks* which

must be accomplished to combat and defeat the medical threat. Finally, the planner combines the specified and implied tasks and puts them in the form of a restated mission. This mission statement can and will change frequently in response to the changing tactical situation. The PVNTMED mission generally stated is, "To combat the medical threat to enable commanders to keep their troops well enough to fight and win."

b. Situation and Considerations.

(1) The planner must evaluate medical intelligence information to identify the medical threat which occurs in the TO. The PVNTMED estimate, as well as the intelligence preparation of the battlefield, should include endemic disease threats. Existing intelligence information should be reviewed through coordination with the unit's supporting intelligence element. Additional medical intelligence information of interest in PVNTMED planning can be obtained from sources listed in Appendix F and in FM 8-10-8.

(2) The planner then conducts a map study to identify geographical sources of concern in the TO. He develops PVNTMED overlays for the TO showing the sources of concern and correlating the medical threat, the tactical scenario, and the PVNTMED situation.

(3) Appendix B contains an example of the PVNTMED estimate. The following items are considered:

- (a) The enemy situation.
- (b) The friendly situation.
- (c) Characteristics of the AO.

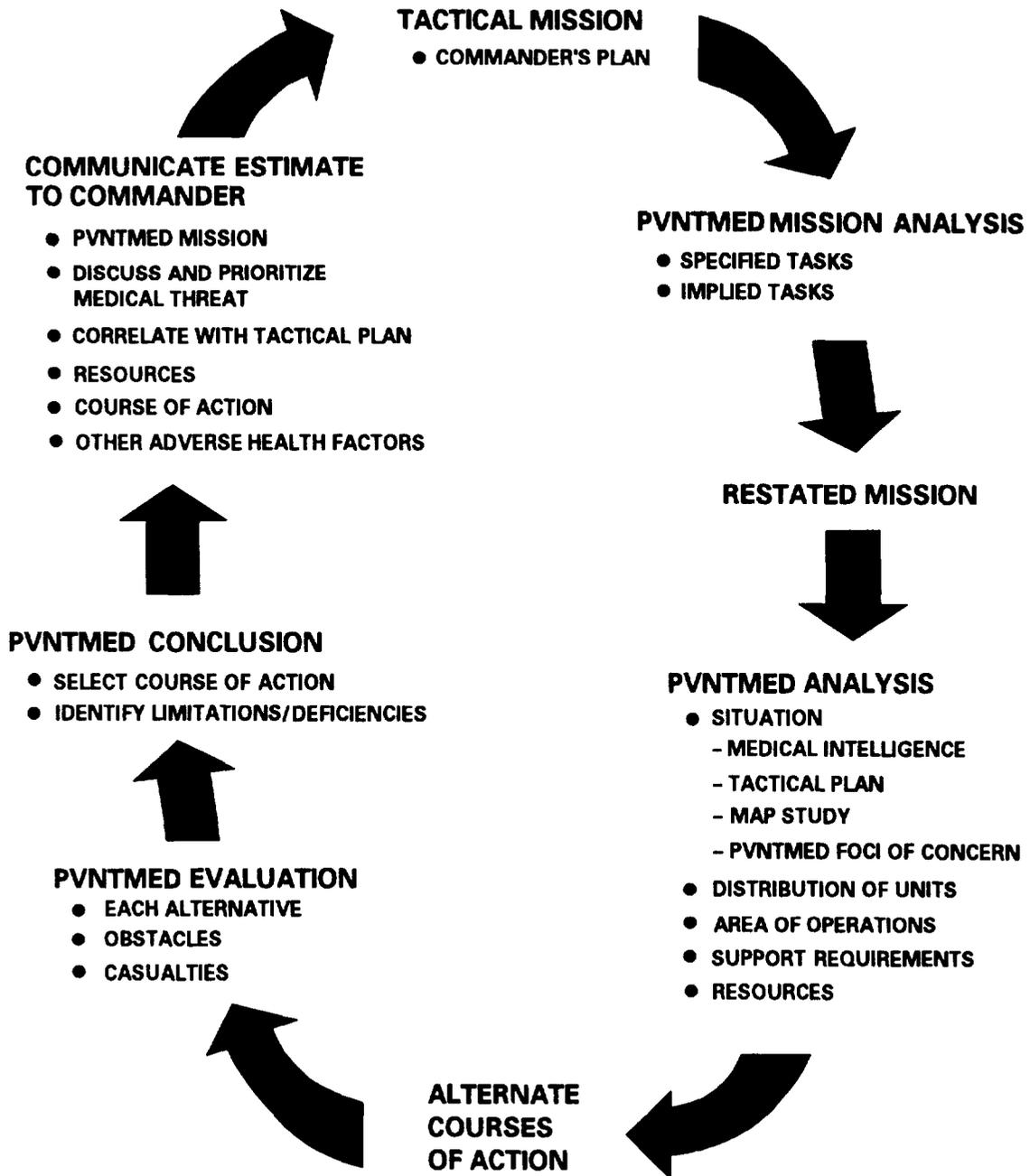


Figure 11-3. The preventive medicine estimate process.

(d) Strengths to be supported.

(e) Health of the command.

(f) Assumptions necessary to complete the estimates.

(g) Special factors of importance to the particular operation.

c. *Analysis.* Many of the essential tools needed to do an analysis have already been gathered. These include the mission and a general idea of the situational elements. To develop possible courses of action, the planner must integrate that data with task estimates and with the requirements and personnel resources available to support those tasks.

(1) *Task estimates.* The planner should consider the situational elements in relation to the distribution of units in the AO. Estimates are developed from the specific tasks required to combat the medical threat.

Example 1: If the units are deployed in an arid environment during hot weather, prime specific tasks would include ensuring that—

- Adequate amounts of potable water are supplied to the troops.
- Heat stress temperature indices are calculated.
- Commanders are informed about the proper work/rest ratios necessary to prevent heat injury.
- Unacclimatized troops are becoming acclimatized to the heat stress.

Example 2: If the units are deployed in a swampy area during a relatively cool

period, then the specific tasks would emphasize arthropodborne disease and immersion injury preventive measures.

(2) *Support requirements.* The planner must estimate the separate requirements for PVNTMED supplies and equipment necessary to combat the medical threat to the units, EPW, and civilians in the AO. For example, if units are deployed to an arid environment where soldiers drink 16 to 24 quarts of water per day, a large increase in the number of iodine tablets for the force will be required.

(3) *Resources available.*

(a) The PVNTMED planner must make maximum use of the personnel available. He must consider the PVNTMED personnel organic to the units in the theater. In addition, he must consider PVNTMED detachments providing support throughout the theater and local civilian public health personnel available to support the local population.

(b) The planner must determine the current status of PVNTMED individual and unit supplies actually available for use.

(c) The planner must align the PVNTMED troop ceiling and supply load with the requirements of the total force.

(4) *Courses of action.* A comparison of the requirements and the means available to fulfill the requirements will enable planners to develop possible courses of action which will enable PVNTMED units to combat the medical threat.

d. *Preventive Medicine Evaluation and Comparison of Courses of Action.* Each course of action is compared against the obstacles that will be encountered and against the casualties that could occur if that course of action were not followed. The PVNTMED planner must now

decide which course of action he will recommend to support the operational mission and the HSS mission. The major limitations and deficiencies in the preferred course of action must be brought to the commander's attention. The disadvantages of the nonselected courses of action can be listed along with any factors that will adversely affect the health of the command. A simplified example of this situation analysis, estimate, and conclusion process is—

(1) *Medical detachment, preventive medicine (sanitation) DS mission:* Combat the medical threat in the 4th Armored Division area.

(2) *Situation:* Units are assembling in the divisional area prior to the start of an offensive tomorrow, August 15, 19xx; medical threat consists of the following in the order listed: heat injury, diarrheal disease, and malaria.

(3) *Medical detachment, preventive medicine (sanitation) tasks:* To survey water production points, food service areas, and troop assembly areas and to conduct pest management surveys and operations for problems that could prevent successful combat operations.

(4) *Courses of action.*

(a) *Course of action 1.* Use the detachment to collect water samples for vector analysis.

(b) *Course of action 2.* Use the detachment to survey the assembly areas prior to their commitment in the offensive of the next day—emphasis on adequate water supply to prevent heat injury.

(c) *Course of action 3.* Use the detachment to evaluate the status and effectiveness of handwashing devices in preventing diarrheal disease.

e. *Preventive Medicine Conclusion.* The planner's evaluation and comparison of the possible courses of action should lead him to choose a course of action which will eliminate or abate the greatest medical threat. Using the operational concepts of "preemptive action" and "priority to combat units," the decision was that the primary emphasis should be to combat heat injury in the assembly areas. The other courses of action could be done concurrently or as personnel, time, and material allowed. The planner would continue to make new/revised estimates, evaluations, and comparisons as the situations changed.

11-15. Communicating the Estimate

The PVNTMED planner will be required to communicate his estimate to the commander. When briefing the PVNTMED estimate, the planner should—

a. *State the Mission.* Keep it brief, specific, and positive.

b. *Identify the Medical Threat.*

(1) Keep it short and simple. If the commander cannot pronounce it, he will not remember it; if he cannot remember it, it will not get command emphasis.

(2) Correlate the medical threat to the tactical plan.

(3) Discuss the medical threat in order of priority.

(4) State the resources available: people and equipment.

(5) State the course of action selected.

(a) State the limitations and deficiencies of the preferred course of action that the commander must know about.

(b) State any factors that could adversely affect the health of the command.

Section III. THE PREVENTIVE MEDICINE PLAN

11-16. The Plan

The PVNTMED plan is a part of or is appended to the HSS plan. When it is implemented, it is a directive to all subordinate commands and enables them to determine the PVNTMED functions within the command.

11-17. Categories

Preventive medicine plans usually can be divided into two separate categories:

a. *Preventive Medicine Detachment Plans.* These plans provide guidance to PVNTMED detachment commanders in the form of a mission statement, location, attachments (if applicable), and coordination instructions. (See Appendix C.)

b. *Preventive Medicine Assets' Input to Health Service Support Plans (Medical Section of a Unit).* These plans provide guidance to subordinate commanders (line and support). Direction may become more detailed as unit size decreases. (See Appendix C.)

Section IV. THE PREVENTIVE MEDICINE TROOP PLAN

11-18. The Process

Planners determining PVNTMED troop requirements for a specific TO must consider the following:

- The mission in the theater.
- The total troop strength to be supported.
- The medical threat present in the theater.
- The composition of the force supported.
- The time phase of the operation.
- The required coordination.

11-19. The Theater Mission

The mission of the tactical force must be considered when the PVNTMED planner is making plans to adequately support that tactical force.

11-20. Troop Strength

The basis of allocation for PVNTMED units is based on the theater troop strength.

11-21. The Theater Medical Threat

Preventive medicine units and personnel have specific mission responsibilities. The selection of the types of PVNTMED resources deployed must consider the major medical threats in the theater.

11-22. Force Composition

Consider the types of combat troops to be supported. Mechanized units will require more mobility than infantry units. Will there be enough civil affairs units with PVNTMED officers to take care of refugees? Do deployed units have field sanitation teams? Are preventive medicine assets available to support the mission?

11-23. Time Phase

As soon as US forces deploy in the theater, there will be a potential for contracting an endemic disease. Preventive medicine personnel and units must be deployed as early as possible to aggressively combat the medical threat. Planners must consider using a part of the total PVNTMED requirement for each segment of the deployment.

11-24. Coordination

a. Although many areas of consideration in planning deal solely with AMEDD organizations, PVNTMED planning must involve coordination with the primary and special staffs at every level. The medical threat may be completely different if—

- Soldiers are served operational rations instead of Class A rations.
- Each soldier is issued two canteens for water in a hot environment and sufficient water transport is available.
- Enough insect repellent is available for issue to soldiers.
- Bulk chlorine is programmed for resupply before unit supplies are exhausted.
- Preventive medicine detachments arrive early.

- Plans and moves into port/staging areas include PVNTMED detachments prior to the arrival of significant number of troops.

b. Planners must examine the medical threat. They must consider issues such as supply, fuel water, uniforms, personal protective clothing and equipment, and transportation and their effects on PVNTMED measures. They must also coordinate with the responsible staff, briefing them on the medical threat and obtaining their support to ensure that the PVNTMED plan will work.

11-25. Preventive Medicine Technical Support Available

a. The Division Preventive Medicine Section. The mission of this section is to—

- Identify the deterioration in PVNTMED measures.
- Inform the commanders on measures to repair the breakdowns.
- Coordinate, monitor, and provide technical assistance for training of unit field sanitation teams.
- Monitor the training of individuals in unit and individual PVNTMED measures.
- Perform sanitation surveys and inspections and limited pest management.
- Perform limited epidemiological surveys.

b. Nondivisional Preventive Medicine Assets.

(1) *Medical command.* Consultants in PVNTMED provide advice and technical

control of PVNTMED assets within the theater. (See Chapter 14.)

(2) *Medical brigade.* Staff in PVNTMED/veterinary section provides advice on PVNTMED aspects of brigade operations. Provides technical control of resources. (See Chapters 10 and 14.)

(3) *Medical group.* Staff in PVNTMED section provides advice on PVNTMED aspects of group operations. Staff also collects data on DNBI from MTFs under group control. (See Chapter 14.)

c. *Preventive Medicine Detachments (Entomology and Sanitation).* Paragraphs 11-8a(1) and (2), respectively, discuss the technical support provided by these detachments.

d. *Preventive Medicine Section, Medical Battalion, Area Support.* Paragraph 11-8b discusses the technical support provided by this section.

e. *Area Medical Laboratory Preventive Medicine Support.* Paragraph 11-8c discusses the support provided PVNTMED operations by the AML.

f. *Other Preventive Medicine Assets.*

(1) *Separate brigade or armored cavalry regiment.* The mission of PVNTMED

assets is to provide support as in the division PVNTMED section.

(2) *Civil affairs units.* Preventive medicine personnel are assigned to the headquarters and headquarters company (HHC), civil affairs command; HHC, civil affairs brigade; civil affairs detachment (DS); civil affairs company (GS); and civil affairs action teams. Their mission is to—

- Provide support for displaced persons, refugees, and evacuees.
- Reestablish essential public health services.

11-26. Preventive Medicine Extenders—Field Sanitation Team

a. *Mission.* Supervise unit and individual PVNTMED measures as additional duties. The team receives special training in use of unit pest control equipment, the design and siting of waste disposal facilities, and the production and protection of water. Recommended team supplies and equipment are listed in AR 40-5 and FM 21-10-1.

b. *Organization.* The team will be comprised of two medical personnel, assigned or attached. If the unit does not have medical personnel (MOS 91B), assigned or attached, two soldiers, one of whom must be an NCO, will be appointed. (See AR 40-5 and FM 21-10-1.)

CHAPTER 12

COMBAT STRESS CONTROL SERVICES

Section I COMBAT STRESS

12-1. The Modern Battlefield

a. Advances in technology are continually changing the way warfare is conducted. The tempo of battle has increased dramatically. On the modern battlefield, US Forces will be required to fight around the clock in offensive or defensive operations. Leaders must, therefore, ensure that troops rest and resupply on the run. (See FM 21-10 for minimum sleep requirements.) They must think faster, make decisions more rapidly, and act more quickly than the enemy. Leaders must know the commander's intent. They must be able to act spontaneously and synchronously, even though the situation has changed and communications are disrupted. The demands on CSS units will be equally extreme. If NBC and DE weapons are employed, the stressors on the integrated battlefield will be incalculably greater. Exhausted and attrited units must be reconstituted and returned quickly to the battle.

b. In OOTW, the terrorist or guerrilla enemy also counts on causing stress to the enemy as his principal weapon and objective. Although the stressors of terrorism and/or guerrilla tactics are less overwhelming than those of war, they are deliberately designed to cause breakdown of professionalism and discipline.

12-2. Leader's Responsibility

It is the responsibility of leadership to control stress. Army Medical Department personnel in unit mental health (MH) sections and in specialized CSC units assist command in—

- Preventing battle fatigue and misconduct stress behaviors. Table 12-1 provides a classification of positive and dysfunctional combat

stress behaviors (CSBS), with examples of positive CSBS, battle fatigue, misconduct stress behaviors, and post-traumatic stress disorders (PTSDS).

- Treating patients suffering from battle fatigue or neuropsychiatric (NP) disorders.
- Returning soldiers to duty or determining their disposition.
- Evaluating soldiers who display misconduct stress behaviors.
- Evacuating patients with NP disorders who cannot RTD.

12-3. Combat Stress Behaviors

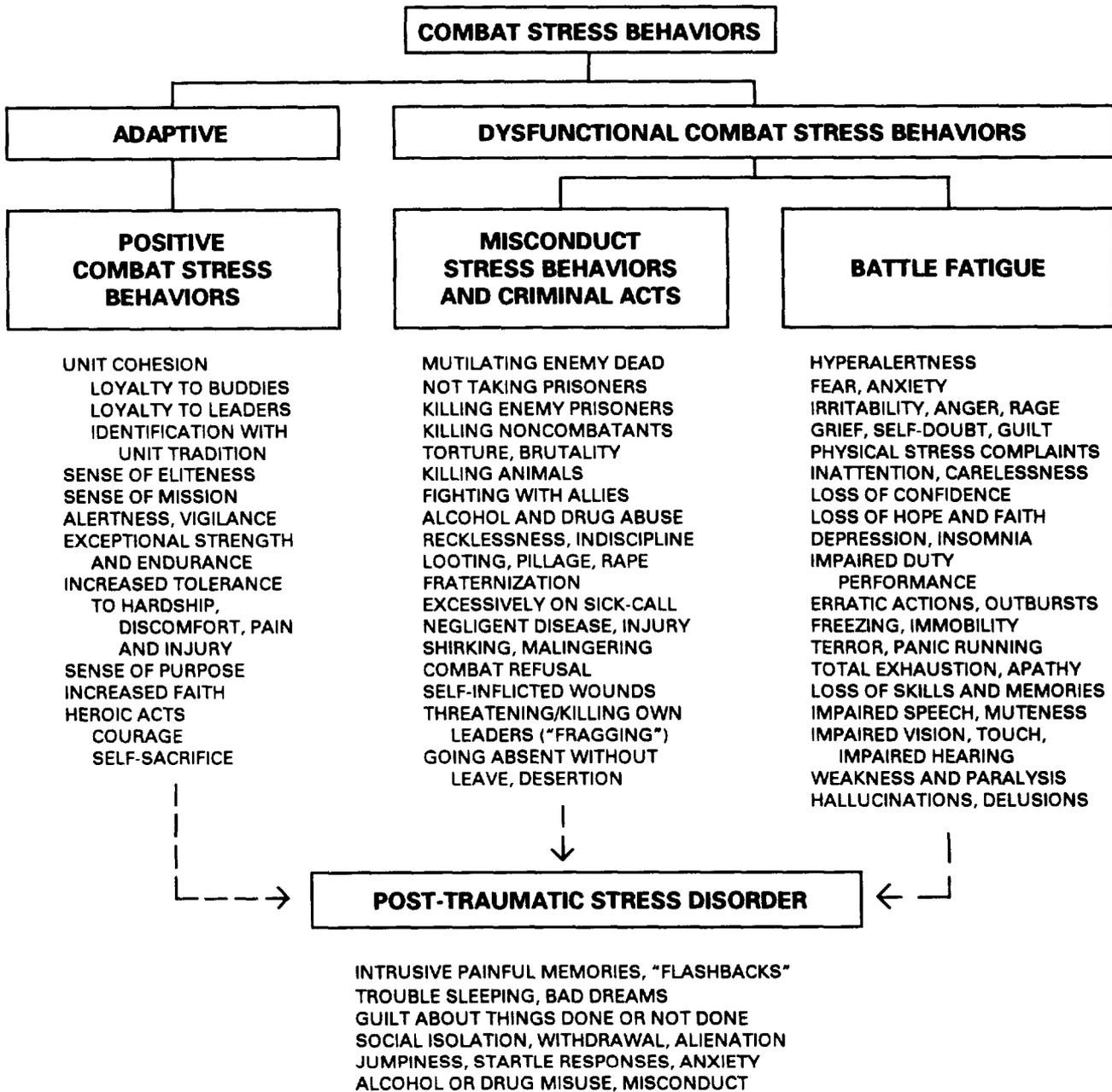
Combat stress behavior is the generic term which covers the full range of behaviors in combat, from highly positive to totally negative. See FM 22-51 for a comprehensive review of CSC.

12-4. Battle Fatigue

a. Battle fatigue is the approved US Army term for combat stress symptoms and reactions. (See AR 40-216.) These symptoms and reactions may be unpleasant feelings and may interfere with mission performance. They are best treated with reassurance, rest, replenishment of physical needs, and activities which restore confidence. (Brief tranquilizing or sedative medication and/or skilled counseling may be needed in some cases.)

b. Battle fatigue also occurs in soldiers who have been physically wounded, or who have

Table 12-1. Combat Stress Behaviors



other nonbattle injuries or diseases caused by stressors in the combat area. It may be necessary to treat both the battle fatigue and the other problems at the same time. Battle fatigue, by definition, does not require some other legal or disciplinary action.

12-5. Triage

The medical triager sorts the battle-fatigued soldiers based on where they can be treated.

Ž *Duty* cases apply to those soldiers who are seen by a physician or physician's assistant but who can be treated and released to duty to their small unit.

- *Rest* cases apply to those soldiers who must be sent to their unit's nonmedical CSS elements for brief rest and lighter duties, but who do not require continual medical observation.

NOTE

Duty and rest cases are not *medical casualties*, because they are still available for some duty in their units. However, those *heavy cases* who cannot RTD or rest in their unit the same day are battle *fatigue casualties* (BFCs).

- *Hold* cases apply to those BFCs who can be held for treatment at the triager's own MTF because both the tactical situation and the BFCs' symptoms permit. This should be done whenever feasible.

- *Refer* cases apply to those BFCs who must be referred (and transported) to a more secure or appropriate echelon of care. *Refer* becomes

hold when the soldier reaches an MTF where he can be held and treated.

12-6. Misconduct Stress Behaviors

Misconduct stress behaviors are not called battle fatigue, although battle fatigue may be present along with them if they truly are reactions to combat stress. The misconduct behaviors require different treatment than battle fatigue. They require administrative action and/or specific medical or surgical treatment.

12-7. Neuropsychiatric Disorders

Neuropsychiatric disorders include functional and organic mental disorders, but exclude battle fatigue cases unless they persist and require evacuation from the TO. Included under this label are—

a. *Post-Traumatic Stress Disorder*. This sublabel is a recognized NP disorder which shares many common features with battle fatigue. The BFC label should be used instead of PTSD while the soldier is in the TO, as that label more clearly implies the positive expectation of recovery and RTD without persistent problems. Post-traumatic stress disorder should be reserved for symptoms which persist and require evacuation from the TO, arise after hostilities end, or after returning to CONUS.

b. *Substance Misuse and Abuse*. This sublabel is discussed above under misconduct stress behavior, but is not necessarily a reaction to combat or deployment stress.

c. *Organic Mental and Neurologic Disorders*. This sublabel applies to physical diseases of the brain or body. The symptoms of organic mental disorders are primarily mental or behavioral; the diagnosis can be documented by neurological or laboratory examinations. Organic

mental and neurologic disorders are in the differential diagnosis of battle fatigue. Some cases

respond to the same treatment principles; others must be diagnosed and evacuated.

Section II. TREATMENT OF BATTLE FATIGUE

12-8. Experience in Treatment of Battle Fatigue

Historical experience in World Wars I and II, the Korean and Vietnam conflicts, and the Arab-Israeli and other wars has demonstrated the basic principles of "combat psychiatry." Applying these principles preserves the fighting strength by minimizing losses due to battle fatigue and NP disorders.

This paragraph implements QSTAG 909.

12-9. Principles for Treating Battle Fatigue ("PIES")

- Proximity—treat as close to the soldier's unit as the situation permits.
- Immediacy—begin to treat immediately; treat quickly and briefly.
- Expectancy—express positive expectation for recovery and rapid RTD.
- Simplicity—use uncomplicated, straightforward treatment methods.

12-10. Treatment Methods

a. Separate Treatment Areas. Battle-fatigued soldiers should be kept separate from

other patients. Association with serious medical, surgical, or psychiatric patients often worsens symptoms and delays recovery. Association with RTD cases who have minor injury or illness is not harmful indeed, many of those cases also have battle fatigue and should be treated according to the same principles. However, those few BFCs who show overly dramatic symptoms need to be kept separate from all other types of patients until those symptoms cease, lest they "infect" the others. Dramatic battle fatigue symptoms, like panic, can be contagious.

b. Transportation. Battle fatigue casualties will be transported in nonmedical or general purpose trucks whenever feasible. Air-ambulance transport will not be used unless there is no alternative. Ground ambulances will be used for those few who temporarily need sedation and/or physical restraints.

c. Minimize Evacuation and Hospitalization. Battle-fatigued soldiers will *not* be evacuated or hospitalized unless absolutely necessary. These actions delay recovery and significantly increase chronic morbidity, regardless of the severity of the initial symptoms. Those cases who require brief hospitalization for differential diagnosis should be transferred to a nonhospital treatment setting as soon as possible. Those who reach hospitals as an accident of evacuation should be told they only have battle fatigue and returned to the forward area to be treated in a nonhospital facility close to their units.

d. Reassurance, Respite, Replenishment, and Restoration of Confidence (The Four Rs).

(1) At every echelon, the BFC is given immediate, explicit reassurance that this is just battle fatigue," a temporary condition which will improve quickly. The BFC will be actively reassured that his condition is neither caused by cowardice nor sickness, and that it will improve quickly with rest, physical replenishment, and useful activities.

(2) Treatment for battle fatigue is deliberately simple and austere. The BFC will be provided relative *respite* from danger but in afield, military tactical atmosphere.

(3) The BFC will be provided physical *replenishment*: dehydration; an opportunity to sleep; "good food and plenty of it;" and an opportunity for self-hygiene.

(4) The BFC's confidence will be *restored* by structured military work details, tasks, honing soldier skills, and recreation, plus supportive counseling as needed to clarify memories, express feelings, and regain perspective. These activities must reinforce the soldier's identity as a soldier (not as a patient) and as a member of his unit.

12-11. Treatment Results

a. Overview. The severity of symptoms and the speed and extent to which they respond to treatment are directly related to the intensity, lethality, and duration of the battle incident which caused them. The following are only general rules of thumb which allow wide margins of variability.

b. Return to Duty in 1 to 3 Days. Fifty to eighty-five percent of hold and refer battle fatigue cases are restored to duty within 1 to 3 days if kept close to their units (for example, within the division). This brief treatment is called *restoration*. When returned to their original units and

welcomed there, recovered cases have no increased risk of relapse.

(1) In principle, the more intense the battle (with high casualty rates, especially from indirect fire and high explosives), the more effort needed to help BFCs to RTD.

(2) The difference between the high and low success rates can be due to several factors, and CSC planners must evaluate them critically. An 85 percent restoration rate could be due to effective far-forward treatment of truly "heavy" cases. Or it could result from the mismanagement of cases which could be easily restored. That situation, in turn, could be due to—

- Inadequate training and consultation to forward units, or
- A tactical situation which prevents maneuver units from resting any marginally effective soldiers.

c. Return to Duty Within 1 to 2 Weeks. Ten to thirty percent of BFCs do not recover within 72 hours, but do return to some duty within 1 to 2 weeks if they continue in structured, equally positive treatment at a *nonhospital* (tactical) facility in the CZ. This intensive treatment is called *reconditioning*. Premature evacuation of battle-fatigued soldiers out of the CZ must be prevented as it often results in permanent psychiatric disability. If the tactical situation permits, the evacuation policy in the corps should be extended from 7 to 14 days for the reconditioning program.

d. Return to Duty in the Communications Zone. Five to fifteen percent of BFCs *do not* improve sufficiently to RTD in the CZ. Further reconditioning treatment can return many of these to useful duty in the COMMZ. This further reduces the risk of chronic PTSD and disability. Final evacuation to CONUS should not exceed five percent of total BFCs.

Section III. THE COMBAT STRESS CONTROL OPERATIONAL CONCEPT AND RESOURCES

12-12. The Concept

The CSC concept updates the time-proven doctrine to new battlefield conditions. Combat stress control refers to a coordinated program to be implemented by MH personnel organic to units and by Echelon III specialized medical CSC units.

a. Organic Mental Health Sections. The organic MH personnel provide preventive consultation, training, technical supervision, staff planning, and clinical evaluation. They can provide forward treatment to small numbers of cases in slow-moving combat, but are not sufficient to provide treatment for large numbers of battle fatigue or NP casualties without sacrificing their other critical preventive and staff functions. Their most important mission is to develop the familiarity and trust with unit leaders which is necessary—

- For effective operational planning, consultation, and prevention.
- To serve as points of contact for reinforcing CSC teams.

b. Combat Stress Control Units. The medical CSC units—

- Operate restoration or reconditioning facilities in the corps.
- Provide support to corps units.
- Send teams forward for attachment to the division, brigade, or regiment to supplement the organic MH personnel.
- Send teams to support units at reconstitution sites.

c. Mental Health/Combat Stress Control Activities. Mental health/CSC activities usually collocate with or attach to other medical units. They must work closely (coordinate and synchronize) with other general medical personnel, chaplains, chaplain assistants, and available combat, CS, and CSS personnel of all types.

12-13. Combat Stress Control Assets in Table of Organization and Equipment Units

The following are the CSC assets:

a. Division Mental Health Section. Personnel assigned are the division psychiatrist (AOC 60W), social work officer (AOC 73A67), clinical psychologist (AOC 73B67), and six or seven behavioral science specialists (MOS 91G).

b. Mental Health Section in Medical Company, Separate Brigade. This company has three behavioral science specialists (MOS 91G). The noncommissioned officer in charge (NCOIC) must fulfill the same functions as in the divisional brigades and coordinate with whatever MH officers are providing backup support.

c. Medical Company, Armored Cavalry Regiment. There are no MH personnel in the new L-edition (1988) TOE.

d. Medical Company, Combat Stress Control, TOE 08-467L00.

(1) *Mission.* The mission of the medical company, CSC is to provide combat stress casualty prevention, treatment, and management on an area basis.

(2) *Assignment.* The medics] company, CSC is assigned to a MEDCOM, TOE 08-611L00, or Medical Brigade, TOE 08-422L100. It may be further attached to a Medical Group, TOE 08-432L000.

(3) *Capabilities.* This unit provides—

- Planning and staff advice to command and control headquarters regarding the stressors affecting the troops such as combat intensity and sleep deprivation; their mental readiness, morale, cohesion, morals, and spiritual welfare; and the potential for and status of treatment of battle fatigue and other NP and alcohol or drug abuse casualties.

- A preventive section (with psychiatrists and social work officers and enlisted) that may divide into six 4-person CSC preventive (CSCP) teams, each providing consultation, NP triage, reconstitution support, and medical supervision and RTD coordination for restoration and reconditioning programs.

- A restoration section (with psychiatric nurses, clinical psychologists, occupational therapy officers, plus enlisted) that may divide into four n-person CSC restoration (CSCR) teams, each providing stabilization and restoration or reconditioning for up to 50 BFCs, plus consultation, reconstitution support, and NP triage support.

(4) *Employment of teams.* The CSCP and CSCR teams may be employed separately, but more commonly are combined into task-organized sections to staff restoration or reconditioning facilities.

(5) *Mobility.* The CSC teams are 100 percent mobile and can provide austere shelter, heat tray packs, and water for field hygiene for limited numbers of BFCs. These teams

depend on the units to which they are attached for logistical and communications support. Large restoration or reconditioning centers require augmentation with patient-holding assets.

(6) *Basis of allocation.* A company is allocated to the corps on the basis of .5 per division supported. The headquarters section of the medical company, CSC usually collocates with its higher medical headquarters or with the headquarters and support company (HSC) of an evacuation battalion or area support medical battalion which provides staff coordination, communication, and logistical support.

e. Medical Detachment, Combat Stress Control, TOE 08-57LA

(1) *Mission.* The mission of the medical detachment, CSC is to provide forward combat stress casualty prevention, treatment, and RTD.

(2) *Assignment.* This unit is assigned to a Medical Group, TOE 08-432L0, or other medical command and control headquarters and may be further attached to supported medical company, or Medical Company, CSC, TOE 08-467L000.

(3) *Capabilities.* At full strength, this unit provides—

- Planning and staff advice to command and control headquarters regarding the stressors affecting the troops such as combat intensity and sleep deprivation; the troops' mental readiness, morale, and cohesion; morals and spiritual welfare; and the potential for and status of treatment of battle fatigue and other NP casualties including substance abuse casualties.

- A preventive section that divides into three CSCP teams; each provides consultation, combat NP triage, reconstitution

support, and medical supervision and RTD coordination for restoration in a BSA.

- One CSCR team that provides stabilization, restoration, and reconditioning for up to 50 BFCs, plus consultation, reconstitution support, and combat NP triage support, usually in the division support area (DSA).

(4) *Mobility*. This unit requires 100 percent of its TOE and common table of allowance equipment and supplies be transported in a single lift using its authorized organic vehicles.

(5) *Basis of allocation*.

(a) One medical detachment, CSC is allocated per division.

(b) One medical detachment, CSC is allocated per two to three separate brigade-sized forces not otherwise provided CSC support.

f. *Mental Health Section, Area Support Medical Battalion (Headquarters and Support Company)*. The MH section, area support medical battalion (HSC) is similar to the division MH section discussed above except that it does not have a psychologist assigned. It provides area MH/CSC support in the corps area and the COMMZ. (See Chapter 13.)

g. *Command and Control*. Command and control of CSC/MH activities will be coordinated by a small MH staff or consultant sections in the MEDCOM, medical brigade (corps and COMMZ), and medical group headquarters. The small MH staff or consultant sections also provide technical supervision of CSC/MH units.

h. *Hospital Staff/Neuropsychiatric Personnel*. These personnel are not technically a CSC resource, but must be considered by the CSC planner in deciding where to collocate

reconditioning centers and to evacuate cases who require hospital treatment. The CSH, FH, and GH will all have an NP service to provide consultation to the medical/surgical services and to staff a 20-bed ward.

12-14. Combat Stress Control Functions

There are six CSC programs or functions: consultation, reconstitution support, NP triage, stabilization, restoration, and reconditioning. The CSC planner must set priorities and allocate the necessary resources to each program. The programs have different relative importance in different situations. In principle, primary emphasis should go to proactive prevention (consultation and reconstitution support) over reactive treatment (restoration and reconditioning).

a. *Consultation to Leaders, Medical Personnel*. This function provides advice, assistance, and liaison to commanders and staff of supported units at the supported unit's location, or by telephone or radio. Primary emphasis is on prevention. Combat stress control personnel must be the organizational memory to line leaders and their medical counterparts for leadership and training measures which can reduce BFCs to fewer than one per ten WIA.

b. *Reconstitution Support to Attrited Units*. This function provides assistance (along with other medical and CSS contact teams) to units which have suffered heavy attrition. This occurs when the units are temporarily withdrawn from action to relatively secure field locations (reconstitution sites) to reorganize, receive replacements, and repair equipment. This can range in scale from deliberate reorganization of small units (platoons, companies, battalions) close behind the battle area for one or more days, to formal regeneration of small or large units (battalions, brigades, whole divisions) farther to the rear for days to weeks.

c. Neuropsychiatric Triage (Sorting).

