

FM 4-02.10

THEATER HOSPITALIZATION

HEADQUARTERS, DEPARTMENT OF THE ARMY

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THEATER HOSPITALIZATION

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PREFACE

The Army Medical Department (AMEDD) continues to pursue the transformation vision. To achieve complete alignment with the transformation process, the AMEDD is committed to a Current and Future Force. Until the transition from Current Force to Future Force is completed, the AMEDD will have a mixed Level III and IV hospital support base.

Under the current Medical Force 2000 (MF2K) concept, theater hospitalization is provided by three hospitals, the combat support hospital (CSH), the field hospital (FH) and the general hospital (GH). These hospitals were designed and based upon the North Atlantic Treaty Organization (NATO) scenario and workloads. Current MF2K hospital doctrine is provided in Field Manual (FM) 8-10-14 for the CSH and FM 8-10-15 for the FH and the GH.

Under the current Medical Reengineering Initiative (MRI), theater (corps and echelons above corps [EAC]) hospitalization is provided by a single CSH. The CSH is designed based on lessons learned from Desert Shield/Desert Storm, recent contingency operations, and the requirements of the future war fighting. In particular, hospital size and bed mix are based upon these experiences as well as the casualty rates, disease and nonbattle injury (DNBI) rates, and projected evacuation policy for the major regional conflict scenarios.

To support the transforming Army to the Future Force, the MRI corps CSH has been redesigned into adaptive medical increments (AMI). The AMI, with its modular design, enhances the ability to tailor health service support (HSS) to adapt to mission requirements of a smaller magnitude when a complete CSH is not required.

The purpose of this publication is to describe the Current (MRI) Force CSH and the redesigned corps CSH in support of the Future Force. The CSH incorporates doctrine based on the A-edition Table(s) of

FM 4-02.10

Organization and Equipment (TOE) 08945A000 (corps CSH) and 08855A000 (EAC). The organizational structures presented in this publication reflect those established in the A-edition TOE in effect on the date of this publication. For a copy of your modified TOE (MTOE), contact the Authorizations Documentation Directorate, 9900 Belvoir Road, Suite 120, ATTN: MOFI-FMA, Fort Belvoir, Virginia 22060-2287.

This publication incorporates the Universal Joint Task List (UJTL) (see Chairman, Joint Chiefs of Staff Manual [CJCSM] 3500.04C) and the Army Universal Task List (AUTL) (see FM 7-15) that are applicable to HSS commanders throughout the operational continuum. These task lists are used to form the doctrinal foundation for the Army tactical task (ART) in support of mission operations and collective tasks.

The following AUTL ART are incorporated into this FM and will be discussed in depth as to their applicability across the operational continuum.

AUTL ART

ART 5.3	Conduct Survivability Operations
ART 6.1	Provide Supplies
ART 6.2	Provide Maintenance
ART 6.8	Provide Religious Support
ART 6.13	Conduct Internment and Resettlement Activities
ART 7.8	Conduct Continuous Operations
ART 7.9	Develop and Implement Command Safety Program
ART 8.4	Conduct Support Operations

The use of the term *level of care* in this publication is synonymous with the terms *echelon of care* and *role of care*. The term echelon of care is the former NATO term. The term *role of care* is the current NATO and American, British, Canadian, and Australian Armies term.

The information presented in this FM is consistent with and supports FM 4-02 (Force Health Protection in a Global Environment). Throughout this publication, the term HSS is synonymous with Force Health Protection in a Global Environment.

This publication is designed primarily for the hospital commander, his staff, assigned personnel, and medical planners. The structural layout of the hospital is flexible and situationally determined (for example, mission requirements, commander's guidance, and terrain features). It requires intensive prior planning and training of all personnel to establish the facility. Users should be familiar with FM 3-0.

The proponent of this publication is the United States (US) Army Medical Department Center and School (AMEDDC&S). Users of this publication are encouraged to submit comments and recommendations to improve the publication. Comments should include the page, paragraph, and line(s) of the text where the change is recommended. Comments and recommendations should be forwarded directly to Commander, AMEDDC&S, ATTN: MCCS-FCD-L, 1400 East Grayson Street, Fort Sam Houston, Texas 78234-5052, or by using the e-mail address: Medicaldoctrine@amedd.army.mil.

This publication implements or is in consonance with the following NATO International Standardization Agreements (STANAGs) and American, British, Canadian, and Australian (ABCA) Quadripartite Standardization Agreement (QSTAG):

STANAG	QSTAG	TITLE
2068		Emergency War Surgery
2931		Orders for the Camouflage of the Red Cross and Red Crescent on Land in Tactical Operations
	2026	Principles and Procedures for Tracing and Tracking Personnel in an ABCA Coalition Force

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

The use of trade names or trademarks in this publication is for illustrative purposes only and does not imply endorsement by the Department of Defense (DOD).

CHAPTER 1

**HOSPITALIZATION SYSTEM IN A
THEATER OF OPERATIONS****1-1. Health Service Support in a Theater of Operations**

a. A theater of operations (TO) is that portion of an area of conflict necessary for military operations, either offensive or defensive, to include administration and logistical support. The scenario depicts the size of the TO and the US forces to be deployed. The theater is normally divided into a combat zone (CZ) and a communications zone (COMMZ). The CZ begins at the Army/corps rear boundary and extends forward to the extent of the commander's area of influence. The COMMZ begins at the corps rear boundary and extends rearward to include the area(s) needed to provide support to the forces in the CZ. In some instances, the COMMZ may be outside the TO and located in offshore support facilities, third country support bases, or in the continental United States (CONUS).

b. The Army Service Component Command (ASCC) is responsible for providing HSS for the Army component in a TO.

c. The medical command (MEDCOM) commander or the senior medical commander in the theater functions as the deputy chief of staff for medicine (DCSMED) for the ASCC. As the DCSMED, he provides information, recommendations, and professional medical advice to the ASCC commander and special staffs. He also maintains current data regarding the status, capabilities, and requirements for HSS. As the DCSMED, he is responsible to the ASCC commander for staff planning and coordinating and developing policies for HSS of the theater Army forces.

d. The mission of the AMEDD is to conserve the fighting strength. This mission of HSS is a continuous and integrated function throughout the TO. It extends from the CZ back through the COMMZ and ends in CONUS. Health service support maximizes the system's ability to maintain presence with the supported soldier, to return injured, sick, and wounded soldiers to duty, and to clear the battlefield of soldiers who cannot return to duty (RTD). Patients are examined, treated, and identified as RTD or nonreturn to duty (NRTD) as far forward as is medically possible. Initial identification is performed by the treating primary care provider and continues in the evacuation chain with constant reassessment. Patients requiring evacuation out of the division who are expected to RTD within the theater evacuation policy are evacuated to a corps and/or COMMZ hospital. Those patients classified as NRTD follow the evacuation chain for evacuation out of the theater.

e. The HSS system is a continuum from the forward edge of the battle area through the CONUS sustainment base. It is a system that provides medical management throughout all levels of care. The challenge is to simultaneously provide medical support to deploying forces; provide health care services to the CONUS base; and establish an HSS system within the theater. Additionally, there will be a requirement to provide medical support to redeployment and demobilization operations at the conclusion of military combat operations. Furthermore, HSS requirements will surface in support of stability operations and support operations. The basic tenets of HSS for a Force Projection Army involve strict adherence to Army medical battlefield rules. These battlefield rules provide the basis for the development of medical organizations and force structure. Table 1-1 lists these rules in order of precedence.

Table 1-1. Army Medical Battlefield Rules

BE THERE (MAINTAIN A MEDICAL PRESENCE WITH THE SOLDIER)
MAINTAIN THE HEALTH OF THE COMMAND
SAVE LIVES
CLEAR THE BATTLEFIELD OF CASUALTIES
PROVIDE STATE-OF-THE-ART MEDICAL CARE
ENSURE EARLY RETURN TO DUTY OF THE SOLDIER

1-2. Principles of Health Service Support

a. Conformity. Conformity with the theater plan is the most fundamental element for effectively providing HSS. Only by participating in the development of the theater operation plan (OPLAN) can the medical planner ensure adequate HSS at the right time and at the right place.

b. Continuity. Health service support must be continuous since an interruption of treatment may cause an increase in morbidity and mortality. Procedures are standardized at each organizational level to ensure that all required medical treatment is accomplished. No patient is evacuated any farther to the rear than his physical condition or the military situation requires. In the COMMZ, patients are not evacuated to the CONUS support base if they can be returned to duty within the provisions of the theater evacuation policy.

c. Control. Control of medical resources must rest with the medical commander. Health service support staff officers must be proactive and keep their commanders apprised of the impact of future operations on HSS assets. The medical commander must ensure that the HSS system is responsive to the requirements of the theater. He must be able to tailor his HSS resources and direct them to focal points of demand throughout the area of operations (AO). Since HSS resources are limited, it is essential that their control be retained at the highest HSS level consistent with the tactical situation.

d. Proximity. In the CZ, the location of HSS assets in support of combat operations is dictated by the tactical situation (mission, enemy, terrain and weather, troops and support available, time available, and civil considerations [METT-TC] factors) and the availability of evacuation resources. In the COMMZ, the hospitals should be located to facilitate access to medical evacuation (MEDEVAC) resources (Army, United States Air Force [USAF], and Navy, if available), host nation (HN) rehabilitation resources (if applicable), and command and control (C2) facilities.

e. Flexibility. A change in tactical plans or operations may require redistribution or relocation of medical resources. No more medical resources should be committed nor medical treatment facilities (MTFs) established than are required to support the expected patient densities.

f. Mobility. Mobility is measured by the extent to which a unit can move its personnel and equipment with organic transportation. When totally committed to patient care, the CSH can retain its limited mobility only by immediate patient evacuation. The hospital's limited mobility severely restricts its capability to relocate assigned personnel and equipment. It is imperative that medical planners program transportation requirements into the system and coordinate with management nodes to ensure adequate transportation assets are requested. Each hospital must have contingency plans to affect a move should one be required; they should routinely do those administrative measures that will enhance the facilities' ability to move. For example, load plans must be developed, maintained, and updated as necessary to ensure that all necessary equipment and supplies are included in the move. The medical planner will identify transportation requirements that exceed the hospital's capability and coordinate requirements with the supporting transportation element.

1-3. Levels of Health Service Support

The HSS system is organized into five levels of support. The TO is normally organized into four levels of support that extend rearward throughout the theater. The fifth level is located in CONUS. Each level has the same capabilities as the level before it, but adds a new treatment capability that distinguishes it from the previous level. In the TO, HSS is tailored and phased to enhance patient acquisition, treatment, evacuation, and RTD as far forward as the tactical situation will permit. Hospital resources located at Levels III and IV will be employed on an area basis to provide the utmost benefit to the maximum number of personnel in the AO. Wounded, sick, or injured soldiers will normally be treated, returned to duty, and/or evacuated to CONUS (Level V) through the theater's four levels. For an additional discussion on the levels of medical care, see FM 4-02.

a. Level I—The first medical care a soldier receives is provided at this level. This care includes immediate lifesaving measures, emergency medical treatment (EMT), advanced trauma management (ATM), disease prevention, stress prevention, casualty collection, and evacuation from supported unit to supporting MTF. Level I elements are found in divisions, corps, and at EAC units. These elements include the trauma specialist assisted by first aid (self-aid/buddy aid) and enhanced first aid (combat lifesaver) and the Level I MTF (battalion aid station [BAS]). Some or all of these elements are found in maneuver, combat support, and combat service support (CSS) units. When a Level I medical capability is not present in a unit, this support is provided, on an area support basis, to that unit by the supporting Level II medical unit.

b. Level II—Capabilities duplicate Level I and expand available services by adding operational dental care, laboratory, x-ray, and patient holding capabilities. Some Level II facilities also have mental health and preventive medicine (PVNTMED) capabilities. Emergency medical treatment and ATM is continued. If necessary, additional emergency measures are instituted; however, these measures do not exceed those dictated by the immediate needs. Level II units are located in the CZ (brigade, division, corps support areas) and at EAC. Forward support, brigade support, main support, division support, area support medical companies, and medical troops provide Level II medical care. The forward surgical team (FST) from the corps collocates with a medical company/troop and provides emergency resuscitative surgical capability. The combined medical company and FST are generally considered to be Level II+. This capability is organic to the medical company/troop, main support battalion, division support command, airborne and air assault divisions, and the support squadron, armor cavalry regiment (light).

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c. Level III—This level of support expands the support provided at Level II. Level III characterizes the care that is provided by the CSH in the corps. Minimum operational functions required for a Level III hospital include: command, control, and communications; patient administration; nutritional care; supply and services; triage; emergency medical treatment; preoperative care; orthopedics; general surgery; operating rooms and central materiel and supply services; anesthesia, nursing services (to include intensive and intermediate care wards); pharmacy; clinical laboratory and blood banking; radiology services; and hospital ministry team services. Operational conditions may require Level III units to locate in offshore support facilities, third country support bases, or in other locations. Level III hospitalization provides hospital care to all classes of patients and with medical resupply can indefinitely sustain care. The Level III hospital in some environments may be augmented with specialty teams, such as head and neck or renal hemodialysis team.

d. Level IV—This level of care is provided at an EAC CSH that is normally augmented with additional and specialized medical and surgical capabilities and with additional patient holding capabilities. The EAC CSH is staffed and equipped for general and specialized medical and surgical treatment. This level of care provides further treatment to stabilize those patients requiring evacuation to CONUS.

e. Level V (CONUS Support Base)—This definitive level of care is provided in the CONUS support base. The patient is treated in hospitals staffed and equipped to provide the most definitive care available. Hospitals used to provide this care are not limited to US Army hospitals. Hospitals from the other military Services, the Department of Veterans Affairs (VA), and the civilian health care systems may also be included. Civilian hospitals include those hospitals that are members of the National Disaster Medical Systems (NDMS).

1-4. Medical Evacuation and Medical Regulating

a. Definition.

(1) Medical evacuation is the timely, efficient movement and en route care provided by medical personnel of wounded, injured, and ill soldiers from the battlefield or other locations within the TO. Evacuation begins when medical personnel receive the injured or ill soldier and continues as far rearward as the patient's medical condition warrants or the tactical situation allows. The higher level is responsible for coordinating for the evacuation of patients from the lower level of care.

(2) Medical regulating entails identifying the patients awaiting evacuation, locating the available beds, and coordinating the transportation means for movement. Careful control of patient evacuation to the appropriate hospital is necessary to—

- Effect an even distribution of cases.
- Ensure adequate beds are available for current and anticipated needs.
- Route patients requiring specialized treatment to the appropriate MTF.

b. Theater Evacuation Policy.

(1) The theater evacuation policy is established by the Secretary of Defense with the advice of the Joint Chiefs of Staff and upon the recommendation of the theater commander. The policy establishes, in the number of days, the maximum number of days of noneffectiveness (hospitalization and convalescence) that patients may be held within the TO for treatment. This policy does not mean that a patient is held in the TO for the entire period of noneffectiveness. A patient who is not expected to be ready to RTD within the number of days established in the theater evacuation policy is evacuated to the CONUS or some other safe haven. This is done providing that the treating physician determines that such evacuation will not aggravate the patient's disabilities or medical condition.

(2) To the degree that a significant increase in patients occurs (due perhaps to an epidemic or heavy combat casualties), a temporary reduction in the policy may be necessary. This reduction is used to adjust the volume of patients to be held in the TO hospital system. A reduction in the evacuation policy increases the number of patients requiring out-of-theater evacuation, and it increases the requirement for evacuation assets. This action is necessary to relieve the congestion caused by the patient increases. A decrease in the theater evacuation policy decreases the hospitalization requirements.

(3) The time period established in the theater evacuation policy starts on the date the patient is admitted to the first hospital (CZ or COMMZ). The total time a patient is hospitalized in the TO (including transit time between MTFs) for a single, uninterrupted episode of illness or injury should not exceed the number of days stated in the theater evacuation policy. Though guided by the evacuation policy, the actual selection of a patient for evacuation is based on clinical judgment as to the patient's ability to tolerate and survive the movement to the next level of HSS.

1-5. Theater Hospital System

The theater hospital system consists of a CSH structure with two variants (a corps CSH and an EAC CSH); a medical detachment, minimal care; a medical detachment, telemedicine; three hospital augmentation teams; two medical teams; and an FST.

- *Combat Support Hospital.* Corps and EAC CSHs provide definitive care and HSS to all patients who will either be returned to duty or stabilized for evacuation out of the corps or theater. Theater hospitalization is discussed in detail in the remaining contents of this publication.

- *Medical Detachment, Minimal Care.* See Appendix A.
- *Medical Detachment, Telemedicine.* See Appendix B.
- *Hospital Augmentation Team, Head and Neck.* See Appendix C.
- *Hospital Augmentation Team, Special Care.* See Appendix D.
- *Hospital Augmentation Team, Pathology.* See Appendix E.

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- *Medical Team, Renal Hemodialysis.* See Appendix F.
- *Medical Team, Infectious Disease.* See Appendix G.
- *Forward Surgical Team.* See FM 4-02-25.

CHAPTER 2

THE COMBAT SUPPORT HOSPITAL**Section I. 248-BED COMBAT SUPPORT HOSPITAL****2-1. General**

This section provides an overall discussion of the CSH, its mission, allocation, assignment and capabilities, organization, and functions. It makes reference to other components of this publication that discusses the corps hospital's adaptive medical increments and its split-base capability.

2-2. Mission

To provide hospitalization and outpatient services for all classes of patients within the theater.

2-3. Allocation

a. Corps. This hospital variant supports the requirement for all CZ intensive care unit/intermediate care ward (ICU/ICW) bed requirements (75 percent of the total conventional [wounded in action (WIA)/DNBI] bed requirements; 78.5 percent of blister; and 45 percent of nerve). To support the minimal care ward (MCW) bed requirements (25 percent of the total WIA/DNBI; 21.5 percent of blister; and 55 percent of nerve), the minimal care detachment, TOE 08949A000, must be added to the hospital bed requirements.

b. Echelon Above Corps. This hospital variant supports the requirement for all COMMZ ICU/ICW care bed requirements (25 percent of the total bed requirements with a 70 percent skip policy [see glossary for skip policy definition]). To support the MCW bed requirements (75 percent of the total bed requirement in the COMMZ with a 70 percent skip policy), the minimal care detachment, TOE 08949A000, must be added to the hospital bed requirements.

2-4. Assignment and Capabilities

a. The CSH will normally be assigned to a medical brigade (corps, TOE 08422A100 or EAC, TOE 08422A200), but may be assigned to a MEDCOM (corps [TOE 08411A000] or theater [TOE 08611A000]) or a joint/combined task force.

b. The CSH provides hospitalization for up to 248 patients and treatment for all classes of patients. For information on patient condition codes and treatment briefs, refer to website <http://www.jrcab.army.mil/> (password is required). For assistance, contact the Joint Readiness Clinical Advisory Board, Assistant Staff Director for Information Systems Division at DSN 343-2001/4142 or commercial (301) 619-2001/4142.

c. Surgical capacity is based on six operating room (OR) tables staffed for 96 operating table hours per day. The six OR tables are contained in three OR International Organization for Standardization

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(ISO) shelters. Surgical capabilities include general, orthopedic, thoracic, urological, gynecological, and oral maxillofacial.

d. Other capabilities include—

- Command and control of organic and attached elements to include HSS planning, policies, and support operations within the hospital's areas of responsibility.
- Emergency treatment to receive, triage, and resuscitate casualties to include civilians and enemy prisoners of war (EPWs) as required.
- Consultation services for inpatient and outpatient support.
- Pharmacy, psychiatry, community health nursing, clinical laboratory, blood banking, radiology, physical therapy, and nutrition care services.
- Medical administrative and logistical services.
- Routine and emergency dental treatment.
- Medical logistics support to the FST when attached.
- Reconstitution of the FST as directed by higher headquarters or the OPLAN.

e. For maximum use of the CSH, the entire organization should deploy together. However, due to its limited mobility and the availability of transportation support, it may be necessary to deploy by modules/echelons.

f. There are specific differences between the corps CSH and the EAC CSH. The corps CSH has been reorganized into adaptive medical increments to provide for split-base capability (see Sections II and III of this chapter, Chapter 4, and Appendix H). The EAC CSH does not have split-base capability. In the corps CSH, the hospital Company A (84 bed) and hospital Company B (164 bed) with their supporting headquarters sections and transportation element are completely functional hospital companies (see Sections II and III). Hospital Company A (84 bed) of the corps CSH is a modular design providing the capability of early entry hospitalization element (EEH EL) of 44 beds, a hospitalization augmentation element of 40 beds, and a transportation element (see Section III). In the EAC CSH, the 84-bed hospital company with its headquarters and headquarters detachment (HHD) is a functional hospital company; the 164-bed hospital company is not a functional element. The EAC 164-bed hospital company can augment the EAC 84-bed company with two additional ORs, two ICUs, seven ICWs, and dental capabilities. The supply and services and mobility of the EAC CSH is reduced. Also, the EAC CSH has no laundry service capability. Other differences between the corps and the EAC 84-bed and 164-bed companies are shown in Figures 2-4 through 2-7.

2-5. Hospital Support Requirements

The corps/EAC CSH is dependent upon appropriate elements of the MEDCOM, corps, ASCC, or supporting elements within the AO for personnel and administrative services; legal; finance; mortuary affairs; security of enemy prisoners of war patients and US prisoner patients; transportation services when single-lift requirements exceed unit capability; vehicle recovery operations; transportation and reequipping for RTD personnel, to include individual clothing and equipment, seasonal outer garments, chemical protective garments; and bath and laundry services for other than patient-related linens. Other support requirements include—

- Quartermaster supply company, TOE 42447L000, for Class I rations, and the medical diet supplement required for patient feeding.
- Engineer combat battalion, heavy, TOE 05415L00, for site preparation, construction or modification of waste disposal areas, force protection, and minor construction.
- Surveillance detachment, TOE 08419A000, for veterinary support for zoonotic disease control and investigation, and inspection of medical and nonmedical rations, to include suspected chemical, biological, and radiological-contaminated rations and disposition recommendations; inspection and procurement of bottled water and ice manufacturing facilities for consumption by US Forces; and investigation of animal bites.
- Medical detachment, preventive medicine, TOE 08429A000, for inspections of food service facilities; water potability; field sanitation activities; wet bulb globe temperature index; medical and nonmedical waste disposal; industrial hygiene; medical laboratory; bloodborne pathogens; waste anesthetic gases; and provision of pest management actions, including retrograde cargo inspections, that are beyond the capabilities of the hospital staff.

2-6. Hospital Organization and Functions

The CSH (corps and EAC) is a modular-designed facility that consists of a HHD and two hospital companies (one 84-bed hospital company and one 164-bed hospital company). (Note the difference between the two CSHs as stated in paragraph 2-4*f*.) Each CSH can be further augmented with medical detachments, hospital augmentation teams, and medical teams to increase its capabilities (Figure 2-1).

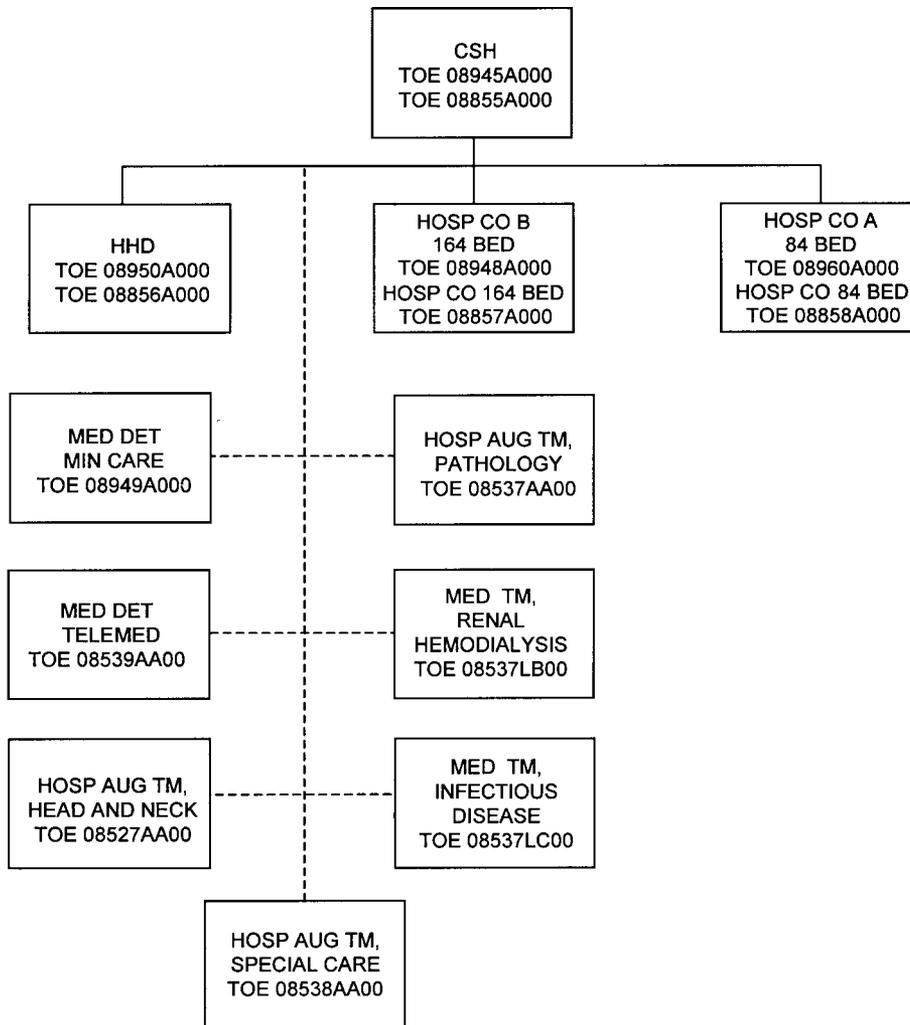
2-7. Headquarters and Headquarters Detachment

a. The HHD provides C2 of all organic/attached units, to include medical planning, policies, and support operations within the CSH's AO. The HHD is dependent upon other support units in the corps/EAC and will be located where elements of these support units can provide support. Figure 2-2 and Figure 2-3 show the corps and EAC HHD organization. See Figure 2-8 for the corps CSH HHD adaptive medical increment organization structure to support split-base operations.

b. The HHD (TOE 08950A000) of the corps CSH augments hospital Company A (84 Bed), TOE 08960A000, and hospital Company B (164 Bed), TOE 08948A000, for split-base operations. For a discussion on HHD split-base operations support, see Section II of this chapter, Chapter 4 and Appendix H.

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c. The HHD (TOE 08856A000) provides C2 of the EAC CSH. The EAC CSH has no split-base capability.



NOTE: DEPENDING UPON OPERATIONAL REQUIREMENTS, MEDICAL DETACHMENTS, HOSPITAL AUGMENTATION TEAMS, AND MEDICAL TEAMS MAY OR MAY NOT BE ATTACHED TO THE INDIVIDUAL CLINICAL ELEMENT OF THE CSH.

Figure 2-1. Combat support hospital organization.

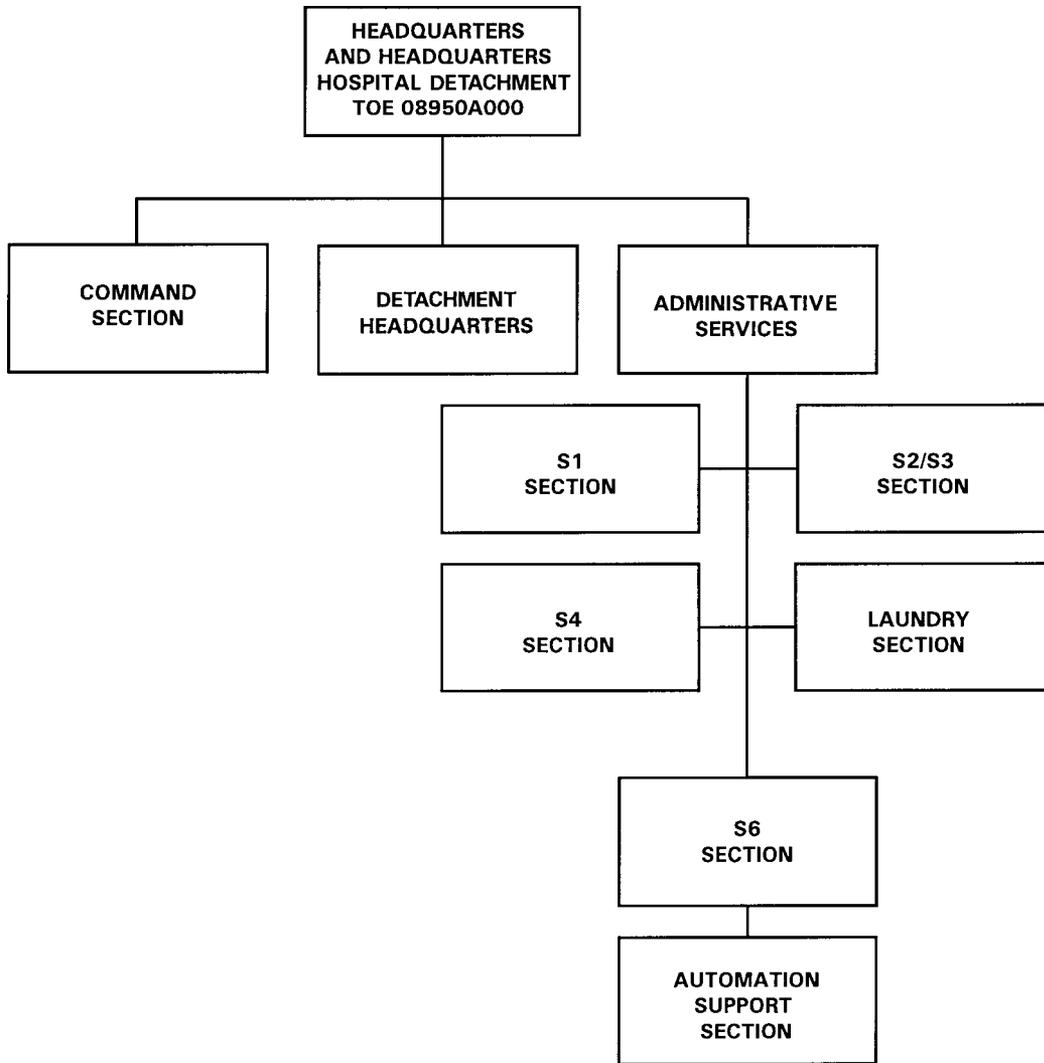


Figure 2-2. Corps headquarters and headquarters detachment organization.

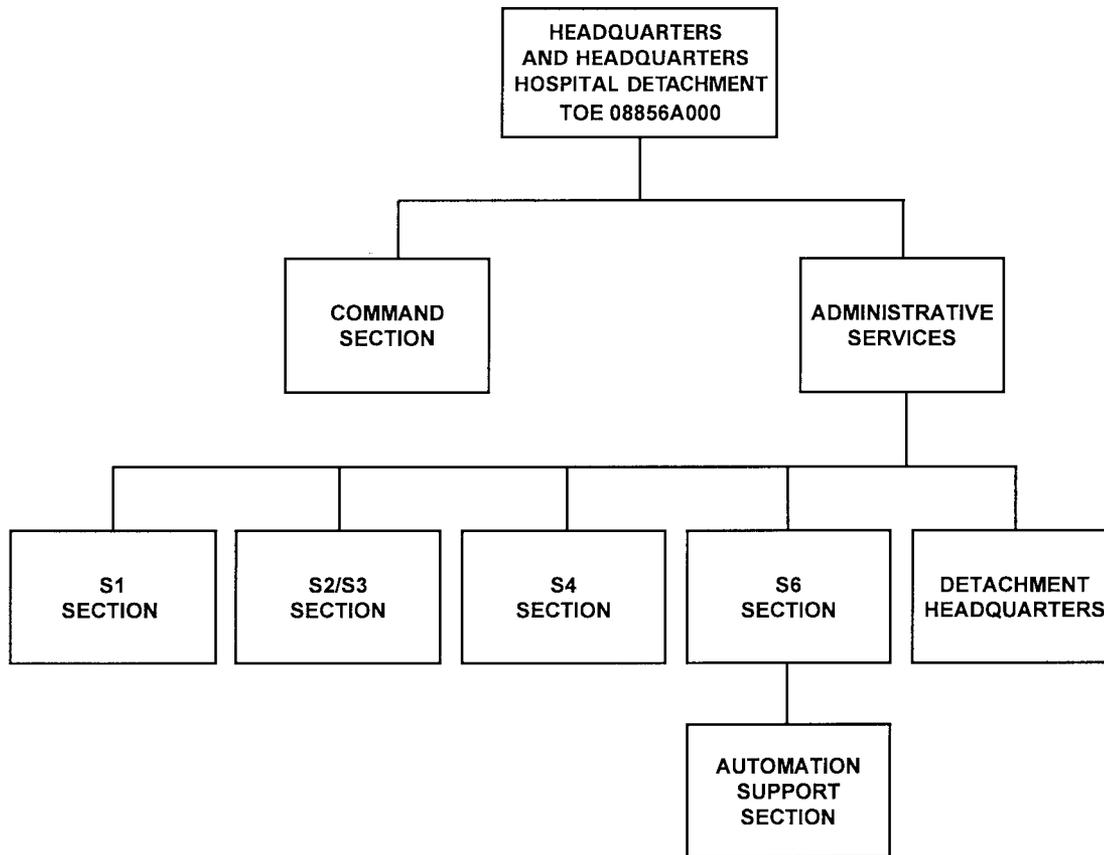


Figure 2-3. Echelon above corps headquarters and headquarters detachment organization.

d. The methods of operation and functions for the HHD corps and EAC are provided below. For the HHD corps organizational structure to support split-base operations, see Section II.

(1) *Command section.*

(a) The command section provides internal C2 and management of the hospital. It provides administrative support, prepares unit plans for movement, routine and specialized operations, and mission-related task organization. Personnel of this section supervise and coordinate surgical, nursing, medical, pastoral, operations, information management/communications, logistical, and administrative services of the HHD and the hospital, when consolidated. When deployed with the hospital Company A (84 bed), these personnel will augment the surgical, nursing, pastoral, administrative, and operation services. The chiefs of surgical and nursing services are trained in advanced trauma management. The chief, surgical service also functions as the deputy commander for professional services. The chief, nursing service is the principal advisor to the hospital commander for nursing activities. All operation element functions will be under the direct supervision of the deputy commander for operations and administrative services (this

officer will also function as the hospital executive officer [XO]). This section is found in both the corps and EAC HHD. The hospital adjutant is located in the corps HHD. In the EAC, the adjutant is located in the S1 section.

(b) The hospital commander will appoint a unit safety officer (see Appendix I).

(2) *Administrative adjutant (US Army) (S1) section.* This section provides overall administrative services for the hospital, to include personnel administration, mail distribution, awards and decorations, leaves, and typing support. This section coordinates with elements of the corps and EAC for finance, personnel, and administrative services. This section is found in both the corps and EAC HHD. As stated above, the hospital adjutant for the EAC CSH is located here.

(3) *Hospital operations (intelligence officer [US Army] [S2]/operations and training officer [US Army] [S3]) section.* This section is responsible for plans, operations, security, deployment, and relocation of the hospital. It uses automated tools for movement control and terrain analysis for unit lay down and security plans. It provides the commander with the necessary summary data to facilitate course of action analysis, resource management, and planning. This section is located in both the corps and EAC HHD.

(4) *Supply officer (US Army) (S4) section.*

(a) The S4 section serves as the focal point for coordination/communication with other general logistics supply and service units. It provides logistics functions throughout the hospital, to include general and medical supplies and maintenance; blood management; utilities such as water distribution, waste disposal (see Appendix J), and environmental control of patient treatment areas; power and vehicle maintenance; and equipment records and repair parts and fuel distribution. This section coordinates with corps/theater elements for materiel handling equipment (MHE) for movement of the hospital's Deployable Medical System (DEPMEDS) equipment, environmental control units, and power distribution equipment. This section is located in both the corps and EAC HHD.

(b) This section requests resupply from the supporting medical logistics (MEDLOG) battalion and corps/theater elements, using the Theater Army Medical Management Information Systems (TAMMIS) or a functional module of the Theater Medical Information Program (TMIP) and Medical Communications for Combat Casualty Care (MC4) systems. The TMIP/MC4 is the seamless, integrated, automated medical information system to support a TO and will rely on the Army communications architecture for transmission of medical data (see Chapter 5).

(c) This section plans and coordinates contractual support requirements for the hospital. Examples where contracting support may be used are: food service, bath and laundry, general housekeeping, health care providers (physicians, nurses, and so forth), and medical equipment operators. The health service materiel officer will identify and coordinate contract support requirements with higher headquarters, which in turn coordinates with the commander's designated principal assistant responsible for contracting. When possible, contract support requirements should be identified by higher headquarters in contingency plans and operations orders. For a detailed discussion on contractors on the battlefield, see FM 3-100.21.

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(d) This section is also responsible for maintaining the unit property book and for establishing a temporary morgue for handling remains until transported to supporting mortuary affairs (MA) organization.

(e) This section will ensure each RTD soldier has or is issued one basic serviceable uniform and will also coordinate with the corps support command (COSCOM)/theater support command (TSC) for the transportation of RTD soldiers to the replacement companies.

(f) This section will coordinate patient movement item (PMI) requirements with the supporting MEDLOG battalion (see FM 4-02.1). This section will also return excess PMIs to the MEDLOG battalion.

(g) When the corps CSH is operating in a split-base mode, assets of the S4 section, HHD, will augment the supply and service section, hospital Company A (84 bed) and hospital Company B (164 bed), to provide logistical continuity.

(5) *Communications-electronics section.* The communications-electronics (CE) officer (US Army) (S6) section is responsible for installation, operation, and maintenance (IOM) of the future switch. This section is also responsible for the installation, operation, management, security, and maintenance of the local area network (LAN), to include unit file servers, archive devices and data storage procedures, information management systems resident on the LAN, and peripheral equipment in all sections of the hospital and attached units. It also plans for the integration of the hospital elements when consolidated. Other responsibilities include coordinating with the supporting signal unit commander for—

- Training in network operations.
- Hospital connectivity to area network.
- Hardware/software maintenance support to the hospital switch.
- Managing network (frequency allocation, communications security [COMSEC], and so forth).

This section also provides unit-level maintenance and troubleshooting for all communications equipment. The S6 (captain (CPT)/major (MAJ), area of concentration [AOC] 25A00) is the primary interface between the hospital and the signal unit for all signal support requirements. This section is located in both the corps and EAC HHD.

(6) *Automation support section.* This section is responsible for the planning and operation of the unit information management systems to include MC4/TMIP. Each hospital section, with the exception of the hospital ministry, will be equipped with MC4/TMIP systems to process health care or patient administration information applicable to its functionality. The automation support section assists the commander and staff in the use of automated tools and plans for the horizontal and vertical internet of the hospital for any given mission. It maintains compact disk-read only memory (CD-ROM) unclassified libraries of medical and operational information required for the HHD and hospital operations, to include

medical references, FMs, and technical manuals (TMs). The section plans for emergency backup procedures in the event of component failures or catastrophic events. It coordinates with organic and attached hospital units to ensure integration of information management systems and telemedicine services. The health service systems management officer is the hospital's agent for the automation information systems. This section is located in both the corps and EAC HHD.

(7) *Laundry section.* The laundry section is only organic to the corps hospital and provides laundry services for patient-related linens. It coordinates with the corps supporting element for all other laundry support. The EAC CSH has no laundry service capability; the S4 section coordinates all laundry support with the EAC supporting element.

(8) *Detachment headquarters.* The detachment headquarters is responsible for company-level command, duty rosters, weapons control, general supply support, and mandatory training. A detachment headquarters is located in both the corps and EAC HHD.

2-8. The 84-Bed Hospital Company

a. This company provides hospitalization for up to 84 patients consisting of two wards providing critical care nursing for up to 24 patients and three wards providing intermediate care nursing for up to 60 patients (see Figures 2-4 and 2-5). Surgical capability includes general surgery and orthopedic surgery and is based on two OR tables staffed for 36 OR table hours per day. Requirements for additional surgical specialties in the corps hospital Company A (84 Bed) can be met by elements of hospital Company B (164 Bed), the FST (when not deployed forward), or the hospital augmentation team, head and neck. Requirements for additional surgical specialties in the EAC 84-bed hospital company can be met by elements of the 164-bed hospital company and the hospital augmentation team, head and neck.

b. The corps hospital Company A (84 bed) and EAC 84-bed hospital company provides emergency treatment to receive, triage, and prepare incoming patients for surgery and to provide consultation and outpatient clinic services for patients referred from other MTFs. Telemedicine consultation capability will be provided by the medical detachment, telemedicine (see Appendix B).

c. This company also provides pharmaceutical, radiology and clinical laboratory services, to include limited basic microbiology screening, and blood banking. It provides the administrative, patient administration, logistical, and nutritional care services required for full hospitalization. Organic hospital personnel set up and break down the unit shelter systems in preparation for unit operations or movement.

d. Assets of the corps hospital Company A (84 bed) may be used for incremental employment. See Section III of this chapter, Chapter 4, and Appendix H for additional information.

e. The methods of operation and functions for this company are provided below.

(1) *Company headquarters.* This section is responsible for company-level command, duty rosters, weapons control, general supply support, and mandatory training. The company headquarters is found in both the corps hospital Company A (84 bed) and EAC 84-bed hospital company.

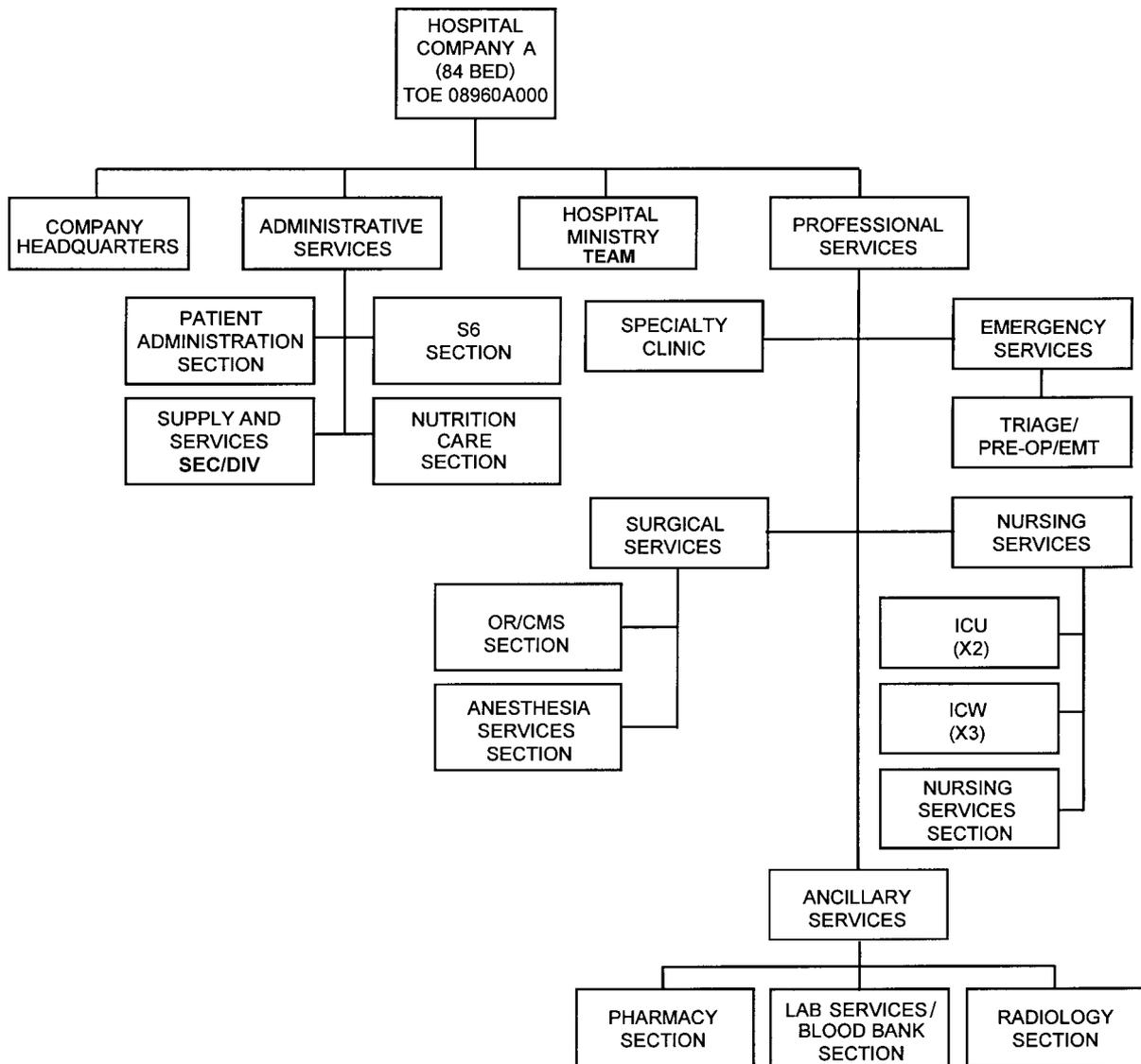


Figure 2-4. The corps hospital Company A (84 bed) organization.

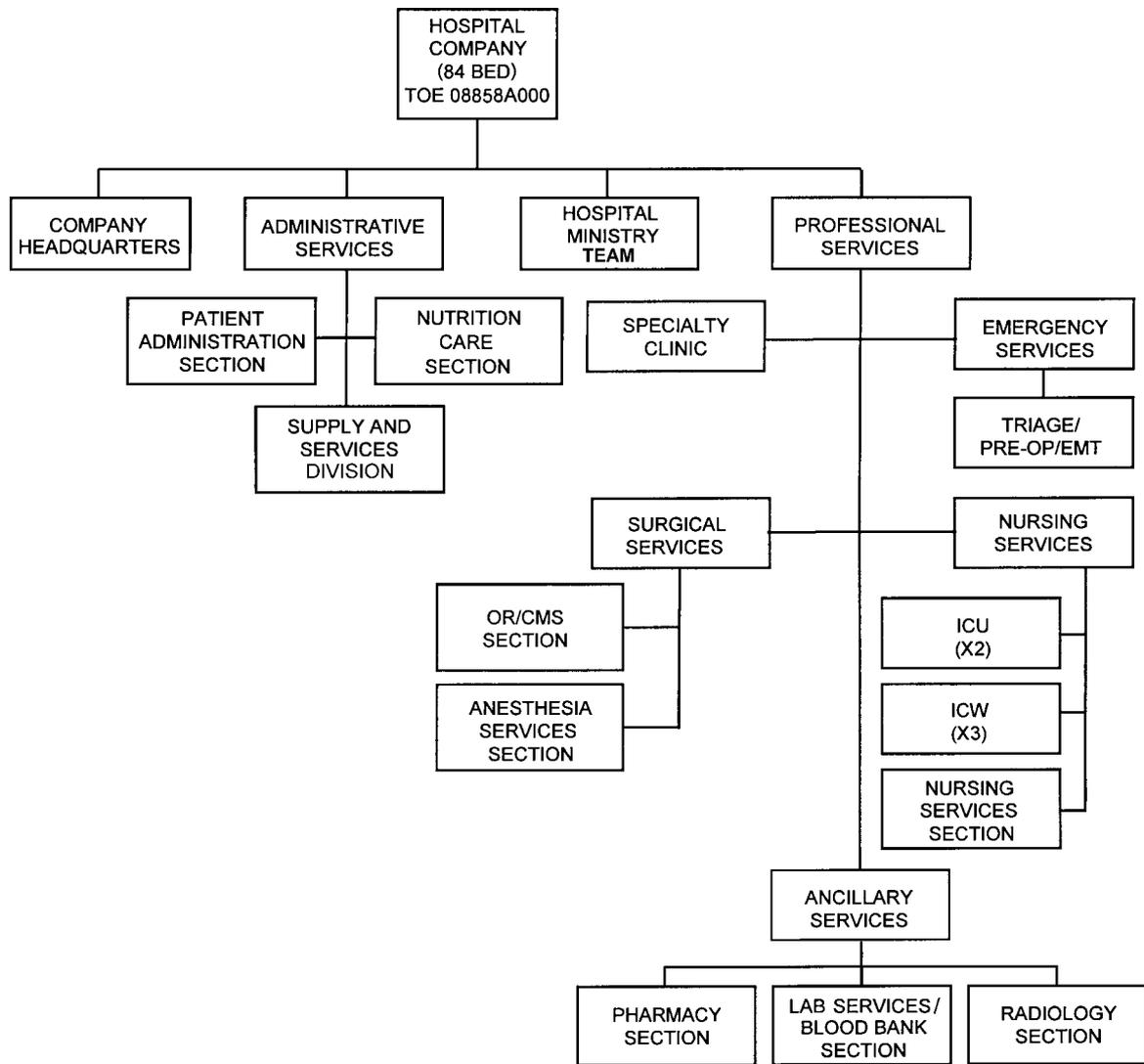


Figure 2-5. The echelon above corps 84-bed hospital company organization.

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(2) *Communications-electronics section.* This section is responsible for installation, operation, management, and maintenance of the information management system and internal and external communications links for the company and attached elements. It plans for the communications and electronics integration of the company with the CSH when consolidated. This section establishes the LAN connectivity for this company's module as well as integration with the full CSH and attached units. This section is only found in the corps hospital Company A (84 bed).

(3) *Patient administration section.* This section is responsible for the admission and disposition of patients, maintenance of patient records, security of patients' valuables, and preparation of patient-statistical reports for the company. It also coordinates requests for patient evacuation and provides reports to higher headquarters. This section is found in both the corps hospital Company A (84 bed) and EAC 84-bed hospital company.

(4) *Nutrition care section.* This section is responsible for nutrition services, meal preparation, and meal distribution to patients and staff, dietetic planning, medical nutrition therapy, patient education, and command advice on health and nutrition and theater health promotion program. This section is found in both the corps and EAC 84-bed hospital company. The EAC 84-bed hospital company provides field feeding for the EAC CSH. The corps hospital Company A (84 bed) only has fielding feeding capability for its company. See Appendix K for additional information nutrition care operations. See Appendix L for information on medical diet supplements for medical field feeding operations.

(5) *Supply and services section/division.* This section/division provides logistical functions for the hospital company and attached units, to include general and medical supplies; medical maintenance (MEDMNT); blood management; water distribution, waste disposal, and environmental control of patient treatment areas; power and vehicle maintenance; fuel distribution; and equipment records and repair parts management. The logistical capability is found in both the corps hospital Company A (84 bed) and EAC 84-bed hospital company. As shown in Figures 2-4 and 2-5, the logistics functions are performed by the supply and services section in the corps hospital Company A (84 bed). In the EAC 84-bed hospital company (nonsplit base [NSB]), these functions are performed by the supply and services division.

(6) *Triage/preoperative/emergency medical treatment section.* This section provides for the receiving, triaging, and stabilizing of incoming patients. The staff will receive patients, assess their medical condition, provide EMT, and transfer them to the appropriate areas of the hospital unit. The staff will be trained in basic and advanced cardiac life support, EMT, and ATM, as appropriate to grade and skill level. The staff monitors patient conditions and prepares those requiring immediate surgery for the OR. The litter bearers are responsible for the transportation of patients within the hospital unit. The EMT personnel read from and input to the automated clinical record, using available information systems for both inpatients and outpatients. They use automated tools for access to medical and essential operational information. The section communicates directly with incoming evacuation platforms (ground and air) to provide en route telementoring and to ensure readiness to receive incoming patients. The section also provides on-site and remote consultation services via the medical detachment, telemedicine, when attached. This section is found in both the corps hospital Company A (84 bed) and EAC 84-bed hospital company.

(7) *Specialty clinic section.* This section combines an outpatient medical treatment section, orthopedic services, psychiatric services, PVNTMED surveillance capability of DNBI, and facilities support.

The staff provides inpatient and outpatient on-site and remote consultations, as requested; evaluation and treatment of infectious disease and internal medicine disorders; evaluation and treatment of skin disorders; and treatment of patients with gynecological disease, injury, or disorders. They also provide inpatient and outpatient assessment and inpatient stabilization of neuropsychiatric patients. Neuropsychiatric stabilization is undertaken in the ICW under the supervision of the neuropsychiatric staff and attending physician. The section also provides casting, splinting, and traction services. The section provides remote consultation services via the medical detachment, telemedicine, when attached. The specialty clinic section is found in both the corps hospital Company A (84 bed) and EAC 84-bed hospital company.

(8) *Operating room/central material services section.* This section provides supervision of the OR and central material service (CMS). It schedules the nursing staff, prepares and maintains the OR and CMS, and maintains surgical and nursing standards within these areas. It functions with the anesthesia service section to perform initial surgery for battle and nonbattle injuries and follow-on surgery for patients who have received initial surgery at other MTFs. It provides general and orthopedic surgical services with two OR tables for a total of 36 hours of operating table time per day. When augmented by specialty surgeons and equipment from other elements of the CSH and the hospital augmentation team, head and neck, it can provide thoracic, urological, obstetrics/gynecology, and oral maxillofacial surgical services. The FST, when not deployed forward, is an additional augmentation for the corps CSH. The OR/CMS section provides records and reports to the commander for input to the commander's situation report. The staff reads from and inputs to automated clinical records, using available information systems. The staff provides remote consultation services via the medical detachment, telemedicine, when attached. The section functions with the CSH OR/CMS section as one surgical service, when consolidated. The OR/CMS section is found in both the corps hospital Company A (84 bed) and EAC 84-bed hospital company.

(9) *Anesthesia services section.* This section provides and manages the anesthesia program and respiratory services for the unit. It provides supervision and administration of anesthetics to patients undergoing surgery. It ensures appropriate supervision of respiratory therapy for patients. It ensures the clinical validation of medical equipment and supply sets for each mission, the readiness of clinical standard operating procedures, and the proficiency of AOC 66F and career management field (CMF) 91D to execute the mission of this section. The staff coordinates with and assists the EMT section in trauma care services. The staff provides remote consultation services via the medical detachment, telemedicine, when attached. When consolidated, this section functions with the CSH anesthesia and respiratory services section as one service. The anesthesia service section is found in both the corps hospital Company A (84 bed) and EAC 84-bed hospital company.

(10) *Nursing services section.* The chief, nursing service, HHD, is the chief nurse for this section. This section is responsible for the management of daily operations of nursing services throughout the unit, to include scheduling and supervision of nursing staff; preparation and coordination of duty rosters; emergency mass casualty plans; and contingency staffing. It plans, organizes, executes, and directs nursing care practices and activities of the unit. This section ensures training and readiness for deployment of AOC 66 officers and CMF 91 personnel. It also ensures the clinical validation of medical equipment and supply sets of the unit for each mission, the readiness of clinical standard operating procedures, and the proficiency of AOC 66 officers and CMF 91 personnel to execute the mission of this unit. The section plans, coordinates, and supervises the layout and design of the hospital physical facilities. This section is found in both the corps hospital Company A (84 bed) and EAC 84-bed hospital company.

(11) *Intensive care units.* Two 12-bed ICUs provide for critically injured or ill patients and are responsible to the nursing service section. The ICUs manage surgical or medical patients, adult and/or pediatric, whose physiological status is so disrupted that they require immediate and continuous medical and/or nursing care. The staff is specially trained with the clinical and managerial skills necessary to deliver safe nursing care to patients with complex nursing and medical problems. The ICUs are also used as a preoperative stabilization area and post anesthesia recovery area for patients either awaiting surgery or recovering from surgery. The staff provides remote consultation services via the medical detachment, telemedicine, when attached. The ICUs are found in both the corps hospital Company A (84 bed) and EAC 84-bed hospital company.

(12) *Intermediate care ward.* The three ICWs manage surgical or medical patients whose conditions require observation for real or potential life-threatening disease/injury. The acuity of care may range from those requiring constant observation to those patients able to ambulate and to begin to assume responsibility for their care. The level of care and acuity of these patients may fluctuate depending on the intensity of conflict. Although not routine, ICW patients may require monitoring devices and ventilator support. Each ward consists of 20 beds. The staff provides remote consultation services via the medical detachment, telemedicine, when attached, in accordance with their technical expertise. The ICWs are found in both the corps hospital Company A (84 bed) and EAC 84-bed hospital company.

(13) *Ancillary services.* The senior officer in the pharmacy, laboratory, or radiology section is dual-hatted as the chief, ancillary services. This person reports to either the chief, professional services or directly to the hospital commander, depending on local policy. The chief, ancillary services is responsible for overseeing the daily operations of these three clinical support sections, to include tracking critical supplies, equipment, manpower issues, emergency mass casualty plans, and contingency staffing. This officer represents these sections at command/staff meetings and hospital committees. The chief, ancillary services ensures training, readiness, and cooperation of personnel in these sections. The chief, ancillary services validates readiness and suitability of medical materiel sets of these sections for each mission, the readiness of section standard operating procedures, and the proficiency of personnel assigned to execute the mission. The chief, ancillary services plans, coordinates, and supervises the layout and design of these sections of the hospital. This position is found in both the corps hospital Company A (84 bed) and EAC 84-bed hospital company.

(14) *Pharmacy section.* The pharmacy is responsible for developing, coordinating, and executing programs and policies that ensure the safe and appropriate medication use within the CSH (see Appendix M). The following are key functions performed by the pharmacy service personnel. Develop, maintain, and publish the approved hospital formulary; screen all medication orders for drug-drug, drug-nutrient interactions, or medication allergies; monitor individual medication therapies for safe and appropriate disease state management; recommend alternative drug regimens to meet situational requirements; monitor and report on all medication-related patient safety problems; provide consultation services to medical and logistical staff; monitor and enforce hospital-wide quality control of pharmaceuticals; provide outpatient pharmacy services; provide inpatient pharmacy services, including sterile products preparation services; provide drug/medication information services; provide bulk drug and controlled substance distribution support for patient care areas; provide direct patient care services, and pharmacy supply and support services. The pharmacy services section exercises appropriate control and accountability for all controlled substances and rosters with signature documentation for all individuals approved by the

CSH commander to prescribe, receive, order, or distribute controlled drugs. The pharmacy provides outpatient medications for the required number of days to complete therapy and/or the supply of medications required for air evacuation out of the corps or theater. It uses automated systems for requisition of pharmacy supplies and interfaces with other unit sections for bulk pharmacy orders and with the supply and services section for resupply. The staff provides remote consultation services via the medical detachment, telemedicine, when attached, in accordance with their technical expertise. The pharmacy section is found in the corps hospital Company A (84 bed) and hospital Company B (164 bed) and the EAC 84-bed hospital company. When consolidated, the pharmacy sections of the hospital Company A and hospital Company B in the corps CSH function as one service. All pharmacy services for the EAC CSH are in the pharmacy section of the 84-bed hospital Company. For an example of a standing operating procedure (SOP) on medication use and pharmacy operations, refer to website <http://dcss.cs.amedd.army.mil/phar/pharhome.htm>. Additional information on pharmacy operations may be requested by calling DSN 471-8887 or commercial (210) 221-8887.

(15) *Laboratory services/blood bank section.* This section performs analytical procedures in hematology, urinalysis, chemistry, blood banking, and limited basic microbiology screening. The EAC CSH has the capability to perform analytical procedures in microbiology; the corps CSH requires the attachment of the hospital augmentation team, pathology for this capability. The staff provides blood banking services, including all routine blood grouping and typing, abbreviated crossmatching procedures, emergency blood collection, and blood inventory management. This section stores and issues liquid blood components and fresh frozen plasma (FFP). It coordinates with the supply and services section and directly with the MEDLOG battalion and, as required, with the blood program office for blood supply and resupply requirements. It provides automated records and reports of current and projected blood status to the commander and higher headquarters. The staff provides remote consultation services via the medical detachment, telemedicine, when attached, in accordance with their technical expertise. The corps hospital Company A (84 bed) and hospital Company B (164 bed) and EAC 84-bed hospital company have laboratory and blood support capabilities. When consolidated, the laboratory services and blood bank of hospital Company A and hospital Company B in the corps CSH function as one service. All laboratory and blood banking services for the EAC CSH are in the 84-bed hospital Company.

(16) *Radiology section.* This section provides radiological services to all areas of the hospital unit and operates on a 24-hour basis. It prepares digital x-rays for transmission to the radiologist of the CSH or other consulting radiologists as requested by physicians. This section is responsible to the radiologist of the CSH for SOP and policies. The radiology section is found in both the corps hospital Company A (84 bed) and the EAC 84-bed hospital company. The radiology section is also found in the corps hospital Company B (164 bed). When consolidated, the radiology sections of hospital Company A (84 bed) and hospital Company B (164 bed) of the corps CSH function as one service. For an example SOP on CSH radiology operations, refer to website <http://radiology.amedd.army.mil/>. Additional information on radiology operations may be requested by calling DSN 471-7614/8597 or commercial (210) 221-7614/8597.

(17) *Hospital ministry team.* This team is responsible to the commander for religious support and pastoral care ministry for all staff and patients. It promotes spiritual health within the unit and performs liaison and consultative functions to ensure continuity of patient care between the hospital unit, CSC units, and the patient's unit of origin. The team advises the commander on spiritual and CSC for unit personnel.

It is responsible for providing inpatient daily clinical ministry to all nursing wards and the EMT section, as required. The hospital ministry team is found in both the corps hospital Company A (84 bed) and EAC 84-bed hospital company. It is also found in the corps hospital Company B (164 bed). When consolidated, the hospital ministry team of hospital Company A (84 bed) and hospital Company B (164 bed) of the corps CSH function as one service. In the EAC, all hospital ministry for the two hospital companies is consolidated in the 84-bed hospital company. The senior chaplain in each CSH is in the command section of the HHD.

2-9. The 164-Bed Hospital Company

a. This company provides hospitalization for up to 164 patients, consisting of two wards providing critical care nursing for up to 24 patients, and seven wards providing intermediate care nursing for up to 140 patients (see Figures 2-6 and 2-7). Surgical capability, including general, orthopedic, thoracic, urological, gynecological, and oral maxillofacial, is based on four OR tables staffed for 60 OR table hours per day. This company, when attached, also provides OR space and time for OR table hours required by the hospital augmentation team, head and neck. Requirements for additional surgical specialties in the corps hospital Company B (164 bed) and EAC 164-bed hospital company can be met by the hospital augmentation team, head and neck. Requirements for additional surgical capability in the corps hospital Company B (164 bed) can be met by the FST (when not deployed forward).

b. The corps hospital Company B (164 bed) provides emergency treatment to receive, triage, and prepare incoming patients for surgery and provides consultation and outpatient clinic services for patients referred from other MTFs in the corps. The EAC 164-bed hospital company augments the EAC 84-bed hospital company to provide these services. A telemedicine consultation capability will be provided by the medical detachment, telemedicine.

c. This company also provides a clinical laboratory, to include limited basic microbiology, blood banking, and radiology services in the corps CSH. (These services are only found in the 84-bed hospital company of the EAC CSH.) It provides the administrative, logistical, patient administration, and nutritional care services required for full hospitalization. Organic hospital personnel set up and break down the unit shelter systems in preparation for unit operations or movement.

d. The methods of operation and functions by paragraph for the corps hospital Company B (164 bed) and EAC 164-bed hospital company are detailed below; paragraphs are annotated to reflect differences. Figures 2-6 and 2-7 reflect organizational differences.

(1) *Company headquarters.* This headquarters is responsible for company-level command, duty rosters, weapons control, general supply support, and mandatory training. A company headquarters is found in the corps hospital Company B (164 bed) and EAC 164-bed hospital company.

(2) *Patient administration section.* This section is responsible for the admission and disposition of patients, maintenance of patient records, security of patient valuables, and preparation of patient statistical reports for the company. It also coordinates requests for patient evacuation and provides reports to the hospital commander. The patient administration section is not found in the EAC 164-bed hospital company.

