Army Medical Logistics

OCTOBER 2015

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Headquarters, Department of the Army

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Army Medical Logistics

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Preface

This Army Techniques Publication (ATP) addresses the role of medical logistics (MEDLOG) in the Army Health System (AHS). It covers MEDLOG operations from the support battalions at the tactical level to the medical command (deployment support) (MEDCOM [DS]) and theater sustainment command where the critical crossover occurs between strategic agencies within the AHS and commands and the operational units providing logistics support in-theater.

The principle audience for this publication is commanders, their staffs, medical planners, MEDLOG officers, Soldiers, and personnel at all levels. Commanders, staffs, and subordinates ensure their decisions and actions comply with applicable United States (U.S.), international, and in some cases, host-nation laws and regulations. Commanders at all levels ensure their Soldiers operate in accordance with the law of war and the rules of engagement. (See Field Manual [FM] 27-10)

This publication implements or is in consonance with American, British, Canadian, Australian, and New Zealand (Armies) Standard 815, Blood Supply in the Area of Operations. This ATP also implements or is in consonance with Quadripartite Advisory Publication 256, Coalition Health Interoperability Handbook, and the following North Atlantic Treaty Organization (NATO) Standardization Agreements (STANAGs):

| Title | STANAGs |
|--|---------|
| Allied Joint Doctrine for Modes of Multinational Logistic Support—Allied Joint Publication (AJP)-4.9 | 2512 |
| Minimum Test Requirements for Laboratory Units of in Theatre Military Medical Treatment Facilities (MTFs)—Allied Medical Publication (AMedP)-8.5 | 2571 |
| Minimum Requirements for Blood, Blood Donors and Associated Equipment | 2939 |

Army Techniques Publication 4-02.1 uses joint terms where applicable. Selected joint and Army terms and definitions appear in both the text and the glossary. For definitions shown in the text, the term is italicized and the number of the proponent publication follows the definition. This publication is not the proponent for any Army terms. Unless otherwise stated, the use of masculine nouns and pronouns in this publication do not refer exclusively to men.

Army Techniques Publication 4-02.1 applies to the Active Army, Army National Guard of the United States, and United States Army Reserve unless otherwise stated.

The proponent and preparing agency of this publication is the United States Army Medical Department Center and School, United States Army Health Readiness Center of Excellence. Send comments and recommendation on a Department of the Army (DA) Form 2028 (Recommended Changes to Publications and Blank Forms) to Commander, United States Army Medical Department Center and School, United States Army Health Readiness Center of Excellence, ATTN: MCCS-FDL (ATP 4-02.1), 2377 Greely Road, Building 4011, Suite D, JBSA Fort Sam Houston, Texas 78234-7731; by e-mail to usarmy.jbsa.medcommendeds.mbx.ameddcs.mbx.ameddcs-medical-doctrine@mail.mil; or submit an electronic DA Form 2028. All recommended changes should be keyed to the specific page, paragraph, and line number. A rationale for each proposed change is required to aid in the evaluation and adjudication of each comment.

Introduction

Army MEDLOG, as one of the ten medical functions, is an integral part of the AHS. It provides intensive life cycle management of medical products and services that are used almost exclusively by the AHS and its joint partners and are critical to the successful delivery of Army medical capabilities. Army MEDLOG support is tailored to anticipate and effectively respond to medical requirements through the provision of uninterrupted, end-to-end sustainment of the AHS mission across the range of military operations. Providing timely and effective AHS support is a team effort which integrates the clinical and operational aspects of the mission and requires collaboration between the medical logisticians, health care providers, distribution managers, and other partners within the Military Health System. Army MEDLOG includes management of the following functions:

- Medical materiel (Class VIIIA).
- Medical equipment maintenance and repair.
- Optical fabrication and repair.
- Patient movement items (PMI).
- Medical gases.
- Blood (Class VIIIB) storage and distribution.
- Regulated medical waste (including hazardous material).
- Medical facilities and infrastructure.
- Medical contracting.