This process is the diagnosing and sorting of battle fatigue, NP, and alcohol/drug misuse cases (including those with physical injury) based on how far forward they can be treated.

d. Stabilization of Disruptive Cases.

This is the acute management of the small percentage of battle fatigue cases and NP patients who have severe behavioral or medical disturbances and evaluation of their RTD potential.

e. Restoration (1- to 3-Day Treatment).

This brief 1- to 3-day treatment is provided at or near forward medical facilities.

(1) When BFCs are many, restoration will assume high priority. However, restoration should not be allowed to completely displace reconstitution support and essential staff coordination, operational planning, and preventive and RTD-related consultation.

(2) When total casualties are light, patient-holding facilities in Echelons II and III medical clearing stations provide resources where BFCs can be rested, fed, and restored. They can also provide enlisted general medical personnel to serve as treaters under the technical supervision of the MH or CSC team.

(3) These resources, however, are only available when WIA rates are low. Battle fatigue rates rise in direct proportion to the intensity of combat (as reflected in the WIA rate). Therefore, patient-holding resources cannot be relied upon for consistent Echelon II CSC support when MASCAL occur. It is at the times of heavy fighting, when the holding assets have been preempted for acute life support and minor surgical care, that it remains most important to restore BFCs close to their units.

f. Reconditioning (7- to 14-Day Treatment). This treatment is provided at a more stable

location, usually in the corps. This program also can include rehabilitation of those NP and alcohol/drug patients with good potential for RTD.

(1) Reconditioning is similar to restoration, but is more intensive and requires a higher staff-to-case ratio.

(2) A combat fitness reconditioning center (CFRC) is usually collocated with a Echelon III CSH, but must maintain its separate *non-hospital* identity. It may be staffed by teams from the specialized medical CSC units, or by consolidating the psychiatric staff from several hospitals in the theater.

(3) Combat fitness reconditioning centers may also be supported by elements of the Echelon III ASMC or medical company, holding. This will be necessary if the reconditioning case census exceeds the capability of the CSC company without posing an excessive burden on the host hospital.

(4) Many of the soldiers who need reconditioning will be unable to return to their original unit, either because of the flow of the battle or the nature of their symptoms. They may need MOS reclassification and on-the-job training into new combat, CS, or CSS roles.

(5) The preferred option is to have a separate, small reconditioning program behind each division to treat soldiers from that division plus those from nearby supporting corps units. This maintains the principle of proximity and favors immediacy and simplicity by avoiding prolonged transportation. The maintenance of unit identification (most soldiers wearing the same division patch) also aids the positive expectation. However, limited resources or geography may require the use of a consolidated CFRC which supports several divisions.

(6) Reconditioning programs have lower priority than restoration, reconstitution support, and consultation. When the number of cases who may benefit from the 1- to 3-day restoration treatment is high, additional CSC personnel should be sent forward from the reconditioning program to reinforce forward restoration teams. Reconditioning in the corps

area may be limited to an additional 3 days until the crisis passes, or it may be discontinued altogether. This accepts that some soldiers, who may have returned to duty with more effort (and have also been protected from subsequent PTSD), will have to be evacuated to the COMMZ in order to maximize RTD of those who have the best potential.

Section IV. THE COMBAT STRESS CONTROL ESTIMATE OF THE SITUATION

12-15. Combat Stress Control Estimate

The CSC planner must prepare the CSC estimate in cooperation with the senior staff surgeon who is responsible for preparing the overall health service estimate. The CSC estimate follows the standard format shown in Appendix B.

a. Some issues require that the CSC planner be authorized to work directly with the staff sections of the combat command: S1/G1, S2 (Intelligence Officer)/G2, S3 (Operations and Training Officer)/G3, S4 (Supply Officer)/G4 (Assistant Chief of Staff [Logistics]), and G5 (Civil Affairs). The staff chaplains (unit ministry teams) and the Judge Advocate General, provost marshal, and military police units are also important sources of information.

b. The level of detail of the CSC estimate depends upon which echelon is preparing it.

(1) The division MH section works with the division surgeon and PVNTMED section. The section is concerned with which brigades are likely to have the most battle fatigue cases or other combat stress and NP problems. This may determine how many assets are pre-positioned at which brigade support areas. Within the brigades (and in the DISCOM), the division MH section may need to identify specific battalions, companies, and platoons in order to focus preventive consultation or reconstitution support activities.

(2) The CSC units which provide backup support and reconditioning in the corps are concerned with which divisions, separate brigades/regiments, and other corps units are likely to generate the most stress casualties. The medical detachment or CSC unit—

- Receives the estimates from the division MH sections and coordinates directly with them.
- Develops its CSC estimate in conjunction with its higher medical command and control unit.
- Prepares to receive reconditioning cases at different regions of the battlefield.
- Sends CSC augmentation or reinforcements to the forward units in greatest need.

NOTE

The medical group and medical brigade headquarters will have a small MH staff section to help coordinate these activities.

c. The primary objective of the CSC estimate is to predict where and when the greatest need is likely to arise among the supported units. With this information, preventive efforts can be initiated early, limited resources can be allocated, and contingency plans prepared for their reallocation as needed.

(1) Quantification of the projected restoration and reconditioning caseloads will not be precise. Absolute values should not be given too much weight. However, quantification provides a useful analytical tool for estimating relative risk. The historical ratios of the incidence of BFCs to the incidence of WIAs provide a baseline for estimates in future operations.

(2) This analysis is most valid when applied to specific units in a specific combat operation. It is less precise when applied to larger, composite units. The analyst must estimate what percentage of subunits of different types (combat, CS, CSS) will encounter particular negative factors (stressors). He must also estimate what percentage will be protected by potential protective factors.

(3) To predict the incidence of BFCs, begin with the prediction of WIA cases who will require hospitalization.

NOTE

This requires estimating the incidence of new WIA cases, not the bed occupancy estimates usually used in medical planning. In moderate to heavy conventional fighting, the CSC planner can begin with the average ratio of one BFC for five WIA (1:5). Then he can examine the nature of the mission for each of the specific units involved and use *protective* (positive) and risk (negative) factors to judge whether 1:5 is likely to be an over- or underestimate.

(4) Paragraphs 12-16a and 12-16c discuss the protective and risk factors for battle fatigue. These factors are referred to by their parenthetical subparagraph numbers, preceded by a plus or minus sign, respectively; for example: +(6), -(18).

(5) Each of these factors could be given a numerical weight (0, +1, +2 for positive factors; 0, -1, -2 for negative ones). The factor scores are added algebraically to give a rough total score. The weight must be based on subjective expert judgment and experience.

(6) The same analyzing process used to estimate BFCS in relation to WIA patients can be applied to estimating the potential for substance misuse/abuse patients and other misconduct stress behavior compared with their normal rates of occurrence in the troop population.

(7) The protective and risk factors for misconduct stress behavior in paragraphs 12-17a and 12-17b will be similarly designated. However, the letter "m" (for "misconduct") will be used after the parenthesis; for example: +(5)m, -(11)m.

12-16. Estimating Battle Fatigue Casualty Work Load

a. *Protective (Positive) Factors.* The following protective (positive) factors reduce BFCS relative to WIA:

+ (1) High unit cohesion. Troops and their leaders have trained together (and, ideally, have been in successful combat) without continual turnover of personnel. For example, Cohesion, Operational Readiness Training (COHORT) companies and battalions are presumed to have high unit cohesion provided the leaders have had time and training to develop "vertical cohesion" through factors +(5) and +(6).

+ (2) History of very tough, realistic training (for example, militarily sound, uncomfortable, and dangerous, preparing troop for the stimuli of war). Successful combat in which there were few casualties is good training. Airborne and Ranger training and realistic live-fire exercises (both small arms and artillery) also help to “battle proof” soldiers.

+ (3) Unit leaders and medical personnel are trained in recognition of battle fatigue. They demonstrate ability to manage duty and rest cases at unit level and to reintegrate recovered hold and refer cases back into units.

+ (4) Units are withdrawn from combat periodically to rest, refit (reconstitute if necessary), and absorb new replacements. Replacements arrive and are integrated as cohesive teams, not as individuals.

+ (5) Leaders demonstrate competence, courage, and commitment. Leaders show caring for the soldiers and make provisions for physical and mental well-being as the tactical situation permits. Noncommissioned officers know and are given responsibility for *sergeant's business* (taking care of their troops). An active sleep discipline and sleep planning program will reduce the risk of battle fatigue particularly when it is targeted towards officer and enlisted leaders. (See discussion in FM 22-51.) Command also shows concern for soldiers' families.

+ (6) Leaders keep troops informed of the commander's intent, the objectives of the operation, and the war. They focus the soldiers' appraisal of the situational stressors to maintain positive coping.

+ (7) Victorious pursuit of a re-treating enemy. This reduces BFCs but may not inhibit misconduct stress behaviors unless command retains tight control.

+ (8) Hasty withdrawal. During hasty withdrawal, few BFCs enter medical channels. However, battle-fatigued soldiers may be lost as KIA, MIA, or captured instead of becoming medical patients, and other stressed soldiers may desert or surrender.

+ (9) Beleaguered unit which cannot evacuate any (or only the most severely wounded) casualties. Here, too, some soldiers may be combat ineffective due to battle fatigue or go AWOL without becoming medical patients.

b. *Assessment of the Positive Protective Factors.*

(1) Factors + (1) through + (6) can be assessed using standard questionnaire surveys of unit cohesion and morale, such as the Unit Climate Profile found in DA Pamphlet 600-69.

(2) Many leaders and soldiers want to believe that their unit is elite and will have far fewer than one BFC for ten WIA even in the most terrible battles. The CSC planner should not discourage this belief since it maybe a necessary first step toward becoming true. However, the CSC estimator should not make plans on the strength of the belief alone. Remember, CSC expertise is not being wasted if it is far forward, assisting command in proactive prevention rather than reactive treatment of BFCs.

(3) Even if tough realistic training, high cohesion, and fine leadership can be independently verified (as with unit survey questionnaires), the BFC estimate should not be too much below the average until the unit has proved itself in successful combat. Even then, estimates should continue to consider the potential negative impact of cumulative attrition, new replacements, and other adverse factors which may eventually overcome the positive factors.

(4) Factors +(8) and +(9) are, of course, not truly “positive.” While they decrease the expected requirement to evacuate BFCs for treatment, they indicate a need to redouble efforts for prevention of misconduct stress behavior. Factor +(7) also should alert command to the need to maintain firm control to prevent misconduct stress behavior.

c. *Risk (Negative) Factors.* The following risk factors increase BFCs in relation to WIA:

- (1) Higher combat intensity—indicated by the rate of KIA and WIA (percent of battle casualties [out of the total troops engaged] per unit time).
- (2) Increasing duration of continuous operations—the number of days which the troops (small units) have been in action without respite, especially if there is little opportunity for sleep. The operation may begin significantly before the actual shooting. Preparation time and rapid deployment (jet lag) effects should also be considered.
- (3) Increasing cumulative combat duration—the total number of days (cumulated over days, weeks, months) in which the small units (platoons, companies) have suffered casualties.
- (4) Sudden transition to the horrors of war—many new troops with no prior combat experience; surprise attack or new weapons of mass destruction.
- (5) Extent to which the troops are subjected to artillery and air attack (with some allowance for the strength of their defensive fortification, dispersion, and concealment). This is especially true if it involves sudden mass devastation.
- (6) Heavy casualties from friendly fire (including direct fire, artillery, and air attack). This, of course, is not part of the plan of operation, but is a special hazard of the fast-moving battle. When such incidents are reported, CSC teams should respond immediately.
- (7) High NBC threat—a state of alertness requiring periods in MOPP 1 through 4; frequency of false alarms; and concern and rumors about escalation. Actual NBC use: What type agents? (Persistent contamination? Potential for contagion?) What casualties? What implications for increased MOPP levels, rumors, concerns of escalation, and worries about home?
- (8) Being on the defensive, especially in static positions (unless the fortifications are very strong and comfortable, in which case complacency may be a problem).
- (9) Attacking repeatedly over the same ground against a stubborn, strong defense.
- (10) Heavy casualties among armor or mounted infantry crews; armor in highly restrictive terrain.
- (11) Heavy casualties from mines or booby traps.
- (12) Extent and intensity of rear battle. Combat support/CSS when attacked and/or confronted with dangers and horrors of war for which they have not been adequately trained or mentally prepared.
- (13) Failure of expected support such as fire support, reinforcement, or relief; inadequate resupply; inadequate HSS.
- (14) High personnel turbulence, resulting in low unit cohesion and inadequate unit tactical training.

- (15) Loss of confidence in leaders, in supporting or allied units, and in equipment as compared to the enemy's equipment.

- (16) Popular opposition to the war at home; lack of understanding or belief in the justness of the effort.

- (17) Families left unprepared by rapid mobilization and deployment. Lack of a believable plan for evacuating families from the theater, and also for keeping them secure under a reliable authority if they cannot be evacuated. This can also contribute to misconduct stress behavior, especially AWOL.

- (18) Home front worries. Lack of visible command program for ensuring support to Army families.

- (19) Inadequate water available for drinking.

- (20) Adverse weather, especially cold-wet; any harsh climate if troops are not properly trained, equipped, and acclimatized.

- (21) Unfamiliar, rugged terrain (jungle, desert, mountain, urban) if troops are not specifically trained and equipped.

- (22) High prevalence of endemic minor illnesses, especially if this reflects inadequate command emphasis on self-aid and buddy aid preventive measures.

- (23) Last operation before units (or many soldiers in them) rotate home, or if the war is perceived as already won, lost, or in final stages of negotiation.

- (24) Many civilian women and children casualties in the fighting. This may be a stronger factor in OOTW than in war where the magnitude of the horror and the preoccupation with personal and unit survival may quickly harden soldiers to these casualties.

12-17. Estimating Substance Abuse and Misconduct Stress Behaviors

a. *Protective (Positive) Factors.* Factors +(1) through +(6) in paragraph 12-16a can also reduce alcohol/drug misuse and other misconduct stress behavior. They can be relabeled and reanalyzed as factors +(1)m through +(6)m.

+ (1)m High unit cohesion is positive if the unit's "identity" forbids abuse of substances and emphasizes adherence to the Law of Land Warfare, United States Code of Military Justice, and tolerance for cultural differences.

+ (2) m History of very tough and realistic training is positive if it includes faithful adherence to rules of engagement which support the Law of Land Warfare and cultural issues.

+ (3) m Unit leaders, medical personnel, and chaplains are trained to recognize battle fatigue and early warning signs of misconduct stress.

+ (4) m Units are withdrawn from combat periodically to rest, refit (reconstitute if necessary), and absorb new replacements who arrive and are integrated as cohesive teams, not individuals.

+ (5) m Leaders have demonstrated competence, courage, candor, and commitment. Leaders show caring for the soldiers and make provisions for their physical, mental, and spiritual well-being as the tactical situation permits.

+ (6) m Leaders keep troops informed of the objectives of the operations and war (including psychological operations and diplomatic, political, and moral objectives). They focus the soldiers' appraisal of the situation to maintain positive coping against the temptations to misconduct stress behaviors.

NOTE

These factors will protect only if leaders and troops maintain and enforce a unit's self-image that regards the misconduct behaviors as unacceptable. If that is lacking, these factors may even contribute to substance abuse and violations of the laws of war.

b. Risk (Negative) Factors Which Increase Substance Misuse and Other Harmful Combat Stress Behaviors.

- (1) m Permissive attitude, availability and use of drugs in the TO and also in the US civilian community, especially around posts/garrison areas and in the regions and age groups from which recruits are drawn.

- (2) m Inadequate enforcement of the unit's Alcohol and Drug Abuse Prevention and Control Program (ADAPCP) before deployment in identifying and treating (or discharging) misusers.

- (3) m Availability and distribution networks (both legal and illegal) for alcohol and different types of drugs in the theater. Some drugs are much more available at lower prices in some foreign countries or regions.

- (4) m Unsupervised use of amphetamines and other strong stimulants to remain awake in continuous operations. This can produce dangerous (usually temporary) NP illness. Also, it may lead to dependency and addiction in originally well-intentioned, good soldiers, including leaders.

- (5) m Boredom and monotonous duties, especially if combined with chronic frustration and tension.

- (6) m High threat of nerve agent use with self-administration of atropine in false

alarms causing mental symptoms and perhaps temporary psychosis.

- (7) m Victorious pursuit of a retreating enemy. This reduces BFCs, but may not inhibit commission of atrocities (the criminal acts of killing EPW, raping, or looting) or alcohol/drug misuse (as supplies are "liberated") unless command retains tight moral control.

- (8) m Hasty withdrawal. Here, too, soldiers may loot or abuse substances to keep them from falling into enemy hands. Rape, murder, and other reprisal atrocities can occur if retreating troops feel hindered by EPW, or if the civilians being left behind are hostile. Leaders must not encourage too zealous a scorched-earth policy. This means that only those items (except medical) that could be of potential use to the enemy are destroyed. If leaders lose tight control, other overstressed soldiers may desert or surrender.

- (9) m Beleaguered unit which cannot evacuate any (or only the most severely wounded) casualties. Here, too, some soldiers may commit misconduct stress behaviors due to battle fatigue, or go AWOL without becoming medical patients.

- (10) m Commission of atrocities by the enemy, especially against US personnel but also against local civilians.

- (11) m Racial and ethnic tension in the civilian world and in the Army. Major cultural and physical/racial differences between US and the local population.

- (12) m Local civilian population perceived as hostile, untrustworthy, or "sub-human." Lack of education and understanding of cultural differences.

- (13) m Failure of expected support, such as reinforcement or relief; inadequate resupply; inadequate medical support and

evacuation. Soldiers who feel abandoned and on their own may resort to illegal measures to get what they think they need. Combat soldiers naturally tend to feel “entitled to claim what they have earned,” and this may lead to looting and worse.

- (14) m High personnel turbulence, lack of unit cohesion, especially “vertical cohesion” between leaders and troops. “Substance-of-choice” can become a “ticket” for inclusion into a group.

- (15) m Loss of confidence in leaders, in supporting or allied units, and in equipment as compared to the enemy’s. These produce the same effects as factors -(13)m and -(16)m.

- (16) m Popular opposition to the war at home; lack of understanding or belief in the justness of the effort. Some soldiers will find this an excuse to desert or refuse lawful orders. Others who continue to do their duty may show their

resentment by lashing out at the local population, or by using drugs and alcohol.

- (17) m Lack of a believable plan for protecting families in the theater, either by evacuating them or keeping them secure under reliable authority. Some soldiers may go AWOL to stay with them.

c. Use of Estimate of Substance Abuse and Misconduct Stress Behavior. The purpose of this estimate of potential substance misuse and other misconduct stress behaviors is the same as for the estimate of BFCs. It is to predict when and where (in which units) problems are most likely to occur so that preventive actions can be focused. Also, provisions can be made for the medical/psychiatric treatment of substance abuse cases in the TO. The CSC estimator must work closely with the Judge Advocate General staff, military police, and the chain of command to compare the projections with what is actually being found.

Section V. THE COMBAT STRESS CONTROL PLAN

12-18. Format

The format for the CSC plan is the standard outline shown in Appendix C. The CSC planner must analyze the OPORD and HSS estimate for direct or implied CSC missions. He must assess the available CSC resources and analyze alternative ways of using them to accomplish the missions. Frequently, it is necessary to prioritize the missions and recommend to the command surgeon which of the alternate courses should be taken.

12-19. Combat Stress Control Planning Considerations in Deployment and Combat

a. The requirements for each of the CSC program functions (consultation, reconstitution

support, NP triage, restoration, reconditioning, and stabilization) and the ability of CSC units to satisfy those requirements will be influenced by the factors listed below:

(1) The nature, mobility, and intensity of combat operations which influence the number of battle-fatigued soldiers; the severity of symptoms; and the feasibility of resting cases in or near their units.

(2) The type of threat force, especially the threat to CSC activities themselves. For example, the likelihood of air and artillery attack; the security of “rear areas” for rest; the electronic warfare threat and target detection capability for concentrations of troops; and the NBC and DE threat.

(3) The availability of other health service units on which the CSC elements can rely for local logistical/administrative support and for patient transportation or evacuation.

(4) The geographical AO, terrain, and climatic conditions which limit mobility of CSC units and require additional shelter for patients.

(5) The endemic disease, drug, alcohol, and environmental hazards which threaten resting battle fatigue cases and produce other preventable nonbattle injuries which, historically, have been a consequence and complication of battle fatigue.

b. The CSC planner must determine the actual strengths of the CSC resources in organic unit MH sections and specialized units. They may not be at the authorized levels for personnel or equipment. The level of training, degree of familiarity, and cohesion with the supported units must be assessed.

12-20. Combat Stress Control Planning Considerations in Deployment and Combat

a. The more intense the combat, the higher the rate of WIA and the higher the ratio of BFCs to WIAs. If the WIA rate doubles, there will be four times as many BFCs requiring treatment. Furthermore, high-intensity combat causes a shift towards more severe symptoms and slower recovery.

b. The CSC organization must achieve a balance between pre-positioning elements far forward and having other elements further to the rear that can take the overflow of cases and be redeployed to areas of special need.

c. In Army Operations, each maneuver brigade covers a larger and more fluid area, and

has greater firepower and responsibility than did a World War II division. Winning the first battle will be critical and can be accomplished only by reconstitution of attrited units and rapid return of temporarily disabled soldiers to their units. The division MH section must be reinforced if cases are to be restored in the BSA and DSA.

d. Small CSC teams must be pushed forward to reinforce the maneuver BSAs well before the fighting starts. Although BFCs will not be evenly distributed among all brigades, those cases which occur must be evaluated and treated immediately at that level.

(1) At the critical places, this will be under MASCAL conditions. Other logistical requirements and enemy activity may make it impossible to send CSC personnel quickly once the battle has begun. Any newly arriving CSC personnel who join anew unit under such circumstances will take critical hours to days to become efficient.

(2) The purpose of these CSC "preventive" teams is NOT to hold BFCs for treatment in the highly fluid BSA. Their purpose is to prevent the evacuation of DUTY and REST BFCs who could remain with their units. These teams also ensure correct initiation of treatment and transfer (not *evacuation*) of the refer cases to the division fatigue center in the DSA. If circumstances allow, they could hold a very small number for overnight observation/restoration.

(3) Combat stress control teams which are with a brigade not in action will use this time productively in consultation activities. These activities will reduce the incidence of stress casualties and better enable the unit to treat its cases far forward when the time comes.

e. Combat stress control elements in the DSA provide NP triage and prevent any unnecessary evacuation. They staff the division fatigue center which assures 2-to 3-day restoration within the division. They provide preventive consultation

and reconstitution support throughout the division rear. They can send personnel, tents, and supplies forward to reinforce the teams at the BSA.

f. Combat stress control elements in the corps area must provide the back-up “safety net” to catch the overflow from hard-pressed divisions, as well as providing reconstitution support to units which are withdrawn from battle and preventing and treating local rear-area battle fatigue cases. Those in the corps area can be transferred laterally within the corps, or temporarily sent forward to divisions which are in greatest need. With somewhat greater difficulty, these assets can be transferred from one corps to another.

g. Combat stress control teams need 100 percent ground mobility and adequate communications capability to function in their local areas. They need a small vehicle to circuit-ride the units in the BSA, DSA, or corps support area, and to deploy to reconstitution sites with other CS/CSS teams. Note that it is not recommended to send CSC teams wandering around the battlefield alone. When they move outside the defensive areas, they should be in convoy with other CSS vehicles or other elements.

h. Combat stress control units, however, provide the expertise of their personnel with little requirement for heavy equipment. Therefore, if time, distance, or the tactical situation prevents a CSC element from traveling by ground to reinforce another CSC element which is already in place, the key personnel and light, specialized equipment can be moved by air, if available.

NOTE

Combat stress control personnel can be sent forward in medical evacuation (MEDEVAC) helicopters that are going to the forward medical companies to evacuate the wounded.

Additional supplies, equipment, and vehicles can follow as prepackaged pallets or sling-loaded vehicle trailers. The key requirement is that a familiar CSC team with vehicle and preestablished contacts is already at the destination expecting to be reinforced.

i. If the division MH section or CSC unit is given the mission to support a separate brigade or ACR, it is important to establish contact and send a liaison officer or NCO to its medical company as much as possible before the battle.

NOTE

Because of their unique missions, armored cavalry units have special need for consultation, preventive education, and staff planning.

Because of their elite self-image, it is important that the liaison is someone who has trained with the unit and is known by its personnel. In some scenarios, cavalry units suffer extreme attrition in the first days of continuous operations, yet they are cited as prime candidates for reconstitution to return the survivors quickly to battle.

j. Combat stress control support is very inexpensive for its potential pay-off in returning to duty soldiers at crucial times and places in the battle and in reconstitution support after battle.

(1) If not required to treat BFCs and attrited units, the same few personnel will be active in consultation to unit leaders. This will improve prevention and readiness to return BFCs to duty.

(2) Combat stress control assets also assist with treatment of other WIAs and DNBI who have rapid RTD potential. Many of these will also have severe battle fatigue symptoms which require treatment.

(3) Finally, they have a crucial role in preventing future PTSD in all troops (including those who did not become casualties) by assisting command with after-action debriefings.

12-21. Combat Stress Control Planning Considerations in Operations Other than War

a. In OOTW, the total requirement for CSC support is less than in war. There is less need to pre-position CSC elements far forward except during specific operations which approach war.

(1) The total ratio of battle fatigue cases to WIAs may be high, but the average number of WIAs is below two per thousand per day, so there are fewer cases. Most battle fatigue cases can be managed in their units as duty or rest cases.

(2) Few of the cases are hold or refer casualties who need to be held under medical observation, so the BFC:WIA ratio is usually below 1:10. However, relatively more of those who are casualties will need stabilization on a hospital ward.

(3) Reconstitution support is still important for units following battle, but the units will usually be small (squad, platoon, company).

b. Contingency operations pose special problems if they involve rapid deployment to an undeveloped theater. The HSS plan for care of all wounded and sick who cannot return immediately to fill duty maybe to evacuate them as quickly as possible to the nearest COMMZ or CONUS MTFs. The tendency will be to err on the side of caution and evacuate anyone whose status is in doubt.

(1) This zero-day evacuation policy may continue for the duration of a brief operation,

or until formal medical holding facilities can be deployed behind the forward area surgical teams.

(2) Early deploying medical personnel, as well as CSC planners and treaters, must make a concerted effort to encourage units to keep soldiers with DUTY battle fatigue in small units, and to keep REST cases in their own CSS elements for a day or two of light duty, then return them to full duty.

(3) If at all possible, the plan should also hold BFCs at the forward medical facilities for 1 to 3 days of restoration as an exception to the usual evacuation policy. This holding can be done under very austere conditions and need not add significant additional logistical burden to the system. Failure to provide such inexpensive, proximate treatment will be paid for in greatly increased chronic psychiatric disability.

c. In OOTW, while the need for restoration of BFCs is less than during war, the incidence of misconduct stress behaviors increases, specifically—

Ž Behavior disorders, including indiscipline and violations of the Law of Land Warfare and the Uniform Code of Military Justice.

- Drug and alcohol abuse.
- Other disorders of boredom and loneliness.

There is still a need for a reconditioning program in the corps to salvage those cases who do not improve in the divisions. The preventive consultation programs remain important for corps-level CSS units with no MH sections.

d. Conflict requires rigorous preventive programs and after-action debriefings to minimize subsequent PTSD because of the ambiguous and often vicious aspects of enemy tactics and their effects on our soldiers.

12-22. Considerations When Units or Individual Soldiers Redeploy Home (After Military Operations)

a. Unit MH personnel and supporting MH/CSC units assist leaders in preparing soldiers for the transition back to garrison or civilian life. A period of several days should be scheduled for memorial ceremonies, group debriefings, and discussions of—

- What has happened in combat, especially working through painful memories.
- What to expect in the soldiers' own reactions on returning to peacetime.
- How family and society may have changed since deployment and how to deal with these changes constructively.

b. More intensive programs are scheduled for individuals or units with especially prolonged intensive combat or other adverse experiences. Coordination with the rear detachment and family support groups is required to schedule similar education briefings and working-through sessions at the home station, both before the unit returns and in combined sessions after the return. The debriefings should also address—

- How the soldier, spouses, children, and society as a whole may have changed.
- How to cope with those changes positively.

Welcome home ceremonies and memorial services provide a sense of completion and closure.

12-23. Combat Stress Control Planning Considerations in Peacetime

a. To be effective, CSC must form a continuum with the Army MH services. The

peacetime utilization and training of MH personnel must prepare them for their mobilization missions and develop strong unit cohesion among themselves and with supported units. Future operations may leave no time for on-the-job training, or to develop familiarity and cohesion before the crucial battle starts.

b. Army Regulation 40-216 states that patient care duties must not interfere with the division MH section's training with its division.

c. Echelon III psychiatric and MH personnel who will provide CSC support should have peacetime duties which bring them into close working relationships with the organic MH sections, chaplains, line commanders, and NCOs of the units they will support in war.

(1) Active Component CSC personnel should be assigned to the medical department activities (MEDDACs), community MH/community counseling centers, drug, alcohol, and family advocacy and exceptional family member programs at the posts or garrisons of the Active Component divisions, brigade, regiments, and corps units they will support. They should participate with those units in field exercises.

(2) Reserve Component CSC personnel should use weekend and annual training to train with and conduct stress control programs for the divisions, brigades, and corps units they will support on mobilization.

12-24. Briefing the Combat Stress Control Plan

a. Depending on the echelon, the CSC plan may be briefed to a senior medical commander or line commander for approval. In some headquarters, the CSC planner may give the briefing. In others, it may be given by the unit surgeon as part of the overall HSS plan.

b. In any case, the CSC briefing must be short and simple. The senior commander does not need all the details which went into the analysis (although those details should be available if asked for). The commander needs to know the “bottom line.” What will it cost? What is the return, especially in reduced casualties and rapid RTD? What is the risk if it is not done?

c. Many commanders are highly knowledgeable about the nature and importance of

combat stress reactions and home-front issues. However, many others are not. The CSC briefing may have to overcome the prejudice that MH (CSC) interventions pamper the troops and ruin them for combat or just burden the unit with ineffective troops who would be better purged from the Army.

d. Educating the senior commander, using language he knows and understands is the first, essential step of CSC.

CHAPTER 13

AREA MEDICAL SUPPORT

**13-1. Combat Zone and Communications
Zone Area Medical Support**

Units which lack an organic HSS capability are provided routine and emergency medical treatment on an area support basis. Within corps, this support is provided by divisional medical companies and medical battalions, area support. In EAC, it is provided by medical battalions, area support. The battalion is modular in design and consists of a battalion headquarters, an HSC, and three ASMCs. The medical battalion, area support incorporates modular systems that are found in the division medical structure. (See Appendix A.) The medical companies have a treatment platoon (area support squad, treatment squad, and holding squad) and an ambulance platoon. In addition to a normal battalion staff, the headquarters has optometry, PVNTMED, and MH sections, and a medical supply element.

a. In operation, each company is assigned an AOR to ensure all personnel receive adequate medical care. Within each company sector, the treatment platoon with its treatment, dental x-ray, laboratory, and patient-holding capability forms the core of the company's support scheme. The treatment squads are employed geographically to best support the troop population. Company ambulances are collocated with medical support elements to provide area patient evacuation or to evacuate patients to the area support section for further treatment or holding.

b. The modular design of the battalion and its ASMCs permits their employment across the operational continuum. For a comprehensive discussion pertaining to the mission, deployment, employment, and operations of the medical battalion, area support, refer to FM 8-10-24.

**13-2. Medical Battalion, Area Support
(Support Command, Corps, or Com-
munications Zone), TOE 08-455L0**

a. Mission. This unit provides Echelons I and II HSS to units located in its AO. It provides command and control and medical staff advice and assistance for all assigned and attached elements of the corps and COMMZ operating in its AO. A secondary mission of this unit is to provide rapid reinforcement/replacement of standardized, like-modules to the division medical structure.

b. Assignment. The unit is assigned to the Medical Brigade, TOE 08-422L0, or the Medical Group, TOE 08-432L0, depending on the density of medical organizations in a TO.

c. Capabilities. Specific functions of the battalion include—

- Planning and coordinating Echelons I and II HSS operations in an AO, to include staff advice on an area basis for corps and COMMZ units without organic medical assets.
- Advising commanders and staff of supported units on the health of their command.
- Providing current information concerning HSS to higher headquarters.
- Operating clearing stations (Echelon H).
- Reinforcing or reconstituting Echelons I or II medical elements, to include technical supervision for physicians assistants in Echelon I MTFs without assigned physicians.

- Providing ground ambulance evacuation of patients.
- Providing health service logistics, to include medical equipment maintenance services.
- Providing laboratory, pharmacy, and radiological services commensurate with Echelon II medical treatment.
- Providing emergency dental care, to include stabilization of maxillofacial injuries, sustaining dental care designed to prevent or intercept potential dental emergencies, and limited preventive dentistry.
- Providing limited MH services and management of battle fatigue and stress-related casualties. (It also coordinates operations of attached CSC unit teams.)
- Providing optometry services, to include fabrication of finished prescription lenses, spectacle repair services, and emergency treatment and routine care.
- Providing PVNTMED consultation and support, to include medical intelligence

and technical control of attached PVNTMED detachments.

- Providing patient-holding for up to 160 patients who will RTD within 72 hours.
- Providing Echelon I (treatment station) HSS on an area basis to units without organic medical elements.
- Providing consultation service for patients referred from Echelon I medical treatment elements.
- Providing daily sick call for supported units.
- Performing organizational maintenance on the battalion's wheeled vehicles. (The battalion maintenance section uses contact teams to provide unit maintenance to assigned subunits.)

d. Basis of Allocation. The medical battalion, area support provides support for approximately 50,000 nondivisional troops. It is allocated on the basis of .018 per 1,000 non-divisional troops supported in the corps and COMMZ. Figure 13-1 depicts the organization of the medical battalion, area support.