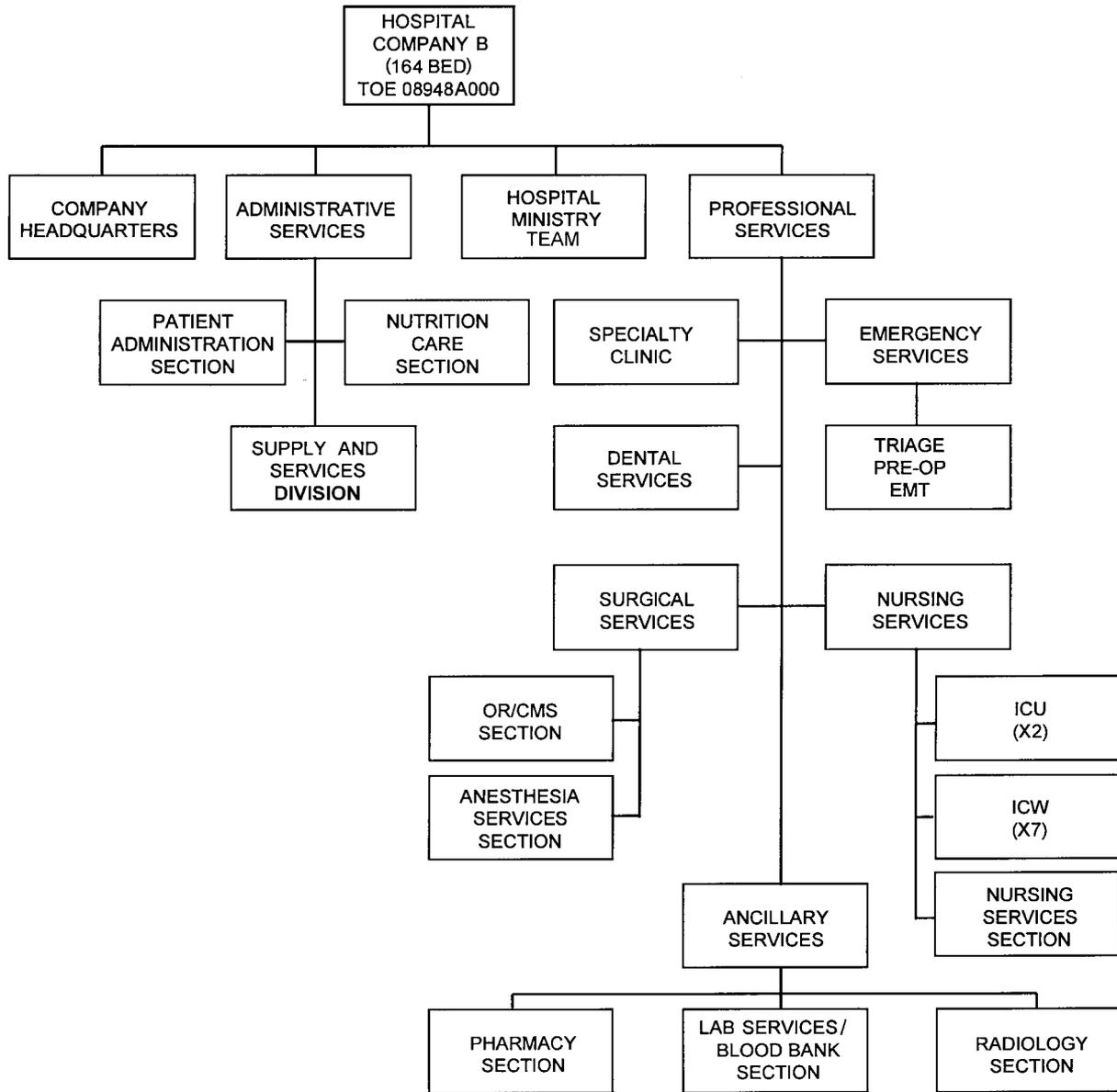


Figure 2-6. The corps hospital Company B (164 bed) organization.

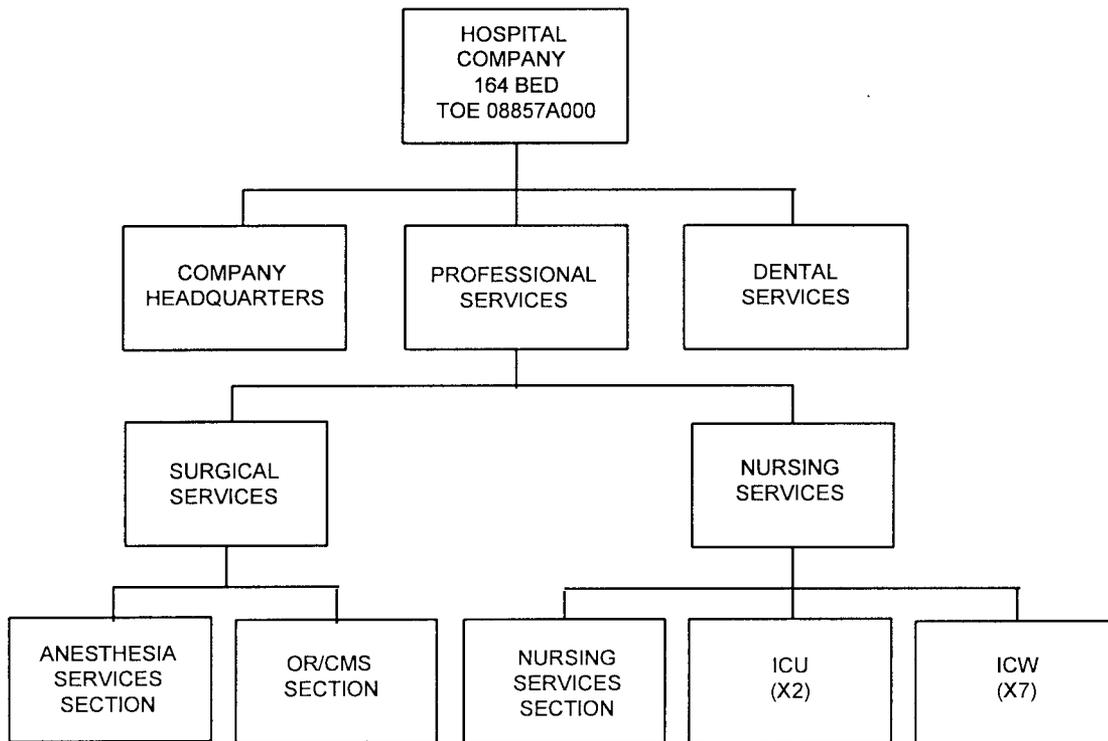


Figure 2-7. The echelon above corps 164-bed hospital company organization.

(3) *Nutrition care section.* This section is responsible for providing hospital unit nutrition services, meal preparation and service to patients and staff, dietetic planning, medical nutrition therapy, patient education, and command advisor on health and nutrition and theater health promotion program. This section is not found in the EAC 164-bed hospital company. See Appendix K for additional information nutrition care operations. See Appendix L for information on medical diet supplements for medical field feeding operations.

(4) *Supply and services division.* This division is responsible for the logistical functions of the hospital company and attached units, to include general and medical supplies; MEDMNT; blood management; water distribution, waste disposal, and environmental control of patient treatment areas; power and vehicle maintenance; fuel distribution; and equipment records and repair parts management. Additionally, this division is responsible for coordinating with the supporting element of the MEDLOG battalion for the return of PMIs. Medical logistics will be managed utilizing the TAMMIS-MEDLOG (see Chapter 5). This division is not found in the EAC 164-bed hospital company.

(5) *Triage/preoperative/emergency medical treatment section.* This section provides for the receiving, triaging, and stabilizing of incoming patients. The staff will receive patients, assess their medical condition, provide EMT, and transfer them to the appropriate areas of the hospital unit. The staff will be trained in basic and advanced cardiac life support, EMT, and ATM as appropriate to grade and skill level. The staff monitors patient conditions and prepares those requiring immediate surgery for the OR. The litter bearers are responsible for transportation of patients within the hospital unit. The EMT personnel read from and input to the automated clinical records, using available information systems for both inpatients and outpatients. They use automated tools to access medical and essential operational information. The section communicates directly with incoming evacuation platforms (ground and air) to provide en route tele-mentoring and to ensure readiness of the section to receive incoming patients. The section also provides supervision and management of MEDEVAC battalion elements, when attached. It provides on-site and remote consultation services via the medical detachment, telemedicine, when attached. This section is not found in the EAC 164-bed hospital company.

(6) *Operating room/central material services section.* This section provides supervision of the OR and CMS. It schedules nursing staff, prepares and maintains the OR and CMS, and maintains surgical and nursing standards within these areas. It functions with the anesthesia section to perform initial surgery for battle and nonbattle injuries and follow-on surgery for patients received from other MTFs. It provides general, orthopedic, thoracic, urological, gynecological, and oral maxillofacial surgical services with four OR tables for a total of 60 hours of table time per day. It uses automated tools to maintain projected OR schedules and determine OR surgical backlog in terms of projected hours to complete each surgery and numbers of patients. It provides records and reports to the commander for input to the commander's situation report. The staff reads from and inputs to the automated clinical record using available information systems. It accesses digital x-ray files for patient care during surgery. The section provides remote consultation services via the medical detachment, telemedicine, when attached. The section functions with the 84-bed hospital company, OR/CMS as one surgical service, when consolidated. The OR/CMS is found in both the corps hospital Company B (164 bed) and EAC 164-bed hospital company.

(7) *Anesthesia services section.* This section provides and manages the anesthesia program and respiratory services for the unit. It provides supervision and administration of anesthetics to patients undergoing surgery. The staff ensures the clinical validation of medical equipment and supply sets for each mission, the readiness of clinical standard operating procedures, and the proficiency of AOC 66F and CMF 91D to execute the mission of this section. The section coordinates with and assists the EMT section in trauma care services. The staff provides remote consultation services via the medical detachment, telemedicine, when attached. When consolidated, it functions with the 84-bed hospital company anesthesia and respiratory services section as one service. This section is found in both the corps hospital Company B (164 bed) and EAC 164-bed hospital company.

(8) *Specialty clinic section.* This clinic provides patient services including sick call for staff and attached units. The clinic staff provides primary care and internal medicine consultation services for hospital patients and patients referred from other MTFs. This clinic functions in conjunction with the EMT section to efficiently provide treatment for incoming ambulatory patients. It evaluates and treats dermatological and gynecological diseases, injuries, and disorders. It provides orthopedic and physical therapy services. It also provides PVNTMED surveillance capability to monitor DNBI. This clinic also provides outpatient psychiatry and inpatient neuropsychiatric consultation services. Neuropsychiatric

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stabilization is undertaken in the ICW beds or minimal care detachment under the care of the psychiatric staff and attending physician. The clinic provides remote consultation services via the medical detachment, telemedicine, when attached. Note that this clinic is found only in the corps hospital Company B (164 bed).

(9) *Dental services section.* This section provides dental services and consultation for patients and staff. The alternate wartime role for this section is to augment the hospital with an additional combat casualty care capability. During mass casualty situations, the dentists assist in the delivery of ATM. The staff reads from and inputs to the automated clinical record using available information systems for both inpatients and outpatients. The staff provides remote consultation services via the medical detachment, telemedicine, when attached. The dental section is found in both the corps hospital Company B (164 bed) and EAC 164-bed hospital company.

(10) *Nursing services section.* This section is responsible to the chief nurse for the management of daily operations of nursing services throughout the unit to include scheduling and supervision of nursing staff, preparation and coordination of duty rosters, emergency mass casualty plans, and contingency staffing. It plans, organizes, executes, and directs nursing care practices and activities of the unit. This section ensures training and readiness for deployment of AOC 66 officers and CMF 91 personnel. It also ensures the clinical validation of medical equipment and supply sets of the unit for each mission, the readiness of clinical standard operating procedures, and the proficiency of AOC 66 officers and CMF 91 personnel to execute the mission of this unit. The section plans, coordinates, and supervises the layout and design of the hospital physical facilities. This section is found in both the corps hospital Company B (164 bed) and EAC 164-bed hospital company. It functions as a single nursing services section when the hospital functions as a 248-bed MTF.

(11) *Intensive care units.* Two 12-bed ICUs provide for critically injured or ill patients and are responsible to the nursing service section. The ICUs manage surgical or medical patients, adult and/or pediatric, whose physiological status is so disrupted that they require immediate and continuous medical and/or nursing care. The staff is specially trained with the clinical and managerial skills necessary to deliver safe nursing care to patients with complex nursing and medical problems. The ICUs are also used as a preoperative stabilization area and postanesthesia recovery area for patients either awaiting surgery or recovering from surgery. The staff provides remote consultation services via the medical detachment, telemedicine, when attached. The ICUs are found in both the corps hospital Company B (164 bed) and EAC 164-bed hospital company.

(12) *Intermediate care ward.* The seven ICWs manage surgical or medical patients whose conditions require observation for real or potentially life-threatening disease/injury. The degree of care may range from those requiring constant observation to those patients able to ambulate and to begin to assume responsibility for their care. The level of care and acuity of these patients may fluctuate depending on the intensity of conflict. Although not routine, ICW patients may require monitoring devices and ventilator support. Each ward consists of 20 beds. The staff provides remote consultation services via the medical detachment, telemedicine, when attached, in accordance with their technical expertise. The ICWs are located in both the corps hospital Company B (164 bed) and EAC 164-bed hospital company.

(13) *Ancillary services.* The senior officer in the pharmacy, laboratory, or radiology section is dual-hatted as the chief, ancillary services. This person reports to either the chief, professional services

or directly to the hospital commander, depending on local policy. The chief, ancillary services is responsible for overseeing the daily operations of these three clinical support sections, to include tracking critical supplies, equipment, manpower issues, emergency mass casualty plans, and contingency staffing. This officer represents these sections at command/staff meetings and hospital committees. The chief, ancillary services ensures training, readiness, and cooperation of personnel in these sections. The chief, ancillary services validates readiness and suitability of medical materiel sets of these sections for each mission, the readiness of section standard operating procedures, and the proficiency of personnel assigned to execute the mission. The chief, ancillary services plans, coordinates, and supervises the layout and design of these sections of the hospital. This position is found in both the corps hospital Company A (84 bed) and EAC 84-bed hospital company.

(14) *Pharmacy section.* The pharmacy is responsible for developing, coordinating, and executing programs and policies that ensure the safe and appropriate medication use within the CSH (see Appendix M). The following are key functions performed by the pharmacy service personnel. Develop, maintain, and publish the approved hospital formulary; screen all medication orders for drug-drug, drug-nutrient interactions, or medication allergies; monitor individual medication therapies for safe and appropriate disease state management; recommend alternative drug regimens to meet situational requirements; monitor and report on all medication-related patient safety problems; provide consultation services to medical and logistical staff; monitor and enforce hospital-wide quality control of pharmaceuticals; provide outpatient pharmacy services; provide inpatient pharmacy services, including sterile products preparation services; provide drug/medication information services; provide bulk drug and controlled substance distribution support for patient care areas; provide direct patient care services, and pharmacy supply and support services. The pharmacy services section exercises appropriate control and accountability for all controlled substances and rosters with signature documentation for all individuals approved by the CSH commander to prescribe, receive, order, or distribute controlled drugs. This section is located in the corps hospital Company B (164 bed). It functions as a single service with the pharmacy services section of the corps hospital Company A when consolidated. For an example of an SOP on medication use and pharmacy operations, refer to website <http://dcss.cs.amedd.army.mil/phar/pharhome.htm>. Additional information on pharmacy operations may be requested by calling DSN 471-8887 or commercial (210) 221-8887.

(15) *Laboratory services/blood bank section.* This section performs analytical procedures in hematology, urinalysis, chemistry, blood banking, and limited basic microbiology screening. The EAC CSH has the capability to perform analytical procedures in microbiology; the corps CSH requires the attachment of the hospital augmentation team, pathology, for this capability. The staff provides blood banking services, including all routine blood grouping and typing, abbreviated crossmatching procedures, emergency blood collection, and blood inventory management. This section stores and issues liquid blood components and FFP. It coordinates with the supply and services section and directly with the MEDLOG battalion and, as required, with the blood program office for blood supply and resupply requirements. It provides automated records and reports of current and projected blood status to the commander and higher headquarters. The staff provides remote consultation services via the medical detachment, telemedicine, when attached, in accordance with their technical expertise. The corps hospital Company A (84 bed) and hospital Company B (164 bed) and EAC 84-bed hospital company have laboratory and blood support capabilities. It functions as a single service with the laboratory services/blood bank section of the CSH, when consolidated.

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(16) *Radiology services section.* This section provides radiological services to all areas of the hospital unit. It prepares digital x-rays for transmission to the radiologist of the CSH or other consulting radiologists as requested by physicians. The radiology services are found in the corps hospital Company B. It functions as a single service with the radiology section of hospital Company A, when consolidated. For an example of an SOP on CSH radiology operations, refer to website <http://radiology.amedd.army.mil/>.

(17) *Hospital ministry team.* This section is responsible to the commander for religious support and pastoral care ministry for all staff and patients. It promotes spiritual health within the unit and performs liaison and consultative functions to ensure continuity of patient care between the hospital unit, CSC units, and the patient's unit of origin. The team advises the commander on spiritual support for unit personnel. It works with the psychiatric personnel of the specialty clinic to provide stress control, including debriefing, to patients and staff. It is responsible for providing inpatient daily clinical ministry to all nursing wards and the EMT section, as required. The hospital ministry team is found in the corps hospital Company B (164 bed). When consolidated, the hospital ministry teams of the corps CSH function as a single team.

Section II. HEADQUARTERS AND HEADQUARTERS DETACHMENT, 248-BED COMBAT SUPPORT HOSPITAL (CORPS), TOE 08950A000

2-10. General

The HHD, corps CSH, TOE 08950A000, is modularly designed to provide C2 for split-base operations and enhances the ability to tailor HSS to adapt to mission requirements of a smaller magnitude. This section discusses the headquarters section, early entry hospitalization element (44 bed), TOE 08546AA00, the headquarters section, hospital augmentation element (40 bed), TOE 08546AB00, the headquarters section, hospital Company B (164 bed), TOE 08546AC00, and the transportation element, HHD, (248-bed CSH), TOE 08546AD00. Figure 2-8 shows the corps CSH HHD organization.

2-11. Headquarters Section, Early Entry Hospitalization Element (44 Bed), TOE 08546AA00

a. This headquarters section provides C2, administrative services, logistics support, and communications support to include information management to the early entry hospitalization element (44 bed), hospital Company A (84 bed), and assigned and attached units. It is authorized on the basis of one per CSH (284 bed), TOE 08945A000 (see Figure 2-8). It will be deployed with the early entry hospitalization element (44 bed), hospital Company A (84 bed), during the initial phase of split-base operation to form stand-alone hospitalization for up to 72 hours without further logistical support. When the headquarters section is deployed with the early entry hospitalization element (44 bed), it will require sustainment support as identified in paragraph 2-4. Additionally, the headquarters section will require field feeding, power generation for power consumers not requiring a dedicated generator, and unit maintenance of all organic equipment except CE from the unit of attachment.

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b. The headquarters section is capable of transporting 5,000 pounds (208 cubic feet [cu ft]) of TOE equipment with organic vehicles. It has 1,659 pounds (67 cu ft) of TOE equipment requiring transportation.

c. For additional information see Appendix H.

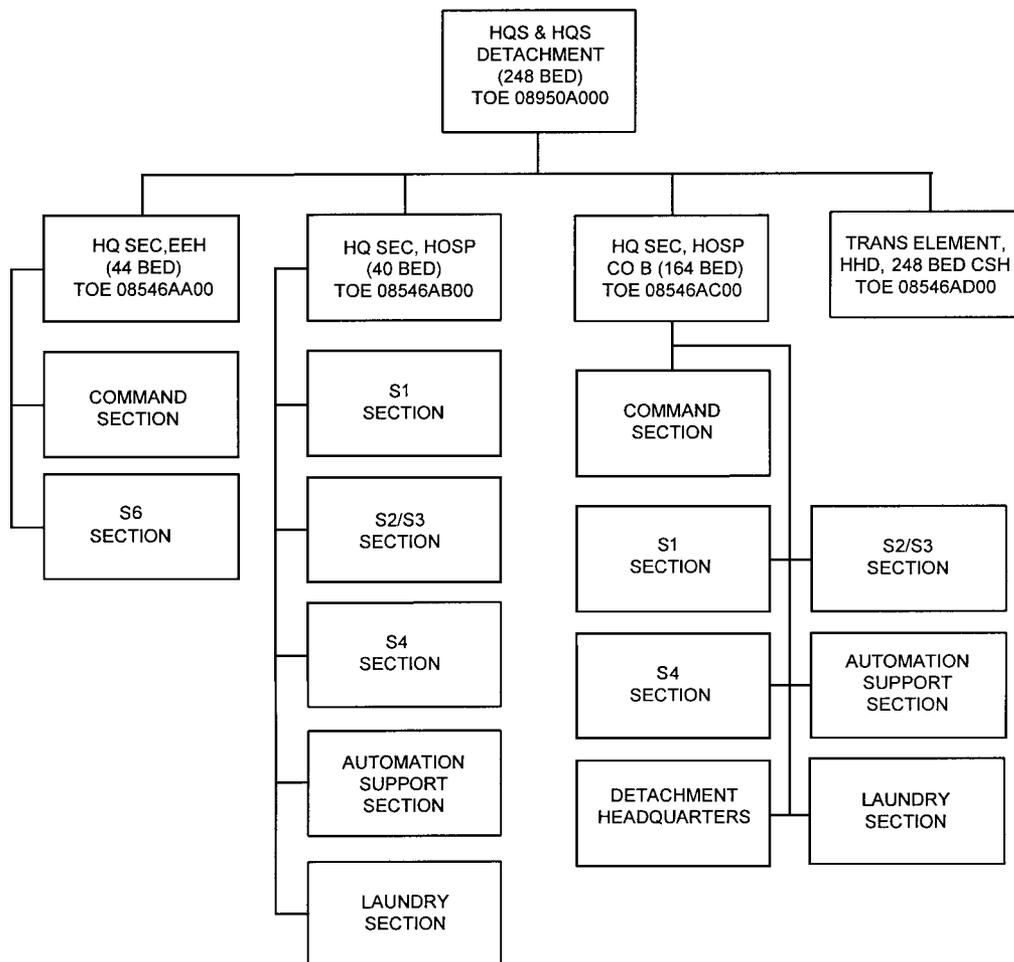


Figure 2-8. Corps combat support hospital headquarters and headquarters detachment organization.

2-12. Headquarters Section, Hospital Augmentation Element (40 Bed), TOE 08546AB00

a. This headquarters section provides C2, administrative services, and logistics augmentation to the hospitalization augmentation element (40 bed), hospital Company A, (84 bed), and to assigned and attached units during split-base operations. It is authorized on the basis of one per CSH (248 bed), TOE 08945A000 (see Figure 2-8). It provides augmentation to operations and personnel sections, logistical and

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communications support to include information management. It also provides patient related linen and coordination for all other laundry support. It will require sustainment support as identified in paragraph 2-4. Conceptually, this section will reunite when the early entry hospitalization element (44 bed) and its supporting headquarters section within 72 hours to form hospital Company A (84 bed).

b. The headquarters section is capable of transporting 10,200 pounds (502 cu ft) of TOE equipment with organic vehicles. It has 6,637 pounds (333 cu ft) of TOE equipment requiring transportation.

c. For additional information see Appendix H.

2-13. Headquarters Section, Hospital Company B (164 Bed), TOE 08546AC00

a. This headquarters section provides C2, administrative services, and logistics augmentation to the hospital Company B (164 bed) and to assigned and attached units during split-base operations. It is authorized on the basis of one per CSH (248 bed), TOE 08945A000 (see Figure 2-8). It provides augmentation to operations and personnel sections, logistical and communications support to include information management. It also provides patient-related linen and coordination for all other laundry support. When this headquarters section is deployed with the hospitalization augmentation element (164 bed), it will require sustainment support as identified in paragraph 2-4.

b. The headquarters section is capable of transporting 5,200 pounds (213 cu ft) of TOE equipment with organic vehicles. It has 3,208 pounds (108 cu ft) of TOE equipment requiring transportation.

c. For additional information see Appendix H.

2-14. Transportation Element, Headquarters and Headquarters Detachment, 248-Bed Combat Support Hospital, TOE 08546AD00

a. This element provides organic transportation for the HHD, CSH (248 bed), TOE 08950A000. It is authorized on the basis of one per CSH (248 bed), TOE 08945A000 (see Figure 2-8). This element has no personnel authorizations. It is dependent upon the unit of attachment for vehicle operations, accountability, and maintenance.

b. The transportation element is capable of transporting 9,000 pounds (722 cu ft) of TOE equipment with organic vehicles. It has 40 pounds (0 cu ft) of TOE equipment requiring transportation.

Section III. HOSPITAL COMPANY A (84 BED), TOE 08960A000

2-15. General

Hospital Company A (84 bed), TOE 08960A000, is modularly designed to provide split-base operations and enhances the ability to tailor HSS to adapt to mission requirements of a smaller magnitude. It consists of

three separate organizations: early entry hospitalization element (44 bed), TOE 08547AA00, hospitalization augmentation element (40 bed), TOE 08547AB00, and transportation element, hospital Company A (84 bed), TOE 08547AC00. This section discusses each of the TOEs and their application in support of hospital deployment. Figure 2-9 shows the organization for this company.

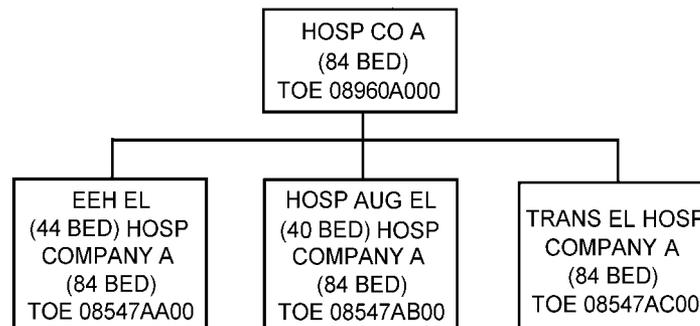


Figure 2-9. Hospital Company A (84 Bed).

2-16. Early Entry Hospitalization Element (44 Bed), Hospital Company A (84 Bed), TOE 08547AA00

a. The modular design of the corps CSH allows specialized support capabilities to match mission requirements. The split-base operations capability of the CSH reduces strategic-lift requirements and in-theater support requirements. The early entry hospitalization element (44 bed), with its supporting headquarters section and transportation element, can be readily deployed to support Army, joint, multinational, and humanitarian contingencies when a complete CSH is not required (see Figure 2-10). This element, with augmentation from the headquarters section and transportation element, has the capability for 72 hours of stand-alone operations without resupply. If the force needs additional hospital assets later, medical commanders/planners can deploy the remaining hospital augmentation element (40 bed), hospital Company B (164 bed) and supporting headquarters sections. When it is determined that medical assets are no longer required they could be incrementally redeployed back to home station or to other locations.

b. The early entry hospitalization element (44 bed) provides hospitalization services for all classes of patients. It is authorized on the basis of one per CSH (248 bed), TOE 08945A000. It provides all clinical and ancillary support as discussed in paragraphs 2-7 and 2-8. It will require sustainment support as identified in paragraph 2-4.

c. The early entry hospitalization element (44 bed) is capable of transporting 773,099 pounds (50,050 cu ft) of TOE equipment with organic vehicles. It has 306,892 pounds (35,419 cu ft) of TOE equipment requiring transportation.

d. For additional information see Appendix H.

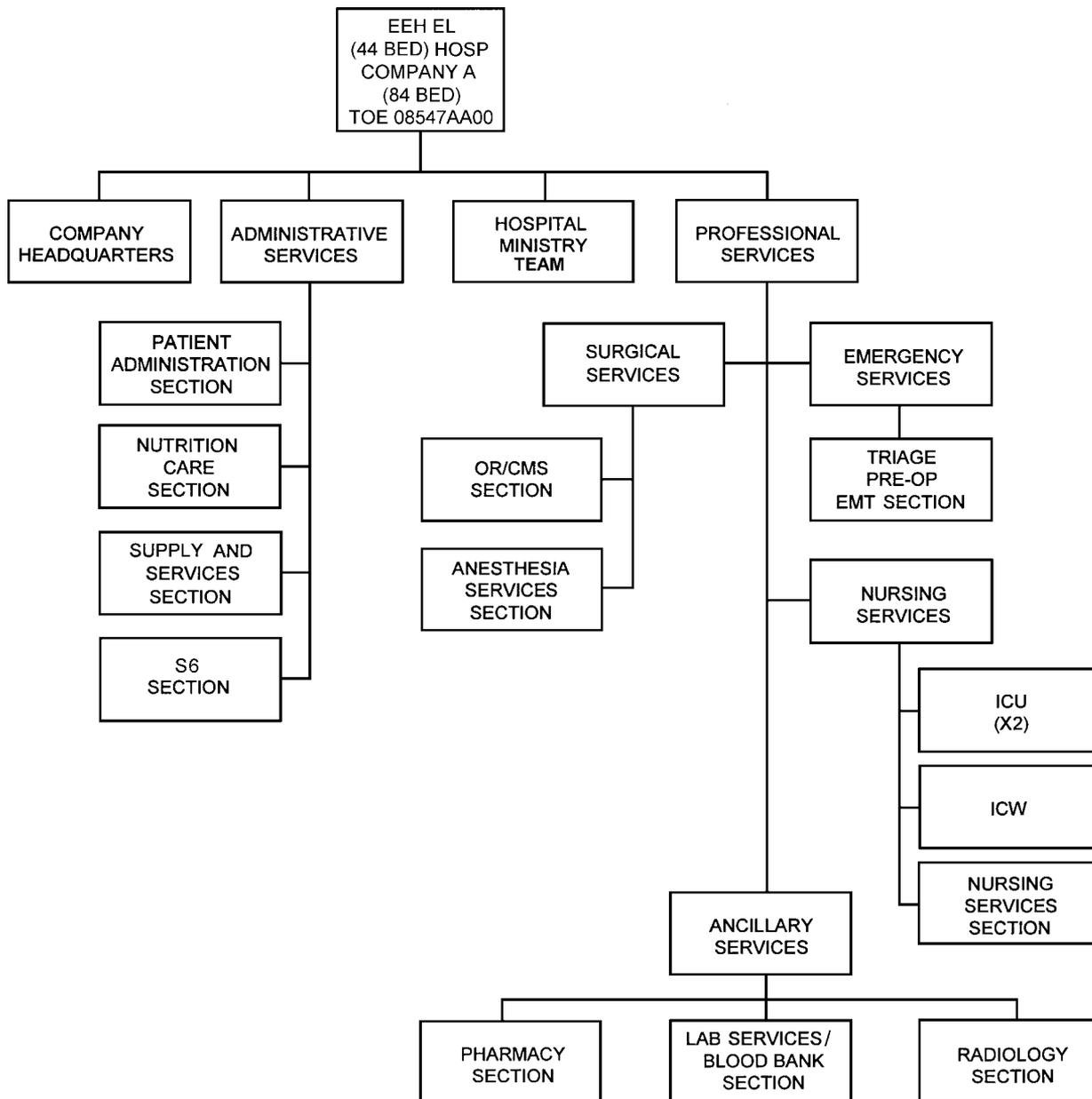


Figure 2-10. The 44-bed hospital Company A.

2-17. Hospitalization Augmentation Element (40 Bed), TOE 08547AB00

a. The hospitalization augmentation element (40 bed) augments the early entry hospitalization element (44 bed), hospital Company A (84 bed), TOE 08547AA00, by providing outpatient specialty clinic services, 40 intermediate care beds, and augmentation to the company headquarters and supply and service section. This unit is authorized on the basis of one per CSH (248 bed), TOE 08960A000 (see Figure 2-11). It will require sustainment support as identified in paragraph 2-4.

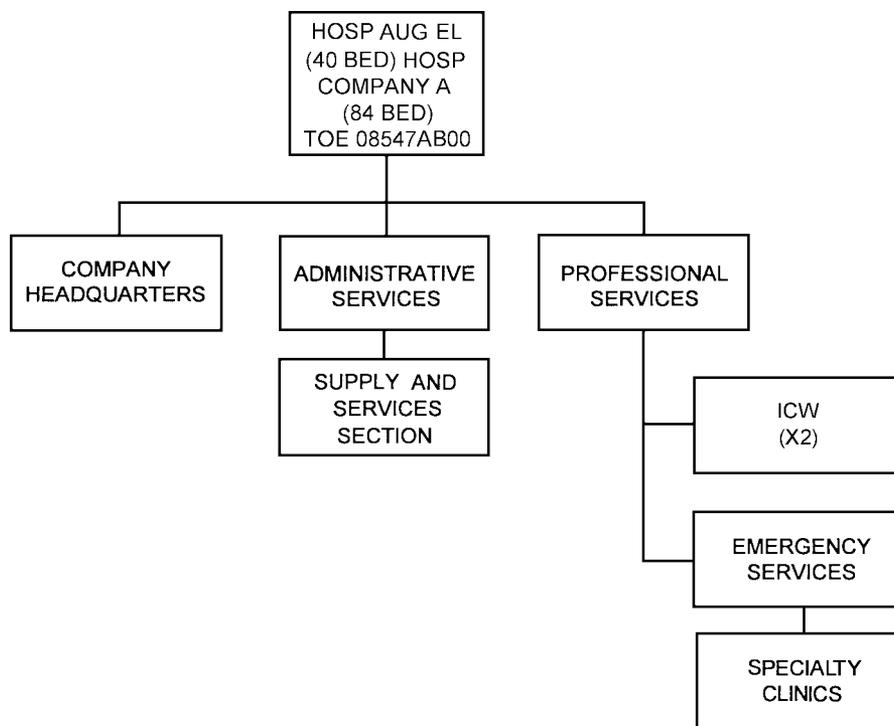


Figure 2-11. The 40-bed hospital Company A.

b. This element has no organic transportation assets. When augmented by the transportation element, hospital Company A (84 bed), TOE 08547AC00, it is capable of transporting 200,000 pounds (11,890 cu ft) of TOE equipment. It has 71,598 pounds (10,955 cu ft) of equipment requiring transportation.

c. For additional information see Appendix H.

2-18. Transportation Element, Hospital Company A (84 Bed), Combat Support Hospital (248 Bed), TOE 08547AC00

a. This transportation element provides organic transportation for elements of hospital Company A, TOE 08960A000. It is authorized on the basis of one per CSH (248 bed), TOE 08945A000 (see Figure 2-9). It is assigned to the CSH (248 bed) and further attached to hospital Company A (84 bed). It is dependent upon the unit of attachment for vehicle operations, accountability, and maintenance. This element has no personnel authorizations.

b. The transportation element is capable of transporting 282,500 pounds (10,706 cu ft) of TOE equipment with organic vehicles. It provides 100 percent mobility to meet mission and function of the early entry hospitalization element (44 bed), and 35 percent to the remaining hospital Company A (84 bed).

c. The transportation element has 363,201 pounds (43,504 cu ft) of TOE equipment requiring transportation.

CHAPTER 3

**COMMAND, CONTROL, AND COMMUNICATIONS OF THE
COMBAT SUPPORT HOSPITAL****3-1. Command and Control**

The major corps and EAC C2 medical units are the MEDCOMs and the medical brigades. The mission of the MEDCOM and medical brigade is to C2 and supervise assigned and attached units. The MEDCOM is assigned on the basis of one per theater and one per corps. The medical brigade is assigned to MEDCOMs on the basis of one per three to eight battalion-size equivalent units commanded per MEDCOM theater and MEDCOM corps. The types and number of HSS units assigned to the medical C2 units depend on various factors such as size, composition, and location of supported forces; types of operations conducted; anticipated workload; and theater evacuation policy. The MEDCOMs control the majority of their assigned units through subordinate medical brigades. However, in stability operations and support operations, and humanitarian assistance missions, a CSH or hospital Company A (84 bed) may be the largest medical unit deployed, and the hospital commander, as the senior medical officer, may be the medical task force commander. The CSH will need to assure communications for subordinate PVNTMED, veterinary, combat operational stress control (COSC), and evacuation units in the task force, that are mobile throughout the AO.

3-2. Communications

Management and control of HSS operations is dependent on the hospital headquarters' ability to communicate with its staff, the MEDCOM, the medical brigade, MEDEVAC organizations, other CSS units, and to monitor the battle. Hospital's communications consist of communications and information systems (IS) designed to interoperate with current and future communication systems. These communications assets include assigned and attached communications assets: high frequency (HF)- and very high frequency (VHF)-frequency modulated (FM) radios; triservice tactical communications (TRI-TAC); mobile subscriber equipment (MSE); and interim commercial technologies used as a bridge to the future capabilities of the Warfighter Information Network-Tactical (WIN-T). The goal of these systems is to provide reliable, redundant and timely net-centric communications leveraging the power of the Global Information Grid (GIG).

a. Communications Planning. Extensive communications planning is required for joint military-civilian stability operations and support operations. The S6 is responsible to the commander for all aspects of communications and in coordination with the hospital S2/S3 plans for communications requirements and usage. Each phase of military operation—predeployment, deployment, sustainment operations, and redeployment must be addressed in this plan. A HN commercial communications system may be available for use by the S6 in communications planning. The communications networks should interface with existing joint and combined communications systems and any available local HN telephone and telegraph systems. This interface is accomplished as outlined in applicable STANAGs and HN support agreements. It should be noted that military, civilian agency, and civilian law enforcement communications systems might not be interoperable, and may require additional coordination.

b. Communications Support. Communications support for organizations within a TO is based upon a unit's level of operations. Signal support for the EAC CSH is coordinated through the theater

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deputy chief of staff for operations and the deputy chief of staff for information management. The corps CSH S6 will request signal support through the corps assistant chief of staff (signal) (G6), command, control, communications, and computers (C4) operations and should be supported by the corps signal brigade. For additional information on theater signal support see FM 6-02.45.

c. Combat Support Hospital. The CSH has been reengineered and restructured to support current operations. The restructured CSH will be communications- and information system-intensive, employing telemedicine in various forms (voice, still imagery, x-ray, and full motion video) internally and externally to other medical facilities in theater and in CONUS. Through an agreement between the US AMEDDC&S and the US Army Signal Center network-switching nodes will be organic to the CSH. These organic nodes will provide internal voice and data services that the currently fielded switching systems supporting the MF2K hospitals cannot accommodate. This organic network-switching node replaces the small extension node (SEN) that is currently provided by the supporting signal battalion. It should be noted that there may continue to be a requirement for the signal elements to provide line of sight (LOS) or beyond LOS connectivity to the organic switch at the CSH. During split-base operations, where the CSH has hospital elements forward, both the organic switching node and the additional switching assets may be required to provide services to both locations. The signal officer (S6) is the interface for all signal matters.

d. Communications-Electronics Section. The S6 section personnel are responsible for performing management operations and overseeing the IOM of all communications and IS within the CSH. The S6 is responsible to the commander for all signal matters and for coordinating with the supporting signal elements for connectivity to the wide area network (WAN). Table 3-1 lists additional tasks and functions of the S6.

e. Staff Responsibilities. Each staff element of the CSH is responsible for adhering to the unit's tactical standing operating procedure (TSOP) and signal support policies in accordance with AR 25-2 during their daily operations.

f. Network Support. Network support to the CSH is provided by organic network support assets supported by nonorganic networked systems operated by signal units. These nonorganic assets currently consist of TRI-TAC at EAC and MSE at echelons corps and below (ECB), combined these systems are commonly called the Area Common-User System (ACUS). These networks are programmed for replacement by the WIN-T and on some occasions by interim commercial technologies used as a bridge to the future capabilities of WIN-T.

(1) The ACUS is the hospital's primary means of communications and consist of a series of network node switching centers connected primarily by nonorganic LOS multichannel radios and tactical satellites (TACSATs). This network provides voice and data transmission capabilities for C2, operations/intelligence, administration, and logistics functions. The ACUS is interconnected allowing the network at ECB to interoperate with the networks at EAC and with adjacent units and networks. The ACUS is designed to form a communications grid providing the force with digital, secure, and flexible features that compensate for link or functional element outages, overload in traffic, and rapid movement of users. The ACUS provides voice and data communications on an automatic, discrete-addressed, fixed-directory basis using the flood search routing technique with a tactical packet network (TPN) switch installed for passing data traffic. Organic to the signal elements are TACSAT equipment and tropospheric scatter radio (TROPO) equipment providing range extension. Range extension improves the employment capability of the ACUS. For additional information see FM 11-55.

Table 3-1. Tasks and Functions of the S6

TASKS	FUNCTIONS
NETWORK EMPLOYMENT	<p>ESTABLISHES, MANAGES, AND MAINTAINS CSH COMMUNICATIONS CONNECTIVITY. ADVISES THE COMMANDER ON COMMUNICATIONS SUPPORT REQUIREMENTS. PLANS, COORDINATES, AND MANAGES NETWORK IS TERMINALS (REGARDLESS OF AFFILIATION).</p>
NETWORK CONFIGURATION	<p>DETERMINES THE SYSTEM REQUIREMENTS NEEDED TO SUPPORT THE TACTICAL SITUATION. COORDINATES AND PLANS CSH LAN CONFIGURATION. DETERMINES COMMUNICATIONS AND/OR TRANSMISSION CONNECTIVITY REQUIREMENTS. INFORMS THE COMMANDER ON PRIMARY AND ALTERNATE COMMUNICATIONS. DEVELOPS INITIALIZATION INSTRUCTIONS FOR NEW OR MODIFIED COMMUNICATIONS SYSTEMS.</p> <p>ASSISTS OPERATORS WITH DATABASE CONFIGURATIONS. SUPERVISES NETWORK CONFIGURATION, INITIALIZATION, AND TACTICAL LAN INSTALLATION. ESTABLISHES AND ENFORCES NETWORK POLICIES AND PROCEDURES. DETECTS, REPORTS, AND TAKES CORRECTIVE ACTION ON SECURITY VIOLATIONS AND POSSIBLE INTERNAL AND EXTERNAL INTRUSIONS. DEVELOPS THE C4 ANNEX TO THE OPERATION ORDER (OPORD). ADVISES THE COMMANDER AND USERS ON THE REQUIREMENTS, CAPABILITIES, AND USE OF THE SYSTEMS.</p>
NETWORK STATUS MONITORING AND REPORTING	<p>MONITORS THE STATUS OF C2 DEVICES USING NETWORK MANAGEMENT TOOLS. MONITORS THE STATUS OF COMMUNICATIONS LINKS. MONITORS NETWORK PERFORMANCE AND DATABASE CONFIGURATION AND RECONFIGURATION. REPORTS NETWORK CHANGES TO THE COMMANDER.</p>
NETWORK CONTROL AND RECONFIGURATION	<p>PROVIDES SUPERVISION, GUIDANCE, FAULT ISOLATION, AND CORRECTIVE ACTIONS ON THE CSH LAN. TROUBLESHOOTS INTERCONNECTION DEVICE PROBLEMS THROUGHOUT THE SYSTEMS. DETERMINES THE NEED FOR CONFIGURATION CHANGES. PLANS SYSTEM RECONFIGURATIONS CAUSED BY CHANGES IN THE TACTICAL SITUATION, COMMUNICATIONS CONNECTIVITY, AND SYSTEM INITIALIZATION INSTRUCTIONS. SUPERVISES CHANGES IN SYSTEM CONFIGURATION, INITIALIZATION, AND LAN INSTALLATIONS. PROVIDES SUPERVISION AND GUIDANCE ON INITIALIZATION AND CONFIGURATION INSTRUCTIONS. REPLICATES, DISTRIBUTES, AND CONTROLS COMMON OPERATING ENVIRONMENT (COE) SOFTWARE IN ACCORDANCE WITH INSTRUCTIONS IN APPROPRIATE TBs AND SOPs.</p>
TRAINING	<p>ASSISTS IN TRAINING C2 SYSTEMS PERSONNEL. SUPPORTS THE DEVELOPMENT AND EXECUTION OF TRAINING FOR IS PERSONNEL AND COLLECTIVE TRAINING FOR THE UNIT. PROVIDES TRAINING IN ESTABLISHING AND INTERCONNECTING NETWORKS TO USERS AND SUPERVISORS.</p>
SECURITY	<p>PREPARES COMMUNICATIONS NETWORK SECURITY PLANS, INSTRUCTIONS, AND SOPs. DEVELOPS SECURITY POLICIES AND PROCEDURES FOR NETWORK OPERATIONS. MONITORS THE SECURITY INTEGRITY OF THE NETWORK AND REPORTS BREACHES IN THAT SECURITY. REPORTS THREATS TO NETWORK SECURITY. ESTABLISHES PROCEDURES TO RESTRICT ENTRY OF UNAUTHORIZED USERS, TRANSACTIONS, OR DATA. ENSURES ALL OPERATE IN ACCORDANCE WITH APPLICABLE ARMY REGULATIONS (ARs) AND LOCAL SECURITY SOPs. ENSURES THE IMPLEMENTATION OF ACCESS CONTROL PROCEDURES. ENSURES INFORMATION ASSURANCE SECURITY OFFICER (IASO) IS APPOINTED FOR EACH IS.</p>

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(2) The WIN-T will replace the MSE, TRI-TAC, and interim commercial solutions fielded to Army elements. The WIN-T is the Army's tactical telecommunications system consisting of infrastructure and network components connecting all users from the maneuver battalion to the theater rear boundary, to joint and multinational elements and the GIG. The WIN-T provides capabilities that are mobile, secure, survivable, seamless, and capable of supporting multimedia tactical information systems. The network's capability to support unit task reorganization and real-time retasking of battlefield support elements is vital. The WIN-T will allow all Army commanders, and other communications network users, at all echelons, to exchange information internal and external to the theater, from wired or wireless telephones, computers (internet-like capability) or from video terminals. Signal and nonsignal units employ organic WIN-T systems to integrate wide and local area networks into a commercial information technology-based tactical network.

(3) The WIN-T employs a combination of terrestrial, airborne, and satellite-based transport options providing a robust and redundant connectivity. The WIN-T information services help achieve information superiority by providing the necessary communications capabilities so that situational information, collaborative planning, sensor-to-shooter linkages, continuous precision operations and focused logistics can be achieved as required by both Joint Vision 2010 and Army Vision 2010. The WIN-T's infrastructure provides commanders and other users the ability to communicate via voice, data, and video simultaneously at all levels of security. The WIN-T supports the Army requirement for battle command on the move (BCOTM) by integrating the major WIN-T elements into Army mobile tactical operations center (TOC) platforms and leveraging the Joint Tactical Radio System (JTRS), legacy wideband digital radios, and wireless LAN technologies. Major components of the WIN-T network infrastructure include switching, routing, transport, transmission media, network management, information assurance (IA), subscriber services and user interfaces to support user multimedia (voice, data, messaging, and video) requirements.

g. Hospital Radio Nets. The CSHs and their staffs depend on both combat net radios (CNRs) and area communications systems to operate. These systems are used to facilitate patient management, air and ground evacuation, and medical regulation of patients. The hospital nets link the hospitals with the MEDCOM and/or medical brigade, which is the net control station (NCS) for the HSS operations net.

h. Combat Net Radio System. The CNR system is authorized for both the corps CSH and the EAC CSH. The CNR system includes the VHF-FM radios, primarily the Single-Channel Ground and Airborne Radio System (SINCGARS) radios, and HF radios.

(1) *Very high frequency-frequency modulated radio.* The hospital's VHF-FM radio net is shown in Figure 3-1 with the SINCGARS being the primary VHF-FM system used today. The VHF-FM radios are designed for simple and quick operation at relatively short range (maximum 20 miles without a retransmission system). The SINCGARS is frequency-hopping capable and operates in the 30 to 88 megahertz (MHz) frequency range.

(2) *High-frequency radio.* The HF radios provide mid-to-far range capability (15 to 2000 miles) and have a frequency range of 2 to 30 MHz. They use "nature's satellite" or the ionosphere to bounce radio waves back to earth (frequencies above 30 MHz pass through the ionosphere rather than bouncing back). The hospital's HF-FM net is shown in Figure 3-2.

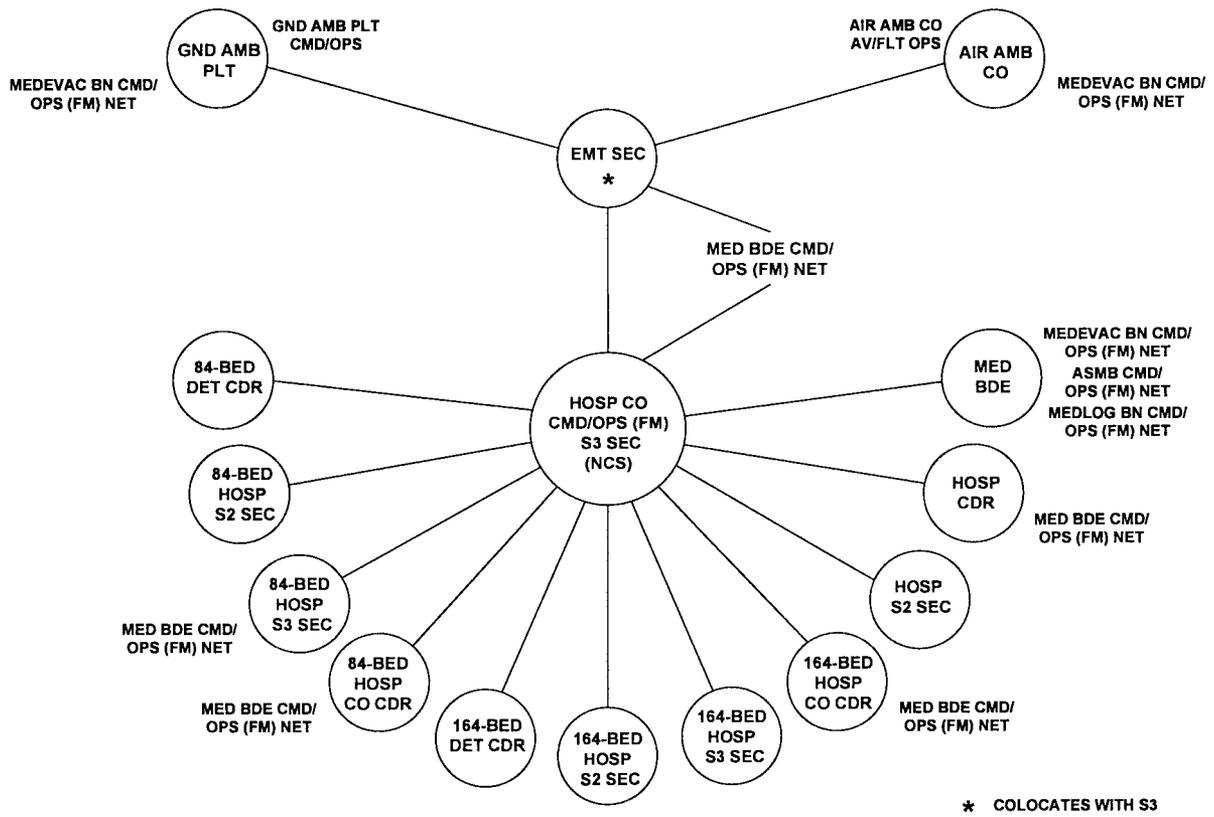


Figure 3-1. Hospital net—VHF-FM.

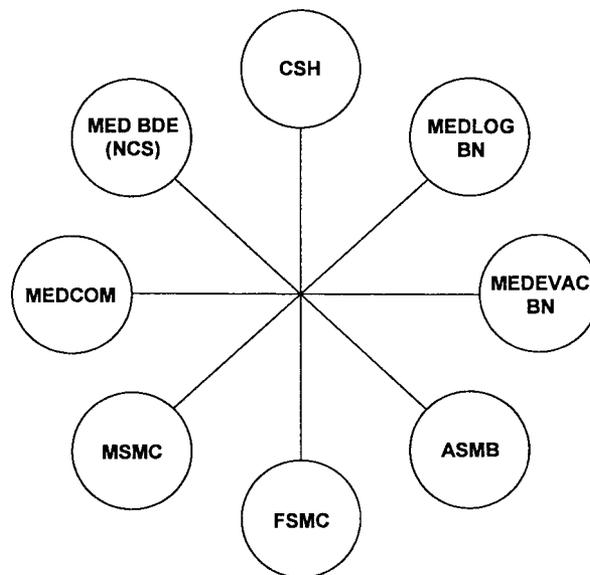


Figure 3-2. Combat support hospital net—HF-FM.

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i. Signal Security. As part of the overall security program, all hospital elements must practice signal security (SIGSEC). The hospital operations section is responsible for SIGSEC and COMSEC. Some considerations include—

- Using terrain features, such as hills, vegetation, and buildings to mask transmissions.
- Maintaining radio-listening silence.
- Using the radio only when absolutely necessary.
- Distributing codes on a need-to-know basis.
- Using only authorized call signs and brevity codes.
- Using authentication and encryption codes specified in the current signal operation instructions (SOI).
- Keeping transmissions short (less than 12 seconds, if possible).
- Reporting all COMSEC discrepancies to appropriate authorities.

j. Security Checklist. Table 3-2 provides the information needed to ensure the unit is operating the IS equipment in accordance with applicable ARs and local unit TSOP.

Table 3-2. Security Checklist

A. BASIC INFORMATION

UNIT IDENTIFICATION: _____
 NUMBER OF SYSTEM WORKSTATIONS: _____
 UNIT LOCATION: _____
 IASO APPOINTED FOR THE TECHNICAL INSPECTION (TI): _____
 UNIT SECURITY MANAGER'S NAME/TITLE/PHONE: _____
 SUPERVISOR'S NAME/TITLE/PHONE: _____

B. ACCESS

ALL PERSONNEL WHO HAVE ACCESS TO THE ARMY BATTLE COMMAND SYSTEM (ABCS) HAVE A SECRET SECURITY CLEARANCE.
 ACCESS ROSTERS AND PERSONAL RECOGNITION WILL BE USED TO CONTROL ACCESS TO THE TI. (ACCESS TO THE ABCS IS ONLY GRANTED ONCE THE SECURITY CLEARANCE AND NEED-TO-KNOW IS VERIFIED.)
 ALL PERSONNEL WHO HAVE ACCESS TO THE ABCS HAVE A NEED-TO-KNOW FOR ALL ACTIVITIES.
 ALL SYSTEMS THAT CONNECT TO THE ABCS LAN WILL BE ACCREDITED SECRET.

C. AUDIT

COMMAND AND CONTROL PROCESSOR (C2P) TOOLS ARE USED TO CAPTURE AUDIT EVENTS.
 AUDIT TOOLS ARE REVIEWED FOR EVIDENCE OF UNAUTHORIZED ACCESS OR TAMPERING.

D. CLEARING, PURGING, AND DECLASSIFYING ELECTRONIC MEDIA

WHEN LEFT UNATTENDED, THE ABCS COMPONENTS MUST BE PLACED IN A PURGED, DECLASSIFIED STATE. ALL CLASSIFIED MAGNETIC MEDIA IS REMOVED, SWITCH WORKSTATION RANDOM ACCESS MEMORY (RAM) IS PURGED, AND PRINTER RAM IS PURGED.
 FLOPPY DISKS WITH CLASSIFIED INFORMATION STORED ON THEM ARE ALWAYS TREATED AS CLASSIFIED AND NOT USED AT THE UNCLASSIFIED SENSITIVE LEVEL. (FLOPPY DISKS CAN ONLY BE PURGED USING A TYPE I OR II DEGAUSSER THAT IS NOT FURNISHED WITH THE TI.)

E. HARDWARE SECURITY

ALL ABCS COMPONENTS ARE INSTALLED AND MAINTAINED ACCORDING TO APPLICABLE TMs.
 ALL ABCS COMPONENT FAILURES OR MALFUNCTIONS ARE DOCUMENTED AND REPORTED TO THE IASO OR TERMINAL AREA SECURITY OFFICER (TASO). (THE IASOs WILL DETERMINE IF THE MALFUNCTIONS SHOULD BE REPORTED AS A TECHNICAL VULNERABILITY.)
 MAINTENANCE PERSONNEL HAVE SECRET SECURITY CLEARANCE.
 MAINTENANCE PERSONNEL WHO DO NOT HAVE A SECRET SECURITY CLEARANCE AND WHO DO NOT ACCESS CLASSIFIED INFORMATION DURING THEIR OPERATIONS ARE OBSERVED BY AN AUTHORIZED INDIVIDUAL WITH A SECRET SECURITY CLEARANCE TO ENSURE THEY PERFORM NO OBVIOUS UNAUTHORIZED MODIFICATIONS.
 CLASSIFIED ABCS COMPONENTS ARE NOT REMOVED FROM THE SHELTER BY UNCLEARED MAINTENANCE PERSONNEL.

F. SOFTWARE SECURITY

SYSTEM WORKSTATION SOFTWARE ERRORS OR FAILURES ARE DOCUMENTED AND REPORTED TO THE IASO OR TASO. (IASOs WILL DETERMINE IF SOFTWARE ERRORS SHOULD BE REPORTED AS A TECHNICAL VULNERABILITY.)
 NO UNAPPROVED MODIFICATIONS OR ALTERATIONS ARE MADE TO THE SYSTEM WORKSTATION SOFTWARE.

Table 3-2. Security Checklist (Continued)

G. PHYSICAL SECURITY

WHEN UNATTENDED, THE ABCS COMPONENTS ARE SECURED WITH DOUBLE BARRIER PROTECTION (FOR EXAMPLE, LOCKED IN A MILITARY VEHICLE OR IN A LOCKED AND SECURED MOTOR POOL). THE ABCS IS OPERATED IN AN ENVIRONMENT WHICH IS AUTHORIZED FOR PROCESSING SECRET MATERIAL.

THE ABCS COMPONENTS ARE MAINTAINED UNDER THE CONTROL OF CLEARED, AUTHORIZED USERS OR SUPERVISORS. CLASSIFIED INFORMATION, MAGNETIC MEDIA, AND OTHER MATERIAL ASSOCIATED WITH THE ABCS ARE SECURED IN A GENERAL SERVICES ADMINISTRATION (GSA)-APPROVED CONTAINER, SAFE, OR CLASS B VAULT WHEN NOT UNDER THE DIRECT CONTROL OF AN AUTHORIZED INDIVIDUAL. THE ABCS COMPONENTS ARE PROPERLY DECLASSIFIED PRIOR TO BEING LEFT UNATTENDED.

H. PROCEDURAL SECURITY

IASO IS APPOINTED.
TASO FOR ABCS COMPONENTS NOT UNDER THE DIRECT CONTROL OF UNIT IASO APPOINTED.
UNIT SECURITY MANAGER ASSISTS IASO AND TASO IN ACCOMPLISHING ABCS SECURITY.

I. PERSONNEL SECURITY

INITIAL SECURITY TRAINING AND AWARENESS BRIEFING FOR ALL SWITCH WORKSTATION USERS AND SUPERVISORS ARE GIVEN.
PERIODIC SECURITY AND AWARENESS TRAINING PROGRAM IS GIVEN.
ALL PERSONNEL WHO HAVE ACCESS TO THE ABCS HAVE A MINIMUM OF SECRET SECURITY CLEARANCE IN ACCORDANCE WITH AR 380-67.

J. INFORMATION SECURITY

ALL WORKSTATION REMOVABLE MAGNETIC MEDIA IS CLEARLY MARKED TO INDICATE THE CLASSIFICATION OF INFORMATION STORED ON IT (SF 707 OR SF 710 LABEL).
ALL WORKSTATION PRINTER OUTPUT IS MARKED AND SAFEGUARDED AS SECRET UNTIL REVIEWED AND MARKED ACCURATELY BY AN AUTHORIZED INDIVIDUAL.
PRINTER RIBBONS USED BY THE WORKSTATION TO PRINT CLASSIFIED INFORMATION ARE MARKED AND STORED WITH APPROPRIATE CLASSIFICATION LEVEL.
ALL CLASSIFIED MATERIAL, DOCUMENTS, REMOVABLE MAGNETIC MEDIA, PRINTER OUTPUT, AND COMSEC MATERIAL ARE SECURED IN A GSA-APPROVED CONTAINER FOR SECURING CLASSIFIED MATERIAL, A CLASS B VAULT, OR GUARDED BY AN AUTHORIZED INDIVIDUAL.

K. EMERGENCY DESTRUCTION

PROCEDURES TO DESTROY WORKSTATIONS TO PREVENT COMPROMISE OF CLASSIFIED AND UNCLASSIFIED SENSITIVE INFORMATION ASSOCIATED WITH THE SWITCH ARE IN PLACE.
EMERGENCY DESTRUCTION PROCEDURES ARE IN PLACE FOR ABCS COMPONENTS DURING TACTICAL MOVEMENTS.
EMERGENCY DESTRUCTION PROCEDURES ARE PERIODICALLY REHEARSED.

L. TRANSPORTATION SECURITY

PROCEDURES ARE IN PLACE TO PROTECT ABCS COMPONENTS DURING TACTICAL MOVEMENTS.
PROCEDURES ARE IN PLACE TO PROTECT ABCS COMPONENTS DURING ADMINISTRATIVE MOVEMENTS.

M. MISCELLANEOUS

SOP IS ON HAND.
THE COMMAND HAS CONDUCTED A LOCAL RESOURCE MANAGEMENT REVIEW.

CHAPTER 4

**DEPLOYMENT, EMPLOYMENT, AND REDEPLOYMENT
OF THE COMBAT SUPPORT HOSPITAL****4-1. Threat Environment**

a. Ethnic, religious, territorial, and economic tensions, held in check by the pressures of bipolar global competition, erupted when Cold War constraints dissolved. The world has entered a period of radical and often violent change. The threats today are more diverse, yet less predictable, than during any other period in our history.

b. Since the events of 11 September 2001, immediate threat to the US nation's survival appears much more real than ever before. Still, our worldwide interests require that we remain engaged in the world. The National Military Strategy notes four principal dangers to which we must be prepared to respond—regional instability, proliferation of weapons of mass destruction, transnational dangers, and threats to democracy and reform.

c. Regional instability, often based on ethnic or territorial disputes, is evident throughout the world. Somalia, Rwanda, Haiti, Bosnia, Iraq, and Afghanistan are just a few examples of countries where America's interests have been affected by instability. Some regional powers, specifically those with strong conventional armies and aggressive modernization programs, can threaten American interests directly. In addition, thousands of CBRNE warheads and strategic delivery systems exist throughout the world. These weapons of mass destruction present a very real danger in the hands of terrorists or rogue states. Terrorism, drug trafficking, and other transnational dangers pose a significant threat to all if left unchecked. In response to threats to democracy and reform, the US is committed to strong, active support for nations transitioning into the democratic community. The failure of democratic reform would adversely affect our nation and its interests.

4-2. Medical Threat Assessment

a. A critical element of the HSS assessment is a thorough appraisal of the medical threat. This assessment includes the medical threat to the deploying forces and the residents in the AO. The US soldier is placed at increased risk in stability operations and support operations scenarios since the incidence of and exposure to infectious diseases and environmental hazards are greater in man-made or natural disaster areas and in developing nations. The medical threat is derived through established intelligence channels and from a variety of informational sources outside of the military.

b. The ability to obtain, interpret, and use medical intelligence is critical to the success of the HSS mission. Regardless of whether the action is conducted within the US or abroad, man-made and natural disasters can cause a resurgence of diseases once thought to be at low epidemiological levels. A combination of factors can result in the spread of communicable diseases in epidemic proportions and increased opportunity for exposure to CBRNE/toxic industrial material (TIM) hazards. These factors are—

- Disruption of sanitation services (such as garbage disposal or sewer systems).
- Intentional contamination, disruption or destruction of food and water.

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- Development of new breeding grounds for rodents and arthropods (such as in rubble or in stagnant pools of water).
- Disruption of industrial operations.
- Dispersion of biological, chemical, or radiological waste by improper handling or terrorist activity.

(1) Medical intelligence is the product resulting from the collection, evaluation, analysis, integration, and interpretation of all available general health and bioscientific information. Medical intelligence is concerned with one or more of the medical aspects of foreign nations or the AO and which is significant to HSS or general military planning. Until medical information is processed, it is not considered to be medical intelligence. Medical information pertaining to foreign nations is processed by the Armed Forces Medical Intelligence Center (AFMIC). The website for AFMIC is: <http://mic.afmic.detrick.army.mil/>. Medical threat information in AOs within the US can be obtained from—

- United States Army MEDCOM.
- United States AMEDD medical centers and activities within the immediate area.
- United States Army Center for Health Promotion and Preventive Medicine (USACHPPM). Website: <http://chppm-www.apgea.army.mil/>.
- United States Civil Affairs and Psychological Operations Command.
- Local public health officials.
- American Public Health Association (FM 4-02.33).
- Centers for Disease Control and Prevention. Website: <http://www.cdc.gov/>.
- World Health Organization. Website: <http://www.who.int/en/>.
- Armed Forces Pest Management Board (AFPMB). Website: <http://www.afpmb.org/>.

(2) The special training of PVNTMED personnel, as well as other medical professionals, is used to provide a clear assessment of the medical and occupational and environmental health threats. Preventive medicine personnel are specifically trained and equipped to collect, analyze, and interpret health information. When the assessment includes oral, dental, or maxillofacial considerations, the dental public health officer has similar specialized training in his field. The veterinary officer can provide expertise in the public health ramifications of zoonotic diseases, food processing and safety, and biological warfare (BW) agents. The chemical corps officer/noncommissioned officer (NCO) in the medical brigade can provide expertise on chemical warfare (CW)/BW agents. The PVNTMED officer specializing in health physics can provide expertise on the nuclear and radiological health threat. These personnel can make recommendations

for types of activities to be accomplished and their priority for support. Using these skills maximizes the efficient use of limited HSS resources. For consultation purposes during the assessment, the medical personnel conducting the assessment must have access to all medical professionals within the HSS force and the local medical community.

c. Health service support planners must acquaint themselves with current intelligence products. These products include national-level intelligence products such as the Medical Capabilities Studies, the AFMIC products, reports, and resources, and the Disease Occurrence Worldwide Reports and access to Intellink that is located at brigade or higher level. These reports are specifically produced to support US military HSS operations conducted outside continental United States (OCONUS). These reports can be obtained through operational and medical intelligence channels (such as the medical brigade/MEDCOM).

d. As HSS plans and operations progress, the requirements for additional medical intelligence will occur. All such requirements should be requested through intelligence channels as soon as they are validated; when required, coordination should be effected with local agencies.

e. In all operations, the HSS planner must make himself aware of the health threat posed by the disaster (such as continued flooding, earthquakes and aftershocks, or further explosions) and groups, factions, opponents, terrorists, or enemy forces operating within the AO. This threat also includes the capabilities and potential use of weapons systems and munitions, such as CBRNE, directed-energy (DE) weapons or devices, or conventional armaments, radiological dispersal devices (RDDs), and the potential for terrorist attacks or incidents, including the use of CW and BW agents without weapons delivery systems. Health service support planning and force survivability necessitates that HSS units understand and utilize threat and medical intelligence to enhance their daily operations.

f. The medical threat includes the stress threat. The stress threat encompasses all stressors in the environment, which are likely to threaten the mission and the soldier's current and future well being. The baseline stress threat in any deployment includes separation from home, where there may be unresolved problems, and immersion in a continuous military field environment with limited privacy, sometimes in austere and dangerous conditions. Boredom and uncertainty about the mission can cause severe stress. Combat adds the challenge of personal danger and receiving increased US casualties (perhaps mass casualties). Even stability operations and support operations and humanitarian missions may expose US personnel to the suffering, injustice, and dead bodies of innocents, which can cause severe distress or delayed reactions. The hospital's psychiatric staff should receive CSC training in the assessment of the stress threat, and in preventive and treatment interventions. The stress threat, uncontrolled, can result in—

- Misconduct stress behaviors.
- Combat/operations stress reactions (battle fatigue).
- Neuropsychiatric disorders including organic mental disorders (especially in CBRNE situations).
- Posttraumatic stress disorder and other postdeployment syndromes.