This publication describes Army MEDLOG capabilities and their role in sustaining the AHS mission. Medical logistics support for units in the operating force is the primary focus of this publication. However, MEDLOG capabilities in the generating force are also addressed to present a clear picture of the Army resources and infrastructure required to sustain the AHS mission. The integration of operating and generating force capabilities provide strategic efficiency, which enables the seamless delivery of AHS support from the point of injury through successive roles of care to the continental United States (CONUS)-support base.

Army Techniques Publication 4-02.1 consists of eight chapters and three appendixes as follows:

- Chapter 1 opens with an overview of Army MEDLOG.
- Chapter 2 provides a description of each MEDLOG unit, the capabilities available, and role of care where each element may be employed.
- Chapter 3 describes MEDLOG operations in support of force projection, sustainment, and redeployment as well as support provided for Roles 1, 2, and 3 medical treatment facilities (MTFs) and the distribution of Class VIII and contingency materiel.
- Chapter 4 of the ATP covers the information systems and enablers available to facilitate the flow of supplies and equipment throughout the area of operations.
- Chapter 5 describes medical equipment maintenance and repair support to the deployed force.
- Chapter 6 outlines optical support available in theater.
- Chapter 7 describes blood support during contingency operations.
- Chapter 8 covers health facility planning and management including the roles and responsibilities of health facilities planners and how support is provided in theater.
- Appendix A describes the patient movement item system.
- Appendix B covers automatic identification technology.
- Appendix C provides general planning considerations for MEDLOG support.

Chapter 1

Overview of Army Medical Logistics

The AHS is extremely intensive in its use of specialized materiel and support services that are collectively managed and are critical to the accomplishment of the health service support (HSS) and force health protection (FHP) missions. The AHS manages these products and services through the use of specialized processes, systems, and personnel within the field of MEDLOG. Army MEDLOG capabilities operate under the control of the Army Medical Department (AMEDD) within the overall construct of the AHS. This chapter provides a brief overview of the AHS and MEDLOG support to unified land operations.

SECTION I — THE ARMY HEALTH SYSTEM

ARMY HEALTH SYSTEM SUPPORT

- 1-1. The AHS is responsible for operational management of the HSS and FHP missions for training, predeployment, deployment, and postdeployment operations. The AHS includes all mission support services performed, provided, or arranged by the AMEDD to support HSS and FHP mission requirements for the Army and as directed, for joint, intergovernmental agencies, and multinational forces. The AHS supports unified land operations through the protection and sustainment warfighting functions. Protection and sustainment are two of the six Army warfighting functions (movement and maneuver, fires, protection, sustainment, mission command, and intelligence). The AHS mission to provide the casualty care (treatment aspects), medical evacuation, and MEDLOG functions of HSS are included in the sustainment warfighting function and FHP (casualty prevention aspects) is included in the protection warfighting function.
- 1-2. Army Doctrine Reference Publication (ADRP) 3-0 defines the sustainment warfighting function as the related tasks and systems that provide support and services to ensure freedom of action, extend operational reach, and prolong endurance. The sustainment warfighting function includes the provision of logistics, personnel services, and HSS necessary to maintain operations until mission accomplishment. While MEDLOG is a part of the sustainment warfighting function under HSS, it also supports the FHP mission. Paragraphs 1-3 through 1-6 of this section are intended to clearly define the MEDLOG function as part of HSS and do not include FHP. However, the remainder of this publication describes the MEDLOG function in support of the entire AHS mission, which encompasses HSS and FHP. See FM 4-02 for a full description of AHS support.