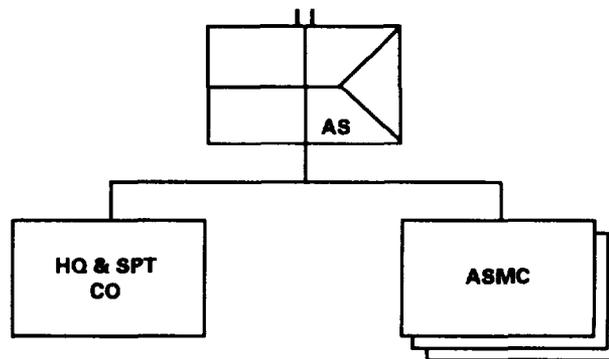


Figure 13-1. Area support medical battalion.

13-3. Headquarters and Support Company, Medical Battalion, Area Support (Support Command, Corps, or Communications Zone), TOE 08-456L0

a. Mission. The mission of the HSC is to provide command and control for the medical battalion, area support and to provide Echelons I and II HSS to units assigned in the battalion's AO.

b. Assignment. The HSC is organic to the Medical Battalion, Area Support, TOE 08-455L0.

c. Capabilities. This unit provides—

- Command and control of organic or attached units, to include medical planning, policies, and support operations within the battalion's AO.

- Information to commanders and their staffs on the health of their command and on medical aspects affecting CSS.

- Current information concerning medical aspects of the CSS situation to higher headquarters.

- Allocation of medical resources (personnel and equipment) to ensure adequate medical treatment to all assigned or attached units operating in the battalion's AO in either the corps or the COMMZ.

Triage and treatment to patients generated in the HSC AO.

- Evacuation of patients from units within the HSC's AO to the treatment squads of the HSC.

- Treatment squads which are capable of operating independently of the HSC for limited periods of time to provide trauma and sick call medical care to forces involved in combat, or to perform reinforcement, reconstitution, or replacement to forward medical units.

- A 3-day level of supplies for all subelements of the HSC upon deployment and during routine operations.

- Laboratory, pharmacy, and radiological services commensurate with Echelon II medical treatment.

- Emergency dental care to include stabilization of maxillofacial injuries, sustaining dental care designed to prevent or intercept potential dental emergencies, and limited preventive dentistry.

- Patient-holding for up to 40 patients who will RTD within 72 hours.

- Outpatient consultation services for patients referred from Echelon I HSS facilities.

- Unit administration for elements of the battalion.

- Food service support to staff and patients of the HSC and to other medical elements dependent upon the HSC for mess support.

d. Basis of Allocation. One HSC per medical battalion, area support. Figure 13-2 depicts the organization of the HSC, medical battalion, area support.

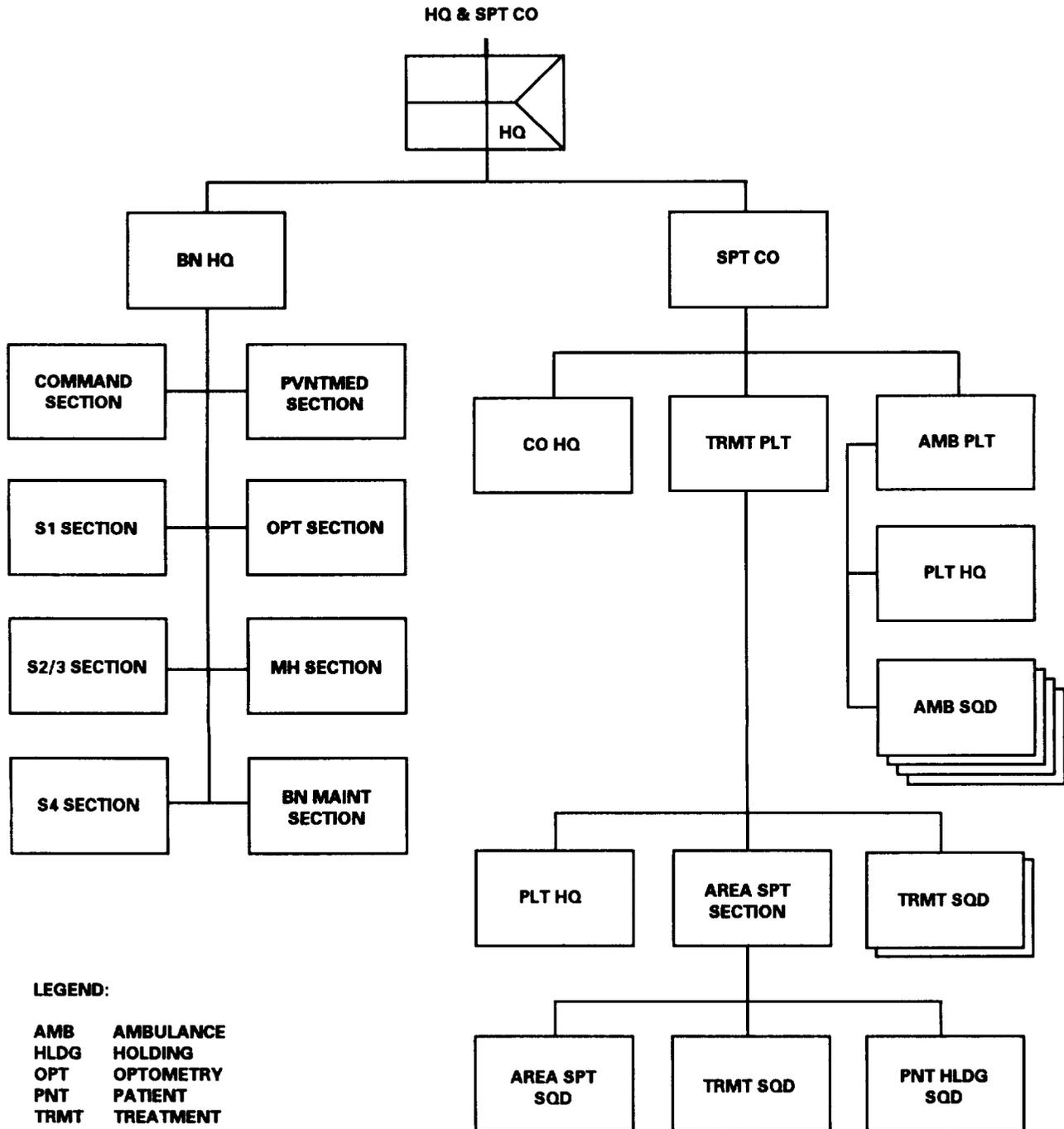


Figure 13-2. Headquarters and support company, area support medical battalion.

13-4. Medical Company, Area Support, Area Support Medical Battalion (Support Command, Corps, or Communications Zone), TOE 08-457L0

a. Mission. The mission of the ASMC is to provide Echelons I and II HSS to units assigned in the AO of the ASMC.

b. Assignment. The ASMC is organic to the Medical Battalion, Area Support, TOE 08-455L0.

c. Capabilities. This unit provides—

- Treatment of patients with disease and minor injuries, triage of MASCAL, initial resuscitation and stabilization, ATM, and preparation for further evacuation of ill, injured, and wounded patients who are incapable of returning to duty within 72 hours.
- Treatment squads which are capable of operating independently of the ASMC for limited periods of time.
- Evacuation of patients from units within the ASMC's AO to the treatment squads of the ASMC.
- Emergency medical supply and resupply to units operating within the AO of the ASMC.
- A 3-day level of supplies for all elements of the ASMC upon deployment and during routine operations.
- Laboratory, pharmacy, and radiological services commensurate with Echelon II HSS treatment.
- Emergency dental care, to include stabilization of maxillofacial injuries, sustaining dental care designed to prevent or

intercept potential dental emergencies, and limited preventive dentistry.

- Patient-holding for up to 40 patients per ASMC.
- Outpatient consultation services for patients referred from Echelon I HSS facilities.
- Food service support to staff and patients of the ASMC and to other medical elements dependent upon the ASMC for mess support. This unit also performs unit maintenance on organic power generation and communications and electronic equipment.

d. Basis of Allocation. Three ASMCs are allocated per medical battalion, area support. Figure 13-3 depicts the organization of the ASMC.

13-5. Command and Technical Relationships

The medical battalion, area support commander exercises command and control over the battalion and over medical units/elements attached or assigned to the battalion. He exercises command and control over subordinate elements according to the mission assigned within the framework of the intentions of the next higher command. The medical battalion, area support is under the overall command of the medical brigade or the medical group. The medical battalion, area support commander, his staff, and subordinate medical commanders employ direct channels of communications on technical and clinical matters. The medical battalion, area support commander makes all fundamental decisions in his area of responsibility.

a. Headquarters and Support Company Commander. Headquarters and support company commander exercises command and

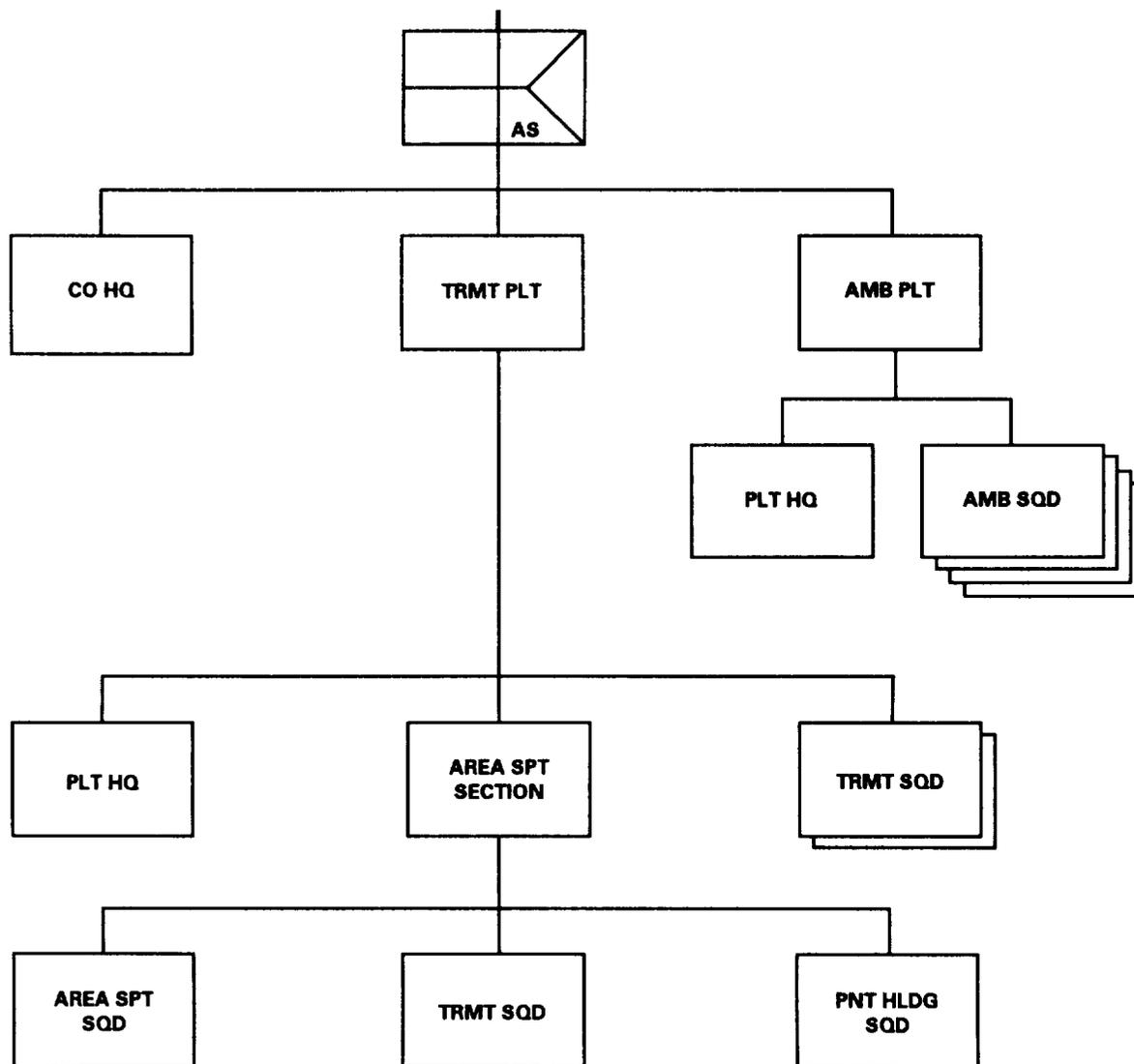


Figure 13-3. Area support medical company.

control over all elements assigned to his company, less OPCON of the battalion headquarters elements.

b. Area Support Medical Company Commander. The ASMC commander exercises

command and control over all elements of the ASMC. He serves as the staff surgeon for supported units and provides technical guidance and assistance when required. He provides technical guidance to any Echelon I medical elements operating within his AO. He advises

commanders of units without organic HSS on the health and welfare of their commands.

c. Medical Battalion, Area Support Staff. The medical battalion, area support staff provides the commander with factual and timely information. Staff personnel prepare, analyze, estimate, and recommend feasible courses of action. The staff translates the commander's decisions into instructions and orders, issues

those orders, and supervises their execution. Staff members resolve the problems and make decisions within their functional areas based on the commander's guidance and TSOPs. An efficient well-organized, and highly motivated staff can accomplish routine things smoothly and effectively. The commander, however, identifies goals, and announces what must be done; the staff supports his decisions and ensures they are carried out.

CHAPTER 14

COMMAND, CONTROL, COMMUNICATIONS,
COMPUTERS, AND INTELLIGENCE**Section I. COMMAND AND CONTROL****14-1. Command and Control Terms**

a. Command. Command is the authority that a commander exercises over his subordinates by virtue of his rank or assignment. Command includes the authority and responsibility for effectively using available resources and for planning, organizing, directing, coordinating, and controlling military forces for the accomplishment of assigned missions. It includes responsibility for health, welfare, training, and discipline of assigned and attached personnel.

b. Operational Control. Operational control is that control which comprises functions of command involving composition of subordinate forces, assignment of tasks, designation of objectives, and the authoritative direction to accomplish the mission. Operational control is delegated by authority of the individual who has overall force control. It does not include administration, discipline, and internal organization or unit training.

c. Technical Control. Technical control is defined as that specialized or professional guidance exercised by an authority in technical matters. The corps surgeon normally exercises technical control over the health services of the corps. In a practical sense, one can say that the corps surgeon has authority to deal through technical channels of communication with surgeons of subordinate commands in matters pertaining to the practice of medicine, with full expectation that his policies will be carried out.

14-2. Command and Control of Corps Medical Units.

a. Under the medical command and control concept, all nondivisional corps medical units are placed under the command of the major medical command and control headquarters within the corps (COSCOM). (See FM 8-10.) This headquarters is normally a medical brigade headquarters. Under certain circumstances, however, when the number of medical troops employed does not warrant a brigade, the major medical command and control headquarters may be a medical group headquarters.

b. The corps medical brigade headquarters commands, controls, plans for, and operates the corps HSS system. The HSS mission is accomplished through centralized control of decentralized operations. Policies are provided for the effective integration of health service activities in the corps and are coordinated with supported units. The major subordinate command and control elements of the medical brigade in a corps are the headquarters of the medical groups. The major subordinate command and control elements of the medical group in a corps are normally the headquarters of the medical battalions (such as evacuation or area support).

c. The corps surgeon provides the corps commander with a continuing series of long-range plans for provision of HSS. The medical brigade/group fill out the details of these plans and

translate them into missions for the subordinate medical groups/battalions.

14-3. Command and Control in the Communications Zone

a. The TA commander exercises command and control over all CSS units. The MEDCOM commander exercises command and control over all assigned and attached medical units. He also commands and controls any non-medical unit assigned or attached to the MEDCOM for support of COMMZ HSS operations.

b. The MEDCOM commander provides assistance in preparing broad plans, policies, and directives for implementing so much of the TA plans as pertain to COMMZ HSS.

14-4. Theater of Operations Command and Control Units

The major HSS command and control units in the TO are the MEDCOM, the medical brigade, and the medical group. (See paragraphs 14-5, 14-6, and 14-7.)

14-5. Headquarters and Headquarters Company, Medical Command, TOE 08-611L000

a. *Mission.* The mission of the HHC, MEDCOM, is to provide command, control, administrative assistance, technical supervision, and consultation services for assigned and attached units in the TO. A schematic of a MEDCOM is depicted in Figure 14-1. A schematic of an HHC, MEDCOM, is depicted in Figure 14-2.

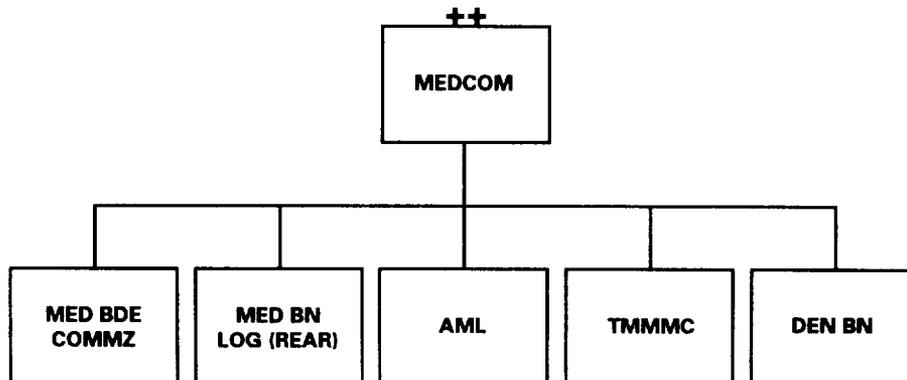
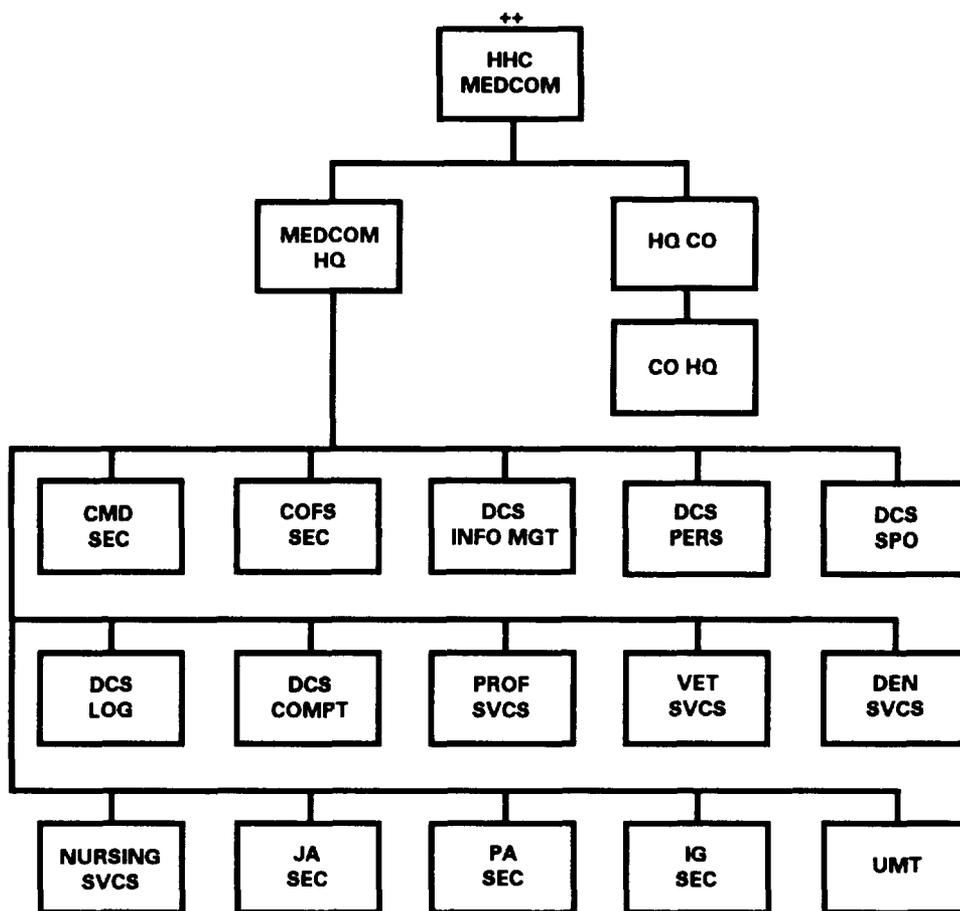


Figure 14-1. Medical command.



LEGEND:

COFS	CHIEF OF STAFF	PA	PUBLIC AFFAIRS
COMPT	COMPTROLLER	PROF	PROFESSIONAL
DCS	DEPUTY CHIEF OF STAFF	SEC	SECTION
IG	INSPECTOR GENERAL	SPO	SECURITY, PLANS, & OPERATIONS
INFO	INFORMATION	UMT	UNIT MINISTRY TEAM
JA	JUDGE ADVOCATE	VET	VETERINARY
MGT	MANAGEMENT		

Figure 14-2. Headquarters and headquarters company, medical command.

b. *Assignment.* This organization is assigned to the TA.

c. *Capabilities.* This organization provides—

- Command and control units providing HSS in the TO.

- Task organization for all TO medical assets to meet the patient work load. Medical assets are designed by duty functions and are interchangeable throughout the TO to meet work load requirements.

- Advice to senior commanders on the medical aspects of their operations.

- Command, control, staff planning, supervision of operations, and administration of the assigned and attached units. These functions include coordination for employment, patient evacuation, supply and equipment management, administrative services for the headquarters, and coordination between medical units operating in the MEDCOM's AOR.

- Medical regulating and evacuation scheduling for patient movement to and between assigned and attached MTFs. This includes coordination with the Echelon III MROs and the JMRO in the TO. This office provides technical advice and assistance concerning patient statistics, patient movement, administrative support, and statistical data requirements.

- Consultation services and technical advice in PVNTMED (environmental health, medical entomology, epidemiology, radiological health, sanitary engineering), nursing, dentistry, veterinary services, NP and social work, medicine and internal medicine, surgery, dietetics, optometry, and pharmacy to supported units. Preventive medicine consultative services include assessment of the medical threat, evaluation of theater PVNTMED program, technical advice on medical aspects of NBC and DE weapons, and staff coordination of theater PVNTMED services. Neuropsychiatry and social work services include the recommendations for regulating the combat stressed soldier, psychiatric consultation, alcohol and drug prevention/control programs, and providing advice on the coordination of operations of the medical companies, CSC in the MEDCOM's AOR. Dietary services and technical assistance include advice on nutrition in relation to health and fitness and medical food service consultation. Veterinary services and technical advice include status of approved sources of food for local procurement, food in storage, incidence or prevalence of zoonotic diseases, and food wholesomeness, hygiene, safety, and quality assurance standards. Veterinary services also include inspection of food

suspected of NBC contamination for wholesomeness before it is consumed by troops.

- Advice and assistance in facility site selection and preparation.

- Supervision of Class VIII and general supply usage and resupply movement.

- Unit-level vehicle, communications, weapons, and power generation equipment maintenance advice and management.

- Food service personnel for dining facility support for the HHC, MEDCOM.

d. Basis of Allocation One MEDCOM is allocated per TA.

14-6. Headquarters and Headquarters Company, Medical Brigade (Corps, TOE 08-422L100, or Communications Zone, TOE 08-422L200)

Medical brigade commanders have the ability to task-organize medical assets to meet the patient work load. The medical assets are modularly designed by duty functions and are replicated throughout the TO to meet these requirements. Schematics of the HHC, medical brigade (CZ and COMMZ), medical brigade, CZ, and medical brigade, COMMZ are at Figures 14-3, 14-4, and 14-5, respectively.

a. Mission. The mission of the unit is to provide command, control, administrative assistance, and technical supervision of assigned and attached medical units.

b. Assignment. This company is assigned to—

- Corps Support Command, TOE 63-431L000, when organized under TOE 08-422L100.

- Medical Command, TOE 08-611L000, when organized under TOE 08-422L200.

c. Capabilities. At full strength, this unit provides-

- Command and control of all medical units in its AO.

- Task organization of medical assets to meet the patient work load demand, Medical assets are modularly designed by function and replicated throughout the TO.

- Advice to senior commanders on the medical aspects of their operations.

- Medical regulation of patient movements to and between assigned and attached MTFs.

- Coordination with MEDCOM and/or JMRO for all medical regulating for evacuation from the medical brigade facilities to supporting MTFs in the COMMZ and CONUS when organized as TOE 08-422L200.

- Consultation services and technical advice in PVNTMED (environmental health, medical entomology, radiological health, sanitary engineering), nursing, dentistry, veterinary services, and NP and social work to supported units.

- Advice and assistance in facility site selection and preparation.

- Control and supervision of Class VIII (medical) supply and resupply movement.

d. Basis of Allocation. This unit is allocated as follows:

- Headquarters and Headquarters Company, Medical Brigade (Corps), TOE 08-422L100-one per corps.

- Generally, there is one HHC, Medical Brigade (COMMZ), TOE 08-422 L200, allocated per three to seven medical battalions or battalion force equivalent organizations.

14-7. Medical Group, TOE 08-432L000

a. Mission. The mission of the medical group is to provide command, control, and administrative supervision of assigned and attached corps medical units.

b. Assignment and Basis of Allocation. The medical group is assigned to the medical brigade. As a general rule of thumb, there are three medical groups per corps. As in the medical brigade, the commander of the medical group can task-organize his medical assets to meet patient work loads.

c. Capabilities. This unit's capabilities include—

- The command, control, staff planning, supervision of operations, and administration of the assigned and attached units which include ASMBs, hospitals, evacuation battalions, CSC companies, dental battalions, and PVNTMED detachments. The command of the assigned medical units includes coordination for employment, patient evacuation, supply and equipment management, and various other headquarters requirements. This command coordination is between its units and other medical elements operating in the medical group's AOR. Units of the medical group maybe task-organized to support close, deep, and rear operations.

- Medical regulation for evacuation and the scheduling of medical group facilities in coordination with the brigade MRO to hospitals assigned to other medical brigades, This includes coordination with the DMOC in those divisions organized under the FSB and MSB

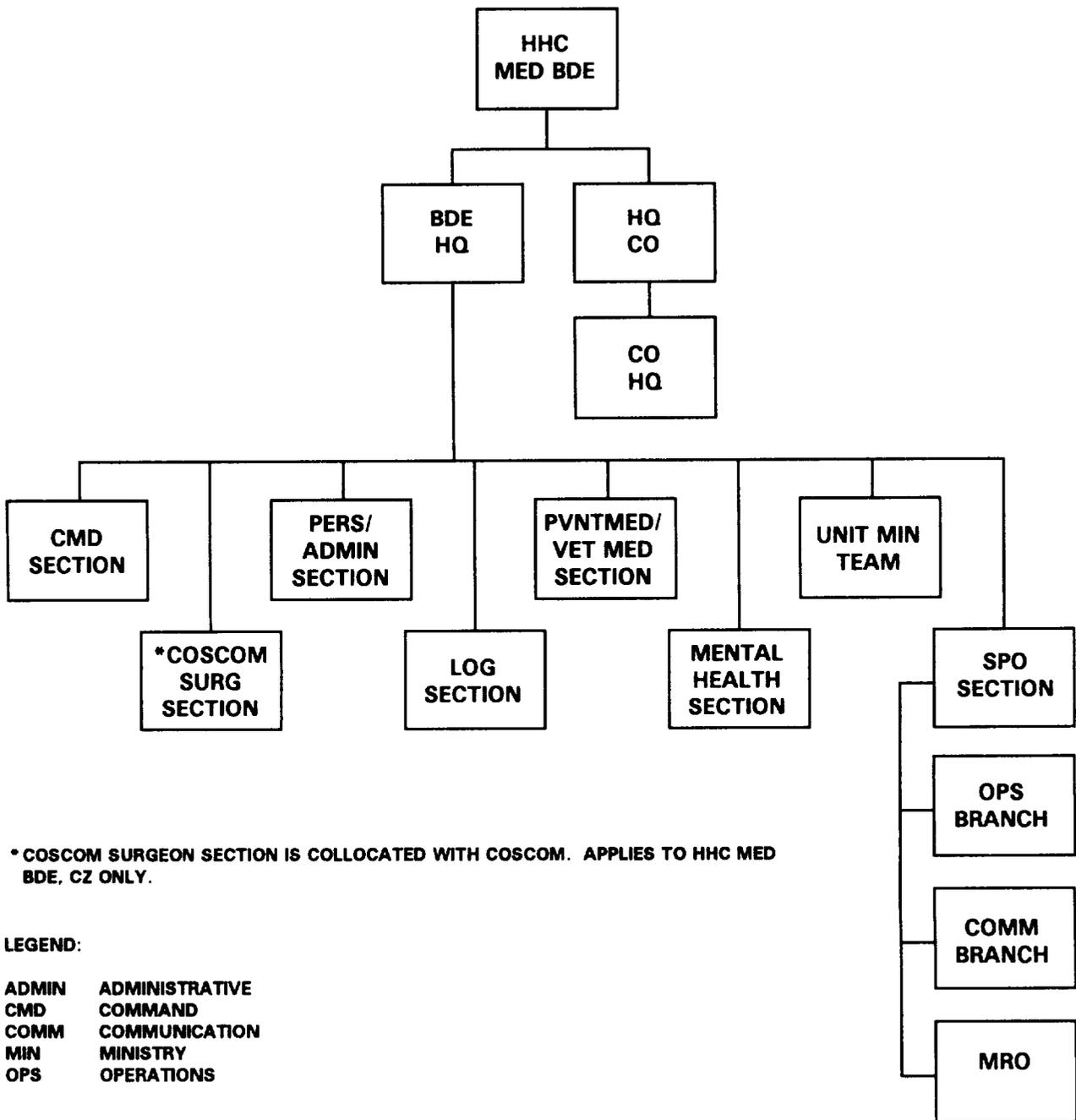


Figure 14-3. Headquarters and headquarters company, medical brigade (combat zone /communications zone).

concept to regulate the patient evacuation from the division's AO. It also coordinates with medical brigade all medical regulating for further evacuation from the medical group facilities to the supporting MTFs in the COMMZ.

- Consultation services and technical advise in PVNTMED (environmental health and sanitary engineering), nursing, MH, and facility site selection and preparation to supported units. Preventive medicine consultative services include—

- Assessment of the medical threat.

- Evaluation of theater PVNTMED programs.

- Technical advise on medical aspects of NBC and DE weapons.

- Staff coordination on employment of theater PVNTMED assets.

- Supervision of Class VIII and general supply usage and resupply and movement.

d. Basis of Allocation. Generally, this unit is allocated on the basis of one per three to seven medical battalions or battalion-equivalent organizations.

Section II. COMMUNICATIONS

14-8. Vital Link

In addition to defining command and control organizations for the HSS organization, the planner must consider communications as a vital link to this important function. Health service support communications within the TO and from the TO to COITUS connect the most forward HSS elements in the theater through each echelon in the phased HSS system to the final destination MTF. The success of HSS operations is highly dependent on reliable communications over dedicated Army systems and parallel systems with other Services.

14-9. Communications Planning

a. Signal support plans should deliberately meet the requirements of the operation. Means for transmitting information and orders range from the time-tested radio, wire, and

messenger systems to high-speed data links and man-packed satellite communication terminals. Commanders and staffs must understand the capabilities and limitations of their systems. They must be actively involved in ensuring adequacy. Atmospheric conditions, terrain, enemy electronic warfare efforts, and nuclear electromagnetic pulse may hinder electronic signal equipment. The key to survivability is establishing command and control procedures that—

- Provide redundancy of communications.

- Eliminate unnecessary reports.

- Ensure that subordinates know what to do during communications interruption.

- Do not overload communication systems. Use them only when absolutely necessary.

- Minimize use of the most vulnerable means.
- Practice operations security and communications security.

b. Each means of communication has its strengths and weaknesses. Carefully integrated means should give the most flexible and reliable system possible.

c. No matter how good the HSS force structure appears to be on paper, it is only as good as the way in which it is employed. War fighters weight the battle to make sure they put enough of the “right stuff” at the right time and place to win. The AMEDD has to do the same. There is a potential synergy within the HSS system of systems but there has to be synchronization (communication) to achieve it.

Section III. COMPUTERS

14-10. Theater Army Medical Management Information System

The TAMMIS supports the information management requirements of HSS units during contingency operations and in war. (See Chapter 4 for a discussion of the TAMMIS.) The system aids the HSS system in effectively transporting, treating, and tracking patients at MTFs worldwide. The system also assists the user to carry out functional responsibilities.

14-11. Theater Army Medical Management Information System Subsystems

The TAMMIS provides timely, accurate, and relevant information through the following subsystems

- a.* Medical regulating. (See Chapter 4.)
- b.* Patient accounting and reporting. (See Chapter 5.)
- c.* Medical logistics which includes MEDSUP, MEDMNT, and MEDASM. (See Chapter 6.)

Section IV. INTELLIGENCE

14-12. Medical Intelligence

Medical intelligence is vital to strategic and tactical planning as well as to preparing for all aspects of HSS activities. It is as critical to HSS planning and operations as tactical intelligence is to tactical planning and operations.

14-13. Requests for Medical Intelligence

Requests for specific medical intelligence should be made to the supporting intelligence element. Need for support must be clearly established with this element before it can be responsive to the consumer's requirements. Appendix F and FM 8-10-8 provide detailed medical intelligence discussions.

CHAPTER 15

SPECIAL PROVISIONS IN MASS CASUALTY SITUATIONS

15-1. Mass Casualties

The term mass casualties means that a large number of casualties has been produced simultaneously or within a relatively short period of time. It also means that the number of patients requiring medical care exceeds the medical capability to provide treatment in a timely manner. (See FM 8-10.) Mass casualties may occur in conventional warfare; however, under NBC/DE conditions, additional problems are superimposed.

a. In nuclear attacks, many more burns, low-velocity missile wounds, and ionizing radiation injuries can be expected as compared to a predominance of high-velocity missile wounds associated with conventional warfare. Casualties will be produced faster, and locally available means for early resuscitative care may quickly prove inadequate. At the time of triage, it will not be possible to predict which patients with thermal or blast injuries will develop radiation sickness. It will not always be possible to determine the dosage of irradiation which a patient has received. In these cases, reliance must be placed on clinical symptoms which may suggest that the patient has received a significant dose of irradiation.

b. Under biological conditions, the control of epidemics will be of paramount importance. Because of the large numbers of patients expected following a biological attack, it is probable that—

- Evacuation facilities will be unable to support the additional requirements.
- Units will have to stay on location and look after themselves.

If required, however, medical personnel and equipment could be moved into the area to assist. Keeping affected units on location will prevent the spread of infection to unaffected areas.

c. In a chemical environment, there will be a need to consider the individual protection of medical personnel and of patients. There will also be a need for decontamination of patients. Decontamination will be time-consuming and will make heavy demands on manpower for which medically trained personnel cannot be spared. Disposal of contaminated clothing and supply of clean clothing and decontaminants will pose a logistic problem.

d. Directed-energy weapons are likely to cause large numbers of casualties and equipment disruptions if countermeasures are not in place. Health service support units have adequate organization, doctrine (FM 8-50), and resources to address low-level lasers already fielded.

e. Civilian casualties may be a significant problem in populated areas, and HSS may be required to assist in treating civilian patients when civil medicine cannot handle the problem.