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g. Should HSS personnel gain information of potential medical intelligence value while performing their duties, they are required to report it to their S2 or supporting military intelligence element.

h. For additional information on infectious diseases and their prevalence, refer to FM 4-02.33.

i. For additional information on the medical threat and intelligence preparation of the battlefield, refer to FM 4-02, FM 4-02.17, FM 8-42, and FM 34-130.

j. For additional information on conducting food and water vulnerability assessments, refer to USACHPPM, Technical Guide (TG) 188, Food and Water Vulnerability Assessments.

4-3. Planning Health Service Support

a. The emerging world situation has resulted in an evolution from a forward-deployed army to one capable of projecting combat power worldwide. Our Army is becoming smaller and primarily CONUS-based. For the Army to accomplish the assigned mission, it must rely on its ability to mobilize, deploy, sustain, reconstitute, and redeploy a crisis response force and reinforcing forces, if required. It must be able to project power from CONUS or forward presence locations in response to requirements from the National Command Authorities. To meet the challenge, the AMEDD must be proactive in projecting HSS. Once the mission is assigned, the commander and his staff use the planning process to determine the most effective means to accomplish the mission. This process enables the commander to estimate, analyze, and determine the courses of action to be undertaken. These courses of action are designed to maximize the accomplishment of the mission.

b. Planning at the CSH echelons entails preparing plans for a variety of situations, such as—

- Activities to be conducted at the various defense readiness condition (DEFCON) postures.
- Split-base operations.
- Hospital operations conducted in a CBRNE environment.
- Joint and multinational deployments.
- Relocation of the hospital complex, to include patient disposition.
- Contingency missions (such as humanitarian assistance or disaster relief).
- Mass casualty situations.
- Rear AO support.
- Reinforcement or reconstitution support for forward medical elements.
- Combating terrorism activities.

- Environmental considerations, policies and requirements.
- Convoy operations.
- Peacekeeping operations.
- Stability operations.
- Support operations.

c. To be complete, HSS planning must consider all functional areas within the AMEDD. These functional areas are—

- Medical evacuation and medical regulating. Refer to FMs 8-10-6, 8-10-26, and 8-55.
- Hospitalization. In addition to this publication, refer to FM 8-55.
- Health service logistics/blood management. Refer to FM 4-02.1.
- Medical laboratory services. Refer to FM 4-02.
- Dental services. Refer to FM 4-02.19.
- Veterinary services. Refer to FM 8-10.18.
- Preventive medicine services. Refer to FMs 4-02.17, 4-25.12 and 21-10, AR 40-5, TB MED 530 and USACHPPM TG 188.
- Combat operational stress control. Refer to FMs 8-51 and 22-51.
- Medical treatment. Refer to FMs 4-02.6 and 4-02.24.
- Command, control, communications, computers, and intelligence. In addition to this manual, refer to FMs 4-02 and 11-43.

4-4. Mobilization

a. *Concept of Operations.*

(1) In the event of contingencies in support of sustainment and support operations or war, the DOD initiates appropriate action for the deployment of forces in response to the scenario. Based on the situation, selected Active Component (AC) and Reserve Component (RC) CSHs and other units are alerted through command channels. For those units located in CONUS, the United States Army Forces Command (FORSCOM) uses the Time-Phased Force Deployment Data (TPFDD) based on the theater commander's

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requirements, and the air and sea resources available. For deployable AC hospitals, an increase in DEFCON is directed by the post or installation commander, or by higher headquarters. For RC hospitals, mobilization notification constitutes an increase in readiness posture.

(2) Deployment operations for hospital readiness validation are controlled by a force-projection platform, sometimes referred to as a power-projection platform. This is a designated Army installation that is responsible for assisting in and validating the deployment of the Army units moving to an AO. The designated installation plans and coordinates all deployment preparation support for the deploying hospital and monitors and controls all facets of the deployment operation, to include reporting to higher headquarters. Department of Defense Directive (DODD) 6490.2 and AR 40-66 mandates that pre- and postdeployment health assessments and medical surveillance be accomplished. Appendix N contains two mandatory health assessment forms that are required for pre- and postdeployment. (See paragraph 4-5f below for environmental considerations.) Also, refer to Army Training and Evaluation Program (ARTEP) 8-855 (MRI)-Mission Training Plan (MTP) for additional guidance on planning unit deployment/redeployment. The ARTEP is available on the Army Publishing Directorate at <https://akocomm.us.army.mil/usapa/>.

(3) The hospitals may deploy by land, sea, or air (or a combination of these modes) from locations designated by higher headquarters. Priority of effort is given to those methods of movement outlined in current plans.

(4) Active Component hospitals maintain the capability for emergency deployment on short notice to execute assigned missions.

(5) Mobilizing RC hospitals must attain and maintain the capability for mobilizing on short notice and arriving at their designated mobilization site according to unit mobilization plans.

(6) Once mobilization is validated, hospitals prepare for deployment on short notice (72 hours or less). During validation, the appropriate status reports are submitted to higher headquarters.

b. Conduct of Operations.

(1) Commanders of deploying hospitals develop movement plans and TSOPs to accomplish the necessary preparations for deployment. Provisions are made for accomplishing all mandatory training and other requirements during all phases of the deployment. The checklists contained in Appendix O can be used as a guide for developing deployment operation procedures in support of movement by air and surface modes, or a combination thereof. The checklists are applicable to both AC and RC units and **are detailed only as a guide for commanders**. Installation mobilization stations and/or higher headquarters may prescribe different procedures for your unit.

(2) During deployment preparations, all CSH personnel must be screened for their chronic medication needs and accompanying monitoring requirements. If monitoring requirements exceed the capabilities of the deployed medical forces, patients should be referred for medical care to the local military medical treatment facility for evaluation of their deployable status prior to actual deployment. If patients are taking medications not found on the Joint Deployment Formulary or theater formulary/stockage list,

conversion to a therapeutic alternative that is stocked should be considered to facilitate future replenishment in theater. Patients stabilized on maintenance medications should deploy with a 6-month supply of these medications.

(3) Active Component hospitals maintain the capability necessary to achieve a deployment posture in the time required by any alert warning order or deployment instructions received. For planning purposes, the readiness posture maintained is consistent with the shortest notification period presented in the mobilization plan.

(4) Reserve Component hospitals maintain the readiness posture necessary to meet planned deployment dates contained in current FORSCOM and mobilization documents. Upon arrival at the designated mobilization site, hospitals are placed in an increased or advanced deployability posture, based on the published priorities of plans for which the hospitals are listed. The hospitals are managed through the RC chain of command, with input by the mobilization installation commander during the premobilization period.

(5) All hospitals are scheduled for deployment validation by unit line number, based on the published validation schedule. Hospitals can be expected to deploy within 72 hours following validation. Actual deployment date and times are directed by higher headquarters.

4-5. Deployment

a. Port of Embarkation. When directed by higher headquarters through the port call or airlift message, the CSH will move to the designated port of embarkation (POE) for deployment. Designating a POE facilitates the loading and movement of personnel and equipment according to the established priority of the combatant commander. Deployment from the POE will be as directed by the US Transportation Command (USTRANSCOM). For a detailed discussion and planning guidance, see FMs 4-01.011 and 100-17 and ARTEP 8-855 (MRI)-MTP.

b. Medical Supplies. In a Force Projection Army, METT-TC will drive the amount of supplies required to support the force. For planning purposes, the hospital normally deploys with 10 days of medical supplies, the medical assemblage for each work area contains a basic load of 3 days of supplies, and the medical supply set maintained by the supply and service section contains a 7-day basic load for the entire hospital. Medical resupply is accomplished by configured loads (CLS) until the MEDLOG battalion support elements have been established. These CLS are throughput directly to the hospital via the transportation system. These CLS may be pre-positioned "mobilization stocks," or may be built and shipped from the Defense Logistics Agency (DLA) depot system. Hospital logistics personnel coordinate with their next higher command headquarters for all logistical support to include resupply. Early deploying hospitals that arrive prior to their higher medical C2 headquarters must coordinate with port transportation personnel for shipment and receipt of supplies and equipment. Once the MEDLOG battalion support elements are established, hospital logistics personnel coordinate directly with the supporting MEDLOG element for resupply of Class VIII materiel. All other resupply is requisitioned through higher headquarters with the appropriate supporting organization. Effective coordination is the key to responsible logistical support. To be effective, coordination must be early and it must be often.

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c. Ports of Debarkation. The ports of debarkation (PODs), either aerial or sea, are the geographic points at which cargo and personnel are discharged. Aerial ports of debarkation (APODs) serve as the primary port of entry for all deploying personnel, as well as for early entry forces normally airlifted into an AO with their equipment. Activities at the APOD include terminal control; loading, unloading, and servicing of aircraft; clearing of personnel and cargo; and life support. Seaports of debarkation (SPOD) serve as the primary ports of entry for equipment, where vessels are off-loaded, and where cargo and personnel are cleared and moved to the staging area for movement forward.

d. Reception and Integration.

(1) Effective force projection largely depends on the speed with which forces assemble at the required location. The essential process that transitions deploying forces into forces capable of meeting the combatant commander's operational requirements is reception, staging, onward movement, and integration (RSO&I). Joint Publication (JP) 4-01.8 and FMs 4-01.8 (100-17-3) and 3-35.4 and ARTEP 8-855 (MRI)-MTP contain detailed discussions of the RSO&I process.

(2) Reception operations include all of those functions necessary to receive and clear personnel, equipment, and materiel through the APOD/SPOD. Personnel and cargo are off-loaded at terminals, processing through the reception center to determine how and where they are to be moved. During major deployments, the majority of personnel arrive via strategic airlift and most equipment and materiel arrive by strategic sealift.

e. Staging and Onward Movement. Once reception is completed, the CSH proceeds to the next phase of RSO&I—staging and onward movement. Staging includes the assembly, temporary holding, and organizing of arriving personnel and equipment and preparing them for onward movement to their AO.

f. Environmental Considerations.

(1) During deployment operations, the hospital commander needs to be aware of key environmental factors in order to make informed decisions regarding soldier health and environmental protection (see FM 3-34 [FM 5-100]). Prior to deployment from CONUS, the hospital commander can request this information from the supporting MEDCOM/medical brigade and PVNTMED activity. During the RSO&I early planning stage when the hospital location/site selection has been identified, the hospital commander should request key environmental factors information on the site from its supporting MEDCOM/medical brigade. This information should include the latest environmental health information and related intelligence and a copy of the Environmental Baseline Survey (EBS) if one has been conducted. If an EBS has not been conducted, the hospital commander, prior to or soon after occupation of the site, should request an EBS.

(2) While the hospital commander may not be required to actually perform the EBS, he must be aware of the information gathered in the conduct of this survey and contained in the report. The commander can request support from external organizations (medical brigade, engineer command, Joint Task Force Engineer, or PVNTMED organizations) in order to complete this survey for the site/area that is occupied.

(3) During in-theater movement, the hospital may be deploying to an area previously occupied by friendly forces who may have completed both the initial and closure EBS for that area/site.

Information contained within these reports (if completed) is instrumental to the decision-making process during base-camp planning for hospital planning and construction. For example, the site planned for occupation may have been previously utilized as a refueling station by a logistical unit. Placement of the fuel pods and fueling areas would be annotated on the EBS developed by the previous organization. This information could be used to make an informed decision regarding hospital facility placement, for example wards, latrines, and feeding locations (see FM 3-100.4 [3-34.500]/MCRP 4-11B for more information).

(4) Environmental considerations, such as identification of TIMs should be addressed during the deployment, occupation and redeployment phases. The environment considerations will assist in occupational and environmental health surveillance and posthealth assessments/evaluations.

g. Liaison Personnel. Upon arrival at the theater point of entry or the staging area, it is essential that contact with the assigned MEDCOM or medical brigade be made immediately. Normally, the MEDCOM or medical brigade has liaison personnel meet and assist the hospital staff with coordination and movement to its AO. An inventory for accountability and damage assessment is conducted. Vehicles are serviced and necessary repairs are made, or coordination is made with the supporting maintenance element for the repairs. Documentation for replacement of unusable supplies or equipment damaged beyond repair is initiated through the MEDCOM or medical brigade headquarters element. Vehicle loads are adjusted for convoy operations. For equipment that was transported separately from the hospital, coordination is made for receiving and transporting it upon arrival. Once the hospital has moved to its AO, the MEDCOM or medical brigade staff elements conduct formal personnel in-processing and an orientation on current operating policies and procedures. The orientation includes information on the following:

- Mission update, to include geographical support area.
- Health service support issues.
- Medical rules of engagement.
- Force protection measures and rules of engagement.
- Defense against radiological dispersal devices.
- Medical support to contractors.
- Host-nation support.
- Local laws and customs.
- Health threat update.
- Occupational and environmental health threats update.

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- Environmental considerations, policies, and requirements.
- Threat update.
- Security requirements.
- Personnel restrictions.
- Personnel replacements.
- Uniform requirements.
- Emergency warning signals.
- Religious support.
- Vehicle and unit movement requirements.
- Geneva Conventions (see Appendix P).
- Supply support activities and procedures (all classes).

4-6. Concept of Employment

During the initial stages of military operations, HSS to US forces will be austere and limited to the unit's organic medical capabilities. A short theater evacuation policy is normally established and tailored hospital support is required. The contingency and projected patient workloads will dictate the composition of the hospital. The modular design of the CSH allows the commander to plan the employment of operating beds in different increments as needed.

a. Corps Combat Support Hospital.

(1) The medical brigade will provide C2 and support to assigned hospitals. The CSH is organized as stated in Chapter 2 and as shown in Figure 2-1. It will provide hospitalization, consultation, and outpatient services for all classes of patients, those that require stabilization and those that will be returned to duty within the theater evacuation policy. Patients will be received from MTFs located in the division and corps, medical companies of the ASMB, and the FST. The CSH will provide medical and dental treatment to contractors as specified in existing policy, the contingency plan, OPLAN, OPORD, and contract.

(2) Hospital Company A, 84-bed, TOE 08960A000, is a complete hospital module capable of stand-alone operation for up to 30 days without further augmentation from the hospital, but will require logistical support. The modular design provides the hospital with a split-base operation capability (see Chapter 2, Section II, and Appendix H).

(3) The corps 84-bed hospital Company A (TOE 08960A000) may be echeloned for strategic deployment as a 44-bed early entry hospitalization element (TOE 08547AA00) with the early entry headquarters section (TOE 08546AA00) and the transportation element (hospital Company A, 84 bed [TOE 08547AC00]). The 44-bed early entry hospitalization element is capable of operating for three days without being resupplied or reestablished as hospital Company A (84 bed). Establishment as hospital Company A (84 bed) entails the follow-on of the hospitalization augmentation element (40 bed), TOE 08547AB00, and the headquarters section hospitalization augmentation element (40 bed).

(4) The corps hospital Company A (84 bed) may also be deployed in support of contingency operations where a complete hospital is not needed. See Chapter 2 and Appendix H.

(5) With hospital Company A (84 bed) deployed, the remaining headquarters section, hospital Company B (164 bed), TOE 08546AC00, and the hospital Company B (164 bed), TOE 08948A000, are fully functional for 72 hours and will require logistical support thereafter. These remaining elements have no mobility.

(6) The hospital's capability may be increased by attaching medical and surgical hospital augmentation teams. The hospital augmentation teams centralize and efficiently manage selected specialty capabilities that are required within the theater, but not required at every hospital (Appendixes A—G). The hospital augmentation team, special care may be attached in support of stability operations and support operations. The CSH depends upon the medical detachment, minimal care, to provide required minimal care beds. The corps MEDCOM and medical brigades will direct the employment of the CSH and its subordinate and attached elements. See Appendix H for additional hospital planning factors.

(7) The hospital, by virtue of its dependency on other support units, must locate in an area where it can be easily supported by elements of the corps support group, the corps signal brigade, the corps engineer brigade, and the COSCOM movement control center (MCC). Direct coordination between the CSH is usually required with—

- The corps support group and its subordinate elements for specific-type logistics support (to include MA and evacuation support for deceased patients).
- The corps signal brigade for external signal support.
- The corps contingency engineer manager for engineer support.
- The COSCOM MCC for transportation support and highway clearance.
- The corps provost marshal or base commander for security.
- The MEDCOM or medical brigade for air and ground ambulance support.

(8) Appendix Q depicts an example of a functional layout using the DEPMEDS tent, extendable, modular, personnel (TEMPER) and ISO system. Paragraph H-3 provides an estimate of hospital operational space requirements.

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(9) Because of its size, relocating the corps CSH should be limited. For planning purposes, this unit may be required to move on an average of one time every 25 days. The average move will be approximately 100 kilometers. With required personnel, it is estimated that 72 hours are needed to erect the hospital completely for operations. The same amount of time is needed to prepare for relocation. The commander may designate certain hospital elements to be erected on a priority basis to expedite the receiving of patients upon relocation.

(10) The size and composition of health services in support of military operations will be tailored based on—

- Mission.
- Size of force being supported.
- Projected patient workloads.
- Anticipated civic action programs.
- Availability of evacuation assets.
- Evacuation policy.

b. Echelon Above Corps Combat Support Hospital.

(1) The medical brigade will provide C2 and support to the EAC hospitals. The EAC CSH is organized essentially the same as the corps CSH as noted in Chapter 2. The EAC CSH provides hospitalization for all classes of patients, those that require stabilization for further evacuation and those that will be returned to duty within the theater evacuation policy. Patients will be received from CSHs located in the corps, the medical companies of the ASMB providing Level II support at EAC, and the EAC supported area.

(2) The EAC CSH will normally deploy as either an 84-bed hospital company or a 248-bed hospital. The EAC 84-bed and 164-bed hospital companies cannot be deployed as separate modules; it does not have split-base capability. The EAC hospital has no organic mobility. It is authorized limited vehicles for administration and housekeeping functions only. The EAC MEDCOM and medical brigades will direct the employment of the hospital and its subordinate and attached units. See Appendix H for additional hospital planning factors.

(3) The hospital's capability may be increased by attaching medical and surgical hospital augmentation teams (see Appendixes A—G).

(4) The EAC hospitals should be located where they can best acquire patients from the CZ and COMMZ. By virtue of their lack of mobility and dependency on EAC support units, their location should be in an area where they can be easily supported by elements of the TSC, the theater signal brigade, the district contingency engineer manager, and the TSC Movement Control Agency.

4-7. Hospital Displacement

a. Concept of Operations.

(1) The MEDCOM or medical brigade commander moves the CSH in support of sustainment operations. Hospital displacement may be in response to forward moves in support of tactical operations, or rearward moves during a retrograde to maintain appropriate distances from the forward line of own troops (FLOT). The MEDCOM or medical brigade commander normally issues orders, either verbally or in writing, to the hospital commander. Frequently, the time to respond to orders is short; therefore, the hospital commander must disseminate his guidance to his staff in the most expedient method. Upon receiving the commander's guidance, the hospital staff conducts the mission analysis, incorporating changes based on new information or situation. The hospital saves time by rehearsing moves, using knowledge from past experience, and maintaining a detailed TSOP.

(2) The hospital operations section develops the OPORD in accordance with the MEDCOM's or the medical brigade's plan, FM 8-55, FM 101-5, and the TSOP. The hospital commander, in consultation with the hospital XO, approves the OPORD. The hospital commander ensures that the move is coordinated with higher headquarters and all supported elements. All supported elements must be aware of when medical operations at the current location will be curtailed and the date and time of opening medical operations at the new site. Hospital displacement necessitates the transfer of patients and medical operations to other MTFs. To minimize hospital operations disruption, the CSH should move in echelons. Displacement by echelons is contingent upon the higher commander's intent, the tactical situation, and the availability of support requirements.

b. Conduct of Operations.

(1) Warning order.

(a) A move is usually initiated by a warning order issued by the MEDCOM or medical brigade headquarters. The warning order serves notice of a contemplated action or order that is to follow. Warning orders are brief oral or written orders. The amount of detail included in a warning order depends on the time available, the means of communications, and the information necessary for the hospital commander

(b) Upon receiving the warning order, the hospital commander analyzes the mission and provides planning guidance to his staff. Using the MEDCOM's or medical brigade's service support annex, status reports, and other appropriate documents, the hospital staff formulates the hospital service support estimate for the commander's approval. (Field Manual 8-55 discusses staff estimates and functions in greater detail.) With the acceptance and approval of the staff estimates, the hospital commander provides his decision and concept of operations. Concurrently with the staff estimate sequence, other hospital personnel conduct preliminary equipment checks and equipment loading procedures. Based on the commander's decision, the patient administration division (PAD) coordinates with the MEDCOM or medical brigade to affect the transfer of patients to other MTFs.

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(c) In preparation for displacement, the hospital commander should organize the hospital into manageable echelons, preserving hospital integrity as much as possible. Review paragraph 2-4 for additional planning considerations. Preparation for displacement requires—

- Identifying external support requirements; for example, MHE.
- Phasing down and transferring hospital operations.
- Patient movement/transfer.
- Performing map, ground, and/or air reconnaissance of the routes, and selecting the new site when possible.
- Selecting routes.
- Designating start points (SPs) and release points (RPs).
- Reconnoitering the route to the SP.
- Providing for fuel, security, maintenance, supply, and equipment evacuation.
- Determining the march order (echelons), rate of march, maximum speed of vehicles, catch-up speed, and distance between vehicles.
- Establishing checkpoints and halts.
- Establishing communications security procedures.
- Establishing mission-oriented protective posture (MOPP) level.
- Dispatching reconnaissance and advanced parties.
- Controlling traffic.
- Environmental considerations, policies and requirements.
- Issuing orders.

(2) *Operation orders.*

(a) The operations officer has staff responsibility for formulating, publishing, and obtaining the commander's approval of and distributing the OPORD. The OPORD provides hospital staff and personnel the information needed to carry out an operation. Preparation of this order normally follows the completion of area reconnaissance and an estimate of the situation. When time is available and the existing tactical situation conditions prevent detailed planning or area reconnaissance, the MEDCOM or

medical brigade prepares an initial march plan and issues fragmentary orders (FRAGOs) to modify these plans as needed. If conditions and time permit, information in the OPORD includes—

- Destination and routes.
- Rate of march, maximum speeds, and order of march.
- Start points and SP times.
- Scheduled halts, vehicle distances, and RPs.
- Required communications.

(b) Each hospital division or section reports its supply, vehicle, equipment, workload, and maintenance status to the operations officer. This information is used in coordination with higher headquarters to finalize the convoy organization, compute additional transportation and external support requirements, and perform march computations. (For additional information on march computations, see FM 55-30.)

(3) *Area reconnaissance.*

(a) The MEDCOM or medical brigade headquarters normally prescribes the reconnaissance route. The hospital operations section uses a map reconnaissance in such cases to confirm checkpoints, identify problem areas, and begin planning positions of the CSH in the new area. This effort includes the gathering of data already generated, if any, on the route and the new area that includes specific environmental health risks, environmental considerations, and related information. If the route is not prescribed and the CSH is not included as part of a reconnaissance party with other units, the operations section briefs the reconnaissance team on the displacement plan and provides the team with a strip map and the designated MOPP level and notifies higher headquarters of the route selected. The composition of the reconnaissance team is directed by the hospital commander.

(b) The reconnaissance party wears the appropriate MOPP gear based on the threat analysis and monitors all radiological and chemical detection devices. It performs duties to—

- Verify map information
- Note capabilities of road networks.
- List significant terrain features and potential problem areas.
- Identify and mark contaminated areas and minefields.
- Compute travel times and distances.
- Perform route and ground reconnaissance to include hospital site selection and

layout.

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(4) *Advanced party.* The advanced party moves before the main body and is dispatched as directed by the hospital commander. Its composition is recommended by the medical operations officer and approved by the hospital commander. It prepares the new site for arrival of the main body. The advanced party performs duties to—

- Conduct a security sweep of the new site to ensure the area is free of enemy activity and monitor radiation exposure measurements within the area of the new site. This is normally done by security support forces.
- Position chemical alarms.
- Establish communications with higher headquarters and old location.
- Designate boundaries of hospital elements, based on unit defense plans and consistent with types of weapons and personnel availability.
- Increase security by manning key points along the perimeter.
- Establish a command post.
- Stake the hospital layout (see Appendix R).
- Ensure personnel follow dispersion and other measures.
- Position personnel to guide main body from the RP to designated locations.

(5) *Main body.* The main body moves as directed in the OPORD. The last echelon normally closes out any remaining operations, ensuring the old site is clear of any intelligence evidence valuable to the enemy, and moves to the new site. This echelon includes maintenance elements to deal with disabled vehicles from the rest of the convoy. It also picks up guides and markers along the route. As the main body arrives at the new site, it is met by the advanced party and guided to designated positions. Erection of the hospital and the establishment of hospital operations follows the priorities set by the commander.

(6) *Crossing a CBRNE-contaminated area.* The hospital should bypass all biological or chemical areas. The hospital should avoid nuclear areas at all cost. If the hospital has no recourse but to cross a contaminated area the following are recommended procedures:

(a) *Operations section.*

- The operations officer conducts a map reconnaissance of the area and briefs the commander on the best possible route.
- Based on the commander's approval, a route reconnaissance is conducted prior to moving the convoy through the contaminated area.

- The reconnaissance team wears the appropriate MOPP level, and carries monitoring equipment.

- The route selected should minimize hospital exposure when crossing the area.

(b) *Convoy operations.*

- Prior to convoy operations, the commander designates the MOPP level.
- The convoy travels at a maximum safe speed with no scheduled stops within the contaminated area.

- The lead vehicle of each segment of the convoy has monitoring capabilities and survey instruments, with a map indicating areas of contamination. The map includes data from the reconnaissance party report. Continuous monitoring is conducted through the contaminated area.

- Spacing of vehicles should take into consideration dust generated by the next forward vehicle.

- Disabled vehicles are abandoned after personnel are recovered with notation of location.

(c) *Decontamination.*

- Immediately upon completion of the move, the hospital is responsible for decontaminating its personnel and equipment (see FM 3-5). Decontamination beyond the capability of the hospital will be requested from the supporting chemical company.

- The decontamination site is annotated on the map.

(d) *Reports.* Upon completion of the move, the operations officer reports immediately to the hospital commander and higher headquarters any contamination acquired during the move. Other required reports are also included.

4-8. Emergency Displacement

When confronted with an adverse tactical situation and/or when directed by higher headquarters, the CSH may be required to relocate expeditiously. The movement procedures identified above may be modified to accommodate the situation. As soon as the threat appears inevitable, all available means are used for evacuation of casualties, hospital personnel, and equipment. Wounded soldiers have priority on transportation assets. The critically wounded who cannot be moved are left behind with medical personnel, supplies, and equipment. The decision to leave patients behind is made by the tactical commander. The medical staff officer keeps the tactical commander informed in order that he may make a timely decision. Medical supplies and equipment are not intentionally destroyed, even to prevent them from falling into

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enemy hands. Paragraph 5 of Article 12, Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in the Armed Forces (GWS), provides that if we must abandon wounded or sick, we have a moral obligation to, “as far as military considerations permit,” leave medical supplies and personnel to assist in their care.

4-9. Chemical, Biological, Radiological, Nuclear, and High-Yield Explosive Operations

a. Considerations.

(1) A major consideration for the hospital commander is the potential enemy use of CBRNE weapons against friendly forces. These weapons through use, or threat of use, can cause shifts in HSS courses of action. Although the hospital may not be specifically targeted, locating it close to other combat support (CS) and CSS units, major airfields, and road junctions makes it vulnerable to CBRNE weapons. The hospital’s TEMPERs are relatively permeable. Therefore, when the threat of CBRNE weapons use is high, increased protection should be established or hospital assets can experience a significant amount of contamination and damage from CBRNE strikes.

(2) Contamination avoidance is essential for successful operations when faced with a CBRNE threat. By applying contamination avoidance procedures allows the hospital to maintain its level of support by keeping medical care providers out of increased MOPP levels.

(3) Force protection is imperative in this environment. The hospital commander can ensure unit survivability by—

- Preparing the unit for CBRNE operations (such as using chemically protected [CP] DEPMEDS).
- Ensuring all supplies and equipment are covered or inside shelters to protect against contamination.
- Establishing decontamination priorities/procedures (including plans for acquiring nonmedical personnel from base cluster or adjacent units for patient decontamination).
- Ensuring hospital personnel use CBRNE contamination avoidance procedures.
- Using terrain for shielding against effects of nuclear weapons and RDD.
- Establishing improved positions (berms, trenches, sandbags, and additional cover) to prevent contamination of key equipment, shelters, and supplies.
- Establishing MOPP level requirements and procedures.
- Ensuring CBRNE detectors and warning systems are properly employed.
- Ensuring adequate planning has taken place to defend against a CBRNE attack.

- Ensuring adequate planning has taken place to establish isolation and restriction of movement procedures for suspected biologically contagious casualties.
- Training relentlessly in CBRNE defense procedures until they become ingrained, while maintaining a realistic but success-oriented attitude.
- Conducting periodic inspections of individual and collective CBRNE equipment to ensure readiness.

(4) Because of the unique requirements and challenges of nontactical CBRNE hazards by hospital elements during stability operations and support operations, the ability to avoid contamination can and will be extremely limited. The commander and the hospital staff must ensure that—

- Methods and locations for decontamination of patients and hospital assets are in place and operational.
- The spread of contamination in noncontaminated areas by air/ground evacuation, support operations, and decontamination operations is limited.

b. Collective Protection.

(1) With collective protection, the CSH can operate in a CBRNE environment. However, individual and unit performance is degraded when operations are conducted in MOPP. Routine medical tasks and other tasks, such as maintenance, vehicle operation, and night operations, become infinitely more difficult when conducted in MOPP Level 4. The degradation caused by the hospital operating in MOPP can be significantly decreased by conducting the actual operation in field training exercises while in MOPP gear. All hospital operations must be routinely practiced while in MOPP gear for this degradation to be minimized.

(2) The DEPMEDS-equipped patient care areas of the corps and EAC CSH may employ the CP DEPMEDS. It will protect patient and staff from chemical/biological (CB) agents and some protection against nuclear fallout effects. However, it will not protect personnel or patients from the thermal, blast, and initial radiation effects of nuclear weapons. Areas of the hospital that are not included in the CP DEPMEDS are administrative areas, food service, supply (including Class VIII), and staff quarters. The system includes CB—

- Protected (M28) liners for TEMPERS and passageways.
- Filtered and conditioned (heated or cooled) air.
- Protected ambulatory, litter, and supply air locks.
- Protected latrines and bedpan wash areas.
- Protected seals for ISO shelters.
- Protected water supply system.

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(3) When the threat of CBRNE action is anticipated in the AO, the collective protection shelter (CPS) components must be set up as the hospital is being established. The system cannot be set up in a hospital that has already been established; to do so requires the hospital to be closed, all TEMPERs to be struck, and erected with the M28 liners installed during the erection process. To establish CPS in a DEPMEDS-equipped hospital, follow the procedures as described in TM 10-5410-283-14&P. Figures Q-1, Q-2, and Q-3 present suggested layouts that can be used for the CP DEPMEDS protected patient care areas of the CSH. Refer to FM 4-02.7 for additional information on hospital operations in a CBRNE environment.

(4) When employing CP DEPMEDS, provisions for waste disposal and protected water and food supplies within the system are established. Additionally, Class VIII supplies must be protected from contamination. Supplies not in use or needed in the protected operational areas are stored in medical chest, shipping containers, or wrapped in layers of plastic that are inside covered areas, such as closed military-owned demountable containers (MILVANs), tents, tarpaulins, or multiple layers of heavy plastic sheeting. When contamination is present, only open these storage areas for operational area emergency resupply. Wrap supplies in plastic or other barrier material for movement from the storage area to the resupply air lock of the collective protection shelter (CPS).

- A water supply system with distribution hoses is established inside the CP DEPMEDS areas. Pumps continuously circulate the water from the storage tank through the hose system back to the storage tank. The continuous circulation ensures that the chlorine residual is maintained in the water supply. Personnel in areas that are not included in the continuous flow system must draw water from the system and carry it to their work areas in 5-gallon water cans or other containers. Water resupply is accomplished by passing a hose through the utility port at the end of the TEMPER and M28 liner for a connection to the water transport vehicle. The ends of both hoses must be decontaminated with a 5 percent chlorine solution before connecting together. The vehicle must have a tank or water supply container that is CBRNE-protected to ensure that the water supplied is free of CBRNE contamination.

- Rations, as determined by the hospital commander, should be available within the protected area for personnel and patients. Under emergency conditions, patients may be fed meal(s), ready-to-eat (MRE) combined with medical diet supplements when other ration types are not safe or available. To aid in patient feeding, blenders may be placed in the protected area for liquefying the MRE. Attempts must be made to ensure the required types of rations for patient feeding are available in the CPS. The rations can be stored in any available space; however, the rations must be protected from exposure to possible contaminants. Ration control measures are established to ensure that the rations are only consumed as provided for in the hospital TSOP.

- Chemically and biologically protected latrine systems are included in the CP DEPMEDS. The latrines contain bedpan wash areas. The waste from the latrines is collected in an outside receiving container. The waste is removed from the container and disposed of as outlined in the unit TSOP.

- Solid waste (including medical) must be placed in plastic bags. Seal the top of the bags to prevent spillage, odors, or spread of infections/disease. **NEVER** overfill the bags; always leave enough room in the bag to make a good seal. Place the sealed bags in the supply air lock. Inside personnel close the inner door to the air lock. Outside personnel check to ensure that the inner air lock door is closed before opening the outside door. Remove the bags and take them to the designated waste

collection/disposal site. Disposal may be by burial on site or by transport to a designated disposal facility. Transport may be by organic vehicles or contractor support vehicles. The specific technique for disposal will be outlined in the unit TSOP.

- All liquid waste produced within the CP DEPMEDS is collected through an outside piped liquid waste system to a central collection container. The waste container for the latrines may be used to collect the liquid waste from the operational areas of the CP DEPMEDS. The container is emptied and the waste disposed of as outlined in the unit TSOP.

c. Protecting Equipment.

(1) *International Organization for Standardization shelter.* To protect the ISO shelters, seal all seams and openings of the ISO to prevent the entry of CB agents. The seals connecting the various sides and floor of the shelter may be a CB-protected material; thus providing a seal to the shelter. When the seals are not of a CB-protected material, the seams must be taped to provide a barrier over the soft seals. Any openings not being used for introduction of support power lines, water lines or wastewater lines must be sealed to prevent entry of CB agents. All access panels must be securely closed to prevent entry of vapors.

(2) *Vestibules.* The vestibules connect TEMPERs to TEMPERs, ISOs to ISOs, and ISOs to TEMPERs. To protect the vestibules, install the CB liners inside and fasten the ends to the liners of the TEMPER or to the doors of the ISOs. Vestibule liner connectors are provided for use at the entry of each ISO.

(3) *Air handler equipment.*

(a) The field deployable environmental control unit (FDECU) is CB protected. For conventional operations, the FDECU can be operated without the CB filters. When required to operate in the CB mode, the fresh air intake on the FDECU is closed and the CB filter blower is turned on drawing fresh air through the filters to support the FDECU and to provide clean air for the CPS. Additionally, recirculation filters are placed within the shelter system to remove any agent that may have entered through any of the entry/exit areas or through breaches in the shelter system.

(b) When heaters are required, they must be CB protected to prevent entry of contamination. The CB filter units are connected to the fresh air intake side of the heater and the heated air discharge side of the heater is connected to the air supply of the TEMPER/ISO.

d. Additional Information. For detailed information on HSS operations in a CBRNE environment, see FM 4-02.7. For detailed information on treatment of CBRNE casualties, see FM 4-02.283, FM 8-284, and FM 8-285 (4-02.285).

4-10. Risk Management

Risk management is the process of making operations safer without compromising the mission. It is a tool that allows soldiers to operate successfully in high-risk environments. Leaders at every level have the

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responsibility to identify hazards, to take measures to reduce or eliminate those hazards, and then to accept risk only to the point that the benefits outweigh the potential costs. (For more information, see FM 100-14.)

4-11. Force Protection and Security Measures

a. Force protection is a complex process in which each action impacts upon many others. Planning for force protection is a continuous process. In stability operations and support operations scenarios, force protection can pose significant challenges. Medical unit structure only considers the medical tasks and is not augmented for force protection; force protection can be achieved with reduced medical capability.

b. The hospital commander is responsible for providing security for his unit and the patients under his care. In some scenarios, a combat or CS unit may provide security forces to assist in the defense of medical units. In other situations, the medical unit may not be collocated with other types of CSS units and the medical commander must then provide completely for his own security. As outlined in Appendix D of AR 71-32, as a Category III unit, hospital personnel are authorized individual small arms (limited to pistols and rifles, or authorized substitutes) on the basis of one per two individuals. These weapons are authorized for personal defense and for the protection of the wounded and sick in their charge (see Appendix P of this FM). For guidance on planning hospital defense, see ARTEP 8-855 (MRI)-MTP. In the corps/EAC, the CSHs are normally located in areas of troop concentration in a base cluster. The base cluster commander has the overall responsibility for the security of units located within his base cluster.

c. In stability operations and support operations, medical units may be deployed into a given geographical area prior to the deployment of combat and CS forces. During humanitarian assistance and disaster relief operations, the perceived terrorist threat may be low, but the commander must ensure that his security measures are adequate for the appropriate threat level. Further, he must ensure he has the capability to increase these protective measures should the operational scenario change and mission creep occur. If the political, social, or economic status of the HN or region deteriorates, an increase in the potential for terrorist activity may also be experienced. The hospital commander must continuously evaluate the potential for terrorist activity and adjust his force protection plan accordingly. See FM 100-14 for definitive information of risk management.

d. Unit and individual protective measures are discussed in detail in JP 3-07.3.

4-12. Redeployment

a. Upon completion of an operation/contingency, the CSH as a unit or an individual rotation, will complete their postdeployment health assessment and redeploy out of the AO as METT-TC allows. Orderly withdrawal ensures that essential medical support remains until no longer needed and that movement of medical personnel and equipment does not inadvertently hinder the overall redeployment process. Field Manual 100-17-5 and ARTEP 8-855 (MRI)-MTP describes in detail redeployment procedures.

b. As the operational situation dictates, the CSH may redeploy prior to the completion of the operation/contingency. Quality and responsiveness of support, force protection, cost, or transfer to HN control are some of the reasons that may create this situation. When the CSH redeploys and the support it is providing is still required, there must be an orderly transfer or transition of that support. Support may be transferred to another military hospital or the HN infrastructure. Regardless, the transitioning of support must be considered and planned for, so that the redeployment of a CSH does not result in the loss of medical support. For redeployments from overseas to CONUS, quarantine and retrograde cargo requirements must be met. See Technical Information Memorandum Number 31. This publication is available on the Armed Forces Pest Management Board website at <http://www.afpmb.org/pubs/tims/tim31.htm>

c. As part of the redeployment process and real estate transition to either another military organization or the host nation, commanders will determine the necessity for the completion of an EBS closure report (Phase II). If it is determined that an EBS is required, coordination will be made through command channels for engineer command (ENCOM) support in completing this survey. The closure EBS is part of the hospital and base camp closure standards and incorporates information found in the initial EBS (Phase I) and the log of periodic environmental conditions reports (ECRs) that have been completed on the particular site/area. Environmental officers appointed by the commander assist the commander and staff in this coordination effort.

4-13. Port of Embarkation

a. Redeployment POEs perform essentially the same functions as those involved in deployment. The procedures are similar, whether the CSH is redeploying to its point of origin (home station) or to another AO. Redeploying a CSH will normally do so in the same manner in which they deploy.

b. Prior to arriving at the aerial port of embarkation (APOE)/seaport of embarkation (SPOE), and depending on the destination, specific wash-down and customs requirements for vehicles and equipment must be met. Following compliance with custom requirements, vehicles and equipment are prepared for shipment. If redeploying to another AO, the CSH may be provided with additional equipment and supplies and any additional training required to conduct follow-on support. Once all preparations are completed, personnel and equipment proceed to the designated port (air or sea) for final processing and departure. Similar to deployment, accountability measures continue as the CSH proceeds through the redeployment process.

4-14. Continental United States Reception and Outprocessing

Unit personnel who deployed through a CONUS Replacement Center (CRC) may be required to return through the same processing center for final outprocessing. The CRC is responsible for assisting the return of individuals and ensuring individual protection, privacy, and transition from the deployment area to home. The CRC will ensure that personnel receive a postdeployment medical screening and briefings on signs and symptoms of diseases to watch for, such as tuberculosis. Appendix N contains a health assessment questionnaire that will be used for redeployment screening.

CHAPTER 5

**INFORMATION SYSTEMS OF THE
COMBAT SUPPORT HOSPITAL**

This chapter is divided into two sections. Section I describes the TAMMIS that is currently being used by some CSHs until conversion to MRI. Section II describes MC4 and its use by some CSHs deployed in support of current operations.

**Section I. THEATER ARMY MEDICAL MANAGEMENT
INFORMATION SYSTEM****5-1. Theater Army Medical Management Information System Support**

a. The TAMMIS supports the information management requirements for the current force field medical units in peacetime and wartime. The TAMMIS supports selected Level II through IV (division, corps, and EAC) units. For Level II, TAMMIS is limited to the division medical supply office (DMSO) of the division support medical company. The TAMMIS is an automated microcomputer system designed to assist commanders and staff by providing medical information in the area of medical supply (MEDSUP).

b. Controlled accessibility is a TAMMIS feature included both to simplify the system and to increase security. During system setup, the local manager establishes each user's accessibility to the system through system setup files; the user may review only the portion of the system that pertains to his job responsibilities. The local manager can also adjust his unit's system to accommodate local requirements and the operating environment.

c. The TAMMIS has communication capabilities and can relay information between units in various ways. The preferred medium is via modem; however, direct communication between computers through a LAN or MSE may be utilized. When direct electronic communications links are not available, users may pass information by courier via electronic media or hard copy.

5-2. The Medical Supply System

a. The TAMMIS-MEDSUP automates the comprehensive management and requisitioning of medical materiel required to support medical units. It is designed to operate at the DMSO within US Army divisions; at MEDLOG battalions; and at TOE hospitals within the corps and EAC. The TAMMIS will operate on commercial off-the-shelf (COTS) boxes. The TAMMIS-MEDSUP interfaces with the Standard Army Management Information System (STAMIS), specifically the Department of the Army Movement Management System-Redesign (DAMMS-R), Combat Service Support Control System (CSSCS), Standard Army Retail Supply System (SARSS), Standard Property Book System—Redesign (SPBS-R), and the emerging Battle Command Sustainment Support System (BCS3).

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b. The TAMMIS-MEDSUP provides the user with automated capabilities in the following areas:

(1) *Customer processing.* Enables the user to—

- Enter routine and emergency customer requests for medical materiel.
- Enter, approve, reject, or receive customer turn-ins.
- Maintain a customer request file where requests can be reviewed, modified, or canceled, and supply status can be provided to the customer.
- Build and maintain an automated customer reorder list.
- Produce various customer supply and financial reports.
- Prepare files for customers.
- Load and process files from customers.

(2) *Supply requisitioning and receiving and due ins.* Allows the user to—

- Generate, review, and enter replenishment requisitions.
- Review, modify, or cancel due-in records.
- Generate follow-up requests and print the due-in items report.
- Enter, process, review, and reverse receipts.
- Prepare files for the supplier.
- Load and process files from the supplier.

(3) *Local stock maintenance, quality control, and reporting.*

(a) Enables the user to—

- Maintain local stock records and levels by adding or changing stock record files and processing stock number changes.
- Review the item request history for stockage of an item.
- Recompute the requisitioning objective or reorder point (ROP) for stocked items.
- Review contingency versus active stocks.

(b) Allows the user to—

- Maintain a stock location file.
- Produce location reports.
- Conduct more efficient physical inventories.
- Perform inventory adjustments.
- Produce inventory reports.

(c) Allows the user to perform quality controls and destruction actions by—

- Processing quality control alert messages.
- Scheduling quality control surveillance inspections.
- Entering quality control data for materiel received.
- Entering or updating destruction records.
- Adjusting the stock record file for destruction.
- Printing quality control and destruction reports.

(d) Enables the user to—

- Obtain information for current stock status and process catalog changes.
- Perform monthly summary purge and create the Standard Financial System file.
- Perform periodic and special purpose reporting, such as C2 and numerous supply management reports.
- Perform excess stock management and reporting.

(4) *Query by the national stock number (NSN), due in or due out, or transaction history.*
Allows the user to—

- View current stock status, due in or out transaction history, and demand history on the screen.
- Modify or cancel customer requests.

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- Review, modify, or cancel due-in records.

(5) *Setting up and maintaining system procedures.* Enables the user at initial system setup or during normal system operation to—

- Build or update the supported customer file.
- Build or update the supporting activity file.
- Build or update the environmental data file by entering and updating local destruction date, financial description data, requisitioning objective or ROP calculation data, processing default data, and control data.
- Update month and cut-off dates.
- Update reporting, printing, and display options.
- Perform file archiving.
- Build an updated cost file.
- Update the elements of expense file.

(6) *Reviewing exceptions referred to manager.* Allows the user to review and process exception records from the due-in exception file, customer demand exception file, receipt exception file, and replenishment exception file.

(7) *User designed reports.* Allows the user to create, modify, delete, and print user-designed temporary reports.

Section II. MEDICAL COMMUNICATIONS COMBAT CASUALTY CARE/ THEATER MEDICAL INFORMATION PROGRAM

5-3. Medical Communications for Combat Casualty Care Overview

a. The MC4 system is the approved Army medical information system to support the warfighter and health care provider in a TO. The system is the medical component of the Army's digitization initiative, to support the Current and Future Force, and is the Army component of the joint TMIP. Beginning in fiscal year 2002, initial MC4/TMIP capability was issued to the Stryker Brigade Combat Team (SBCT) and the First Digitized Division, 4th Infantry Division. Limited MC4/TMIP capabilities were issued to certain Level III medical units, to include CSHs deployed in support of Operation Iraqi Freedom (OIF). Limited system capabilities were issued down to Level I for the SBCTs deployed in support of the sustainment

phase of OIF. The MC4 system provides the cornerstone medical information system as the Army transitions to the Future Force.

b. The MC4 system will be achieved by the integration of emerging information management technologies with existing and emerging digital communications technologies. This system will start with the individual soldier and continue throughout the health care continuum. The best way to visualize the MC4 system capability is as a piece of the Army digital computer network where all ten HSS functional areas have been digitized, and this HSS information is freely shared with everyone on the Army network with a need to know. It provides near-real time medical information to support C2, situational understanding and commodity management by seamlessly linking both vertically and horizontally all levels of medical care and logistics. The MC4 system significantly enhances medical force protection through automating the medical record system at all levels of health care. The MC4 system will not only provide the warfighting commanders with HSS information, it will also provide a seamless transition to the joint HSS environment.

5-4. System Description

a. The MC4 system will be a worldwide, automated HSS system, which provides commanders, health care providers, and medical support providers, at all levels, with integrated medical information. The system will provide digital enablers to link, both vertically and horizontally, all ten HSS functional “business systems.” The MC4 system will receive, store, progress, transmit, and report medical C2, medical surveillance, medical treatment, medical situational understanding, and MEDLOG data across all levels of care. This will be achieved through the integration of a network of medical information systems linked through the Army data communications structure. The MC4 system will be developed incrementally through rapid prototyping and the spiral development process, which will process the system from limited functional capabilities to fully integrated objective capabilities.

b. The MC4 system will consist of three basic components—software, hardware, and telecommunications systems. These three basic components are discussed in paragraphs 5-5 through 5-7.

5-5. Software Capability

a. The Joint TMIP will provide government off-the-shelf (GOTS)/COTS software to support joint theater operations. The software provides an integrated medical information system that will support all levels of care in a theater of operations with links to the sustaining base. Medical capabilities provided to support commanders in the theater will address medical C2 (including medical capability assessment/sustainability analysis and medical intelligence); MEDLOG (including blood product management and medical maintenance management); casualty evacuation; and health care delivery.

b. The MC4 system will support Army-unique requirements and any software needed to be interoperable with emerging warrior systems, the Movement Tracking System, and current and emerging Army C2 and CSS information systems, for example, BCS3 and Global Combat Support System-Army (GCSS-A).

c. The TMIP software capabilities will be fielded in increments. Each successive increment will add additional capabilities and improve upon earlier capabilities. Increment I is the infrastructure phase

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where the hardware and some software capability will be fielded. The software will provide the following functionalities: medical logistics, immunization tracking, medical record generation, health care information, medical reference, patient movement, and interface with the personal information carrier (PIC). Increment II will be the interoperability phase where the capabilities of Increment I will be improved and interoperability with other Army systems will be achieved. Increment III is the objective phase where full functionality of the software application will be achieved, the system will function using the Warfighter Information Network (WIN), and voice activation technology will be introduced. As the Army transitions toward the Future Force, and technological advances are introduced, the required capabilities of the MC4 system will be assessed and adjusted as necessary.

5-6. Hardware Systems

The hardware will consist of automation equipment supporting the above software capabilities. Examples include, but are not limited to, computers, printers, networking devices, and the PIC. The term PIC will be used throughout the document as the label to represent the technology that will store personal health and demographic information about the soldier. The MC4 system will have the capability to read and write to the PIC in order to update health care information and provide a health record for the individual soldier.

5-7. Telecommunications Systems

The MC4 system will rely on current and proposed Army solutions for tactical, operational, and strategic communications systems to transmit and receive digitized medical information throughout the theater and back to the sustaining base. The MC4 system will include hardware or software required to interface with current and emerging technologies supporting manual, wired, and wireless data transmission. At end-state, the MC4 system users will exchange data electronically via the WIN architecture. In the interim, until the WIN architecture is fully fielded and can support the requirement, the MC4 system will provide, to selected medical units, a solution (such as commercial satellite and/or high-frequency radios) to transmit digital medical data.

5-8. Objective Operational Concept

a. Soldier Level.

(1) Soldiers have long required the ability to carry medical information with them for purposes of individual readiness, continuity of care, medical surveillance, and postdeployment health care follow-up. Virtually all this critical medical information is currently documented on paper after the fact. In order to become a part of the soldier's permanent medical record, the pieces of paper must be physically transported back to the soldier's home station and then physically placed in that record. Because of weight, preparation difficulties (rain, cold, darkness), and storage limitations, it is impossible to maintain a high level of paper documentation during an operational deployment.

(2) With the MC4 system, medical information about each soldier will be entered into a local database maintained at the supporting BAS or troop medical clinic (TMC). This information will include

the soldier's immunization status, medical deployability status, and dental deployability status. A commander, faced with a deployment, will be able to simply query the database to gain the deployability status of the entire command. Time previously spent on physically searching paper records will be available for other tasks.

(3) With the MC4 system, each soldier will be issued a PIC. The PIC is an electronic device that will store personal information about the individual soldier. The PIC specifications will be addressed in a separate DOD capabilities document, which incorporates Army operational capabilities into this standard joint device. The PIC will be used to record all of the soldier's health care events and the soldier's readiness status. Each time a soldier receives medical care or immunizations, the medical history on the PIC will be updated. When a soldier is deployed, his PIC will contain baseline clinical data. During processing for deployment the medical staff will be able to read all of this immunization, medical, dental, and medical history data directly from the PIC, greatly speeding up the process. Once in an operational theater, the soldier's PIC will continue to provide a backup record of all medical events that occur during the deployment. Any medical data generated by a medical event will be entered onto the PIC as well as being entered into the MC4 information system. The preservation of medical data will no longer rely on the safeguarding and transporting of stacks of paper records.

(4) As part of the Future Force Land Warrior Program, a Warfighter Physiological Status Monitor (WPSM) is under development. The WPSM will be a suite of external sensors that will monitor numerous elements of a soldier's body functions, obtaining data on vital signs, thermal strain, hydration state, and sleep/alert status. These sensors will feed the physiologic data to a body-worn computer (also part of the warrior system). An artificial intelligence program on the computer will process the data obtained and will provide a red-amber-green soldier status to the supervisor. The system will also allow the trauma specialist to monitor soldier vital signs and ultimately provide a remote triage capability, generating an alert if physiologic parameters fall outside of preset ranges. This alert will be transmitted by the soldier's warrior radio to the platoon leader/platoon sergeant and trauma specialist, warning that the soldier may have become a casualty. In addition, the warrior system will also provide a call-for-help button that the soldier can press if he requires medical assistance. The alert button will transmit a distress call to the platoon leader/platoon sergeant and trauma specialist. When either alarm is activated, the vital sign information coming from the WPSM will automatically be broadcast to the trauma specialist as well as recorded onto the PIC. Additional capabilities such as psychological stress, workload capacity, and energy balance monitoring are anticipated.

b. Databases. With the MC4 system, medical information on soldiers will be stored at different levels. This will allow commanders and command surgeons at the various levels to access medical information on their soldiers to find out specific information and to conduct analysis of disease/injury trends. These lower level databases also provide a means for information redundancy should an information node destruct or a communications outage occur. Personnel (medical commanders, and staff surgeons) at each level with the MC4 system management functionality will be able to query the database. The HSS information required by CSSCS will pass from the MC4 system through GCSS-A or directly to CSSCS.

(1) *Personal information carrier.* The PIC will contain the medical information relevant to one soldier.

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(2) *Battalion aid station/forward support medical company (FSMC)/division support medical company (DSMC)/TMC/area support medical battalion (ASMB)/CSH.* Units responsible for the treatment of soldiers will maintain a database containing medical information relevant to the soldiers that it supports.

(3) *Division surgeon/corps surgeon.* The surgeons will maintain a database containing medical information relevant to the soldiers in that division or corps.

(4) *Combatant command surgeon.* The surgeon will maintain a database containing all medical information relevant to the entire theater. This will be the interim theater database (ITDB), which provides information to update sustaining base medical information systems such as the computer-based patient record and health surveillance system and is used for medical threat and trend analysis.

c. *Level I.*

(1) *Trauma specialist.* The trauma specialist (formerly referred to as the combat medic) will be the first point where a casualty interfaces with the MC4 system. Each trauma specialist will be equipped with a device capable of reading and writing to the casualty's PIC. Any medical care provided to the casualty by the trauma specialist will be recorded on the PIC. Where communication assets allow, this information will also be transmitted to the supporting BAS. Under the warrior program, trauma specialists assigned to maneuver battalions will have some additional capabilities. A warrior medic version of the warrior ensemble is being developed with specific medical requirements. The medic warrior ensemble will include a body-worn computer, a Global Positioning System (GPS) locator system, and a warrior radio. If a soldier's WPSM/computer system broadcasts an alert or a soldier activates his trauma specialist call button, the trauma specialist will receive these alerts and the flow of vital sign information over his warrior radio. The trauma specialist's GPS locator will allow the trauma specialist to quickly locate and reach the casualty. The trauma specialist's computer will be able to read vital signs directly from the casualty's WPSM. All of these capabilities will enhance the trauma specialist's ability to quickly detect, reach, and treat a casualty. In the event of multiple casualties, the flow of WPSM data to the trauma specialist will allow him to prioritize the casualties using remote triage in order to reach the worst injured first.

(2) *Evacuation.* If a casualty's injuries or illness require treatment beyond the trauma specialist's abilities, the casualty is evacuated to a higher level of medical care, most often the BAS. Evacuation is accomplished via dedicated MEDEVAC vehicles, wheeled or tracked ambulances, and helicopters. During this evacuation, onboard medical attendants apply en route treatment and monitor the casualty. Digital onboard medical equipment eliminates the difficulties with manual vital signs monitoring which are oftentimes impossible. With the MC4 system, each evacuation vehicle will be equipped with an onboard computer that will interface with the casualty's PIC. En route care received will be recorded on the PIC and will also be transmitted to the destination MTF. Digital linkages to medical C2 units/medical regulators allow for redirecting the casualty en route should the need arise. The request for evacuation from the trauma specialist's site will be made over Force XXI Battle Command Brigade and Below System (FBCB2) utilizing a built-in MEDEVAC request.

(3) *Battalion aid station.* At the BAS, the casualty will receive routine or emergency resuscitative care. The medical staff will use MC4 computers to read the casualty's PIC, learning what medical care the casualty has already received and any relevant medical history. This information, along

with any information generated by the treatment that the casualty receives at the BAS, will be recorded onto the local database. The information will also be transmitted to the next higher level of medical care (the FSMC) and ultimately to the ITDB.

(4) *Medical logistics.* The present MEDLOG system at Level I is a totally manual system. Under MC4, the trauma specialist will utilize FBCB2 to request medical supplies from the BAS. This request will be a built-in report on the FBCB2 system. At the BAS, requests for medical resupply will be made utilizing the MC4 system. This automation will not only speed the resupply process, but will also allow the combatant commander to maintain visibility of his unit's MEDLOG status, either through FBCB2 or through MC4's link to CSSCS through GCSS-A.

d. Level II.

(1) At the Level II medical units (FSMCs and DSMCs), the MC4 system will provide the same augmentations to treatment documentation, evacuation, and MEDLOG seen at Level I. Through the use of the medical detachment, telemedicine, Level II medical companies will have the ability to digitize medical data (x-rays, pictures, and so forth) and transmit it to medical experts at levels above division. This teleconsultation ability will result in some casualties being treated further forward in the theater, will increase the RTD rate and will reduce overevacuation.

(2) The medical materiel management branch at the division materiel management center is the Class VIII commodity manager and, using the same automated tools as the other commodity managers, makes arrangements to fill the request through the battlefield distribution system. The MC4 system will automate linkage of Class VIII to the transportation system. The management of the complex medical sets along with the quality control of Class VIII material is also automated, improving efficiency over the current manual system. The joint software design supports the Army MEDLOG units' support mission to other Services.

e. Levels III and IV. These levels contain hospitals and all of the specialized medical units required to support the theater. The MC4 system will link all of these medical functions. The MC4 system will equip corps treatment and evacuation teams with personally carried and mobile computers for the collection and forwarding of medical information to the forward, division, or area support medical company. Likewise, CSC, veterinary, dental, and PVNTMED teams operating in the brigade rear area will be equipped with personally carried or mobile computers. These MC4 provided devices will be loaded with the appropriate software functionality. Corps/theater medical regulators/medical C2 will be able to rapidly and accurately match treatment capability with the soldier's need for care. The MC4 corps medical regulating system (TRANSCOM Regulating and Command and Control Evacuation System [TRAC2ES]) provides this functionality via WIN. A seamless Class VIII (including blood) automated system links the theater to prime vendor systems in CONUS.

f. Command and Control. At all levels, the MC4 system will automatically provide information such as evacuation status, current fitness for combat, and hazard exposure information to the commander's situational understanding system. The MC4 system will provide the commander with the ability to track and record the date and location of exposure to health hazards, which include environmental, occupational, industrial, and CBRNE hazards. This information is critical to the force protection health hazard analysis

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necessary to identify emerging DNBI problems and trends. Commanders will have real-time information on food source safety/quality, operationally significant zoonotic diseases, health surveillance/trends, and near real-time health hazard assessment data for CBRNE/endemic disease threats and occupational or environmental health threats. This information will be provided to the commander from the MC4 system functional digital systems through GCSS-A to CSSCS. Commanders, for the first time, will have a complete picture of the battlefield, which will allow them to accurately influence current operations while synchronizing HSS with other activities.

g. Level V. All care/exposure information will be digitally stored. The documentation of immunizations, for example, will eliminate challenges that have surfaced post deployment for vaccines such as anthrax and botulism. This information is stored not only in the Level I database supporting the soldier, but is transmitted to the ITDB and the soldier's permanent computerized record. The digital documentation of medical treatment/exposure information will make addressing health exposure issues, as seen in the Gulf War and more recent deployments, much easier.

5-9. Medical Communications for Combat Casualty Care/Theater Medical Information Program Support to Contingency Operations

a. Limited MC4/TMIP capabilities were issued to certain Level III medical units, to include CSHs, deployed in support of OIF. The lessons learned from the experimental use of the limited MC4/TMIP capabilities during OIF will provide the foundation for implementing improvements to the systems during the acquisition process prior to the formal fielding process.

b. The following MC4 hardware/software components were deployed:

(1) Handheld computer with Battlefield Medical Information System-Tactical (BMIS-T) software.

(2) Notebook computer with Composite Health Care System II-Theater (CHCS II-T), Defense Medical Logistic Standard System-Assemblage Management (DMLSS-AM), Theater Army Medical Management Information System Customer Assistance Module (TCAM), Micromedex® and TMIP as the primary software applications. Some notebook computers also were deployed with laserjet printers and label printers. Some notebooks also served as server computers.

(3) Server computer with hub and router with the same software as the notebook computers.

c. A description of the software functionalities follows:

(1) Battlefield Medical Information System-Tactical. This software will be use to document medical care at the treatment team level. It will provide the capability to rapidly enter the limited data required during initial medical encounters. The BMIS-T data also feeds the theater medical surveillance systems and will become part of the patient's permanent medical record.

(2) Composite Health Care System II-Theater. A joint developed software, CHCS II-T, provides a medical information system for documenting outpatient care at Levels I through IV. The system

provides digital data for theater medical surveillance and trend analysis. The patient information from CHCS II-T will become part of the individual's permanent medical record.

(3) Defense Medical Logistic Standard System–Assemblage Management. This is a medical logistics software that enables theater medical units to manage their medical assemblages.

(4) Theater Army Medical Management Information System Customer Assistance Module. This software is a web-based extension of the TAMMIS medical logistics module. It will allow theater medical units to order medical supplies.

(5) Micromedex®. This is a CD medical reference.

(6) Web browser for TRAC2ES and Patient Accounting and Reporting Real-Time Tracking System (PARRTS).

(a) TRAC2ES. This is a joint system that will provide strategic MEDEVAC C2 and patient regulation between theater and supporting base hospitals. The systems will also provide in-transit visibility during the evacuation process.

(b) PARRTS. This is a web-based Army program developed by the Patient Administration System and Biostatistics Activity (PASBA). It offers casualty location and medical condition information.

d. Data will originate with the BMIS-T on the handheld device. Data will be transmitted to Level II MC4 devices and on to Level III and IV CSHs if a patient requires medical care by those facilities. As casualties are received, they will be accompanied by records of any care they received prior to arriving at the CSH. These records will either be handwritten (DD 1380 or SF 600), digital records on casualties' PIC, or both. The CSH EMT section will review this information as they assess the casualty. As a status is determined for the casualty, these received records will be added to the records generated by the CSH and stored in the CSH local database. For purposes of this document, the data flow will be confined to the data flow with the CSH.

e. The CSH at levels III and IV are identical in functionality and in the manner in which they utilize information management (IM)/information technology (IT) assets. The CSH will maintain a hospitalwide LAN. The LAN will include the notebook computers used by the various sections as well as separate servers for clinical systems and medical logistics systems. Figure 5-1 illustrates an example of data flow within the CSH.

f. The CSH will provide routine (sick call), emergency, and inpatient care. The TRIAGE/PRE-OP/EMT section treatment teams will use BMIS-T software on handheld computers and CHCS II-T software on notebook computers to document encounters. The outpatient clinic section of the hospital will also use CHCS II-T to document care. Once a status has been determined for a casualty (admit, RTD, evacuate, died) the encounter will be closed and all data for that encounter will be consolidated on the team notebook. The CHCS II-T server will serve as the local database.