HEALTH SERVICE SUPPORT

- 1-3. Army HSS is defined as all support and services performed, provided, and arranged by the AMEDD to promote, improve, conserve, or restore the behavioral and physical well-being of personnel in the Army and as directed in other Services, agencies and organizations. Health service support includes casualty care (encompassing a number of AMEDD functions—organic and area medical support, hospitalization, the treatment aspects of dental care, behavioral health/neuropsychiatric treatment, clinical laboratory services, and the treatment of chemical, biological, radiological, and nuclear [CBRN] patients), medical evacuation, and MEDLOG.
- 1-4. Medical logistics is not part of the logistics subtask under the sustainment warfighting function, but is included in the AHS mission under HSS as defined above. Army Doctrine Reference Publication 4-0 defines logistics as planning and executing the movement and support of forces. Army logistics includes

the following: supply, field services, maintenance, distribution, transportation, operational contract support, and general engineering support.

- 1-5. The AMEDD is responsible for the operational management of Army MEDLOG as a mission element of HSS. Medical logistics encompasses the management of medical material procurement and distribution, medical equipment maintenance and repair, optical fabrication and repair, blood storage and distribution, PMIs, medical contracting, regulated medical waste, medical gases, and medical facilities and infrastructure.
- 1-6. Medical logistics is distinguished from *line logistics* in that its products and services are used almost exclusively by the medical system for the provision of HSS and FHP, while *line logistics* focuses on the sustainment of major end items and general troop support to maximize combat power. Medical products and services are critical to the success of the AHS mission and subject to the strict standards and practices that govern the U.S. health care industry including regulatory guidelines as published by the United States Food and Drug Administration and Drug Enforcement Administration. Medical logistics focuses on the specialized requirements of a multifunctional Military Health System in order to reduce morbidity and mortality among Soldiers.

SIGNIFICANCE OF THE MEDICAL COMMODITY

- 1-7. The Army has long recognized that certain commodities possess peculiarities or characteristics that make them sufficiently distinctive, requiring that they be managed by specially trained personnel. Class III and Class V are typical examples, as is Class VIII. For this reason, on 20 July 1967 the Joint Chiefs of Staff directed that medical materiel be removed from Class III and Class IV and designated as a separate class of supply (Class VIII).
- 1-8. Basic to any logistics plan are the principles of anticipated user needs and continued support. These principles imply that the individual directing this support must have a thorough knowledge of the system being supported, as well as an understanding of how and why the particular item being supplied is used. Medical logistics cannot operate on the basis of historical data alone. Many external factors—the judgment of the physician, environmental factors, and the peculiarities of the patient's medical condition—affect the demand for an item. The nonavailability of certain pieces of equipment or supply items can cause an interruption in the support being provided.
- 1-9. Specific peculiarities of Class VIII materiel include—
 - Items subject to deterioration (short shelf life and dated items).
 - Subject to damage by freezing or high heat.
 - Subject to damage if not properly refrigerated or frozen for preservation.
 - Flammable and corrosive items.
 - Controlled medical items or controlled substances to include alcohol, narcotics, and precious metals.
 - Radioactive materials.
 - Fragile items requiring special storage, handling, and packaging.
 - Medical gases.
- 1-10. Considerations governing inventory management of Class VIII materiel include, but are not necessarily limited to, the fact that—
 - Request for and actual use of Class VIII is preceded by a professional decision.
 - Choice of substitution is extremely limited, professionally directed, and controlled and monitored by technical specialists.
 - Nonstandard items are an integral and significant element of the logistical management effort.
 - Inherent to medical materiel management are the functions of medical equipment maintenance and repair parts support, as well as optical fabrication and repair services.
 - Strict adherence to the provisions of the Geneva Conventions precludes the storage of medical materiel with other commodities in accordance with FM 27-10.