15-2. Categorization

In a MASCAL situation, the conventional treatment priorities must be abandoned. This means a radical departure from the traditional practice of providing early complete definitive treatment to each patient on the basis of his individual needs. Field Manual 8-10 discusses triage (sorting) which is the means for evaluating and categorizing casualties for priority of treatment.

15-3. Commanders' Planning Responsibilities in a Nuclear, Biological, Chemical, and Directed-Energy Environment

a. In planning for support following enemy nuclear or NBC/DE attack, combat, CS, and CSS commanders at every echelon must ensure that self-aid, buddy aid, combat lifesaver, and unit NBC defensive procedures are adequately trained. Command emphasis is required to ensure that—

- Nonmedical personnel are trained to perform search and rescue, immediate first aid, and initial NBC decontamination.
- The soldier's skills to perform self-aid and buddy aid are current.
- The combat lifesaver is trained and proficient in combat lifesaver skills.

b. Extremely limited medical assets require that support unit commanders establish unit teams to decontaminate patients at the MTF. These unit teams will function under medical supervision while decontaminating patients.

c. Based on medical recommendations, commanders establish procedures for the strict regulation, control, and administration of convulsant antidote for nerve agent (CANA) and Nerve Agent Antidote Kit (MARK I). (See FM 8-285.)

d. Based on tactical and intelligence information, commanders establish safety measures for DE.

15-4. Command Surgeon's Responsibilities in Mass Casualty Operations

a. The command surgeon's role in preparing for a MASCAL situation includes the

development of a MASCAL plan. In addition to providing support to the normal mission, the command surgeon recommends protective measures against other forms of warfare which could result in the generation of MASCAL. When a MASCAL situation occurs, the surgeon is responsible for the management of patients.

b. The command surgeon must develop a MASCAL plan that is clearly defined and which is sufficiently detailed for understanding at all levels. It must be practiced at regular intervals and executable at the appropriate level.

c. The command surgeon must address in the plan such items as—

- The medical situation.
- The evacuation policy (including alternate plans) and responsibilities for patient evacuation and medical regulation.
- Alternate treatment locations and evacuation routes.
- Nuclear, biological, and chemical considerations. (For example, should patients with NBC injuries or contamination be regulated to certain hospitals; or will all hospitals have to receive NBC contaminated or injured patients? [In World War I, separate hospitals were designated for chemical casualties.] Other issues include casualty estimates, additional medical resource requirements, reallocation of medical resources after attack, categorization of combined injury casualties/patients, and treatment management of soldiers exposed to biological warfare agents.)
- Directed-energy considerations. (For example, what are the requirements for ballistic/laser protective spectacles, protective filters, magnifying optics, and vision blocks?)

- Protection of patients and HSS resources to include medical personnel from contamination. (planning provisions must include collective protection shelters for MTFs, if available.)

- Emergency resupply for Class VIII including blood.

- Nonmedical resources (especially personnel and transportation).

- Assistance including evacuation support from other arms and services.

- The types of additional non-organic medical assets needed.

- Priority of support and communications between evacuation assets and treatment assets.

- A clear delineation of medical responsibilities throughout the operational, technical, and administrative channels.

- Procedures for keeping necessary records and reports of the flow of patients.

- Procedures to cover situations where an unusual number of blinded patients seek medical attention.

- Required liaison with civilian authorities, where and when applicable.

d. The command surgeon working with the command dental surgeon determines the best

use of dental resources in their alternate wartime roles during MASCAL situations. The dental surgeon, in turn, alerts dental resources through the technical chain as to the surgeon's guidance. He ensures that those concerned are able to perform their established role when required.

e. Mass casualty operations should be considered as part of an area damage control (ADC) mission, coordinated through and approved by the tactical commander and his principal staff, and incorporated into the overall tactical plan. The MASCAL plan must be coordinated with echelons above and below. It must also be adaptable to day and night operations.

f. Directives from higher echelons should provide the guidance and support to permit effective execution of the MASCAL plan.

15-5. Reference Information for the Modern Battlefield

Currently, there are many sources on NBC medical issues; however, to date there is not a consolidated medical reference concerning medical planning factors for NBC operations. There are still too many uncertainties concerning virtually all aspects of combat operations employing NBC and/or DE weapons. The following references may be useful in presenting medical aspects of each of these weapon types: Field Manuals 3-3, 3-4, 3-5, 3-100, 8-9, 8-10, 8-10-4, 8-10-7, 8-50, 8-285, 21-11; TM 3-216; and DA PAM 50-3. Joint Pub 3-11 and STANAGs 2873 and 2874 may be useful in joint or NATO operations.

APPENDIX A

MEDICAL CARE IN A THEATER OF OPERATIONS

Section I. THE ECHELONS OF MEDICAL CARE**A-1. Health Service Support**

The doctrinal term health service support includes all services performed, provided, or arranged by the AMEDD to promote, improve, conserve, or restore the mental or physical well-being of personnel in the Army and, as directed, in other Services, agencies, and organizations.

A-2. Theater of Operations

A TO is that portion of an area of conflict including land, sea, and air masses necessary for military operations and the administration incident to such operations. The theater is normally divided into two major zones: the CZ and the COMMZ.

This paragraph implements STANAG 2068 and QSTAG 322

A-3. Organization of the Health Service Support System.

The HSS system extends from the point of wounding, injury, or illness, through the TO to CONUS. Echelon of medical care is a term which can be used interchangeably with the term level of medical care.

a. Each higher echelon of care has the same treatment capabilities as those echelons before it. Each echelon adds a new increment of treatment capability which distinguishes it from the previous echelon. The echelons of care are

referred to as Echelons (or Levels) I through IV, Level V care is provided at CONUS.

b. Health service support includes providing support to organizations that do not possess an organic medical capability. The HSS units required for this support are allocated based on troop strength and anticipated work load. The units are established where and when requirements indicate. Although a COMMZ may not be required in the theater, HSS may include CZ and COMMZ units.

A-4. Echelon I (Level I)

a. The first medical care a soldier receives is provided at this echelon. It includes the following:

- (1) Immediate lifesaving measures.
- (2) Disease and nonbattle injury prevention.
- (3) Combat stress control preventive measures.
- (4) Patient collection.
- (5) Evacuation from supported units to supporting medical treatment.
- (6) Treatment provided by designated individuals or treatment squad (BAS). Major emphasis is placed on those measures necessary to return the patient to duty, or to stabilize him for medical evacuation to the next echelon. These measures include maintaining the airway, stopping bleeding, preventing shock, protecting wounds, immobilizing fractures, and

providing other emergency measures, as indicated.

b. Those patients not requiring a higher level of care are returned to duty.

c. Echelon I care is provided by an individual (self-aid, buddy aid, combat lifesaver, or combat medic) or by medical personnel in a treatment squad.

(1) Initial care consists of those lifesaving steps that do not require the knowledge and skill of a physician. The following three different skill levels of personnel provide the care required in the forward area.

(a) Self-aid/buddy aid. Each individual soldier is trained to be proficient in a variety of specific first-aid procedures. These procedures include aid for chemical casualties with particular emphasis on lifesaving tasks. This training enables the soldier or a buddy to apply immediate care to alleviate a life-threatening situation.

(b) Combat lifesaver. The combat lifesaver is a member of a nonmedical unit selected by the unit commander for additional training beyond basic first-aid procedures. A minimum of one individual per squad, crew, team, or equivalent-sized unit should be trained. The primary duty of this individual does not change. The additional duties of the combat lifesaver are performed when the situation permits. The combat lifesaver provides enhanced first aid for injuries based on his training before the combat medic arrives. The combat lifesaver's training is normally provided by medical personnel assigned to, attached to, or supporting the unit. The training program is managed by the senior medical person designated by the commander.

(c) Combat medic (aidman).

This is the first individual in the HSS chain who makes medically-substantiated decisions based on medical MOS-specific training. The combat medic is trained to emergency medical technician (EMT) level. The combat medic is assigned to the medical platoon or section of the HHC, the HSC, or the troop of the appropriate combat or CS battalion. (See paragraph A-11 for an explanation of this phase of care.)

(2) The physician and the physician's assistant in a treatment squad (aid station) are trained and equipped to provide ATM or trauma treatment to the battlefield casualty. This element also conducts routine sick call when the situation permits. Like-elements provide this echelon of care in division, corps, and COMMZ units. (See paragraphs A-12 and A-13 for an explanation of this phase of care.)

NOTE

Patients entering the HSS system will retain their protective mask. Ammunition and individual weapons belonging to patients to be evacuated from the BAS are disposed of as directed by brigade (division artillery, battalion, or squadron) or division policy. Patients evacuated to the rear retain individual equipment as prescribed by division SOP. All excess equipment is collected at the BAS and disposed of by the battalion S4 or as directed by command SOP.

d. Echelon I HSS is provided by the medical platoons/sections of combat and CS battalions, by corps ASMCs, by other corps medical units, and by COMMZ ASMCs.

A-5. Echelon II (Level II)

a. This echelon of care includes the following:

(1) Evacuating patients from Echelon I.

(2) Providing care at the clearing station (division) which is operated by the area support section of the treatment platoon of the medical company. (The area support section consists of a treatment squad, an area support squad, and a patient holding squad. [The ambulance squad operates in conjunction with the treatment squad.] When these squads are collocated, they form a clearing station capable of holding up to 40 patients [20 patients in the light infantry division].) At this echelon of care, the patient is examined; his wounds, illness, and general status are evaluated; and he is treated and returned to duty, or his priority for continued evacuation is determined. The area support section (clearing station) provides HSS on an area basis to all forces within a geographical AOR. The area support section normally operates in the BSA, the DSA, and areas of high concentration of troops in the corps support area (CSA) and COMMZ. The area support and patient holding squads are incapable of independent operations.

b. This echelon of support duplicates Echelon I (see paragraph A-4) and expands services available by adding dental, laboratory, x-ray, and patient holding capabilities. Emergency care, including continuing resuscitation procedures, is provided. (No general anesthesia is available.) (See paragraph A-13 for an explanation of this phase of care.) If necessary, additional emergency measures are instituted; however, they do not go beyond the measures dictated by the immediate need. Those patients who can RTD within 72 hours are held for treatment.

c. The above functions are performed by medical companies organic to-

- Support battalions of separate maneuver brigades.

- Support squadrons of ACRs.

- Support battalions of DISCOMs.

- Medical battalions (area support) (corps and COMMZ).

A-6. Echelon III (Level III)

a. At this echelon of care, all categories of patients are provided care in MTFs which are staffed and equipped to provide care to them. (See Chapter 5 for a discussion of the care provided at the MASH and the CSH.)

b. This echelon of care expands the support provided at Echelon II. Patients who are unable to tolerate and survive movement over long distances will receive immediate surgical care in a MASH as close to the division rear boundary as the tactical situation will allow. Medical detachment, surgical, and medical detachment, surgical (airborne) provide a rapidly deployable initial surgical service forward in a division's AO as required by the nature of operations of the forces being supported. The medical detachment, surgical provides personnel augmentation to Echelon III hospitals when not task-organized to support Echelon II HSS. (See Chapter 5 for a discussion of these detachments.) Tactical situations or lack of suitable terrain availability may require that Echelon III units locate in offshore support facilities, third country support bases, or in the COMMZ. Those patients whose injuries permit additional transportation without detriment receive surgical care in a hospital farther to the rear. Those patients who are expected to RTD within the corps evacuation policy are regulated to a CSH. (See paragraphs

A-14, A-15, and A-16 for an explanation of this phase of care.)

A-7. Echelon IV (Level IV)

This echelon of care provides treatment to patients in a FH or a GH staffed and equipped for general and specialized medical and surgical care. Paragraphs A-15, A-16, and A-17 discuss the phases of care provided at this echelon.

a. The FH provides hospitalization for general classes of patients and reconditioning and rehabilitative services for those patients who can RTD within the theater evacuation policy. The majority of patients within this facility are in the rehabilitative category.

b. The GH provides hospitalization and stabilization for general classes of patients. It serves as the primary conduit for patient evacuation to CONUS.

A-8. Level V

At Level V, the casualty is treated in CONUS hospitals staffed and equipped for the most

definitive care available within the AMEDD HSS system. Hospitals in the CONUS base represent the final level of HSS.

A-9. Modular Medical System

a. Health service support for Echelons I and II is provided by a modular medical system. The modular design enables the medical resource manager to rapidly tailor, augment, reinforce, or reconstitute modular units that have become ineffective. These modules were designed—

- To acquire, receive, and sort casualties.

- To provide EMT and ATM to personnel in divisions and area support to personnel in the corps and COMMZ.

b. The modular system is built around six modules: combat medic, treatment squad, ambulance squad, area support squad, patient holding squad, and surgical squad. The system is oriented to forward casualty assessment, collection, evacuation, treatment, and initial emergency surgery.

Section II. PATIENT CARE AND TREATMENT

A-10. Phases of Patient Care and Treatment

The phases of patient care and treatment include combat medic (aidman) care, EMT, initial resuscitative treatment, resuscitative surgery or care, definitive treatment, convalescent care, and rehabilitative treatment.

A-11. Combat Medic (Aidman) Care

Combat medic care is the first medical treatment that a sick, injured, or wounded soldier receives

from a soldier who holds a medical MOS. If emergency or lifesaving measures are required prior to aidman care, they must be performed by a soldier trained in first aid (self-aid/buddy aid) or by a combat lifesaver. (See NOTE below.) Aidman care entails the skillful application of examining techniques; performance of emergency or lifesaving measures; and continual observation and care to ensure that the airway remains open, that bleeding has ceased, and that shock, infection, and further injury are prevented. It involves the effective use of medical supplies not available to the nonmedical soldier

and arrangement for evacuation by air or ground ambulance, as appropriate.

NOTE

FIRST AID is the emergency or lifesaving care given to a sick, injured, or wounded person when a soldier with a medical MOS is not immediately available. Every soldier is expected to know and apply lifesaving first-aid measures; otherwise, the victim may not live until he can receive care from the combat medic. Lifesaving measures are applied to restore breathing and heartbeat, to stop bleeding, and to prevent shock and infection. These procedures include aid for chemical casualties with particular emphasis on lifesaving tasks. First aid also entails—

(1) The application of measures to prevent a victim's condition from becoming worse.

(2) The use of proper methods in moving a victim to a relatively safe point to await evacuation and care by medically trained personnel. (See FM 21-11.)

A-12. Emergency Medical Treatment

In the EMT phase, medical skill and judgment of a higher degree are applied. The medical treatment is provided in a relatively safe environment with time to accomplish a more complete examination and start an adequate plan of treatment. Treatment includes the use of intravenous fluids and antibiotics; the preservation of the patient's airway by invasive procedures, if necessary; treatment for shock, and

the application of more secure splints and bandages. These comprehensive elements of medical management make it possible for the patient to be transported to the level of treatment demanded by the nature of his condition. For those patients who cannot be returned to duty, the final step is to arrange for the proper means of evacuation. This phase of treatment is characteristic of an aid station's capabilities and has no holding capacity.

A-13. Initial Resuscitative Treatment

In the initial resuscitative treatment phase, the clinical judgment and skill of a team comprised of a physician, physician's assistant, and dentist are applied. This team is supported by a staff, basic laboratory capability, broad range of medicinal drugs, equipment and supplies, intravenous fluids to include whole blood, and a holding ward capability where the necessary examinations and observations can be accomplished in a deliberate manner. For those patients who must be evacuated for a more comprehensive scope of treatment, arrangements are made for evacuation by ground or air to the particular CZ hospital which can provide the required treatment. This phase of care is characteristic of a BAS or a clearing station's capabilities.

A-14. Resuscitative Surgery

a. The resuscitative treatment phase is for patients whose conditions require—

- Comprehensive, preoperative diagnostic procedures.
- Intensive preparation for surgery.
- Qualified surgical teams.

- The administration of general anesthesia.
- Properly equipped operating rooms.
- An adequate postoperative intensive-care environment.

b. The objective of this phase of treatment is to perform those emergency surgical procedures which, in themselves, constitute resuscitation and without which death or loss of limb or body function is inevitable. This phase of treatment is normally provided in a medical company with an attached medical detachment, surgical, or in a hospital.

A-15. Definitive Treatment

The definitive treatment phase is particularly adapted to the precise condition of the patient. It embraces those endeavors which complete the recovery of the patient. Specific procedures are executed by specialists. Definitive treatment, not hampered by the crisis aspect as in resuscitative care, proceeds with a greater degree of deliberation and preparation. Definitive treatment is provided at hospitals located in the rear of the CZ and at GHs in the COMMZ. Its completion represents the maximum of recovery and preservation of limb and function. As patients are evacuated to the rear, treatment is more definitive. For the majority of patients, definitive treatment constitutes all that is needed for them to return to full and useful duty. This scope of treatment requires the type of clinical capability found only in a hospital that is properly staffed

and equipped and located in an environment with a low level of threat from enemy action.

A-16. Convalescent Care

During this phase in a patient's recovery, medical supervision is still needed, but the patient's condition does not require the frequent or close monitoring characteristic of the acute stage. Convalescent care occurs in several types of settings. This care can be given on an outpatient basis, in a holding unit, or in a hospital. This phase involves clinical judgment to determine when the patient has—

- Recovered from an injury or disease.
- Achieved a state of physical and mental function commensurate with the job to which the soldier will be subsequently assigned.

A-17. Rehabilitative Care

a. Rehabilitation is part of the total medical care provided to patients in the definitive and convalescent phases of care. Preventing or minimizing loss of physical or psychological function for patients capable of being RTD are the primary goals. For patients requiring evacuation, treatment is aimed toward starting basic rehabilitation procedures that can be continued throughout the evacuation process.

b. Physical and occupational therapy are the rehabilitation assets in a TO. Physical therapy staff assets are found at the CSH, FH, GH, and the medical company, holding. Occupational therapy staff assets are found in the FH and GH, the medical company, holding, and as MH officers in CSC units.

APPENDIX B
ESTIMATES

	EXAMPLE	PAGE
Format for the Health Service Support Estimate	B-1	B-1
Format for the Dental Estimate	B-2	B-7
Format for the Veterinary Estimate	B-3	B-12
Format for the Preventive Medicine Estimate	B-4	B-18
Format for the Combat Stress Control Estimate	B-5	B-25

Example B-1. FORMAT FOR THE HEALTH SERVICE SUPPORT ESTIMATE

(Classification)

*Headquarters
Location
Date, time, and zone*

HEALTH SERVICE SUPPORT ESTIMATE OF THE SITUATION

References: *Maps, overlays, charts, or other documents required to understand the plan. Reference to a map will include the map series number and country or geographic area, if required; sheet number and name, if required; edition; and scale.*

1. MISSION *(Statement of the overall HSS mission.)*
2. SITUATION AND CONSIDERATIONS
 - a. Enemy situation.
 - (1) Strength and disposition.
 - (2) Combat efficiency.
 - (3) Capabilities.
 - (4) Logistic situation.

(Classification)

Example B-1. FORMAT FOR THE HEALTH SERVICE SUPPORT ESTIMATE (Continued)

(Classification)

- (a) Army.
 - (b) Navy.
 - (c) Air Force.
 - (d) Marines.
 - (e) Coast Guard.
 - (2) Department of Defense Civilians.
 - (3) Allied forces.
 - (4) Coalition forces.
 - (5) Enemy prisoners of war.
 - (6) United States national contract personnel.
 - (7) Indigenous civilians and third country civilians. *(Refer to discussion of Articles 15 and 16 of the Geneva Convention for the Amelioration of the Condition of the Wounded and The Sick in Armed Forces in the Field in FM 8-10.)*
 - (8) Detainees.
 - (9) Internees.
 - (10) Others.
- e. Health of the command.
- (1) Acclimation of troops.
 - (2) Presence of disease.
 - (3) Status of immunizations and/or chemoprophylaxes.

(Classification)

Example B-1. FORMAT FOR THE HEALTH SERVICE SUPPORT ESTIMATE *(Continued)*

(Classification)

- (4) Status of nutrition.
- (5) Clothing and equipment.
- (6) Fatigue.
- (7) Morale.
- (8) Status of training.
- (9) Other, as appropriate.

f. Assumptions. *(Assumptions may be required as a basis for initiating, planning, or preparing the estimate. Assumptions are modified as factual data when specific planning guidance becomes available.)*

g. Special factors. *(Mention items of special importance in the particular operation to be supported such as the unique conditions to be encountered in NBC or DE warfare, or the impact that patients suffering from combat stress will have on the HSS system.)*

3. HEALTH SERVICE SUPPORT ANALYSIS

a. Patient estimates, (Indicate rates and numbers by type unit /division)

- (1) Number of patients anticipated.
- (2) Distribution within the AO (space).
- (3) Distribution in time during the operation (evacuation time).
- (4) Areas of patient density.
- (5) Possible mass casualties.
- (6) Lines of patient drift and evacuation.

b. Support requirements. *Consider separately the estimated support requirements for—*

(Classification)

Example B-1. FORMAT FOR THE HEALTH SERVICE SUPPORT ESTIMATE (Continued)

 (Classification)

- (1) Patient evacuation and medical regulation.
- (2) Hospitalization.
- (3) Health service logistics, to include blood management.
- (4) Medical laboratory services.
- (5) Dental services.
- (6) Veterinary services.
- (7) Preventive medicine services.
- (8) Combat stress control services.
- (9) Area medical support.
- (10) Command, control, communications, computers, and intelligence.
- (11) Others, as appropriate.

c. Resources available. *Consider Air Force/Naval support in addition to—*

- (1) Organic medical units and personnel.
- (2) Attached medical units and personnel.
- (3) Supporting medical units.
- (4) Civil public health capabilities and resources. *(Civil Affairs personnel are responsible for obtaining host-nation support.)*
- (5) Enemy prisoner of war medical personnel.
- (6) Health service logistics.
- (7) Medical troop ceiling.

 (Classification)

Example B-1. FORMAT FOR THE HEALTH SERVICE SUPPORT ESTIMATE (Continued)

(Classification)

d. Courses of action. *(As a result of the above considerations and analysis, determine and list all logical COA which will support the commander's OPLAN and accomplish the HSS mission. Consider all SOPs, policies, and procedures in effect. Courses of action are expressed in terms of what, when, where, how, and why.)*

4. EVALUATION AND COMPARISON OF COURSES OF ACTION

a. *Compare the probable outcome of each COA to determine which one offers the best chance of success. This may be done in two steps:*

(1) *Determine and state those anticipated difficulties or difficulty patterns which will have a different effect on the COA listed.*

(2) *Evaluate each COA against each significant difficulty or difficulty pattern to determine strengths and weaknesses inherent in each.*

b. *Compare all COA listed in terms of significant advantages and disadvantages, or in terms of the major considerations that emerged during the above evaluation.*

5. CONCLUSIONS

a. *Indicate whether the mission set forth in paragraph 1 can (cannot) be supported.*

b. *Indicate which COA can best be supported from the HSS standpoint.*

c. *List the limitations and deficiencies in the preferred COA that must be brought to the commander's attention.*

d. *List factors adversely affecting the health of the command.*

/s/ _____
Surgeon (Command)

Annexes *(as required)*

Distribution:

(Classification)

Example B-2. FORMAT FOR THE DENTAL ESTIMATE

(Classification)

Headquarters
Place
Date, time, and zone

DENTAL ESTIMATE OF THE SITUATION

References: *Maps, overlays, charts, or other documents required to understand the plan. Reference to a map will include the map series number and country or geographic area, if required; sheet number and name, if required; edition; and scale.*

1. MISSION *(Statement of the specific dental support mission.)*

2. SITUATION AND CONSIDERATIONS

a. Enemy situation.

- (1) Strength and disposition.
- (2) Combat efficiency.
- (3) Capabilities.
- (4) Logistics situation.
- (5) State of health.
- (6) Weapons.

b. Friendly situation.

- (1) Strength and disposition.
- (2) Combat efficiency.
- (3) Present and projected operations.
- (4) Logistics situation.

(Classification)

Example B-2. FORMAT FOR THE DENTAL ESTIMATE (Continued)

(Classification)

(5) Weapons.

c. Characteristics of the area of operations.

(1) Terrain.

(2) Weather.

(3) Civilian population.

(4) Local resources.

(5) Other.

d. Patient population to be supported.

(1) United States uniformed services.

(a) Army

(b) Navy.

(c) Air Force.

(d) Marines.

(e) Coast Guard.

(2) Department of Defense Civilians.

(3) Allied forces.

(4) Coalition forces.

(5) Enemy prisoners of war.

(6) United States national contract personnel.

(Classification)

Example B-2. FORMAT FOR THE DENTAL ESTIMATE (Continued)

 (Classification)

- (7) Indigenous and third country civilians.
 - (8) Detainees.
 - (9) Internees.
 - (10) Others.
- e. Oral health of the command.
- (1) Emergency rate.
 - (a) Preventable.
 - (b) Nonpreventable.
 - (2) Soldier's individual level of oral health.
 - (3) Unit dental readiness indexes.
 - (4) Dental readiness status of soldiers deploying into the theater.
 - (a) Individuals.
 - (b) Units.
- f. Assumptions.
- g. Special factors.
3. ANALYSIS
- a. Dental service personnel estimate.
 - b. Patient estimates. *(Indicate rates and numbers by type unit/division.)*
 - c. Support requirements and resources available.

 (Classification)

Example B-2. FORMAT FOR THE DENTAL ESTIMATE (Continued)

(Classification)

- (1) Supply.
 - (a) Requirements.
 - (b) Availability.
 - (c) Limiting factors.
- (2) Transportation.
 - (a) Requirements.
 - (b) Availability.
 - (c) Limiting factors.
- (3) Services.
 - (a) Requirements.
 - (b) Availability.
 - (c) Limiting factors.

d. Evacuation.

- (1) Requirements.
- (2) Availability.
- (3) Limiting factors.

e. Hospitalization.

- (1) Requirements.
- (2) Availability.

(Classification)

Example B-2. FORMAT FOR THE DENTAL ESTIMATE (Continued)

 (Classification)

(3) Limiting factors.

f. Miscellaneous. *(Indicate any special or unusual organizational or other logistical considerations.)*

g. Dental courses of action.

4. EVALUATION AND COMPARISON OF DENTAL COURSES OF ACTION

a. *Determine the probable outcome of each COA listed in paragraph 3g when opposed by each significant difficulty identified.*

b. *Compare all significant advantages and disadvantages.*

5. CONCLUSIONS

a. *Indicate whether the mission set forth in paragraph 1 can (cannot) be supported.*

b. *Indicate which COA can best be supported from the dental service standpoint.*

c. *Indicate the disadvantages of nonselected COA.*

d. *List the deficiencies in the preferred COA that must be brought to the attention of the commander.*

/s/ _____
 Dental Surgeon

Annexes *(as required)*

Distribution:

 (Classification)

Example B-3. FORMAT FOR THE VETERINARY ESTIMATE

(Classification)

Headquarters
Place
Date, time, and zone

VETERINARY ESTIMATE OF THE SITUATION

References: Maps, overlays, charts, or other documents required to understand the plan. Reference to a map will include the map series number and country or geographic area, if required; sheet number and name, if required; edition; and scale.

1. MISSION (Statement of the specific veterinary support mission.)
2. SITUATION AND CONSIDERATIONS
 - a. Enemy situation.
 - (1) Strength and disposition of animals.
 - (2) State of health of animals and threat concerning zoonotic diseases.
 - (3) Capabilities that affect the ability of the Veterinary Service to accomplish its mission.
 - b. Friendly situation.
 - (1) Size and posture of Class I supply system.
 - (2) Type of rations to be used.
 - (3) Status of Class I supplies.
 - (4) Strength and disposition of animals, if applicable.
 - (5) Status of veterinary supply.
 - (6) Number and extent of civic action programs.

(Classification)

Example B-3. FORMAT FOR THE VETERINARY ESTIMATE (Continued)

(Classification)

c. Characteristics of the area of operations. *(Factors that affect the veterinary mission and veterinary support.)*

- (1) Terrain.
- (2) Weather and climate.
- (3) Animal population (health, types, and disposition [domestic and wildlife]).
- (4) Flora.
- (5) Zoonotic diseases posing a serious threat to the health of the command or the local population.
- (6) Local food supply system.
- (7) Location, quantity, and quality of indigenous veterinary services.
- (8) Nuclear, biological, chemical, and DE weapons.
- (9) Animal diseases having a disruptive impact on the economy.

d. Strengths to be supported. *(Normally a table is used to include food inspection support and animal support.)*

- (1) United States uniformed services.
 - (a) Army.
 - (b) Navy.
 - (c) Air Force.
 - (d) Marines.
 - (e) Coast Guard.

(Classification)

Example B-3. FORMAT FOR THE VETERINARY ESTIMATE (Continued)

(Classification)

- (2) Department of Defense Civilians.
 - (3) Allied forces.
 - (4) Coalition forces.
 - (5) Enemy prisoners of war.
 - (6) United States national contract personnel.
 - (7) Indigenous and third country civilians.
 - (8) Detainees.
 - (9) Internees.
 - (10) Others.
- e. Health of animals in the command. *(If applicable to this estimate.)*
- (1) Origin of animals.
 - (2) Presence of disease.
 - (3) Status of immunizations.
 - (4) Status of diagnostic tests.
 - (5) Status of nutrition.
 - (6) Care and management.
 - (7) Fatigue.
- f. Assumptions.
- g. Special factors.

(Classification)

Example B-3. FORMAT FOR THE VETERINARY ESTIMATE (Continued)

(Classification)

3. ANALYSIS

a. Veterinary service personnel estimate.

- (1) Distribution of Class I installations.
- (2) Distribution of subsistence (perishable and nonperishable).
- (3) Extent of local procurement.
- (4) Extent of inspection load of indigenous foods for indigenous personnel, if applicable.
- (5) Estimate of animal casualties, if applicable.
- (6) Evacuation of animal casualties, if applicable.

b. Veterinary support requirements.

- (1) Food inspection.
- (2) Veterinary PVNTMED and veterinary public health.
- (3) Veterinary supply.
- (4) Veterinary treatment.
- (5) Evacuation.
- (6) Other (civil-military).

c. Veterinary resources available.

- (1) Organic veterinary personnel.
- (2) Attached veterinary units.
- (3) Supporting veterinary units.

(Classification)

Example B-3. FORMAT FOR THE VETERINARY ESTIMATE (Continued)

(Classification)

- (4) Veterinary personnel in CA units and SFGs.
- (5) Staff veterinarians in MEDCOM and medical brigades.
- (6) Area medical laboratories.
- (7) The veterinary troop ceiling.
- (8) Status of veterinary supply.

d. Courses of action. *(As a result of the above considerations and analysis, determine and list all logical COA which will support the commander's OPLAN and accomplish the HSS mission. Consider all SOPS, policies, and procedures in effect. Courses of action are expressed in terms of what, when, where, how, and why.)*

4. EVALUATION AND COMPARISON OF COURSES OF ACTION

a. *Determine the probable outcome of each COA listed in paragraph 3d when opposed by each significant difficulty identified. This may be done in two steps:*

(1) *Determine and state those anticipated difficulties or difficulty patterns that will have an equal affect on the COA listed.*

(2) *Evaluate each COA against each significant difficulty or difficulty pattern to determine strengths and weaknesses inherent in each COA.*

b. *Compare all COA listed in terms of significant advantages and disadvantages, or in terms of the major considerations that emerged during the above evaluation.*

5. CONCLUSIONS

a. *Indicate whether the mission set forth in paragraph 1 can (cannot) be supported.*

b. *Indicate which COA can best be supported from the veterinary service standpoint.*

c. *Indicate the disadvantages of nonselected COA.*

(Classification)

Example B-4. FORMAT FOR THE PREVENTIVE MEDICINE ESTIMATE

(Classification)

Headquarters
Place
Date, time, and zone

PREVENTIVE MEDICINE ESTIMATE OF THE SITUATION

References: *Maps, overlays, charts, or other documents required to understand the plan. Reference to a map will include the map series number and country or geographic area if required; sheet number and name, if required; edition; and scale.*

1. MISSION *(Statement of the specific PVNTMED mission.)*
2. SITUATION AND CONSIDERATIONS
 - a. Enemy situation.
 - (1) Communicable disease.
 - (2) Sanitation levels.
 - (3) Public health capabilities.
 - (4) Immunization status.
 - (5) Level of field sanitation training.
 - (6) Nuclear, biological, and chemical capabilities.
 - (7) Directed energy capabilities.
 - b. Friendly situation.
 - (1) Status of PVNTMED individual and unit supplies.
 - (2) Operational situation.
 - (3) Types of rations used.

(Classification)

Example B-4. FORMAT FOR THE PREVENTIVE MEDICINE ESTIMATE (Continued)

 (Classification)

- (4) Unit PVNTMED readiness.
 - (a) *Field sanitation team training and equipment.*
 - (b) *Individual and unit PVNTMED measures training and enforcement.*
 - (5) Potable water and ice.
 - (a) *Sufficient production and distribution units.*
 - (b) *Sufficient availability and quantity.*
 - (6) Availability of aircraft for aerial spray operations.
- c. Characteristics of the area of operations. *Discuss the following:*
- (1) Terrain.
 - (a) *Does AO favor arthropod/rodent populations?*
 - (b) *Is the AO at high altitude?*
 - (c) *Is water available?*
 - (d) *How will the terrain affect pest management operations?*
 - (2) *Climate and weather. Discuss the following:*
 - (a) *Will the season affect disease transmission ?*
 - (b) *Will the season affect heat/cold injury?*
 - (c) *Will the season affect disease vectors?*
 - (d) *Will the season affect water supply?*
 - (e) *Will the season affect pest management operations?*

 (Classification)

Example B-4. FORMAT FOR THE PREVENTIVE MEDICINE ESTIMATE (Continued)

(Classification)

- (3) Civilian population. *Discuss the following:*
 - (a) *Endemic disease.*
 - (b) *Epidemic disease.*
 - (c) *Sources of disease on MSR.*
 - (d) *Disease immunization status.*
 - (e) *Water treatment standards.*
 - (f) *Waste disposal practices.*
 - (g) *Nutritional standards.*
 - (h) *Civilian medical support/public health system.*

- (4) Flora and fauna. *Discuss the following:*
 - (a) *Arthropod vectors in AO.*
 - (b) *Arthropod vectors resistant to pesticides.*
 - (c) *Venomous animals and arthropods.*
 - (d) *Poisonous plants.*
 - (e)

- (5) Enemy prisoners of war. *Discuss the following:*
 - (a) *Presence of disease.*
 - (b) *Number EPW public health officers.*
 - (c) *Disease immunization status.*

(Classification)

Example B-4. FORMAT FOR THE PREVENTIVE MEDICINE ESTIMATE (Continued)

(Classification)

(d) Nutritional *standards*.

(6) Other.

d. Strengths to be supported.

(1) United States uniformed services.