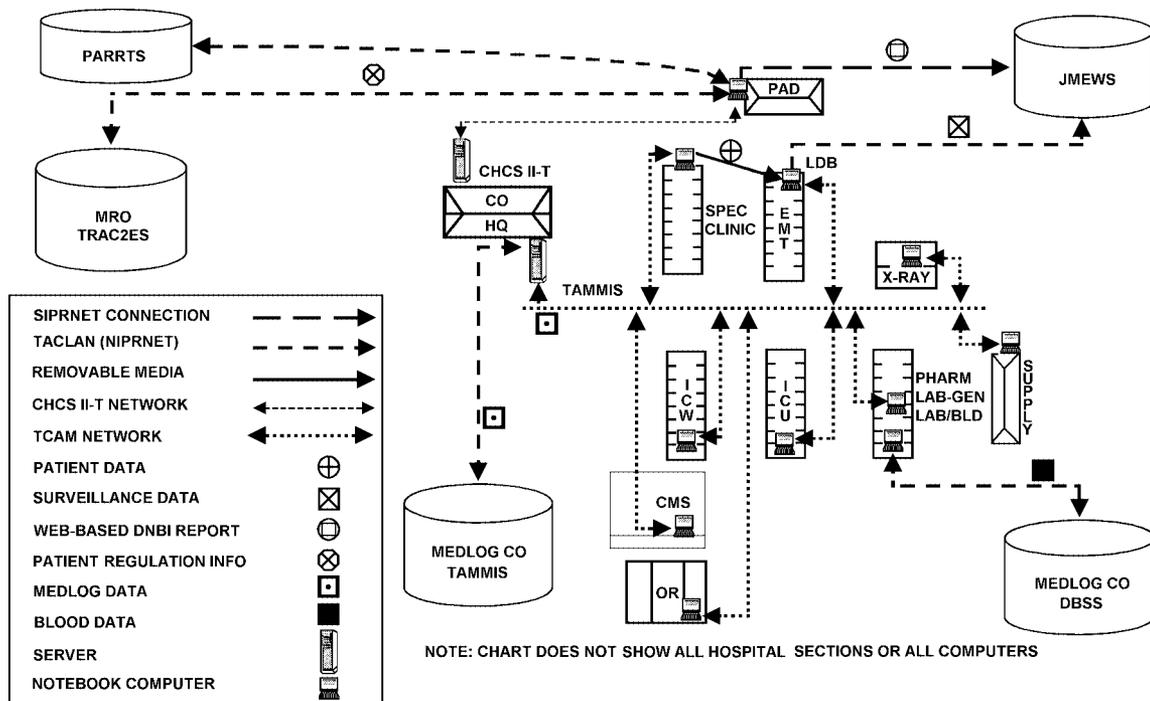


Figure 5-1. Example of combat support hospital data flow.

g. Once a patient is admitted, the data that has been generated by CHCS II-T and/or BMIS-T will be printed out and added to the patient’s inpatient record. The CHCS II-T and BMIS-T data will also be added to the local database (LDB) and transmitted to the Joint Medical Workstation (JMeWS). The JMeWS medical surveillance system will provide limited surveillance and trend analysis at the command surgeon level. Transmission of data to the JMeWS database will only contain those data elements from a medical encounter that are relevant to medical surveillance rather than a complete record of the encounter.

h. The consolidated encounter data for all RTDs will be collected on the CSH LDB. Every 8 to 12 hours, all new data will be transmitted to the JMeWS database. This transmission will include any data received from the supported medical companies and the battalion aid stations. Upon redeployment, RTD encounters will be printed and placed in the appropriate medical records.

i. When a casualty is evacuated to a higher level of care, the collected encounter data will be printed out and will accompany the casualty. Any paper record from lower levels of care will also accompany the casualty. Surveillance relevant data will be transmitted as part of the regular JMeWS update.

j. Upon the death of a casualty, all medical encounter data will be printed and will accompany the body.

k. The above information pertains to the concept of operations pertaining to the limited deployment of MC4/TMIP in support of current contingency operations. Upon formal fielding of MC4/TMIP systems pursuant to the DOD acquisition process and as the systems mature and business processes are refined, the concept is subject to change.

5-10. Operational Facility Rules and Equipment

To ensure effective communications, a system has evolved which authorizes specific types and numbers of radios for a unit. The system is the operational facility (OPFAC) rule and it is the tool used to determine where, type, and numbers of communication devices are needed. The OPFAC rule is the smallest of a TOE to which a piece of communications equipment is assigned; such as the commander, staff officer, or section or platoon. The OPFAC rules are the basis for documenting C4 equipment in the basis of issue plans and TOEs. The OPFAC rule system is an ongoing validation. These rules are subject to change. To view the OPFAC rule for your unit, refer to website: <https://www.aimd.army.mil>. Once you have entered the website, go to “password request.” A password is required to enter the AIMD product area and will be for view only.

APPENDIX A

**MEDICAL DETACHMENT, MINIMAL CARE,
TOE 08949A000****A-1. Introduction**

The medical detachment, minimal care, is a new organization as a result of the MRI. This unit replaces Medical Company, Holding (TOE 08458L000), and Hospital Unit, Holding (TOE 08739L000).

A-2. Mission

This detachment provides minimal care/convalescent care hospitalization, nursing, and rehabilitative services in support of corps and EAC hospitalization. Provides oversight of holding and monitoring facilities for decontaminated biologic patients/communicable disease contacts.

A-3. Assignment

This detachment will be assigned to a medical brigade and normally attached to a hospital.

A-4. Capabilities

This detachment provides—

- a.* Command and control of organic elements to include health support planning, policies, and support operations within the detachment's area of responsibility.
- b.* Information to commanders and their staffs on the health and status of soldiers in their command.
- c.* Augmentation of the hospital to which attached to provide hospitalization, minimal nursing care, for up to 120 patients and for reconditioning and rehabilitation for those patients who can RTD within the theater evacuation policy or who are awaiting further MEDEVAC.
- d.* Physical therapy and occupational therapy services for patients.
- e.* Augmentation of the emergency nursing capabilities of the hospital to which attached during mass casualty situations.
- f.* Augmentation to the nutrition care capabilities of the hospital to which attached to support patient feeding of this detachment.
- g.* Augmentation to the patient administration section capabilities of the hospital to which attached.
- h.* Three days of supply level for all organic elements upon deployment and during routine operations.

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A-5. Limitations

This unit is dependent upon—

a. Appropriate elements of the corps or theater for religious, legal, finance, personnel and administrative services, laundry and bath, clothing exchange, mortuary affairs, transportation, maintenance, and communication/information management support.

b. The hospital to which attached for food service, water distribution, personnel and administrative services, unit health services, medical treatment, patient administration, medical maintenance, supply (all classes), and unit maintenance for the detachment's communications equipment and power generator.

c. The hospital to which attached for additional power requirements.

d. The medical company, dental services and the medical company, CSC for augmentation of treatment capabilities.

A-6. Basis of Allocation

This detachment supports the requirement for all CZ MCW bed requirements (25 percent of the total WIA/DNBI; 21.5 percent of blister; 55 percent of nerve; and 50 percent biological contacts) and all COMMZ MCW bed requirements (75 percent of total bed requirements with an 70 percent skip policy). To get the total bed requirements, Minimal Care Detachment (standard requirement code [SRC] 08949A000) bed requirements must be added to the ICU/ICW bed requirements generated by corps and EAC hospitals. For programming purposes, 2.604 minimal care detachments per 1,000 hospital patients in the corps and 4.792 minimal care detachments per 1,000 hospital patients in EAC.

A-7. Mobility

a. This unit has no mobility.

b. This unit has 181,305 pounds (16,600 cu ft) of TOE assets requiring transportation.

c. When providing support to hospitals, elements of this unit will not move on a regular basis.

A-8. Employment

The medical brigade will provide C2 to assigned medical detachment, minimal care and will ensure continuous provisions of minimal care beds as required to the corps and EAC hospitals. The medical detachment, minimal care will be further attached to the hospital for support and is designed to provide 120 beds of minimal and convalescent care. Each squad of the detachment may be employed separately

providing 40 minimal care beds per squad. The medical detachment, minimal care provides nursing, physical therapy, and occupational therapy services for those patients expected to RTD within the theater evacuation policy or who are awaiting further medical evacuation. The medical company, dental services and the medical company or detachment, CSC can provide appropriate support to augment the medical detachment, minimal care treatment capabilities, if required.

A-9. Concept of Operations and Functions

The function of this detachment is to perform minimal care nursing, occupational therapy, and physical therapy for the patients admitted to the hospital to which attached and to other eligible personnel as determined by the MEDCOM/medical brigade. Organic personnel of the detachment set up and break down unit shelters and power-generating equipment in preparation for detachment operations or detachment movement, set up the nursing care and occupational therapy/physical therapy areas, and perform routine minimal care nursing and rehabilitation/reconditioning for patients expected to RTD within the theater evacuation policy or who are awaiting medical evacuation and require continued nursing supervision, this includes those individuals being monitored after suspected biological/communicable disease contact. The detachment is normally attached to the hospital and provides a detachment headquarters, an occupational/physical therapy section, and three minimal care wards. See Figures A-1 and A-2 for organization and operational and command relationship.

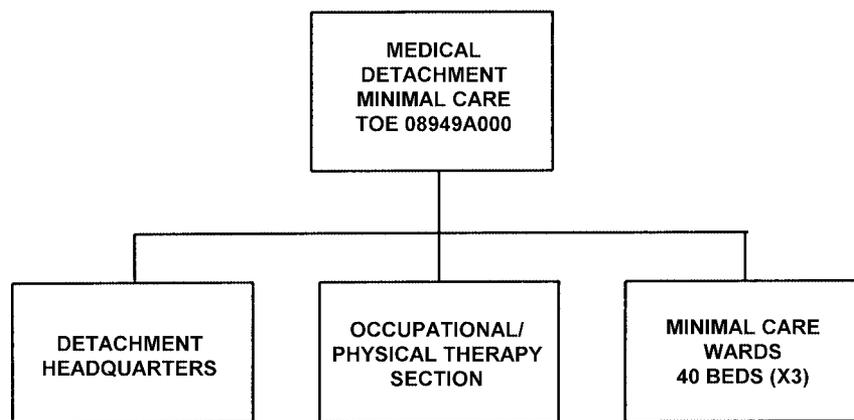


Figure A-1. Medical detachment, minimal care.

a. *Detachment Headquarters.* The detachment headquarters provides C2 and administrative support. It performs unit plans and movement, routine and specialized operations, mission-related task organization, and coordinates directly with the hospital to which attached. Personnel of the headquarters and support section provide maintenance and supply and services to augment the respective sections of the hospital to which attached.

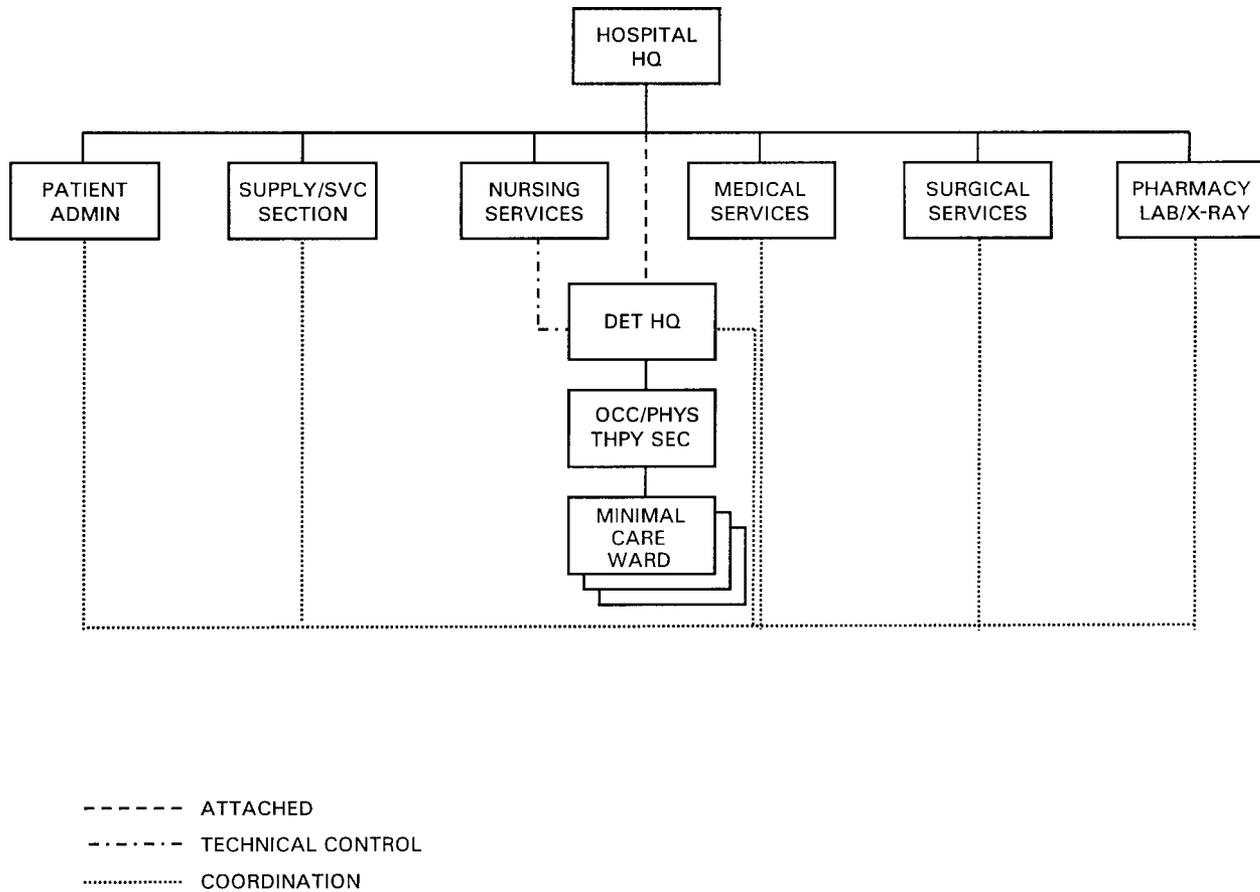


Figure A-2. Medical detachment, minimal care operational and command relationship.

b. *Occupational/Physical Therapy Section.* This section provides occupational therapy and physical therapy services to the detachment’s inpatients. Personnel in this section augment the respective sections of the hospital to which attached.

c. *Minimal Care Wards.* Three minimal care wards provide nursing supervision and management of medical or surgical patients who are ambulatory and partially self-sufficient and are in the final stages of recovery awaiting RTD or who are awaiting further MEDEVAC. The focus of nursing management is on an aggressive therapeutic environment which speeds recovery for RTD or which ensures stabilization and preparation for MEDEVAC. Nursing personnel administer medications and treatments which cannot be done by the patient and provide instruction in self-care and posthospitalization health maintenance. Nursing personnel coordinate with occupational/physical therapy personnel for rehabilitation and reconditioning of patients. Nursing personnel also coordinate with the hospital to which attached for routine and emergency medical treatment needs of patients. Nursing personnel also monitor individuals who may have been exposed to an infectious agent and require isolation until disease manifests or individual is determined not to be infected/infectious.

APPENDIX B

**MEDICAL DETACHMENT, TELEMEDICINE,
TOE 08539AA00****B-1. Introduction**

The medical detachment, telemedicine, is a new organization as a result of the MRI. It is not replacement for any unit.

B-2. Mission

The mission is to provide telemedicine services in support of MTFs within the division, corps, and theater AO.

B-3. Assignment

This detachment will normally be assigned to a CSH and further attached to the medical company of the forward support battalion, main support battalion, or ASMB.

B-4. Capabilities

This detachment provides—

- a.* Command and control of organic telemedicine teams, to include planning and coordination of telemedicine support across all supported MTFs within the division, corps, or theater AO.
- b.* Augmentation teams for up to seven MTFs, providing integrated telemedicine service to the host MTF, teleconsultation, telementoring, teleradiology, telepathology, telepreventive medicine, and other forms of telemedicine support.
- c.* An interface for MTF clinicians through interactive or store and forward telemedicine support, to include the multimedia transmission of clinical information in the form of video, voice, high-resolution still images, and/or text data.
- d.* Telemedicine links for on-site capability for video access to remote medical and allied health specialists for real-time mentoring of complex treatment and surgical procedures.
- e.* Three days of supply for all organic elements upon deployment and during routine operations.

B-5. Limitations

This detachment is dependent upon—

- a.* Appropriate elements of the theater Army, corps, or division for religious, legal, finance, personnel, and administrative services, laundry and bath, and supplemental transportation of equipment.
- b.* The hospital or medical company to which assigned or attached for food service, water distribution, personnel and administrative services, unit health services, medical maintenance, supply (all

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classes), power generation, and unit maintenance for the detachment's wheeled vehicles and communications equipment.

c. The hospital or medical company for LAN and WAN connectivity.

d. The corps and theater signal brigade for communications support, general support of communications maintenance, and coordination for long-range communications.

B-6. Basis of Allocation

The basis of allocation is one medical detachment, telemedicine, per division in the CZ and one per theater.

B-7. Mobility

a. This unit is capable of transporting 34,000 pounds (2,631 cu ft) of TOE assets with organic vehicles.

b. This unit has 8,262 pounds (485 cu ft) of TOE assets requiring transportation.

c. The headquarters section of this unit requires organic transportation for the commander.

d. When providing support to MTFs, the commander and each forward telemedicine team may be required to move on an average of 25 to 50 kilometers every two days.

B-8. Employment

The MEDCOM/medical brigade directs the employment of the detachment. The detachment will provide telemedicine teams for up to seven MTFs. The headquarters element of the detachment will locate with one of the telemedicine teams, preferably with one attached to a hospital. Each team will be equipped for attachment to either a hospital or a medical company in order to provide organizational flexibility. The teams will be dependent upon the MTF to which attached for other forms of support. The telemedicine teams of the detachment provide initial set up of telemedicine services and shelter systems, on-site and remote operational assistance, and periodic operator maintenance of telemedicine equipment and associated information systems for up to seven MTFs.

B-9. Concept of Operations and Functions

The function of the detachment is to provide expert capability to plan and execute telemedicine services in support of MTFs. Operational planning for support of a major theater of war (MTW) requires the detachment to plan support for up to two hospitals, one area support medical company, one MSMC, and three FSMCs for each division force equivalent in the corps. The telemedicine detachment will plan support for

consultation on the management of biological/communicable disease entities and other issues of public/occupational health importance. The detachment will also plan for telemedicine support of peace operations, humanitarian assistance, and operations in aid of civil authorities as determined by higher headquarters. Organic personnel of the detachment set up and break down unit shelters, communication and information management hardware/software, and patient examination equipment in preparation for unit operations or unit movement. Telemedicine personnel assist in initiating remote medical consultations and provide on-site maintenance and repair/replacement of communication and information management hardware/software. They also assist hospital/medical company health care providers in completing patient examinations for the purpose of remote consultations and to provide on-site training to hospital/medical company personnel in the use of telemedicine equipment for consultations and for other uses, such as medical maintenance, administration, and communication of policies and procedures. The detachment is normally attached to a hospital and provides teams to support an additional six MTFs. The following paragraphs outline the functions of the headquarters section and telemedicine teams. The organization is shown in Figure B-1. The operational and command relationship is shown in Figure B-2.

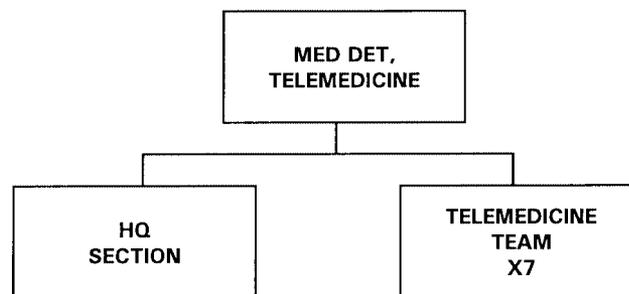


Figure B-1. Medical detachment, telemedicine organization.

a. Headquarters Section. The headquarters of the medical detachment, telemedicine provides telemedicine advice to the MEDCOM/medical brigade and provides C2 of subordinate telemedicine teams. This includes telemedicine support across all supported MTFs and supervision of the telemedicine teams. The headquarters section will coordinate with the supporting signal units to ensure adequate communications support. The headquarters section will also coordinate with the supported MTFs to ensure the integration of clinical services, medical imaging, information systems, and communications for the conduct of telemedicine.

b. Telemedicine Teams. The telemedicine teams provide an integrated telemedicine service to a MTF. Each team can be attached to either a hospital or medical company. The team provides referring telemedicine services to multiple clinical areas within the MTF and provides the ability to perform consulting telemedicine services for more forward health care providers on the battlefield. The team coordinates with the MTF clinicians, establishes links to the health information system in order to utilize electronic patient records, collects multimedia patient data, and establishes links to the information-communications system in order to establish external communications connectivity. These teams are required to provide this service 24 hours per day.

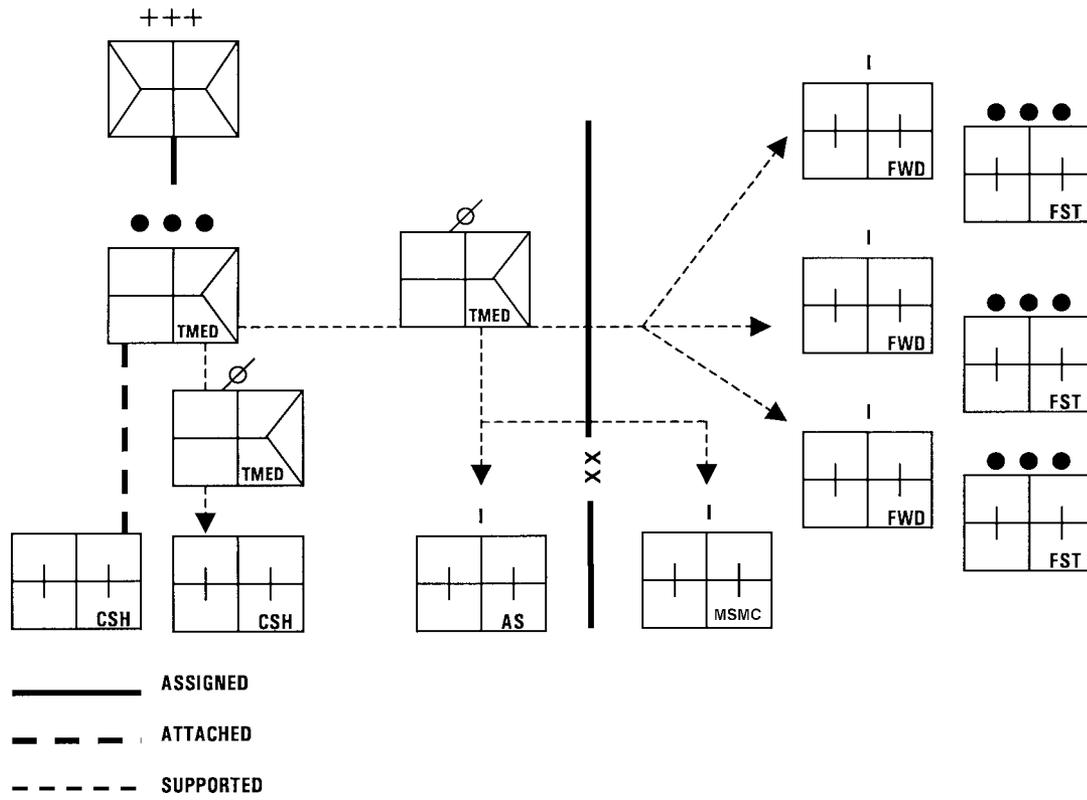


Figure B-2. Medical detachment, telemedicine operational and command relationship.

APPENDIX C

**HOSPITAL AUGMENTATION TEAM, HEAD AND NECK,
TOE 08527AA00****C-1. Introduction**

The hospital augmentation team, head and neck, is a new organization as a result of the MRI. The hospital augmentation team, head and neck, replaces and consolidates the functions of the MF2K Medical Team, Head and Neck Surgery (TOE 08527LA00), the Medical Team, Neurosurgery (TOE 08527LB00), and the Medical Team, Eye Surgery (TOE 08527LC00).

C-2. Mission

The mission of this team is to provide ear, nose, and throat surgery, neurosurgery, and eye surgery augmentation in support of theater hospitals and consultative services as required.

C-3. Assignment

This team will be assigned to a medical brigade or MEDCOM and normally will be attached to a hospital.

C-4. Capabilities

This unit provides—

- a.* Initial and secondary ear, nose, and throat surgery and consultation services in support of theater hospitals.
- b.* Initial and secondary neurosurgery and consultation services in support of theater hospitals.
- c.* Initial and secondary eye surgery and consultation services in support of theater hospitals.
- d.* Augmentation of the hospital OR surgical and nursing services.
- e.* The medical materiel set (MMS) (radiology, computerized tomography), which will give the hospital the capability to perform computerized tomography examinations.
- f.* Three days of supply for all organic elements upon deployment and during routine operations.

C-5. Limitations

This unit is dependent upon—

- a.* Appropriate elements of the corps for legal, religious, finance, personnel, and administrative services, laundry, bath, clothing exchange, patient decontamination, MA, and EPW security during processing and evacuation.

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b. The hospital to which it is attached to provide sheltered ORs, commonly used equipment, pre- and postoperative nursing care for all patients, field feeding (to include patient food service), HSS, water distribution, security, personnel and administrative services, transportation, unit maintenance for generator, power support for all equipment (except that related to the computerized tomography), patient administration, coordination of medical evacuation, and all classes of supply.

c. The United States Army Medical Materiel Agency (USAMMA) for the procurement of the MMS (radiology, computerized tomography).

C-6. Basis of Allocation

The basis of allocation is one per four hospitals in the corps.

C-7. Mobility

a. This unit has no organic mobility.

b. This unit has 55,046 pounds (5,031 cu ft) of TOE assets requiring transportation.

c. Teams will move one time every two days on average. The average move will be approximately 25 kilometers.

C-8. Employment

The medical brigade will provide C2 and support to the assigned hospital augmentation team, head and neck, and will ensure continuous provision of neurosurgery, ear, nose and throat surgery, and ophthalmic surgery services to the corps and EAC. The hospital augmentation team, head and neck, will be employed with and further attached for support to hospitals.

C-9. Concept of Operations and Functions

The function of the hospital augmentation team, head and neck is to provide preoperative assessment and perform neurosurgery, ear, nose, and throat surgery, and ophthalmic surgery for patients admitted to the hospital to which the unit is attached. The team will also provide the hospital with neurosurgical, ophthalmic, and otolaryngological consultation services and postoperative follow up. The equipment for the hospital augmentation team, head and neck includes the MMS (radiology, computerized tomography). This will provide the hospital augmentation team, head and neck, with the capability to perform computerized tomography scans prior to surgery and will decrease the previous requirement for exploratory surgery. The hospital augmentation team, head and neck will include the power supply, radiology technicians, and medical equipment repair support required for the MMS (radiology, computerized tomography). The hospital augmentation team, head and neck, does not include an OR and work areas and will perform

surgery utilizing the OR/CMS complex of the hospital to which it is attached. The operational and command relationship is shown in Figure C-1.

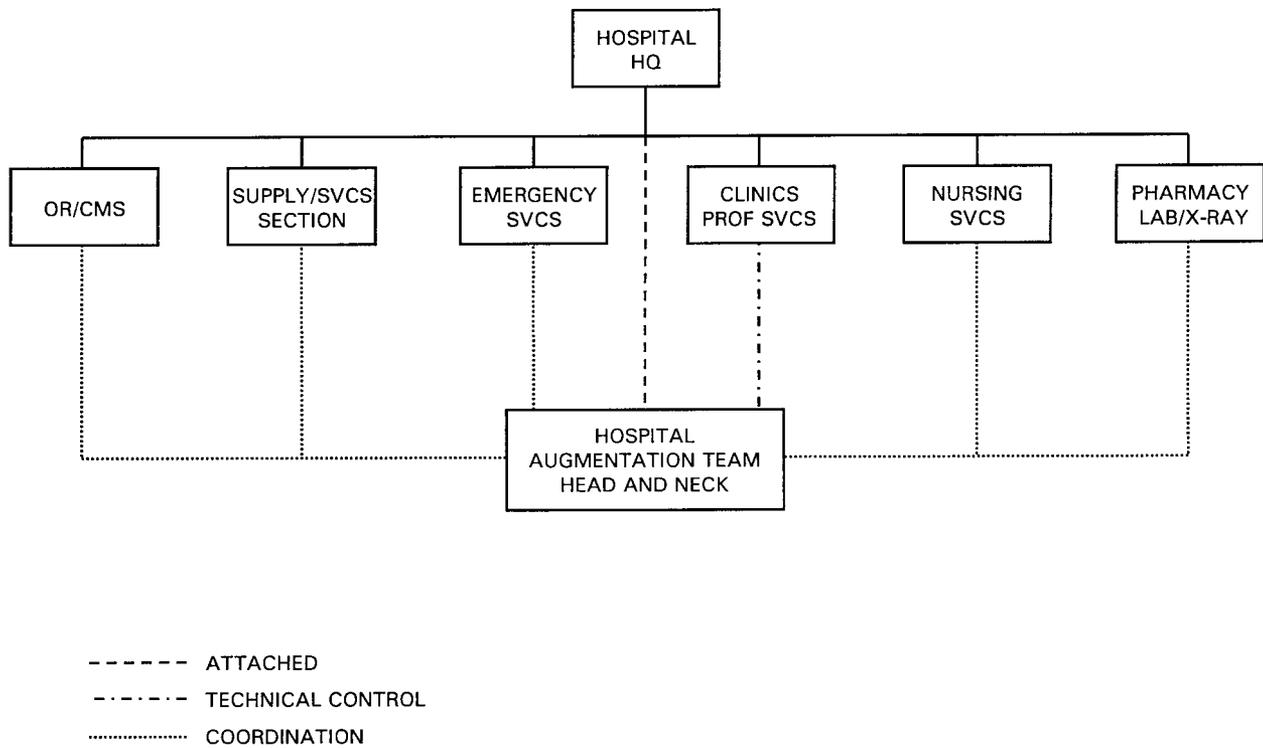


Figure C-1. Hospital augmentation team, head and neck, operational and command relationship.

APPENDIX D

**HOSPITAL AUGMENTATION TEAM, SPECIAL CARE,
TOE 08538AA00****D-1. Introduction**

The hospital augmentation team, special care, is a new organization as a result of the MRI. It is not a replacement for any current unit.

D-2. Mission

The mission of this team is to augment an MTF with the necessary health personnel and equipment to provide HSS to other military operations.

D-3. Assignment

This unit will be assigned to a medical brigade or MEDCOM and normally will be attached to a hospital or other MTF.

D-4. Capabilities

This unit provides—

- a.* Pediatric inpatient, consultation, and nurse practitioner services.
- b.* Obstetrics/gynecology and specialty nursing services.
- c.* Preventive medicine services.
- d.* Community health nursing services.
- e.* Family physician services.

D-5. Limitations

This unit is dependent upon—

a. Appropriate elements of the theater for legal, religious, finance, personnel and administrative services, laundry, bath, patient decontamination, mortuary affairs, clothing exchange, HSS, and EPW security during processing and evacuation.

b. The hospital to which it is attached to provide sheltered working space, commonly used equipment, inpatient nursing care for all patients, patient and food service, water distribution, transportation,

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security, personnel and administrative services, maintenance for organic equipment, patient administration, coordination of MEDEVAC, power to support all equipment, and all classes of supply except medical equipment set (MES), humanitarian care augmentation.

c. The Department of the Army Assistant Chief of Staff (Operations and Plans) (G3) to grant release authority to the Office of The Surgeon General (OTSG) for issue of the MES, humanitarian care augmentation.

D-6. Basis of Allocation

The basis of allocation is one team per theater.

D-7. Mobility

a. This unit has no organic mobility. The PVNTMED physician, community health nurse, and family nurse practitioner will require a vehicle from the supported unit to perform their mission.

b. This unit has 239 pounds (36 cu ft) of TOE assets requiring transportation.

c. Teams will move as directed by higher command.

D-8. Employment

The medical brigade will provide C2 and support to the assigned hospital augmentation team, special care, and will ensure continuous provision of health support during operations. The team will be employed and further attached for support to hospitals.

D-9. Concept of Operations and Functions

The hospital augmentation team, special care, provides pediatric services, obstetrics/gynecology services, PVNTMED services, community health nursing services, and family physician services. This team will be dependent upon the hospital to which assigned or attached for sheltered working space and Class VIII supply. It will depend upon OTSG and USAMMA for the MES, humanitarian care upon deployment. The MES will provide an MTF with the additional pediatric, obstetrics/gynecology, general medical, and nutritional supplies to support a civilian population of 10,000 people for 30 days. This MES will provide basic items and is suitable for use as an initial push package to meet initial requirements. The intent is to deploy the team and a pre-positioned MES separately for issue in theater. The MES is not organic to the MTF MTOE. It augments the MTF to support humanitarian missions. As such, the MES is not included in unit status reporting under the provisions of AR 220-1. The function of the hospital augmentation team, special care, is to provide additional health personnel to augment an MTF for increased capability to minimize nonbattle occupational injuries, support humanitarian missions, provide public health management

of communicable disease/reportable conditions events, and to advise and provide health promotion services to optimize health maintenance during long term deployments. The increased capability will enhance medical capacity to prevent/control/eliminate nonbattle injuries, epidemics, and other diseases/illness. This will be accomplished by enhanced on-site monitoring and analysis of injury, communicable disease and other illness reports; performance of epidemiologic investigations; contact tracing; environmental controls implementation; commander, staff, patient and community education regarding required disease and injury control interventions. Additionally, the enhanced capability will include inpatient/outpatient care for a civilian population. The operational and command relationship is shown in Figure D-1.

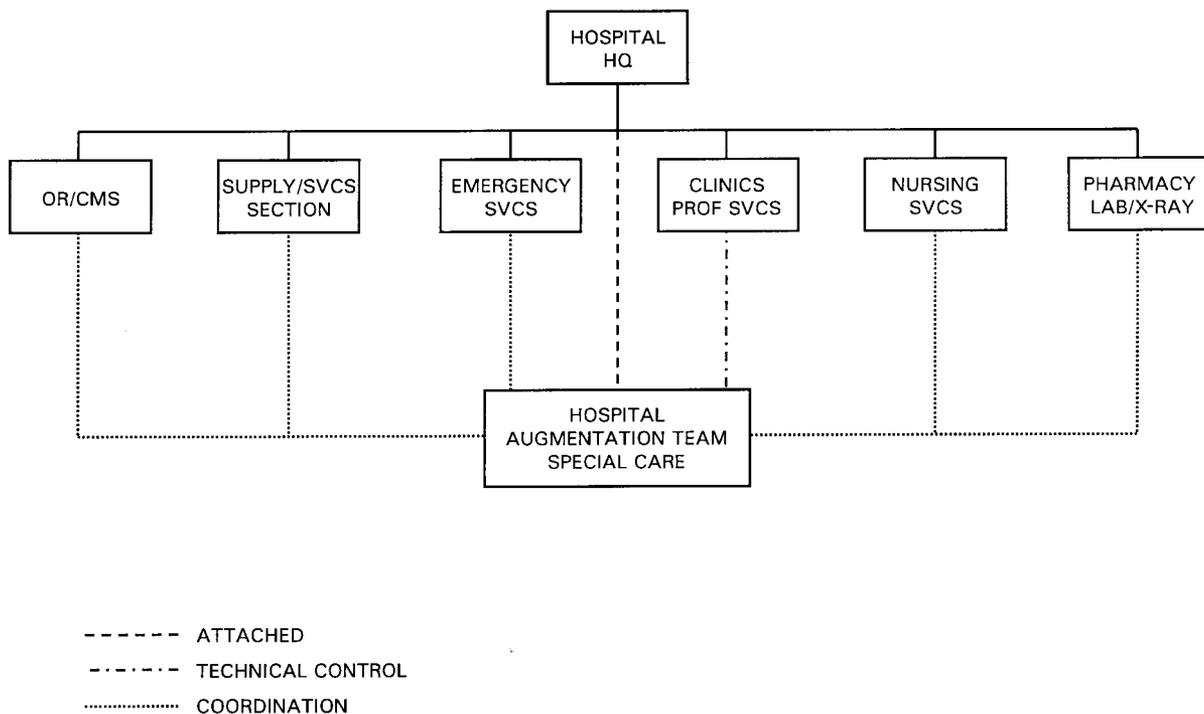


Figure D-1. Hospital augmentation team, special care, operational and command relationship.

APPENDIX E

**HOSPITAL AUGMENTATION TEAM, PATHOLOGY,
TOE 08537AA00****E-1. Introduction**

The Medical Team, Pathology, TOE 08537LA00, was initially organized based on MF2K requirements. Under MRI, the Medical Team, Pathology, was reorganized as the Hospital Augmentation Team, Pathology, TOE 08537AA00, which is the basis for this appendix. The TOE 08537LA00 will be rescinded when units are no longer organized thereunder.

E-2. Mission

The mission is to provide pathology augmentation in support of theater hospitals and consultative services as required.

E-3. Assignment

Assignment will be to a medical brigade or a MEDCOM and will normally be attached to a hospital.

E-4. Capabilities

The capabilities of this team are based on METT-TC. The team may provide—

a. Theater hospitals with an additional and an enhanced pathology capability in the following areas:

- Anatomic pathology (for example, histology, cytology, and postmortem examination).
- Enhanced chemistry (for example, toxicology, immunochemistry, and therapeutic drug monitoring).
- Enhanced microbiology.

b. Three days of supply for all organic elements upon deployment and during routine operations.

E-5. Limitations

This team is dependent upon—

a. Appropriate elements of the theater or corps for legal, religious, finance, personnel and administrative services, bath and laundry support, clothing exchange, decontamination of remains, and transportation support when the unit is required to relocate.

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b. The hospital to which it is attached to provide partial sheltered working space, commonly used equipment, food service, water distribution, HSS, security, personnel and administrative services, unit maintenance for generators, transportation, and all classes of supply.

E-6. Basis of Allocation

The basis of allocation is one per 2,360 conventional hospital patients in theater.

E-7. Mobility

- a.* This unit has no organic mobility.
- b.* This unit has 12,974 pounds (1,874 cu ft) of TOE assets requiring transportation.

E-8. Employment

The medical brigade or MEDCOM will provide C2 and support to the assigned hospital augmentation team, pathology, and will ensure continued provision of pathology services to the corps and EAC. The hospital augmentation team, pathology, will be employed with and further attached for support to hospitals.

E-9. Concept of Operations and Functions

The function of the hospital augmentation team, pathology, is to augment hospital laboratories with a standardized team having capabilities for anatomic pathology, enhanced chemistry, and enhanced microbiology. Medical materiel sets will augment existing clinical laboratory equipment to support anatomic pathology and enhanced chemistry capabilities. The operational and command relationship is shown in Figure E-1. The laboratory section has technical control of the pathology augmentation team.

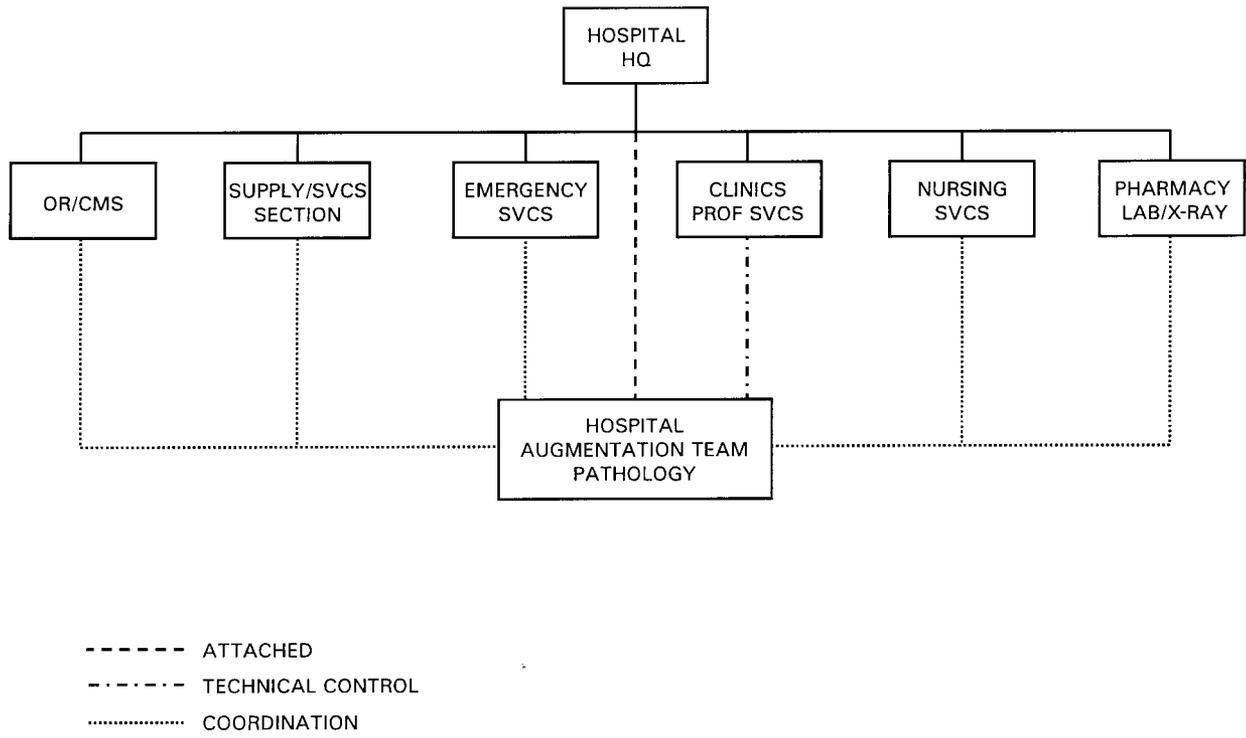


Figure E-1. Hospital augmentation team, pathology, operational and command relationship.

APPENDIX F

MEDICAL TEAM, RENAL HEMODIALYSIS, TOE 08537LB00**F-1. Introduction**

The medical team, renal hemodialysis, was initially developed based on MF2K requirements and was not changed under the MRI. It is a part of and is included in the MRI hospitalization support system.

F-2. Mission

The mission is to provide medical augmentation to corps and EAC hospitals.

F-3. Assignment

Assignment is to a MEDCOM or a medical brigade and may be further attached to subordinate hospitals, as required.

F-4. Capabilities

The medical team, renal hemodialysis, provides renal hemodialysis care for patients with acute renal failure and consultative services on an area basis.

F-5. Limitations

This team is dependent on—

a. Appropriate elements of the corps or ASCC for legal, religious, finance, bath, laundry, and clothing exchange support.

b. The hospital to which it is attached to provide sheltered working space, commonly used equipment, field feeding (to include patient field feeding), HSS, personnel and administrative services, unit level maintenance, transportation, security, patient administration, coordination of MEDEVAC, power to support all equipment, and all classes of supply.

F-6. Basis of Allocation

The basis of allocation for this team is one per 550 conventional hospital patients in theater.

F-7. Mobility

This team requires no organic mobility.

F-8. Employment

The MEDCOM or medical brigade will provide C2 and support to the assigned medical team and will ensure its continued support to the corps and EAC. It will be attached to theater hospitals as required.

F-9. Concept of Operations and Functions

The function of this medical team is to provide support to hospitals as assigned. Its assignment will be determined by the medical planners of the MEDCOM/medical brigade. The operational and command relationship is shown in Figure F-1.

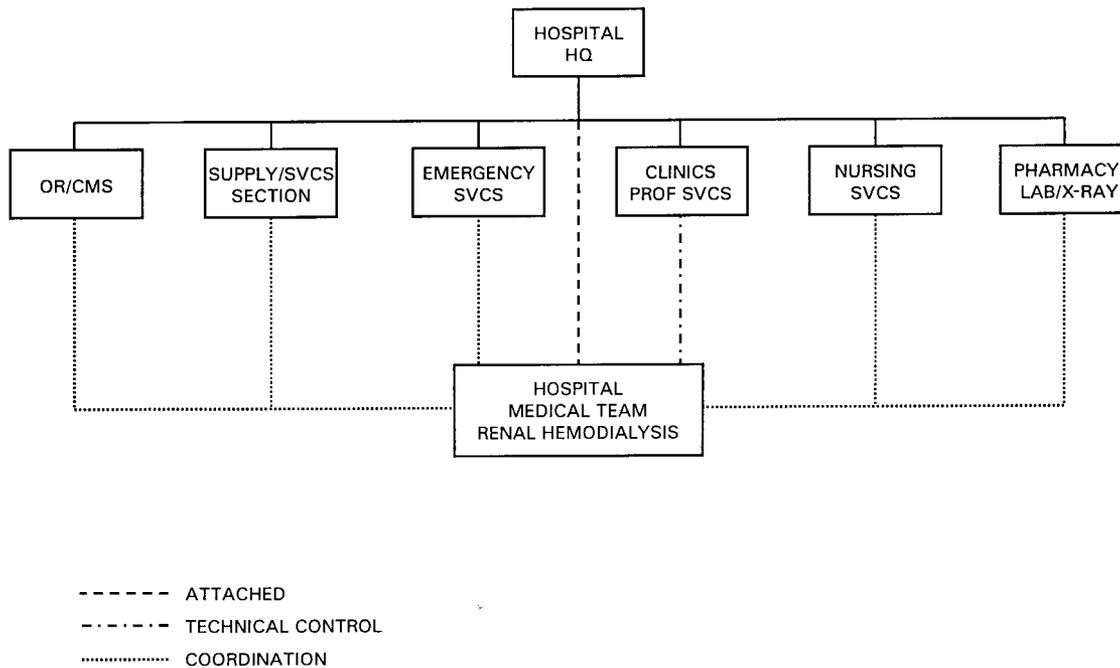


Figure F-1. Medical team, renal hemodialysis, operational and command relationship.

APPENDIX G

MEDICAL TEAM, INFECTIOUS DISEASE, TOE 08537LC00**G-1. Introduction**

The medical team, infectious disease, was initially developed based on MF2K requirements and was not changed under the MRI. It has been integrated into the MRI hospitalization support system.

G-2. Mission

The mission of this team is to provide medical augmentation to corps and EAC hospitals.

G-3. Assignment

Assignment is to a MEDCOM or a medical brigade and may be further attached to a subordinate hospital, as required.

G-4. Capabilities

This team provides infectious disease investigation, takes measures to control the spread of the disease, assures access to health services, and provides consultative services to the health service unit to which attached. This team may include or partner with special care teams with a PVNTMED/community health nurse when public health measures are required.

G-5. Limitations

This team is dependent on—

a. Appropriate elements of the Corps or ASCC for legal, religious, finance, laundry, bath, and clothing exchange support.

b. The hospital to which it is attached to provide sheltered working space, commonly used equipment, field feeding (to include patient field feeding), HSS, personnel and administrative services, unit level maintenance, transportation, security, patient administration, coordination of medical evacuation, power to support all equipment, and all classes of supply.

G-6. Basis of Allocation

The basis of allocation for this team is one per 800 conventional hospital patients in theater.

G-7. Mobility

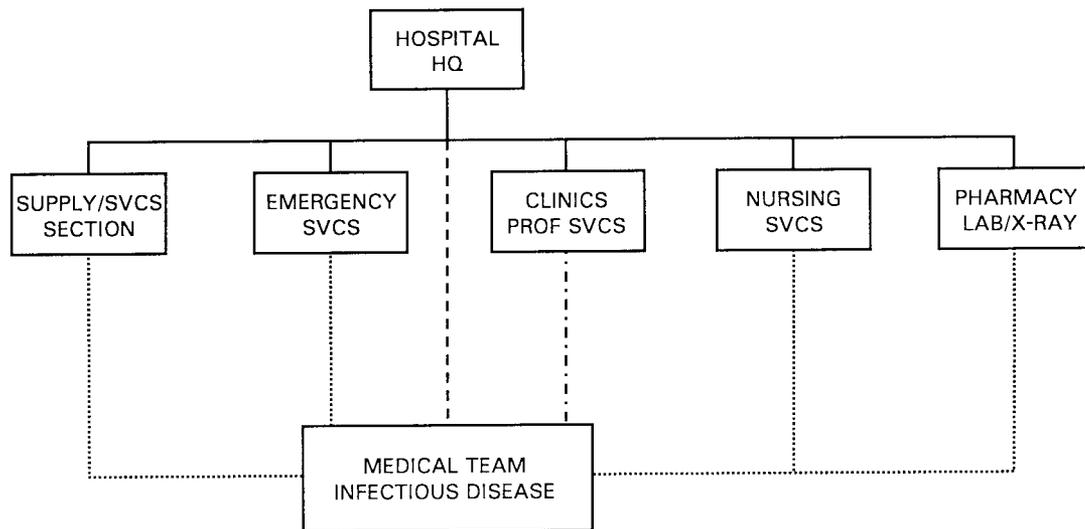
This team does not have organic lift capability and requires support from the CSH for mobility.

G-8. Employment

The MEDCOM or medical brigade will provide C2 and support to the assigned medical team and will ensure its continued support to the corps and EAC. It will be attached to a corps hospital as required.

G-9. Concept of Operations and Functions

The function of this medical team is to provide support to hospitals as assigned. The medical planners of the MEDCOM/medical brigade will determine its assignment. The operational and command relationship is shown in Figure G-1.



- ATTACHED
- .-.-.- TECHNICAL CONTROL
- COORDINATION

Figure G-1. Medical team, infectious disease, operational and command relationship.

APPENDIX H

HOSPITAL PLANNING FACTORS

This appendix provides information for CSH commanders, their staff, and assigned personnel. It contains estimated planning factors for personnel, transportation and movement, supply, personnel service support, HSS planning for hospitalization, and engineer requirements effective as of the date of this publication. **The data is an estimate and is not intended to be all-inclusive.** Fluctuations and changes in the data presented are contingent upon modifications to the TOE, its mission, and the scenario. This appendix does not negate responsibility for the commander and his staff to initiate deployment planning and coordination for his unit based on METT-TC. The CSH TOEs can be accessed at <https://www.usafmsaridd.army.mil>. This is a secure site requiring an access password. Hospital commanders should ensure that selected staff members of the HHD, 84-bed and 164-bed medical companies attend a unit movement course to enhance strategic deployment. For information on the Unit Movement Officer Deployment Planning Course, contact the Commandant, US Army Transportation School, ATTN: ATSP-TDD-SD, Fort Eustis, VA 23604-5001. The telephone number is DSN 826-2039, commercial (757) 878-2039. Commanders should use the MTOE to compute the unit’s specific movement data based on unit loads tailored for the mission.

Section I. CORPS HOSPITAL PLANNING FACTORS

H-1. Personnel Deployment Planning Factors

	HHD	84 BED	164 BED	TOTAL (248 Bed)
Officer	13	56	84	153
Warrant Officer	2	0	0	2
Enlisted	44	114	172	330
Total	59	170	256	485

248 Bed

Personnel-weight (combat-equipped, includes 15-lb hand-carry bag)	220 lbs/man (485)	106,700 lbs
Mobilization bag-weight	25 lbs/man	12,125 lbs
Mobilization bag-cube	1 cu ft/man	485 cu ft
Check-in baggage-weight	70 lbs/man	33,950 lbs
Check-in baggage-cube	3 cu ft/man	1,455 cu ft
Total personnel-weight and cube with all gear	152,775 lbs	1,940 cu ft

HHD

Personnel-weight (combat-equipped, includes 15-lb hand-carry bag)	220 lbs/man (59)	12,980 lbs
Mobilization bag-weight	25 lbs/man	1,475 lbs
Mobilization bag-cube	1 cu ft/man	59 cu ft
Check-in baggage-weight	70 lbs/man	4,130 lbs
Check-in baggage-cube	3 cu ft/man	177 cu ft
Total personnel-weight and cube with all gear	18,585 lbs	236 cu ft

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Hospital Company A (84 Bed)

Personnel-weight (combat-equipped, includes 15-lb hand-carry bag)	220 lbs/man (170)	37,400 lbs
Mobilization bag-weight	25 lbs/man	4,250 lbs
Mobilization bag-cube	1 cu ft/man	170 cu ft
Check-in baggage-weight	70 lbs/man	11,900 lbs
Check-in baggage-cube	3 cu ft/man	510 cu ft
Total personnel-weight and cube with all gear	53,550 lbs	680 cu ft

Hospital Company B (164 Bed)

Personnel-weight (combat-equipped, includes 15-lb hand-carry bag)	220 lbs/man (256)	56,320 lbs
Mobilization bag-weight	25 lbs/man	6,400 lbs
Mobilization bag-cube	1 cu ft/man	256 cu ft
Check-in baggage-weight	70 lbs/man	17,920 lbs
Check-in baggage-cube	3 cu ft/man	768 cu ft
Total personnel-weight and cube with all gear	80,640 lbs	1,024 cu ft

44-Bed Early Entry Hospitalization Element

HHD (for 44 Bed)

Personnel-weight (combat-equipped, includes 15-lb hand-carry bag)	220 lbs/man (20)	4,400 lbs
Mobilization bag-weight	25 lbs/man	500 lbs
Mobilization bag-cube	1 cu ft/man	20 cu ft
Check-in baggage-weight	70 lbs/man	1,400 lbs
Check-in baggage-cube	3 cu ft/man	60 cu ft
Total personnel-weight and cube with all gear	6,300 lbs	80 cu ft

44 Bed

Personnel-weight (combat-equipped, includes 15-lb hand-carry bag)	220 lbs/man (133)	29,260 lbs
Mobilization bag-weight	25 lbs/man	3,325 lbs
Mobilization bag-cube	1 cu ft/man	133 cu ft
Check-in baggage-weight	70 lbs/man	9,310 lbs
Check-in baggage-cube	3 cu ft/man	399 cu ft
Total personnel-weight and cube with all gear	41,895 lbs	532 cu ft

HHD (for 40-Bed)

Personnel-weight (combat-equipped, includes 15-lb hand-carry bag)	220 lbs/man (18)	3,960 lbs
Mobilization bag-weight	25 lbs/man	450 lbs
Mobilization bag-cube	1 cu ft/man	18 cu ft
Check-in baggage-weight	70 lbs/man	1,260 lbs
Check-in baggage-cube	3 cu ft/man	54 cu ft
Total personnel-weight and cube with all gear	5,670 lbs	72 cu ft

40 Bed

Personnel-weight (combat-equipped, includes 15-lb hand-carry bag)	220 lbs/man (36)	7,920 lbs
Mobilization bag-weight	25 lbs/man	900 lbs
Mobilization bag-cube	1 cu ft/man	36 cu ft
Check-in baggage-weight	70 lbs/man	2,520 lbs
Check-in baggage-cube	3 cu ft/man	108 cu ft
Total personnel-weight and cube with all gear	11,340 lbs	144 cu ft

HHD (for 164 Bed)

Personnel-weight (combat-equipped, includes 15-lb hand-carry bag)	220 lbs/man (21)	4,620 lbs
Mobilization bag-weight	25 lbs/man	525 lbs
Mobilization bag-cube	1 cu ft/man	21 cu ft
Check-in baggage-weight	70 lbs/man	1,470 lbs
Check-in baggage-cube	3 cu ft/man	63 cu ft
Total personnel-weight and cube with all gear	6,615 lbs	84 cu ft

H-2. Logistics Planning Factors (Classes I, II, III, IV, VI, and VIII)

a. Classes of Supply Planning Factor Rates.

Class of Supply	Planning Factor
Class I	4.03 pounds per man per day (PMD)

Class I—Information on available operational rations and menu planning in a TO is available in FM 10-23. The DLA C-8900-SL Federal Supply Classification (FSC) Stock List Group 89, Subsistence, lists the NSNs, item information, and weight and cube information for all operational rations. Menu planning should be coordinated with the theater Class I manager to ensure the availability of the ration mix needed to

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support medical requirements. At a minimum, a 21-day basic load of medical nutritional supplements should be deployed until the logistical system is fully capable of Class I support.

Class II	3.67 PMD
Class III	53.70 PMD (bulk) 0.59 PMD (packaged)
Class IV	8.500 PMD (includes 4.0 barrier materiel and 4.5 base construction)
Class VI	3.20 PMD

All soldiers should deploy with at least 30 days supply of personal demand items. If exchange support is not readily available or cannot be established, health and comfort items are packaged and issued as a Health and Comfort Pack (HCP). The DLA C-8900-SL FSC Stock List Group 89, Subsistence, lists the NSNs and weight and cube information for the HCP Types I (all soldiers) and II (female only). Army Regulation 710-2 provides guidance on planning and requisition of these items. Adjustments in quantity or selection of items in the HCP should be submitted to the theater Class I manager. The issue of HCPs will cease when exchange facilities are available.

Class VIIIA (weight and cube planning factors are based on total Army analysis [TAA] 11)

Echelon	WIA	WIA	NBI	NBI	DIS	DIS	CHEM	CHEM
	Wt per Casualty	Cube per Casualty						
IA	2.15	0.14	1.18	0.08	0.18	0.01	0.35	0.02
IB	12.83	0.41	3.07	0.14	0.45	0.03	0.62	0.03
II	14.28	0.70	7.41	0.35	3.90	0.18	1.28	0.04
IIIF	62.00	0.00	62.00	0.00	0.00	0.00	0.00	0.00
III	325.11	12.97	108.76	4.94	77.88	2.35	41.15	1.69
IV	103.29	5.96	37.86	2.36	6.04	0.19	33.97	1.13

The above figures are an average of both theaters (Northeast Asia and Southwest Asia), broken down by type of casualty (WIA, NBI, DIS, CHEM) showing the amount of materiel used at each level of care. These amounts are shown in weight and cube.

Legend:

- WIA — wounded in action
- NBI — nonbattle injury
- DIS — disease
- CHEM — chemical

b. Army Medical Field Feeding Policy. The Army medical field feeding policy for hospitalized patients is three hot meals daily. The meals will consist of Unitized Group Rations (UGR) with the medical diet supplement. The UGR is available in two options, UGR-Heat and Serve (H&S) which is nonperishable and UGR-A, which includes perishable/frozen type entrees. Unitized Group Rations require mandatory enhancements such as bread, milk, and cold cereal for completion. The MRE are not authorized for feeding hospitalized patients except in emergencies when other rations are not available. In a mature TO, contract food service may be used to feed hospitalized patients. The medical diet supplement may be used with UGR, MRE, or contractor-provided foods for preparation of patient meals and nourishments (see Appendixes K and L).

c. Meal(s), Ready-to-Eat Policy for Soldiers. The Surgeon General's policy on sole source consumption of MRE for soldiers allows MRE to be consumed as the sole source of subsistence for up to 21 days. When available, bread, fruit, and milk as enhancements to the MRE are recommended. See Appendixes K and L for additional information on use of MRE with medical diet supplements for patient feeding.

d. Patient Meals. Patients are exempt from the theater rations policy and will receive three prepared hot meals per day. To support 24-hour patient care, the hospital may prepare four meals per day—breakfast, lunch, dinner, and a night meal. The night meal may utilize a breakfast or lunch/dinner menu according to local procedures.

e. Staff Meals. Staff assigned to medical units will be fed according to the service theater ration policy. However, to simplify procurement, meal preparation, and service, staff may be served the patient regular hot meal if available.

f. Nutrition Care in Stability Operations and Support Operations.

(1) The hospital nutrition care section may be involved in feeding a healthy or malnourished population. The nutrition care services may be provided directly to the HN population or displaced persons through nutrition assessment, therapeutic feeding, and population-based feeding programs. Indirect nutrition care assistance includes serving as a consultant to the HN medical education system to develop HN nutritional care specialists and nutritional programs.

(2) Contract food service support may be procured for the deployed force. When the contract includes feeding the hospital staff and patients, only one dietitian and one or two nutrition care specialists may be deployed. However, if the mission requires support to a large population, the full nutrition care section should be deployed. Regardless of the number of personnel deployed, the nutrition care personnel are responsible for ensuring that hospital nutrition care services are provided. They must ensure that the correct patient diets and nourishments are provided by the contractor at the right times. To ensure that patient needs are met, a process is developed (with the contractor, the nutrition care section, and hospital nursing services working together) for ordering and delivering patient meals and nourishments.

(3) The provision of adequate fluids for rehydration and minimizing the effects of diarrhea is imperative. The CSH dietitian is capable of providing expertise on the increased fluid requirements for rehydration and minimizing the effects of diarrhea.

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g. Nutrition Care Section Support for the Stay-Behind 40-Bed Slice of the 84-Bed CSH (Corps).
 When the hospital forward deploys a 44-bed hospital, the entire nutrition care section (personnel and equipment) deploys with it. There are no nutrition care personnel or equipment that would be left with the stay-behind 40-bed slice. Personnel in the stay behind 40-bed slice must obtain food service support from the 164-bed company or from another unit in the area.

h. Management and Planning Blood Requirements.

(1) The management and distribution of blood in the TO is a function of combat health logistics. In the long term, and in a mature theater, blood management is based on resupply from the CONUS blood donor base, using a combination of liquid and frozen blood products. Each CSH stores liquid blood and a combination of liquid and frozen blood products of various groups and types.

(2) Liquid blood products enter the theater through the USAF Blood Transshipment Centers (BTCs) for further distribution to the Army blood support detachment, located with the MEDLOG battalion. The blood support detachment provides collection, manufacturing, storage, and distribution of blood and blood products to division, corps, and EAC MTFs. The blood support detachment is resupplied from a supporting USAF BTC. The blood support detachment commander may also serve as the Area Joint Blood Program Officer (AJBPO) if a DOD AJBPO is not available.

(3) Blood collection in the theater is governed by theater policy, but normally is done to provide platelets for emergency situations. Limited testing of blood drawn in the theater is done to minimize danger to recipients.

(4) Blood shipped into the AO will be packed red blood cells (RBC) and FFP and, possibly, frozen platelets. Subject to availability, RBC shipped from CONUS are packed with the following unit group and type distribution:

Blood Group/Type	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%

(5) Blood planning factors.

Blood Component	Planning Factor
Red Blood Cells	*4 units for each WIA and NBI casualty initially admitted to a hospital
Fresh Frozen Plasma	0.08 units for each hospitalized WIA or NBI
Frozen Platelet Concentrate	0.04 units for each hospital WIA or NBI

*For blood planning purposes, count the WIA or NBI only one time in the system, not each time the patient is seen or admitted.

(6) The expected admission rates per day are critical in computing initial blood requirements. These rates, along with the above blood planning factors, provide the planner with an initial estimate of daily blood requirements.

Sample Calculations for Initial Blood Requirements

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:

$(10,000/1,000) \times 8 \times 4 = 320$ units of RBCs per day

(For additional information on blood requirements and calculations, see FM 8-55.)

i. Estimated Oxygen Planning Factors and Requirements.

(1) Estimated planning factors.

OR Table: 2.8 liters/minute during operational time.

ICU Beds: 4.5 liters/minute for 17 percent of the total ICU beds (patients on resuscitator/ventilator).

ICU Beds: 3.1 liters/minute for 17 percent of the total ICU beds (patients on nasal cannula/mask).

Miscellaneous Requirements: An additional factor of 10 percent is applied to the total of OR and ICU requirements to account for oxygen requirements in other areas of the hospital.

(2) Oxygen conversion factors.

1 gal (gaseous oxygen)	=	0.1333 cu ft
95 gal "D" cylinder	=	12.7 cu ft
1650 gal "H" cylinder	=	220 cu ft
1 cu ft (gaseous oxygen)	=	28.317 liters
95 gal "D" cylinder	=	359.63 liters
1650 gal "H" cylinder	=	6229.74 liters

j. Showers.

(1) The OTSG recommends, from a health maintenance perspective, a minimum of one shower and one change of uniform per soldier per week. While this meets the minimum health standard requirements, from a morale standpoint the Army goal is one standard shower and one expedient shower per week with two changes of uniform. The central hygiene and laundry planning factors are based on these two showers and fifteen pounds of laundry per soldier per week.

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(2) Central hygiene, shower and laundry water is required by theater quartermaster elements to provide individual soldier laundry and bath field services. Water for centralized hygiene, such as field showers, can be disinfected nonpotable fresh water when approved by PVNTMED. Water for laundry services can be nonpotable fresh water. Water used for personal hygiene will be potable water only. The health threat may impact the water quality standards and limit the use of nonpotable water for field services.

k. *Wastewater Planning Factors.* The hospital should plan for all patient and staff water, and all laundry water requirements to become wastewater. See Appendix J for the disposal of wastewater.

l. *Solid Waste Factors.*

(1) Solid waste calculation (estimated):

Total patients (beds) x 15 lbs = total patient solid waste per day
Staff x 12.5 lbs = total staff solid waste per day

(2) Hospital infectious waste planning factors (estimated):

3 lbs (1 cu ft) of infectious waste generated per bed per day

H-3. Hospital Operational Space Requirements

Table H-1 provides estimated operational space requirements that are applicable to both the corps and EAC CSH. This FM does not provide exact operational space requirements for all situations. Due to the modular nature of DEPMEDS, the recommended space requirements serve as guidelines only. The actual space requirement will be dependent on the specific hospital configuration for a given mission, the available terrain, and the terrain topography.

Table H-1. Estimated Operational Space Requirements

164-BED HOSPITAL COMPANY	246,394 SQ FT	÷	43,560 SQ FT PER ACRE	=	5.7 ACRES
84-BED HOSPITAL COMPANY	248,454 SQ FT	÷	43,560 SQ FT PER ACRE	=	5.7 ACRES
EARLY ENTRY HOSPITALIZATION ELEMENT (44 BED)	156,816 SQ FT	÷	43,560 SQ FT PER ACRE	=	3.6 ACRES
HOSPITALIZATION AUGMENTATION ELEMENT (40 BED)	87,555 SQ FT	÷	43,560 SQ FT PER ACRE	=	2.01 ACRES
248-BED COMBAT SUPPORT HOSPITAL	403,432 SQ FT	÷	43,560 SQ FT PER ACRE	=	9.3 ACRES

H-4. Estimated Hospital Water Planning Factors

a. Table H-2 provides **estimated** water planning factors that are unique to the CSH. The planning factors are applicable to both the corps and EAC CSH. Estimated water requirements for the 44-bed increment can be determined from the data presented. The table **does not** include the Department of the Army (DA) water planning factors, which are common to all Army elements. Paragraph H-4*b* provides estimated water planning factors for operations under a chemical environment. To compute detailed water requirements, use the planning factors published in Chapter 3 and Appendix B of FM 10-52.

b. Estimated water planning factors while operating under a chemical environment.

(1) Decontamination (decon).

Individual	7 gal/decon
Major end item	380 gal/decon
Vehicle	450 gal/decon

(2) Vehicle maintenance.

$\frac{1}{2}$ gal per vehicle (temperate)
1 gal per vehicle (hot climate)

(3) Estimated water consumptive factors (under chemical environment, 72-hour scenario).