1-11. The characteristics of medical materiel that differentiate it most from other commodities, is the dynamic and often unpredictable nature of Class VIII requirements, their specialized means of identification and sourcing, and their criticality to the immediate needs of the AHS. Other commodities (such as Class IX) may have a significant number of items or special storage/security requirements (such as Class I and Class V). However, effective and efficient Class VIII management requires both specialized training and direct accountability to the AHS. The tonnage or weight of medical materiel is not a major consideration in sustainment operations. With the exception of fluids and medical gas cylinders, Class VIII sustainment is characterized by a high number of line items with relatively low volume and weight, which often risks it relegation to a lower priority for movement when cargo is held to maximize use of transportation capacity, especially to remote customers. Class VIII supplies and equipment are also afforded protective status under the provisions of the Geneva Conventions. Refer to FM 27-10 for a detailed discussion of the Geneva Conventions.

SECTION II — LEVELS OF SUSTAINMENT

1-12. Logistics support may be executed at the strategic, operational, or tactical level and is dependent upon Department of Defense (DOD) and Army distribution management systems and platforms for physical movement and handling of medical materiel. Effective MEDLOG support to the AHS mission requires unity of effort in a wide range of activities across strategic, operational, and tactical levels with shared understanding of plans and intentions and near real-time visibility of user requirements, available resources, and materiel in-transit. While it is useful to associate organizations with a level of sustainment, to the extent possible, the AHS minimizes layers of management and inventory in MEDLOG processes to promote efficiency, flexibility, and high reliability in meeting HSS and FHP requirements. The AHS also integrates the capabilities of Army generating force organizations into key MEDLOG functions to support the operating force in an effort to avoid redundancy and leverage capabilities and processes used to sustain the AMEDD and Military Health System missions.

STRATEGIC LEVEL

- 1-13. Strategic logistics supports the attainment of broad goals and objectives as outlined in national security policies established by the President and Secretary of Defense. Strategic logistics functions are performed in CONUS and within each of the combatant commands. Medical logistics activities at the strategic level include—
 - Determination of materiel requirements.
 - Acquisition, assembly, and fielding of medical supplies and equipment.
 - Management of strategic programs for medical force modernization and materiel readiness.
- 1-14. Strategic MEDLOG capabilities also include planning and executing the release or acquisition of Class VIII materiel to complete the outfitting of medical units at the time of deployment and coordination for movement into the theater and staging areas. Strategic MEDLOG activities use multiple sources for support to operating forces to include—commercial supplier networks, Defense Logistics Agency stocks, Army pre-positioned stocks (APS) and operational projects, and other materiel readiness programs. Medical logistics is also characterized by the use of DOD standard business practices and supporting information systems across the Military Health System.
- 1-15. The United States Army Medical Research and Materiel Command (USAMRMC) serves as the medical life cycle management command and is responsible for the planning, management, and execution of strategic programs to acquire, assemble, field, and maintain the readiness of Army medical capabilities. In doing so, the USAMRMC predominantly uses medical prime vendor and other strategic acquisition programs provided by the Defense Logistics Agency to enable operational and strategic-level MEDLOG organizations to order and receive materiel directly from commercial suppliers. The Defense Logistics Agency, as the DOD executive agent for medical materiel, coordinates these programs with the United States Transportation Command to enable direct delivery to the Army medical materiel centers in theater without intermediate government inventory or handling. The United States Transportation Command plays a vital role in establishing and maintaining joint total asset visibility and provides common-user airlift, sealift, and terminal services to deploy and sustain U.S. forces on a global basis. The Defense Health

Agency's Medical Logistics Division (formerly the Defense Medical Materiel Program Office) collaborates with the Service medical departments for joint standardization of medical materiel within the DOD. The AHS also engages in ongoing formal collaboration with the medical departments of the United States Air Force (USAF), United States Navy, the Defense Logistics Agency, and other governmental agencies to promote joint interoperability and sustainability of materiel used by their respective operating medical forces.

OPERATIONAL LEVEL

1-16. Operational logistics supports the commander's plan and links strategic logistics to tactical logistics on the battlefield, ensuring support and success at the lowest level. Operational support attempts to balance strategic planning requirements with the needs of tactical operations in support of unified land operations. Medical logistics at the operational level focuses on the mission and requirements of the combatant command and supporting Army Service component command (ASCC) and links tactical level MEDLOG to strategic level sustainment programs. Operational logistics support to tactical units/elements at the brigade combat team (BCT) level is conducted by echelons above brigade (EAB) organizations such as the—

- Medical command (deployment support), which serves as the senior medical mission command element in theater in support of the ASCC.
- Army medical materiel centers.
- Medical logistics management center (MLMC) forward teams and others as described throughout the publication.