(a) Army.

(b) Navy.

(c) Air Force.

(d) Marines.

(e) Coast Guard

(2) Department of Defense Civilians.

(3) Allied forces.

(4) Coalition forces.

(5) Enemy prisoners of war.

(6) United States national contract personnel.

(7) Indigenous and third country civilians.

(8) Detainees.

(9) Internees.

(10) Others.

e. Health status of the command.

(Classification)

Example B-4. FORMAT FOR THE PREVENTIVE MEDICINE ESTIMATE (Continued)

(Classification)

(2) Tasks involving environmental health.

(a) *Heat.*

(b) *Cold.*

(c) *Water.*

(d) *Sanitation.*

(3) Tasks involving disease.

(a) *Epidemiology.*

(b) *Immunizations.*

(c) *Prophylaxis.*

b. Requirements.

(1) Supplies.

(2) Equipment.

(3) Civil/military support.

c. Resources available.

(1) Organic PVNTMED personnel.

(2) Attached PVNTMED personnel.

(3) Supporting PVNTMED personnel.

(4) Status of unit field sanitation teams.

(5) Civilian public health personnel.

(Classification)

Example B-4. FORMAT FOR THE PREVENTIVE MEDICINE ESTIMATE (Continued)

(Classification)

- (6) Captured enemy public health personnel.
- (7) Preventive medicine troop ceiling.
- (8) Preventive medicine supply status.

d. Preventive medicine courses of action. *Determine, as a result of the above analysis, all logical COA which will support the commander's OPLAN and accomplish the HSS mission. Expressed in terms of what, when, where, how, and why.*

4. EVALUATION AND COMPARISON OF PREVENTIVE MEDICINE COURSES OF ACTION
(Compare each COA against the obstacles that will be encountered and against the casualties which could result from inaction.)

5. CONCLUSION (*Decide which COA will best fulfill the mission. List the major advantages and disadvantages of the selected COA.*)

/s/ _____
Preventive Medicine
Staff Officer

Annexes (*as required*)

Distribution:

(Classification)

Example B-5. FORMAT FOR COMBAT STRESS CONTROL ESTIMATE

(Classification)

Headquarters
Place
Date, time, and zone

COMBAT STRESS CONTROL ESTIMATE OF THE SITUATION

References: *Maps, overlays, charts, and other documents required to understand the plan. Reference to a map will include the map series number and country or geographic area, if required; sheet number and name, if required; and scale.*

1. MISSION *(Statement of the specific CSC mission in conformity with the operations in which the supported troops are engaged.)*

2. SITUATION AND CONSIDERATIONS

a. Enemy situation.

(1) Strength and disposition.

(2) Combat efficiency *(how skilled and stubborn)*.

(3) Capabilities *(note especially the artillery and air threat, armor and mobility, continuous operations, NBC and DE, rear battle threat, electronic warfare and disinformation capability, and target detection capability)*.

(4) Logistics situation.

(5) State of health.

(6) Weapons *(note especially any recently introduced "surprise" or "terror" weapons, or weapons which our troops judge especially dangerous and superior to ours)*.

b. Friendly situation.

(1) Strength and disposition.

(Classification)

Example B-5. FORMAT FOR COMBAT STRESS CONTROL ESTIMATE (Continued)

(Classification)

(2) **Combat efficiency** (*note areas such as level of training, confidence in leaders, unit cohesion, and unit determination*).

(3) **Present and projected operations** (*What is the tactical plan of the commander? How long has the unit been in combat? How long is it expected to go without respite? Is the operation an attack versus defense? Is the operation mobile versus static or slow moving?*).

(4) **Logistics situation** (*What is the confidence level in availability and resupply of ammunition, food water, maintenance, medical support, and evacuation?*).

(5) **Weapons** (*note the confidence in superiority of weapons over enemy's weapons*).

(6) **Defeating his first and second echelon and rear area forces.**

c. Characteristics of the area of operations.

(1) **Terrain** (*how strange, unfamiliar, difficult, restrictive versus exposed, such as jungle, desert, mountain, urban*).

(2) **Weather** (*especially wet, cold, or hot*).

(3) **Civilian population** (*friendly versus neutral versus hostile versus belligerent; likelihood of civilian casualties, especially women and children*).

(4) **Flora and fauna** (*perceived as dangerous?*).

(5) **Local resources** (*availability of buildings for shelter?*).

(6) **Other.**

d. Strengths to be supported (and their organic MH/CSC assets):

(1) **Army** (*divisions? separate brigades? ACRs? corps units?*).

(2) **Air Force** (*liaison personnel in Army units? forward airfields?*).

(3) **Navy** (*personnel ashore?*).

(Classification)

Example B-5. FORMAT FOR COMBAT STRESS CONTROL ESTIMATE (Continued)

 (Classification)

- (4) Marines *(supported by Navy medicine? attached to Army?)*.
- (5) Allied Forces.
- (6) Coalition forces.
- (7) Enemy prisoners of war.
- (8) Indigenous civilians.
- (9) Detainees *(US military personnel confined in military police facilities)*.
- (10) Internees.
- (11) Others *(such as US military families not evacuated before hostilities)*.

e. Health of the command.

- (1) Acclimation of troops to weather, strangeness, culture.
- (2) Presence of disease *(especially preventable "diseases of loneliness or negligence," such as sexually transmitted disease, cold injury diarrhea infections related to poor hygiene or failure to protect)*.
- (3) Status of immunizations.
- (4) Status of nutrition.
- (5) Clothing and equipment *(adequate for climate?)*.
- (6) Fatigue *(sleep loss, physical overwork, jet lag)*.
- (7) Morale *(sense of purpose, support by country? rest and recuperation chances?)*.
- (8) Status of training *(especially tough, realistic)*.

 (Classification)

Example B-5. FORMAT FOR COMBAT STRESS CONTROL ESTIMATE (Continued)

(Classification)

(9) Other *(such as concerns about families in the theater or left abruptly in rapid deployment; lack of support for the war on the home front).*

f. Assumptions. *(Assumptions maybe required as a basis for initiating or preparing the estimate. Assumptions are modified as factual data becomes available.)*

g. Special factors. *(Emphasize items of special importance in the particular operation to be supported, such as the unique conditions to be encountered in the event of NBC warfare.)*

3. COMBAT STRESS CONTROL ANALYSIS

a. Patients' estimates. *(Indicate rates and numbers by type of unit/division.)*

(1) Number of patients anticipated *(such as BFCs, misconduct stress behaviors, holding and hospital patients, as well as consultation work load and cases who can be treated and released to duty).*

(2) Distribution within the AO (space).

(3) Distribution in time during the operation.

(4) Areas of patient density.

(5) Possible mass casualties.

(6) Lines of patient drift and evacuation.

b. Support requirements. *(Consider separately the estimated support requirements for:)*

(1) Patient evacuation and medical regulation *(using nonmedical transport before ground ambulance or before air ambulance).*

(2) Hospitalization *(where to send the few who need it?).*

(3) Health service logistics, to include blood management.

(4) Medical laboratory services *(drug screening capability? NP diagnostics?).*

(Classification)

Example B-5. FORMAT FOR COMBAT STRESS CONTROL ESTIMATE (Continued)

 (Classification)

- (5) Dental services *(for BFCs and staff)*.
- (6) Veterinary services *(local food inspection? care for unit mascots?)*.
- (7) Preventive medicine services.
- (8) Area medical support.
- (9) Command, control, and communications *(critical to dispersed CSC)*.
- (10) Others such as field feeding.

c. Resources available. *(Consider Air Force/Naval support in addition to:)*

- (1) Mental health personnel organic to US Army CSC/MH sections and medical units.
- (2) Attached CSC/MH medical units and personnel.
- (3) Supporting CSC units and medical units.
- (4) Air Force *(air transportable hospitals with "combat stress units")*.
- (5) Navy *(supporting Marines? fleet hospitals ashore? shipboard?)*.
- (6) Allied CSC-equivalent units or elements.
- (7) Civil public health capabilities and resources. *(Civil affairs personnel are responsible for obtaining host-nation support.)*
- (8) Retained medical/MH health personnel.
- (9) Medical supplies and equipment.
- (10) Medical (CSC/MH) troop ceiling.

 (Classification)

Example B-5. FORMAT FOR COMBAT STRESS CONTROL ESTIMATE *(Continued)*

(Classification)

d. *Course of action. (As a result of the above considerations and analysis, determine and list all logical COA which will support the commander's OPLAN and accomplish the HSS/CSC mission. Consider all SOPS, policies, and procedures in effect. Courses of action are expressed in terms of what, when, where, how, and why.)*

4. EVALUATION AND COMPARISON OF COURSES OF ACTION

a. *Compare the probable outcome of each COA to determine which one offers the best chance of success. This may be done in two steps:*

(1) *Determine and state those anticipated difficulties or difficulty patterns which will have a different effect on the COA listed.*

(2) *Evaluate each COA against each significant difficulty or difficulty pattern to determine strengths and weaknesses inherent in each.*

b. *Compare all COA listed in terms of significant advantages and disadvantages, or in terms of the major considerations that emerged during the above evaluation.*

5. CONCLUSIONS

a. *Indicate whether the mission set forth in paragraph 1 can (cannot) be supported.*

b. *Indicate which COA can best be supported from the CSC standpoint.*

c. *List the limitations and deficiencies in the preferred COA that must be brought to the commander's attention.*

d. *List factors adversely affecting the CSC health of the command.*

/s/ _____
(as appropriate)

Annexes *(as required)*

Distribution:

(Classification)

APPENDIX C

PLANS, ORDERS, AND ANNEXES TO PLANS AND ORDERS

	EXAMPLE	PAGE
Format for the Health Service Support Plan	C-1	C-2
Format for the Dental Service Portion of the Health Service Support Plan	C-2	C-6
Format for the Veterinary Service Portion of the Health Service Support Plan	C-3	C-7
Format for the Plan for Preventive Medicine Detachments	C-4	C-9
Format for the Preventive Medicine Portion of the Health Service Support Plan (Medical Section of a Unit)	C-5	C-10
Format for the Combat Stress Control Portion of the Health Service Support Plan	C-6	C-12
Operation Plan/Order (Medical Brigade)	C-7	C-13
Annex to Operation Plan/Order-Task Organization, Medical Brigade	C-8	C-18
Annex to Operation Plan/Order-Service Support, Medical Brigade	C-9	C-20
Operation Plan/Order (Medical Group)	C-10	C-25
Annex A (Task Organization) to OPLAN/OPORD 1, 82d Medical Group	C-11	C-29
Annex B (Intelligence) to OPLAN/OPORD 1, 82d Medical Group	C-12	C-30
Annex D (Personnel) to OPLAN/OPORD 1, 82d Medical Group	C-13	C-34
Annex E (Service Support) to OPLAN/OPORD 1, 82d Medical Group	C-14	C-36
Annex F (NBC) to OPLAN/OPORD 1, 82d Medical Group	C-15	C-43
Format for Fragmentary Order	C-16	C-45
Format for Health Service Support Appendix to Annex P (Personnel) to the Division Tactical Standing Operating Procedure	C-17	C-47
Format for Joint Task Force Operation Order Annex Q	C-18	C-52
Joint Task Force Health Service Support Planning Checklist	C-19	C-59

Example C-1. FORMAT FOR THE HEALTH SERVICE SUPPORT PLAN

(Classification)

copy _ of _ copies
Headquarters
Location
Date, time, and zone

HEALTH SERVICE SUPPORT PLAN

References: *Maps, overlays, charts, or other documents required to understand the plan. Reference to a map will include the map series number and country or geographic area, if required; sheet number and name, if required; edition; and scale.*

Time Zone Used Throughout the Plan: _____*(Included only if used as the initial plan, or if a major organization is to be effected.)*

Task Organization: Annex A (Task Organization) *(Task organization may appear here, in paragraph 3, or in an annex.)*

1. SITUATION. *(Provide information essential to understanding of plan.)*
 - a. Enemy forces. *(Emphasis on capabilities bearing on plan.)*
 - b. Friendly forces. *(Emphasis on HSS functions and responsibilities for higher and adjacent units.)*
 - c. Attachments and detachments. *(May be published as an appendix, task organization.)*
 - d. Assumptions. *(Minimum required for planning purposes.)*
2. MISSION. *(Statement of the overall HSS mission [WHO, WHAT, WHEN, WHERE, AND WHY].)*
3. EXECUTION.
 - a. Surgeon's concept of support. *(First lettered subparagraph provides a concise overview of planned HSS operation and its purpose.)*
 - b. *(The second lettered subparagraph identifies the major subordinate headquarters and lists the missions assigned to it.)*

(Classification)

Example C-1. FORMAT FOR THE HEALTH SERVICE SUPPORT PLAN (Continued)

 (Classification)

c. *(The third and subsequent lettered subparagraphs identify the remaining major subordinate units in turn and provide their respective missions.)*

d. **Coordinating instructions.** *(The final lettered subparagraph contains any coordinating instructions that may be appropriate to ensure continuity in HSS.)*

4. SERVICE SUPPORT.

a. **Supply.** *(Refer to SOP or another annex whenever practical.)*

(1) **General supply.** *(Provide special instructions applicable to medical units.)*

(2) **Medical supply.** *(Provide special procedures applicable to this operation.)*

(a) **Requirements.**

(b) **Procurement.**

(c) **Storage.**

(d) **Distribution.**

(3) **Health service logistics units.** *(Give the locations, mission, hours of opening and closing, and troops supported for each medical supply unit. An overlay may also be used for clarity.)*

(4) **Salvage of medical equipment and supplies.**

(5) **Captured enemy medical supplies.**

(6) **Civilian medical supplies.**

(7) **Other medical supply matters.**

b. **Transportation and movements.** *(Include medical use of various transportation means.)*

(1) **Ground.**

 (Classification)

Example C-1. FORMAT FOR THE HEALTH SERVICE SUPPORT PLAN *(Continued)*

(Classification)

(2) Rail.

(3) Water (inland and/or sea).

(4) Air.

(5) Movement control and traffic regulation.

c. Services.

(1) Services to HSS units and facilities. *(Include information on the following services: laundry, bath, utilities, fire fighting, construction, real estate, mortuary affairs, and control of patients discharged from hospitals.)*

(2) Medical equipment maintenance. *(Include in separate subparagraphs the location, mission, hours of opening or closing of medical maintenance and for optical repair teams, unless included as attachments to health service logistics units.)*

d. Labor. *(Include policies on the use of civilian or other labor personnel. Comply with existing agreements or arrangements.)*

e. Maintenance. *(Include priority of maintenance, location of facilities, and collecting points.)*

5. EVACUATION, TREATMENT, HOSPITALIZATION, AND OTHER HEALTH SERVICES.

a. Evacuation.

(1) Evacuation of patients from the United States uniformed services (Army, Navy, Air Force, Marines, or Coast Guard), DOD civilians, allied forces, coalition forces, EPW, US national contract personnel, indigenous and third country civilians, detainees, internees, others.

(2) Requirements. *(List requirements, including percentage evacuated by air or sea transportation means.)*

(3) Units. *(Give location, mission, and attachments for each subordinate evacuation unit.)*

(4) Evacuation policy. *(Provide evacuation policy by phases of the operation.)*

(Classification)

Example C-1. FORMAT FOR THE HEALTH SERVICE SUPPORT PLAN (Continued)

(Classification)

- b. Treatment and hospitalization.
- (1) Policies. *(State treatment and hospitalization policies, to include civilians and EPW.)*
- (2) Units. *(Under separate subparagraphs for each hospital /treatment facility, give location, mission, hours of opening or closing, and attachments.)*
- (3) Dispensary services. *(Under separate subparagraph, give location, mission, hours of opening or closing, and troops supported.)*
- c. Other health services. *(Include blood management; medical laboratory, dental, veterinary, PVNTMED, and CSC services; and required command, control, communications, computers, and intelligence.)*
6. MISCELLANEOUS. *(Address areas of support not previously mentioned which may be required or needed by subordinate elements in the execution of their respective HSS mission: command post locations, signal instructions, medical intelligence, claims, special reports that may be required, and international or host-nation support agreements affecting HSS.)*

/s/
Commander Command
Surgeon

Annexes

Distribution:

(Classification)

**Example C-2. FORMAT FOR THE DENTAL SERVICE PORTION OF THE
HEALTH SERVICE SUPPORT PLAN**

(Classification)

DENTAL SERVICE

1. ASSIGNMENT OF RESPONSIBILITIES. *(A separate subparagraph is included for each unit giving location, mission, and attachments if indicated.)*
2. PREVENTION. *(Identify preventive measures to be performed by the individual, troop units, and dental units to reduce dental casualties.)*
3. TREATMENT. *(Include types of dental care to be provided and prioritization of treatment.)*
4. ALTERNATE WARTIME ROLE. *(Establish guidelines for dental personnel to support hospital units when required by heavy patient loads.)*
5. REPORTING. *(Include basic information to be reported, such as number of patients seen, type of care provided, and patient dental classification. This information is reported from the DTF through the dental operational chain of command. This information is essential for planning and resource allocation. Commanders and dental staff officers at all levels evaluate this information, identify trends, and make operational decisions accordingly.)*
6. MISCELLANEOUS DENTAL MATTERS. *(Include specific clinical protocols appropriate for the situation such as definitive crown and bridge procedures will not be initiated.*

(Classification)

Example C-3. FORMAT FOR THE VETERINARY SERVICE PORTION OF THE HEALTH SERVICE SUPPORT PLAN

(Classification)

VETERINARY SERVICE

1. FOOD INSPECTION.

- a. Procurement inspection policy.
- b. Captured ration inspection policy.
- c. Nuclear, biological, and chemical contaminated ration inspection policy.
- d. Units. *(Under separate subparagraphs for each unit, give location, mission, hours of opening or closing, and attachments, if indicated. Include specific location, type, and name of units requiring inspection services.)*

2. EVACUATION POLICY FOR MILITARY WORKING DOGS.

- a. Evacuation requirements.
- b. Units participating in evacuation. *(Under separate paragraph, include location, mission, and attachments of each subordinate evacuation unit.)*
- c. Special requirements for animals subjected to NBC agents.

HOSPITALIZATION OF GOVERNMENT-OWNED ANIMALS. *(Under separate subparagraphs for each hospital, give location, mission, hours of opening or closing, and attachments, if indicated.)*

4. VETERINARY OUTPATIENT SERVICE. *(Under separate subparagraphs for each facility, give location, mission, hours of opening or closing, and attachments or animals supported.)*

5. VETERINARY SUPPORT TO HUMANITARIAN CIVIC-ACTION PROGRAMS. *(When veterinary support of humanitarian civic-action programs has been authorized, separate subparagraphs identify-*

- Ž Each veterinary unit providing support.
 - Each unit's area of responsibility.
 - The type and extent of veterinary support to be provided.

(Classification)

Example C-4. FORMAT FOR THE PLAN FOR PREVENTIVE MEDICINE DETACHMENTS

(Classification)

PREVENTIVE MEDICINE DETACHMENTS

1. SITUATION. *(Provide information essential to understanding of plan.)*
2. MISSION. *(Statement of the unit support mission.)*
3. EXECUTION.
 - a. Concept of support. *(Indicate how PVNTMED teams integrate their activities into the units supported.)*
 - b. Units *(subparagraph for each PVNTMED team).*
 - (1) Mission. May be several statements giving–
 - (a) Area/general support missions (such as *arthropod surveillance within corps AO*).
 - (b) Unit support missions *(such as PVNTMED support to separate brigade during an operation)*.
 - (c) Specific support missions *(such as arthropod control along MSR and retrograde cargo inspection at port)*.
 - (2) Location (unit HQ).
 - (3) Attachments (if applicable).
 - (4) Coordination instructions *(consider the relationship needed among PVNTMED teams and units they support, direct coordination, and any reporting requirements)*.

(Classification)

Example C-5. FORMAT FOR THE PREVENTIVE MEDICINE PORTION OF THE HEALTH SERVICE SUPPORT PLAN (MEDICAL SECTION OF A UNIT)

(Classification)

PREVENTIVE MEDICINE

1. **MEDICAL THREAT.** *(From the PVNTMED estimate, give a brief picture of the size of the threat.)*
 - a. **Heat/cold.** *(Example: Units conducting combat operations, especially in MOPP Level 4 and/or in enclosed vehicles, can expect heat casualties in excess of 10 percent of strength within hours if PVNTMED measures are not enforced.)*
 - b. **Diarrhea.** *(Example: The threat from diarrheal casualties should be low for units consuming MRE and treating all water. Units preparing Class A or B rations or not treating water could experience 20 percent diarrheal casualties in hours to days if PVNTMED measures are not enforced.)*
 - c. **Biting arthropods.** *(Example: Units should experience few casualties from diseases caused by biting arthropods if proper personal hygiene is practiced and required laundry support is provided. Poor personal hygiene / laundry support could result in significant casualties from louse-carried diseases within weeks.)*
 - d. **Other.** *(Consider the threat from diseases such as those of the skin, upper respiratory infections, and schistosomiasis. Also consider performance detractors such as eye injury due to laser devices, hearing threshold shifts due to noise exposure, or disrupted physical motor skills from carbon monoxide exposure due to firing weapons in an enclosed vehicle.)*
2. **CONCEPT OF SUPPORT.** *(Give a brief overview of the integration of PVNTMED at different levels.)*
 - a. **Individuals.** *(Example: Perform individual PVNTMED measures.)*
 - b. **Units.** *(Example: Enforce individual PVNTMED measures; perform unit PVNTMED measures.)*
 - c. **Major units.** *(Example: Monitor PVNTMED status of command; request support.)*
 - d. **Division PVNTMED personnel.** *(Example: Provide support on an area basis.)*
 - e. **PVNTMED detachment.** *(Example: Provide support with priority to combat units.)*

(Classification)

**Example C-6. FORMAT FOR THE PREVENTIVE MEDICINE PORTION OF THE
HEALTH SERVICE SUPPORT PLAN (MEDICAL SECTION OF A UNIT) (Continued)**

(Classification)

3. RESPONSIBILITIES.

a. General policies. *(State policies applying to all soldiers within the command.)*

(1) Individual PVNTMED measures. *(See Chapter 11, for listing.)*

(2) Specific policies. *(Example: Policies concerning off-limits areas and immunizations.)*

b. Unit commanders. *(Indicate specific requirements which all unit commanders must enforce within their units. Start with unit PVNTMED measures [see Chapter 11] as a basis and add requirements specific for this operation).*

(1) Heat/cold. *(Example: Ensure that each soldier is issued an additional canteen, sunscreen, and specified zone clothing.)*

(2) Diarrhea. *(Example: Obtain food from Class I points only; obtain water from water supply points only.)*

(3) Biting arthropods. *(Example: Ensure each soldier is issued arthropod repellent before deploying.)*

(4) Other.

c. Specific unit commander's responsibilities. Examples:

(1) Medical units: *(*Reporting responsibilities for diseases /injuries received or admitted. Infectious waste disposal policy.)*

(2) Quartermaster units: *(*Reporting responsibilities of location of water supply points and laundry exchange.)*

(3) Subordinate units: *(Attachments of PVNTMED teams.)*

*These reporting requirements may already be defined in the unit tactical SOP.

(Classification)

Example C-6. FORMAT FOR THE COMBAT STRESS CONTROL PORTION OF THE HEALTH SERVICE SUPPORT PLAN

(Classification)

COMBAT STRESS CONTROL

- a. Concept of support. *(Indicate how MH personnel [teams/units] integrate their activities into the units supported.)*
- b. Teams/units. *(Subparagraph for each CSC/MH team / unit.)*
 - (1) Mission. May be several statements giving–
 - (a) Area/general support missions.
 - (b) Unit support missions.
 - (c) Specific support mission *(such as reconstitution support, host-nation support)*.
 - (2) Location (unit HQ and deployed teams).
 - (3) Attachments (if applicable).
 - (4) Coordination instructions. *(Consider the relationship needed among MH teams and units they support [direct coordination] and any reporting requirements.)*

(Classification)

Example C-7. OPERATION PLAN/ORDER (MEDICAL BRIGADE)

 (Classification)

*Copy_ of _ copies
80th Medical Brigade
Anytown (RS4240),
Euralandia
141300S Sep
YZ51*

OPERATION PLAN/ORDER 1

- References:
- a. Map, series V451, Euralandia-Crisland, sheet NM 12-1 (Jameson-Helsey), edition 2, 1:50,000.
 - b. ADMIN/LOGPLAN/Order 1- 10th (US) Corps.
 - c. OPLAN/ORDER 1- 145th COSCOM.

Time Zone Used Throughout the Plan: SIERRA

Task Organization: Annex A (Task Organization) *(Task organization may appear here, in paragraph 3, or in an annex.)*

1. SITUATION.

a. Enemy forces. (Current periodic intelligence report [PERINTREP], 10th (US) Corps with emphasis on medical aspect of the enemy situation.)

(1) Enemy has capability to use NBC weapons.

(2) Enemy has capability to execute airborne or airmobile operations into rear areas.

b. Friendly forces.

(1) On order, corps defends with 23d Armored Div in the North, 42d Infantry (Inf) Div in the center, 31st Inf Div (Mechanized [Mech]) in the south, The 123d ACR OPCON to the 42d Inf Div. On D day, H hour, divisions conduct defensive operations in the covering force area to strip away threat reconnaissance elements and destroy assaulting first-echelon regiments east of the division forward edge of the battle area (FEBA).

 (Classification)

Example C-7. OPERATION PLAN/ORDER (MEDICAL BRIGADE) (Continued)

(Classification)

(2) 86th MEDCOM provides Echelon IV HSS.

(3) Elements of the 475th Aeromedical Airlift Wing provide tactical aeromedical evacuation support.

(4) 145th COSCOM provides CSS.

(5) 14th Engineer Bde provides engineer support.

(6) Elements of military region command coordinate host-nation support.

(7) 314th Air Defense Artillery (ADA) Gp provides air defense coverage.

c. Attachments and detachments. Annex A (Task Organization).

d. Assumptions. *(NOTE: This subparagraph is used only in OPLANS to indicate those situations/conditions that the commander believes will exist at the time the OPLAN becomes an OPORD.)*

(1) Host-nation agreements will be honored.

(2) Minimum warning time of 30 days will be received.

2. MISSION.

80th Med Bde provides HSS to all US units operating within the 10th (US) Corps' AO and other forces as directed not later than (NLT) 151300S Sep 92 to support 52d Mech Div in counterattack objective area RED. Also provides Echelons I and II care to corps troops.

3. EXECUTION.

a. Concept of HSS. Hospitalization will be provided by MASHs and CSHs on an area basis, nearest the supported elements, and augmented when required. Patient evacuation will be provided by air and ground ambulances within the corps area. Movement of patients by air is the preferred means of evacuation. Annex B (Operation Overlay).

(Classification)

Example C-7. OPERATION PLAN/ORDER (MEDICAL BRIGADE) (Continued)

(Classification)

b. 88th Med Gp.

(1) Provide HSS in support of units assigned/attached to 10th (US) Corps located within 11th Spt Gp area.

(2) Be prepared to establish alternate 80th Med Bde forward command post (CP).

(3) Be prepared to reinforce forward divisions in contact with patient evacuation and treatment units as required.

(4) Position air and ground ambulances within AO as required.

(5) Act as alternate Med Bde HQ on order.

c. 89th Med Gp.

(1) Provide HSS in support of units assigned/attached to 10th (US) Corps located within 12th Spt Gp area.

(2) Position air and ground ambulances within AO as required.

(3) Be prepared to reinforce other corps-level medical air evacuation units.

(4) Be prepared to reinforce forward divisions in contact, with patient evacuation and treatment units as required.

d. 845th Med Bn, Log (Fwd).

(1) Provide medical supply, optical fabrication, and medical equipment maintenance support to 10th (US) Corps.

(2) Provide food service support to HHD, 88th Med Gp.

e. HHC, 80th Med Bale. Provide food service support, motor maintenance, and administrative support to 8823d Med Det (Vet Svc) and 826th Med Bn (Den Svc).

f. Coordinating instructions.

(Classification)

Example C-7. OPERATION PLAN/ORDER (MEDICAL BRIGADE) (Continued)

(Classification)

(1) This plan is effective for planning on receipt and for implementation on order. *(NOTE: This instruction is provided only in an OPLAN.)*

(2) Supporting plans will be submitted to this HQ NLT 72 hours after issue of this OPLAN.

(3) Maximum use of technical channels is directed.

(4) Direct coordination between subordinate units and supported elements is directed.

(5) Direct coordination between medical aviation (avn) units with corps/division airspace management element is directed.

(6) Chemical MOPP 1 is in effect. Be prepared to increase MOPP on short notice.

(7) Be prepared to displace on order.

(8) Rear area protection.

(a) Units located within base clusters will comply with defense and ADC procedures established by the base cluster operations center. **(NOTE: The GWS does not itself prohibit the use of Article 24 personnel in perimeter defense of nonmedical units such as unit trains logistics areas or base clusters under overall security defense plans, but the policy of the US Army is that Article 24 personnel will not be used for this purpose. Adherence to this policy should avoid any issues regarding their status under the GWS due to a temporary change in their role from noncombatant to combatant. Medical personnel may guard their own unit without any concurrent loss of their protected status. See FM 8-10.)**

(b) Units not located within base clusters will comply with defense and ADC instructions of the respective support group.

(c) Units traveling along the MSR will contact nearest military police unit for support in the event of attack by threat forces.

(9) Operations security. Annex C (Operations Security.)

(10) Direct coordination with the 475th Aeromedical Airlift Wing for patient evacuation is authorized.

(11) HQ 88th and 89th Med GP will report times of opening and closing of all treatment facilities to this HQ. The 845th Med Bn, Log (Fwd), 8823d Med Det (Vet Svc), 826th Med Bn (Den Svc),

(Classification)

Example C-7. OPERATION PLAN/ORDER (MEDICAL BRIGADE) (Continued)

(Classification)

and 803d Med Bn (Area Spt) will report opening and closing times of subordinate elements directly to this HQ.

4. SERVICE SUPPORT.

Annex D (Service Support)

5. COMMAND AND SIGNAL.**a. Command.**

(1) 80th Med Bde CP initially vicinity (WC) of MJ476231.

(2) Alternate CP 88th Med Gp VIC of TV337465.

b. Signal (Sig).

(1) 21st Sig Bde provides sig support.

(2) Signal Operation Instructions (SOI) Index 4 in effect.

(3) Minimize in effect until lifted.

Acknowledge.

JONES
BG

OFFICIAL:
BAKER
SPO

Annexes:

- A—Task Organization
- B—Operation Overlay (omitted)
- C—Operations Security (omitted)
- D—Service Support

Distribution: A

(Classification)

**Example C-8. ANNEX TO OPERATION PLAN/ORDER-TASK ORGANIZATION,
MEDICAL BRIGADE**

(Classification)

ANNEX A (TASK ORGANIZATION) to OPERATION PLAN/ORDER 1—80th Med Bde

80th Med Bde

2250 Mil Hist Det
845th Med Bn, Log (Fwd)
9906 Med Team (Infect Dis)

8823 Med Det (Vet Svc)

8826 Med Det (Vet Svc) (Sml)
8826 Med Det (Vet Svc) (Sml)
8827 Med Det (Vet Svc) (Sml)
8828 Med Det (Vet Svc) (Sml)
8829 Med Det (Vet Svc) (Sml)
8830 Med Det (Vet Svc) (Sml)

826 Med Bn (Den Svc)

8267 Med Co (Den Svc)
8268 Med Co (Den Svc)
8269 Med Co (Den Svc)

88th Med Gp

83d MASH
805th CSH
8902 Med Team (Head & Neck)
8903 Med Team (Head & Neck)

806th CSH

8904 Med Team (Eye Surg)
8905 Med Team (Eye Surg)

807th CSH

800th Med Bn (Evac)

840th Med Co (AA)
845 Med Co (GA)
846th Med Co (GA)

805th Med Bn (Area Support)

7870 Med Co (Area Support)
7871 Med Co (Area Support)
7872 Med Co (Area Support)

(Classification)

**Example C-8. ANNEX TO OPERATION PLAN/ORDER-TASK ORGANIZATION,
MEDICAL BRIGADE (Continued)**

(Classification)

7888th Med Co (CSC)
7890TH Med Co (CSC)
7891ST Med Det (CSC)
7868th Med Det (Sani)
7869th Med Det (Sani)
7876th Med Det (Ento)
7877th Med Det (Ento)

89th Med Gp

84th MASH

809th CSH

9900 Med Team (Neuro)

9901 Med Team (Neuro)

810th CSH

9902 Med Team (Head and Neck)

9904 Med Team (Eye Surgery)

811th CSH

9903 Med Team (Head and Neck)

9905 Med Team (Eye Surgery)

812th CSH

813th CSH

801st Med Bn (Evac)

850 Med Co (Air Ambulance)

851 Med Co (Air Ambulance)

855 Med Co (Ground Ambulance)

856th Med Co (Ground Ambulance)

803d Med Bn (Area Support)

8855 Med Co (Area Support)

8856 Med Co (Area Support)

8857 Med Co (Area Support)

8888 Med Co (CSC)

8890 Med Det (CSC)

8891 Med Det (CSC)

8868 Med Det (Sani)

8869 Med Det (Sani)

8876 Med Det (Ento)

8877 Med Det (Ento)

(Classification)

**Example C-9. ANNEX TO OPERATION PLAN/ORDER-SERVICE SUPPORT,
MEDICAL BRIGADE**
(Classification)

ANNEX D (SERVICE SUPPORT) to OPERATION PLAN/ORDER 1—80th Med Bde

- References:
- a. Map, series V451, Euralandia-Crisland, sheet NM 12-1 (Jameson-Helsey), edition 2, 1:50,000.
 - b. ADMIN/LOGPLAN/Order 1 - 10th (US) Corps.
 - c. OPLAN/Order 1 - 145th COSCOM.

Time Zone Used Throughout the Plan: SIERRA

1. GENERAL.

a. This annex prescribes CSS for the 80th Med Bde and assigned/attached units. Annex A (Task Organization Combat service support operations will be conducted IAW 10th (US) Corps Field SOP and 145th COSCOM Field SOP.

b. The 80th Med Bde is supported by the 145th COSCOM. Appendix 1 (Sources of Support).

2. MATERIEL AND SERVICES.

a. Supply.

(1) Class I and VI. Units will draw rations and sundry packs from their supporting Supply and Transport (S&T) Co daily. All units maintain two days reserve of MRE. Class VI sundry packs will be issued gratuitously through Class I distribution points.

(2) Class II, III (package), and IV.

(a) Units will request supplies from their supporting S&T Co as required. Class IV controlled items will be issued only to support approved construction projects and will be requisitioned through command channels.

(b) The following Class IV items are command controlled.