Staff	
Drinking	1.5 gal/man/day
Hygiene	1.0 gal/man/day
Feeding	0.25 gal/man/day
Patient Care	4 gal/patient/bed/day
Surgical	3 gal/case/day

Table H-2. Estimated Hospital Water Planning Factors

	GAL	248 BED HOSPITAL		164 BED HOSPITAL		84 BED HOSPITAL		MC MED DET		HHD	
		FACTORS	TOTAL	FACTORS	TOTAL	FACTORS	TOTAL	FACTORS	TOTAL	FACTORS	TOTAL
PATIENT CARE											
CLEAN UP (GAL/BED/DAY)	1.00	248	248	164	164	84	84	120	120		
BED BATH (GAL/BED PATIENT/DAY)	2.75	248	682	164	451	84	231	0	0		
BED PAN WASH (GAL/BED/DAY)	1.50	248	372	164	246	84	126	0	0		
LAB (GAL/BED/DAY)	0.20	248	49.6	164	32.8	84	16.8	0	0		
STERILIZER (GAL/UNIT/DAY)	48.00	12	540	8	360	4	180	0	0		
X-RAY PROCESSOR (GAL/UNIT/DAY)	5.00	3	15	2	10	1	5	0	0		
HANDWASHING (GAL/BED/DAY)	2.00	248	496	164	328	84	168	120	240		
SHOWERS (GAL/AMBULATORY PATIENT/BED/DAY)	3.40	0	0	0	0	0	0	120	408		
TOTAL (GAL/DAY)			2402.60		1591.80		810.80		768		
SURGICAL											
SCRUB (GAL/CASE/DAY)	80.00	48	3840	32	2560	16	1280	0	0		
INSTRUMENT RINSE (GAL/CASE/DAY)	20.00	48	960	32	640	16	320	0	0		
INSTRUMENT CLEANING (GAL/UNIT/DAY)	70.00	3	210	2	140	1	70	0	0		
OPERATING ROOM CLEAN-UP (GAL/CASE/DAY)	3.00	48	144	32	96	16	48	0	0		
TOTAL (GAL/DAY)			5154		3436		1718		0		
HOSPITAL LAUNDRY											
LINEN (GAL/LBS/DAY)	3.00	819.25	2457.75	519.59	1558.77	299.66	898.98	202.26	606.78		
TOTAL (GAL/DAY)			2457.75		1558.77		898.98		606.78		
STAFF/PATIENT GENERAL											
STAFF (GAL/UNIFORM/DIRECT CARE WORKER/DAY)	3.20	365	1168	225	720	140	448	40	128		
FOOD PREP (GAL/MEAL/DAY)	1.00	652	652	432	432	260	260	40	40	68	217.60
SHOWERS (GAL/DIRECT CARE WORKER/DAY)	3.40	365	1241	225	765	140	476	40	136		
TOTAL (GAL/DAY)			3101		1917		1184		304		
GRAND TOTAL (GAL/DAY)			13115.35		8503.57		4611.78		1678.78		217.60

Section II. ECHELONS ABOVE CORPS HOSPITAL PLANNING FACTORS

H-5. Personnel Deployment Planning Factors

	HHD	84 BED	164 BED	TOTAL (248 Bed)
Officer	15	78	67	160
Warrant Officer	2	0	0	2
Enlisted	33	172	73	278
Total	50	250	140	440

248 Bed

Personnel-weight (combat-equipped, includes 15-lb hand-carry bag)	220 lbs/man (440)	96,800 lbs
Mobilization bag-weight	25 lbs/man	11,000 lbs
Mobilization bag-cube	1 cu ft/man	440 cu ft
Check-in baggage-weight	70 lbs/man	30,800 lbs
Check-in baggage-cube	3 cu ft/man	1,320 cu ft
Total personnel-weight and cube with all gear	138,600 lbs	1,760 cu ft

HHD

Personnel-weight (combat-equipped, includes 15-lb hand-carry bag)	220 lbs/man (50)	11,000 lbs
Mobilization bag-weight	25 lbs/man	1,250 lbs
Mobilization bag-cube	1 cu ft/man	50 cu ft
Check-in baggage-weight	70 lbs/man	3,500 lbs
Check-in baggage-cube	3 cu ft/man	150 cu ft
Total personnel-weight and cube with all gear	15,750 lbs	200 cu ft

84 Bed

Personnel-weight (combat-equipped, includes 15-lb hand-carry bag)	220 lbs/man (250)	55,000 lbs
Mobilization bag-weight	25 lbs/man	6,250 lbs
Mobilization bag-cube	1 cu ft/man	250 cu ft
Check-in baggage-weight	70 lbs/man	17,500 lbs
Check-in baggage-cube	3 cu ft/man	750 cu ft
Total personnel-weight and cube with all gear	78,750 lbs	1,000 cu ft

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164 Bed

Personnel-weight (combat-equipped, includes 15-lb hand-carry bag)	220 lbs/man (140)	30,800 lbs
Mobilization bag-weight	25 lbs/man	3,500 lbs
Mobilization bag-cube	1 cu ft/man	140 cu ft
Check-in baggage-weight	70 lbs/man	9,800 lbs
Check-in baggage-cube	3 cu ft/man	420 cu ft
Total personnel-weight and cube with all gear	44,100 lbs	560 cu ft

H-6. Logistics Planning Factors (Classes I, II, III, IV, VI, and VIII)

The logistics planning factors for Class I, II, III, IV, VI, and VIII for the EAC CSH are the same as the corps CSH planning factors identified in paragraph H-2.

a. Estimated Water Planning Factors (Gallons of Water Per Day). See paragraph H-4. The major difference between the corps CSH and the EAC CSH water estimate is the laundry requirement. The corps CSH has organic laundry capability for patient-related linens while the EAC CSH does not. The difference in personnel authorizations will have minimal impact on overall water calculations. Otherwise, all other estimated water calculations remain the same.

b. Showers. See Paragraph H-2j.

c. Laundry. The Surgeon General's policy statement (theater hospital laundry support) states that hospitals operating in the COMMZ will use area support facilities for laundry. Planning for establishing hospitals in the COMMZ normally will include the provision of shower facilities for patients. Clothing exchange functions will be a responsibility of the medical holding element.

d. Wastewater Planning Factors. The hospital should plan for all patient and staff water and all laundry water requirements to become wastewater.

e. Solid Waste Factors.

(1) Solid waste calculation (estimated):

Total patients (beds) x 15 lbs = total patient solid waste per day
Staff x 12.5 lbs = total staff solid waste per day

(2) Hospital infectious waste planning factors (estimated):

3 lbs (1 cu ft) of infectious waste generated per bed per day

APPENDIX I

SAFETY**Section I. INTRODUCTION****I-1. Safety Policy and Program**

An effective safety program is essential to any unit. Leaders must stress the importance of constant vigilance to detect potential hazards and reduce or eliminate these hazards.

a. Policy. The safety policy of the Army is to reduce and keep to a minimum accidental manpower (and monetary) loss, thus providing more efficient use of resources and advancing combat effectiveness.

b. Program. The unit safety program should be designed to cover all operations and take into consideration all conditions peculiar to the specific operation of the unit. Implementation of the program includes the establishment of a safety organization consisting of a unit safety officer responsible for the supervision and coordination of all unit safety activities and other personnel as required to assist him (see AR 385-10).

I-2. Responsibility for Accident Prevention

a. Commander. The hospital commander must establish and promote safety and occupational health directives and policies to protect the personnel and equipment under his command. He must coordinate and integrate these directives and policies with those of higher headquarters and other commands and Services. The hospital commander appoints a qualified individual as the hospital safety officer (see AR 385-10).

b. Hospital Safety Officer. The hospital safety officer serves as a principal advisor to the commander. He manages the safety program by integrating safety into all functions conducted within the hospital. The safety officer can serve as an advisor to both the radiation control and infection control assets. He must continuously monitor the safety program for effectiveness and identify new methods for accident prevention.

c. Supervisors. Supervisors enforce command safety directives and policies through specific training programs, routine inspections of work areas, accident investigations, and prompt evaluation and action to eliminate or minimize potential hazards identified by personnel.

d. Individuals. All personnel should be made to realize that safety rules have been established for their protection. It is their responsibility to report all unsafe conditions/acts, accidents, and near misses to their immediate supervisor; to follow all instructions; and to properly use all personal protective equipment and safeguards.

I-3. Principles of Accident Prevention

An effective safety program depends on the proper application of the following principles of accident prevention:

a. Stimulation of Interest. Emphasis on safety must be vigorous and continuous, and it must originate with the hospital commander. Group discussions, safety meetings, bulletin board notices, posters, and recognition of individuals for participation create interest in the safety program.

b. Applicability. Practical safety controls should be provided in all planning, training, tactical operations, professional activities, and off-duty activities.

c. Fact Finding. This refers to the assembly of information bearing upon the occurrence and prevention of accidents. For each accident, the following facts should be determined:

- (1) Who was injured, and what was damaged.
- (2) The time and place where the accident or injury occurred.
- (3) The severity and cost of the accident or injury.
- (4) The root cause of the accident or injury.
- (5) Measures that can be instituted to guard against future occurrences.

d. Corrective Action Based on Facts. Any corrective action that is adopted should be based on available and pertinent facts surrounding the accident or injury. Near accidents also should be reported with all available information so that hazards and unsafe procedures or conditions can be eliminated. Similarly, any procedure or condition that might be dangerous should be reported so that remedial action can be instituted.

e. Safety Education and Training. The objectives of safety education and training are to develop the individual's safety awareness so he performs his tasks with minimal risk to himself and to others.

f. Inspections. The purpose of safety inspections is to identify and evaluate hazards and unsafe work practices, and then avoid, eliminate, or control them to keep associated risks at an acceptable level.

g. Stress Control. Stressors such as work overload, inadequate staffing and resources, shift work, continuous change, complex tasks and equipment, and death and dying have been linked to job dissatisfaction, burnout, anxiety, depression, absenteeism, and substance abuse and dependency. Leadership can alleviate the effects of a stressful work environment stress by:

- (1) Instituting a formal stress management program.
- (2) Discussing stress awareness and stress control measures with personnel.

- (3) Providing accessible counseling.
- (4) Establishing reasonable and flexible work schedules.
- (5) Addressing staffing and resource issues.

I-4. Safety Plan

Many items that can be included in any safety plan are listed below, but the list is neither all-inclusive nor restrictive. Certain conditions or geographical areas may require guidance to conform with those needs. Precautions for certain medical/dental procedures or equipment are included here.

a. Accident Reporting. Basic to any safety plan is accident reporting. A definite procedure should be established that emphasizes prompt and complete reporting of all accidents or injuries (AR 385-40). Supervisors must investigate all accidents and injuries and, when needed, seek the assistance of the safety officer to determine the root cause(s) and take corrective action to prevent their recurrence. Any accident resulting in damage to equipment should be reported immediately. Continued operation of damaged equipment can subsequently result in injuries to personnel.

b. Safety Color Code Markings and Signs. A safety color code prescribes the use of color combinations that are effective in preventing accidents and in improving production, visual perception, and housekeeping. The code defines the application of colors for such specific purposes as the uniform markings of physical hazards, showing the location of safety equipment, identifying fire-fighting equipment, and designating colors to be used if local conditions warrant the use of color coding (29 Code of Federal Regulations 1910.144/145).

c. Fire Prevention.

(1) A hospital fire plan or a fire SOP should be included in the safety program. It should contain fire prevention guidance and information on what to do if a fire occurs.

(2) NO SMOKING signs should be posted wherever fire hazards exist, such as oxygen administration and flammable materials storage areas. Smoking should be permitted only in designated smoking areas.

(3) Fire-fighting equipment should be available, and all personnel should be familiar with its location and operation. This equipment should be inspected frequently to determine if it is serviceable, operative, and accessible.

(4) Fire drills should be conducted often enough for all personnel to be familiar with the procedures. Guard personnel should be alert to fire hazards at night.

(5) Gasoline, oil, paint, and other flammables should be stored in approved locations and in authorized containers. Oxygen and acetylene tanks must be stored separately and apart from other flammables. Electrical power cables should not be exposed to vehicular and/or foot traffic.

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d. Generators. Generators in the field produce the same potential electrical hazards that are found with electricity at permanent installations and demand the same precautions. Only those personnel who have been properly trained and certified on the use of power generation equipment should handle or work with this equipment. Personnel working around generators or electrical wiring should remove rings and watches. Generators should be grounded and not refueled while they are in operation. Generators used for patient treatment areas should be located to reduce, as much as possible, their noise in the operative area (MILVANs strategically placed in proximity to generators serve as excellent noise buffers).

e. Housekeeping. All work areas must be kept clean and orderly at all times. Hazards to personnel and equipment can be eliminated or controlled by enforcing high housekeeping standards.

f. Heaters. When heaters are used, they should be watched closely for potential tent fire. Spark arresters or flue guards on stove exhaust pipes and metal shields in stovepipe openings in tents should be used when heaters are in operation. Ensure tents are well ventilated to prevent carbon monoxide over exposures. Fireguards are required when stoves are in use to monitor stoves for correct operations and alert others of any potential fire hazards.

g. M-2 Burners. The M-2 burner unit is a heat source used in the nutrition care division. These units require safety precautions and trained operators who know what to do if the burners malfunction or a fire starts. The commander may require a licensed operator to operate the burners. The burner units have a U-shaped tank containing fuel under pressure. When burners are used, they should be closely monitored because of potential fire and safety hazards. Burners must be used in well-ventilated areas because of the buildup of carbon monoxide gas produced.

h. Modern Burner Unit. The modern burner unit (MBU) is a variable firing rate, food service field burner that will be the primary heat source for all Army field food service equipment. It will replace the M-2 burner, which has been in the field for over 30 years and can only operate on gasoline. The MBU will operate on JP-8 to comply with the single battlefield fuel initiative. Heat output is from 20,000 to 60,000 British thermal unit/hour. To eliminate shock hazards, it will operate from 28-volt direct current power and requires approximately 50 watts (less than a standard light bulb). It can operate from a vehicle or a power converter that will draw power from a 110-volt alternating current generator. It will utilize a closed circuit, electric refueling system, electric ignition, and fuel atomization technology to eliminate all of the hazards and inconveniences associated with the M-2 burner. Because of these innovations, the MBU can be refueled, ignited, operated, and stored in the kitchen, only being removed for maintenance. These units require safety precautions and trained operators who know what to do if the burners malfunction or a fire starts. The commander may require a licensed operator to operate the burners.

i. Vehicle Operation. Army Regulation 385-55 contains guidance on government vehicle operation.

j. Weapons and Ammunition. Continual command emphasis should be directed toward training each individual in the hospital in the handling of weapons and ammunition. Training should begin when an individual joins the hospital. Commanders should ensure that all personnel are briefed on the handling of weapons that accompany patients to the treatment facility. Weapons of hospital personnel should be cleared and placed on safety until required otherwise. Army Regulation 190-11 and provides guidance on the physical security of weapons and ammunition.

I-5. Accident Investigation and Reporting

a. Investigations. Accident investigation is necessary for accident prevention. Investigation seeks to determine the cause of accidents by finding the elements and sources from which accidents develop. Corrective measures may then be instituted.

b. Reporting. In accordance with AR 385-40, the Army accident reporting system provides for the initial reporting of accidents at unit level. This is done to notify the higher echelon of the command that a mishap has occurred; to record information that will identify causes and corrective actions, indicate trends, and provide a basis for formulating future plans; and to evaluate progress in accident prevention.

Section II. DEPLOYED MEDICAL UNIT SAFETY CONSIDERATIONS

I-6. X-ray Protective Measures and Standards

a. General. X-ray facilities established during deployments usually do not meet the quality control and construction standards that are required for fixed medical and dental X-ray facilities. Because of the limitations associated with operation in the field and the lack of lead shielding there may be situations that may increase radiation exposures to patients, staff, and nearby personnel. Commanders must balance operational requirements with radiological safety concerns when establishing policies for using medical and dental X-ray systems during deployments.

b. Implementing a Quality Control and Radiation Protection Program.

(1) The hospital commander should designate a medical radiation protection officer (MRPO), usually the senior X-ray technician, to develop and implement a Quality Control and Radiation Protection Program (QC/RPP). The QC/RPP should be designed to meet the requirements of AR 11-9 and Technical Bulletin Medical (TB MED) 521. The MRPO should review, and revise as necessary, the QC/RPP for each site where X-ray systems are used during a deployment. The MRPO should coordinate with the nuclear medical science officer (normally assigned to the corps) to conduct radiation protection surveys on diagnostic X-ray systems prior to their use on human patients.

(2) The MRPO should coordinate for medical maintenance performance verification and where necessary, system calibration prior to using the systems on patients. During extended deployments, a health physics survey of the installed X-ray equipment should be performed in accord with the requirements of TB MED 521. Following return from deployment the X-ray systems should be performance verified, and recalibrated if necessary. In all instances except long-term storage (LTS), the X-ray equipment is subject to annual calibration and performance verification.

(3) The MRPO can request individual radiation dosimeters, if required, from the US Army Aviation Missile Command, US Army Ionizing Radiation Dosimetry Branch (AIRDB), ATTN: AMSAM-TMD-SR-D, Redstone Arsenal, AL 35898-5000, DSN 746-7674/1858 or commercial (206) 876-7674/1858. The requirements for using, handling, processing, and storing individual dosimeters are specified in the AIRDB Dosimetry Customer's Handbook.

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(4) Patients, staff, and personnel in adjacent areas should be afforded the same level of radiation protection established by AR 11-9 and TB MED 521. Operational conditions may prevent including all requirements of AR 11-9 and TB MED 521 in the QC/RPP. The hospital commander must consider the current status of the QC/RPP, and the current operational circumstances, when establishing policies for using X-ray systems during deployments.

c. Maximizing Diagnostic Image Quality. Obtaining diagnostically useful X-ray images under field conditions can be difficult. The source generator of electrical power may be the largest variable in determining image quality, so should be located within the limitations of the phase cables (max 100') and the service cable feeding the ISO shelter (max 50') or tent system (max 100'). Image quality can be improved by ensuring the proficiency of X-ray technicians and verifying the functionality of supporting equipment.

(1) X-ray technicians can maintain their proficiency by spending at least two weeks per year performing X-ray procedures in an active MTF. If X-ray technicians cannot be rotated through medical facilities prior to deployment, consideration should be given to rotating technicians from relatively inactive to more active X-ray facilities during the deployment.

(2) Film cassettes should be periodically checked to ensure they are functional and sensitive. Cassettes should be compared with the cassettes used at an active medical facility prior to deployment. Alternatively, cassettes can be compared against each other after deployment. Cassettes can be checked using the following procedure:

(a) Ensure that each group of cassettes is prepared with the same type of intensifier screen, for example, par, high speed, or super speed, as the case may be. Do not mix the screens within a cassette.

(b) Load each cassette of a same speed group with the appropriate film.

(c) Select a standard source image distance (SID) from the X-ray source to the image receptor, typically 40 to 48". All cassettes tested will be at the same SID and same relative location to the X-ray tube.

(d) Place a container with between 7 and 10 inches of water (a sharps container or bucket) on the X-ray table, or on top of the cassette.

(e) If photodetector exposure termination is available on the X-ray system, select it and prepare to make an exposure of the water filled bucket over the image receptor. Place a lead marker with cassette ID in the area to be X-rayed. It is recommended to use a lead marker and number system to identify each cassette tested.

(f) Expose each cassette through the water while either using a phototimer to terminate the exposure or establish an X-ray technique that produces a gray (not black) image.

(g) Develop the films and determine the average film density in the exposed areas under the water filled bucket. For phototimed exposures, the finished film densities will be very similar.

The image density can be verified with a densitometer. If a cassette shows a consistent lighter than normal pattern, verify the speed of the intensifying screen and if correct, do not use the screens. Order replacement-intensifying screens for all cassettes that are not within 20 percent of the average density. Without the use of a densitometer, remove from use any cassette with images noticeably lighter than the best (darkest) cassette.

(3) Poor quality or unstable electrical power may cause significant variations in an X-ray System's output. Poor or unstable electrical power can diminish image quality and increase the number of X-ray retakes. X-ray systems should be located as close to the electrical generators as practical within the distance limits established by the use of one phase cable set and one distribution cable set to the X-ray equipment being used. Inside tentage, the X-ray system should be directly connected to the distribution box, not to the extension cables that may be used to power the receptacles on the wall. In general, the X-ray system should be powered by a generator that is loaded to about 40 to 50 percent of its rating. A small portable X-ray system that uses about 4000 watts can be powered by a 10,000 watt power source that is preloaded to about 40 to 50 percent of normal maximum rating. A higher power X-ray system, 300 milliamperes or so can use about 45,000 watts during an exposure. Such equipment should be powered by a generator (typically a 100 kilowatt generator set) operating at about 40 to 50 percent of maximum rated power. In rare instances, the X-ray system may be powered by a "Dedicated Generator" if such resources are determined to be the only way of producing a satisfactory or diagnostic X-ray. Unfortunately, the dedicated generator does not lend itself to consistent accuracy and reproducibility.

(4) An inanimate object should be imaged daily to verify general functionality of the X-ray system, film-cassette combination, and film processor and/or procedures. The ideal object for daily imaging would be one that produced image areas ranging from very dark to very light.

d. Protecting Patients. Diagnostic X-rays produced under field conditions may be of diminished quality, particularly when normal quality control requirements cannot be met. Hospital commanders must consider the radiological risks and treatment benefits when establishing policies for using X-ray systems during deployments.

(1) All standard procedures for protecting X-ray patients (gonadal shielding, proper techniques, collimation, and so forth) should be employed.

(2) Portable X-ray systems should not be used for assessing chronic conditions, performing medical screening, or as part of routine physical exams. Portable X-ray systems produce a more variable quality X-ray image when used for dense or large sections of the body, such as the pelvis or abdomen, than fixed general purpose X-ray systems. Patients requiring routine high-quality diagnostic imaging should be referred to a hospital with a general purpose X-ray system supported by an adequate quality control program.

e. Protecting X-ray Technicians. The maximum permissible whole-body exposure for X-ray technicians is 5,000 millirem (mrem) per year, or approximately 100 mrem per week. Personnel likely to receive over 10 percent of the maximum permissible exposure must be issued a personnel dosimeter. Therefore, either the design of X-ray facilities should ensure technicians will not receive over 10 mrem per week, or technicians should be issued a personnel dosimeter. For busy facilities, technicians should use the personal dosimeter.

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(1) Technicians and physicians performing fluoroscopic studies often stand very close to the patient. Facility design alone generally cannot ensure technicians and physicians will receive less than 10 mrem per week during fluoroscopic studies. Technicians and physicians performing fluoroscopic procedures should be issued a personnel dosimeter.

(2) The design of general-purpose X-ray facilities normally ensures X-ray technicians will receive less than 10 mrem per week. A personnel dosimeter is generally not required for these technicians, provided the following conditions can be met:

(a) The primary X-ray beam is not aimed at the technician's position.

(b) The technician is provided adequate shielding from scattered radiation. Shields designed specifically to shield X-ray technicians, typically with lead-glass viewing windows, are ideal. When determined necessary where the X-ray primary beam will directly face into an occupied area, the facility should consider the use of sandbags as a primary radiation shield.

(3) When fixed shielding for X-ray technicians is not possible, the technician's distance from the radiation source and the patient should be maximized. In these situations, technicians should wear protective leaded aprons and use the maximum length of the exposure cord. In addition, these personnel should be issued a personnel dosimeter.

f. Protecting Personnel in Adjacent Areas. X-ray facilities in the field environment should be designed to place such areas out of the mainstream path for both patient and staff. Facilities should be designed to maintain exposures to persons in adjacent areas below 2 mrem per week.

(1) The primary beam from the X-ray system must be shielded from adjacent areas, unless the beam is directed at the ground. When the X-ray beam cannot be directed at the ground, it should be directed at an outside wall. Example of field expedient shields for the primary beam includes a lead protective apron hung behind the vertical image receptor.

(2) An exclusion area of 50 feet for all directions around the X-ray system, or a formal evaluation of the facility design, can ensure personnel in adjacent areas will receive less than 2 mrem per week. Exclusion areas should remain unoccupied whenever the X-ray system is used. The USACHPPM Health Physics Program Manager at DSN 584-3502 can assist in performing formal shielding evaluation.

(3) When neither a 50-foot exclusion area nor a formal review of the facility design is practical, field expedient techniques should be used to protect personnel in adjacent areas. The best technique available to the facility is to use distance as the main protection factor. The physical location of the X-ray system should be at the outside edge or at the end of the facility with the primary beam pointing to unoccupied arrears. Additional protection may include radiation absorbers, such as sandbagged walls for shielding, and maximizing the distance to occupied areas. In general, a single wall of sandbags parallel to the interior wall, 5 feet high will ensure adequate shielding in almost all situations from primary beam X-radiation.

g. Documenting Radiation Exposures.

(1) The AIRDB maintains individual dosimetry records of radiation exposures recorded with personnel dosimeters. These records can be supplemented with administrative dose assignments in accordance with AR 11-9 and with procedures described in DA Pamphlet (Pam) 40-18.

(2) Postdeployment evaluations of radiation exposures may be desirable if exposures in adjacent areas may have exceeded 2 mrem in a week, if exposures to X-ray technicians not wearing personnel dosimeters may have exceeded 10 mrem in a week, or if field expedient shielding methods were used. The USACHPPM Health Physics Program Manager at DSN 584-3502 can assist in calculating possible radiation exposures. The accuracy of these evaluations would depend primarily on the adequacy of records made during the deployment. Records should include a description of the facility (including a diagram), distances between the X-ray machine and potentially exposed individuals, X-ray beam direction, the identity and social security numbers (SSNs) of potentially exposed individuals, a description of any shielding present, the types of activities conducted in adjacent areas, the radiographic technique involved (including milliamperes, time, and kilovolt peak), and the dates and number of X-rays taken.

I-7. Hearing Conservation

a. The DA Pam 40-501 provides the guidance on unit hearing conservation programs.

b. Units should contact the PVNTMED activity of the area medical support activity for identification of noise hazardous equipment, job sites, and exposed personnel. This is to be accomplished by conducting sound level surveys on field equipment (that is, compressors, generators, medical and dental handpieces, field laboratory equipment, and military vehicles). These data are used to identify individuals who will require a fitting for a hearing protective device, medical surveillance, and health education.

c. Personnel identified in this survey are entered in the hearing conservation program and monitored by the medical unit for response to noise exposure and adequacy of hearing-protective devices by the periodic testing of hearing levels. Audiograms are conducted annually, as a minimum.

d. Hearing protectors are issued to all unit personnel. Their use will be required when operating or in proximity to noise hazardous equipment such as (but not limited to) generators, compressors, field laboratory equipment, and tactical vehicles, 2^{1/2} tons and larger. Areas around this equipment should be identified by placing NOISE HAZARDOUS AREA, HEARING PROTECTION REQUIRED signs as directed in the hospital's TSOP.

e. Noise hazardous equipment, such as generators and compressors, should be positioned and sandbagged as directed by PVNTMED personnel or the hospital's TSOP to reduce the noise hazard and noise signature.

I-8. Compressed Gas Cylinders

a. All compressed gas cylinders should be considered full for handling purposes. They should never be dropped or struck by any object. While cylinders are being transported in vehicles or stored in an

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upright position, they should be restrained to prevent them from falling. Cylinders must be protected from dampness, excessive temperatures, and sources of ignition. Smoking is prohibited near cylinders in use as well as near compressed gas storage areas. Valve protection caps must be installed on each cylinder. All compressed gas cylinders should be labeled and tagged with the contents of the container to avoid confusion of what material is in each cylinder. Army Regulation 700-68 provides comprehensive safety rules for handling and storing compressed gases.

b. Oxygen must be tested before use to verify that it meets medical grade oxygen purity standards (TB MED 245 and HQ MEDCOM Supply Management Bulletin 1-94). Also, oxygen should be stored in areas separated from flammable gases and combustible materials by at least 20 feet.

c. Nitrous oxide must be secured to prevent unauthorized access.

d. Gases used in laboratory procedures require caution in handling.

I-9. Flammable, Explosive, or Corrosive Materials

These materials must be kept in approved safety containers and away from any potential source of ignition. Acids used in laboratory procedures should be stored in noncorrosive containers and cabinets designed to hold caustic/corrosive material. Incompatible materials must be stored separately. In general, reactives must be segregated from ignitables; acids must be segregated from caustics; corrosives must be segregated from flammables; and oxidizers should be separated from everything. Most organic reactives must be segregated from inorganic reactive metals.

I-10. Special Equipment for Vision Conservation

Protection of the eyes and face from injury by physical agents, chemical agents, and radiation is vital. Individuals using high-speed medical/dental units, and those working in the laboratory may be exposed to any or all of these hazards. Eye protective devices such as splash goggles, plano cylinder or prescription safety eyewear should be carefully selected, fitted, and used to prevent injuries to the eyes. See DA Pam 40-506 for details on vision safety.

I-11. Radio Frequency Radiation

a. Radio frequency (RF) data and communications sources are integral to fulfilling mission requirements for the CSH (Chapter 3) and TAMMIS (Chapter 5). These sources may require radiation safety control measures. Department of Defense Instruction (DODI) 6055.11, Army Regulation 11-9, TB MED 523, and MEDCOM Regulation 40-42 provide guidance on RF radiation safety programs and standards and electromagnetic interference (EMI) issues with regard to electronic medical equipment in hospitals.

b. Units/personnel should observe the radiation safety guidelines (if applicable) for the specific RF source being used. These procedures will generally be found in the system specific TMs or in Technical

Bulletin (TB) 43-0133. If the necessary information is not readily available, units should contact the radiation safety officer (RSO) or PVNTMED activity of the area medical support activity.

c. MEDCOM Regulation 40-42 also provides guidance regarding prevention of EMI to electronic medical equipment in hospitals. This guidance includes:

(1) Restrict the use of all personal wireless transmitting RF devices, including but not limited to cellular phones, bidirectional pagers, computers and walkie-talkies, in all areas designated as critical care areas. These normally include, but are not limited to, areas such as intensive care units, surgical wards, neonatal wards, and emergency rooms.

(2) Limit the use of wireless RF transmitting devices, including but not limited to cellular phones, bidirectional pagers, personal digital assistants and walkie-talkies, in the emergency room and associated areas. Wireless RF transmitting devices should only be used in these areas when used to render medical treatment and should be used at least 1 meter from any electronic medical equipment.

d. The USACHPPM Radio Frequency Program Manager, DSN 584-3353 or 410-436-3353, may also be contacted for assistance on determining appropriate safety procedures, analysis, investigation of suspected overexposures or problems with EMI and medical equipment.

I-12. Department of Defense Federal Hazard Communication Training Program

Department of Defense Instruction 6050.5 directed the elements of DOD to develop a training program to meet the requirements of the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 Code of Federal Regulation, 1910.1200). The OSHA issued this standard to ensure everyone's right to work in a safe environment. It requires that everyone understand the hazards of the materials they work with and know how to minimize these hazards. It requires supervisors to develop and maintain current listings of all hazardous materials used at a work site and the specific hazards of each material. Material safety data sheets must be maintained at each work location, and personnel should be trained in the hazards of their occupation.

I-13. United States Army Center for Health Promotion and Preventive Medicine

There are PVNTMED assets located within each division and at corps level. These units have subject matter experts in most areas of environmental health, sanitation, industrial hygiene, and health promotion to promote and encourage healthy behaviors. Additionally, the USACHPPM has the mission of looking out for the soldiers' welfare worldwide. The USACHPPM is an excellent source for advice and assistance in areas related to environmental quality, occupational health, rapid health assessments, health promotion, DNBI prevention, and deployment medical surveillance and epidemiology. Any Army official safety representative (for example, unit safety officer) can request assistance from this organization. Potential areas for assistance include, but are not limited to—

- Technical assistance on monitoring the use of ionizing radiation, telephone: DSN 584-3502.

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- Hospital hazardous waste management on-site visits, CONUS/OCONUS, DSN 584-3651.
- Industrial Hygiene Medical Safety Management Program on-site visits, CONUS/OCONUS, DSN 584-2439.
- Pre- and postdeployment health assessments and DNBI surveillance, DSN 584-0471.

The USACHPPM also provides document review services that may be of assistance in evaluating a unit safety, PVNTMED, and field sanitation programs. Requests for on-site visits should be coordinated in advanced with higher headquarters, particularly for OCONUS locations.

I-14. Infection Control

Special precautions must be taken during patient treatment procedures to avoid the transmission of infections. Infection control, to include medical waste disposal, is covered in Appendix J.

APPENDIX J

FIELD WASTE

The accumulation and disposal of waste of all types is a major concern on the modern battlefield. Improper handling and disposal of field waste can adversely impact military operations by leaving an operational footprint and causing health and sanitation problems, to include serving as breeding grounds for rodents and arthropods that cause disease. Further, the accumulation of waste contributes to environmental contamination.

Section I. OVERVIEW**J-1. General**

Army policy is that all solid and hazardous waste will be disposed of in an environmentally acceptable manner consistent with good sanitary engineering principles and the accomplishment of unit mission. While operating OCONUS, either in training or actual contingency operations, the theater commander will determine the applicability of both US and host-country policies. While operating in CONUS, the commander will follow all applicable US laws and regulations.

J-2. Responsibility for Disposal of Waste

a. Depending on the nature and volume of waste created, units generating the waste are responsible for its collection and disposal.

b. Certain types of waste require special handling that may be beyond the capability of the unit or facility. Units generating larger amounts of solid/liquid waste, such as hospitals, may not have the resources or equipment to properly dispose of the waste. In these cases, supporting engineer units should be contacted to provide waste disposal support. Medical planners should address this additional support in the HSS plan and annexes.

J-3. Categories of Waste

Waste can be subdivided into four distinct categories: solid waste, hazardous waste, medical waste, and wastewater. Any military unit can generate solid waste and hazardous waste. Medical waste is only generated by medical elements, such as treatment, research, and laboratory. Supporting engineer and PVNTMED personnel can provide guidance and assistance on the handling, processing, and disposing of waste.

a. Solid Waste. This category includes all waste not specifically classified as medical waste or hazardous waste. It includes such items as—

- Paper and plastic products (which are the most abundant solid waste generated in a field environment).

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- Garbage (generated by dining facilities).
- Scrap material (wood, metal, and so forth).

b. Hazardous Waste. This includes waste that is ignitable, corrosive, reactive, or toxic, especially petroleum, oils, and lubricants (POL), batteries, some chemicals, and some waste pharmaceuticals. Hazardous waste usually requires special handling, transportation, disposal, and documentation, or treatment to render it nonhazardous.

c. Medical Waste. There are two types of medical waste; nonregulated and regulated. Nonregulated medical waste is defined as solid material generated from the direct result of patient diagnosis, treatment, or therapy that requires no further treatment and can be disposed of as general waste. Regulated medical waste (RMW) is defined as medical or laboratory waste that is potentially capable of causing disease in people and may pose a risk to individuals or public health if not handled or treated properly. An example of this type of medical waste includes soiled dressings, bandages, disposable catheters, swabs, used disposable drapes, gowns, masks, and gloves, empty used specimen cups, and gauze or cotton rolls, to include saliva-soaked and blood-tinged gauze.

d. Wastewater. Wastewater is sometimes further classified as “black” water (consisting of feces and urine) and “gray” water (consisting of shower, laundry, and kitchen wastewater). For all practical purposes and from a public health perspective, gray water should be considered sewage and should be treated as such.

Section II. SOLID AND HAZARDOUS WASTE

J-4. General

All military units produce solid and hazardous waste. Control and disposal of these types of waste requires planning and the development of unit SOP. See FM 3-100.4, Appendix C, for additional information and examples of unit environmental SOP.

J-5. Sources of Solid and Hazardous Waste

- a.* The primary sources of solid and hazardous waste are—
- Routine troop support operations.
 - Maintenance and motor pool operations.
 - Administrative and some minor health care facility operations from MTFs.
 - Dining facility operations.
 - Medical treatment facilities.

b. In all of these operations or functions, a major effort must be made to reduce the amounts of waste generated and, thus, to lessen the burden on the disposal system.

J-6. Disposal of Solid and Hazardous Waste

a. Most solid waste is buried or burned by the generating element. It can be transported in organic vehicles to a waste disposal point (sanitary landfill). It is important to remember that vehicles used to transport waste must be properly cleaned and sanitized with a 0.5% chlorine solution (or other comparable disinfectant) before being used for ration or patient transportation operations. During training exercises and real-world operations, supporting engineers are responsible for the construction and operation of landfills. Coordination with the supporting engineers is key to proper landfill construction and maintenance. See FM 21-10 (FM 4.25-10) for more information and construction of garbage pits and grease traps.

b. The actual method of choice for the disposal of solid waste is determined during the predeployment planning phase. The decision should be made during communications with the host nation if possible in order to accommodate, or at least understand any sensitivities of the local population. If not possible (forced entry operations), planners should be careful in determining both the location and type of waste disposal methods.

c. If existing landfills are not available, burial of waste should employ the characteristics typical of landfill operations that include segregation of solid waste by type. Landfill operations will not be conducted in the vicinity of watercourses or in areas of high water tables. Burning of solid waste may be an acceptable alternative.

d. Putrescible waste from dining facilities, while not hazardous or infectious in and of itself, can become a serious aesthetic and health problem, as well as a breeding site for disease-carrying rodents and arthropods. This class of solid waste must be removed and disposed of after every meal. Burial of this type waste should be at least 30 yards (or meters) from the food service facility. Normally, one garbage pit is required per 100 soldiers per day (FM 4-25.12). See FM 21-10 (FM 4.25-10) for information considering the location and construction of garbage pits.

e. Used oil and POL products are classified as hazardous waste. Disposal methods for this waste must comply with federal, state, local, and HN regulations. Military engineer and PVNTMED support elements can advise on required disposal procedures. Refer to Annex L of the Operations Order for more information concerning the disposal of hazardous waste.

Section III. MEDICAL WASTE

J-7. General

a. Medical waste includes all biomedical wastes such as limbs, organs and blood, needles, syringes, pharmaceuticals and any medical associated chemicals such as X-ray fluids. Medical waste in a

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theater of operations will be disposed of either by incineration, other suitable methods or by contract with medical agencies of the host nation. Medical authorities should ensure disposal method(s) do not present any immediate or future danger to soldiers or the local populace. Ashes should be disposed of in an appropriate landfill site.

b. Regulated medical waste is the category of medical waste that requires special handling, treatment, and/or disposal. Classes of RMW are as follows:

(1) *Class 1—Culture stocks and vaccines.* Cultures and stocks of infectious agents and associated biologicals, including cultures from medical and pathological laboratories, discarded live and attenuated vaccines, and culture dishes and devices used to transfer, inoculate, and mix cultures. (All other laboratory waste except Class 2 and Class 3 is considered general waste.)

(2) *Class 2—Pathological waste.* Human pathological waste, including tissues, organs, body parts, extracted human teeth, and body fluids removed during surgery or autopsy and during other medical procedures as well as specimens of body fluids.

(3) *Class 3—Blood and blood products.*

(a) Free-flowing human blood, plasma, serum, and other blood derivatives that are waste (for example, blood in blood bags, blood and/or body drainage in suction containers).

(b) Items such as gauze or bandages, saturated or dripping with human blood, including items produced in dental procedures, such as gauze or cotton rolls saturated or dripping with saliva.

(4) *Class 4 and 7—All used and unused sharps.* Sharps used in animal or patient care or treatment in medical, research, or support laboratories (including hypodermic needles, syringes [with or without the attached needle], Pasteur pipettes, scalpel blades, blood collection tubes and vials, test tubes, needles attached to tubing, and culture dishes [regardless of presence of infectious agents]). Other types of broken or unbroken glassware that were in contact with infectious agents (for example, used slides and cover slips).

(5) *Class 5—Animal waste.* Animal carcasses, body parts, and bedding contaminated or suspected of contamination with infectious agents. Roadkills, euthanized animals, and animals dying of natural causes are not considered Class 5.

(6) *Class 6—Isolation centers for disease control and prevention risk Group IV waste.* Biological waste and discarded materials contaminated with blood, excreta, or secretions from humans or animals isolated to protect others from highly communicable diseases. Disease agents classified in centers for disease control and prevention risk Group IV are considered highly communicable.

J-8. Responsibility for Disposal of Medical Waste

a. The hospital commander is responsible for implementing policies for medical waste management to include—

- Identification.

- Segregation.
- Handling.
- Storage.
- Disposal.
- Transportation.

b. The hospital commander will normally designate a member of his staff to serve as the infectious disease control officer. This officer assists the hospital commander in establishing infectious disease control procedures. Infectious disease control procedures are established to preclude the spread of infection within the hospital and to prevent the spread of infectious disease outside the facility.

c. The PVNTMED advisor is responsible for providing the commander with technical guidance on proper identification, segregation, and handling of medical waste, including RMW, and compliance with bloodborne pathogen regulations.

d. Medical treatment personnel are responsible for the proper identification, segregation, and handling of medical waste generated during patient care.

e. Supply and service section is responsible for the handling, transportation, and disposal of the medical waste.

J-9. Source of Medical Waste

The major sources of medical waste are patient care areas, especially the emergency room or EMT/triage areas, ORs, and ICUs. Medical wards and laboratories are also medical waste generators. The actual amount of medical waste generated is dependent on the intensity and nature of medical operations.

J-10. Handling and Transporting Medical Waste

a. Proper handling is the key to an effective hospital waste program. Segregation of RMW from general waste at the point of generation is a must. Procedures for handling medical waste are as follows:

- Personnel who transport and dispose of RMW must wear a disposable mask, Butyl rubber apron, and gloves.
- Regulated medical waste is collected in double-lined impervious containers lined with leak-resistant bags; otherwise, double plastic bags are used. (The hospital should consider ordering 30-gallon drums to store RMW on site.) The containers are clearly marked as RMW. All bags are sealed after being filled to only two-thirds capacity. The bags are sealed by lapping the gathered open end and binding

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it with tape or a closure device. This ensures that liquid waste cannot leak. A method of segregating RMW from general waste is the use of distinctly colored bags (red) for RMW, if available (AR 40-5).

- Sharps are placed in a rigid, puncture-resistant container clearly marked with the universal biohazard symbol.

NOTE

Needle/syringe clippers are not authorized for use.

- Blood, blood products, and semisolid waste are placed in unbreakable capped or stoppered containers.
- Medical waste is stored in designated areas, protected from the elements and stray animals, rodents, and insects, either secured or under direct physical control.
- Regulated medical waste is removed from the point of generation and is disposed of at least every 24 hours.

b. Medical waste within the hospital is transported in rigid, leakproof containers, marked and used exclusively for transportation purposes. A vehicle used to transport medical waste to disposal sites must not be used to transport rations, clean laundry, or medical supplies, or used for other purposes until after the vehicle has been thoroughly cleaned and sanitized, using a 5 percent chlorine solution (48 ounces of granules of 0.7 calcium hypochlorite in 10 gallons of water).

J-11. Disposal of Medical Waste

The purpose of properly treating and disposing of medical waste is to render it nonpathogenic, unrecognizable, and to make it unusable (sharps). Depending on the quantity and type of waste, command policies, and availability of disposal facilities and engineer support, a variety of options exist. Every effort should be made to use the safest and most complete method of disposing of this waste.

a. Training and Tactical Deployment. During training deployment in CONUS and training/tactical deployment in many OCONUS locations (such as Europe), the HN environmental regulations are such that disposal of medical waste via field expedient methods is not permitted. Furthermore, the quantities and types of medical waste generated during training are relatively limited due to the limited amount of actual patient care. As such, the option of choice is to haul the medical waste, via military vehicle or contract services, to fixed installations (preferably large fixed medical facilities) for treatment and disposal according to command policies. While proper field medical waste techniques are difficult or against regulation to train in the field, it is still important to plan for during operations. The requirements for segregating and handling waste are critical and remain an essential part of training.

b. Steam Sterilization. Some types of medical waste, especially in small quantities, can be rendered nonpathogenic by autoclave (steam sterilization). This technique or system is particularly appropriate for small amounts of waste generated in EMT areas and the laboratory element (for example, contaminated dressings, needles, syringes, cultures, culture plates, pipettes, and blood tubes). To ensure complete disinfection, the steam sterilizer must operate at a minimum of 250 degrees Fahrenheit (121 degrees centigrade), under 15 to 17 pounds of pressure per square inch, for 45 minutes. Two factors must be kept in mind when using the autoclave—the size of the load placed in the chamber and the exposure time. There are a number of different types of autoclaves; therefore, for detailed information on the operation of a specific autoclave, refer to the manufacture's instructions or TM. Never autoclave waste in a sterilizer that is used to prepare sterile packs or instruments for medical uses. Also, some plastics (red bags) and sharps containers may melt during an autoclave cycle, causing uncontained waste to stick to the autoclave. It may be necessary to use autoclave bags that can withstand the physical conditions produced by the sterilizer.

c. Controlled Incineration. Incineration is the method of choice for most types of medical waste, but it must be controlled. Burning medical waste requires incinerators specifically designed for the various types of medical waste. In full operation, the temperatures in the combustion chamber range from 1,400 degrees Fahrenheit to a maximum of 2,000 degrees Fahrenheit. During OCONUS mobilization deployment, the CSH should coordinate with the engineers for an acceptable and efficient incinerator for disposal of medical waste.

d. Disposal by Burying. As a last resort, and with command approval, medical waste can be buried. The burying depth will be below scavenger depth (approximately eight feet). Engineer support is required for construction of the waste disposal site. The waste must be covered immediately with refuse (trash) then soiled to ensure the waste is not accessible to scavenging. All previous options are considered before accepting burial as the final option. All areas used for the burial of medical waste must be marked as such. The grid coordinates of the disposal site must be reported to PVNTMED with details annotated within the EBS conducted on this site for incorporation into the current and future versions of Appendix 2 (ENVIRONMENTAL CONSIDERATIONS) of Annex F (ENGINEER) to the current OPORD. An environmental impact statement for the disposal site will be completed and attached to the EBS. The hospital must record the type and amount of waste buried in that location, this information and the date of closure, must be reported to PVNTMED and through command channels.

Section IV. HUMAN WASTE

J-12. General

a. Correct human waste (feces and urine) disposal is essential to prevent the spread of diseases caused by direct contact, contamination of water supplies, or dissemination by rodents or arthropods. It is even more critical in a hospital environment because patients are more susceptible to diseases transmitted through fecal contact. All human waste must be disposed of in a manner consistent with command policy and good sanitary engineering practices.

b. The handling of storage and disposal of human waste in a way that best supports the mission, protects the environment, and protects human health serves to enhance the overall success of the mission.

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This factor is particularly significant in densely populated areas where basic public health services may be disrupted and standard field sanitation procedures are inadequate. Existing sanitary latrine, sewers, and treatment plants should be used to the maximum extent possible. If such facilities have exceeded their capacity or do not exist, human waste will be disposed of according to the operation and the situation encountered. The preferred method of disposal in order of precedence is sanitary wastewater disposal systems, portable latrines, and slit trenches. Expeditionary sewage collection and disposal will be sited and operated to minimize environmental impacts according to unit field sanitation procedures. If possible, do not conduct open wind burning upwind of populated areas. As a minimum, all slit trenches will be covered with not less than 24 inches of earth fill (12 inches of compacted fill level to the site. A sign showing the date of closure and the words, "CLOSED LATRINE" will be posted at each closed site). The location and status of human waste disposal facilities will be annotated on the current EBS for that location/site.

J-13. Responsibility for Disposal of Human Waste

The hospital commander is responsible to provide human waste disposal facilities. This may require the supporting engineer element to assist in the construction of latrine facilities.

a. Field Medical Treatment Facilities. In some locations, construction and use of actual field expedient waste facilities may be prohibited. In this case, one option is to obtain engineer support. The option of choice is to establish the hospital in an area with permanent or semipermanent latrine facilities already constructed and connected to an established sanitary sewer system. However, this may only be possible in areas designated as deployment sites. In many instances, it may be possible for hospitals to contract waste removal or latrine facilities through an HN support contract. Procedures will vary depending on the command policy and local (HN) agreements, but waste will still have to be separated into types by the unit. The use of chemical or self-contained toilets is another option instead of constructing field expedient latrines. Sufficient latrines are required to accommodate 4 percent of the males and 6 percent of the females at one time. In addition, urinals should be provided to accommodate 2 percent of the male population. In all types of arrangements, the hospital field sanitation team and PVNTMED personnel are responsible for monitoring the achievement of field sanitation requirements (FM 4-25.12).

b. Field Expedient Facilities.

(1) *Type selection.*

(a) The type of field latrine selected for a given situation depends on a variety of factors, such as—

- Number of personnel (staff and patients).
- Duration of stay at the site.
- Geological and climatic conditions.

(b) The hospital commander should consider all types of latrines and only use "burnout latrines" as a last resort due to the hazards associated with the burning of human waste and the logistical

requirements (construction materials and fuel). Supporting PVNTMED personnel and the hospital's field sanitation team can assist the commander in determining the appropriate type of latrines, their locations, and size. Consultation with supporting PVNTMED personnel should be conducted prior to the operation to determine the most appropriate latrines for the operation.

(c) Specific guidance on selection criteria is provided in FMs 21-10 and 4-25.12.

(2) *Location.* Latrines should be located in a manner that prevents the contamination of food and water. Hospital latrines are located at least 100 yards (90 meters) downwind (prevailing wind) from the hospital food service facility, at least 33 yards (30 meters) from any ground water source, and at least 33 yards/30 meters from the hospital faculty and living areas but within reasonable distance for easy access (FM 4-25.12). For the CSH, multiple latrine sites are required due to the size of hospital layout and distances between patient care, administrative, and sleeping areas.

(3) *Maintenance.* Sanitation and maintenance of the hospital's latrine facilities are critical to prevent disease transmission. Handwashing facilities must be placed at each latrine.

c. *Closing and Marking.* Closing and marking of latrines will be in accordance with command policy and good field sanitation practice in accordance with FMs 21-10 and 4-25.12. The location and status of human waste disposal facilities will be annotated on the current EBS for that location/site.

J-14. Patient Facilities

a. Ambulatory patients will use the same latrines as the staff. The number of latrines established will be based on both the number of staff and the anticipated patient load. However, male and female latrines are required. Latrines need to be close enough to the ward areas for convenience of access while maintaining distances from dining facilities, water sources, and the like.

b. Nonambulatory patients require the use of bedpans and urinals. Disposal (of feces and urine) and sanitation of bedpans and urinals for the nonambulatory patient is a major concern. One or more of the hospital latrines should be designated for bedpans and urinals, to include their cleaning and sanitizing. The hospital should consult with PVNTMED personnel on the latest and best method for cleaning and sanitation of bedpans and urinals. An alternative consideration is the use of plastic bedpan liners. If plastic liners are used, they will reduce the requirement for cleaning and sanitizing the bedpan. The plastic linings will then be managed as solid waste. The use of plastic linings will increase the amount of solid waste generated; therefore, planning for solid waste disposal must be adjusted accordingly.

Section V. WASTEWATER

J-15. General

Water usage generally results in the production of wastewater that requires disposal. Depending on the source, wastewater may contain suspended solids and particulate matter, organic material, grease, dissolved

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salts, biological, pathological, and pathogenic organisms, and toxic elements. Just the volume of wastewater alone, without consideration of the various contaminants, can cause substantial operational and health-related issues if not properly managed and disposed.

J-16. Requirement for Disposal

a. All wastewater and waterborne waste generated in a field environment must be collected and disposed of in a manner that—

- Protects water resources from contamination.
- Preserves public health while minimizing mission impairment or adversely impacting on the readiness of the force.
- Protects the local environment from adverse harm.
- Complies with applicable environmental law.

b. When operating OCONUS, or in an actual contingency operation, units may have to comply with applicable HN laws and procedures. Commanders should consult their servicing Staff Judge Advocate for specific legal advice about environmental legal requirements. Irrespective of laws and regulations, proper disposal of wastewater is essential to protect the health of the force by precluding contamination of water supplies and development of rodent and arthropod breeding sites.

J-17. Responsibility for Disposal

Units generating wastewater in the field are responsible for their own wastewater collection and disposal. Large volume wastewater generators, such as hospitals, may require engineer support. Theater combat engineers will provide support during OCONUS deployments or contingency operations. In any case, the hospital commander has the final responsibility for coordinating disposal of his unit's wastewater.

J-18. Wastewater Sources and Collection

Hospitals generate a significant volume of wastewater corresponding to the volume of water consumed. The hospital should plan for all patient and staff water, and all laundry water requirements to become wastewater (see Appendix H). Support operations of the hospitals, such as laundry, shower, and food service operations, generate the largest volumes of wastewater. While this type of wastewater is not unique to a hospital, it contributes to an enormous volume requiring collection and disposal. However, wastewater generated from direct patient care functions is unique to the hospitals and may be contaminated with blood, other body fluids, particulate matter, and potentially infectious organisms. In addition to the quantity of wastewater, an added problem is the multiplicity of sources within the hospital that contribute to the complexity of collection.

a. Field Sinks. Field sinks are a primary source of wastewater from staff handwashing, patient hygiene, instrument cleaning, and the like. This liquid waste is generated intermittently and the volume is highly variable depending on the functional area and patient workload. The sinks can operate with the drain line placed in an empty 5-gallon water can. The 5-gallon water can must be periodically emptied into a disposal system.

NOTE

Extreme care must be taken to ensure that 5-gallon cans used for wastewater are not mistaken or confused with 5-gallon cans used for potable water; clear labeling is critically essential.

If wastewater collection cans or the DEPMEDS wastewater management set are not used, the sinks will drain to the immediate exterior of the hospital shelter, resulting in an unacceptable pooling of wastewater throughout the hospital area.

b. Medical Treatment Facility Sources. Sources of wastewater other than the sinks are limited and will generate relatively small volumes of waste liquids. In most cases, this wastewater can be collected and discharged into a nearby sink. An exception may be the water used for facility and major equipment sanitation; for example, wastewater from washing OR tables, OR floors, litters, ambulances, and other medical materiel.

c. Field Showers.

(1) While not an actual part of the hospital system, quartermaster field showers may collocate with or be near the hospital to support both patient and staff. These showers may also support personnel of other units within the area. The quartermaster personnel operating field showers are responsible for wastewater collection and disposal.

(2) If quartermaster support is not available, hospital personnel must provide their own showers (FMs 21-10 and 4-25.12). The hospital is responsible for the collection and disposal of this wastewater.

d. Field Laundries. The field laundry is one of the largest generators of wastewater. Field laundries may be collocated with or near hospitals to provide support and can present an inordinate wastewater disposal problem. Like the showers, quartermaster personnel operating laundries are responsible for wastewater collection and disposal. Because of the large volume of water required for laundry operations, the facility may have to be located away from a hospital and closer to a water source. In effect, this location would reduce or remove what may be a wastewater disposal problem from the immediate area of the hospital. (Preventive medicine personnel must ensure that laundry personnel are trained in properly implementing procedures for handling contaminated linens.)

e. Field Kitchen. Army field kitchens are also significant sources of wastewater. In addition to the volume, the greases and particulate matter in wastewater from a field kitchen must be dealt with in a

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much more deliberate manner. For instance, grease traps must be constructed to remove food particles and grease from the kitchen wastewater before disposal. Information for the construction and operation of the filter and baffle grease traps is provided in FM 21-10 and FM 4-25.12. Also, hospital commanders may obtain technical assistance from the supporting PVNTMED unit.

J-19. Disposal of Wastewater

- a. In disposing of wastewater, a number of factors should be considered. These include—
 - Volume and characteristics of the wastewater.
 - Operational considerations (for example, duration of stay in a given location and the intensity of combat operations).
 - Geological conditions (for example, type of terrain and soil characteristics, or depth of the water table).
 - Climatic conditions.
 - Availability of engineer support.
 - Accessibility of established sewage collection, treatment, and disposal systems.
 - Applicability of command environmental programs.
- b. In light of the above factors, there are a number of wastewater disposal alternatives that a hospital commander may select. These include—
 - Connecting to an established sanitary sewer system.
 - Collecting and holding wastewater for engineer or HN agency removal to a fixed treatment facility.
 - An engineer-constructed semipermanent wastewater collection and disposal system.
- c. In many OCONUS noncombat operations, especially in the more developed countries, use of existing installation disposal facilities should be the method of choice. Even in some contingency operations, preplanned siting of hospitals can take advantage of preestablished connections to the existing sewer system. Coordinate with the local waste disposal facility prior to connecting to the sewer system or dumping waste into the system to ensure the facility can handle the extra waste and for compliance with environmental laws. Assistance from supporting engineers is required to establish the necessary connections and access to the sewer system. However, grease traps or filters may still have to be used in some areas, such as the dining facility's wastewater stream. Traps and filters will be required to remove grease and particulate matter that would adversely affect the operation of the wastewater pumps.

d. If use of a HN sewer is possible, but direct connection is not readily available, an alternate approach is to consolidate and collect wastewater in containers for eventual removal to a sewage treatment plant or a sanitary sewer access by supporting engineers or HN agency. As these storage containers are not part of the hospital's TOE and wastewater tank trucks and pumping equipment are not standard engineer equipment, this option requires extensive prior planning and coordination.

e. All AMEDD personnel are required to know how to construct and operate field expedient waste facilities. For the hospital, some engineer support in the form of excavation equipment is almost always required. This requirement will be due, in part, to the large volumes of wastewater generated by the hospital and its associated facilities (kitchen, shower, and laundry). Engineer support must be coordinated and included in the site preparation planning.

f. Traditional field expedient methods of wastewater disposal consist of soakage pits, soakage trenches, and/or evaporation beds. The effectiveness of these methods depends on the geological conditions and the climate. While these disposal devices, especially soakage pits, are generally constructed for small volumes of wastewater, with proper design and operation they can be effective for larger volumes. Because these methods result in final disposal, it is necessary to remove grease, particulate matter, and other such organic material that could reduce the effectiveness of the process. Guidance on designs and construction of these devices is available in FMs 21-10 and 4-25.12 and from supporting engineer and PVNTMED personnel.

g. In arctic environments, or when geological or climatic conditions are to such extreme that soakage or evaporation is not possible, the only alternative may be to collect the wastewater in containers and coordinate removal with Army engineers, or use HN operators.

APPENDIX K

NUTRITION CARE OPERATIONS**K-1. Mission**

a. The nutrition care section provides services as part of the Army deployable hospital systems. This section is responsible for providing hospital nutrition care services (meal preparation and service to patients and staff, dietetic planning, medical nutrition therapy, patient education, advising the commander on health and nutrition, and the theater health promotion training program).

b. In stability operations and support operations—

- Contract food service support may be procured for the deployed force. When the contract includes feeding the hospital staff and patients, only one dietitian and one or two nutrition care specialists, may be deployed. However, if the mission requires support to a large population, the full nutrition care section may be deployed. Regardless of the number of personnel deployed, the nutrition care personnel are responsible for ensuring that hospital nutrition care services are provided (dietetic planning, patient education, advising the commander on health and nutrition, and the theater health promotion training program). They are also responsible for ensuring that the correct patient diets and nourishments are provided by the contractor at the right times. To ensure that patient needs are met, a process is developed (with the contractor, the nutrition care section, and nursing services working together) for ordering and delivering patient meals and nourishments.

- Nutrition care services may involve feeding a healthy population or working with a HN malnourished population. Nutrition care services may be provided directly to the HN population through nutrition assessment, therapeutic feeding, and population-based feeding programs. Indirect nutrition care assistance includes serving as a consultant to the HN medical education system in the development of nutrition programs for the HN population.

K-2. Deployment Actions

a. The nutrition care section must maintain the readiness of all section equipment and supplies for deployments. The section must continually train in preparation for deployments. Training may be conducted in the section, in a classroom, or during field training exercises. The key is to have all personnel trained to proficiency in their specialties and in their common soldiering tasks. Professional Officer Filler System (PROFIS) personnel must be included in the section training activities. Even if the PROFIS personnel cannot actively participate in the section training at the installation, they must be provided copies of all section-training schedules, lesson plans, outlines, references, and other pertinent training material to ensure that they are prepared to perform their duties in the section.

b. During the predeployment phase, the nutrition care section staff must ensure that they are prepared for the mission. Figure K-1 provides a checklist to assist the section's staff in planning and coordinating their predeployment actions.

c. During deployment, the nutrition care section provides staff and patient feeding activities or ensures that feeding is accomplished as required by the contractor. They ensure that food and medical diet supplements are requisitioned, received, stored, and prepared in a sanitary manner. They provide nutrition

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assessment and appropriate medical nutrition therapy to hospitalized patients, and health promotion education programs for supported organizations, as well as for hospital staff and patients. They also serve as consultants to the command on nutrition issues.

ACTIONS REQUIRED	COMPLETED
Receive mission requirements from the hospital commander.	
Ensure staff members are qualified at the skill levels needed.	
Conduct patient play scenarios with nutrition screening and assessment, modified diet preparation, and patient food delivery and service.	
Update the section SOPs.	
Ensure all equipment is operable and repair parts are on hand.	
Rehearse ARTEP task steps and performance measures.	
Train personnel using individual task list.	
Rehearse movement procedures for nutrition care section for deployment.	
Coordinate nutrition care operations/support with the following:	
PROFIS Dietitian	
Company Commander and First Sergeant	
Hospital Commander and hospital Layout Staking Team	
Supply Officer/Supply Sergeant	
Training NCO	
Publications NCO	
Movement Control Officer	
Motor Pool Sergeant	
Chief Nurse and Wardmaster	
Supporting Class I Activity	

Figure K-1. Nutrition care section preparation checklist.

d. Upon redeployment the section cleans, repairs, or requests replacement items and repair parts for unserviceable equipment, obtains new stocks of expendable supplies, and stores supplies and equipment for the next deployment. They continue to provide the required nutrition and health promotion education programs, as directed.

K-3. Administrative Procedures

a. The nutrition care section will establish a reference library for the section of all essential publications and blank forms. The section is authorized a “Nutrition Care Book Set” that must be kept up to date. The set issued to the section may not have current editions of publications. Therefore, it is critical that new

and revised publications be obtained and placed in the set, as they are available (see DA Pam 25-30 and references in this publication). Publications are available at website <https://akocomm.us.army.mil/usapa/>.

b. The section develops and updates, as necessary, SOPs. Several SOPs may be needed to ensure that personnel have guidance on how the section will conduct operations. Nutrition care section SOPs describe how the section provides support. They should describe any special supply requirements, (such as procedures for securing subsistence, supplies, funds, and equipment).

c. Establish and maintain records and logs that reflect unit activities such as, records of training; equipment and maintenance; ration accounting; and patient meals served.

d. Prepare and submit daily reports as directed or in accordance with the command SOP.

e. Prepare after action reports on the deployment/training exercise.

K-4. Organic Personnel Requirements

Each unit has a TOE that provides the personnel requirements. It is important that the chief and noncommissioned officer in charge (NCOIC) work together to identify personnel shortages and request fills in anticipation of short notice deployments. Some personnel may be PROFIS to your unit. The chief and NCOIC must ensure that the PROFIS roster for their section is current. Any section positions, including PROFIS, not filled must be reported to the chief, administrative services for replacements.

K-5. Personnel Task Organization

a. The CSH (EAC) nutrition care section is not staffed to operate split-based.

b. The CSH (Corps) 248-bed has two nutrition care sections with corresponding chiefs and NCOICs. When operating split-based the two sections are organized on the TOE appropriately. When operating together the sections will combine and task organize according to the number of personnel and rank to perform the mission.

K-6. Staff Responsibilities

a. The dietitian—

- Formulates policies, develops procedures, and directs and supervises the operation of nutrition care services and the provision of comprehensive nutrition care programs in the deployable hospital.

- Manages medical food preparation and service systems.

- Coordinates and ensures the procurement and receipt of safe, wholesome food items/rations for patients and staff.

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- Provides nutrition health promotion programs for the military community and develops and directs nutrition education or dietary intervention programs for the military.
 - Assists the physician with patient nutritional assessment and therapeutic dietary intervention.
 - Serves as a consultant at all levels of nutrition related health and performance issues, and medical food service operation.
 - Develops, implements, and directs nutrition and medical food service education programs for nutrition care specialists and other medical personnel.
- b.* The nutrition care specialist—
- Performs clinical dietetic functions in the dietary management and treatment of patients and staff.
 - Assists in the nutritional assessment and screening of individual patients.
 - Assists in the health promotion program activities.
 - Prepares and serves modified and regular food items in the management of the nutritional needs of individuals (across the life span and a diversity of people, cultures, and religions in support of the mission), under the supervision of a dietitian or senior NCO.
- c.* For detailed information on the qualifications and responsibilities of the dietitian and nutrition care specialist see DA Pam 611-21.

K-7. Additional Personnel Requirements

The hospital commander is responsible for providing military personnel for support duties in the nutrition care section. Based on the mission, additional personnel support will be required for sanitation duties and patient food delivery. It is essential that representatives from the nutrition care sections be involved in the initial planning stage of all deployments to ensure nutrition care section requirements are included. The number of personnel needed for support duties will be based on the mission. The soldiers assigned for support duties may be unfamiliar with food service sanitation principles and patient food delivery support; therefore, extensive supervision is required. In operations where civilian contracted dining facility attendants are available, the chief and NCOIC will provide the contracting representative with the number of attendants required, a clear statement of work, and shift schedules. Interpreter support and translation of work instructions may be required for the contracted attendants.

K-8. Additional Duties

Based on the unit's mission, nutrition care section personnel may have additional duties that interfere with or disrupt patient feeding requirements. The chief and NCOIC must accurately communicate the section's

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nutrition care workload to the hospital commander to ensure that the nutrition care section can accomplish its primary mission of feeding the staff and patients. When additional duties interfere with or disrupt patient feeding, it must be communicated to the hospital commander.

K-9. Equipment

a. The hospital TOE lists the authorized nutrition care section equipment. The hospital TOE lists the nomenclatures and quantities of the nutrition care section's equipment. This appendix only discusses the major line items. Common items that are also found in other sections of the CSH such as tentage, communication equipment, and vehicles are not described in this appendix. Regardless of the type of equipment, every piece should have a corresponding TM or manufacturer's instructions that describe its operation, user maintenance, and support maintenance. The TM also lists repair parts and special tools for each item of equipment. The nutrition care section should maintain and deploy with all equipment TMs. All nutrition care section personnel must be familiar with the TMs to ensure that all equipment is maintained and operated properly. The TMs are critical references for training personnel on use and maintenance of the equipment.

b. Each nutrition care section is assigned one 150 cubic foot refrigerator. Depending on the ration delivery schedule, the 150 cubic foot refrigerator may not have enough storage space for all perishable rations. To ensure sufficient refrigeration space is available, the nutrition care chief or NCOIC should request the issue of an 8 x 8 x 20 foot refrigerated container. When a standard 8 x 8 x 20 refrigerated container is not available, a request for contract should be submitted to obtain one, if funds are available.

K-10. Normal Nutrition

a. Normal nutrition and assessment are addressed in the American Dietetic Association's (ADA) *Manual of Clinical Dietetics*, hereafter referred to as the ADA Manual. It is not the intent of this appendix to repeat any of the information from the ADA Manual. This appendix provides other sources of information that enhances the application of the ADA Manual procedures for use in a field setting with limited types of food items available to prepare patient meals.

b. For military dietary reference intakes (MDRIs) see AR 40-25. The MDRI is intended for healthy and fit soldiers performing their mission. The MDRIs are provided in the currently fielded operational rations. Consuming the daily ration provides soldiers with essential calories, vitamins, and minerals.

K-11. Nutrition and Disease

The medical nutrition therapy for specific conditions and diagnoses are defined in the ADA Manual. This publication provides dietetic modifications, related physiology, examples of food selection, and adequacy of each therapy.

a. Diet Orders. The most common diet orders on a deployment are regular, high-calorie—high-protein, clear liquid, and full/blenderized liquid. Use available rations and medical diet supplements

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to prepare other therapeutic diets listed in the ADA Manual. Humanitarian assistance deployments will be in support of civilians (ages from infants to the very old) for whom a wide variety of dietetic needs will be required. Thus, health care personnel must be prepared to respond to these complex patient needs. Even in war, nutrition care personnel may be required to respond to situations where the very young and very old require support.

b. Disease and Health Risk. Considering worldwide deployments, it is important to understand the diseases and health risks inherent to each country. The dietary habits of the culture impact on humanitarian support missions. When contracting agents hire local civilians to work in the food service facility, there may be additional health risk to the supported population. Preventive medicine personnel should have detailed reports on endemic/epidemic diseases and possibly dietary habits of local civilians in the deployment area. Invaluable information on diseases, injuries, and nutritional requirements in areas of deployment can be obtained from—

- United States Armed Forces Medical Intelligence Center. Website: <http://mic.afmic.detrick.army.mil/>.
- United States Army Research Institute of Environmental Medicine (USARIEM). Website: <http://www.usariem.army.mil/>.
- United States Army Medical Research Institute of Infectious Diseases (USAMRIID). Website: <http://www.usamriid.army.mil/>.
- United States Army Center for Health Promotion and Preventive Medicine (USACHPPM). Website: <http://chppm-www.apgea.army.mil/>.
- World Health Organization (WHO). Website: <http://www.who.int/en/>.
- The Centers for Disease Control and Prevention (CDC). Website: <http://www.cdc.gov>.
- Center for Army Lessons Learned (CALL). Website: <http://call.army.mil/>.

K-12. Nutrition for Military Operations

a. Nutrition Guidance. The USARIEM publishes technical notes that are valued references for nutrition in military operations. The technical notes are periodically updated with new information on nutritional information. Example: Technical notes on “Nutritional Guidance for Military Operations in Temperate and Extreme Environments” may be obtained from USARIEM (see website address above).

b. Military Rations. The rations most often used by deployable hospitals are described below. Other available military rations are listed in NATICK PAM 30-25.

- *Unitized group ration.* Unitized group rations are designed to simplify and streamline the process of providing the highest quality meals in the field. They integrate modules of H&S (formerly

T-Rations) and A-Rations with quick-prepared, user-friendly brand name commercial products. The UGR is used by unit food service facilities to sustain groups of personnel during worldwide operations. Refrigeration is required with UGR-A-Rations, but not with the UGR-H&S. Menus and recipes are included with each module. Each module provides 50 complete meals. The UGR contains supplements of milk, bread, and cold cereal, and provides an average of 1450 kilocalories (commonly referred to as calories). For additional information on preparing regular diets, refer to FM 10-23.

- *Medical diet supplement to the unitized group ration.* The medical diet supplement list is used in combination with the UGR to prepare modified patient diets. See Appendix M for a list of medical diet supplements to support 50 patients for five days. The medical diet supplements can be combined with the UGR to meet the requirements for high-calorie—high-protein, blenderized liquid, full liquid, and clear liquid diets. The purchase and resupply of these items must be coordinated for during the hospital’s predeployment phase.

- *Meal, ready-to-eat, individual.* The individual MRE is a packaged meal designed for issue, either in individual meals or in multiples of three meals for a complete ration. The components are packaged in flexible envelopes with flameless ration heaters. Each meal provides an average of 1250 kilocalories. There are 24 MRE menus of which four are vegetarian menus. Each box of 12 MRE has two vegetarian menu meals. See Appendix L for a list of medical diet supplements to support 50 patients for five days. As with the UGRs, the medical diet supplements can be combined with the MRE to meet the requirements for high-calorie—high-protein, blenderized liquid, full liquid, and clear liquid diets.

c. *Nutrition Advice for Field Feeding.* The key issues in field feeding are: dehydration, inadequate energy and carbohydrate intake and gastrointestinal complaints. Even an individual that is mildly dehydrated (body water losses amounting to as little as two percent of body weight) will have impaired performance, reduced appetite, and sluggishness. To prevent diarrhea and constipation, advise soldiers to hydrate, choose high-fiber foods, eat wholesome foods maintained in sanitary conditions, and avoid eating or drinking locally produced foods unless approved by veterinary personnel. Stress the value of consuming military rations; they are designed to provide essential food elements. See Figure K-2 for medical field feeding positives and negatives.

POSITIVES	NEGATIVES
DO accentuate the positive aspects of the ration; food is a tactical weapon. It maintains mental and physical performance. Stress the need to consume the full ration.	DON'T assume that a ration issued is a ration fully consumed.
DO emphasize water discipline.	DON'T allow soldiers to use field exercises or deployments as weight-loss programs.
DO provide group/hot meals whenever possible; soldiers tend to eat more when eating “socially.”	DON'T allow consumption of foods locally procured unless approved by food inspection officer.
DO schedule meal times when possible, even when individual operational rations are the planned meal.	DON'T encourage less nutritious food to become a replacement for more nutritious rations.
DO watch to see what the soldiers are eating.	DON'T take nutritional supplements instead of eating meals.
DO encourage consumption of the fortified ration components.	DON'T add sugar-sweetened drink mixes or flavorings directly to a canteen, camel back, or bulk water storage containers.

Figure K-2. Medical field feeding positives and negatives.

d. Nutrition Advice Concerning Supplements. The military rations (with the exception of special purpose rations) are designed to meet soldier's nutritional needs. However, many soldiers are looking for that edge to improve their performance; for guidance on nutrition supplements see Appendix L.

NOTE

The use of over-the-counter dietary supplements without counseling may cause undesired effects. Products marked for performance enhancement and weight loss contain stimulants that may result in adverse events to include dehydration, dizziness, palpitations, high blood pressure, stroke and/or heart attack. Furthermore, exercise, dehydration, caffeine, and some medications (to include over-the-counter medications) used in conjunction with these products will increase the risk of these adverse side effects as well as the severity.

e. Nutrition Advice for Military Operations in a Hot Environment. The nutritional concerns in hot environments include: dehydration, inadequate food intake, and waterborne and foodborne illnesses. Most individuals' appetite may be suppressed during their first eight days of exposure to a hot environment. To maintain adequate sodium or salt intake, individuals should eat at least 2 meals a day. To prevent dehydration individuals should follow the water consumption rates as described in FM 4-25.10. See Figure K-3 for hot weather hydration and nutrition positives and negatives.

POSITIVES

- DO** coordinate drinking and work/rest cycles.
- DO** maintain and enforce routine water and food discipline.
- DO** provide adequate quantities of potable, palatable water.
- DO** instruct soldiers to monitor the color and relative volume of their urine to check for dehydration.
- DO** monitor weight loss if possible.
- DO** eat slightly more food than usually eaten in garrison.
- DO** encourage consumption of at least two meals per day to replace the salt lost in sweat.
- DO** encourage consumption of complex carbohydrate foods and beverages.
- DO** establish specific meal times and have soldiers continue to consume snack foods throughout the day as time permits.

NEGATIVES

- DON'T** allow soldiers to become dehydrated.
- DON'T** eat foods that are salty or high in protein if water is not available.
- DON'T** use the deployment to a hot environment as an opportunity to start a diet.
- DON'T** skip meals.
- DON'T** consume unsanitary (untreated) ice.
- DON'T** eat uncooked or unpeeled fresh fruits and vegetables that have not been sanitized during operations in developing countries.

Figure K-3. Hot weather hydration and nutrition positives and negatives.

f. *Nutrition Advice for Military Operations in a Cold Environment.* Key nutritional concerns in a cold environment include: hypothermia, dehydration, and high-energy food requirements. Individual caloric needs may increase by as much as 25 to 50 percent during cold weather operations; calories produce heat and fuel muscular activity. See Figure K-4 for cold weather nutrition positives and negatives.

POSITIVES	NEGATIVES
DO eat 10 to 40 percent more calories than usually eaten in garrison.	DON'T eat snow or ice for moisture.
DO heat food and beverages at every opportunity prior to eating.	DON'T adopt bizarre dietary habits (such as eating only meat and butter) just because of being in the cold.
DO drink more than thirst dictates.	DON'T take multivitamin tablets to "ward off cold stress."
DO eat snacks between meals and before going to sleep.	DON'T eat food cold because of being too busy to eat it when it's hot or too busy to stop and heat MRE food items.
	DON'T use field-training exercises in cold weather as an opportunity to lose weight.
	DON'T consume alcohol to "ward off" cold.

Figure K-4. Cold weather nutrition positives and negatives.

g. *Nutrition Advice for Military Operations in a High-Altitude Environment.* Nutritional concerns in high-altitude operations include weight loss, low-carbohydrate intake, dehydration, and gastrointestinal complaints. The cold temperatures combined with the physical demands of activities over rugged terrain increase energy expenditures to as much as 6000 kilocalories per day. Acute mountain sickness (AMS) decreases the appetite; a high-carbohydrate diet may be better tolerated by individuals with AMS. High-altitudes increase dehydration. See Figure K-5 for high-altitude nutrition positives and negatives.

POSITIVES	NEGATIVES
DO monitor weight loss if possible.	DON'T allow soldiers to use a mountain exercise as an opportunity to lose weight.
DO emphasize a high-carbohydrate diet, preferably complex carbohydrates.	DON'T skip meals.
DO serve at least one hot meal per day.	DON'T fill up on high-fat foods.
DO discourage high-fat snack items.	DON'T force food when nauseous or vomiting.
DO encourage consumption of portions of all ration components.	DON'T drink unpurified water or melted snow.
DO schedule and enforce drinking, making sure soldiers drink at least 4 to 6 quarts of beverages per day.	DON'T restrict water intake in order to "save it for later" or avoid having to urinate.
DO provide a variety of noncaffeinated beverages.	
DO monitor the color and volume of urine to check for dehydration.	
DO discourage alcohol consumption.	

Figure K-5. High-altitude nutrition positives and negatives.

K-13. The Clinical Dietetics Process

The clinical dietetics process is the systematic process of providing nutritional care to patients. The process begins with the patient being admitted to the hospital and ends when the patient is discharged as outlined below—

- The patient is admitted to hospital, a diet order is written, and the ward diet roster is updated.
- Nutrition care personnel complete the patient nutrition screening within 24 hours; document in medical record.
- Initiate medical nutrition therapy protocol based on nutrition screening.
- Interview patient for food preferences and tolerances.
- Create menu and give to patient tray service personnel.
- Document nourishments and forced fluids requirements.
- Deliver meals and nourishments to patients.
- Monitor changes to diet order.
- Conduct daily follow-ups on high/medium risk patients and on all patients every 5 to 7 days of hospitalization, patient load permitting.

a. Clinical Dietetics Documentation. The form needed for the clinical dietetics process is the Ward Diet Roster, DA Form 1829 (see DA Pam 25-30). See Figure K-6 for a sample nutrition risk factor criteria. See Figure K-7 for a sample nutrition screening chart. See Figure K-8 for a sample patient food preference and tolerance checklist. During humanitarian assistance situations, refer to the references in this manual for appropriate references on screening and nutrition therapy.

HIGH RISK	MODERATE RISK
<p>Systems/Disease States:</p> <p>BATTLEFIELD INJURIES/DISEASES— Gunshot wounds to the abdomen; Fracture of Head, Neck, or Jaw; Closed Head Injury; Multiple Trauma; Respiratory Failure (on Ventilator); Bowel Obstruction; Sepsis; Malaria; Anthrax; Dengue.</p> <p>STABILITY OPERATIONS AND SUPPORT OPERATIONS— Acquired Immune Deficiency Syndrome/Human Immunodeficiency Virus; Anorexia/Bulimia; Cancer; Colitis; Chronic Obstructive Pulmonary Disease; Crohn’s Disease; Decubitus Ulcer; Diabetes (New or Uncontrolled); Diverticulitis; Dysphagia; Esophageal Stricture; Gastric Bypass; Gastrointestinal Bleed; Inflammatory Bowel Disease; Leforte (Wired Jaw); Malignant Hypertension (HTN) (HTN Crisis or Uncontrolled HTN); Non-healing Wound; Pancreatitis; Pericarditis; Pulmonary Edema; Renal Failure.</p>	<p>Systems/Disease States:</p> <p>Anemia; Ascites; Congestive Heart Failure; Dehydration; Peptic Ulcer Disease; Sigmoidectomy</p>
<p>Weight History:</p> <p>10 percent weight loss in one month</p>	<p>Weight History:</p> <p>5 percent weight loss in 1 month</p>
<p>Laboratory Values:</p> <p>Albumin 3.0 grams (g)/deciliter (dl) or less</p>	<p>Laboratory Values:</p> <p>Albumin 3.1–3.5 g/dl</p>
<p>Age:</p> <p>75+ years <12 years</p>	<p>Age:</p> <p>65+ years</p>
<p>Feeding Modalities:</p> <p>Parenteral Nutrition Tube Feeding Nothing by mouth (NPO) and/or Clear Liquids > 3 days By mouth (PO) Intake Inadequate</p>	<p>Feeding Modalities:</p> <p>Transitional Feedings (stable) NPO for 3 days PO Intake Inadequate</p>
<p>Procedures:</p> <p>Major Surgeries</p>	<p>Procedures:</p> <p>Rehabilitation</p>

Figure K-6. Sample nutrition risk factor criteria.

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SUBJECTIVE:						
Weight Change <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, how much? _____ If Yes, in what time period? _____		Nausea	Vomiting	Diarrhea	Appetite Change <input type="checkbox"/> Yes <input type="checkbox"/> No	
Chewing Difficulty?		Swallowing Difficulty?				
Vitamin/Mineral Supplement <input type="checkbox"/> Yes <input type="checkbox"/> No Specify: _____				Food Allergies		
Herbals/Other Dietary Supplements <input type="checkbox"/> Yes <input type="checkbox"/> No Specify: _____						
Following a special diet?						
Typical eating pattern?						
OBJECTIVE:						
Age	Height	Weight	Desired body weight (DBW)	Percent DBW	Percent Weight Change	Albumin grams/deciliter
Diagnosis						
Diet Order						
ASSESSMENT:						
Nutritional Status <input type="checkbox"/> High Risk <input type="checkbox"/> Moderate Risk <input type="checkbox"/> Not Compromised				Further Registered Dietitian (RD) Intervention Needed <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Nutrition Risk Factors:						
PLAN:						
<input type="checkbox"/> Nutrition status not compromised. Provide basic nutrition services. Reevaluate in _____ days.						
<input type="checkbox"/> Nutritional assessment by RD required						
<input type="checkbox"/> Nutritional counseling/diet instruction provided						
Other:						
Name: _____						
Ward: _____						
Bed: _____						
Date: _____						

Figure K-7. Sample nutrition screening chart note.

DIET ORDER _____ PATIENT'S NAME _____ DATE _____

HEIGHT _____ WEIGHT _____ AGE _____ ALLERGIES _____

TOLERANCES	LIKES			DISLIKES
BEVERAGES	COFFEE	B	L	D
	DECAF COFFEE	B	L	D
	ICED TEA	B	L	D
	HOT TEA	B	L	D
MILK				
FRUIT & JUICE				
CEREAL				
BREAD				
MEAT OR MEAT EQUIVALENT				
BREAKFAST ENTRÉE				
VEGETABLES				
POTATO OR STARCH EQUIVALENT				
OTHER COMMENTS				

Figure K-8. Sample patient food preference and tolerance checklist.

b. *Patient Feeding Policy.* The Army Patient Feeding Policy mandates 3 hot meals a day. In emergencies patients may be served MRE.

c. *Common Diet Orders and Preparation.* For a brief description of the most common diet orders and preparation tips using the UGR-A and UGR-H&S see Appendix L.

d. *Menu Patterns.* See Appendix L for menu pattern to provide special diets using UGR-A and the UGR-H&S with the addition of medical diet supplement.

e. *Procedures for Adjusting MRE for Use in Patient Feeding.* Occasionally an operation will happen so quickly that logistics only allows for shipment of MRE rations at the start. Also, the hospital may have to initiate operation using the CBRNE CPS system and the nutrition care section will have to discontinue operations in the modular field kitchen until normal operations resume (see FM 4-02.7). One technique to ensure that a temporary supply of medical diet supplements are available is to include at least a footlocker or Number 3 medical chest full of medical diet supplements with the unit personnel's baggage. While these are intended to supplement the UGR-A or UGR-H&S, the medical diet supplements will also help adjust MRE to patient needs. See Appendix L for examples on adjusting the MRE to therapeutic diets.

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f. Procedures for Feeding Patients Using a Contract Food Service. When a contracted dining facility provides the hospital staff and patients with food and food service supplies, a dietitian and the appropriate number of nutrition care specialists must be deployed to ensure that the required patient nutritional services are met. Research the provisions of the contract prior to deploying. If the contract provides only some of the foods listed in the medical diet supplement, then arrange with the deploying food advisor or supply officer to order the remaining items. The team should—

- Set up an area(s) on or near the wards to assemble patient meals and nourishments. The minimal equipment required for this set up is a table, serving supplies, refrigerator, a blender, rodent-proof containers for nourishments, and shelves. The minimal equipment required for this set up is a table work surface; patient trays; a refrigerator; a microwave; a blender; rodent-proof containers for nourishments; and shelves.

- At a minimum, they should use the contractor's daily menu and make modifications for patient diets; see Figure K-9 for sample patient meal tickets that can be used to simplify this process. Turn in meal tickets to the contract staff to fill the order. Also, establish a system to order and pick up food from the contract dining facility. Carry the covered food from the contract facility to the hospital in boxes or insulated containers. Assemble the patient trays in the pantry and deliver to the patient.

- Establish a method for disposing of patient trays and other waste (see Appendix J and FMs 4-02.17 and 4-25.10).

K-14. Health Promotion and Nutrition Education

a. A strong and fit soldier is less likely to be injured accidentally; can more readily withstand exposure to disease and stress; and will require less recovery time for wounds, injuries, or illnesses. Maintaining a healthy and fit body enables the individual to support the unit in accomplishing its mission.

b. Health concerns mind, body, and spirit; therefore, a multidisciplinary team must work together to develop a complete program. Depending on the health promotion program planned and available providers, team members may include nutrition care, physical therapy, COSC, chaplain, preventive medicine and nursing personnel, and physicians.

c. To have a good health promotion program several steps must be accomplished. They include, but are not limited to—

- Conduct a population assessment.
- Establish goals and objectives.
- Plan the program.
- Conduct the program.

- Document the programs successes and failures.
- Make changes to the program to emphasize the successes and eliminate the failures for future use in the program.

K-15. Nutrition Care Section After Action Report

At the end of a deployment or training exercise the chief, nutrition care section, should prepare an after action report (AAR) on nutrition care activities. The AAR should be prepared in accordance with the hospital SOP. Provide a copy of the section AAR to the Chief, Army Medical Specialist Corps (AMSC) upon approval by the hospital commander.

<p>Hospital Meal Ticket Regular Diet Bed _____</p> <p>Meat _____</p> <p>Starch (rice, potatoes, pasta) _____</p> <p>Vegetable _____</p> <p>Bread _____</p> <p>Fruit and/or Dessert _____</p> <p>Drink _____</p> <p>Salt Pepper Sugar 2 Napkins Silverware Packet</p>	<p>Hospital Meal Ticket Transition/Soft/Bland Diet Bed _____</p> <p>(Ask Patient to Choose)</p> <p>Soup Fruit Sauce</p> <p>Crackers Yogurt</p> <p>Bread/Toast Milk</p> <p>Hot Cereal Pudding</p> <p>Soda Jello</p> <p>Juice Ice Cream</p> <p>Salt Pepper Sugar 2 Napkins Silverware Packet</p>
<p>Hospital Meal Ticket Cardiac or Diabetes Diet Bed _____</p> <p>Meat (Heart Healthy Entrée) _____</p> <p>Starch (rice, potatoes, pasta) _____</p> <p>Vegetable _____</p> <p>Bread _____</p> <p>Fruit _____</p> <p>Drink _____</p> <p>Pepper 2 Napkins Silverware Packet</p> <p>NOTE: no soup or fried foods</p>	<p>Hospital Meal Ticket Liquid Diet Bed _____</p> <p>(Ask Patient to Choose)</p> <p>Broth Strained Soup</p> <p>Milk Popsicle</p> <p>Hot Cereal, thinned Pudding</p> <p>Soda Jello</p> <p>Juice Ice Cream</p> <p>Salt Pepper Sugar 2 Napkins Silverware Packet Straws</p>

Figure K-9. Sample patient meal tickets.

APPENDIX L

SUPPLEMENTAL INFORMATION ON NUTRITIONAL SUPPORT**L-1. Nutrient Sources and Functions**

Nutritional care is a critical part of patient care; providing the correct nutritional care enhances the patient's recovery. To meet this need, nutritional care personnel must ensure that foods served to the patients meet their nutritional requirements. Knowing the nutrient functions of various food items enables nutritional care personnel to meet these needs. See Table L-1 for an overview of the nutrient sources and functions of food items in A-rations, MRE, and UGRs.

Table L-1. Nutrient Sources and Functions

NUTRIENT	FUNCTION	SOURCES		
		GARRISON/UGR-A	MRE	UGR-H&S
PROTEIN	BUILD AND MAINTAIN TISSUE; REGULATE WATER BALANCE; FORMATION OF HORMONES, ENZYMES, AND ANTIBODIES; EXCESS INTAKE USED AS ENERGY	MEAT, FISH, CHEESE, MILK, POULTRY, EGGS, WHOLE GRAINS, NUTS, BEANS	ENTREES, CHEESE, PEANUT BUTTER	MEATS, ENTREES, MILK, CHEESE, PEANUT BUTTER
CARBOHYDRATES	PRIMARY ENERGY SOURCE; DIETARY FIBER (NONDIGESTIBLE CARBOHYDRATE) ASSISTS THE DIGESTION SYSTEM	WHOLE GRAINS, SUGARS, FRUITS, VEGETABLES	DESSERTS, FRUITS, COCOA, CANDY, BEVERAGE BASE (SUGAR-SWEETENED)	PUDDING, CAKES, RICE, POTATOES, LASAGNA, BREAD
FAT	PROVIDE ENERGY; SUPPLY FATTY ACIDS FOR CELL MEMBRANES; ABSORPTION OF FAT-SOLUBLE VITAMINS	OILS, BUTTER, CHEESE, NUTS, MARGARINE, SALAD DRESSINGS	PEANUT BUTTER, ENTREES, CHEESE	BREAKFAST ENTREES
WATER	TRANSPORT OF VITAL SUBSTANCES THROUGH BODY; ELIMINATE WASTES FROM BODY; REGULATION OF NORMAL BODY TEMPERATURE	BEVERAGES OF ANY KIND, FOODS WITH HIGH WATER CONTENT (ESPECIALLY FRESH FRUITS AND VEGETABLES)	BEVERAGES, ENTREES, WET-PACKED FRUITS	BEVERAGES, ENTREES, FRUITS
CALCIUM	BUILD AND MAINTAIN TEETH & BONES; NORMAL BLOOD CLOTTING; MUSCLE CONTRACTION; HEALTHY CELL MEMBRANES	MILK, GREEN LEAFY VEGETABLES, SHELL-FISH, DRIED BEANS	CRACKERS, CHEESE, COCOA	LASAGNA, MILK, CHEESE, MACARONI & CHEESE
PHOSPHOROUS	BUILD BONES AND TEETH; RELEASE ENERGY FROM CARBOHYDRATES, FATS AND PROTEIN; FORM GENETIC MATERIALS, CELL MEMBRANES, AND MANY ENZYMES	FISH, MEAT, POULTRY, EGGS, LEGUMES, MILK, NUTS, WHOLE GRAINS	BEEF ENTREES, CHEESE SPREAD	LASAGNA, POTATO DISHES, CHICKEN
MAGNESIUM	BUILD BONE & PROTEIN; RELEASE ENERGY FROM MUSCLE GLYCOGEN; REGULATE BODY TEMPERATURE	LEAFY GREEN VEGETABLES, MILK, NUTS, CORN, SOYBEANS, SEEDS, WHOLE GRAINS	PEANUT BUTTER, ENTREES, CHOCOLATE MINT POUND CAKES, NUT-RAISIN MIX, COCOA, COFFEE	MEATS/ ENTREES, BREAD, COCOA

Table L-1. Nutrient Sources and Functions (Continued)

NUTRIENT	FUNCTION	SOURCES		
		GARRISON/UGR-A	MRE	UGR-H&S
IRON	HELP BLOOD SUPPLY OXYGEN TO CELLS; PART OF SOME PROTEINS & ENZYMES	RED MEAT, LIVER, KIDNEYS, EGG YOLKS, LEAFY GREEN VEGETABLES, DRIED BEANS & PEAS, DRIED FRUITS, POTATOES, WHOLE GRAINS	ENTREES, CAKES, FUDGE BROWNIES, MRE CRACKERS, NUTRIGRAIN BAR, SPORT BAR, TOASTER PASTRY	ENTREES, FORTIFIED BREAKFAST CEREAL
ZINC	ESSENTIAL ROLE IN FORMATION OF PROTEIN (WOUND HEALING, TISSUE GROWTH); COMPONENT OF NUMEROUS ENZYMES	OYSTERS, MEAT, LIVER, EGGS, POULTRY, SEAFOOD, SEEDS, DRIED BEANS, WHOLE GRAINS, MILK	ENTREES, NUTRIGRAIN BAR	BEEF ENTREES
SODIUM	REGULATE BODY FLUID VOLUME AND BLOOD ACIDITY; TRANSMISSION OF NERVE IMPULSES	SALT, SALTED SNACKS, SOY SAUCE, TOMATO JUICE, CANNED AND PROCESSED FOODS	SALT, ENTREES, CRACKERS WITH PEANUT BUTTER, PRETZELS, RICE DISHES	SALT, SPAGHETTI, OMELETS, RICE
POTASSIUM	MUSCLE CONTRACTION; MAINTAIN FLUID & ELECTROLYTE BALANCE; TRANSMISSION OF NERVE IMPULSES; RELEASE OF ENERGY FROM CARBOHYDRATE, FAT, AND PROTEIN	ORANGE JUICE, BANANAS, DRIED FRUITS, SEEDS, POTATOES, MEATS, BRAN, PEANUT BUTTER, DRIED PEAS & BEANS, COFFEE, TEA	ENTREES, COCOA, PEANUT BUTTER, FRUITS, NUT-RAISIN MIX	BEEF & PORK ENTREES, MILK, ORANGE JUICE, PEANUT BUTTER, POTATOES
VITAMIN C	FORMATION OF COLLAGEN (STRUCTURE OF BONES, CARTILAGE, MUSCLE); MAINTAIN SMALL BLOOD VESSELS, BONES, AND TEETH; AID IRON ABSORPTION	CITRUS FRUITS, TOMATOES, STRAWBERRIES, GREEN PEPPERS, POTATOES, DARK GREEN LEAFY VEGETABLES	FRUITS, COCOA, PEANUT BUTTER, CHEESE, BEVERAGE BASE (SUGAR-SWEETENED)	BEVERAGE BASE, COCOA, CHEESE, PEANUT BUTTER
VITAMIN B ₁ (THIAMIN)	RELEASE ENERGY FROM CARBOHYDRATE; NORMAL FUNCTION OF NERVOUS SYSTEM	PORK, LIVER, OYSTERS, ENRICHED CEREALS, OATMEAL, PASTA, BREAD, MILK, LEAFY GREEN VEGETABLES, WHOLE GRAINS	COCOA, CRACKERS, CHEESE, PEANUT BUTTER, NUTRIGRAIN BAR	CHEESE, COCOA, PEANUT BUTTER, HAMBURGER ROLLS
VITAMIN B ₂ (RIBOFLAVIN)	RELEASE ENERGY FROM CARBOHYDRATE, PROTEIN, AND FAT	WHOLE GRAINS, ENRICHED BREADS & CEREALS, LIVER, MEAT, DARK GREEN LEAFY VEGETABLES, FISH, POULTRY, EGG YOLK	CRACKERS, ENTREES, NUTRIGRAIN BAR	LASAGNA, CHICKEN DISHES, FORTIFIED BREAKFAST CEREALS, MILK, HAM/EGGS, PORK WITH BARBEQUE (BBQ) SAUCE

Table L-1. Nutrient Sources and Functions (Continued)

NUTRIENT	FUNCTION	SOURCES		
		GARRISON/UGR-A	MRE	UGR-H&S
NIACIN	WORK WITH THIAMIN AND RIBO-FLAVIN FOR ENERGY PRODUCTION	LIVER, TUNA, POULTRY, ENRICHED BREAD & CEREALS, MEAT, NUTS, DRIED PEAS & BEANS, PASTA	ENTREES, CRACKERS, NUT-RAISIN MIX, PEANUT BUTTER	ENTREES, BREAD
VITAMIN B ₆ (PYRIDOXINE)	FORMATION OF CERTAIN PROTEINS; AID IN USE OF FATS	WHOLE GRAINS, MEAT, EGGS, FRUITS & VEGETABLES, LIVER, FISH, POULTRY, CEREALS & BREAD, NUTS	CHEESE, COCOA, ENTREES, CRACKERS	CHEESE, BEEF HASH, COCOA, CHICKEN BREAST & GRAVY
FOLACIN	FORMATION OF HEMOGLOBIN IN RED BLOOD CELLS; FORMATION OF GENETIC MATERIAL	WHOLE GRAINS, ENRICHED CEREALS, DRIED BEANS, LEAFY GREEN VEGETABLES, LIVER	BURRITO, ENTREES WITH PASTA OR RICE, NUT-RAISIN MIX, RICE	LASAGNA, PORK WITH BBQ SAUCE, WESTERN OMELET, ORANGE JUICE, FORTIFIED BREAKFAST CEREALS, PASTA AND RICE DISHES
VITAMIN B ₁₂	RED BLOOD CELL FORMATION; NORMAL FUNCTION OF NERVOUS SYSTEM; ASSIST IN BUILDING GENETIC MATERIAL	MILK, CHEESE, EGGS, MEAT, FISH, OYSTERS	ENTREES WITH MEAT OR CHEESE	PORK WITH BBQ SAUCE, CHILI, ENTREES WITH BEEF, PORK, POULTRY, OR CHEESE
VITAMIN A	HEALTH SKIN, HAIR, MUCOUS MEMBRANES, TEETH, AND BONES; AID NIGHT VISION	LIVER, EGGS, CHEESE, BUTTER, MILK, FRUITS AND VEGETABLES	ENTREES WITH CHEESE OR VEGETABLES, COCOA, PEANUT BUTTER, NUTRIGRAIN BAR, TOASTER PASTRY	CARROTS, PEAS/CARROTS, COCOA, CHEESE, BEEF STEW, ENTREES WITH CHEESE OR VEGETABLES
VITAMIN E	PROTECT VITAMIN A AND FATTY ACIDS FROM OXIDATION; PREVENT CELL MEMBRANE DAMAGE	VEGETABLE OILS, MARGARINE, GREEN VEGETABLES, WHOLE GRAIN CEREALS AND BREADS, LIVER	MEATBALLS WITH RICE, BEEF STEW, FUDGE BROWNIE, NUT-RAISIN MIX, PEANUTS, PEANUT BUTTER, PEACHES	OMELETS, POUND CAKE, LASAGNA, BEEF STEW, PEACHES, PEANUT BUTTER

NOTE

For information on recommended intakes of nutrients, see AR 40-25.

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L-2. Medical Diet Supplements

a. The medical diet supplement, used in combination with the MRE and UGR provides commercial semiperishable food components required to prepare therapeutic diets. Each medical diet supplement (see Figure L-1) supports 50 patients for a 15-day period based on the following diet mix: 28 regular; 5 high-calorie—high-protein; 11 blenderized liquid; and 6 clear liquid. The medical diet supplement is shipped in a triwall container with the following unit load dimensions: 33” wide by 41” length by 49” height; the cube is 38.37’; and the weight is 443 lbs. The medical diet supplement is ordered from Defense Supply Center Philadelphia with the NSN: 8970-01-470-5077. If necessary, individual components may be ordered separately.

COMPONENT	UNITS/CASE	CASE QUANTITY	TOTAL UNITS	NSN
INSTANT BREAKFAST, ASSORTED FLAVORS	60	9	540	8940-01-503-6663
BEEF BROTH, DEHYDRATED (8 OZ)	96	2	192	8935-01-503-6672
CHICKEN BROTH, DEHYDRATED (8 OZ)	96	2	192	8935-01-503-6689
CREAM OF CHICKEN SOUP, CONDENSED, 2 SERVINGS/CAN	48	1	48	8935-01-503-6695
CREAM OF TOMATO SOUP CONDENSED, 2 SERVINGS/CAN	48	1	48	8935-01-503-6699
GELATINS, INDIVIDUAL CUPS				
STRAWBERRY 4/PACK	48	3	144	8940-01-503-6702
STRAWBERRY/ORANGE 4/PACK	48	3	144	8940-01-503-6706
TANG, ORANGE FLAVORED FORTIFIED MIX	96	3	288	8960-01-503-6706
ENSURE (ROSS LABS), 8 OZ LIQUID CANS				
CHOCOLATE PLUS	24	1	24	8940-01-503-6758
VANILLA PLUS	24	1	24	8940-01-503-6769
TEA BAGS	1200	1	1200	8955-01-503-6773
SUGAR SUBSTITUTE	1200	1	1200	8940-01-503-6777
SANDWICH BAGS	600	1	600	
STRAWS, FLEXIBLE, INDIVIDUAL WRAPPED	1000	2	2000	
PLASTIC SPOONS	1200	1	1200	
CUPS, STYROFOAM (8 OZ)	1000	3	3000	
LIDS, CUP (WITH STRAW-HOLE)	1000	2	3000	

Figure L-1. Medical diet supplements for MRE and UGR rations.

b. Enteral feeding products can be ordered through the medical supply section of the hospital. Coordination for ordering components of the medical diet supplement and enteral feeding products should be done prior to any exercise or deployment. Due to potential delays in receiving products, the above list of components from the medical diet supplement and a supply of enteral feeding products should be packed prior to deployment for immediate availability.

L-3. Therapeutic Diet Menus

The medical diet supplements are used to provide therapeutic diet menus for patients with components of the MRE and UGR to promote acceptability and nutritional adequacy of the hospital diet. The diet distribution

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is estimated for the population. Exact distribution may vary with the scenario and type of military operation. Other less popular diets such as diabetic or cardiac may be necessary under special conditions.

L-4. Therapeutic Diet Preparation

Therapeutic diets are prepared to accommodate each patient's diet order as stated in the patient's medical record and recorded on the patient ward roster. These diets may be modified to meet the patient's particular medical conditions and personal requests. The ADA Manual is the primary reference for therapeutic diet instructions. The menu components for these diets come from the MRE, UGR, and the medical diet supplement list.

a. Regular Diet. This diet will use the standard MRE or UGR menu with bread, milk, and cereal. Enhancements should be incorporated into the diet plan as soon as they are available, such as fresh fruits and salads. In between meal snacks may be incorporated into the diet upon request. Patient preferences should be incorporated into the meal plan to the maximum extent possible.

b. Clear Liquid Diet. This diet is intended to supply fluid and energy in a form that requires minimal digestion. It consists primarily of broth, gelatin, and juice. The orange juice is strained before it is served to the patient. If refrigeration is unavailable, the gelatin can be served in a liquid form. Carbonated beverages can be added to the diet, when available. Between meals feeding are encouraged.

c. Blenderized Liquid Diet. This diet is designed to provide adequate calories, protein, and fluids for patients who are unable to chew, swallow, or digest solid foods. This diet consists of fluids and foods blenderized to a liquid form. The viscosity of blended items ranges from the thickness of fruit juice to that of cream soup. Frequent small feedings may be necessary to facilitate ingestion of adequate calories and protein.

d. Mechanically Altered Diet. This diet is designed to minimize the amount of chewing necessary to ingest food. This diet includes food modified only in texture, such as blended, chopped, ground, and pureed foods to promote ease of chewing. All vegetables included should be well cooked to minimize the need for chewing. Most raw fruits and vegetables are excluded. Spices are encouraged to increase palatability of the diet. Between meal snacks may be arranged upon request.

e. Low Sodium Diet. This diet is used to promote management of hypertension. Due to the high number of canned and instant food items found in the UGR and the contents of MRE, a highly restrictive sodium diet is not possible without severely compromising caloric and other nutrient needs. When available, use fresh vegetables in the place of canned vegetables. If canned vegetables must be used, rinse and drain them to reduce the sodium content. Between meals snack may be arranged upon request.

f. Cardiac Diet. This diet is designed to reduce elevated serum cholesterol and promote healthy eating. It consists of modifications in total fat, saturated fat, cholesterol, sodium, caffeine, and fiber. All meat entrees should be as lean as possible (trimming fat, removing skin from chicken, using minimal fat in preparation, and draining fat off of products). Lower fat entrees from the MRE may be an acceptable substitute for some of the highest fat entrees in the UGR; for example, the bean and rice burrito could be

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substituted for chili con carne. Low sodium cooking methods are used. Avoid soups and broths; they are high in sodium content. Use fresh fruits and vegetables to replace canned fruits and vegetables, whenever available. Increase fiber with whole grain products when available. Dessert items may be added to the menu plan depending on the item content and diet restrictions. Between meals snack may be arranged upon request.

g. High-Calorie/High-Protein Diet. This diet is designed to provide additional calories and protein to the regular diet. The additional calories are primarily in the form of added fruit and extra bread. The additional protein is provided by increasing entrée portion sizes and including a medical diet supplement high protein beverage or a milk shake as a between meal snack. Milk shakes may be made using milk, instant breakfast, flavored syrups, and fruits.

h. Diabetic Diet. This diet is used to improve blood glucose levels and control diabetes. It is set up as three meals and 1 to 3 snack regimes consisting of approximately 2200 calories. Most of the cardiac modifications including low fat, low sodium, and high fiber should be followed. Meals should be set up around 60 to 75 grams of carbohydrates and snacks should contain 15 to 30 grams of carbohydrate until modified by a dietitian. One starch, fruit, or milk exchange contains 15 grams of carbohydrate.

i. Tube Feeding. Tube feeding is a highly specialized diet tailored to meet the needs of a small population of patients that must be close coordinated with the medical staff. Commercial tube feeding formulas are the preferred menu item. However, commercially prepared formulas may not always be available when needed. To prepare tube feeding menu items a powdered commercial nutrition drink is the optional ingredient is available. Nutrition care specialists will reconstitute the powdered commercial product. For preparation, all equipment must be properly sanitized and the product refrigerated immediately after preparation. Limit the contents of each tube-feeding package to a 500-cubic centimeter intravenous bag. Due to limited refrigeration on the wards, progressive preparation and delivery of tube feedings to the wards may be necessary. Additional powdered commercial tube feedings are available as a standard subsistence (NSN 8940-01-304-3620) or medical supply item ordered through the pharmacy. Nutritional analysis of the tube feedings is available on the nutrition label of the powdered commercial nutrition product.

L-5. Recipe Modifications

Providing food items for patients needs include making modifications not normally needed for standard menus. Modifying recipes for consistency are a part of this process. Principles for modifying a recipe for consistency includes, but is not limited to—

- Modifying UGR items for consistency.
- Checking the ADA Manual and the menu patterns shown in Tables L-2 and L-3 for foods allowed on each diet type.
- Cutting meat items into bite-sized pieces, grinding or pureeing meats for consistency.

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- Blenderizing foods with additional liquids until the required consistency is reached.
- Using liquids that add calories (such as gravy, soup, sauce, milk or juice) for thinning.
- Using heated liquids for thinning if the blended item is a hot food item.
- Pouring the blended and thinned food item through a strainer to remove lumps.
- Proper consistency of the final product requires that:
 - The item is thick enough to coat a spoon like a sauce or gravy; but thin enough to flow through a straw freely.
 - The food item is at the correct serving temperature after blending, thinning, and straining.
 - The seasoning is blended in the items so that they are not bland (such as, adding garlic powder to pureed meats).

L-6. Supplemental Fluids

An estimated 40 to 50 percent of all patients will need supplemental fluids. Have milk and juice available at most meals. The UGRs also contain a fruit flavored beverage that can be used to meet fluid requirements. These beverages, along with water, can also be made available for between meal nourishment.

L-7. Nourishments and Snacks

Nourishments and snacks are important elements of many of the therapeutic diets. They should be served three times per day, midway between meals and in the evening. Many of the snack items listed on the therapeutic menus are prepared from the UGRs of the previous meal, for example, the peanut butter and jelly from the lunch UGR for the mechanically altered diet is saved and used as the afternoon snack. *Table*

Table L-2. Medical Field Feeding Meal Pattern Guideline Using UGR

BREAKFAST

*DIET FOOD	HIGH-CALORIE/HIGH-PROTEIN (PROVIDE INSTANT BREAKFAST AT 1000 AND 1400 HOURS)	BLENDERIZED LIQUID (CONSISTENCY—ABLE TO PASS THROUGH A STRAW)	CLEAR LIQUID	**DIABETIC
EGGS	½ CUP	BLENDERIZED SCRAMBLED EGGS	NONE	½ CUP SERVING
BREAKFAST MEAT	2 SAUSAGE PATTIES OR 3 BACON SLICES	BLENDERIZED INTO EGGS	BROTH	1 SAUSAGE PATTY OR 1 BACON SLICE
STARCH (POTATO, HOT CEREAL, WAFFLE, OR PANCAKE)	½ CUP SERVING OR MORE	BLENDERIZED STARCH OF THE DAY	½ CUP GELATIN	½ CUP (1 CARBOHYDRATE CHOICE)
GRAVY OR SAUCE (IF AVAILABLE)	2 OUNCES OR MORE	USE TO THIN ENTREE	NONE	NONE
FRUIT OR JUICE	½ CUP SERVING OR 6 OUNCES JUICE	BLENDERIZED FRUIT OF THE DAY	2 EACH OF 6 OUNCE JUICE (STRAINED)	½ CUP CANNED FRUIT OR 1 PIECE FRESH FRUIT OR ½ CUP JUICE (1 CARBOHYDRATE CHOICE)
PASTRY, ROLL, OR BISCUIT AND MARGARINE	1 WITH MARGARINE	NO BREADS 2 MARGARINE	NONE	1 SLICE PLAIN BREAD OR 1 BISCUIT (1 CARBOHYDRATE CHOICE) 1 MARGARINE
BEVERAGES ALLOWED	MILK, INSTANT BREAKFAST, COCOA, TEA, COFFEE, SODA, WATER	MILK, INSTANT BREAKFAST, COCOA, TEA, COFFEE, SODA, WATER	TEA, COFFEE, SODA, WATER	UNSWEETENED OR ARTIFICIALLY SWEETENED BEVERAGE LOW-FAT MILK (8 OUNCES = 1 CARBOHYDRATE CHOICE)
ACCESSORIES	SALT, PEPPER, SUGAR	6 STRAWS, SALT, PEPPER, SUGAR	2 STRAWS	1 STRAW, ARTIFICIAL SWEETENER, SALT, PEPPER

* REGULAR DIET FOLLOWS UGR MENU FOR ITEMS AND SERVING SIZES.
 ** DIABETIC MEALS SHOULD HAVE FOUR CARBOHYDRATE CHOICES PER MEAL. ADJUST OFFERINGS TO PATIENT PREFERENCES.

Table L-2. Medical Field Feeding Meal Pattern Guideline Using UGR (Continued)

LUNCH/DINNER

*DIET FOOD	HIGH-CALORIE/ HIGH-PROTEIN	BLENDERIZED LIQUID	CLEAR LIQUID	**DIABETIC
ENTREE (MEAT, POULTRY, FISH)	AT LEAST 4 OUNCE SERVING	BLENDERIZED ENTREE OF THE DAY	BROTH	3 TO 4 OUNCE SERVING
STARCH (PO- TATO, PASTA, RICE, BEANS, LEGUMES)	½ CUP SERVING	BLENDERIZED STARCH OF THE DAY	NONE	½ CUP (1 CARBO- HYDRATE CHOICE)
GRAVY OR SAUCE	2 OUNCE OR MORE	USE TO THIN ENTREE	NONE	NONE
VEGETABLE	½ CUP SERVING	BLENDERIZED VEGETABLE OF THE DAY	NONE	½ CUP NON- STARCHY VEGETABLE TOSSED SALAD IF AVAILABLE
FRUIT	½ CUP SERVING	BLENDERIZED FRUIT OF THE DAY	2 EACH OF 6 OUNCE JUICE (STRAINED)	½ CUP CANNED FRUIT OR 1 PIECE FRESH FRUIT (1 CARBOHYDRATE CHOICE)
DESSERT	½ CUP SERVING	BLENDERIZED CAKE OR THINNED PUDDING	½ CUP GELATIN	NONE
BREAD AND MARGARINE	1 OR 2 SERVINGS WITH MARGARINE	NO BREAD 2 MARGARINE	NONE	1 SLICE OR ½ BUN (1 CARBOHYDRATE CHOICE) 1 MARGARINE
BEVERAGES ALLOWED	MILK, INSTANT BREAKFAST, COCOA, TEA, COFFEE, SODA, WATER	MILK, INSTANT BREAKFAST, COCOA, TEA, COFFEE, SODA, WATER	TEA, COFFEE, SODA, WATER	UNSWEETENED OR ARTIFICIALLY SWEETENED BEVERAGES. LOW-FAT MILK (8 OUNCE = 1 CARBOHYDRATE CHOICE)
ACCESSORIES	SALT, PEPPER, SUGAR	AT LEAST 6 STRAWS, SALT, PEPPER, SUGAR	2 STRAWS	1 STRAW ARTIFICIAL SWEETENER, SALT, PEPPER

Table L-3. Adjusting MRE for Blenderized Liquid Therapeutic Diets

	REGULAR	CLEAR LIQUID	BLENDERIZED LIQUID	#DIABETIC	##CARDIAC PRUDENT
ENTREE	HEAT ENTREE	DO NOT SERVE ENTREE. USE BROTH FROM MEDICAL DIET SUPPLEMENT.	DO NOT SERVE ENTREE. USE BROTH FROM MEDICAL DIET SUPPLEMENT. MAKE CREAM SOUPS, IF AVAILABLE.	SERVE 3 OUNCE PORTION SIZE FOR ENTREES.	SERVE 2 TO 3 OUNCE PORTIONS OF ENTREES. THE SODIUM CONTENT IS HIGH FOR MOST ENTREES.
SIDE DISHES	PASTA, RICE, POTATOES ALL ACCEPTABLE.	DO NOT SERVE ANY SOLID FOODS.	PREPARE THINNED STRAINED HOT CEREALS IF AVAILABLE.	SERVE ½ CUP PORTION SIZES FOR STARCHES.	PASTA, RICE, AND POTATOES ALL ACCEPTABLE WITH EXCEPTION OF SODIUM CONTENT OF MANY. ADD FRESH VEGETABLES WHEN AVAILABLE.
DESSERT	MRE DESSERT OK. ADD FRUIT AS AVAILABLE.	MAKE GELATIN FROM MEDICAL DIET SUPPLEMENT.	PREPARE INSTANT BREAKFAST MILK SHAKES AND GELATIN FROM MEDICAL DIET SUPPLEMENT.	CAKES, COOKIES, BROWNIES AND CANDIES WILL GENERALLY PUSH THE PATIENT ABOVE THE 60 TO 70 GRAMS OF CARBOHYDRATE PER MEAL. RINSE THE THERMOSTABILIZED FRUITS TO REMOVE SYRUP.	ADD FRESH FRUITS WHEN AVAILABLE. USE MRE FRUITS. FIG BARS. NUTRIGRAIN BARS. OTHER DESSERTS ARE HIGH IN FAT AND SHOULD BE LIMITED.
BREAD & SPREAD	ADD BREAD AS AVAILABLE. CRACKERS ARE ACCEPTABLE.	DO NOT SERVE SOLID FOODS.	DO NOT SERVE SOLID FOODS.	APPROXIMATELY 1 CRACKER OR ½ A POUCH BREAD EQUALS 15 GRAMS CARBOHYDRATE. WORK IN DIET AS ALLOWED. PEANUT BUTTER AND CHEESE SPREADS ARE ALLOWED. DO NOT SERVE JELLY.	BREAD AND CRACKERS ACCEPTABLE. PEANUT BUTTER AND CHEESE SPREADS ARE HIGH IN FAT.

NOTE: ONE STARCH, ONE FRUIT, OR ONE MILK EXCHANGE CONTAINS 15 GRAMS OF CARBOHYDRATE. SEE THE ADA MANUAL FOR SERVING SIZE AND LISTS.

- # FOR DIABETIC DIETS SERVE 3 MEALS AND 3 SNACKS A DAY. SAVE COMPONENTS OF MRE FOR SNACKS. GOAL IS 60 TO 70 GRAMS OF CARBOHYDRATE PER MEAL AND 15 TO 30 GRAM PER SNACK.
- ## FOR CARDIAC DIETS REDUCE TOTAL FAT, SATURATED FAT, CHOLESTEROL, SODIUM AND CAFFEINE. INCREASE FIBER.

Table L-3. Adjusting MRE for Blended Liquid Therapeutic Diets (Continued)

	REGULAR	CLEAR LIQUID	BLENDED LIQUID	#DIABETIC	##CARDIAC PRUDENT
BEVERAGE	ADD MILK AS AVAILABLE. PREPARE BEVERAGE BASE FOR PATIENT.	SERVE CLEAR JUICES AS AVAILABLE. PREPARE BEVERAGE BASE FOR PATIENT.	SERVE JUICES AS AVAILABLE. PREPARE BEVERAGE BASE FOR PATIENT. ADD MILK TO DIET. COCOA IS ACCEPTABLE.	1 CUP UHT MILK, ½ CUP PORTIONS OF JUICE AND UNLIMITED WATER CAN BE SERVED. ELIMINATE ALL SUGAR-BASED BEVERAGES.	SERVE THE LOWEST FAT UHT MILK AVAILABLE. PREPARE BEVERAGE BASE FOR PATIENT. COCOA IS ACCEPTABLE.
ACCESSORY PACKET	NO RESTRICTIONS ON ACCESSORIES, UNLESS LOW CAFFEINE ORDERED.	COFFEE, TEA, APPLE CIDER ALL USABLE.	COFFEE, TEA, APPLE CIDER ALL USABLE.	COFFEE IS USABLE. REMOVE SUGAR PACKET AND TEA WITH SUGAR ADDED.	CLARIFY CAFFEINE RESTRICTION WITH PHYSICIAN. GENERALLY NO OR VERY LIMITED COFFEE AND TEA SERVED. APPLE CIDER IS ACCEPTABLE.

NOTE: ONE STARCH, ONE FRUIT, OR ONE MILK EXCHANGE CONTAINS 15 GRAMS OF CARBOHYDRATE. SEE THE ADA MANUAL FOR SERVING SIZE AND LISTS.

#FOR DIABETIC DIETS SERVE 3 MEALS AND 3 SNACKS A DAY. SAVE COMPONENTS OF MRE FOR SNACKS. GOAL IS 60 TO 70 GRAMS OF CARBOHYDRATE PER MEAL AND 15 TO 30 GRAM PER SNACK.

FOR CARDIAC DIETS REDUCE TOTAL FAT, SATURATED FAT, CHOLESTEROL, SODIUM AND CAFFEINE. INCREASE FIBER.

APPENDIX M

MEDICATION USE AND PHARMACY OPERATIONS**M-1. Purpose**

This appendix establishes general policies and procedures for the use of medications within the theater hospital system as well as key matters regarding pharmacy support operations. It further describes the roles, responsibilities, and scopes of several key personnel with regards to medication use processes.

M-2. References

- a. AR 40-3, *Medical, Dental, and Veterinary Care*, 30 July 1999.
- b. AR 40-7, *Use of Investigational Drugs and Devices in Humans and the Use of Schedule I Controlled Drug Substances*, 4 January 1991.
- c. AR 40-38, *Clinical Investigation Program*, 1 September 1989.
- d. AR 40-61, *Medical Logistics Policies and Procedures*, 25 January 1995.
- e. AR 40-66, *Medical Record Administration and Health Care Documentation*, 10 March 2003.
- f. AR 40-68, *Clinical Quality Managements*, 26 February 2004.
- g. AR 40-562, *Immunizations and Chemoprophylaxis*, 1 November 1995.
- h. STP 8-91Q15-SM-TG, *Soldier's Manual, Skill Levels 1/2/3/4/5 and Trainer's Guide, MOS 91Q, Pharmacy Specialist*, 1 April 2003.

M-3. Applicability

This appendix applies to all health care personnel involved in the medication use process, to include the acquisition and procurement, ordering, transcribing, dispensing, distributing, and monitoring of medications and responses to therapies.

M-4. Roles and Responsibilities

- a. The hospital commander is responsible for all aspects of medication use within the facility. This includes all phases of medication employment from procurement through use and monitoring of patient responses. The hospital commander must develop and execute policies and procedures that ensure the safe and effective use of drugs for the prevention, diagnosis, or treatment of disease, and conform to the highest standards of medical care.

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b. The deputy commander for clinical services (DCCS) is responsible to the hospital commander for all medication use processes employed by the clinical staff of the facility. Policies must be developed to ensure rational prescribing, administering, and monitoring of medication therapies. The DCCS normally chairs several hospital committees to ensure these processes are instituted. One such committee involved with medication use is the Pharmacy and Therapeutics (P&T) Committee.

c. The chief, pharmacy services is charged with development of pharmacy policy and implementing hospitalwide programs to ensure the safe and effective use of medications. This individual is normally given the responsibility of facilitating and recording proceedings of the P&T Committee.

M-5. Hospital Formulary Development

a. The hospital commander approves the formulary to be employed by his facility. Premission planning must entail detailed mission analysis, including evaluation of the mission (assigned and implied tasks), enemy forces, troops/personnel supported, terrain/environment of the operation (endemic diseases/medical threats), and time available to determine any special medication requirements.

b. The CSH formulary is developed by the P&T Committee.

c. Included in this review and formulary development should be an alignment with the joint deployment formulary (JDF). The JDF consists of medications recommended for use by all military departments that have been standardized and published by the JRCAB. Use of JDF items, when appropriate, improves supply chain responsiveness and enhances predictability for all personnel involved in the medication use process.

d. The unit's authorized stockage list (UAL) should also be examined to determine what items might be included in a standardized unit deployment package (UDP) that could be issued by the USAMMA.

e. Lastly, if deploying to a theater with an established supply chain, the P&T Committee should examine the current levels of theater support available and any theater formulary that might be in place.

M-6. Combat Support Hospital Pharmacy and Therapeutics Committee

a. As within a fixed facility the CSH commander will appoint hospital staff members to a P&T Committee. Membership will include a mixture of clinical and administrative personnel.

b. The key objectives of the CSH P&T Committee include:

(1) Recommend facilitywide medication use policies to assure safe, appropriate, and effective use of drugs.

(2) Evaluate and select CSH formulary items, taking into consideration medications found in the JDF, the UAL, the mission assigned to the CSH, and any special medication requirements.

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(3) Recommend policies for the storage, distribution, use, and monitoring of medications, and other matters related to medication safety within the CSH.

(4) Recommend or develop programs to educate the CSH staff on matters related to the safe use of medications.

(5) Review DOD-Medical Materiel Quality Control (MMQC) messages and disseminate pertinent information to staff.

(6) Evaluate the internal quality assurance/quality control measures over the medication use processes within the CSH, including patient care area inspections, controlled substance accountability, and physical security.

(7) Monitor adverse drug events and medication errors. Recommend interventions as appropriate. Assess performance improvement measures to reduce further risks.

(8) Monitor medication use within the facility and make recommendations to optimize therapies.

(9) Monitor the use of controlled substances. Reduce risk of drug diversion.

(10) Report pharmacy workload.

(11) Monitor the management of any investigational new drug (IND) items that are employed within the CSH.

(12) Report procurement of any non-FDA approved medications in accordance with AR 40-7.

M-7. Predeployment Mission Planning

In addition to formulary development, several key aspects of medication use and pharmacy support should be assessed prior to deployment. These include:

a. Maturity of the Theater of Operations. The speed and likelihood of resupply of medications will be dependent upon the maturity of the supply chain. In an immature theater of operations the facility (or an early entry module) may need to deploy with a larger “days of supply” amount of materiel to ensure continuity of care.

b. Mission. The mission of the unit and personnel to be supported will impact the amount and types of care to be provided. This is extremely critical if the unit is tasked with providing humanitarian aid to the local population (either refugees or internally displaced persons) or enemy prisoners of war. Medication needs and follow up could be much greater if supporting humanitarian missions. Types of care provided may include pediatrics, obstetrics and gynecology, and geriatrics.

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c. Equipment Needs. Equipment required to ensure the safe and appropriate storage, shipment, and use of medications, as well as their control/security and accountability should be assessed. Make every effort to obtain/fill all critical equipment shortages prior to deployment. Refer to the UAL for all authorized equipment. Additional equipment needed based on expanded mission requirements should be procured. A pharmacy automation package that will support the provision of drug information, inpatient pharmacy services, outpatient pharmacy services, bulk drug distribution, controlled substance management, and inventory tracking is a must for efficient field pharmacy operations. The JRCAB's Joint DEPMEDS database contains a recommended pharmacy automation support package. Additionally, the Joint DEPMEDS database recommends an automatic tablet/capsule counting machine to facilitate prepacking and filling of outpatient prescriptions.

d. Information Requirements. Intelligence assessments should drive medication requirements. Additionally, proper medical and medication references should be available to support hospital staff medication information needs in the deployed theater.

e. Staff Organization. The primary duties and responsibilities of personnel involved in medication use management as well as pharmacy support operations must be identified and assigned.

f. Special Deployment Medications. Based upon intelligence estimates and endemic disease threats certain deployment medications may be needed. Identify these requirements, procure the necessary medications and provide appropriate information to all personnel receiving these medications.

g. Provision of Investigational Medications or Devices. If any INDs or investigational devices are to be employed during operations, an associate investigator must be identified and appointed to manage the investigational protocol and the legal/regulatory requirements. Control and accountability of investigational agents is similar to controlled substances. It is strongly recommended that the pharmacy services section in the CSH be the inventory control point for all IND products.

h. Tactical SOP. The CSH Tactical SOP must stress medication use procedures and planning throughout the entire CSH facility.

i. Pharmacy Services Section SOP. The pharmacy services section must develop and review its internal procedures to ensure the facility will be supported with safe medication use policies. (For an example of an SOP on medication use and pharmacy operations, refer to website <http://dcss.cs.amedd.army.mil/phar/pharhome.htm>.)

j. Maintenance Medication Requirements. The current CSH mission does not include the provision of maintenance medications for forces operating within the supported area. Refill of prescriptions for maintenance medication should be provided by the refill pharmacy augmentation team/system as described in Annex Q of the theater operations order.

(1) During deployment preparations, internal CSH personnel must be screened for their chronic medication needs and accompanying monitoring requirements. Soldier readiness processing (SRP)

sites should incorporate pharmacy personnel during screening to assist with medication evaluation and Composite Health Care System (CHCS) entry.

(2) If monitoring requirements exceed the capabilities of the deployed medical forces patients should be referred for medical care to the local military medical treatment facility for evaluation of their deployable status prior to actual deployment.

(3) If patients are taking medications not found on the JDF or theater formulary/stockage list, conversion to a therapeutic alternative that is stocked should be considered to facilitate future replenishment in theater.

(4) Patients stabilized on maintenance medications should deploy with up to 180-days supply of these medications.

(5) To the fullest extent possible, all prescriptions should be entered into CHCS to permit medication tracking and future screening for refill needs.

(6) Using the DOD Pharmacoeconomic Center's Predeployment Medication Analysis and Reporting Tool (P-MART), data for an entire unit can be passed to the theater pharmacy consultant/maintenance medication refill coordinator. The P-MART can be used to provide the listing of maintenance medication needs to the refill pharmacy augmentation system established to support refills of maintenance medications in theater as defined in Annex Q of the theater operations plan/order. The P-MART website can be found at <http://www.pec.ha.osd.mil/>.

(7) A refill pharmacy augmentation team/system can consolidate the maintenance medication requirements for all in-theater personnel, validate their needs, stock the required drugs, process and refill prescriptions, and push the medication refills to the patients' units through existing medication logistics infrastructure.

k. Echelonning of Supplies and Equipment. If the CSH's EEH EL, containing a 44-bed slice of the CSH, is detached, assess the medication needs for this package. For accountability purposes consolidate controlled substances and other medications within the pharmacy module during movement.

M-8. Deployment/Movement Medication Use Needs

During unit movement the CSH medical staff will likely be called upon to provide sick call care and possibly emergency medical treatment. Some quantity of medication should be segregated/packaged as a small EMT/sick call readiness kit. This kit must always be readily available to the medical staff and pharmacy personnel to provide for urgent care needs.

M-9. Considerations for the Employment of Pharmacy Services Staff

a. Early Entry Hospitalization Element. The CSH's EEH EL should be staffed with at least one pharmacy officer, one pharmacy NCO, and two additional pharmacy specialists to provide initial 24-hour coverage.

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b. Consolidation Under 84-Bed Company. Pharmacy operations will be consolidated once the entire 84-bed company has deployed and merges with the EEH EL.

c. Corps CSH 164-Bed Company. The pharmacy services section in the 164-bed company is designed to operate either independently (split-base) of the 84-bed company or may be consolidated into one single pharmacy services section.

d. Echelons Above Corps CSH Pharmacy Services. These services are contained wholly within the 84-bed company. An EEH EL may be employed for initial deployment, but the EAC pharmacy services section is not designed to conduct split-base operations. The EAC CSH pharmacy services section provides medication use and pharmacy support services to the entire 248-bed facility.

M-10. Redeployment Requirements

a. All personnel must be screened for medical conditions and medication needs prior to redeployment.

b. Medications and drug information for postexposure treatment of endemic diseases will be provided if appropriate. Each individual's medications will be screened for potential interactions with any existing medication therapies to preclude preventable adverse events.

c. Screening should also include evaluation of patients' maintenance medication needs to ensure they possess an adequate amount to treat them until they return for care at home station.

M-11. Establishment of Pharmacy Services/Employment and Functions of Combat Support Hospital Pharmacy Services Personnel

a. Ensure safe and effective medication therapy. Monitor appropriateness of medications for disease state management.

b. Medication use surveillance. Adjusting items and quantities stocked based on demands, susceptibilities, or anticipated requirements.

c. Review all medication orders. Recommend therapeutic alternatives when primary medication desired is in a shortage situation or unavailable. Screen orders for drug-drug interactions, drug-food interactions, and medication allergies. Assess appropriateness of dosage, route of administrations, and potential for adverse effects.

d. Provide medication consultation services.

(1) Provide consultation services to the medical and nursing staff to resolve patient medication questions and concerns.

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(2) Provide consultation services to the MEDLOG section to assist them with item identification and alternate/substitute procurement.

(3) Assess medications that may have been “temperature compromised” during either storage or shipment to determine if they should be recalled, destroyed, or can still be administered to patients. Stress maintenance of appropriate storage and shipping conditions for all pharmaceuticals to the CSH commander and all CSH staff members.