- 1. Cement, Portland

(Classification)

**Example C-9. ANNEX TO OPERATION PLAN/ORDER-SERVICE SUPPORT,
MEDICAL BRIGADE (*Continued*)**

(Classification)

2. Barbed tape
3. Wire, 16 gage

(3) Class III (bulk) will be distributed by the S&T Co Class III supply points. Units with bulk fuel handling vehicles will pick up at area Class III distribution points. Unit fuel allocations will be determined by Commander, S&T, as required. Appendix 1.

(4) Class V. Appendix 1.

(5) Class VII. Units will request end items to fill TOE shortages from supporting S&T Co. Combat losses will be reported on Daily Battle Loss Report IAW Annex T, COSCOM Field (Fld) SOP Reports, which will serve as the request for replacement end items.

(6) Class VIII.

(a) 845th Med Bn Log (Fwd) establishes supply point in VIC of Driesden (RS721463).

(b) All additions to medical TOE equipment and major medical assemblage authorizations are command controlled.

(7) Class IX. Repair parts required for organization maintenance will be drawn from supporting Maint Co Tech supply.

(8) Class X. Not authorized for stockage.

(9) Maps. Units will request maps from supporting S&T Co.

(10) Water.

(a) Water purification tablets will be issued with rations.

(b) Units will use only approved local sources of water and water points operated by the supporting S&T Co.

(11) Capture/abandoned enemy materiel.

(Classification)

**Example C-9. ANNEX TO OPERATION PLAN/ORDER-SERVICE SUPPORT,
MEDICAL BRIGADE (*Continued*)**

(Classification)

(a) Captured/abandoned enemy materiel will be reported to bde security, plans, and operations officer who will provide disposition instructions.

(b) Supplies and equipment of military value that cannot be evacuated will be destroyed or disabled. Enemy rations and abandoned enemy medical supplies will be extracted if possible. Under no circumstances will captured medical supplies be destroyed.

(c) Captured rations and abandoned enemy medical supplies will not be used for US Forces but will be made available for EPW use.

b. Transportation.

(1) All MSRs are two way.

(2) Ten or more vehicles dispatched within an hour from the same origin to the same destination constitute a convoy.

(3) Movements. US Forces have priority of movement on all numbered MSR.

(4) Requests for transportation will be submitted to the Commander, S&T, this HQ.

(5) Convoys require clearance from the supporting Movement Control Team (MCT).
Appendix 1.

c. Services.

(1) Construction. Construction efforts will be limited to essential work.

(2) Clothing exchange, water, mortuary affairs bath/laundry provided by supporting S&T
Co.

d. Labor.

(1) Availability and conditions of employment for civilian labor will be established by the 311th Civil-Military Cooperation Det in compliance with agreements or arrangements to be negotiated and in coordination with local civil authorities. Direct negotiation between subordinate commanders having requirements for civilian labor and 311th Civil-Military Cooperation Det is authorized.

(Classification)

**Example C-9. ANNEX TO OPERATION PLAN/ORDER-SERVICE SUPPORT,
MEDICAL BRIGADE (Continued)**

(Classification)

(2) Maximum use will be made of local civilian labor in support of mission accomplishment.

e. Maintenance.

(1) DS maintenance will be provided by supporting maintenance company, Appendix 1.

(2) 21st Trans Bn (Aircraft Maint) in VIC of RS883461 will provide aviation intermediate maintenance and backup AVUM support for all med avn units. Support includes aircraft recovery and retrograde service to aircraft end items in the corps area.

(a) 200th Transport Aircraft Maint Co in VIC of RS421377 will provide avn maint support to med avn units assigned to the 800th Med Bn (Evac).

(b) 201st Transport Aircraft Maint Co in VIC of RS675379 will provide support to the med avn units assigned to the 801st Med Bn (Evac).

(3) Medical equipment maintenance, 845th Med Bn (Log) (Fwd) in VIC of Dresden (RS721463).

3. MEDICAL EVACUATION AND HOSPITALIZATION.

a. Division holding policy—72 hours.

b. Evacuation policy.

(1) Corps—7 days initially.

(2) Theater—15 days initially.

c. Nonambulatory EPW patients will be evacuated through medical channels, but will be segregated from US and allied patients. They will be evacuated from the CZ as soon as possible. Only those sick, injured, or wounded EPW who would suffer a great health risk by being evacuated immediately may be treated temporarily in the CZ. Accountability and security of EPW and their possessions in MTFs are the responsibility of the echelon commander. Ambulatory EPW patients will be processed through EPW channels following treatment. The 215th MP Co in VIC of RS516226 coordinates EPW evacuation from the corps area.

(Classification)

**Example C-9. ANNEX TO OPERATION PLAN/ORDER-SERVICE SUPPORT,
MEDICAL BRIGADE (Continued)**

(Classification)

d. The following USAF aeromedical evacuation points operational:

Airfield	Coordinates	Daily Capacity Standard/Maximum
BRIEGE	RS 8557	50/150
STANSA	RS 6718	100/250
ELSEDEN	RS 9917	100/250
JAMESON	RS 7579	100/250

4. PERSONNEL.

a. Postal, personnel, administrative, and finance services provided on an area basis by the 10th Personnel and Administration Bn. Appendix 1.

b. Critical MOS shortages: 91D20 and 91P20.

c. Coordinate EPW handoff with the rear command post.

d. Chaplain support for units without chaplains will be coordinated with bde chaplain.

e. Military prisoners. Whenever possible, persons awaiting trial are retained in their units. Only when they present a hazard to the mission, to themselves, or to others are they placed in confinement or pretrial confinement at a detention facility. Convicted military prisoners are evacuated as soon as possible to confinement facilities outside the AO.

5. CIVIL-MILITARY COOPERATION.

Annex S, 145th COSCOM Fld SOP.

6. MISCELLANEOUS.

a. Corps light line is division rear boundaries.

b. Reports submitted IAW Annex Y, 145th COSCOM Fld SOP.

Appendix: 1—To be published

(Classification)

Example C-10. OPERATION PLAN/ORDER (MEDICAL GROUP)

(Classification)

*Copy ___ of ___ copies
82d Med Gp
Town (DQ765602), So
Euralandia
191400S May 19
RB 12*

OPERATION PLAN (ORDER) 92-1 GOLDEN THUNDER

- References:
- a. Map, series V451, Euralandia-Crisland, sheet NM 12-1 (Jameson-Helsey), edition 2, 1:50,000.
 - b. ADMIN/LOGPLAN/Order 1—10th (US) Corps.
 - c. OPLAN/ORDER 1—145TH COSCOM.

Time Zone Used Throughout the Plan/Order: SIERRA

Task Organization: Annex A (Task Organization) (Task organization may appear here or in an annex.)

1. SITUATION.

- a. Enemy forces. (Current) PERINTREP, 10th (US) Corps, Annex B (Intelligence).
- b. Friendly forces.

(1) Commencing D-Day, H-Hour, 10th COSCOM provides CSS to 10th (US) Corps units and other services. 10th (US) Corps will defend in sector from DR 147175 to DR 759241, and prepares to conduct counteroffensive operations. Our defensive operations will be designed to quickly transition to an offensive operation to secure the Penguin Parallel.

(2) 25th USAF provides tactical airlift support.

(3) Homeland and Reserve Forces (Home Guard) assists in providing rear planning/operations in corps rear area.

(4) Current MOPP Level 0.

(Classification)

Example C-10. OPERATION PLAN/ORDER (MEDICAL GROUP) (Continued)

 (Classification)

- 209th Spt Bn in support of the 319th Inf Bde.
- 210th Spt Bn in support of the 52d Inf Div.
- 244th Spt Bn in support of the 23d Armor Div.
- 902d Spt Bn in support of the 13th Spt Gp (Rear).

(b) Emergency care as needed to So Euralandian Forces.

(9) 801st Med Bn (Evac) in VIC of DQ 605642: Provide command and control to ground and air medical evacuation units. Also provide far forward air and ground evacuation within the 82d Med Gp's AO and patient transfer between MTFs and MASFs.

b. Coordinating instructions.

(1) MOPP 0 in effect.

(2) Provide unit base defense; prepare for NBC-related MASCAL situations; and provide support under NBC operations.

(3) Evacuation routes will be the MSRs and approved air corridors.

4. SERVICE SUPPORT. See Annex E (Service Support).

5. COMMAND AND SIGNAL.

a. Signal. SOI Edition M in effect.

b. Command. 82d Med Gp CP in VIC of DQ495535. Alternate CP is 810th CSH in VIC of DQ706487.

HILLER
COL

OFFICIAL:
/s/Edwards
EDWARDS

 (Classification)

Example C-10. OPERATION PLAN/ORDER (MEDICAL GROUP) (Continued)

(Classification)

S3 ANNEXES:

- A—Task Organization
- B—Intelligence
- C—Operation Overlay (omitted)
- D—Personnel
- E—Service Support
- F—NBC
- G—Medical Regulating (To be published)
- H—Aviation (To be published)
- I—Preventive Medicine (To be published)
- J—Reports (To be published)
- L—Preventive Medicine (To be published)
- X—Reports (To be published)

(Classification)

**Example C-11. ANNEX A (TASK ORGANIZATION) TO OPLAN/OPORD 1,
82d MEDICAL GROUP**

(Classification)

82d Med Gp

84th MASH

813th CSH (NBC MTF)

809th CSH

9900 Med Team (Neuro)

9901 Med Team (Neuro)

810th CSH

9902 Med Team (Head and Neck)

9904 Med Team (Eye Surgery)

811th CSH

9903 Med Team (Head and Neck)

9905 Med Team (Eye Surgery)

812th CSH (EPW MTF)

803d Med Bn (Area Support)

8851st Med Co (Area Support)

8852d Med Co (Area Support)

8853d Med Co (Area Support)

8888 Med Co (CSC)

8890 Med Co (CSC)

8891 Med Co (CSC)

8868 Med Det (Sani)

8869 Med Det (Sani)

8876 Med Det (Ento)

801st Med Bn (Evac)

850 Med Co (Air Ambulance)

851 Med Co (Air Ambulance)

855 Med Co (Ground Ambulance)

856 Med Co (Ground Ambulance)

(Classification)

**Example C-12. ANNEX B (INTELLIGENCE) TO OPLAN/OPORD 1,
82d MEDICAL GROUP**

(Classification)

1. SUMMARY OF ENEMY SITUATION.

- a. Appendix 1 (Situation Overlay).
- b. Current intelligence summary (INTSUM), this HQ.

c. In the forward defense areas, the North Euralandians have been pushed back along a line running from DR147174, DR405 153, DR529150, and DR760241. Enemy forces are occupying defensive positions which are estimated at 85-90 percent unit strength. Unconventional forces have been covertly inserted into the area to be occupied. Reports indicate guerilla sabotage and harassment will increase in the rear area. Air activity is expected to continue with emphasis on LOC and major unit locations. Captured documents indicate special emphasis is planned on sabotage of facilities involving dangerous industrial chemicals and radioactive materials.

2. ESSENTIAL ELEMENTS OF INFORMATION (EEI).

- a. EEI.

- (1) Will the enemy respect the Geneva Conventions?
- (2) Are disease-carrying arthropods resistant to available pesticides?
- (3) Does the enemy possess laser weapons or laser devices?

- b. Other Intelligence Requirements.

(1) Enemy is expected to escalate espionage, sabotage, subversion, and other clandestine activities prior to main attack. Targets will be logistical operations centers, command and control centers, and MSRs/evacuation routes.

(2) The civilian population is not sympathetic to the enemy cause.

(3) Presently, the enemy has the capability to employ NBC weapons but does not have the munitions. However, the North Euralandian's allies have assured them that munitions will be supplied upon request. Due to the extensive nuclear retaliatory capability of the 10th (US) Corps, nuclear weapon employment is improbable. There is a high probability that enemy forces will employ isolated

(Classification)

**Example C-12. ANNEX B (INTELLIGENCE) TO OPLAN/OPORD 1,
82d MEDICAL GROUP (*Continued*)**

(Classification)

chemical agent attacks to deny terrain, create MASCALs, harass supply lines, and overburden our logistical system.

3. INTELLIGENCE ACQUISITION TASKS.

a. Orders to attached and subordinate units.

(1) Enemy air strikes and attacks are expected in the rear battle area. Priorities of attack are command and control, LOC, and the MSR/evacuation routes.

(2) Location, movements, and activities of guerrilla activities must be reported as soon as possible (ASAP) to Gp S2 using the SPOT report.

(3) Expect air mobile and airborne activities in the rear area.

(4) The enemy has electronic and communication jamming and deception activities. Be prepared to communicate by alternate means.

b. Requests to higher and adjacent units.

(1) COSCOM. Report as obtained—

(a) Changes in tactical situation.

(b) Changes in enemy capability to impair and degrade CS and CSS operations in the 10th COSCOM or 80th Med Bde area.

(c) Location, movement, and activities of enemy units likely to affect 80th Med Bde and COSCOM area.

(d) Known or suspected infiltration routes into bde or COSCOM base areas.

(e) Presence of known or suspected clandestine agents or subversive elements within AO.

(f) Themes, grievances, or causes being used as a basis for psychological operations within the 80th Med Bde area.

(Classification)

**Example C-12. ANNEX B (INTELLIGENCE) TO OPLAN/OPORD 1,
82d MEDICAL GROUP (Continued)**

(Classification)

- (g) Any new enemy plans or capabilities to impair logistical operations.
- (h) Indications of new technological advancements by the enemy.
- (i) Preparations related to employment of riot control or toxic chemicals.

4. MEASURES FOR HANDLING PERSONNEL, DOCUMENTS, AND MATERIAL.

a. EPW.

(1) EPW and/or surrendered personnel will be reported to Gp S2 without delay. Standard DOD Capture Tag will be used.

(2) EPW from chemical/biological units will be reported to bde S2 ASAP.

(3) Coordinate EPW handoff with the rear CP.

(4) Medical treatment of all EPW will be IAW Geneva Conventions.

b. Captured documents.

(1) NBC documents will be safeguarded and turned over to 10th MI Bde ASAP. Report of captured documents will be forwarded through S2 channels ASAP.

(2) All other captured documents will be safeguarded and turned over to 10th MI Bde.

c. Captured material.

(1) All material will be safeguarded and reported to 80th Med Bde S2. S2 will provide disposition instructions for material (less medical) and evacuation procedures to appropriate collection points.

(2) Captured medical material will be safeguarded and evaluated. Reports of evaluated medical material will be forwarded to 80th Med Bde G2.

(3) Captured medical supplies will be used for treating EPW patients only.

(Classification)

**Example C-12. ANNEX B (INTELLIGENCE) TO OPLAN/OPORD 1,
82d MEDICAL GROUP (Continued)**

(Classification)

5. REPORTS AND DISTRIBUTION.

a. Spot Report—used to report all information about the enemy. It is to be submitted by the capturing unit or immediate command echelon ASAP.

- (1) Size—describe number of personnel seen or the size of object.
- (2) Activity—describe what the enemy was doing.
- (3) Location—give grid coordinates, direction from a known point, including distance and azimuth from the known points.

(4) Unit—describe any patches or clothing, distinctive signs or symbols, or identification numbers on equipment.

(5) Time—state the time the activity was observed.

(6) Equipment—describe or identify all equipment associated with the activity.

b. Weather forecast reports—will be provided to this headquarters at 0800 and 2000 hours daily (12 hour forecast) and updated every 1/2 hour.

c. Captured enemy equipment—all reports will be submitted by the capturing unit or immediate command ASAP by the quickest possible means.

(1) Identification letters—equipment is to be marked showing the nationality of the capturing force by the national identifying letters.

(2) Designation of capturing units—includes the service to which the unit belongs.

(3) Serial numbers—units are to give each item serial number and should record the dispatch of the equipment in a war diary.

(4) Date/time of capture.

(5) Place of capture (with map coordinates if possible).

(6) Summary of circumstances under which the equipment was found.

(Classification)

**Example C-13. ANNEX D (PERSONNEL) TO OPLAN/OPORD 1,
82d MEDICAL GROUP**
(Classification)

1. GENERAL POLICIES.

All units will be maintained at 90 percent or better of their authorized strength.

2. REPORTING PROCEDURES.

a. Subordinate units are required to submit a Personnel Status Report, a Physician Status Report, and a Projected Loss Report reflecting 30-day losses.

b. Reports are due to the Gp S1 no later than 0500 and 1700 hours daily and may be done telephonically. Negative reports are required.

c. Casualty reporting will be done IAW AR 600-8-1 and local SOP.

3. AWARDS AND DECORATIONS.

a. The wartime criteria are in effect for awards.

b. Bronze stars will be approved by the brigade commander.

4. LEAVE POLICY

a. There will be no ordinary leave granted during the operation.

b. Emergency leave requests will be reviewed by the bde commander who is the approving authority.

5. EVALUATION REPORTS

a. OERs and NCOERs will be submitted IAW established wartime suspenses. The minimum rating period is 30 days.

6. POSTAL.

A free mail policy is in effect for letters and cassette-sized items.

(Classification)

**Example C-13. ANNEX D (PERSONNEL) TO OPLAN/OPORD 1,
82d MEDICAL GROUP (Continued)**

(Classification)

7. FINANCE.

- a. Soldiers have the option of being paid up to \$100.00 per month regardless of rank.
- b. Finance teams will report to the Gp HQ twice monthly to issue payments. This will be in the form of a military pay certificate.

8. ENEMY PRISONERS OF WAR.

- a. The guidelines of the Geneva Conventions will be followed in the handling of all EPW.
- b. EPW who have been treated and can be released will be released to the custody of the military police. Nonambulatory EPW patients will be evacuated through medical channels, but will be segregated from other patients. They will be evacuated from the CZ as soon as possible. Only those sick, injured, or wounded EPW who would suffer a great health risk by being evacuated immediately may be treated temporarily in the CZ. Accountability and security of EPW and their possessions in MTFs are the responsibility of the echelon commander. Ambulatory EPW patients will be processed through EPW channels following treatment.

(Classification)

**Example C-14. ANNEX E (SERVICE SUPPORT) to OPLAN/OPORD 1,
82d MEDICAL GROUP**
(Classification)

References: Map, series V451, Eurlandia-Crisland, sheet NM 12-1, Jameson-Helsey), edition 2, 1:50,000.

1. SITUATION.

- a. Enemy forces. Annex B (Intelligence).
- b. Friendly forces. OPLAN.
- c. Attachments and detachments. Annex (Task Organization).

2. GENERAL.

a. Purpose. This annex assigns logistical and personnel responsibilities to the various components of the 82d Med Gp, specifically, where joint servicing or common servicing of CSS functions occur. Items not specifically addressed by this annex are a responsibility of the component commander.

b. Concept of logistics support.

(1) The 82d Med Gp initial location will be in VIC of DQ6043.

(2) The 10th COSCOM provides DS, GS, and logistical support for the AO as follows:

AO. (a) The 11th Spt GP provides DS to nondivisional units in the northeast site of the bde

AO. (b) The 12th Spt GP provides DS to nondivisional units in the northwest site of the bde

(c) The 13th Spt GP provides GS to the 11th and 12th Spt Gp and DS to nondivisional units in the corps rear area.

(3) Depot maintenance will not be performed in the AO.

(4) Major airports and seaports in the AO are ANDREWS (used primarily for bulk petrol) and CHANEL, for general cargo and US ammunition.

(Classification)

**Example C-14. ANNEX E (SERVICE SUPPORT) to OPLAN/OPORD 1,
82d MEDICAL GROUP (Continued)**

(Classification)

- (5) Aeromedical staging facilities established at Bridges; MASFs at Pharris and Michener.
- (6) Medical evacuation:
 - (a) Evacuation policy - 15 days.
 - (b) Evacuation routes will follow MSRs and approved air corridors.
 - (c) Primary means of evacuation is by Army ground ambulance. Preferred means is by air.
- (7) LOGSTAT will be prepared and forwarded to Gp S4 at 0500 hours and 1700 hours daily.

3. MATERIEL AND SERVICES.

- a. Supply.
 - (1) Class I.
 - (a) Only ration cycle for issue B-MRE-B will be issued.
 - (b) Unit distribution will be to DSU level only.
 - (c) Stockage of ASL items. ASL -3 days; DS - 2 days.
 - (d) Resupply based on unit strength reports.
 - (e) Water will be chlorinated to 1 part per million (ppm) free available chlorine (FAC) residual, or as directed by medical authority.
 - (2) Class II.
 - (a) Unit distribution will be to DSU level only.
 - (b) Stockage of ASL items. DS - 15 days.
 - (3) Class III.

(Classification)

**Example C-14. ANNEX E (SERVICE SUPPORT) to OPLAN/OPORD 1,
82d MEDICAL GROUP (Continued)**

(Classification)

(a) Hospitals submit requirements for bulk distribution to supporting DSU with information copy to Gp S4.

(b) Units maintain 3-day level of bulk. DS -2 days.

(c) Priorities for bulk POL distribution.

1. USAF/USMC aviation.
2. Division DSU.
3. Aviation units (includes air ambulance units).
4. Hospitals.
5. Other.

(4) Class IV.

(a) Storage of ASL items. DS -15 days.

(b) Command controlled items.

1. Culvert.
2. All lumber.
3. Asphalt.
4. Cement.
5. Landing mat sets.

(c) Command controlled items must be requisitioned through command channels for corps approval.

(5) Class V.

(Classification)

**Example C-14. ANNEX E (SERVICE SUPPORT) to OPLAN/OPORD 1,
82d MEDICAL GROUP (Continued)**

(Classification)

1. Trk, 2 1/2-ton and 5-ton.
2. Forklift, 6K.
3. Helicopters.

(10) Class X. No stockage authorized.

(11) Support Location. See ADMIN/LOG Overlay.

(12) Excess equipment on hand to be reported to Gp S4.

(13) Submit local procurement requests through Gp S4.

b. Transportation.

(1) All MSR's are two-way. Ten or more vehicles dispatched within an hour from the same origin to the same destination constitutes a convoy.

(2) Request transport in excess of organic capability on a traffic control movement request (TCMR) to the supporting transportation movement officer. Send information copies of TCMRs to Gp S4 and Bde G4.

c. Services.

(1) Field services. Divisional and nondivisional supply companies will provide field services to supported units within their capabilities.

(2) Health service support.

(a) Veterinary services. COMARFOR will provide—

1. Food inspection, evaluation of animal vectors of disease and treatment of animals.

2. One medical detachment (veterinary service) and five small veterinary detachments within the brigade area of operations.

(Classification)

**Example C-14. ANNEX E (SERVICE SUPPORT) to OPLAN/OPORD 1,
82d MEDICAL GROUP (Continued)**

(Classification)

(b) Dental services. Emergency/sustaining dental support will be provided at the area support medical companies.

(c) Combat stress control services. CSC services will provide—

1. Restorative and preventive care to supported units.
2. Two restoration and three preventive stress management teams in the area of operations.

(d) Preventive medicine services.

1. COMARFOR will establish and enforce the PVNTMED program for all forces.
2. The PVNTMED officer will ensure that the field sanitation team is trained. He also monitors PVNTMED activities.
3. Preventive medicine support within the 82d Med Gp will be supported by two PVNTMED (Sani) Dets and 1 PVNTMED (Ento) Det.
4. All water is to be considered nonpotable unless approved by appropriate COMARFOR medical authorities. All water will be chlorinated to 1 ppm FAC residual.
5. All restaurants, bars, hotels, private homes, shops, and other Euralandian establishments are off limits to US Forces personnel, except in the performance of official duties.
6. Diseases/injuries of military significance are climatic, biting arthropods/ animals, diarrheal, physical or mental unfitness, occupational, and altitude exposure.

d. Maintenance.

(1) DS maintenance.

- (a) Cannibalization for stockage is not authorized.
- (b) See ADMIN/LOG overlay for locations.

(Classification)

**Example C-14. ANNEX E (SERVICE SUPPORT) to OPLAN/OPORD 1,
82d MEDICAL GROUP (Continued)**

(Classification)

(2) GS maintenance.

(a) 4003d Aircraft Maint Co provides GS to all units within 10th (US) Corps.

1. Provides delivery evacuation, and retrograde services for aviation-unique Class II, VII, and IX supplies (except end items) to the area supported.

2. Provides for the assembly and float maintenance of all aviation-unique end items.

(b) Requests for exceptional support will be routed through Gp S4 to the MMC.

(c) ORF exchange authorized when equipment is expected to be in support maintenance for 3 days or longer.

(Classification)

Example C-15. ANNEX F (NBC) TO OPLAN/OPORD 1, 82d MEDICAL GROUP

(Classification)

1. PURPOSE. Establish standardized procedures for NBC reporting, detection, protection and decontamination.
2. PROCEDURES.
 - a. NBC reporting formats.
 - (1) NBC formats will be adhered to. NBC 1 and NBC 4 will be reported by organizations subordinate to this HQ, as required. This HQ will provide NBC 2, 3, 5, and 6.
 - (2) NBC 1 will be expedited with a FLASH precedence message. NBC 2, 3, 4, 5, and 6 will be sent as an IMMEDIATE precedence message.
 - (3) Telephonic communications (MSE) will backup messages when necessary.
 - b. MOPP.
 - (1) Units may be directed to establish appropriate MOPP Levels 1-4 as conditions indicate. In absence of guidance, local commanders may direct an appropriate MOPP level based on the threat and mission. If a unit detects an NBC threat, they will automatically go to MOPP Level 4.
 - (2) Organizations may increase MOPP level as detection devices or local threat indicates.
 - c. Detection.
 - (1) Units will develop detection SOPs that will employ organic detection devices IAW FM 3-4, NBC Protection, and FM 3-100, NBC Operations.
 - (2) Units will ensure designation and qualification of operators for organic equipment. Units will also ensure alarm system is operational.
 - d. Decontamination.
 - (1) Units exposed to NBC contamination will not normally displace. Hasty or deliberate decontamination will be accomplished as appropriate, IAW FM 3-5, NBC Decontamination.

(Classification)

Example C-15. ANNEX F (NBC) TO OPLAN/OPORD 1, 82d MEDICAL GROUP (Confirmed)

(Classification)

(2) If threat of persistent agents or high levels of fallout or radiation are present, unit displacement may be considered. Unit displacement is to be addressed through S3 channels prior to commitment to movement of the unit.

(3) NBC contaminated remains that cannot be evacuated to a mortuary affairs collection point will be buried a minimum of 4 feet deep with a standard NBC marker.

e. supply.

(1) Supply will have two sets of nerve agent Physostigmine pretreatment (NAPP) per soldier at all times. Ensure soldiers have one set of NAPP, three sets of nerve agent antidote kits (Mark I), and one CANA at all times. Ensure all combat lifesaver aid bags have extra Mark Is and CANA.

(2) Will have two sets of unopened MOPP gear per soldier. Individual protective masks will be fitted properly, inspected regularly, and maintained. (Unit supply needs a replacement set of filters per protective mask.)

(3) Unit NBC personnel will proactively coordinate with their S4 to ensure adequate stocks of NBC decontamination equipment supplies are adequate to decontaminate equipment. Emergency resupply will be accomplished with an IMMEDIATE MESSAGE to 82d Med Gp, ATTN S4; information copy to Gp Chemical Officer.

(4) Medical treatment facilities will be issued chemical casualty decontamination medical equipment sets and chemical casualty treatment medical equipment sets when required.

(Classification)

Example C-16. FORMAT FOR FRAGMENTARY ORDER

(Classification)

82d MED GP
TOWN, (DQ765605)

FRAGO 82-1

REFERENCE: 82d MED GP OPORD-1

1. SITUATION. Enemy penetration across FEBA into 319th SIB by elements of the 132d NKPA Div and elements of regimental armor and infantry units.
2. MISSION. The 82d Med Gp will develop HSS plan to support three separate contingency plans for a counterattack to reestablish FEBA.
3. CONCEPT OF OPERATION.
 - a. Proposed contingency plans.
 - (1) 23d AR counterattack through 52d Inf Div.
 - (2) 23d AR counterattack through 19th Inf Div.
 - (3) 23d AR counterattack through 319th SIB.
 - b. 84th MASH, 812th CSH, and 813th CSH are to push current patients to the 809th and the 810th CSHs and prepare to receive additional patients from the 23d AR and the 319th SIB.
 - c. 801st Evac Bn be prepared to provide additional air and ground ambulance support to the 23d AR.
 - d. 818th CSH upon attachment (contingency (1) and (3) will be located inVIC of DQ605715 and upon establishment be prepared to receive patient overload from forward hospitals.
 - e. 8827th Den Co, located in VIC of DQ605675, provides emergency and maintaining dental care on an area basis to US Forces located in the 82d Med GP's AO.
 - f. Remaining group units prepare contingency support plans for possible offensive operations to begin 24 to 48 hours.

(Classification)

Example C-16. FORMAT FOR FRAGMENTARY ORDER *(Continued)*

(Classification)

4. SERVICE SUPPORT. Units provide Gp S4 transportation requirements for possible movements 24-48 hours.
5. COMMAND AND SIGNAL. No change.

(Classification)

**Example C-17. FORMAT FOR HEALTH SERVICE SUPPORT APPENDIX TO ANNEX P
(PERSONNEL) TO THE DIVISION TACTICAL STANDING OPERATING PROCEDURE**

(Classification)

Appendix 1 (Health Service Support to Annex P (Personnel) to the Division Tactical Standing Operating Procedures

1. GENERAL.

- a. Health service support is a command responsibility.
- b. The division surgeon provides technical supervision and control over all medical units in the division. He is also responsible for the division's HSS planning.
- c. The DMOC of the DISCOM, in coordination with the division surgeon, plans and supervises the execution of HSS to the division. This includes coordination of corps support to the division.
- d. Each brigade surgeon is responsible for technical supervision and control of medical units in the brigade. He is also responsible for the brigade's HSS planning.
- e. Combat and CS battalions are provided Echelon I HSS by organic medical platoons, sections, or teams. Each battalion with organic HSS will include a HSS annex in all OPLANs and OPORDs.
- f. Combat service support units will be provided Echelon I HSS by the medical companies of the DISCOM.
- g. Echelon II HSS will be provided to all units of the division by the FSB/MSB medical companies of the DISCOM.

2. ECHELON I HEALTH SERVICE SUPPORT.

- a. All units will ensure that each soldier is trained in combat critical self-aid/bddy aid tasks and that each platoon-size element has a casualty evacuation plan for each operation.
- b. All units will ensure that there is at least one combat lifesaver with aid bag assigned to each squad. The combat lifesaver provides immediate far-forward care for injuries based on his additional training beyond first-aid procedures. The primary duty of this individual does not change. The additional duties of the combat lifesaver are performed when the situation permits before the combat medic arrives.

(Classification)

**Example C-17. FORMAT FOR HEALTH SERVICE SUPPORT APPENDIX TO ANNEX P
(PERSONNEL) TO THE DIVISION TACTICAL SOP (Continued)**

(Classification)

c. Maneuver companies will ensure that casualties are evacuated to predesignated patient collection points (PCPs) as specified in overlay.

d. The medical platoon will normally provide one combat medic per infantry platoon and one per armor company. These medics should be positioned so that they can provide emergency medical care to casualties within minutes of wounding. The combat medic does not accompany individual patients when evacuated. The combat medic can provide limited sick call to the platoon.

e. The medical platoon may pre-position ambulances at the PCPs to speed evacuation. During movement, ambulances will move with the company trains.

f. The medical platoon will establish the platoon HQ and the BAS with the combat trains. The platoon's medical operations officer will coordinate evacuation of patients from this location. The BAS will provide EMT, ATM, and sick call.

g. Each medical platoon or section will maintain a 3-day stock of medical supplies or that amount dictated by the mission.

h. Units without organic medical support will receive Echelon I HSS on an area basis from either the DISCOM's MSB/FSB medical companies or a battalion medical platoon. Units without organic medical support will make direct contact with the nearest medical unit to coordinate for support.

3. ECHELON II HEALTH SERVICE SUPPORT.

a. Emergency and sustaining dental care is provided by the DISCOM medical companies.

b. Psychiatric services will be provided by the MSMC's MH section. This section will normally provide a CSC team to each FSMC. Combat stress casualties will not be evacuated beyond the FSB medical company prior to evaluation by a physician. Combat stress casualties will not be evacuated beyond the division without first being evaluated by the division surgeon. Combat stress casualties will be evacuated using nonmedical vehicles, if possible.

c. Preventive medicine services will be provided by the PVNTMED section of the MSB medical company. This section may provide a mobile PVNTMED team to each FSB medical company. Preventive medicine teams are capable of performing area surveys to check for potential water sources, determine hazards to troops, and determine causes of disease. They can also be used to determine compliance with command policies on PVNTMED measures and to train unit field sanitation teams.

(Classification)

**Example C-17. FORMAT FOR HEALTH SERVICE SUPPORT APPENDIX TO ANNEX P
(PERSONNEL) TO THE DIVISION TACTICAL SOP (Continued)**

(Classification)

d. Optometry services are provided by the optometry section of the MSB medical company. This section can perform emergency eye care and routine examination. It can also produce replacement glasses and inserts. All personnel who wear glasses should retain a copy of their prescription on their person. If replacement glasses are required, only the prescription would need to be sent to the MSB medical company.

e. Class VIII resupply and medical maintenance is provided by the DMSO of the MSB medical company. Each medical company will maintain a 5-day basic load of Class VIII or the amount dictated by the mission. The DMSO will operate a unit distribution system and will coordinate through the DMOC for transportation of medical supplies. Whenever possible, the DMSO should anticipate demands of medical units and push supplies forward based on known operational requirements. The normal Class VIII request flow is as follows: combat lifesaver and combat medic to BAS to medical company to DMSO (battalions located in the DSA may go directly to the DMSO). The normal Class VIII resupply flow is DMSO to medical company to BAS to combat medic, or BAS to combat lifesaver.

f. Patient holding will be provided by the medical companies of the DISCOM. Each company can hold up to 40 patients. Those patients who can RTD within 72 hours are held for treatment. Those patients who cannot be RTD will be stabilized for further evacuation.

g. Sick call services are provided by the DISCOM medical companies. A set schedule will be published for each operation.

h. Emergency medical treatment is provided starting at the combat medic phase of patient care and treatment.

i. Patients will be evacuated using an integrated system of air and ground medical evacuation assets. The DISCOM's FSMCs are responsible for coordinating evacuation within their brigade's area. The FSB medical companies will normally pre-position ambulances with each BAS (the number of ambulances will depend on the battalion's mission). Each medical company may establish ambulance exchange points (AXP) to the rear of the BAS to transfer patients. This reduces the turnaround time of the ambulances of the forward deployed medical companies. The MSB medical company will provide ground evacuation and coordinate aeromedical evacuation in the DSA. The DMOC will request aeromedical evacuation support from corps. Air ambulance units in support of the division may be collocated with the DISCOM medical companies or the division aviation brigade depending on the situation.