(4) Coordinate with higher headquarters pharmacy consultant and other pharmacy officers on pharmaceutical issues, drug information, and pharmacy policy matters.

e. Report medication related patient safety problems. Investigate and report adverse drug and vaccine events.

f. Assess nutritional needs in cooperation with physicians and dietitians. If the pharmacy services section is expected to provide parenteral nutritional support, a tabletop laminar airflow hood is needed to safely prepare these products. Parenteral nutrition products are highly susceptible to microbial contamination and a laminar airflow hood is essential to reduce the risk of contamination. A tabletop laminar flow hood has been standardized in the Joint DEPMEDS database maintained by the JRCAB.

g. Conduct therapeutic monitoring of patients’ drug therapies and provide pharmacokinetic consultation when appropriate.

h. Monitor patients for and report adverse drug reactions.

i. Make medication adjustments as necessary.

j. Participate in patient care rounds, whenever possible.

k. Participate in clinic operations to provide direct patient care services.

l. Provide medication information services. Maintain a reference library for drug/disease information. An automation system, standardized and approved by JRCAB, is recommended for use by the CSH pharmacy services section for this purpose. This automation system will also support other medication use documentation processes within the pharmacy services section.

m. Provide inservice training.

n. Provide inpatient pharmacy services. The pharmacy services in conjunction with the hospital staff must decide if they will provide a unit dose distribution system or a unit of use (for example, 2- or 3-days supply) distribution system for inpatient care.

o. Provide sterile products preparation services. It is highly recommended that pharmacy staffs employ a “binary connector” system linking medication vials directly to intravenous piggyback containers to the maximum extent possible. Use of binary connectors permits batch preparation in anticipation of

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needs while reducing waste since products prepared in this manner are generally stable for 30 days if not mixed. Several of these devices have been standardized by the JRCAB.

p. Provide outpatient pharmacy services (may include a self-care program). Provide patient medication counseling to all outpatients.

q. Provide direct support to patient care areas during mass casualty events or patient codes, and maintain medications on all crash carts within the facility.

r. Provide bulk medication supply and controlled substances to hospital sections.

s. Coordinate and ensure procurement of appropriate drugs to support CSH patient care requirements.

t. Provide oversight of immunization programs in conjunction with preventive medicine services.

u. Prepare and submit daily reports in accordance with the command SOP.

v. Collect, record, tabulate, and report pharmacy workload data to commander and senior pharmacy consultant.

APPENDIX N

PRE- AND POSTDEPLOYMENT HEALTH ASSESSMENT

This appendix contains two health assessment forms. It is very important that each individual complete DD Form 2795 (Figure N-1) during predeployment processing and DD Form 2796 (Figure N-2) during postdeployment processing. These forms, filled out by the concerned individual, are used to assess whether or not an individual is medically fit for deployment and to assess possible long-term health impacts upon their return.



PLEASE FILL IN SOCIAL SECURITY #

Grid for Social Security Number: [][][][] - [][] - [][][][][][]

- 1. Would you say your health in general is: Excellent Very Good Good Fair Poor
- 2. Do you have any medical or dental problems? Yes No
- 3. Are you currently on a profile, or light duty, or are you undergoing a medical board? Yes No
- 4. Are you pregnant? (FEMALES ONLY) Don't Know Yes No
- 5. Do you have a 90-day supply of your prescription medication or birth control pills? N/A Yes No
- 6. Do you have two pairs of prescription glasses (if worn) and any other personal medical equipment? N/A Yes No
- 7. During the past year, have you sought counseling or care for your mental health? Yes No
- 8. Do you currently have any questions or concerns about your health? Yes No

SAMPLE

Please list your concerns:

Service Member Signature

I certify that responses on this form are true.

After interview/exam of patient, the following problems were noted and categorized by Review of Systems. More than one may be noted for patients with multiple problems. Further documentation of problem to be placed in medical records.

REFERRAL INDICATED

- None
- Cardiac
- Combat/Operational Stress Reaction
- Dental
- Dermatologic
- ENT
- Eye
- Family Problems
- Fatigue, Malaise, Multisystem complaint
- GI
- GU
- GYN
- Mental Health
- Neurologic
- Orthopedic
- Pregnancy
- Pulmonary
- Other _____

FINAL MEDICAL DISPOSITION:

Comments: (If not deployable, explain)

- Deployable
- Not Deployable

I certify that this review process has been completed.

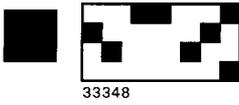
Provider's signature and stamp:

Date (dd/mm/yyyy)

[][] / [][] / [][][][]



Figure N-1. Sample DD Form 2795, Predeployment Health Assessment (Continued).



POST-DEPLOYMENT Health Assessment

Authority: 10 U.S.C. 136 Chapter 55. 1074f, 3013, 5013, 8013 and E.O. 9397

Principal Purpose: To assess your state of health after deployment outside the United States in support of military operations and to assist military healthcare providers in identifying and providing present and future medical care to you.

Routine Use: To other Federal and State agencies and civilian healthcare providers, as necessary, in order to provide necessary medical care and treatment.

Disclosure: (Military personnel and DoD civilian Employees Only) Voluntary. If not provided, healthcare WILL BE furnished, but comprehensive care may not be possible.

INSTRUCTIONS: Please read each question completely and carefully before marking your selections. Provide a response for each question. If you do not understand a question, ask the administrator.

Demographics

Last Name

Today's Date (dd/mm/yyyy)

First Name MI

Social Security Number

Name of Your Unit or Ship during this Deployment

DOB (dd/mm/yyyy)

Gender
 Male
 Female

Service Branch
 Air Force
 Army
 Coast Guard
 Marine Corps
 Navy
 Other

Component
 Active Duty
 National Guard
 Reserve
 Civilian (Veteran, Former, etc.)

Date of arrival in theater (dd/mm/yyyy)

Date of departure from theater (dd/mm/yyyy)

SAMPLE

Location of Operation

<input type="radio"/> Europe	<input type="radio"/> Australia	<input type="radio"/> South America
<input type="radio"/> SW Asia	<input type="radio"/> Africa	<input type="radio"/> North America
<input type="radio"/> SE Asia	<input type="radio"/> Central America	<input type="radio"/> Other _____
<input type="radio"/> Asia (Other)	<input type="radio"/> Unknown	

Grade

<input type="radio"/> E1	<input type="radio"/> 001	<input type="radio"/> W1
<input type="radio"/> E2	<input type="radio"/> 002	<input type="radio"/> W2
<input type="radio"/> E3	<input type="radio"/> 003	<input type="radio"/> W3
<input type="radio"/> E4	<input type="radio"/> 004	<input type="radio"/> W4
<input type="radio"/> E5	<input type="radio"/> 005	<input type="radio"/> W5
<input type="radio"/> E6	<input type="radio"/> 006	
<input type="radio"/> E7	<input type="radio"/> 007	<input type="radio"/> Other
<input type="radio"/> E8	<input type="radio"/> 008	
<input type="radio"/> E9	<input type="radio"/> 009	
	<input type="radio"/> 010	

To what areas were you mainly deployed:
 (mark all that apply - list where/date arrived)

Kuwait _____

Qatar _____

Afghanistan _____

Bosnia _____

On a ship _____

Iraq _____

Turkey _____

Uzbekistan _____

Kosovo _____

CONUS _____

Other _____

Name of Operation:

Occupational specialty during this deployment (MOS, NEC or AFSC)

Combat specialty: _____

Administrator Use Only

Indicate the status of each of the following:
 Yes No N/A

Medical threat debriefing completed

Medical information sheet distributed

Post Deployment serum specimen collected

Figure N-2. Sample DD Form 2796, Postdeployment Health Assessment.

Please answer all questions in relation to THIS deployment

1. Did your health change during this deployment?

- Health stayed about the same or got better
- Health got worse

2. How many times were you seen in sick call during this deployment?

--	--

No. of times

3. Did you have to spend one or more nights in a hospital as a patient during this deployment?

- No
- Yes, reason/dates: _____

4. Did you receive any vaccinations just before or during this deployment?

- Smallpox (leaves a scar on the arm)
- Anthrax
- Botulism
- Typhoid
- Meningococcal
- Other, list: _____
- Don't know
- None

5. Did you take any of the following medications during this deployment?

- (mark all that apply)*
- PB (pyridostigmine bromide) nerve agent pill
 - Mark-1 antidote kit
 - Anti-malaria pills
 - Pills to stay awake, such as dexedrine
 - Other, please list _____
 - Don't know

6. Do you have any of these symptoms now or did you develop them anytime during this deployment?

No	Yes During	Yes Now	No	Yes During	Yes Now
<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Chronic cough	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Chest pain or pressure
<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Runny nose	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Dizziness, fainting, light headedness
<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Fever	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Difficulty breathing
<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Weakness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Still feeling tired after sleeping
<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Headaches	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Difficulty remembering
<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Swollen, stiff or painful joints	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Diarrhea
<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Back pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Frequent indigestion
<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Muscle aches	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Vomiting
<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Numbness or tingling in hands or feet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Ringing of the ears
<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Skin diseases or rashes			
<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Redness of eyes with tearing			
<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Dimming of vision, like the lights were going out			

7. Did you see anyone wounded, killed or dead during this deployment?

- (mark all that apply)*
- No
 - Yes - coalition
 - Yes - enemy
 - Yes - civilian

10. Are you currently interested in receiving help for a stress, emotional, alcohol or family problem?

- No
- Yes

8. Were you engaged in direct combat where you discharged your weapon?

- No
- Yes (land sea air)

9. During this deployment, did you ever feel that you were in great danger of being killed?

- No
- Yes

11. Over the LAST 2 WEEKS, how often have you been bothered by any of the following problems?

- | <u>None</u> | <u>Some</u> | <u>A Lot</u> | |
|-----------------------|-----------------------|-----------------------|--|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Little interest or pleasure in doing things |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Feeling down, depressed, or hopeless |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Thoughts that you would be better off dead or hurting yourself in some way |

DD FORM 2796, APR 2003

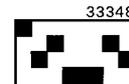


Figure N-2. Sample DD Form 2796, Postdeployment Health Assessment (Continued).

12. Have you ever had any experience that was so frightening, horrible, or upsetting that, IN THE PAST MONTH, you

- | | | |
|-----------------------|-----------------------|---|
| <u>No</u> | <u>Yes</u> | |
| <input type="radio"/> | <input type="radio"/> | Have had any nightmares about it or thought about it when you did not want to? |
| <input type="radio"/> | <input type="radio"/> | Tried hard not to think about it or went out of your way to avoid situations that remind you of it? |
| <input type="radio"/> | <input type="radio"/> | Were constantly on guard, watchful, or easily startled? |
| <input type="radio"/> | <input type="radio"/> | Felt numb or detached from others, activities, or your surroundings? |

15. On how many days did you wear your MOPP over garments?

--	--

No. of days

16. How many times did you put on your gas mask because of alerts and NOT because of exercises?

--	--

No. of times

13. Are you having thoughts or concerns that ...

- | | | | |
|-----------------------|-----------------------|-----------------------|--|
| <u>No</u> | <u>Yes</u> | <u>Unsure</u> | |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | You may have serious conflicts with your spouse, family members, or close friends? |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | You might hurt or lose control with someone? |

17. Were you in or did you enter or closely inspect any destroyed military vehicles?

- No Yes

18. Do you think you were exposed to any chemical, biological, or radiological warfare agents during this deployment?

- No Don't know
 Yes, explain with date and location

14. While you were deployed, were you exposed to:
 (mark all that apply)

- | <u>No</u> | <u>Sometimes</u> | <u>Often</u> | |
|-----------------------|-----------------------|-----------------------|--|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Chlorine gas |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Pesticide-treated uniforms |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Environmental pesticides (like area fogging) |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Flea or tick collars |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Pesticide strips |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Smoke from oil fire |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Smoke from burning trash or feces |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Vehicle or truck exhaust fumes |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Tent heater smoke |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | JP8 or other fuels |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Fog oils (smoke screen) |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Solvents |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Paints |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Ionizing radiation |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Radar/microwaves |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Lasers |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Loud noises |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Excessive vibration |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Industrial pollution |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Sand/dust |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Depleted Uranium (If yes, explain) _____ |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | Other exposures _____ |

SAMPLE

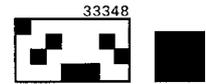


Figure N-2. Sample DD Form 2796, Postdeployment Health Assessment (Continued).

Health Care Provider Only
 SERVICE MEMBER'S SOCIAL SECURITY # - -

Post-Deployment Health Care Provider Review, Interview, and Assessment

Interview

1. Would you say your health in general is: Excellent Very Good Good Fair Poor
2. Do you have any medical or dental problems that developed during this deployment? Yes No
3. Are you currently on a profile or light duty? Yes No
4. During this deployment have you sought, or do you now intend to seek, counseling or care for your mental health? Yes No
5. Do you have concerns about possible exposures or events during this deployment that you feel may affect your health? Yes No
 Please list concerns: _____

6. Do you currently have any questions or concerns about your health? Yes No
 Please list concerns: _____

Health Assessment

After my interview/exam of the service member and review of this form, there is a need for further evaluation as indicated below. (More than one may be noted for patients with multiple problems. Further documentation of the problem evaluation to be placed in the service member's medical record.)

REFERRAL INDICATED FOR:

None

Cardiac

Combat/Operational Stress Reaction

Dental

Dermatologic

ENT

Eye

Family Problems

Fatigue, Malaise, Multisystem complaint

Audiology

Comments: _____

EXPOSURE CONCERNS (During deployment):

SAMPLE

GU

GYN

Mental Health

Neurologic

Orthopedic

Pregnancy

Pulmonary

Other _____

Environmental

Occupational

Combat or mission related

None

I certify that this review process has been completed.
 Provider's signature and stamp:

This visit is coded by V70.5 __ 6

Date (dd/mm/yyyy) / /

End of Health Review

Figure N-2. Sample DD Form 2796, Postdeployment Health Assessment (Continued).

APPENDIX O

COMMANDERS' CHECKLIST**Section I. PERSONNEL CHECKLIST—MOBILIZATION****O-1. Personnel and Administration**

- a.* Maintain individual records alphabetically by last name. If records are maintained by an activity separate from the hospital, provide that activity an updated personnel roster as of the 15th of each month to arrive not later than the 20th. Reserve Component hospitals use the most current DA Form 1379.
- b.* Identify nondeployable personnel and initiate procedures for reassignment and/or separation.
- c.* Identify and color code all reference publications to be taken with the hospital upon deployment.
- d.* Maintain personnel readiness folders and review them quarterly.
- e.* Ensure that hospital members' (to include PROFIS) identification tags and Geneva Conventions cards are on hand and are in serviceable condition.
- f.* Ensure that all physicians and nonphysician health care providers have gone through a credentialing committee according to AR 40-68 and their scope of practice is documented.
- g.* Identify files to accompany the hospital in case of deployment, as well as those to be destroyed.
- h.* Maintain a 60-day supply of blank forms for deployment.
- i.* Maintain a deployment set of DA Form 3955 on all assigned personnel in alphabetical order.
- j.* Appoint a (unit) family member's assistance officer.
- k.* Conduct personal affairs briefing.
- l.* Identify personnel shortages by grade and military occupational specialty (MOS).
- m.* Submit requisition for personnel shortages.
- n.* Ensure that assigned personnel have enrolled their dependents in Defense Enrollment Eligibility Reporting System (DEERS). It is the service member's responsibility to verify DEERS enrollment for their family members prior to deployment. This will ensure that family members can receive medical care while the service member is deployed. To confirm enrollment contact DEERS at 1-800-538-9552.
- o.* Ensure service members check the expiration date of all dependent ID cards prior to deployment. If the cards expire prior to the end of the deployment, you should contact the appropriate personnel office to initiate the paperwork.

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p. Ensure that dependent care plans are on file and adequate for soldiers and PROFIS personnel who are sole parents, or are married to another soldier and have children.

q. Appoint a unit mail clerk.

r. Requisition and maintain recreational equipment and supplies.

s. Appoint a unit safety officer and an NCO.

t. Maintain in a current status the personnel data cards (PDCs) for all personnel assigned, to include designated PROFIS personnel.

u. Appoint a unit records management coordinator to pick up and transport the hospital's individual records (personnel, medical, dental, and finance) in case of a deployment.

v. Ensure assigned personnel maintain current MOS evaluation scores; if personnel have failed to verify their MOS, conduct training in deficient tasks.

w. Establish procedures to recall personnel absent from the unit in the event of increased readiness conditions.

x. Obtain sufficient boxes to carry unit files and personnel, dental, and medical records.

y. Maintain records (PDC files) on PROFIS personnel.

z. Appoint rear detachment commander.

aa. Check to ensure military drivers' licenses are current and schedule driver training/testing to ensure sufficient numbers of drivers are available for movement of unit's assigned vehicles.

ab. Assure all personnel, especially those newly assigned from far away, link their "significant others" (not limited to "entitled beneficiaries") with the unit family support group.

O-2. Finance

a. Maintain a current roster of all assigned and PROFIS personnel.

b. Ensure that orders for purchasing officer and Class A agent are current and that each individual is thoroughly briefed on his duties.

c. Upon mobilization, ensure that the Class A agent contacts the mobilization station finance and accounting office (FAO) and identifies any immediate finance requirements.

d. Establish contact with FAO upon arrival at the mobilization station to enhance personnel processing.

- e.* Arrange for emergency financial assistance, as required.
- f.* Advise personnel to adjust or initiate allotments for dependents, as appropriate. Direct deposit is the fastest and most convenient way to receive your pay while you are deployed. By utilizing direct deposit, your pay will be automatically credited to your checking or savings account. For more information check with your bank or credit union.
- g.* Upon mobilization and deployment notification, advise personnel of the amount of cash and/or credit cards they should bring. Advise personnel to adjust or initiate allotments for dependents, as appropriate. Direct deposit is the fastest and most convenient way to receive pay while deployed. By utilizing direct deposit, pay will be automatically credited to your checking or savings account. For more information check with your bank or credit union.

O-3. Medical

a. Ensure that the home station medical and dental treatment facilities (supporting mobilization/deployment operations) record the deploying soldier's essential health and dental care information on DD Form 2766. The health record (DA Form 3444 or DA Form 8005-series [Medical and Dental Treatment Record]) folders of deploying soldiers will not accompany them to combat areas. For additional information, see AR 40-66.

(1) The preparation and use of DD Form 2766 is applicable to deploying military personnel as well as civilian employees who may accompany the unit.

(2) If the health record is not available, DD Form 2766 will be completed based on soldier interviews and any other locally available data. A health record may not be available for Individual Ready Reserves, Individual Mobilization Augmentees, and retired personnel because their health records may be on file at the US Army Reserve Personnel Center.

(3) The CSH will maintain the DD Form 2766 in an outpatient field file for reference as needed. The field file will consist of, in part, DD Form 2766, and possibly, Standard Form (SF) 600 (Health Record—Chronological Record of Medical Care), SF 558 (Medical Record—Emergency Care and Treatment), SF 603 (Health Record—Dental), or DD Form 1380 (US Field Medical Card).

(4) Ensure that all soldiers complete the Predeployment Health Assessment (DD Form 2795, see Appendix N). A copy of this form will go in the individual's medical record and a copy will be sent to Army Medical Surveillance Activity (AMSA) in accordance with Joint Staff Memorandum MCM 0006-02 and DODI 6490.3. As prescribed by the Under Secretary of Defense Memorandum on Enhanced Postdeployment Health Assessments, DOD Health Affairs Memorandum on Pre- and Postdeployment Health Assessments, both pre- and postdeployment health surveys are required in order to assess a service member's state of health before and after deployment to assist military health care providers in identifying health concerns and providing medical care. The predeployment health assessment should be administered at the home station or at the mobilization processing station within 30 days prior to deployment.

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- b.* Ensure that immunizations for unit personnel are current.
- c.* Verify temporary physical profiles every 3 months.
- d.* Maintain a record copy of all permanent physical profiles.
- e.* Ensure all personnel requiring spectacles have at least two pairs, as well as optical inserts for their protective mask.
- f.* Ensure that each individual has a duplicate panoramic dental x-ray on file and that a deoxyribonucleic acid (DNA) specimen is on file with the DOD DNA Registry and Repository.
- g.* Requisition and maintain medical supplies based upon modification TOE, mission(s), and contingency plans. Medical supplies that have a shelf life of less than 60 months are centrally managed and funded by the USAMMA. At the deployment station, units receiving alert deployment certification will receive potency and dated supplies in unit deployment package configuration from USAMMA. The installation medical supply activity (IMSA) will issue UDP and procure any UDP shortages locally. Unit deployment packages are intended to go as to accompany troops (TAT).
- h.* Ensure that each individual has an ample supply of all personal medications (up to 180 days) and other personal supplies and that the medications are necessary and are medically safe and can be resupplied under deployment conditions.
- i.* Ensure that the correct blood type is posted to individual records.
- j.* Ensure all soldiers have their annual hearing examination and have medically fitted hearing protection.
- k.* Request information on the health threat and countermeasures in the AO.
- l.* Ensure all field sanitation team supplies are on hand and all field sanitation equipment is mission capable.
- m.* Ensure all personnel have a current human immunodeficiency virus test according to requirements of AR 611-110.

O-4. Discipline, Law, and Order

- a.* Prepare plans for security of unit equipment, weapons, and ammunition.
- b.* Designate a unit physical security officer.
- c.* Brief unit personnel on policy that prohibits bringing privately owned firearms to the mobilization station.

- d.* Conduct a shakedown inspection for contraband prior to movement to mobilization station.
- e.* Implement plans for storage and/or care of privately owned vehicles (POVs), firearms, pets, and other personal property.
- f.* Vehicle Information—While deployed it is recommended that you make storage arrangements for your vehicle(s). Some installations have long-term storage available. Additionally, you should check your vehicle registration expiration date. If your registration will expire while you are deployed, you should renew your registration prior to deployment or make arrangements for someone with your power of attorney to take care of it for you. Also, some insurance companies offer reduced rates to service members who are deployed if their vehicle will not be in use. Contact your insurance agency to see if this is an option for you.

O-5. Religion

- a.* Ensure that religious services are available.
- b.* Provide necessary training for chapel activity specialists.
- c.* Obtain appropriate religious equipment and supplies.

O-6. Legal

- a.* Seek assistance from the Staff Judge Advocate in preparing unit for deployment.
- b.* Contact the Office of the Staff Judge Advocate to ensure all personnel are able to consult an attorney concerning powers of attorney, wills, and other personal legal matters. Coordinate with the Office of the Staff Judge Advocate for legal support to soldier readiness processing operations.
- c.* Consult the servicing Trial Counsel at the Office of the Staff Judge Advocate concerning pending disciplinary actions. Appropriate arrangements must be made to dispose of disciplinary action, and to ensure the availability of testimony for investigations and hearings from persons who will deploy.
- d.* Contact the Office of the Staff Judge Advocate to request training and legal briefings before deployment on such areas as applicable rules of engagement, law of war (appropriate portions of the Hague Regulations and Geneva Conventions), Status of Forces Agreements, and any unique laws in the countries of deployment which may impact operations (any entry and exit requirements, status of deployed personnel, local traffic and criminal laws, and so forth).

O-7. Public Affairs

- a.* Make provisions to recall unit personnel through the use of electronic media outlets; that is, radio and television stations.

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- b.* Brief personnel on the nature and background of the emergency that has required the mobilization.
- c.* Brief unit personnel on the history, geography, religion, language, and customs of the country or area of eventual military operations.
- d.* Make sure assigned personnel are aware of required actions to take if contacted by members of the news media.
- e.* Inform personnel of actions to take and agencies available to support their family members after mobilization; for example, legal assistance, health care, financial arrangements, and so forth.
- f.* Assure all personnel, especially those newly assigned from far away, link their “significant others” (not limited to “entitled beneficiaries”) with the unit family support group.
- g.* Advise personnel not to discuss sensitive information outside of the unit; for example, movement dates, times, departure points, troop lists, means of transportation, special training, special equipment, status of morale, and so forth.

Section II. OPERATIONS CHECKLIST—MOBILIZATION

O-8. Operations

- a.* Maintain current alert notification rosters (both telephonic and nontelephonic); update monthly and conduct exercises periodically.
- b.* Brief key personnel on contingency plans and exercise requirements.
- c.* Report attainment of deployability posture according to FORSCOM alert and deployment procedures and plans and policies of the mobilization site.
- d.* Monitor unit SRP and mobilization processing operations and request guidance and assistance as required.
- e.* Provide current access roster to the emergency operations center (EOC) and update as needed.
- f.* Prepare hospital movement plans.
- g.* Establish liaison and communications with the EOC.
- h.* Obtain mission briefing and plans required for execution of deployment mission.

O-9. Security and Intelligence

a. The S2 officer accomplishes all duties related to security and intelligence matters. (See the Assistant Chief of Staff [Intelligence] [G2]/S2 responsibilities in FM 101-5.) The commander is briefed as required.

b. Review the personnel security status of the unit and request, in order of priority, interim security clearances to ensure the correct personnel have proper clearance consistent with mission requirements, to include classified material escort responsibilities.

c. Ensure appropriate hospital personnel are familiar with duties and responsibilities in conjunction with movement and shipment of classified material, protection of movement data, and execution of classified moves, as applicable.

d. Prepare to enforce primary Wartime Information Security Program.

(1) Appoint primary censors (one for every 100 personnel).

(2) Prepare requisition for censorship stamp.

(3) Initiate censorship education program.

e. Conduct operations security (OPSEC) training according to AR 530-1 and local supplements.

f. Prepare briefing for hospital personnel to be conducted when movement is imminent. Include the following:

(1) Subversion and Espionage Directed Against US Army according to AR 381-12.

(2) Procedures for classified moves.

g. Ensure access rosters are current; prepare and submit access rosters to the appropriate mobilization site staff and higher headquarters, if appropriate.

h. Expedite processing of pending security clearance actions.

i. Ensure all personnel, including fillers, are briefed on OPSEC practices.

j. Brief command and staff personnel on the nature of the threat of electronic warfare (EW) and signal intelligence.

k. Ensure personnel are aware of intelligence acquisition tasks, responsibilities, techniques, and reporting procedures.

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- l.* If sealed-off staging areas are used—
 - (1) Conduct mission briefings at the latest possible time prior to out-loading. Classified mission briefings will be as determined by the commander.
 - (2) Restrict briefed personnel to sealed-off area.
 - (3) Establish and enforce controlled pass procedures.
 - (4) Monitor and control telephone use.
- m.* Identify the classified documents that will not accompany the hospital.
- n.* Review plans for the conduct of a counterintelligence (CI) inspection of the hospital area upon departure.
- o.* Ensure timely transfer or destruction of classified material not to accompany the hospital.
- p.* Request assistance for security briefings.
- q.* Ensure all plans contain OPSEC and CE security planning considerations.
- r.* Maintain a list of map requirements and prestock. Submit requirements to the appropriate staff section at the mobilization site.
- s.* Ensure SIGSEC plans include—
 - (1) Nature and amount of information to be transmitted or protected.
 - (2) Communications system capabilities and limitations.
 - (3) Selection of available SIGSEC kits and instructions for use.
 - (4) Basic load, source, and manner of resupply for key cards, authentication codes, and other security-related codes.
 - (5) Operating procedures to include C2 warfare techniques and any special requirements.
 - (6) Emergency destruction of classified operating instructions and associated materials.
- t.* Identify all intelligence requirements and submit to the appropriate security staff at the mobilization site.
- u.* Identify all linguist-qualified personnel and potential translator needs based upon mission(s) and contingency plans.

- v. Review plans for the conduct of a classified move according to AR 380-5.
- w. If deployment is from a civilian port, make a request for port security to higher headquarters.
- x. Coordinate with the appropriate staff for any unique unit requirements.

O-10. Training

- a. Train field sanitation teams (FM 4-25.12).
- b. Conduct training in air and rail movement.
- c. Conduct MOS training as required.
- d. Conduct PVNTMED refresher training (FM 21-10). Training should include—
 - The transmission and countermeasure information for endemic and epidemic diseases prevalent in the AO.
 - Heat and cold weather injury prevention.
 - Poisonous plant, wild animals, and reptiles (land and water).
 - Pest management.
- e. Conduct stress management skills training and stress inoculation to specific, anticipated stressors.
- f. Conduct weapons qualification and CBRNE training.
- g. Conduct training for potential civic action programs that include medical operations (FM 8-42).
- h. Conduct defense team training.

Section III. LOGISTICS CHECKLIST—MOBILIZATION

O-11. Subsistence

- a. Complete basic load of Class I (DA Form 3161) and forward to troop issue subsistence officer.

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b. Complete ration requirements for air deployment: 3 days subsistence for Army pre-position of stocked hospitals and 5 days for non-Army pre-positioned stocked hospitals.

c. Identify rations required for personnel to accompany sea-deploying equipment.

d. For hospitals operating their own dining facility—

(1) Coordinate with the appropriate staff section to close accounts and turn in or transfer dining facility supplies and equipment.

(2) Coordinate for subsistence support of hospital personnel during the period between the closure of the hospital's dining facility and hospital deployment.

e. For a CSH currently subsisting in another organization's dining facility—

(1) Coordinate with the supporting dining facility manager to withdraw hospital food service personnel during deployment preparations.

(2) Prepare plans to collect and turn in meal cards to the supporting facility prior to unit deployment.

(3) Prepare a roster of all deployable and nondeployable personnel receiving basic allowance for subsistence; for example, separate rations. For deployable personnel, establish a termination date for the basic allowance for subsistence and coordinate with the supporting dining facility and the finance officer.

f. Ensure ration requirements for patient feeding in the AO have been planned for and are available. Planning for a basic load of unique patient-feeding items may be needed until the TO can support these items.

O-12. Supplies and Equipment

a. Ensure assigned personnel have all required individual clothing and supplies, to include permethrin, DEET (75 percent N, N-diethyl-meta-toluamide), and personal hygiene items. Cover shortages by requisition, cash collection voucher, or scheduled individual purchase.

b. Ensure personnel have all required organizational clothing and equipment and that items are marked, as required. Cover shortages by requisition, cash collection vouchers, or individual purchases.

c. Expendable supplies.

(1) Prepare a list of expendable supplies required for 15-day usage.

(2) Ensure all expendable supplies required are on hand, requisitioned, or readily available through the self-service supply center (SSSC).

O-10

(3) Ensure hospital draft loading plan makes provisions for carrying the 15-day supply of expendables as TAT baggage.

- d.* Identify all station property and coordinate to ensure turn in during deployment preparation.
- e.* Ensure supply personnel are familiar with procedures to close out SSSC and other accounts.
- f.* Ensure unit field sanitation teams have required equipment listed in FMs 4-02.17 and 21-10.

O-13. Petroleum, Oils, and Lubricants

a. Determine requirements for packaged products for deployment. Ensure necessary items are on hand, requisitioned, or readily available through the SSSC.

b. Bulk POL.

(1) Have required 5-gallon fuel cans on hand or on requisition.

(2) Have bulk POL containers serviceable, or initiate appropriate repair or replacement action.

(3) Coordinate with the appropriate staff element for the purging of bulk containers prior to deployment. Have replacement filters on hand or on requisition for this equipment.

O-14. Ammunition

a. Compute unit basic load and have computations verified by the appropriate staff element at the mobilization site/home station.

b. Prepare and submit DA Form 581 for basic load.

c. If appropriate, include that portion of the basic load in hospital TAT load plans.

d. Identify requirements for guard ammunition for equipment and classified material escorts.

O-15. Major End Items

a. Ensure all TOE/modification TOE-required items are on hand or on requisition.

b. Have all excesses identified and turned in prior to deployment.

c. Have all requisitions for shortages screened for status, proper unit movement data, and priority.

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- d.* Identify impact of shortages to the appropriate headquarters and in unit readiness report.
- e.* Ensure that major training sets such as the DEPMEDS minimal essential equipment for training sets are either turned in or prepared for shipment to the mobilization site or POE.

O-16. Medical Supplies and Equipment

a. Coordinate with installation Department of Defense Activity Address Code (DODAAC) coordinator for contingency DODAACs, split-base operations and deployments, change of addresses, and unique tasked force structure requirements (AR 710-2).

b. Have all required medical supplies and equipment items on hand or requisitioned through the supporting Class VIII organization. Both the UDP provided by USAMMA and any locally procured by the IMSA must accompany the unit as TAT.

c. Have requisitions for shortages validated and obtain latest status.

d. Address the effect of shortages to the appropriate headquarters and in the unit readiness report.

e. Ensure that enough refrigerated and heated storage is available for the temperature-controlled items for shipment.

f. Ensure that medical supplies (such as cylinders containing oxygen and anesthesia gases, Code R items, and other hazardous materials) requiring special handling are identified and on hand or on requisition.

g. Ensure that required support kits are on hand.

h. Ensure all supply catalogs are on hand and current.

O-17. Prescribed Load List

a. Review hospital's prescribed load list (PLL) on all equipment.

b. Provide PLL to the appropriate supporting staff.

c. Have all PLL items on hand or on requisition.

d. Include PLL in hospital loading plans.

e. Include blocking, bracing, packing, crating, and tie-down (BBPCT) necessary to protect PLL in the hospital's BBPCT forecast.

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- f.* Adjust PLL to reflect continuous equipment operations.
- g.* Provide list of PLL shortages having or anticipated to have an impact on unit readiness to the appropriate staff element or higher headquarters.

O-18. Maintenance

- a.* Initiate equipment records for all newly received items in accordance with DA Pam 738-750.
- b.* Identify all excess equipment and coordinate with the support activity for turn in.
- c.* Have all items requiring direct support- or general support-level maintenance, to include equipment to be purged, job-ordered to the appropriate support activity.
- d.* Ensure calibration of equipment is completed, or scheduled for completion.
- e.* Upgrade job order priorities to reflect anticipated deployment dates.
- f.* Notify the EOC or higher headquarters of any conflict or shortfalls between the estimated completion date of equipment repairs and the required-to-load date for deployment.
- g.* Request maintenance assistance in conducting final inspection of major equipment prior to movement and loading.

O-19. Laundry

- a.* Review procedures necessary to close out laundry account; prepare and submit paperwork, as necessary.
- b.* Notify laundry manager of anticipated deployment date.

O-20. Transportation

- a.* Keep the hospital's automated unit equipment list and computerized movement and status system reports current. Coordinate with local movement control teams for additional transportation assets. Medical supply shortages and any surgeon-directed Class VIII must be planned for movement with the unit as TAT.
- b.* Train hospital personnel in the following areas:
 - (1) How to load unit equipment on aircraft, trucks, and railcars for deployment, including hazardous materials certification.

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- (2) Preparation of packing lists.
- (3) Marking of containers.
- (4) Preparation of transportation control and movement document (TCMD) (DD Form 1384).
- (5) Preparation of personnel manifests as required by the Air Mobility Command (AMC).
- (6) Blocking, bracing, packing, crating, and tie-down.

(a) Computation of hospital BBPCT requirements for both air and sea deployment. Have requirements validated by the transportation support activity and place a job order for BBPCT.

(b) Computation of supplemental packing and crating requirements and, if required, submit appropriate request to the USAF for those requirements that cannot be met. This request should be for fabrication of supplemental packing and crating for—

1. Air deployment.
2. Rail deployment.
3. Surface (sea) deployment.

(c) Maintaining supplemental packing and crating items.

- (7) Determining center of gravity and marking vehicle and cargo loads.
- (8) Loading vehicles for both air and/or sea deployment, as appropriate.

(9) Preparation of movement documents for items requiring special handling and packing and hazardous materials certification.

c. Review with the Installation Transportation Officer, Port Support Activity, or Arrival/Departure Airfield Control Group, the support requirements for the following areas:

- (1) Preparing, packing, and marking loads.
- (2) Augmenting vehicle requirements to support movement to POE and other transportation requirements.
- (3) Providing MHE support to assist in loading.
- (4) Load team and driver team requirements.
- (5) Application of Logistics Application of Automated Marking and Reading Symbols (LOGMARS) labels.

- (6) Operation of marshaling area at POE.
- d.* Prepare hospital movement plans to include—
 - (1) Convoy or move to POE.
 - (2) Logistical support of hospital elements at POE.
 - (3) Guard personnel and equipment at POE.
 - (4) Handling of hazardous and special cargo and preparation of necessary certificates.
 - (5) Preparation of equipment and items which use or store combustibles; that is, generators, water heaters, and so forth for shipment.

O-21. Miscellaneous Logistics

- a.* Develop guidance and plans for the establishment of a rear detachment, to include transfer of property and signature cards (DA Form 1687).
- b.* Establish procedures to terminate all signature cards and authorizations on departure of the last hospital element.
- c.* Personal property.
 - (1) Ensure proper disposition of civilian clothing and personal property.
 - (2) Have on hand or on order sufficient C-boxes and inventory forms for packing and storing of personal items that cannot be disposed of by the individual.
 - (3) Train supply personnel in inventorying, packing, marking, and transferring personal property.
- d.* Billeting.
 - (1) Advise personnel who reside in bachelor officers' quarters (BOQ), bachelor enlisted quarters (BEQ), or off-post housing of necessary termination and clearance procedures on notification of deployment.
 - (2) Prepare a listing of personnel who will have their basic allowance for quarters (BAQ) terminated upon deployment.
- e.* Provide personnel with a list of personal comfort items that should be obtained and a list of prohibited items based upon projected deployment locations, local customs and religion, and PVNTMED guidance.

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f. Establish a list of personal support items to be obtained based upon projected deployment locations, such as lip balm, bug repellent, sunscreen, and mosquito netting.

g. Real property facilities.

(1) Maintain a current roster of real property facilities (RPF) managers for all RPF assigned to the hospital.

(2) Identify interim RPF managers who will not deploy and will assume accountability for assigned RPF.

O-22. Contracting

Notify the contracting activity of the anticipated termination date of any supply or service support provided by civilian contractors.

Section IV. PERSONNEL CHECKLIST—DEPLOYMENT

O-23. Personnel and Administration

a. Upon notification of deployment, recall all personnel, including those on leave, special duty, and temporary duty (except MOS-producing schools).

b. Coordinate with higher headquarters for PROFIS personnel. The PROFIS is met primarily through the designation of officers and enlisted personnel within the MEDCOM to meet AMEDD professional filler requirements (see AR 601-142).

c. Submit personnel status report.

d. Conduct final SRP processing. Identify nondeployable personnel and initiate procedures for reassignment and/or separation.

e. Have unit records management coordinator assist the officer in charge at the POR processing site.

f. Clear nondeployable personnel from the hospital after final POR. Return their records and update the personnel roster.

g. Following final POR, receipt for medical and dental records. Pack them in boxes to accompany the hospital. Personnel records will remain at the installation for 90 days pending determination of where to ship them. Dental records (necessary for identification of remains) will not be transported on the same vessel or airplane as soldiers.

O-16

- h.* Ensure that a set of DA Form 3955 accompanies the hospital for filing at the postal activity in the AO.
- i.* If not initiated, submit DA Form 17 for publications and blank forms.
- j.* Pack files, publications, and blank forms that will accompany the hospital. Retire or destroy remaining files. Turn in excess publications and blank forms.
- k.* Carry copies of the movement orders with the hospital.
- l.* Carry a copy of the current enlisted promotion list with the hospital.
- m.* Ensure that personnel are cleared of post activities; follow up on discrepancies.
- n.* Conduct safety orientation for all unit personnel regarding the deployment operation.
- o.* Orient personnel on the Status of Forces Agreement in the AO.
- p.* Conduct personal affairs briefing in accordance.
- q.* Close unit morale support fund account and dispose of fund property.
- r.* Arrange for emergency financial assistance of hospital personnel, as needed, with Army Emergency Relief and Red Cross, or other appropriate agencies.
- s.* Inform the installation postal officer, in writing, of the day and time of the last postal pick up; provide the postal officer a copy of the movement orders.
- t.* Initiate action to terminate separate rations as of the day the hospital departs the installation.
- u.* Turn in recreational services clothing and equipment except for items accompanying the hospital.

O-24. Medical

- a.* Ensure convoy and serial commanders know the sources and methods of obtaining emergency medical support while en route and at the POEs.
- b.* Identify medical personnel to provide EMT during convoy and stationary operations. Ensure that enough air bags, litters, and other equipment are set aside for their support.
- c.* Identify evacuation and medical treatment support (usually on an area basis) for each stage of deployment and movement.

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O-25. Discipline, Law, and Order

a. Have soldiers' POVs placed in temporary storage or ensure that other suitable arrangements have been made for disposal or upkeep. For POVs temporarily stored on the installation, have soldier provide power of attorney authorization to a responsible individual to pick up the vehicle, or have the soldier arrange for long-term commercial storage at his own expense.

b. Report assigned personnel who are absent without leave.

c. Prepare for disposition of privately owned weapons stored in the unit arms room.

d. Implement plans for storage and/or care of POVs, firearms, pets, and other personal property.

O-26. Religion

Ensure that religious services are available to all personnel.

O-27. Legal

a. Contact the Office of the Staff Judge Advocate to ensure all personnel are able to consult an attorney concerning powers of attorney, wills, and other personal legal matters. Coordinate with the Office of the Staff Judge Advocate for legal support to soldier readiness processing operations.

b. Consult the servicing Trial Counsel at the Office of the Staff Judge Advocate concerning pending investigations and disciplinary actions. Appropriate arrangements must be made to dispose of disciplinary actions and to ensure the availability of testimony for investigations and hearings from persons who will deploy.

c. Contact the Office of the Staff Judge Advocate to request training and legal briefings before deployment on such areas as applicable rules of engagement, Standards of Conduct, Code of Conduct, law of war (appropriate portions of the Hague Regulations and Geneva Conventions), Status of Forces Agreements, and any unique laws in the countries of deployment which may impact operations (any entry and exit requirements, status of deployed personnel, local traffic and criminal laws, and so forth).

O-28. Public Affairs

a. Keep hospital personnel apprised of the current overall emergency situation requiring the mobilization and deployment.

b. Apprise personnel of any operational changes to the hospital's mission.

c. Brief personnel on their eventual AO.

O-18

- d.* Use the hometown news release program, if warranted.
- e.* Continue coordination with installation.
- f.* Continue command information program throughout the period of mobilization and deployment.

Section V. OPERATIONS CHECKLIST—DEPLOYMENT

O-29. Operations

- a.* Conduct overseas orientation.
- b.* Report attainment of deployability posture in accordance with FORSCOM emergency action procedures and installation EOC policies and procedures.
- c.* Monitor hospital SRP operations, and provide guidance and assistance, as required.
- d.* Prepare appropriate plans and orders.
- e.* Coordinate hospital movement.
- f.* With the approval of the hospital commander, appoint an officer or NCO as rear detachment commander.

O-30. Security and Intelligence

- a.* Review the personnel security status to ensure sufficient numbers of personnel are properly cleared consistent with mission requirements, to include classified material escort responsibilities.
- b.* Ensure appropriate personnel are familiar with the duties and responsibilities in conjunction with classified movement and shipment, if applicable.
- c.* Initiate censorship education program.
- d.* Conduct OPSEC program.
- e.* Prepare briefing for unit personnel to be conducted when movement is imminent. Briefing will include, but not be limited to, the following:
 - (1) Dissemination of movement data on a need-to-know basis.
 - (2) Procedure for handling movement documents.

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- (3) Procedures for handling classified material in transit.
- (4) Subversion and Espionage Directed Against US Army.
- (5) Procedures for classified moves.
- f.* Ensure all personnel, including fillers, are briefed on OPSEC practices.
- g.* Brief command and staff personnel on the nature of the threat's EW/signals intelligence capabilities.
- h.* If sealed-off staging areas are used—
 - (1) Establish strict security.
 - (2) Enforce blackout camouflage.
 - (3) Conduct mission briefings at the latest possible time prior to out-loading.
 - (4) Restrict briefed personnel to sealed-off area.
 - (5) Establish and enforce controlled pass procedures.
 - (6) Monitor and control telephone use.
 - (7) Ensure personnel hospitalized or confined during staging are isolated until public announcement of the operation.
 - (8) Collect letters and other personal mail and place in sealed mailbags until public announcement of the operation.
- i.* Identify classified documents that will not accompany the hospital.
- j.* Ensure timely transfer or destruction of classified material not to accompany the hospital.
- k.* Review plans for the conduct of a CI inspection of the area upon departure.
- l.* Review plans for the return of cryptographic material, not accompanying the hospital, to the office of record or issue; transfer as appropriate.
- m.* Ensure all plans contain OPSEC and CE security planning considerations.
- n.* Plan for the distribution of maps and related topographical materials.
- o.* If deploying from a civilian port, forward request for port security to US Army Intelligence and Security Command through appropriate channels.

Section VI. LOGISTICS CHECKLIST—DEPLOYMENT

O-31. Subsistence

- a.* Draw unit basic load of rations and store with TAT cargo.
- b.* Draw rations to support deployment (3 days for Army pre-positioned stocked units, 5 days for non-Army pre-positioned stocked units) and load in a readily accessible manner.
- c.* Arrange subsistence support to any portion of the unit that will not accompany the main body.
- d.* For hospitals operating their own dining facility—
 - (1) Close out all accounts and hand receipts.
 - (2) Turn in or transfer all unused rations and condiments.
 - (3) Make arrangements to subsist assigned personnel at another activity from the closure of the dining facility until deployment.
- e.* For hospitals supported at another activity's dining facility—
 - (1) Make arrangements with the supporting facility for final turn in of meal cards.
 - (2) Coordinate with supporting dining facility for the release of deploying food service personnel.
- f.* Submit the necessary paperwork to the finance office to terminate basic allowance for subsistence for any personnel receiving it; arrange to subsist personnel on the termination of their basic allowance for subsistence.

O-32. Supplies

- a.* Pack the hospital's 15-day supply of expendables with TAT cargo.
- b.* Report significant shortfalls in expendable supplies to the supporting element.
- c.* Report shortfalls in individual clothing items to the supporting element.
- d.* Report shortfalls in organizational clothing and equipment to the supporting element.
- e.* Report shortfalls in tools and/or test equipment to the supporting element.
- f.* Close out all station property accounts.

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g. Close out SSSC account, and complete credit and turn in.

h. Ensure that coordination has been completed with the installation DODAAC coordinator for contingency DODAACs, split-base operations and deployments, change of addresses and unique tasked force structure requirements (AR 710-2).

O-33. Ammunition

a. Draw basic load of ammunition; include in the TAT cargo load plans.

b. Draw necessary ammunition to guard equipment during deployment.

O-34. Major End Items

a. Turn in all excess items and other equipment not accompanying the hospital.

b. Pick up all incoming items of equipment on the property records.

c. Report shortages to the EOC and the supporting element.

O-35. Medical Items

a. Ensure all medical items and supplies are received and included in the loading plans.

b. Report shortages to the EOC and the supporting element.

c. Ensure that all medical supplies requiring special handling (paragraph O-16f) are on hand and included in the loading plans.

d. Ensure all required medical equipment support kits are on hand or on order.

O-36. Repair Parts

a. Adjust PLL to reflect any equipment increases and expected increased utilization; have PLL at 100 percent fill; if not, report critical shortage to the supporting element.

b. Prepare loading plans that place the PLL in a readily available location.

O-37. Maintenance

a. Complete calibration.

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- b. Close out direct support and general support job orders at the maintenance support facility.
- c. Conduct inspection of vehicles and other major end items to ensure that they are ready for deployment. Take corrective action as required.
- d. Complete equipment records for newly received equipment according to DA Pam 738-750.
- e. Have unit mechanics available to support convoy moves to the POE. Arrange for toolboxes.
- f. Arrange for recovery support, both internal and external, and address in the movement plans.
- g. Maintain floats for those that cannot be taken out of support maintenance.

O-38. Transportation

Transportation planning and requirements represent the most detailed and transient elements of the deployment process. As a result, a complete checklist of all possible requirements would be too bulky for meaningful use by the commander. Therefore, the commander and the unit movement coordinator must be thoroughly familiar with FORSCOM and installation mobilization requirements. Presented below are major topics that are common to the various modes of deployment.

- a. *General.*
 - (1) Configure unit vehicle loads for air and/or sea deployment, as appropriate.
 - (2) Mark all vehicles, crates, and pallets as required.
 - (3) Have all vehicles clean and free from leaks and seeps.
 - (4) Have fuel pods and bladders prepared and certified.
 - (5) Mark all TAT cargo with 3-inch red or yellow disk and stencil "TAT" on the disk.
 - (6) Prepare packing lists (DD Form 1750).
 - (7) Designate armed guards for classified and sensitive cargo.
- b. *Blocking, Bracing, Packing, Crating, and Tie-Down.*
 - (1) Determine, in coordination with the appropriate office, specific BBPCT requirements for deployment based on actual personnel and equipment for movement; actual method of movement; equipment for movement; and POE.
 - (2) Request any necessary BBPCT support from the USAF. The request should identify—

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(a) The location of the POE at which the support is required.

(b) The date and time which hospital personnel will report to the POE, and the date and time they will depart (deploy).

(3) Request any packing and crating support necessary to supplement organic assets for sealing previously fabricated supplemental packing items.

(4) Provide space in the unit area for packing and crating operations.

(5) Deliver equipment and supplies to the designated packing and crating base of operations.

(6) Maintain a packing list for each box packed.

(7) Provide sufficient trained teams to execute rail, air, and sea loading operations. Type team is dependent upon specified method of deployment.

c. *Convoy Operations.*

(1) Submit road clearances (DD Form 1265) and oversized cargo clearance (DD Form 1266) to the supporting transportation element for unit moves to POE.

(2) For movement to seaport POE—

(a) Provide convoy and serial commanders with strip maps, EMT and emergency maintenance instructions, and other points of contact.

(b) Coordinate and finalize billeting and messing arrangements for drivers.

(c) Ensure priority for unit recovery capability is given to POE convoy.

(3) Allocate maintenance personnel to each convoy to assist in final preparation of vehicles for loading.

(4) Brief each serial commander on refueling and defueling requirements.

(5) Arrange, as required, for civilian or military escort.

d. *Forms.*

(1) Have TCMDs (DD Form 1384) completed; one form for each vehicle or other exterior container.

(2) Have load plans completed for each vehicle; load plans will reflect necessary last minute adjustments.

- (3) Submit request to AMC for personnel being air transported.
- (4) Prepare required forms for hazardous cargo to be airlifted.
- (5) Prepare DA Form 2940-R for vehicles, trailers, MILVANS, pallet loads, or other exterior shipping containers.
- (6) Prepare aircraft load plans as required by Military Airlift Command.

O-39. Miscellaneous Logistics

- a.* Finalize support arrangements for rear detachment, if required.
- b.* Have all supply and maintenance accounts closed out and signature cards canceled.
- c.* Notify the appropriate activity, in writing, of the termination date of any contract that provides supplies or services.
- d.* Billeting.
 - (1) All personnel in BOQ or BEQ will clear quarters.
 - (2) Notify finance of the cutoff date for BAQ for all single personnel.
 - (3) Brief dependent families on family quarters policies and procedures.
 - (4) All personnel residing off-post will either terminate their leases or make other suitable arrangements.
- e.* Secure personal property.
 - (1) Inventory and pack personal property.
 - (2) Provide soldiers with a copy of the personal property inventory.
 - (3) Transfer all personal property to the supporting transportation element.
- f.* Real property facilities.
 - (1) Request termination of assigned RPF.
 - (2) Request designation of interim RPF manager through command channels.
 - (3) Transfer accountability for RPF to the interim RPF manager prior to deployment.

Section VII. REDEPLOYMENT/DEMobilIZATION

Redeployment and demobilization activities are essentially the same functions as those involved in mobilization and deployment. The procedures are similar, whether the CSH is redeploying to its point of origin (home station) or to another AO. Redeploying a CSH will normally do so in the same manner in which they mobilized and deployed. Field Manuals 3-35.5 (100-17-5) and 100-17, JP 4-05, and ARTEP 8-855 (MRI)-MTP describes in detail redeployment demobilization procedures (see Chapter 4). Redeployment/demobilization activities will ensure that all soldiers complete the Postdeployment Health Assessment Form (DD Form 2796, see Appendix N). A copy of this form will go in the individual's medical record and a copy will be sent to AMSA in accordance with Joint Staff Memorandum MCM 0006-02 and DODI 6490.3.

APPENDIX P

LAW OF WAR OBLIGATIONS FOR MEDICAL PERSONNEL**P-1. Law of War***a. Sources.*

(1) Sources for the law of war obligations of the US are treaties ratified by the US. As such, they are part of the supreme law of the land. The US is obligated to adhere to these treaty obligations even when an opponent does not. It is the policy of the DOD and the US Army to conduct its military operations in a manner consistent with these treaty obligations.

(2) In the area of HSS, the law of war sources are the Geneva Conventions for the Protection of War Victims of 12 August 1949. Questions regarding implementation and interpretation of these treaties should be directed to the command judge advocate, or to the Office of the Judge Advocate General of the Army.

b. Geneva Conventions. The four 1949 Geneva Conventions are as follows:

(1) *Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in the Armed Forces (GWS)*. This convention provides for the protection of Armed Forces personnel who are wounded and sick on the battlefield. It requires States Parties to a conflict to take all possible measures to search for and collect the military wounded and sick; to protect them against pillage and ill treatment; to ensure their adequate care; and to search for the military dead. It also provides for the protection of AMEDD personnel. The GWS is the primary source for the obligations set forth in this appendix.

(2) *Geneva Convention for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of the Armed Forces at Sea (GWS [Sea])*. This treaty extends the guarantees of the GWS for wounded, sick or shipwrecked military personnel at sea. Once those personnel are placed on land, the GWS provisions apply.

(3) *Geneva Convention Relative to the Treatment of Prisoners of War (GPW)*. This treaty provides protection for military personnel who fall into enemy hands. Captured military wounded and sick remain prisoners of war during their recovery from their wounds or sickness, and for the duration of their captivity.

(4) *Geneva Convention Relative to the Protection of Civilian Internees in Time of War (GC)*. The convention provides for the protection of civilians in the hands of enemy military forces, or who are in enemy-occupied territory. It also sets forth standards for their medical care.

P-2. Medical Implications of Geneva Conventions

a. Provisions for Collection of Wounded and Sick. Provisions must be made for the collection and treatment of military wounded and sick personnel, whether friend or foe. Only urgent medical reasons may determine priority in the order of treatment to be administered. This means that military wounded or sick enemy personnel may require treatment before military wounded US or allied personnel. The principle

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of triage is consistent with this obligation. For military wounded or sick enemy military personnel, a dual responsibility exists—custodial and medical. The custodial activity of guarding military wounded or sick EPW should be carried out by assets other than AMEDD personnel. The echelon commander will designate nonmedical units to act as guards when EPW are in medical channels.

b. Accountability and Custody of Enemy Prisoners of War. Enemy prisoners of war or retained personnel (RP) evacuated through medical channels must be identified and their accountability established prior to evacuation per appropriate TSOP. Sick, injured, and wounded EPW or RP may be evacuated through normal medical channels, but segregated from US and allied personnel. They may also be evacuated through dedicated or task-organized evacuation assets, particularly in rear areas where they are likely to be moved in a group.

c. Responsibility for and Handling of Prisoners of War. The US Army is responsible for the care and treatment of EPW and RP Army units capture, and for EPW/RP captured by other US Services or allies upon their transfer to Army custody. Below brigade level, EPW/RP are handled by combat troops who bring them to the forward or brigade collecting points. Subject to the tactical situation and available resources, EPW/RP wounded, injured, or sick will be evacuated from the CZ as soon as possible. Only those injured, sick, or wounded EPW/RP who would run a greater health risk by being immediately evacuated may be temporarily kept in the CZ. When intelligence sources indicate that large numbers of EPW/RP may result from an operation, medical units may require reinforcement to support the additional EPW/RP patient workload. In this case, the care of wounded, injured, and sick EPW/RP becomes a joint matter between the ground combat commander and the medical commander. For a more detailed discussion on the administration, handling, treatment, and identification of EPW/RP, see AR 190-8.

d. Identification and Protection of Medical Personnel.

(1) Personnel exclusively engaged in the performance of medical duties in connection with the wounded, injured, or sick in medical units or establishments may wear, affixed to the left arm, a water-resistant brassard/armband bearing the distinctive emblem (a red cross on a white background) prescribed by GWS and GWS (Sea). The wearing of brassards/armbands will be at the discretion of the tactical commander in far forward areas.

(2) Medical personnel as identified in paragraph (1) are to carry a special identity card, DD Form 1934 (*Geneva Conventions Identity Card for Medical and Religious Personnel Who Serve in or Accompany the Armed Forces*), issued to all persons qualifying as protected medical personnel (see AR 600-8-14). This special identification card will be carried in addition to their regular identification card.

(3) Enemy military personnel meeting the definition of medical personnel contained in paragraph (1) who are captured are considered RP and not EPW. They will receive the benefits and protection afforded them by the GWS and GPW. They may be required to treat injured, wounded, or sick EPW/RP. United States medical personnel or medical units that are captured may be required to do likewise, continuing to provide medical support for injured or sick US or allied prisoners of war/RP while in captivity. In such a situation, this probably would be a primary source of treatment for US prisoners of war and RP, although enemy wounded could be treated also.

(4) Personnel protected as medical personnel under the GWS must be *exclusively engaged* in medical duties or administration of medical units. This includes all military personnel permanently assigned to a medical unit and exclusively engaged in its mission, including cooks, mechanics, drivers, or administration personnel. Performance of any activity inconsistent with this mission removes the protection, and the DD Form 1934 must be withdrawn. For example, if an ambulance driver is tasked with driving an unmarked tactical vehicle forward with ammunition prior to evacuating casualties, he would not be exclusively engaged in medical duties and would not be entitled to continued classification as *medical personnel*.

e. Self-Defense.

(1) Medical personnel may carry small arms for personal defense of themselves and defense of their patients. This does not mean that they may resist capture or otherwise fire on the advancing enemy. It means that, if civilians or enemy military personnel are attacking and ignoring the marked medical status of medical personnel, medical transportation or the medical unit, the medical personnel may provide self-protection. If an enemy force merely seeks to assume control of a military medical facility or a vehicle for the purposes of inspection and without firing on it, the facility or vehicle may not resist.

(2) Medical personnel are entitled to carry defensive small arms only. By Army policy these are defined as service rifles (M-16) and pistols (M9 or M11).

(3) An overall defense plan may not require medical units to take offensive or defensive action against enemy troops at any time. If a medical force is part of a defensive area containing nonmedical units, medical personnel may not be responsible for manning part of the overall perimeter. If located in isolation, the medical unit may provide its own local and internal security if other support is not available. However, a medical unit may not be defended from capture or inspection by enemy forces by military police or other soldiers acting as pickets.

(4) If medical personnel fire on enemy troops or otherwise abuse their protected status by engaging in acts harmful to the enemy, they may be attacked. It is also possible that such a violation could result in an allegation of violation of the law of war by the capturing force. For example, if an enemy force was advancing on a marked medical facility and medical personnel within the facility then took advantage of their protected status to fire at the enemy, the enemy forces would be entitled to return fire and medical personnel subsequently captured may be charged with a violation of the law of war. Under the law of war, this action would constitute an act of perfidy. It would be akin to firing on enemy soldiers while bearing a flag of truce.

This paragraph implements STANAG 2931.

f. Marking of Medical Units/Facilities and Transportation.

(1) *Medical units and facilities.*

(a) The distinctive emblem (red cross on a white background) provided in the GWS and GWS (Sea) for medical units, facilities, and transportation shall be displayed only over such medical

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units and facilities (except veterinary) as are entitled to be respected under the conventions, subject to the authorization of the tactical commander of a brigade-size or larger unit. The marking of facilities and the use of camouflage are incompatible and should not be undertaken concurrently. The camouflage of medical units is regulated by ARs and also, in the European theater, by NATO STANAG 2931. It is not envisioned that fixed, large medical facilities will be camouflaged. The medical commander must be aware of who has the authority to order camouflage and its duration. The camouflage of medical facilities is one of the more difficult issues to reconcile with operational necessities. The problem has been present in past wars but now is more critical due to the ability of intelligence assets to see deep into the rear AO. If the failure to camouflage endangers or compromises the tactical mission, the camouflage of medical facilities may be ordered by a NATO commander of at least brigade level or equivalent. Such an order is to be temporary and local in nature and is rescinded as soon as circumstances permit.

(b) The camouflage of a medical unit does not deprive it of its protected status. However, an enemy force is not required to forego an attack on a camouflaged facility unless it recognizes it as a medical facility. The use of defensive arms by medical personnel at a camouflaged site attacked by ground maneuver forces is not authorized unless the actions of the attacking forces clearly are illegal rather than the result of mistaken identity. Medical personnel should attempt to make the attackers aware of their status rather than fighting back.

(c) If medical facilities are used to commit acts harmful to the enemy, the protection of those facilities may be withdrawn if the acts are not stopped after warning. This might be the case where a facility is used as an observation post or if combat information was reported or relayed through the facility.

(2) *Medical transportation.*

(a) Standard air and ground ambulances should be marked with the distinctive emblem when performing medical missions. Medical transportation may not bear the distinctive emblem if and so long as it is used for nonmedical missions. Fighting vehicles, such as a tank, are not entitled to bear the distinctive emblem even when used for battlefield evacuation. However, aviators and drivers with status as medical personnel may not perform nonmedical tasks without risk of loss of their medical personnel status. As such, the policy that benefits the mission to the greatest degree is to use air and ground medical transportation exclusively for medical tasks.

(b) Crew-served weapons may not be mounted on ambulances or air ambulances, even if mounting brackets are present.

(c) Vehicles other than fighting vehicles (such as tanks) may be used in a dual role, moving wounded to the rear bearing removable distinctive emblems. However, the distinctive emblems must be removed before nonmedical tasks are attempted. Care must be taken so that the protection provided by the distinctive emblem is not abused.

(d) The protection provided medical aircraft bearing the distinctive emblem extends only to areas in which it is entitled to operate due to the absence of enemy forces or, if enemy forces are present, with the consent of enemy forces. If the latter, medical aircraft may operate only at such times and on such routes for which there is agreement, and medical aircraft must land to be searched if summoned to

do so by enemy forces. Failure to respond to a summons to land may entitle the enemy to attack the aircraft. Medical aircraft may be used for combat search and rescue (CSAR) missions if all vestiges of its medical aircraft status, such as the distinctive emblem, are removed for the duration of the CSAR mission. In such cases, it would not be operating as a medical aircraft but as a military aircraft. The legal prohibition is not on the use of an aircraft normally dedicated to medical missions, but on use of its status as a medical aircraft during any CSAR mission. If used for CSAR missions, military aircraft are not entitled to protection from enemy attack.

g. Civilians—Wounded and Sick. Civilians who are injured, wounded, or become sick as a result of military operations may be collected and provided initial medical treatment in accordance with theater policies. If treated, treatment will be on the basis of medical priority only. If treated, they shall be transferred to appropriate civil authorities as soon as possible. The echelon commander and medical unit commanders jointly exercise responsibilities for custody and treatment of the sick, injured, or wounded civilian personnel. Enemy civilians detained by US forces are entitled to military medical care during their detention. Treatment will be on the basis of medical priority only.

h. Captured Medical Supplies and Equipment. Because medical supplies and equipment captured from the enemy are considered neutral and protected, they are not to be intentionally destroyed. If these items are considered unfit for use, or if they are not needed for US and allied forces, noncombatants, or EPW patients, they may be abandoned for enemy use. Since captured medical personnel are familiar with their medical supplies and equipment, the captured items are especially valuable in the treatment of EPW. Use of these captured items for EPW and the indigenous population helps to conserve other medical supplies and equipment. When the capture of US medical supplies and equipment by enemy forces is imminent, these items are not to be purposely destroyed. Every attempt must be made to evacuate them. Those items that cannot be evacuated should be abandoned; however, such abandonment is a command decision.

P-3. Compliance with the Geneva Conventions

a. As the US is a signatory to the Geneva Conventions, all medical personnel should thoroughly understand the provisions that apply to HSS activities. Violation of these Conventions can result in the loss of the protection afforded by them. Medical personnel should inform the tactical commander of the consequences of violating the provisions of these Conventions.

b. Outright violations of the Geneva Conventions result when—

- Medical personnel are used to man or help man the perimeter of nonmedical facilities, such as unit trains, logistics areas, or base clusters.
- Medical personnel are used to man any offensive-type weapons or weapons systems.
- Medical personnel are ordered to engage enemy forces in other than self-defense, or in the defense of patients and MTFs.

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- Crew-served weapons are mounted on a medical vehicle.
 - Mines or booby traps are placed in and around medical units and facilities.
 - Hand grenades, light antitank weapons, grenade launchers, or any weapons other than rifles and pistols are issued to a medical unit or its personnel.
 - The site of a medical unit is used as an observation post, a fuel dump, or an ammunition storage site.
- c.* Possible consequences of violations described in *b* above are—
- Loss of protected status for the medical unit and personnel.
 - Medical facilities attacked and destroyed by the enemy.
 - Medical personnel being considered prisoners of war rather than retained persons when captured.
 - Health service support capabilities are decremented.
- d.* Other examples of violations of the Geneva Conventions include—
- Making medical treatment decisions for the wounded and sick on any basis other than medical priority, urgency, or severity of wounds.
 - Allowing the interrogation of enemy wounded or sick even though medically contraindicated.
 - Allowing anyone to kill, torture, mistreat, or in anyway harm a wounded or sick enemy soldier.
 - Marking nonmedical unit facilities and vehicles with the distinctive emblem or making any other unlawful use of this emblem.
 - Using medical vehicles marked with distinctive Geneva emblem for transporting nonmedical troops, equipment, and supplies.
 - Using a medical vehicle as a tactical operations center.
- e.* Possible consequences of violations described in *d* above are—
- Criminal prosecution for war crimes.
 - Reprisals taken against our wounded in the hands of the enemy.

- Medical facilities attacked and destroyed by the enemy.
- Medical personnel being considered prisoners of war rather than RP when captured.

APPENDIX Q

EXAMPLE OF HOSPITAL LAYOUT

This appendix provides an example of a hospital layout for the 44-bed, 84-bed, 164-bed and 248-bed configurations. The example layouts support modular deployment and split-base operations. The examples support hospital incremental deployment and relocation with minimal disruption of hospital operations. The layouts support hospital operations in a contaminated environment.

a. The 84- and 164-bed configuration can be deployed independently of one another or be combined to make a 248-bed hospital. An example of a 44-bed/84-bed hospital company layout is shown in Figure Q-1 (page Q-2). An example of a 164-bed hospital company is shown in Figure Q-2 (page Q-3). Figure Q-3 (page Q-4) gives a recommended 248-bed hospital layout. The actual layout of the hospital is contingent upon the METT-TC factors and guidance provided by the hospital commander.

b. The corps and EAC CSHs are very similar in design (see Figures 2-4 through 2-7 and paragraphs 2-4*f* and 4-6*a–b*). With minor adjustments, Figure Q-1 can be used as the basis for the layout of the EAC CSH. The EAC CSH has no split-base capability.

c. When issued collective protection (CP) equipment, the CSH will be capable of establishing the chemical and biological protected shelter system for operation in a contaminated environment. Hospitals are issued CP equipment at the time of deployment. The hospital commander, in coordination with the theater surgeon, must make the decision whether or not CP equipment will be installed when the hospital is initially being set up. If not installed when the hospital is initially being set up, the hospital complex would have to be struck and reset up with the CP equipment. Refer to FM 4-02.7, TM 10-8340-224-13, and TM 10-8340-224-23P for establishment and operational procedures.

d. Issue of CP equipment will require additional transportation support. Additional generators will be issued with the CP equipment. The following are additional requirements to operate in a CP mode:

- The 84- and 164-bed adds two patient processing units (48' TEMPER), one CB latrine (3:1 ISO), one water tent (32' TEMPER), and a supply airlock (16' TEMPER).
- The 248-bed MRI adds two patient processing units (48' TEMPER), two CB latrines (3:1 ISO), two water tents (32' TEMPER), and a supply airlock (16' TEMPER).

e. The hospital will set up and locate the patient decontamination area at least 30 to 50 yards downwind of the hospital.

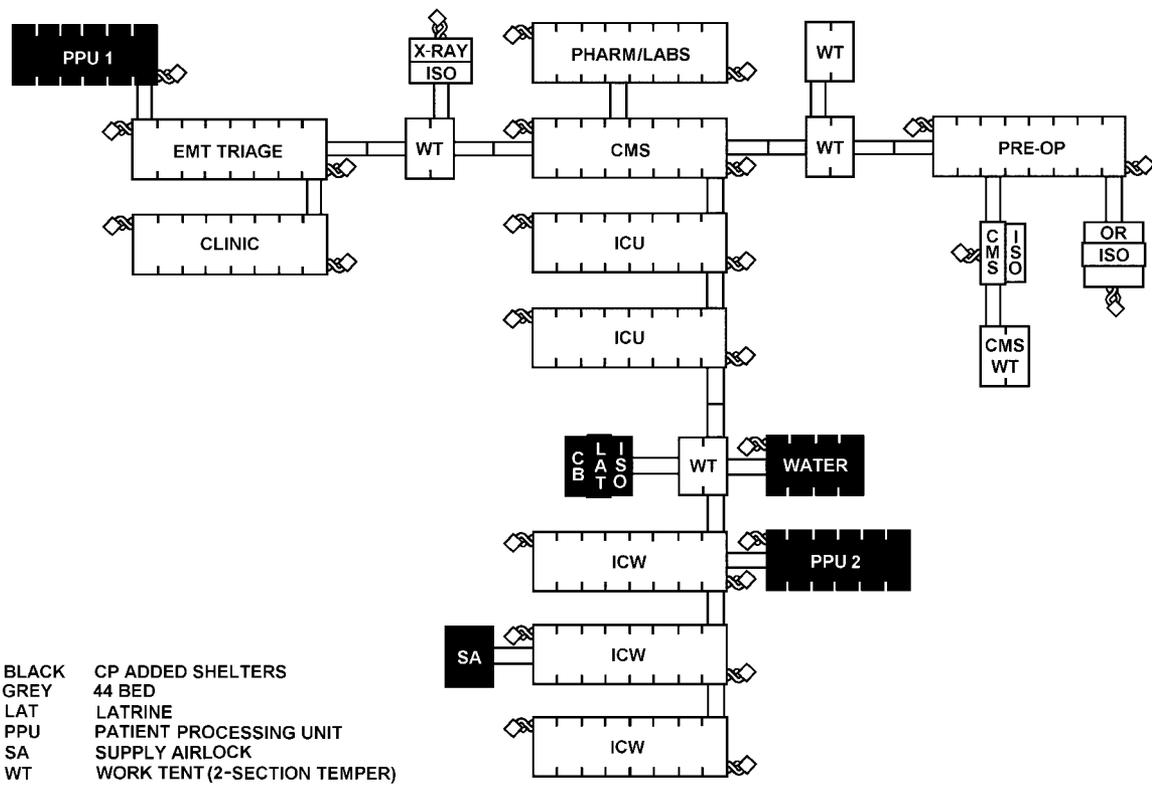


Figure Q-1. Example of a combat support hospital 44-bed/84-bed hospital company layout.

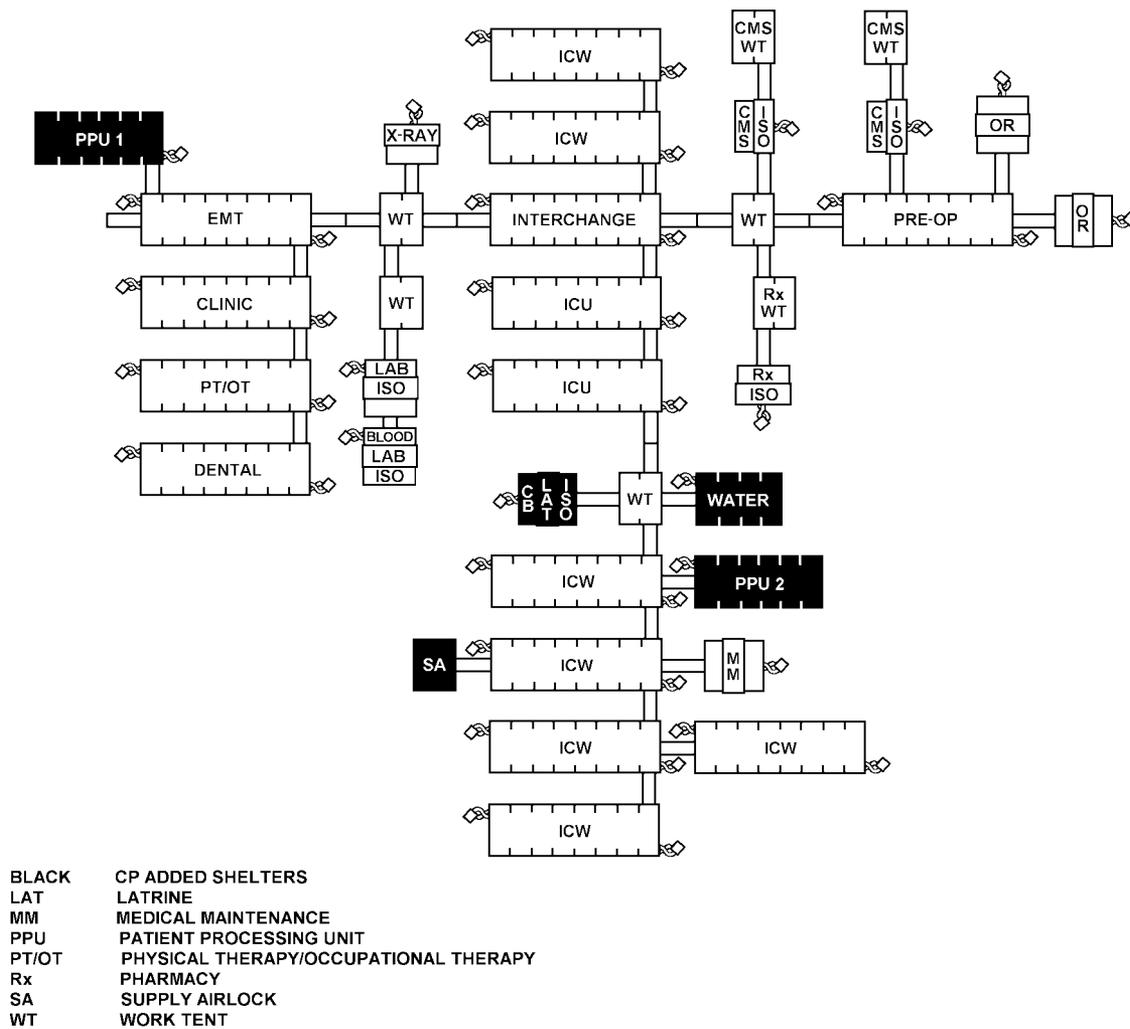


Figure Q-2. Example of a combat support hospital 164-bed hospital company layout.

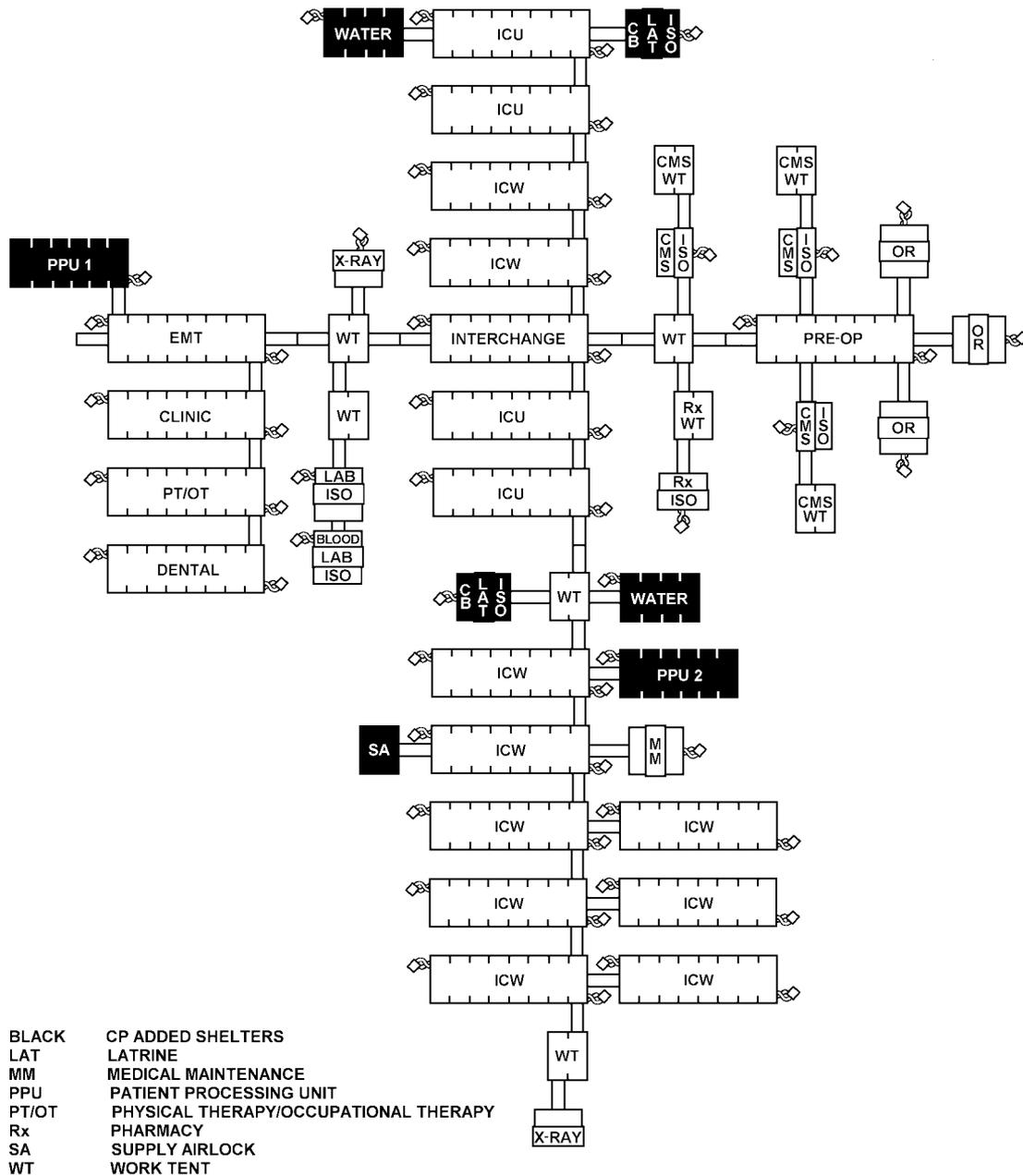


Figure Q-3. Example of a combat support hospital (248 bed) layout.

APPENDIX R

STAKING PLAN AND LAYOUT**R-1. General**

a. There are many variations in which a DEPMEDS hospital can be complexed. As previously stated, the commander has the final approval as to how the hospital will be laid out. This section provides specific dimensional criteria and instructions to ensure the proper alignment of TEMPERs and ISOs.

b. Six sets of dimensions are critical for complexing DEPMEDS hospitals. These dimensions provide for connecting the various shelters, passageways, and vestibules.

- (1) The TEMPER door panel to an ISO side closeout panel.
- (2) The ISO side closeout panel to an ISO end closeout panel.
- (3) The ISO end closeout panel to a TEMPER endwall door.
- (4) The TEMPER side door panel to a TEMPER side door panel.
- (5) The TEMPER endwall door to an ISO side closeout panel.
- (6) The TEMPER endwall door to a TEMPER endwall door.

R-2. Starting Point

You know what is to be set up, and you have a rough drawing of the complex. Where are you going to start? For an example, we are going to explain the setup of the complex shown in Figure R-1. Our starting point will be the eight-section TEMPER marked 1. The starting point may be any shelter you desire. The only criteria are that it be as near the center of the complex as possible. The shelter in Figure R-1 could be the EMT/triage MMS. We will stake the shelters in the order shown in Figure R-1.

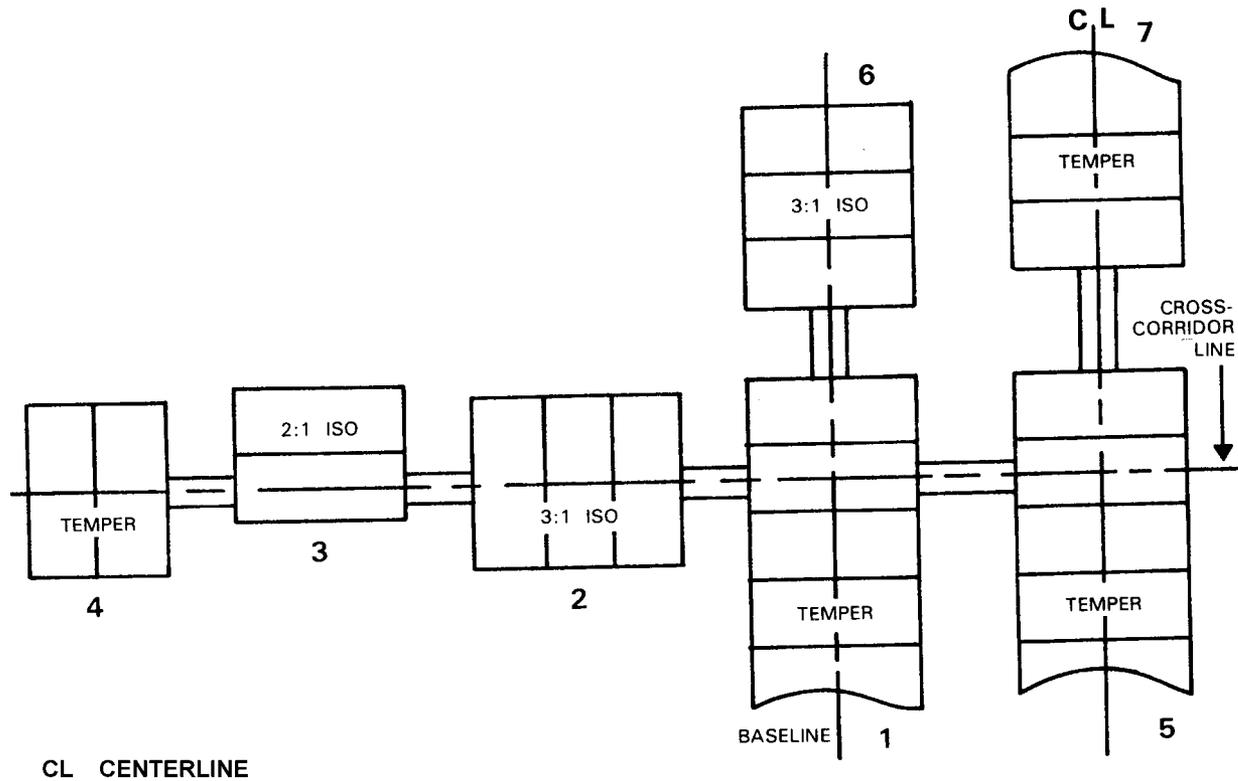


Figure R-1. Deployable Medical System complex.

R-3. Baseline

Establish a baseline by physically placing a strip of engineer tape on the ground (see Figure R-2). This strip of tape should run the entire length of your planned complex. Notice that the baseline in Figure R-1 runs through the center of an eight-section TEMPER and a 3:1 ISO.

R-4. Control Point

Establish a control point (Stake A) and mark it on the baseline (see Figure R-2). Use a stake, can lid, or other material to mark this or any other point. Our only suggestion is that the marker be something that can readily be identified. All of the measurements on the baseline will be made from this control point.

R-5. Cross-Corridor Point

When completed, your hospital will be a complex of ISOs and TEMPERs, joined by corridors. The corridors are marked as cross-corridor points in Figure R-2. Referring to the figure, notice that the cross-corridor point on the baseline is 52 feet from the control point. There are two reasons for this. First, the cross-corridor point for a TEMPER must be placed in the center of a door section, or 4 feet from the end of that section. The end section of a TEMPER issued prior to May 1989, must be a window section. Door sections do not have the inlets and outlets for the air conditioner/heater.

R-2

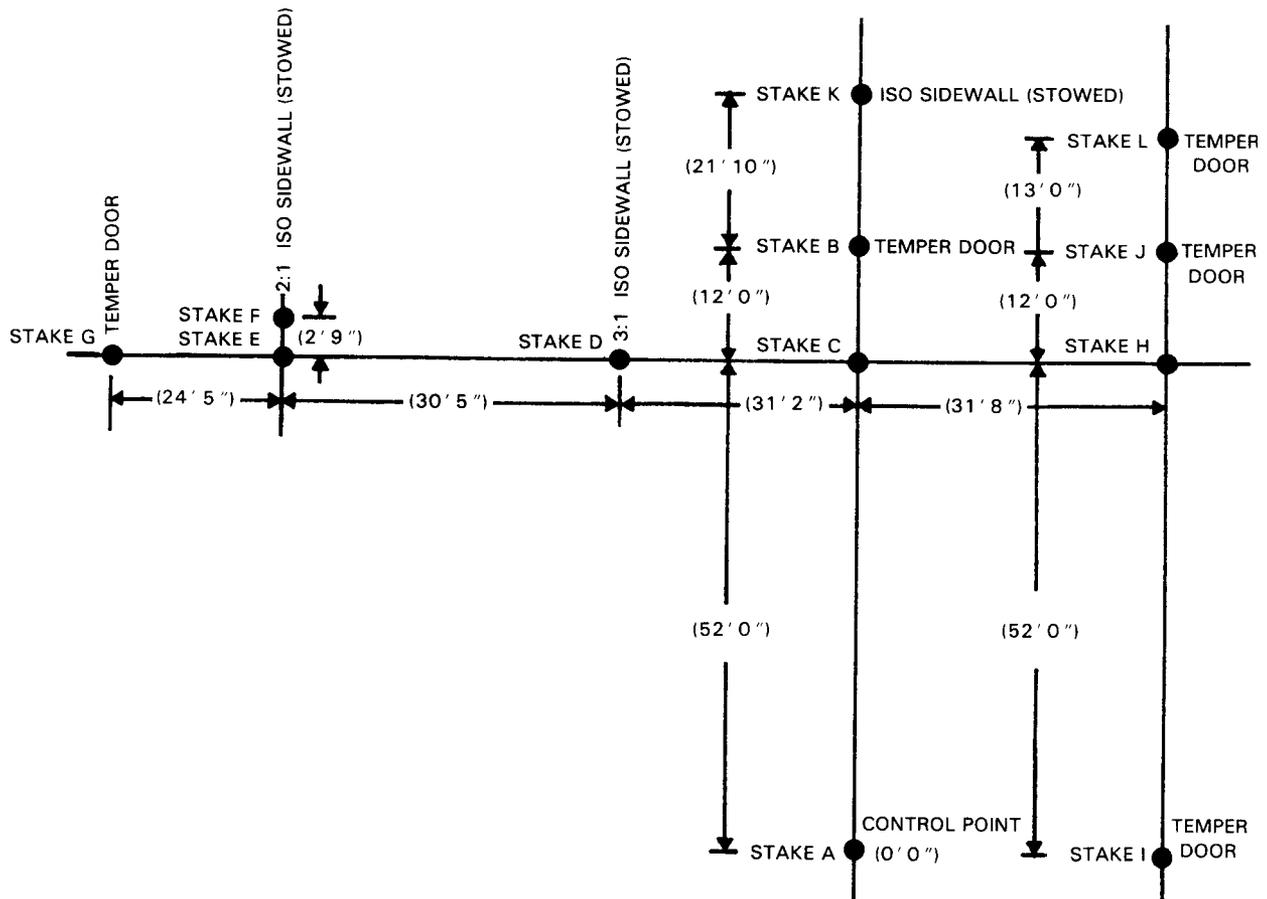


Figure R-2. Staking plan.

R-6. Cross-Corridor Line

a. The line at the cross-corridor point is at a right angle to the baseline. How do you establish a right angle in the field? There are several ways. The easiest requires a 100-foot tape measure and three soldiers (see Figure R-3).

- On the baseline, measure and mark a point 20 feet to the left of the cross-corridor point.
- Measure and mark another point 20 feet to the right of the cross-corridor point.
- Position a soldier at each point. Have one soldier hold the “O” mark on the tape measure. Instruct the other soldier to hold the “100-foot” mark.
- Instruct the third soldier to grasp the tape measure at the 50-foot mark. Stretch the tape out in the direction of the desired line. The tape should be stretched to its full length.
- Mark the point on the ground where the 50-foot mark on the tape reaches.

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- Have the third soldier move to the other side of the baseline and repeat the above steps.
- Stretch a length of engineer tape between the two points just marked.

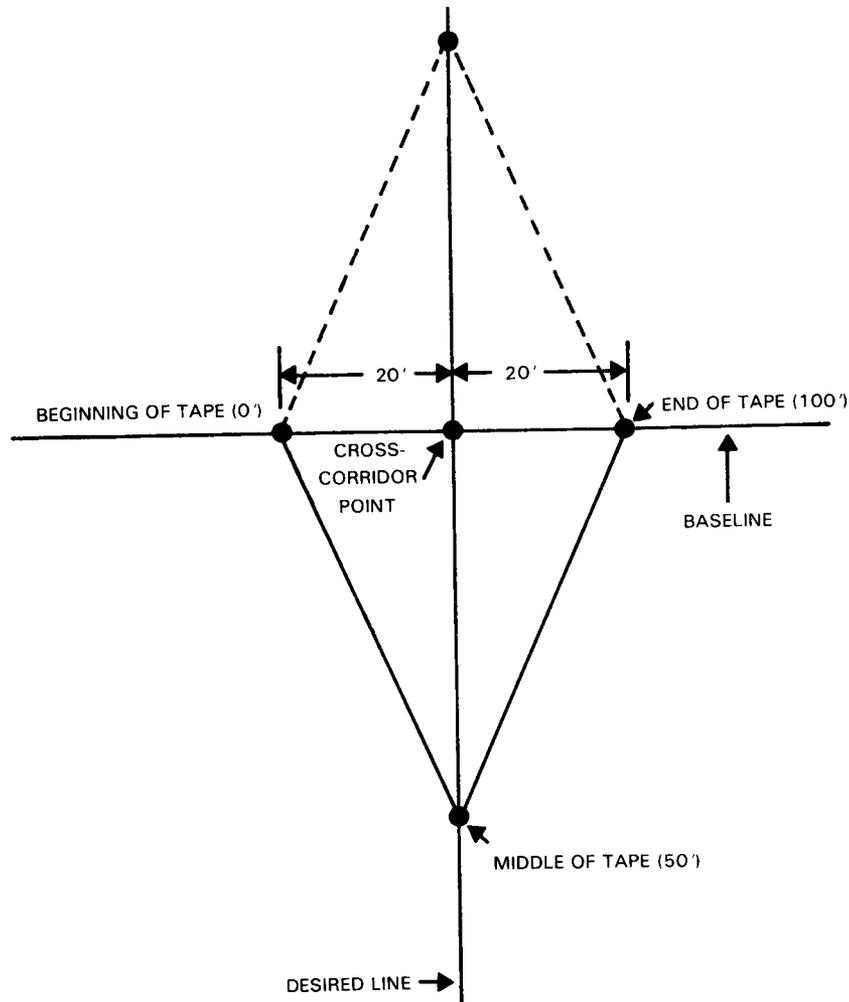


Figure R-3. Plotting a right angle.

b. The line formed by this length of engineer tape is at a 90-degree angle to the baseline. Extend this cross-corridor line the entire width of the compound. A cross-corridor line may be established at any point on any line using these procedures.

R-7. Tent, Extendable, Modular, Personnel Staking

The baseline will extend through the center of the TEMPER. We suggest, however, that you do not attempt to center the TEMPER over the line. Instead, we suggest that you measure and mark the four corners (see Figure R-4).

a. If you will recall, the control point marks the center of the door on the TEMPER endwall. Measure 10 feet on both sides of the control point (Stake A) and mark those spots. Use the procedures in paragraph R-6 to ensure that the spots are at right angles to the baseline.

b. Measure off 64 feet on the baseline from the control point, or 12 feet from the cross-corridor point (Stake C). Mark this spot (Stake B). Remember that the cross-corridor point (Stake C) is 52 feet from the control point. This spot will mark the center of the endwall door at the other end of the TEMPER.

c. Repeat the procedures in paragraph R-7*a* at this point. When completed, you will have marked the four corners of the TEMPER.

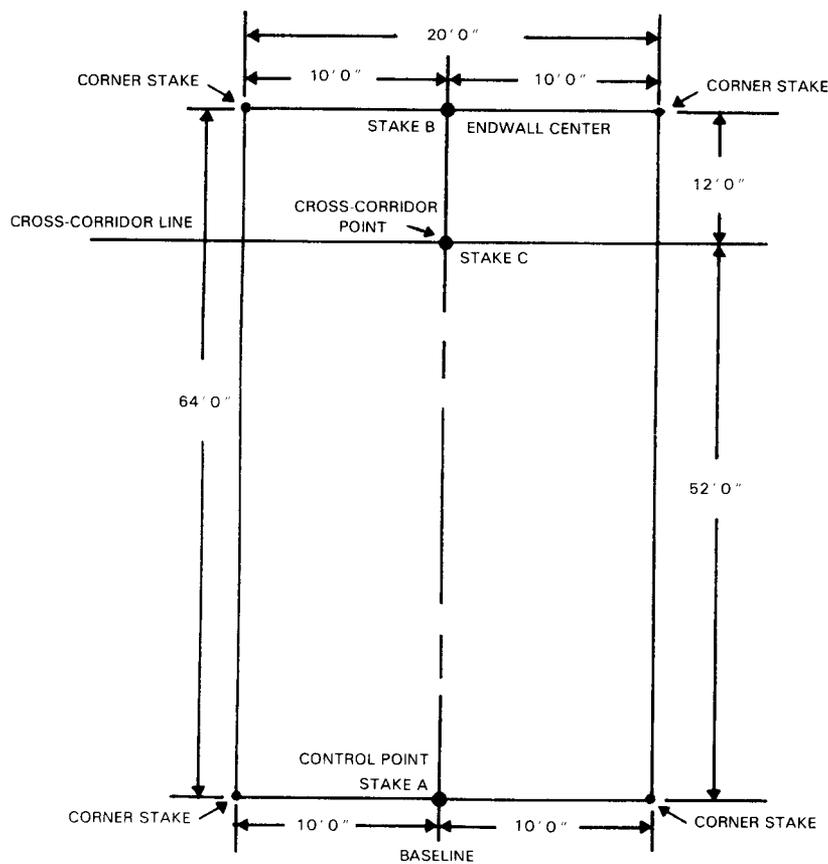


Figure R-4. Tent, extendable, modular, personnel staking.

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R-8. Tent, Extendable, Modular, Personnel Door Panel to International Organization for Standardization Side Closeout Panel

The next shelter to be staked is a 3:1 (pronounced 3 for 1) ISO (No. 2 in Figure R-1). According to our plan, the TEMPER just staked will be connected to the side closeout panel of the ISO (see Figure R-5).

a. Where do you want the ISO placed when it is moved to the site? There are several things that you must take into consideration.

(1) The ISO, of course, will be unexpanded when moved into position. Therefore, you must allow for the width of the expansion; 6 feet, 11 inches.

(2) There are two types of passageways.

(*a*) The first is an ISO to TEMPER passageway. This passageway measures 3 feet, 5 inches. It has a metal ramp that measures 11 feet, 2 inches.

(*b*) The ISO to ISO passageway is 6 feet long. It has a ramp that is 8 feet, 2 inches long.

(3) Vestibules are issued with each TEMPER. The vestibule is 10 feet long and is designed to connect two TEMPERs. Due to the length of the ramp, we strongly recommend that you use a vestibule with the passageway when connecting an ISO to a TEMPER. If not, the ramp will extend 6 feet, 11 inches into the TEMPER itself. This could present some safety hazards, especially if an ISO is connected to the other side of the TEMPER. It also reduces the amount of floor space.

(4) Each TEMPER door has a flap around it called a vestibule adapter. The vestibule is attached to the adapter. The only difference between the endwall door adapter and the sidewall adapter is their length. The endwall vestibule adapter measures 1 foot, 6 inches, while the door section adapter measures only 10 inches.

b. As you will notice in Figure R-5, the ISO staking point (Stake D) is 31 feet, 2 inches from the baseline (Stake C). This allows—

(1) Ten feet from the baseline (Stake C) to the TEMPER door.

(2) Ten inches for the vestibule adapter around the TEMPER door.

(3) Ten feet for the vestibule.

(4) Three feet, five inches for the passageway.

(5) Six feet, eleven inches for the ISO expansion.

c. Measure the 31 feet, 2 inches on the cross-corridor line and mark the spot (Stake D). From there, mark the corners of the ISO. Measure 10 feet to the left and right as you face the baseline, and mark

both spots. If the corners are straight, they should each measure 31 feet, 2 inches to the baseline. If not, adjust the corner marks as needed.

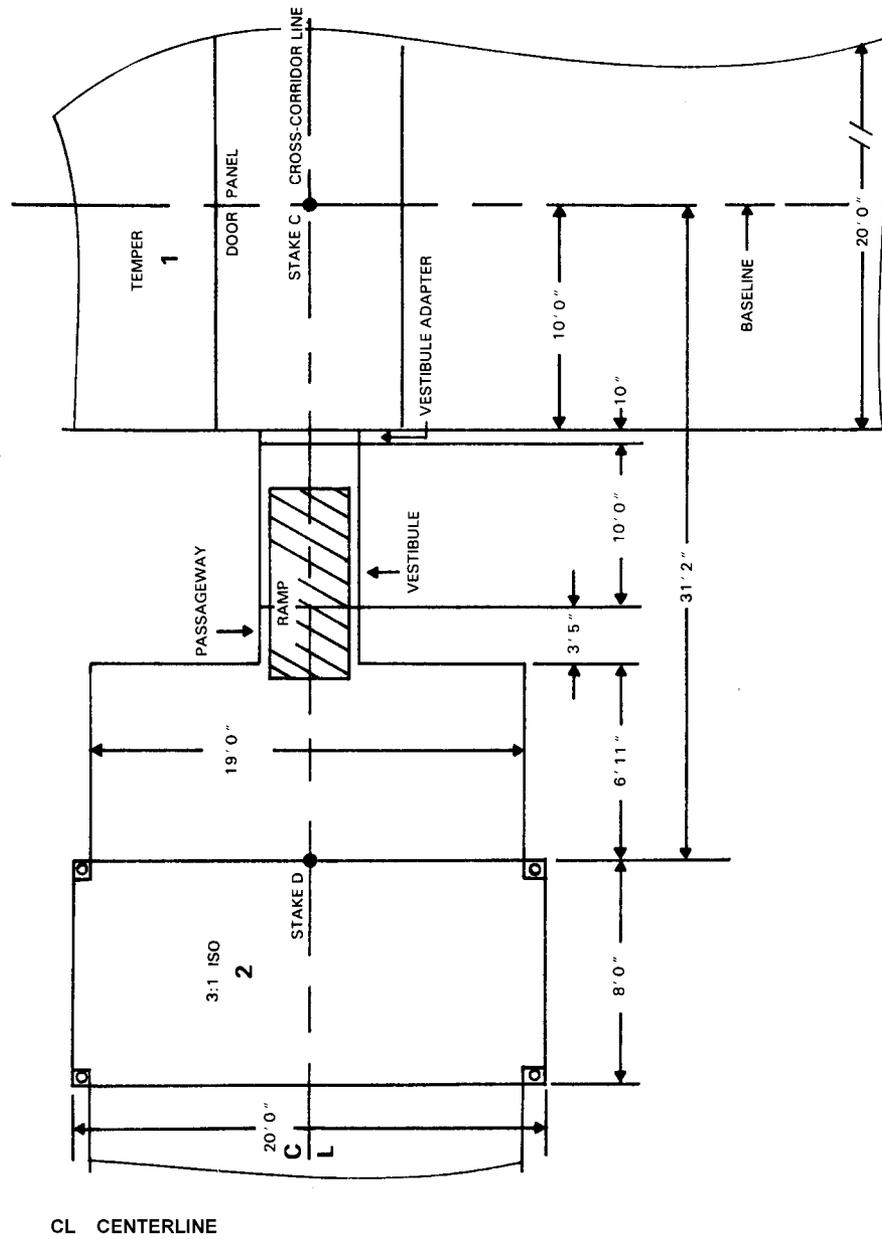


Figure R-5. The TEMPER door panel to ISO side panel.

R-9. International Organization for Standardization Side Closeout Panel to International Organization for Standardization End Closeout Panel

a. Our plan now calls for the connection of the end closeout panel of a 2:1 ISO (No. 3 in Figure R-1) to the other side of the 3:1 ISO just staked (see Figure R-6). Measure from the staking point for the 3:1 ISO (Stake D) on the cross-corridor line. The distance to the next staking point (Stake E) is 30 feet, 5 inches. This will take you to the center of the 2:1 ISO expansion. This measurement includes—

- (1) Eight feet for the 3:1 ISO.
- (2) Six feet, eleven inches for the 3:1 ISO expansion.
- (3) Six feet for the passageway.
- (4) Nine feet, six inches to the center of the 2:1 ISO expansion (Stake E).

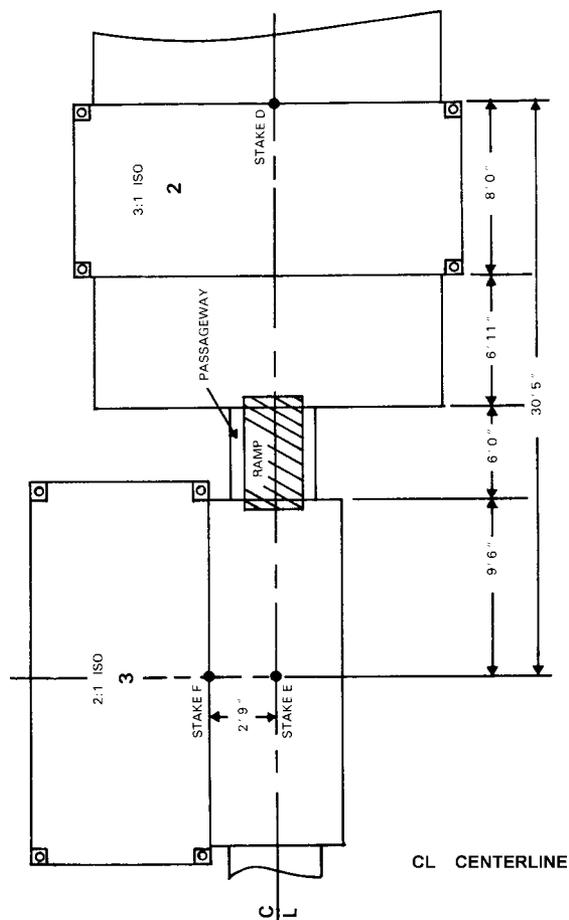


Figure R-6. The ISO side panel to ISO end panel.

R-10. International Organization for Standardization End Closeout Panel to Tent, Extendable, Modular, Personnel Endwall Door

Follow the procedures in paragraph R-8 to connect the end closeout panel of an ISO to a TEMPER endwall (see Figure R-7). Some of the measurements, however, are different. The vestibule adapter on a TEMPER endwall is 1 foot, 6 inches rather than the 10 inches on the door section adapter. The TEMPER to be erected here is a two-section shelter (No. 4 in Figure R-1), measuring 16 feet. The total measurement here then is 24 feet, 5 inches (Stake E to Stake G). Stake the four corners of the TEMPER in accordance with paragraph R-7.

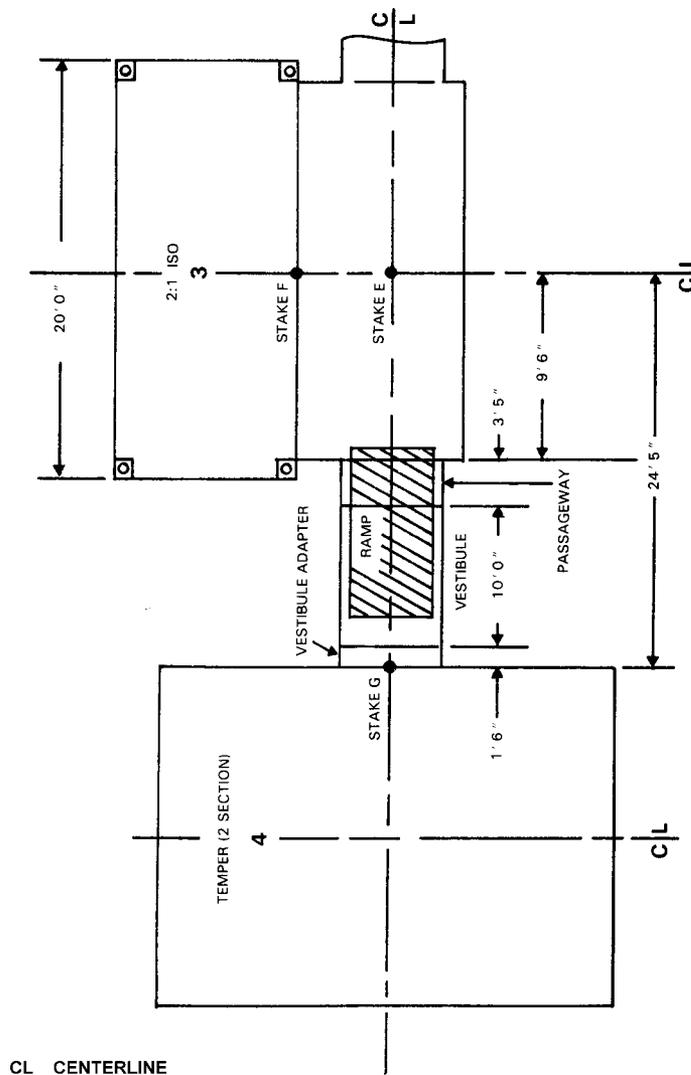


Figure R-7. The ISO end panel to TEMPER endwall.

R-11. Tent, Extendable, Modular, Personnel Door Panel to Tent, Extendable, Modular, Personnel Door Panel

The center line of the second eight-section TEMPER (No. 5 in Figure R-1) is 31 feet, 8 inches from the baseline or from Stake C to Stake H (see Figure R-8). To ensure that the lines are parallel, measure the 31 feet, 8 inches from both the control point (Stake A) and the cross-corridor point (Stake C). Stake the corners of this TEMPER the same as you did in paragraph R-7.

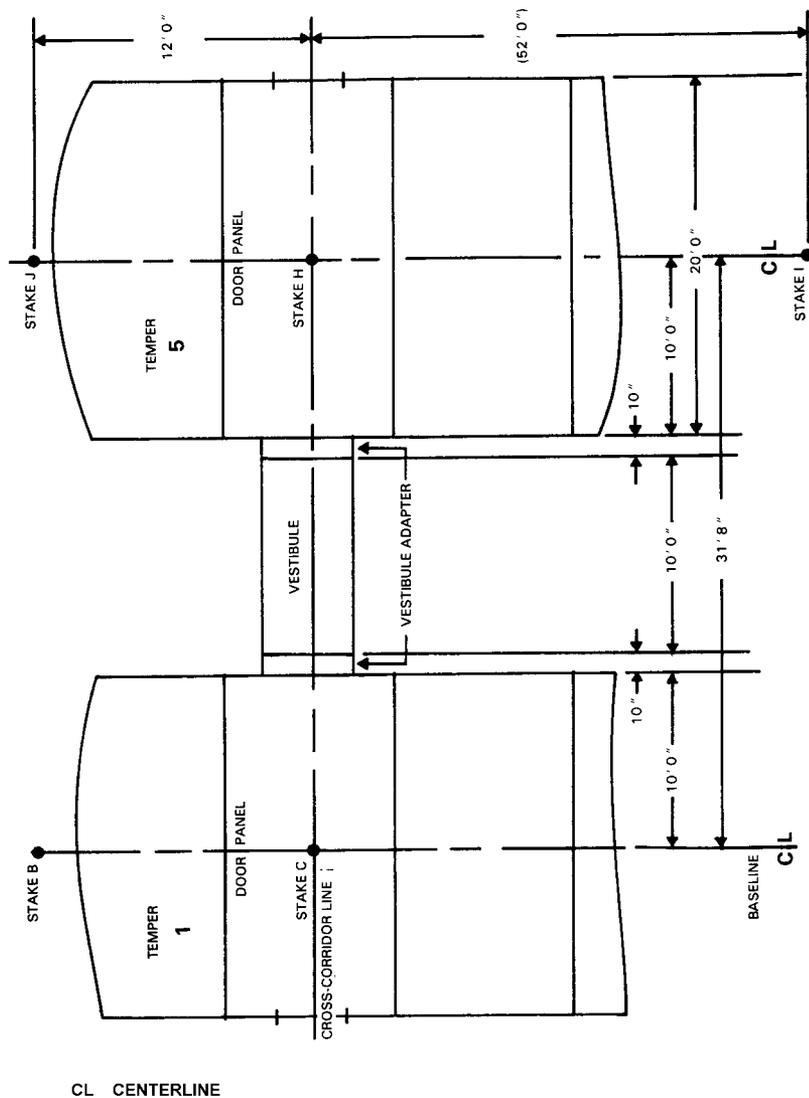
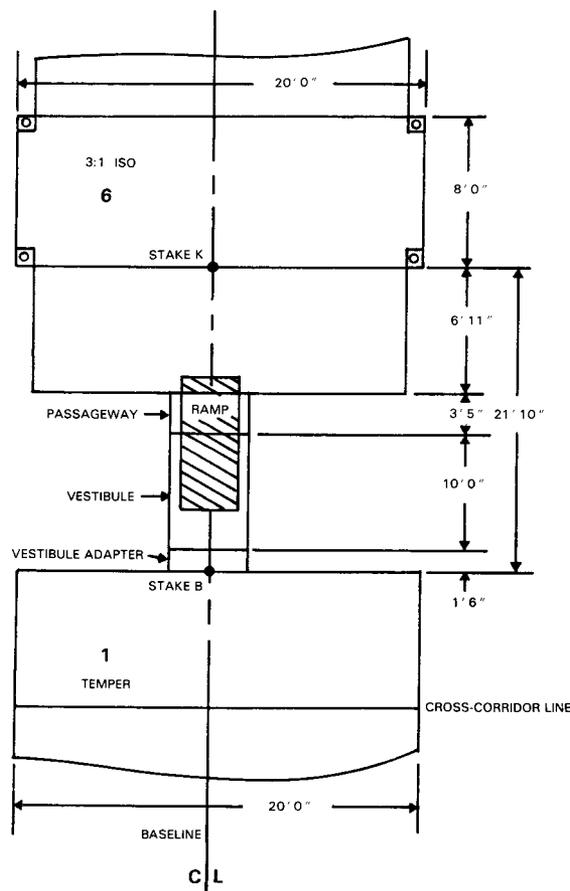


Figure R-8. The TEMPER door panel to TEMPER door panel.

R-12. International Organization for Standardization Side Closeout Panel to Tent, Extendable, Modular, Personnel Endwall Door

The procedures here are the same as those used to connect any other ISO to a TEMPER (see Figure R-9). It is important though to remember the measurements. The ISO staking point (Stake K) is 21 feet, 10 inches from the TEMPER (Stake B). On the baseline, measure from the TEMPER endwall—

- a. One foot, six inches for the vestibule adapter.
- b. Ten feet for the vestibule.
- c. Three feet, five inches for the passageway.
- d. Six feet, eleven inches for the ISO expansion.



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Figure R-9. The ISO side panel to TEMPER endwall.

R-13. Tent, Extendable, Modular, Personnel Endwall Door to Tent, Extendable, Modular, Personnel Endwall Door

The last combination possible is the connection of a TEMPER endwall to another TEMPER endwall (see Figure R-10). This TEMPER (No. 7 in Figure R-1) will be connected to the eight-section TEMPER in paragraph R-11. The measurement between the two endwall sections is 13 feet. This includes two 1-foot, 6-inch vestibule adapters and a 10-foot vestibule. Measure the 13 feet from the center of the first door (Stake J). This will mark the center of the door of the new TEMPER (Stake L). Follow the instructions in paragraph R-7 to stake the corners of this last shelter.

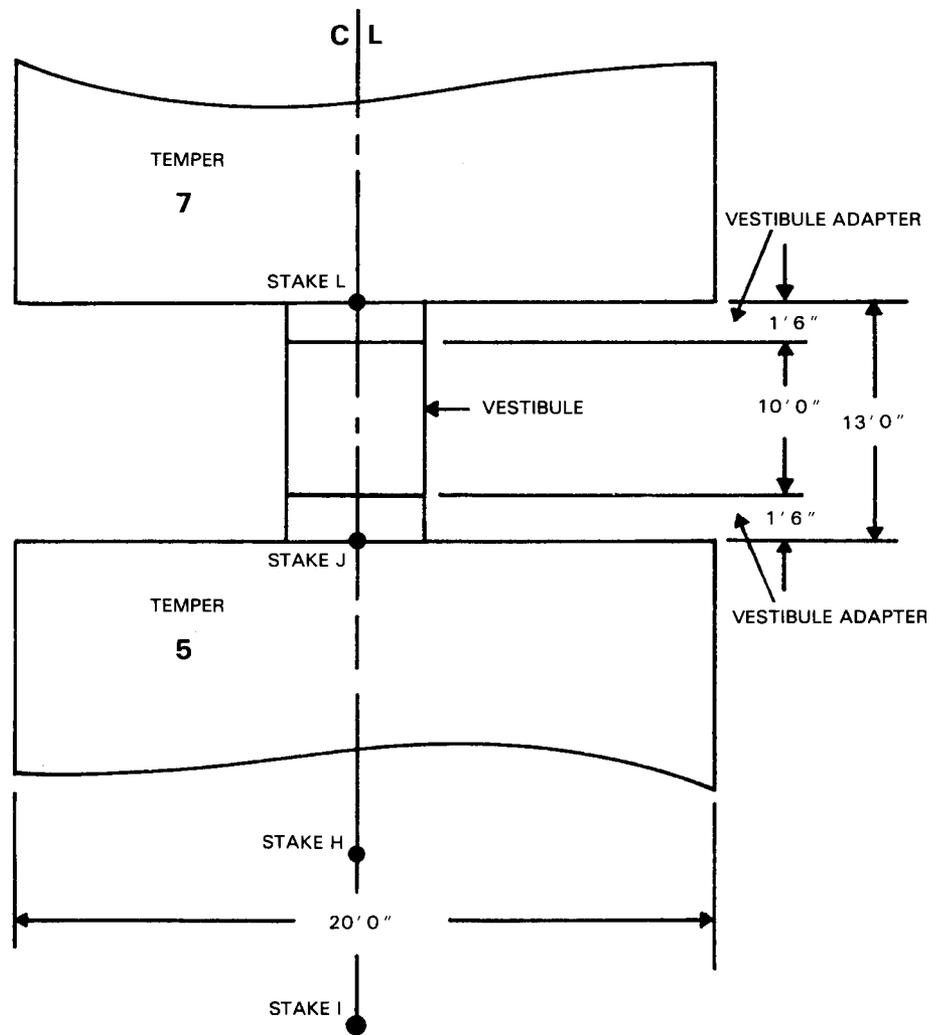


Figure R-10. The TEMPER endwall to TEMPER endwall.

GLOSSARY

ABBREVIATIONS, ACRONYMS, AND DEFINITIONS

AAR after action report

ABCA American, British, Canadian, and Australian

ABCS Army Battle Command System

AC Active Component/cyanide

ACUS Area Common-User System

ADA American Dietetic Association

admin administration

AFMIB Armed Forces Medical Intelligence Branch

AFMIC Armed Forces Medical Intelligence Center

AFPMB Armed Forces Pest Management Board

AFSC Air Force Specialty Code

AIRDB Army Ionizing Radiation Dosimetry Branch

AJBPO Area Joint Blood Program Officer

amb ambulance

AMC Air Mobility Command

AMEDD Army Medical Department

AMEDDC&S Army Medical Department Center and School

AMI adaptive medical increments

AMS acute mountain sickness

AMSA Army Medical Surveillance Activity

AMSC Army Medical Specialist Corps

AO area of operations

AOC area of concentration

APOD aerial port of debarkation

FM 4-02.10

APOE aerial port of embarkation

AR Army Regulation

ART Army tactical task

ARTEP Army Training and Evaluation Program

AS area support

ASCC Army Service Component Command

ASMB area support medical battalion

ATM advanced trauma management

attn attention

AUG augmentation

AUTL Army Universal Task List

AV aviation

BAQ basic allowance for quarters

BAS battalion aid station

BBPCT blocking, bracing, packing, crating, and tie-down

BCOTM battle command on the move

BCS3 Battle Command Sustainment Support System

bde brigade

BEQ bachelor enlisted quarters

bld blood

BMIS-T Battlefield Medical Information System-Tactical

bn battalion

BOQ bachelor officers' quarters

Glossary-2

BTC Blood Transshipment Center

BW biological warfare

C2 command and control

C2P command and control processor

C4 command, control, communications, and computers

C4I command, control, communications, computers, and intelligence

CALL Center for Army Lessons Learned

CB chemical/biological

CBRNE chemical, biological, radiological, nuclear, and high-yield explosive(s)

CD-ROM compact disk-read only memory

CDC Centers for Disease Control and Prevention

CDR commander

CE communications-electronics

CHCS Composite Health Care System

CHCS II-T Composite Health Care System II-Theater

CHEM chemical

CI counterintelligence

CJCSM Chairman, Joint Chiefs of Staff Manual

CLS configured loads

cmd command

CMF career management field

CMS central material service

CNR combat net radio

FM 4-02.10

co company

COE common operating environment

COMMZ communications zone

COMSEC communications security

CONUS continental United States

COSC combat operational stress control

COSCOM corps support command

COTS commercial off-the-shelf

CP chemically protected/collective protection

CPS collective protection shelter

CPT captain

CS combat support

CSAR combat search and rescue

CSH combat support hospital

CSS combat service support

CSSCS Combat Service Support Control System

cu cubic

CW chemical warfare

CZ combat zone

DA Department of the Army

DAMMS-R Department of the Army Movement Management System — Redesign

DBW desired body weight

DCCS deputy commander for clinical services

Glossary-4

DCSMED deputy chief of staff for medicine

DD Department of Defense

DE directed energy

decon decontamination

DEERS Defense Enrollment Eligibility Reporting System

DEET 75 percent N, N-diethyl-meta-toluamide

DEFCON defense readiness condition

DEPMEDS Deployable Medical System

det detachment

DIS disease

dl deciliter

DLA Defense Logistics Agency

DMLSS-AM Defense Medical Logistic Standard System–Assemblage Management

DMSO division medical supply office

DNA deoxyribonucleic acid

DNBI disease and nonbattle injury

DOD Department of Defense

DODAAC Department of Defense Activity Address Code

DODD Department of Defense Directive

DODI Department of Defense Instruction

DSMC division support medical company

DSN Defense Switched Network

EAC echelon(s) above corps

FM 4-02.10

EBS Environmental Baseline Survey

ECB echelons corps and below

ECR environmental condition report

EEH EL early entry hospitalization element

EMI electromagnetic interference

EMT emergency medical treatment

ENCOM engineer command

ENT ear, nose and throat

EOC emergency operations center

EPW enemy prisoner of war

evacuation policy Command decision indicating the maximum number of days of noneffectiveness that patients may be held within the command for treatment. For example a 7/15 evacuation policy sets 15 days as the maximum time in theater of which only 7 can be in the CZ. Changes in the evacuation policy primarily impacts RTD numbers.

EW electronic warfare

FAO finance and accounting office

FBCB2 Force XXI Battle Command Brigade and Below System

FDECU field deployable environmental control unit

FFP fresh frozen plasma

FH field hospital

FLOT forward line of own troops

FLT flight

FM field manual; frequency modulated

Glossary-6

force protection Force protection consists of those actions to prevent or mitigate hostile actions against DOD personnel (including family members), resources, facilities, and critical information. It coordinates and synchronizes active and passive (offensive and defensive) measures to enable the force to perform while degrading the opportunities for the enemy. Force protection includes air, space, and missile defense; NBC defense; antiterrorism; defensive information operations; and security to operational forces and means. Force protection does not include actions to protect against accidents, weather, and disease. It is the commander's responsibility to ensure that force protection measures are planned for and executed.

FORSCOM United States Army Forces Command

FRAGO fragmentary order

FSC Federal Supply Classification

FSMC forward support medical company

FST forward surgical team

ft feet/foot

fwd forward

g grams

G2 Assistant Chief of Staff (Intelligence)

G3 Assistant Chief of Staff (Operations and Plans)

G6 Assistant Chief of Staff (Signal)

gal gallon(s)

GC Geneva Convention Relative to the Protection of Civilian Internees in Time of War

GCSS-A Global Combat Support System-Army

GEN general

GH general hospital

GI gastrointestinal

GIG Global Information Grid

FM 4-02.10

gnd ground

GOTS government off-the-shelf

GPS Global Positioning System

GPW Geneva Convention Relative to the Treatment of Prisoners of War

GSA General Services Administration

GU genitourinary

GWS Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in the Armed Forces

GWS (Sea) Geneva Convention for the Amelioration of the Condition of the Wounded, Sick, and Shipwrecked Members of the Armed Forces at Sea

GYN gynecology

H&S heat and serve

HCP Health and Comfort Pack

HF high frequency

HHQ headquarters and headquarters detachment

HN host nation

hosp hospital

HQ headquarters

HSS health service support

HTN hypertension

IA information assurance

IASO Information Assurance Security Officer

ICU intensive care unit

Glossary-8

ICW intermediate care ward

IM information management

IMSA *See* installation medical supply activity.

IND investigational new drug

info information

installation medical supply activity (IMSA) The IMSA in CONUS is the supply support activity (SSA) for medical materiel for an installation or geographic area. The supporting installation, some of which are specifically designated as force projection (sometimes called power projection) platforms, is responsible for providing support to deploying/redeploying military forces. When directed by the OPLAN/OPORD, these installations assist with the predeployment processing and facilitate the movement of personnel and equipment to the designated POE. Additionally, they may provide assistance or garrison-type life support in staging areas. Outside the continental United States, the IMSA is normally the primary SSA for medical materiel for a designated geographic area.

IOM installation, operation, and maintenance

IS information systems

ISO International Organization for Standardization

IT information technology

ITDB interim theater database

JDF joint deployment formulary

JMeWS Joint Medical Workstation

JP joint publication

JRCAB Joint Readiness Clinical Advisory Board

JTRS Joint Tactical Radio System

LAB laboratory

LAN local area network

lb/lbs pound/pounds

FM 4-02.10

LDB local database

LOGMARS Logistics Application of Automated Marking and Reading Symbols

LOS line of sight

LTS long-term storage

MA mortuary affairs

MAJ major

MAX maximum

MBU modern burner unit

MC minimal care

MC4 medical communications for combat casualty care

MCC movement control center

MCW minimal care ward

MDRI military dietary reference intake

med medical

MEDCOM medical command

MEDEVAC medical evacuation

medical threat Medical threat is defined as “a collective term used to designate all potential or continuing enemy actions and environmental situations that could adversely affect the combat effectiveness of friendly forces, to include wounds, injuries, or sickness incurred while engaged in a joint operation.” (See Joint Publication 4-02.) In Army and multiservice publications, the term is defined as a composite of all ongoing potential enemy actions and environmental conditions (disease and nonbattle injuries [DNBIs]) that may render a soldier combat ineffective. Commanders and unit leaders are responsible for protecting and preserving Army personnel and equipment against injury, damage, or loss that may result from food-, water-, and arthropodborne diseases, as well as environmental injuries (for example, heat and cold injuries) and occupational hazards

MEDLOG medical logistics

Glossary-10

MEDMNT medical maintenance

MEDSUP medical supply

MES medical equipment set

METT-TC mission, enemy, terrain and weather, troops and support available, time available, and civil considerations

MF2K Medical Force 2000

MHE materiel handling equipment

MHz megahertz

MILVAN military-owned, demountable container

min minimal/minimum

MMS medical materiel set

MOPP mission-oriented protective posture

MOS military occupational specialty

MRE meal(s), ready-to-eat

mrem millirem

MRI Medical Reengineering Initiative

MRO medical regulating office

MRPO medical radiation protection officer

MSE mobile subscriber equipment

MSMC main support medical company

MTF medical treatment facility

MTOE modified table(s) of organization and equipment

MTP Mission Training Plan

MTW major theater of war

FM 4-02.10

N/A not applicable

NATO North Atlantic Treaty Organization

NBC nuclear, biological, and chemical

NBI nonbattle injury

NCO noncommissioned officer

NCOIC noncommissioned officer in charge

NCS net control station

NDMS National Disaster Medical Systems

NEC Navy Enlisted Code

NET network

NIPRNET Nonsecure Internet Protocol Router Network

NPO nothing by mouth

NRTD nonreturn to duty

NSB nonsplit based

NSN national stock number

OCC occupational

OCONUS outside continental United States

OIF Operation Iraqi Freedom

OPFAC operational facility

OPLAN operation plan

OPORD operation order

OPS operation(s)

OPSEC operations security

Glossary-12

OPZONE operational zone

OR operating room

OSHA Occupational Safety and Health Administration

OTSG Office of The Surgeon General

P&T pharmacy and therapeutics

P-MART Predeployment Medication Analysis and Reporting Tool

PAD patient administration division

pam pamphlet

PARRTS Patient Accounting and Reporting Real-Time Tracking System

PASBA Patient Administration System and Biostatistics Activity

PDC personnel data card

pharm pharmacy

phys physical

PIC personal information carrier

PLL prescribed load list

plt platoon

PMD pounds per man per day

PMI patient movement item

PO by mouth

POD port of debarkation

POE port of embarkation

POL petroleum, oils, and lubricants

POV privately owned vehicle

PRE-OP preoperative

FM 4-02.10

prof professional

PROFIS Professional Officer Filler System

PVNTMED preventive medicine

QC quality control

QSTAG Quadripartite Standardization Agreement

radio frequency radiation (RFR) radio frequency radiation. Electromagnetic radiation in the frequency range 3 kilohertz to 300 gigahertz. The RFR is nonionizing in that there is insufficient energy to ionize atoms. The primary health effect of RF energy is a result of heating. Exposure standards are based on preventing thermal problems. Use of RFR includes: radars, radios, communication transmitters, medical treatments, processing and cooking of foods, heat sealers, and welders.

RAM random access memory

RBC red blood cells

RC Reserve Component

RD registered dietician

RDD radiological dispersal device(s)

RF radio frequency

RFR *See* radio frequency radiation.

Rh rhesus factor

RMW regulated medical waste

ROP reorder point

RP release point; retained personnel

RPF real property facilities

RPP Radiation Protection Program

RSO radiation safety officer

RSO&I reception, staging, onward movement, and integration

Glossary-14

RTD return to duty

S1 Adjutant (US Army)

S2 Intelligence Officer (US Army)

S3 Operations and Training Officer (US Army)

S4 Supply Officer (US Army)

S6 Communications-Electronics Officer (US Army)

SARSS Standard Army Retail Supply System

SBCT Stryker Brigade Combat Team

sec section

SEN small extension node

SF standard form

SID source image distance

SIGSEC signal security

SINCGARS Single-Channel Ground and Airborne Radio System

skip policy Skip policy (or skip factor) is defined in the Joint Strategic Capability Plan Health Support Planning Guidance as “the percentage of patients evacuated directly from Operational Zone (OPZONE) 1 to OPZONE 3”. The OPZONE 1 is the CZ, OPZONE 2 is the communications zone, and OPZONE 3 is the Continental United States. A key point is the skip policy only applies to patients originating in the combat zone that will not RTD within the theater evacuation policy.

SOI signal operation instructions

SOP standing operating procedure(s)

SP start point

SPBS-R Standard Property Book System-Redesign

spec specialty

FM 4-02.10

SPOD seaport of debarkation

SPOE seaport of embarkation

sq square

SRC standard requirement code

SRP soldier readiness program

SSA supply support activity

SSN social security number

SSSC self-service supply center

STAMIS Standard Army Management Information System

STANAG Standardization Agreement

svc/svcs service(s)

TAA total Army analysis

TACLAN Tactical Local Area Network

TACSAT tactical satellite

TAMMIS Theater Army Medical Management Information System

TASO terminal area security officer

TAT to accompany troops

TB technical bulletin

TB MED technical bulletin, medical

TCAM Theater Army Medical Management Information System Customer Assistance Module

TCMD transportation control and movement document

TELEMED/TMED telemedicine

TEMPER tent, extendable, modular, personnel

Glossary-16

TG technical guide

thpy therapy

TI technical inspection

TIM toxic industrial material

Time-Phased Force Deployment Data (TPFDD) The TPFDD is the Joint Operations Planning and Execution System data base portion of an operation plan. The TPFDD is the combatant commander's statement of his requirements and includes assigned forces, augmentation forces, resupply, replacements, and supporting forces which are to be deployed to the AO and forces stationed within the AO.

TM technical manual; team

TMC troop medical clinic

TMIP Theater Medical Information Program

TO theater of operations

TOC tactical operations center

TOE table(s) of organization and equipment

TPFDD *See* Time-Phased Force Deployment Data.

TPN tactical packet network

TRAC2ES TRANSCOM Regulating and Command and Control Evacuation System

TRANS EL transportation element

TRANSCOM Transportation Command

TRI-TAC triservice tactical communications

TROPO tropospheric

TSC theater support command

TSOP tactical standing operating procedure

UAL unit's authorized stockage list

FM 4-02.10

UDP unit deployment package(s)

UGR Unitized Group Rations

UHT ultrahigh temperature

UJTL Universal Joint Task List

unit categories Units are divided into three categories as follows: Category I–A unit, organized under table of organization and equipment, whose primary mission includes engaging and inflicting casualties and/or equipment damage on the enemy by use of its organic weapons. Category I status is extended to its corresponding headquarters and service companies whose mission is supporting and providing assistance thereto, and to those command and control headquarters habitually operating in the forward portion of the active combat area (forward of the brigade rear boundary). Category I units normally operate in the forward portion of the active combat area, but may, because of the range of their primary weapons and positioning requirements, operate in the division and corps rear areas. Category II–A unit, organized under table of organization and equipment, whose mission is primarily that of providing command and control, combat support, or combat service support and assistance to category I units. It operates in the combat zone, normally between the brigade and corps rear boundaries. Category III–A unit, organized under table of organization and equipment, whose mission is primarily service and assistance to the units operating in the combat zone area and operating agencies of the communications zone. The unit functions habitually in the communications zone or along the lines of communications leading thereto.

United States Transportation Command (USTRANSCOM) The USTRANSCOM is the functional combatant command responsible for common-user air, land, and sea transportation, as well as port management for the DOD across the range of military operations. It assists the supported combatant commander to ensure that validated movement requirements are routed and scheduled for maximum support during deployment, sustainment, and redeployment.

US United States

USACHPPM United States Army Center for Health Promotion and Preventive Medicine

USAF United States Air Force

USAMMA United States Army Medical Materiel Agency

USAMRIID United States Army Medical Research Institute of Infectious Diseases

USARIEM United States Army Research Institute of Environmental Medicine

USTRANSCOM *See* United States Transportation Command.

Glossary-18

VA Department of Veterans Affairs

VHF very high frequency

WAN wide area network

wgt weight

WHO World Health Organization

WIA wounded in action

WIN Warfighter Information Network

WIN-T Warfighter Information Network–Tactical

WPSM Warfighter Physiological Status Monitor

wt weight

XO executive officer

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