(Classification)

**Example C-17. FORMAT FOR HEALTH SERVICE SUPPORT APPENDIX TO ANNEX P
(PERSONNEL) TO THE DIVISION TACTICAL SOP (Continued)**

(Classification)

j. Requests for medical evacuation should be made using the command net or medical operations net. Requests will be made as follows: Injury site to platoon to company to battalion/BAS (if BAS cannot complete the mission) to FSB medical company. Units located in the BSA request directly from the FSB medical company on the medical company net. Units located in the DSA request directly from the MSB medical company on its net.

4. ECHELON III HEALTH SERVICE SUPPORT. The DMOC will coordinate for corps support. Corps evacuation battalions will normally collocate ground and air ambulances with each of the DISCOM medical companies. These ambulances will be used to evacuate patients to corps hospitals.

5. NUCLEAR, BIOLOGICAL, AND/OR CHEMICAL CASUALTIES. These casualties will be decontaminated at the lowest level where treatment is provided. The medical platoon establishes a patient decontamination site proximate to its BAS when there is an NBC threat. Each support medical company establishes a patient decontamination site proximate to the clearing station. Supported units must provide eight nonmedical personnel to perform patient decontamination. Medical personnel will supervise patient decontamination. Patient decontamination sites are manned with personnel other than medics since the medical personnel will be fully engaged treating casualties who have been decontaminated.

6. POLICIES.

a. Red cross emblems will be displayed on all medical evacuation vehicles when in operation. These vehicles will only be used to transport patients, medical supplies, and medical personnel.

b. Red cross emblems on medical facilities which include ground ambulances and air ambulances on the ground will only be camouflaged when directed by the brigade commander (tactical).

c. Weapons and sensitive tactical equipment will not accompany patients who are evacuated to corps. Protective masks will accompany patients who are evacuated.

d. Whenever possible, personal belongings should accompany soldiers who are evacuated to corps.

e. Soldiers who are returned to duty within the division will be picked up by the owning organization. The G1 will coordinate with corps hospitals for the return of soldiers from that level.

f. Enemy prisoner of war patients will be evacuated and treated IAW the Geneva Conventions.

(Classification)

**Example C-17. FORMAT FOR HEALTH SERVICE SUPPORT APPENDIX TO ANNEX P
(PERSONNEL) TO THE DIVISION TACTICAL SOP *(Continued)***

(Classification)

g. Other than air or ground ambulances will only be used to evacuate patients on an exception basis above the PCPs. When patient load is expected to exceed the evacuation capability of the division, evacuation plans will include the use of nonmedical air and ground vehicles. Ad hoc use of nonmedical vehicles is strongly discouraged. This not only puts the patient at greater risk, but it also can cause the disruption of the normal mission of the vehicle or aircraft used.

BALDWIN
LTC

1 Encl-Annex 1, PCP Overlay
(omitted)

(Classification)

Example C-18. FORMAT FOR JOINT TASK FORCE OPERATION ORDER ANNEX Q

(Classification)

Headquarters, CJTF 140
1 May 1992

ANNEX Q TO CJTF 140 OPORD XXXX-92

HEALTH SERVICE SUPPORT ()

- () REFERENCES:
- A. THE GENEVA CONVENTIONS OF 12 AUGUST 1949
 - B. JOINT PUB 3-07.3, JOINT TACTICS, TECHNIQUES, AND PROCEDURES (JTTP) FOR PEACEKEEPING OPERATIONS.
 - C. JOINT PUB 3-07.5, CONTINGENCY OPERATIONS (CONOPS)
 - D. JOINT PUB 3-11, DOCTRINE FOR NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) DEFENSE
 - E. JOINT PUB 3-57, DOCTRINE FOR JOINT CIVIL AFFAIRS (TEST PUBLICATION)
 - F. JOINT PUB 4-01.1, JTTP FOR AIRLIFT SUPPORT TO JOINT OPERATIONS (FINAL DRAFT)
 - G. JOINT PUB 4-02, DOCTRINE FOR HEALTH SERVICE SUPPORT IN JOINT OPERATIONS (REVISED FINAL PUBLICATION)
 - H. JOINT PUB 5-00.2, JOINT TASK FORCE PLANNING GUIDANCE AND PROCEDURES
 - I. USCINCLANT OPLAN XXXX-92
 - J. USCINCLANTINST 6320.X, US ATLANTIC COMMAND CONTINGENCY JOINT MEDICAL REGULATING PROGRAM
 - K. USCINCLANTINST 6530.X, US ATLANTIC COMMAND JOINT BLOOD PROGRAM

1. () SITUATION.

A. () GENERAL.

(1) () PURPOSE. TO PROVIDE A CONCEPT OF HSS OPERATIONS, ASSIGN TASKINGS, AND PROVIDE GUIDANCE FOR THE PROVISION OF HEALTH CARE IN SUPPORT OF COMBAT OPERATIONS IN VIARTA. SPECIFIC OBJECTIVES INCLUDE:

(A) () DEFINE AND IDENTIFY HEALTH SERVICE RESPONSIBILITIES OF SUBORDINATE COMMANDS.

(Classification)

Example C-18. FORMAT FOR JOINT TASK FORCE OPERATION ORDER**ANNEX Q (*Continued*)**

(Classification)

(B) () ENSURE TASKS, FUNCTIONS, AND RESPONSIBILITIES ARE PROPERLY ASSIGNED.

(C) () ESTABLISH UNIFORM HEALTH SERVICE POLICIES.

2. () MISSION. CJTF 140 WILL DEPLOY WITH APPROPRIATE HSS ASSETS TO SUPPORT COMBAT OPERATIONS IN VIARTA AND PROVIDE QUALITY AND RESPONSIVE HSS TO US FORCES AND NONCOMBATANT EVACUEES.

3. () EXECUTION.

A. () CONCEPT OF HSS OPERATIONS.

(1) () US MILITARY PERSONNEL WILL NOT BE HOSPITALIZED IN CIVILIAN MEDICAL FACILITIES EXCEPT IN EMERGENCIES OR AS AUTHORIZED BY CJTF 140.

(2) () UNDER THE OVERALL COORDINATION OF CJTF 140, MEDICAL SUPPORT WILL BE PROVIDED BY SUBORDINATE COMMANDERS.

(3) () CTF 141 (ARMY), CTF 145 (NAVY), AND CTF 147 (MARINE) WILL PROVIDE ECHELON I AND II MEDICAL CARE TO ASSIGNED PERSONNEL. CTF 141 AND CTF 147 WILL PROVIDE ECHELON I AND II MEDICAL CARE TO CTF 146 (AIR FORCE) AND CTF 148 (SPECIAL OPERATING FORCES) ON AN AREA SUPPORT BASIS. ECHELON III MEDICAL CARE WILL BE PROVIDED BY CTF 141.

(4) () CASUALTY EVACUATION BETWEEN ECHELON I AND II FACILITIES IS A TASK FORCE RESPONSIBILITY; ROTARY-WING TRANSPORT IS THE PREFERRED MEANS OF EVACUATION. CTF 146 WILL ESTABLISH THE THEATER AEROMEDICAL EVACUATION SYSTEM. FIXED-WING AEROMEDICAL EVACUATION BETWEEN ECHELON II AND III FACILITIES MAY BE REQUIRED. ROTARY WING TRANSPORT WILL BE AVAILABLE TO MOVE PATIENTS BETWEEN ECHELON II AND III FACILITIES OPERATING WITHIN THE INTERMEDIATE SUPPORT BASE. CTF 146 WILL COORDINATE INTERTHEATER AEROMEDICAL EVACUATION OF PATIENTS TO CONUS WITH USTRANSCOM. CASUALTIES WILL BE STABILIZED PRIOR TO FIXED-WING AEROMEDICAL EVACUATION.

(5) () SUBORDINATE COMMANDERS WILL PROVIDE MEDICAL CARE TO NEO EVACUEES AS REQUIRED.

(Classification)

**Example C-18. FORMAT FOR JOINT TASK FORCE OPERATION ORDER
ANNEX Q (Continued)**

(Classification)

(6) () CIVILIAN, DETAINED CIVILIAN, AND EPW CASUALTIES WILL BE TREATED AND CARED FOR IN ACCORDANCE WITH THE TREATIES GOVERNING LAND WARFARE AND THE PROTOCOLS OF THE GENEVA CONVENTION. CTF 141 WILL PROVIDE ECHELON III MEDICAL CARE FOR DETAINED CIVILIAN AND EPW. USE OF CIVILIAN FACILITIES IS ENCOURAGED; CIVILIAN CASUALTIES WILL BE TRANSFERRED TO LOCAL CIVILIAN FACILITIES AS SOON AS THEIR CONDITION PERMITS. KNOWN CIVILIAN HOSPITALS IN VIARTA ARE:

(A) () GENERAL HOSPITAL, LLOTTE STREET, VIARTA CITY, VIARTA. 882 BEDS. TERTIARY REFERRAL HOSPITAL WITH FULL RANGE OF SERVICES.

(B) () CATHOLIC HOSPITAL, WESTERN MAIN ROAD, VIARTA CITY, VIARTA. 70 BEDS. GENERAL MEDICAL, SURGICAL, DENTAL, X-RAY, AND LABORATORY SERVICES.

(C) () ST. JUDE MEDICAL CENTER, 18 ELIZABETH STREET, VIARTA CITY, VIARTA. NUMBER OF BEDS UNKNOWN. FULL RANGE OF SERVICES. EMBASSY RECOMMENDS THIS HOSPITAL FOR ANY PATIENTS REQUIRING HOSPITALIZATION.

(D) () SAN FERMENTO GENERAL HOSPITAL, STREET ADDRESS UNKNOWN, SAN FERMENTO, VIARTA. 628 BEDS. FULL RANGE OF SERVICES.

(E) () (U) PINTO COUNTY HOSPITAL, STREET ADDRESS UNKNOWN. PINTO, VIARTA 96 BEDS. GENERAL MEDICAL AND SURGICAL SERVICES ONLY.

B. () EVACUATION POLICY. EVACUATION POLICY IS X DAYS FOR NEO PATIENTS AND X DAYS FOR US MILITARY PERSONNEL. SUBORDINATE COMMANDERS MAY RECOMMEND EVACUATION POLICY CHANGES TO CJTF 140.

C. () MEDICAL REGULATING WILL BE IN ACCORDANCE WITH USCINCLANTINST 6320.X. CJTF 140 WILL ESTABLISH A THEATER JMRO AND COORDINATE PATIENT MOVEMENTS WITH SUBORDINATE COMMANDS AND THE ASMRO. JMRO WILL DISSEMINATE ADDITIONAL POLICIES AND PROCEDURES FOR REQUESTING MEDICAL EVACUATIONS AS REQUIRED.

D. () BLOOD MANAGEMENT WILL BE IN ACCORDANCE WITH USCINCLANTINST 6330.X. CJTF 140 WILL ESTABLISH A THEATER JBPO AND COORDINATE BLOOD MANAGEMENT WITH SUBORDINATE COMMANDS AND THER ASBPO. JBPO WILL

(Classification)

**Example C-18. FORMAT FOR JOINT TASK FORCE OPERATION ORDER
ANNEX Q (Continued)**

(Classification)

DISSEMINATE BLOOD MANAGEMENT ADDITIONAL POLICIES AND PROCEDURES AS REQUIRED.

E. () PREVENTIVE MEDICINE.

(1) () SUBORDINATE COMMANDERS WILL INITIATE AND MAINTAIN VIGOROUS PREVENTIVE MEDICINE PROGRAMS. PERSONNEL SHOULD BE IMMUNIZED IN ACCORDANCE WITH SERVICE DIRECTIVES. YELLOW FEVER AND IMMUNE SERUM GLOBULIN IMMUNIZATIONS ARE REQUIRED.

(2) () THE GREATEST THREAT TO MILITARY PERSONNEL IS FROM WATER AND FOODBORNE GASTROENTERIC INFECTIONS SUCH AS DIARRHEA, ACUTE VIRAL HEPATITIS, AND TYPHOID FEVER. LOCAL FOOD IS CONSIDERED CONTAMINATED AND SHOULD NOT BE CONSUMED. LOCAL WATER IS NOT POTABLE AND SHOULD BE TREATED BEFORE DRINKING. RISK OF CIGUATERA FISH TOXIN POISONING EXISTS; CONSUMPTION OF LARGE REEF FISH LIKE GROUPER, SNAPPER, DOLPHIN, AND BARRACUDA IS PROHIBITED.

(3) () RISK OF INFLUENZA AND OTHER ACUTE RESPIRATORY INFECTIONS IS HIGHEST FROM OCTOBER THROUGH JANUARY. DENGUE VIRUS HAS OCCURRED IN MANY COUNTRIES WITHIN THE CARIBBEAN BASIN. MALARIA IS NOT ENDEMIC. LEPTOSPIROSIS IS PRESENT IN LOW LYING FLOOD ZONES WITH LARGE RAT POPULATIONS; RISK CAN BE MINIMIZED BY AVOIDING PROLONGED CONTACT WITH STAGNANT WATER OR WET SOIL IN THESE AREAS. TRICHURIASIS, ASCARIASIS, AND ANCYLOSTOMIASIS HAVE BEEN REPORTED.

(4) () SEXUALLY TRANSMITTED DISEASES INCLUDING SYPHILIS AND GONORRHEA ARE MODERATELY ENDEMIC. HIV INFECTION PREVALENCE APPEARS LOW. SEXUAL CONTACT WITH LOCAL CIVILIANS IS PROHIBITED.

(5) () A VARIETY OF POISONOUS ANIMALS ARE FOUND WITHIN THE AREA OF OPERATIONS INCLUDING CENTIPEDES, SCORPIONS, TARANTULAS, BLACK WIDOW SPIDERS, BROWN WIDOW SPIDERS, SAC SPIDERS, CORAL SNAKES, TERCIOPELOS, AND BUSHMASTERS. ANTIVENIN IS AVAILABLE AT THE GENERAL HOSPITAL IN VIARTA CITY.

(6) () DETAILED MEDICAL INTELLIGENCE SUMMARIES ARE ON FILE WITH THE CJTF 140 SURGEON.

(Classification)

Example C-18. FORMAT FOR JOINT TASK FORCE OPERATION ORDER
ANNEX Q (*Continued*)
(Classification)

(7) () SUBORDINATE COMMANDERS WILL PROMPTLY REPORT ALL UNUSUAL INCIDENCE OF DISEASE TO CJTF 140.

F. () DENTAL SERVICES. DENTAL SUPPORT IS A SERVICE COMPONENT RESPONSIBILITY. CARE PROVIDED WILL BE LIMITED TO TREATMENT NECESSARY TO RELIEVE SUFFERING AND ALLOW CONTINUED MISSION PERFORMANCE.

G. () VETERINARY SERVICES.

(1) () VETERINARY SUPPORT WILL BE AUSTERE. IF REQUIRED, SUBORDINATE COMMANDERS WILL SUBMIT REQUESTS TO CJTF 140.

(2) () PETS WILL NOT BE ALLOWED TO ACCOMPANY NEO EVACUEES.

(3) () THE FOLLOWING ANIMALS ARE ASSOCIATED WITH THE INDICATED DISEASES AND ARE PROHIBITED FROM ENTRY INTO CONUS:

(A) () CATTLE: BRUCELLOSIS, TUBERCULOSIS, TOXOPLASMOSIS.

(B) () SHEEP AND GOATS: BRUCELLOSIS AND TOXOPLASMOSIS.

(C) () SWINE: TOXOPLASMOSIS AND TRICHINOSIS.

(D) () CHICKEN: TOXOPLASMOSIS AND SALMONELLOSIS.

(E) () CATS: TOXOPLASMOSIS AND RABIES.

(F) () DOGS AND RACCOONS: RABIES.

(G) () PARROTS: PSITTACOSIS.

(H) () VIARTAN GREEN BACKED SEA TURTLE: SALMONELLOSIS.

4. () ADMINISTRATION AND LOGISTICS.

A. () HEALTH SERVICE LOGISTICS. HEALTH SERVICE LOGISTICS IS A SERVICE COMPONENT RESPONSIBILITY. UNITS WILL DEPLOY WITH MEDICAL SUPPLIES IN ACCORDANCE WITH SERVICE DIRECTIVES.

(Classification)

Example C-18. FORMAT FOR JOINT TASK FORCE OPERATION ORDER
ANNEX Q (Continued)
 (Classification)

B. () PLANNING FACTORS. WITH THE FOLLOWING EXCEPTIONS, SUBORDINATE COMMANDERS SHOULD USE MEDICAL PLANNING FACTORS CONTAINED IN SERVICE PUBLICATIONS:

(1) (U) BLOOD PLANNING FACTORS (PER INITIAL ADMISSION OF WIA AND NBI) ARE: RED BLOOD CELLS -4.00 UNITS, FRESH FROZEN PLASMA -0.08 UNITS, AND PLATELETS -0.04 UNITS.

(2) (U) ASSUME 3 PERCENT OF NEO EVACUEES WILL REQUIRE SOME TYPE OF MEDICAL CARE IN A PERMISSIVE ENVIRONMENT. CASUALTIES MAY BE MUCH HIGHER IN A NONPERMISSIVE ENVIRONMENT.

C. () MEDICAL REPORTING WILL BEGIN UPON RECEIPT OF THIS ORDER AND CONTINUE UNTIL CANCELED BY CJTF 140.

(1) () CURRENT FORMATS OF ALL MEDICAL REPORTS, REQUESTS, AND RESPONSES ARE FOUND IN USCINCLANTINST 6320.X AND USCINCLANTINST 6530.X.

(2) () SUBORDINATE COMMANDS WILL CUT OFF INPUT TO THE DAILY MEDSTAT REPORT AT 1000Z AND SUBMIT TO REACH CJTF 140 NOT LATER THAN 1800Z. ECHELON II ASHORE/AFLOAT COT CAPACITY, USE, AND AVAILABILITY WILL NOT BE REPORTED AS HOSPITAL BEDS. THIS INFORMATION MAYBE INCLUDED IN THE COMMAND ASSESSMENT PARAGRAPH OF THE MEDSTAT REPORT.

5. () COMMAND AND CONTROL.

A. () AS THE PRINCIPAL MEDICAL ADVISOR TO CJTF, THE JTF SURGEON EXERCISES DIRECTIVE AUTHORITY OVER ALL ALLOCATED HSS RESOURCES AND WILL ENSURE THEIR EFFECTIVE USE TO MEET MISSION REQUIREMENTS.

B. () COORDINATING INSTRUCTIONS.

(1) () SUBORDINATE COMMANDERS WILL INCLUDE DETAILED HSS CONCEPTS AS PART OF THEIR SUPPORTING PLANS OR ORDERS.

(2) () AND FOLLOW-ON LOCATIONS OF ALL ECHELON II AND III MEDICAL FACILITIES TO CJTF 140.

(Classification)

**Example C-18. FORMAT FOR JOINT TASK FORCE OPERATION ORDER
ANNEX Q (*Continued*)**

(Classification)

(3) () SUBORDINATE COMMANDERS WILL IDENTIFY ALL ADDITIONALLY REQUIRED HSS TO CJTF 140.

C. () HEALTH SERVICE SUPPORT COMMUNICATIONS.

(1) () ROUTINE COORDINATING COMMUNICATIONS BETWEEN COMPONENT SURGEONS AND BETWEEN COMPONENT SURGEONS AND THE JTF SURGEON WILL BE BY SECURE TELEPHONE WHENEVER POSSIBLE. ALTERNATE MEANS OF COMMUNICATION ARE WWMCCS TELECONFERENCE (PREFERRED) AND AUTODIN MESSAGE.

(2) () ALL OFFICIAL PLANS, ORDERS, REPORTS, AND REQUESTS WILL BE PASSED BY BOTH WWMCCS TELECONFERENCE AND AUTODIN MESSAGE.

(3) () COMPONENT SURGEONS WILL COORDINATE HSS COMMUNICATIONS INTERNAL TO THEIR COMMANDS.

(Classification)

**Example C-19. JOINT TASK FORCE HEALTH SERVICE SUPPORT
PLANNING CHECKLIST**

(Classification)

- C-1.** Who is the JTF/CTF Force surgeon?
- C-2.** What are his/her staff requirements for the following:
- a. A deputy?
 - b. Health service support operations?
 - c. Health service logistics to include the Joint Blood Program?
 - d. Administration?
 - e. Duty-hour coverage?
- C-3.** What are the security classification requirements?
- C-4.** Who will comprise the JTF/CTF surgeon's staff?
- C-5.** Will the composition of the JTF/CTF surgeon's staff facilitate optimum employment and synergy of effort for the joint medical forces in this operation?
- C-6.** Have provisions been made for adequate office equipment such as computers, facsimile (FAX) machines, and compatible software for JTF/CTF operations at the JTF/CTF operating headquarters?
- C-7.** What is the organic HSS capability for the deploying forces?
- a. What are its capabilities in each of the following areas?
 - (1) Patient evacuation and medical regulation (tactical and strategic)?
 - (2) Hospitalization?
 - (3) Health service logistics to include blood management?
 - (4) Medical laboratory services?
 - (5) Dental services?

(Classification)

**Example C-19. JOINT TASK FORCE HEALTH SERVICE SUPPORT
PLANNING CHECKLIST *(Continued)***

(Classification)

- (6) Veterinary services?
- (7) Preventive medicine services?
- (8) Combat stress control services?
- (9) Area medical support?
- (10) Command, control, communications, computers, and intelligence?
- (11) Other?

b. What are the HSS requirements to adequately support the deploying forces (commander's concept of operations) in the following areas?

- (1) Patient evacuation and medical regulation (tactical and strategic)?
- (2) Hospitalization?
- (3) Health service logistics to include blood management?
- (4) Medical laboratory services?
- (5) Dental services?
- (6) Veterinary services?
- (7) Preventive medicine services?
- (8) Combat stress control services?
- (9) Area medical support?
- (10) Command, control, communications, computers, and intelligence?
- (11) Other?

(Classification)

**Example C-19. JOINT TASK FORCE HEALTH SERVICE SUPPORT
PLANNING CHECKLIST (Continued)**

(Classification)

c. After comparing HSS capabilities of deploying forces and HSS requirements, what are the remaining shortfalls in HSS?

d. Have these shortfalls been identified through channels to the appropriate headquarters, unified command.

e. What are the indigenous/host nations' HSS capabilities?

f. As HSS units are identified for deployment in an operation, are the critical transportation costs such as the number of passengers, weight, cube, and 463L pallets being identified and coordinated with other JTF/CTF staff members?

C-8. Does the JTF/CTF surgeon have a copy of Joint Pub 4-02?

C-9. Has the JTF/CTF surgeon coordinated with the Civil Affairs staffs, nongovernmental organizations, and relief organizations for the management of refugees?

a. How will refugees be managed in the medical evacuation system? Where are the hospitals that will be used to accommodate refugee needs such as civilian, host nation, and military?

b. Has the mission of providing such things as food, water, shelter for refugees been assigned?

c. Has sufficient logistical planning been accomplished to accommodate immunizing and dehydrating of refugees?

d. Does the JTF/CTF surgeon have knowledge of civilian medical relief organizations such as locations, numbers of personnel, and liaisons)?

e. Have plans been made for the use of refugees with a medical background to treat refugees.

C-10. Has coordination among the JTF/CTF, local embassies, and affected host nation governments been completed to ensure a synchronized concept of HSS operations for humanitarian assistance operations, civic action programs, and natural disaster relief operations?

C-11. What is the medical command, control, communications, and computers plan?

a. Can the medical command and control elements communicate with all critical parties vertically and laterally? If not, is there a communications hardware fix?

(Classification)

**Example C-19. JOINT TASK FORCE HEALTH SERVICE SUPPORT
PLANNING CHECKLIST *(Continued)***

(Classification)

b. Is the JTF/CTF medical regulating system and attendant communications equipment in place?

C-12. Does the contemplated operation fall under the purview of an existing OPLAN of the appropriate unified command?

a. Does the HSS portion of the OPLAN require refinement when reviewed in context of the above factors?

b. Does the contemplated OPORD for the JTF/CTF address on call nonmedical transportation augmentation, as required, to accommodate surges in medical evacuation missions?

C-13. Does the JTF/CTF surgeon and staff have medical intelligence about the AO to include but not limited to the following:

a. Endemic/epidemic diseases?

b. Medical infrastructure in AOR?

(1) Public health standards and capabilities?

(2) Quality of health services?

c. Communicable zoonotic diseases?

d. Adequacy of local food supplies?

e. NBC threat of opposing forces?

f. Directed energy capabilities of opposing forces?

g. Meteorological data, altitude of AOR, precipitation, topography, and their potential impact upon the health of the command?

h. Poisonous flora and fauna of the AOR?

i. Source of local blood donors and quality of blood product testing and manufacturing?

(Classification)

**Example C-19. JOINT TASK FORCE HEALTH SERVICE SUPPORT
PLANNING CHECKLIST *(Continued)***

(Classification)

- C-14.** What are the immunization/chemoprophylaxis requirements for the AOR?
- C-15.** Are special operations forces (SOF) involved?
 - a. Where will these be operating in the AOR?
 - b. Does this OPORD include sufficient HSS to complement SOF medical packages?
- C-16.** What is the HSS concept of operations for management of EPW?
- C-17.** Have the CINC's strategic objectives (end state) been identified and considered within the planning issues.

(Classification)

APPENDIX D

HISTORICAL DATA**Section I. ARMY MEDICAL DEPARTMENT EXPERIENCE FACTORS**

D-1. Table D-1 depicts the total AMEDD percentages by type of casualties during the Korean Conflict. It further depicts the percentage distribution of total casualties within each corps of the AMEDD and of enlisted personnel.

Table D-1. Army Medical Department Battle Casualties, Korean Conflict

CASUALTIES	KIA	WIA	MIA	CAPTURED	TOTAL
TOTAL AMEDD	17.2	70.6	3.6	8.6	100.0
MEDICAL CORPS	20.0	51.2	4.4	24.4	100.0
DENTAL CORPS	22.2	66.7	11.1	0.0	100.0
MEDICAL SERVICE CORPS	14.3	52.3	4.8	28.6	100.0
ENLISTED PERSONNEL	17.2	71.0	3.6	8.2	100.0

D-2. Table D-2 depicts the total AMEDD WIA percentages by type of disposition within all overseas theaters during World War II. It further depicts percentage distribution of total wounded-in-action dispositions within each corps of the AMEDD and of enlisted personnel.

Table D-2. Army Medical Department Wounded in Action in all Oversea Theaters During World War II

WOUNDED	DIED OF WOUNDS	RETURNED TO DUTY WITHIN THEATER	EVACUATED TO US	TOTAL WOUNDED
TOTAL AMEDD	4.5	64.8	30.7	100.0
MEDICAL CORPS	6.7	59.6	33.7	100.0
DENTAL CORPS	8.3	58.4	33.3	100.0
MEDICAL SERVICE CORPS	2.6	55.7	41.7	100.0
ARMY NURSE CORPS	5.9	61.7	32.4	100.0
VETERINARY CORPS	0.0	0.0	100.0	100.0
ENLISTED PERSONNEL	4.5	65.0	30.5	100.0

D-3. Table D-3 depicts the total AMEDD percentage of WIA by type of disposition within the Far East. It further depicts the percentage

distribution of total wounded-in-action dispositions within each corps of the AMEDD and of enlisted personnel.

Table D-3. Army Medical Department Wounded in Action, Korean Conflict

WOUNDED	DIED OF WOUNDS	RETURNED TO DUTY WITHIN THE FAR EAST	EVACUATED TO US AND HAWAIIAN ISLANDS	TOTAL WOUNDED
TOTAL AMEDD	2.9	67.7	29.4	100.0
MEDICAL CORPS	0.0	47.8	52.2	100.0
DENTAL CORPS	0.0	50.0	50.0	100.0
MEDICAL SERVICE CORPS	0.0	63.6	36.4	100.0
ENLISTED PERSONNEL	2.9	68.1	29.0	100.0

D-4. Table D-4 depicts the total AMEDD percentage of battle casualties for all overseas theaters by each type of casualty. It further

depicts the percentage distribution of total casualties within each corps of the AMEDD and of enlisted personnel.

Table D-4. Army Medical Department Battle Casualties all Oversea Theaters, World War II

CASUALTIES	KIA	WIA	MIA	CAPTURED	TOTAL
TOTAL AMEDD	15.4	66.7	2.3	15.6	100.0
MEDICAL CORPS	14.6	55.7	1.4	28.3	100.0
DENTAL CORPS	15.4	51.2	0.9	32.5	100.0
MEDICAL SERVICE CORPS	17.5	59.4	1.5	21.6	100.0
ARMY NURSE CORPS	10.4	25.4	11.2	53.0	100.0
VETERINARY CORPS	10.0	10.0	0.0	80.0	100.0
ENLISTED PERSONNEL	15.4	67.5	2.3	14.8	100.0

D-5. Table D-5 depicts AMEDD battle casualties as percent of total US Army casualties by type of casualty during World War II and the Korean Conflict.

Table D-5. Army Medical Department Battle Casualties as Percent of Total US Army** Casualties*

THEATER	PERCENT OF ALL KIA	PERCENT OF ALL WIA	PERCENT OF ALL MIA	PERCENT OF ALL CAPTURED	PERCENT OF TOTAL BATTLE CASUALTIES
WORLD WAR II					
ALL OVERSEA THEATERS***	2.5	2.8	2.9	4.5	2.9
EUROPEAN THEATER	2.4	2.7	2.7	4.2	2.8
PACIFIC THEATERS	3.4	3.4	5.2	6.0	3.8
MEDITERRANEAN THEATER	2.0	2.6	1.9	2.9	2.5
KOREAN CONFLICT	3.0	3.0	2.7	4.3	3.0

* Includes all personnel of the AMEDD (officer plus enlisted).

** Excludes Air Corps personnel and flight officers in World War II and US Air Force personnel in the Korean Conflict.

*** Includes battle casualties incurred in Africa-Middle East, Caribbean Defense Command and South Atlantic Alaskan Department, Burma-China-India, theater unknown, and those incurred while en route and not chargeable to any command. These theaters are not shown separately above.

D-6. Table D-6 depicts the AMEDD WIA as percent of total US Army WIA by type of disposition in the theater during World War II and the Korean Conflict.

*Table D-6. Army Medical Department** Wounded in Action as Percent of Total US Army** Wounded in Action*

THEATER	DIED OF WOUNDS	RETURNED TO DUTY IN THEATER	EVACUATED TO US	TOTAL WOUNDED
WORLD WAR II				
ALL OVERSEA THEATERS***	2.9	2.8	2.8	2.8
EUROPEAN THEATER	2.9	2.7	2.6	2.7
PACIFIC THEATERS	3.3	3.4	3.4	3.4
MEDITERRANEAN THEATER	2.2	2.5	2.7	2.6
KOREAN CONFLICT	3.5	2.9	3.0	3.0

* Includes all personnel of the AMEDD (officer plus enlisted).

** Excludes Air Corps personnel and flight officers in World War II and US Air Force personnel in the Korean Conflict.

*** Includes battle wounds incurred in Africa-Middle East, Caribbean Defense Command and South Atlantic Alaskan Department, Burma-China-India, theater unknown, and those incurred while en route and not chargeable to any command. These theaters are not shown separately above.

Section II. DENTAL EXPERIENCE FACTORS

D-7. General

Experience factors derived from previous US Army operations are presented in this section. The data presented here may be useful in planning for dental service in support of future US Army operations. During times of military conflict, dental service resources have been used in the treatment of maxillofacial injuries and disease, the treatment of acute dental emergencies, the maintenance of oral health and fitness of troops, the provision of combat casualty care, and the identification of deceased personnel. These services have been provided to the US Army, other US Forces, allies, indigenous populations, and EPW.

D-8. Maxillofacial Injury Work Load

Maxillofacial trauma represents a significant part of the total medical work load in an area of operations. (See Table D-7 through D-9.) In Vietnam it was estimated that 10.1 percent of admissions to hospitals for trauma were for maxillofacial injuries which were treated by maxillofacial surgeons. Of the maxillofacial injuries, 78.2 percent were injury result of hostile action (IRHA) and 21.8 percent were nonbattle injury. Hospital admissions were 84.2 percent of the total maxillofacial injuries reported.

Table D-7. Types of Facial Bones Fractured in 1,096 IRHA Patients-Vietnam

BONES FRACTURED	NUMBER OF PATIENTS	PERCENT OF ALL PATIENTS WITH MAXILLOFACIAL INJURIES IRHA
MANDIBLE	573	20.5
MAXILLA	526	18.8
MALAR	350	12.5
ORBITAL FLOOR	238	8.5
NASAL	236	8.4
ZYGOMATIC ARCH	219	7.8

Table D-8. Soft Tissue Injuries-Vietnam

SOFT TISSUE SITE	LACERATIONS	AVULSIONS	OTHER	TOTAL INJURIES
RIGHT CHEEK	865	249	266	1,380
LEFT CHEEK	861	214	249	1,324
CHIN	641	133	280	1,054
LIPS	559	124	133	816
FLOOR OF MOUTH	249	57	13	319
TONGUE	210	15	7	232
PA LATE	139	54	10	203
OTHER FACIAL TISSUES	996	270	271	1,537
TOTAL	4,520	1,116	1,229	6,865

Table D-9. Disposition of 2,795 IRHA Patients with Maxillofacial Injuries-Vietnam

DISPOSITION	PERCENT OF 157 OUTPATIENTS	PERCENT OF 2,638 INPATIENTS	PERCENT OF TOTAL MAXILLOFACIAL INJURIES IRHA
RETURNED TO DUTY	89.8	25.2	28.8
DIED	0.6	2.7	2.5
TRANSFERRED OR EVACUATED	6.4	67.9	64.5
RELEASED TO OWN CARE	1.3	2.5	2.5
OTHER DISPOSITION	1.9	1.7	1.7

D-9. Dental Emergency Work Load

The rate of dental emergencies will vary with the amount of predeployment preparation of troops, length of deployment, intensity of conflict, and amount of in-theater dental maintenance care.

The most credible report of dental emergencies from Vietnam was on Marine personnel. (See Table D-10.) The rate of dental emergencies was calculated from this report to be 184 per 1,000 troops per year. Other reports of dental emergency rates vary. (See Table D-11.)

Table D-10. Relative Frequency of Categories of Dental Emergencies Among Navy-Marine Personnel in Vietnam and CONUS, 1970

CATEGORY	VIETNAM (PERCENT)	CONUS (PERCENT)
CARIES	48.8	46.0
PERICORONITIS	18.3	14.0
PERIODONTAL	9.2	11.0
TRAUMATIC	7.6	6.0
PROSTHETIC	3.1	8.5
OTHER	13.0	14.5

Table D-11. Summary of Dental Emergency Rates

	RATE PER 1,000 PER YEAR	
VIETNAM	1968	142
	1969-70	184
FIELD EXERCISES	1964	152
	1978	167
	1980-81	234

D-10. Dental Services Capability

a. World War II.

(1) The average number of the five principal dental operations completed per dental officer per year from 1 January 1943 to 31 August 1945 was as follows:

- Permanent filling—1,067.
- Extractions—232.
- Dentures—42.
- Dentures repaired—26.
- Fixed bridges—3.

Table D-12 depicts dental operations completed for each 1,000 men oversea.

(2) At the larger dental laboratories in the CONUS, each dental laboratory

specialist completed an average of:

- 58.6 cases per month in 1943.
- 51.0 cases per month in 1944.

The decrease in 1944 was probably due to a slackening in demand and because a considerable amount of overtime operation of dental laboratories was carried out during 1943. Cases included dentures, repairs, and bridges.

(3) The dental laboratory specialist who functions in the field with field-type laboratory equipment is not able to complete many prosthodontic appliances. However, on the average, the dental laboratory specialist in the field is usually able to fabricate 30 cases per month. This includes full and partial dentures, denture repairs, and bridges. Table D-13 depicts prosthodontic operations completed for each 1,000 men oversea.

Table D-12. Dental Operations Completed 1 January 1942 through 31 August 1945 (Oversea)

DENTAL OPERATIONS	NUMBER	ARMY	OTHERS
		MEAN STRENGTH PER YEAR	NUMBER
PERMANENT FILLINGS	12,698,735	1,290	187,771
EXTRACTIONS	2,562,643	262	335,428
FULL DENTURES	101,561	10	1,256
PARTIAL DENTURES	360,405	36	10,275
DENTURES REPAIRED	278,562	28	5,755
FIXED BRIDGES	36,504	3.7	406
TEETH REPLACED*	3,245,822	332	25,110
DENTAL PROPHYLAXIS	2,188,841	224	41,694

* By bridges and partial dentures only.

(4) Authentic theater reports during World War II show that the proportion of oversea personnel wearing prosthodontic appliances was about 10 percent. On a worldwide basis, however, it is estimated that 15 percent of all military personnel wore dentures.

b. Korean Conflict. Figures are not available covering the Army dental service for the entire Korean Conflict; however, the annual report of the Dental Surgeon, Eighth United States Army, 1952, includes the data in Table D-14. Dental officers in Korea in the year 1952 averaged about 115 to 120 permanent fillings per month.

c. Vietnam Conflict. Important dental treatments are depicted in Table D-15.

d. Other Experience.

(1) A mobilization exercise at an Army reception station in 1982 indicated that under time of great demand on the reception station 50 inductees could be processed per hour using five panoramic x-ray machines, one high-speed automatic film processor, five enlisted dental specialists, one NCOIC and one dental officer to

read films. The rate of x-ray film retakes and wastage required 1,140 films per 1,000 troops. When x-ray machines were not available, each dental officer with one enlisted dental specialist to record could in-process patients at the rate of one patient per 3.5 minutes (17 patients per hour).

(2) The total treatment capability of the Army Dental Care System for all beneficiaries in FY 1980 is depicted in Table D-16.

Table D-13. Prosthodontic Operations Completed 1943—1945 per 1,000 Men (Oversea)

YEAR	FULL DENTURES	PARTIAL DENTURES	REPAIRS	TOTAL
1943	10.0	28.1	19.9	58.0
1944	12.3	37.9	29.4	79.6
1945	9.2	40.3	33.6	83.1
YEARLY AVERAGE	10.5	35.4	27.6	73.6

Table D-14. Important Dental Treatments, Eighth US Army, 1952

DENTAL TREATMENTS	NUMBER
TOTAL RESTORATIONS (FILLINGS, CROWNS)	253,652
TOTAL TEETH REPLACED BY BRIDGES AND PARTIAL DENTURES	36,258
SURGICAL TREATMENTS (INCLUDE EXTRACTIONS AND FRACTURE REDUCTIONS)	302,465
GENERAL	
INPATIENT ADMISSIONS	8,508
OUTPATIENT ADMISSIONS	133,720
SITTINGS	493,441
EXAMINATIONS	334,712

Table D-15. United States Army Dental Patient Visits in Vietnam, 1968-1973

	FY 1968*	FY 1969	FY 1970	FY 1971	FY 1972	FY1973**
RESTORATIVE	167,057	273,045	249,249	156,259	54,431	8,715
FIXED PROSTHETICS	3,869	9,710	12,064	8,139	4,110	1,054
REMOVABLE PROSTHETICS	31,193	55,928	39,342	26,957	8,786	1,453
ORAL SURGERY	113,348	174,935	145,868	96,632	31,637	4,583
PERIODONTICS	13,206	16,766	13,653	5,569	1,563	619
ENDODONTICS	8,221	13,501	12,321	8,815	4,287	704
ORAL HYGIENE (PROPHYLAXIS)	64,243	112,332	119,548	63,667	33,808	8,648
ORAL DIAGNOSIS (EXAMINATIONS)	192,763	281,637	278,213	179,472	56,235	13,355
TOTAL DENTALPATIENTS TREATED	593,952	944,974	870,321	565,554	195,365	39,131
VIETNAMESE EXAMINATIONS (CIVIL ACTION}	44,470	59,474	NR	NR	NR	NR

* Last three quarters only.
 ** First three quarters only.

LEGEND

NR Not recorded
 FY Fiscal Year

Table D-16. Total Patients Treated in US Army Dental Care System, FY 1980

	1ST QUARTER	2D QUARTER	3D QUARTER	4TH QUARTER
HSC	720,383	760,674	766,491	764,132
Europe	198,205	277,154	237,671	222,983
Korea	24,666	30,827	18,997	16,292

D-11. Dental Care Requirements

Dental care needs include all treatment to put the individual in optimal oral health.

a. *Recruits* (see Table D-17).

b. *Active duty* (see Tables D-18 and D-19).

Table D-17. Dental Needs of Army Recruits—1981 Survey Mean Treatment Time Requirements by Total Sample and by Army Component in Hours

	REGULAR ARMY	RESERVE	NATIONAL GUARD	TOTAL SAMPLE
RESTORATIVE*	3.38	3.33	4.06	3.51
ENDODONTIA	.64	.49	.46	.52
FIXED PROSTHODONTIA	1.28	1.21	1.38	1.29
REMOVABLE PROSTHODONTIA	.21	.23	.24	.22
EXODONTIA—ERUPTED	.19	.18	.22	.20
IMPACTION	1.64	1.62	1.84	1.67
PERIODONTIA	.24	.30	.31	.26
PROPHYLAXIS	.35	.34	.35	.35
CALCULUS REMOVAL	.16	.17	.17	.16
EXAMINATION	.33	.33	.33	.33
TOTAL HOURS	8.32	8.20	9.36	8.51

* Includes only those recruits having bitewing radiographs, 1,773—Regular Army; 405—Reserve; and 537—National Guard.

*Table D-18. Distribution of Treatment of Active Duty Army—1978 Survey Time Requirements for Each Treatment Category by Rank Group**

TREATMENT CATEGORY	RANK GROUP					
	E1—E4	E5—E6	E-7—E9	W1—W4	O1—O3	O4—O6
RESTORATIONS*	2.74	2.32	1.77	1.24	1.23	0.72
EXTRACTIONS	0.28	0.18	0.11	0.08	0.14	0.05
ENDODONTICS	0.19	0.15	0.17	0.15	0.10	0.02
CROWN AND BRIDGE	0.44	0.65	0.52	0.34	0.38	0.53
FULL DENTURES	0.01	0.08	0.15	0.09	0.00	0.07
PARTIAL DENTURES	0.12	0.22	0.38	0.17	0.06	0.08
PROPHYLAXIS/SCALING	0.53	0.52	0.53	0.51	0.49	0.49
SUBGINGIVAL CURETTAGE	0.21	0.31	0.62	0.36	0.09	0.20
GINGIVECTOMY	0.10	0.20	0.57	0.10	0.11	0.09

* Figures presented are in hours and represent the time needed to deliver the particular needed care to the “average” individual in that group.

*Table D-19. Distribution of Treatment of Active Duty Army—1978 Survey Time Requirements for Each Treatment Category by Basic Branch/Career Management Field**

TREATMENT CATEGORY	COMBAT	COMBAT SUPPORT/ SERVICE SUPPORT
RESTORATIONS	2.57	2.06
EXTRACTIONS	0.23	0.19
ENDODONTICS	0.18	0.15
CROWN AND BRIDGE	0.44	0.57
FULL DENTURES	0.05	0.04
PARTIAL DENTURES	0.17	0.17
PROPHYLAXIS/SCALING	0.53	0.51
SUBGINGIVAL CURETTAGE	0.30	0.23
GINGIVECTOMY	0.16	0.19

* Figures are in hours and represent the time needed to deliver the particular needed care to the “average” individual in that group. It does not mean that every individual requires that much treatment time to satisfy his or her dental needs.

APPENDIX E

MEDICAL FORCE PLANNING**Section I. MEDICAL TROOP LIST****E-1. Medical Force Planning Process**

To accomplish its assigned mission, the command must be provided with troops of an adequate quantity and type. The demands of HSS on the modern battlefield will present significant challenges to medical commanders at all levels. The medical force structure designed to meet these challenges results from the medical force planning process. The HSS planner must be able to develop medical personnel and unit requirements needed to fulfill the mission of the AMEDD in a TO.

E-2. Formulation of Medical Requirements Troop Lists

Planning for medical troop requirements is normally done in three phases: estimation, calculation, and modification. These phases are not mutually exclusive in any sense. Portions may well be nearer final form than are others during the planning sequence.

a. Phase I—Estimation.

(1) Normally, there is little tangible, definitive information available to the planner early in a planning sequence. The planner may only know of major combatant elements, a general operational area, and perhaps the mission of the force and its expected duration. Accordingly, the experience of the planner and his systematic use of planning references and tools must be used to formulate a tentative medical troop basis required for support of the force to be deployed. There are, in addition to specifics which may be unique to the background of the planner, two tools which will assist in developing this tentative troop basis:

- Hospital bed computation.
- Basis of allocation.

(2) Knowing the number of major combatant forces (divisions) to be supported, the planner can readily estimate the total number of medical personnel spaces required for the CZ, the COMMZ, or the TO.

(3) Hospital bed computations are also included in the estimate phase as the hospitalization components of the force constitute the major elements of the medical support base, and their types and numbers dictate many of the other smaller units required in that base. The methodology for developing these bed requirements is discussed in Chapter 5.

(4) The overall structure of the tentative medical troop basis is then derived by a detailed review of the basis of allocation for all possible types of field medical units using the appropriate 8-series TOE. Knowing the level of HSS to be provided (employment zone), number of major combatant forces, and proposed distribution of forces, the planner prepares a listing of AMEDD units by number and type that, together with the data provided by bed computations, constitutes a viable tentative troop basis.

b. Phase II—Calculation. During the calculation phase of medical force planning, the tentative troop basis is refined based upon additional information and guidance received by the planner. For instance, specific command policies relevant to the HSS of the force, of allied forces, and of the indigenous populace may well cause significant changes in the troop composition. Specific bed requirement computations must be balanced with basis of allocation for

hospitalization units. A detailed, comprehensive, multidisciplinary staff review of the entire plan and the medical troop basis must be completed so that the support provided will be balanced, flexible, doctrinally-sound, and economical in terms of manpower and equipment resources used. Intramedical staff coordination must include an examination of HSS functional requirements. The product of this staffing or calculation phase should be a tailored medical troop basis adequate for support of the force.

c. Phase III—Modification/Refinement of Troop Basis.

(1) The final phase in medical force planning then involves final revisions dictated by additional command policy, guidance, or information received by the planner. Typically, such policy might include information on levels of support to be provided in specific specialties, logistics priorities, or support to allies. The more normal situation may include imposition of a personnel ceiling of forces to be deployed. Such a condition requires the assignment of judgmental priorities to the units in the troop basis, possibly only for the purpose of determining deployment phasing or sequencing.

(2) Options available to the planner for reducing medical spaces or units include—

- Recommending reduction in the evacuation policy.
- Substitution of similar units with like capabilities but fewer personnel.
- Use of Type B manning in units where appropriate.
- Elimination of units.

(3) In any reduction, the commander must be kept informed so as to be able to assess the risk involved. The final stage of force planning involves creating a troop list from the troop basis. The planner will—

- Assign specific units to fill the requirements.
- Task organize the medical support organization.
- Define command, control, and functional relationships.

Section II. TIME-PHASED FORCE AND DEPLOYMENT DATA

E-3. Planning for Employment

During the planning portion of the JOPES development phase (third phase of a five-phase process), the component/subordinate commanders time phase their force lists to sequence the arrival of forces according to a visualized concept of operations. Planning for employment is the product of mission analysis and intelligence assessment as it is keyed to the supported commander's

concept of operations. It is based on Service doctrine, guidance, review, and the availability of forces. While this planning is ultimately the responsibility of the supported joint commander of the CINC, the component commanders develop detailed lists of combat and support forces to accomplish the assigned tasks. This includes the required closure time of forces (as specified in the supported commander's concept of deployment) to be deployed to the AO. This phase concludes

with the production of the supported commander's Time-Phased Force and Deployment Data (TPFDD).

a. The TPFDD includes assigned forces, augmentation forces, and supporting forces which are to be deployed to the AO and forces stationed within the AO.

b. The TPFDD is built by each CINC and refined in a conference in detail by various participants to ensure the feasibility and adequacy of the data. The TPFDD is then loaded on a WWMCCS computer so that it may be accessible to planners throughout the joint military community on the WWMCCS.

E-4. Time-Phased Force Deployment List

The TPFDL is the major tool used by the unified commanders to request forces to support their OPLAN. In determining the adequacy of the logistics support for the TPFDL, the major factors considered are strategic lift, sustainability, pre-positioned war reserve stocks, force shortfalls, and warning time.

E-5. Fielding the Organization

Actual fielding of the organization is the most

difficult aspect of troop planning. An advanced party should be formed to prepare facilities and pre-position equipment. The advanced party should also coordinate the arrival of the remaining personnel. Then the professional staff and other personnel can join the unit at its destination assured of a place and equipment with which to work.

E-6. Tailoring Health Service Support to the Battlefield Situation

Health service support is tailored to the constantly changing battlefield situation. In this adjustment process, the methods of employment of medical TOE units must not be confused with their basis of allocation. The staff planners of HSS develop the medical troop list for a theater, using primarily the basis of allocation for the various medical units selected; whereas HSS operators in the various medical command and control headquarters deploy these units on the basis of need which results from shifting patient densities and/or the METT-T. An erroneous belief that the basis of allocation controls the methods of employment for a unit could cause misunderstandings between medical unit commanders and supported commanders and could result in non-effective use of a valuable battlefield health care delivery tool.

APPENDIX F

MEDICAL INTELLIGENCE**F-1. Aspects of Medical Intelligence**

Medical intelligence is that intelligence produced from the collection, evaluation, and analysis of information concerning the medical aspects of foreign areas that have immediate or potential impact on policies, plans, and operations. Medical intelligence also includes the observation of the fighting strength of enemy forces and the formation of assessments of foreign medical capabilities in both military and civilian sectors. To develop medical intelligence, information is gathered, evaluated, and analyzed on the following subjects:

a. Endemic and epidemic diseases, public health standards and capabilities, and the quality and availability of health services.

b. Medical supplies and blood products, health service facilities, and the number of trained HSS personnel.

c. The location, specific diseases, strains of bacteria, lice, mushrooms, snakes, fungi, spores, and other harmful organisms.

d. Foreign animal and plant diseases, especially those diseases transmissible to humans.

e. Health problems relating to the use of local food and water supplies.

f. Medical effects of radiation and prophylaxis for chemical and biological agents.

g. The possible casualties that can be produced by newly developed foreign weapon systems such as directed energy weapons.

h. The health and fitness of the enemy's force and his special use of antidotes.

i. Areas of operations such as altitude, heat, cold, and swamps that in some way may

affect the health of the command or HSS operations.

F-2. Significance of Medical Intelligence

a. At the strategic level, the objective of medical intelligence is to contribute to the formulation of national and international policy. The policy will be predicated in part on foreign military and civilian capabilities of the medical or biological scientific community.

b. At the operational level, the objective of medical intelligence is to develop HSS that—

(1) Counters the medical threat.
(See FM 8-10 and FM 8-10-8.)

(2) Is responsive to the unique aspects of a particular theater.

(3) Enables the commander to conduct his operation.

(4) Conserves the fighting strength of friendly forces.

F-3. Sources of Medical Intelligence

a. All medical intelligence is provided to the medical planner by intelligence organizations. The medical planner must identify the intelligence requirements and provide that request to the supporting intelligence element within the command or task force. In an emergency, up-to-date medical intelligence assessments can be obtained by contracting the Armed Forces Medical Intelligence Center (AFMIC), Fort Detrick, Maryland 21702-5004. The message address is DIRAFMICFTDETRICKMD. Medical intelligence elements and AFMIC can provide

Medical Capabilities Studies, Disease Occurrence—Worldwide Reports, Foreign Medical Materiel Studies, the Disease and Environmental Alert Report, the Foreign Medical Facilities Handbook, Scientific and Threat Intelligence Studies, Foreign Medical Materiel Exploitation Reports, Quick Reaction Responses, and the AFMIC Wire. The medical planner must use all available intelligence elements to obtain needed intelligence to support the military operation. See FM 8-10-8 for a discussion of medical intelligence.

b. A supporting intelligence element should exist at some point in the medical unit's chain of command. This element, whether military or civilian, will be the primary source for the HSS planner to access the necessary intelligence for the execution of HSS operations. The HSS personnel must develop a feedback system with the supporting intelligence element to provide as well as receive intelligence updates.

c. The following organizations are recipients of medical intelligence from AFMIC and may also be the sources of other data to be used in tandem with medical intelligence for development of support plans or medical threat risk assessments.

(1) Office of The Surgeon General (OTSG), US Army.

- Category of information: Not applicable.

- Tasking requirement: Direct contact.

- Maintains limited data. Specific areas of interest may be addressed.

(2) Walter Reed Army Institute of Research (WRAIR) (Preventive Medicine).

- Category of information: For Official Use Only/Not Releasable to Foreign Nationals (FOUO/NOFORN).

- Tasking requirement: Direct contact.

- Maintains area specific information to brief epidemiological survey teams. Area specific information reports may be addressed in 2 to 3 days.

(3) Natick Research Laboratory.

- Category of information: FOUO/NOFORN.

- Tasking requirement: Direct contact.

- Maintains documents on weather survey teams and effects of weather on soldiers. Also maintains climatic and geodetic information. Does not maintain specific medical intelligence.

(4) Foreign Service and Technology Center.

- Category of information: FOUO/NOFORN.

- Tasking requirement: Direct contact.

- Maintains foreign military equipment data and some medical information in the preventive medicine field such as the water purification apparatus.

(5) Defense Pest Management Information Analysis Center.

- Category of information: Unclassified.

Direct contact.

- Tasking requirement:
- Maintains arthropod vector and pest biology, ecology, and geographical distribution data; arthropod-borne disease data; and rodent, venomous vertebrate and invertebrate, hazardous marine organisms, and toxic flora data.

(6) United States Army Medical Research Institute of Infectious Diseases.

Branch.

- Operational Medicine
- Category of information: FOUO/NOFORN.
- Tasking requirement: Direct contact.

- Maintains information on biological warfare agents and medical countermeasures to such agents. Also maintains deployable aeromedical isolation team to evacuate a patient with a highly infectious disease under biocontainment conditions.

(7) United States Army Medical Research Detachment-Brooks.

- Category of information: FOUO/NOFORN.
- Tasking requirement: Direct contact.

- Maintains information on directed energy threat and countermeasures. Also maintains capability for management of laser eye injuries.

d. The following are civilian sources for procuring various types of medical intelligence products.

(1) Department of State.

- Category of information: Secret.
- Tasking requirement: Direct contact.
- Maintains annual updates of endemic diseases and prophylaxes. Lists embassy medical personnel and medical capabilities at each location.

(2) World Health Organization (WHO).

- Category of information: Unclassified.
- Tasking requirement: Direct contact.
- Primarily maintains statistical data on endemic diseases (information is subject to skepticism). Data compiled from each country's self-prepared reports. Country may report incorrect data because of national pride, impact on tourism, or lack of surveillance.

e. The following are source locations at Fort Bragg, North Carolina, for procuring various types of medical intelligence products:

(1) XVIII Airborne Corps.

- Category of information: Secret.
- Tasking requirement: Assistant Chief of Staff, G2, Intelligence.
- Maintains National Security Agency material with general medical and epidemiological information.

(2) XVIII Airborne Corps Surgeon's Office.

- Category of information: Secret.
- Tasking requirement: None.
- Maintains AFMIC capability studies and monthly scientific intelligence review produced by National Foreign Assessment Center.

(3) United States Army John F. Kennedy (JFK) Special Warfare Center and School (Assistant Chief of Staff, G2, Intelligence).

- Category of information: Secret.
- Tasking requirement: None.
- Maintains Defense Intelligence Agency and National Security Agency reports with limited medical information (normally several years old).

(4) United States Army JFK Special Warfare Center and School Surgeon's Office.

- Category of information: Secret.
- Tasking requirement: None.
- Maintains AFMIC weekly wire that contains specific and current update of medical information, area studies produced by the Defense Intelligence Agency (DIA) on specific countries, State Department reports, WHO weekly reports, and reference library on most endemic disease groups, files, slides, and studies.

(5) Fourth Psychological Operations Group.

- Category of information: FOUO/NOFORN.
- Tasking requirement: None.
- Maintains basic DIA and National Security Agency documents. Army experts on psychological operations are very knowledgeable on specific cultures, psychological background data, nutritional basics, taboos, and folk medicine.

(6) Regional Studies Course (RSC).

- Category of information: FOUO.
- Tasking requirement: None.
- Maintains no source documents; the RSC is attended by officers who have extensive experience in the regions they study. Generally, those officers have lived in those regions. The point of contact is Commander, Co D, 3d Bn, 1st SPWAR TN Group (A), Fort Bragg, North Carolina 28307-5000.

(7) General Intelligence Production Detachment.

- Category of information: Top Secret.
- Tasking requirement: None. (US Army JFK Center and School G-2 only on deployment order.)
- Maintains order of battle material with continuous update. Intelligence production request must be channeled through G-2. Medical information is limited.

(8) United States Army JFK Center and School Library.

- Category of information: FOUO/NOFORN.

- Tasking requirement: None.

- Maintains general area information: Department of State reports, DA Form 550 series; and area handbooks.

(9) Threat Manager, US Army Medical Department Center and School.

- Category of information: Unclassified through TOP SECRET.

- Tasking requirement: Requests for information to Commander, US Army Medical Department Center and School, ATTN: Threat Manager, Fort Sam Houston, TX 78234-6100.

- Maintains finished intelligence and United States Army Training and Doctrine Command threat data bases. Produces medical threat risk assessment projections (MEDTRAP) to support AMEDDC&S and Army combat development activities. The MEDTRAP methodology is a tool used to assess and project risk from assorted medical threats to US Forces operating in different geographical areas and during the execution of a variety of missions across the operational continuum. These assessments are based on historical data, open source, published medical information, insights from subject matter experts, and current, finished medical intelligence. The MEDTRAP methodology allows for timely and accurate vulnerability assessment for development and execution of effective passive and active protective measures prior to exposure of US Forces to high risk medical threat agents. It also provides operational commanders, intelligence officers (J2/G2/S2), and AMEDD HSS planners with limited medical threat vulnerability data in support of intelligence preparation of the battlefield.

GLOSSARY

ABBREVIATIONS, ACRONYMS, AND DEFINITIONS

AA air ambulance	AMEDD Army Medical Department
AABB American Association of Blood Banks	AMEDDC&S Army Medical Department Center and School
AAD admission and disposition	AML area medical laboratory
ABCA American, British, Canadian, and Australian	AO area of operations
ACFT aircraft	AOC area of concentration
ACR armored cavalry regiments	AOR area of responsibility
AD active duty	APOD aerial port of debarkation
ADAPCP Alcohol and Drug Abuse Prevention and Control Program	approx approximately
ADC area damage control	AR Army regulation
admin administrative	ARC Army Reserve Component
ADP automatic data processing	ASAP as soon as possible
AE aeromedical evacuation	ASBP Armed Services Blood Program
AECC Aeromedical Evacuation Control Center	ASBPO Armed Services Blood Program Office
AECE aeromedical evacuation control element	ASF aeromedical staging facility
AELT aeromedical evacuation liaison team	ASIOE associated support items of equipment
AFMIC Armed Forces Medical Intelligence Center	ASL authorized stockage list
AG Adjutant General	ASMB area support medical battalion
AJBPO Area Joint Blood Program Office	ASMC area support medical company
AJMRO Area Joint Medical Regulating Office	ASMRO Armed Services Medical Regulating Office(r)
amb ambulance	ASWBPL Armed Services Whole Blood Processing Laboratory
AMC air mobility command	ATM advanced trauma management

attn attention

AUTODIN automatic digital network

AVIM aviation intermediate maintenance

avn aviation

AWM aviation unit maintenance

AWOL absent without leave

AXP ambulance exchange point

BAS battalion aid station

BDC blood donor center

bde brigade

BDP base development plan

BFC battle fatigue casualty

BG Brigadier General

BI battle injury

BLDREP blood report

BLDSHIPREP blood shipment report

bn battalion

BPD blood products depot

BSA brigade support area

BSU blood supply unit

BTC blood transshipment centers

CA Civil Affairs

CANA convulsant antidote for nerve agent

CAP crisis action planning

CDS cargo delivery system

CFRC combat fitness reconditioning center

chap chaplain

CINC Commander in Chief

CJTF Commander, Joint Task Force

CLS combat lifesaver

CMCC corps movement control center

cmd command

CMO civil-military operations

co company

COA course(s) of action

CofS Chief of Staff

COHORT cohesion, operational readiness training

COL colonel

COMARFOR Commander, Army Forces

comm communication(s)

COMMZ communications zone

compt comptroller

CONPLAN concept plan

cont control

CONUS continental United States

COSCOM corps support command

CP command post	DBSS Defense Blood Standard System
CPT captain	DCS Deputy Chief of Staff
CRAF Civil Reserve Air Fleet	DCSOPS Deputy Chief of Staff for Operations and Plans
CRO carded-for-record only. Special cases that are not admitted to an inpatient status but require the preparation of a DA Form 3647 or a DD Form 1380 and the assignment of a register number (AR 40-66 and AR 40-400).	DE directed energy
CRTS casualty receiving ship	den dental
CS combat support	DEPMEDS Deployable Medical Systems
CSA corps support area	det detachment
CSB combat stress behavior	DIA Defense Intelligence Agency
CSC combat stress control	DIH died in hospital
CSCP combat stress control preventive	DIS disease
CSCR combat stress control restoration	DISCOM division support command
CSH combat support hospital	distr distribution
CSS combat service support	div division
CTF commander, task force	DMCC depot maintenance control center
CVC calibration, verification, and certification	DMOC division medical operations center
CZ combat zone	DMRIS Defense Medical Regulating Information System
D day	DMSB Defense Medical Standardization Board
DA Department of the Army	DMSO division medical supply officer
DA Pam Department of the Army Pamphlet	DNBI disease and nonbattle injury
DAS3 Decentralized Automated Service Support System	doc document
	DOD Department of Defense
	DOS days of supply

DOW died of wounds

DS direct support

DSA division support area

DSN defense switched network

DSU direct support unit

D-TACC deployed tanker airlift control center

DTF dental treatment facility

DTG date-time group

E echelon

EAC echelons above corps

EEI essential elements of information

EMT emergency medical treatment/technician

ento entomology

EPA Environmental Protection Agency

EPW enemy prisoner(s) of war

equip equipment

evac evacuation

FAC free available chlorine

FAX facsimile

FDA Food and Drug Administration

FEBA forward edge of the battle area

FFP fresh frozen plasma

FH field hospital

fld field

FLOT forward line of own troops

FM field manual

FMC field medical card

FOUO For Official Use Only

FRAGO fragmentary order

FSB forward support battalion

FSMC forward support medical company

FSP forward supply platoon

fwd forward

FY fiscal year

FZ frozen

G1 Assistant Chief of Staff (Personnel)

G2 Assistant Chief of Staff (Intelligence)

G3 Assistant Chief of Staff (Operations and Plans)

G4 Assistant Chief of Staff (Logistics)

G5 Assistant Chief of Staff (Civil Affairs)

GA ground ambulance

GEN general

GH general hospital

gp group

GS general support

GWS Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field	inf infantry
HHC headquarters and headquarters company	info information
HHD headquarters and headquarters detachment	infect infectious
hist history	intel intelligence
HIV human immunodeficiency virus	INTSUM intelligence summary
HMMWV high mobility multipurpose wheeled vehicle	IPDS Individual Patient Data System
hldg holding	IRHA injury result of hostile action
hosps hospitals	ISG immune serum globulin
HQ headquarters	ITR inpatient treatment record
HREC health record	J2 Intelligence
HSC headquarters and support company	J3 Operations and Plans
HSS health service support	J5 Civil Affairs
HUB hospital unit, base	JA Judge Advocate
HUH hospital unit, holding	JAMPS JINTACCS Automated Message Preparation System
HUM hospital unit, medical	JBPO Joint Blood Program Office(r)
HUS hospital unit, surgical	JCS Joint Chiefs of SW
HUSF hospital unit, surgical forward	JFK John F. Kennedy
HUSM hospital unit, surgical main	JINTACCS Joint Interoperability of Tactical Command and Control
IAW in accordance with	JMRO Joint Medical Regulating Office(r)
IG inspector general	JOA joint operational area
IM infectious mononucleosis	JOPES Joint Operation Planning and Execution System

JTF joint task force

KIA killed in action

LAPES low-altitude parachute extraction system

LAT/LONG latitude/longitude

lbs pounds

loc locator

log logistics

LOGPLAN logistics plan

LOGSTAT logistic status

LQ liquid

LTC lieutenant colonel

LTOE living tables of organization and equipment

MACOM major Army command

maint maintenance

MAJ major

MAJCOM major command

MASCAL mass casualties

MASF mobile aeromedical staging facility

MASH mobile army surgical hospital

mat materiel

MCC movement control center

MCD medical crew director

MCT movement control team

mech mechanized

MED medical

MEDASM medical assemblage management

MEDCOM medical command

MEDDAC medical department activity

MEDEVAC medical evacuation

MEDLOG medical logistics

MEDMNT medical maintenance

MEDMOD medical module

MEDPAR medical patient accounting and reporting

MEDREG medical regulating

MEDSTAT medical status

MEDSTEP Medical Standby Equipment Program

MEDSUP medical supply

MEDTRAP medical threat risk assessment projections

MER medical equipment repairer

METT-T mission, enemy, terrain and weather, troops, and time available

mgt management

MH mental health

MIA missing in action

mil military	MWD military working dog(s)
mL milliliter	NAPP nerve agent physostigmine pretreatment
MMC materiel management center	NATO North Atlantic Treaty Organization
MOPP mission-oriented protective posture	NBC nuclear, biological, and/or chemical
MOS military occupational specialty	NBI nonbattle injury
MPL mandatory parts list	NCO noncommissioned officer
MPM Medical Planning Module	NCOER NCO evaluation report
MPRJ Military Personnel Records Jacket, US Army	NCOIC noncommissioned officer in charge
MRE meal(s), ready to eat	NEACDS Naval Emergency Air Cargo Delivery System
MRO medical regulating office(r)	NEO noncombatant evacuation operations
MSB main support battalion	neuro neurology
MSC Military Sealift Command	NG National Guard
MSE mobile subscriber equipment	NICP national inventory control point
MSMC main support medical company	NLT not later than
MSR main supply route	NMP national maintenance point
MSRS Medical Summary Reporting System	NOFORN Not Releasable to Foreign Nationals
MST mobile support team	NP neuropsychiatric
MTE medical treatment elements	NR not recorded
MTF medical treatment facility	NSN national stock number
MTFE Message Text Format Editor	OCONUS outside continental United States
MTMC Military Traffic Management Command	OER officer evaluation report
MTOE modified table of organization and equipment	

OL operating level

OOTW operations other than war

OPCON operational control

OPLAN operation plan

OPORD operation order

opt optometry

OR operating room

ORF operational readiness float

OST order ship time

OTSG Office of The Surgeon General

PAD patient administrator(ion)

pam pamphlet

P&A Personnel and Administration

PA Public Affairs

PCP patient collection point(s)

PERINTREP periodic intelligence report

PFM patient flow model

PIES proximity, immediacy, expectancy, simplicity

PLL prescribed load list

plt platoon/platelet concentrate

PMCS preventive maintenance checks and services

pnt patient

POL petroleum, oils, and lubricants

POR preparation of replacements for oversea movement

ppm parts per million

prof professional

PROFIS Professional Officer Filler System

pros prosthodontics

PTSD post-traumatic stress disorder

PVNTMED preventive medicine

QSTAG Quadripartite Standardization Agreement

RBC red blood cell

REBUT resupply by unit

RFI requests for information

RO requisitioning objective

ROP reorder point

RP retained personnel

rqns requisitions

RSC regional studies course

RTD return(ed) to duty

S1 Adjutant

S2 Intelligence Officer

S3 Operations and Training Officer

S4 Supply Officer

sani sanitation	TACC tactical air control center
S&T supply and transport	TAMMIS Theater Army Medical Management Information System
SB supply bulletin	TB technical bulletin
SC supply catalog	TB MED technical bulletin medical
sec section	TC training circular
SFG special forces group(s)	TCMR traffic control movement request
SIB signal battalion	TCMS Theater Construction Management System
SICC service item control center	TDA table of distribution and allowances
sig signal	tech technical/technician
SIMLM single integrated medical logistics manager	TM technical manual/team
SJA Staff Judge Advocate	TMDE test, measurement, and diagnostic equipment
SKO sets, kits, and outfits	TMMMC Theater Medical Materiel Management Center
SL safety level	TO theater of operations
SOI signal operation instruction	TOE table(s) of organization and equipment
SOP standing operating procedure	TPFDD Time-Phased Force Deployment Data
SPO security, plans, and operations	TPFDL Time-Phased Force Deployment List
spt support	trans transport
sqd squad	trmt treatment
SSA supply support activity	TSG The Surgeon General
STANAG Standardization Agreement	TSOP tactical standing operating procedure
surg surgeon	UAL unit assemblage listing
svcs services	UM unit maintenance
TA theater Army	

UMT unit ministry team

US United States

USAF United States Air Force

USAMMA United States Army Medical Materiel Agency

USARPERCEN US Army Personnel Center

USCINCLANT United States CINC, Atlantic

USCINCLANTINST USCINCLANT, Atlantic Instructions

USJMTF United States Joint Message Text Format

USMC US Marine Corps

USTRANSCOM United States Transportation Command

UTM universal transverse Mercator (grid)

VET veterinary

VIC vicinity

WBC white blood cell

WHO World Health Organization

WIA wounded in action

WRAIR Walter Reed Army Institute of Research

WWMCCS Worldwide Military Command and Control System

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