1-17. The various operational-level sustainment agencies are assigned logistics responsibilities in accordance with Title 10, United States Code (10 USC), Department of Defense directives (DODD), interagency agreements, and applicable federal laws. Within these guidelines, the combatant commander has many options when establishing the theater support system. For example, the combatant commander may choose to assign specific common user logistics functions (to include both planning and execution) to a lead Service. As is the case when the ASCC is tasked to provide single integrated medical logistics management (SIMLM) support. When responsibility for the SIMLM mission is assigned, the combatant commander must define the scope of MEDLOG support required and assess the degree to which augmentation is needed to provide the necessary support.

TACTICAL LEVEL

1-18. At the tactical level, essential functions such as medical support, supply, maintenance, field services, transportation, and personnel services are provided to assist Soldiers in accomplishing the mission. During the tactical phase, the medical logistician's primary focus is the identification of unit requirements to ensure availability of the medical material and equipment necessary to sustain the uninterrupted delivery of AHS support.

1-19. Medical logistics activities at this level are geared toward satisfying immediate HSS and FHP requirements and rely heavily on the effective application of agility, velocity, and situational understanding. Army medical capabilities organic to the BCT deploy medical supply and maintenance capabilities for limited self-sustainment and receive MEDLOG support from the medical logistics company (MLC). The MEDLOG capabilities of Army medical units at EAB are also limited and are dependent upon the MLC, Army medical materiel center, or supporting theater lead agent for medical materiel (TLAMM) for Class VIII resupply and medical equipment maintenance support.

SECTION III — MEDICAL LOGISTICS SUPPORT

1-20. The office of the Deputy Chief of Staff of the Army (Logistics) is the proponent office for all Army logistics policy. The Surgeon General (TSG), as the Army's MEDLOG manager provides advice and assistance to Headquarters, DA agencies and activities on procedures and systems for management of Class VIII materiel. Army MEDLOG support is characterized by goals, policies, procedures, and organizational structures and is directly related to overall AHS support. It interfaces as a facilitating-type subsystem responsive first and foremost to patient care and secondly to the DOD and the Army's logistics system.

ARMY MEDICAL LOGISTICS

1-21. The Surgeon General of the Army executes Section 3031 to 3032, Title 10, United States Code (10 USC 3031 to 3032) responsibilities for development and direction of policy to train and equip the Army medical force and serves as the Commanding General, United States Army Medical Command (USAMEDCOM). The Surgeon General also serves as the Army's medical combat developer and materiel developer and is responsible for determination of requirements and the provision of materiel acquisition and total product life cycle management for Class VIII materiel and equipment.

OFFICE OF THE SURGEON GENERAL

1-22. The Office of The Surgeon General (OTSG) is responsible for the development and management of MEDLOG business processes to provide the clinical capabilities necessary to achieve the standard of care expected by warfighting commanders and the American people. Medical logistics follows the policies of the Army Regulation (AR) 700-series with exceptions provided in AR 40-61. The policies and procedures covered in AR 40-61 are unique to medical material and operations that are subject to regulations and standards of the Food and Drug Administration, the Environmental Protection Agency, the Drug Enforcement Agency, and The Joint Commission. The AHS executes TSG's 10 USC responsibilities through organizations in both the Army's operating and generating forces.

UNITED STATES ARMY MEDICAL COMMAND

1-23. The USAMEDCOM is a direct reporting unit that provides mission command for Army fixed-medical, dental, and veterinary treatment facilities as well as public health, medical research and development, and medical education and training institutions. The OTSG's Director of Logistics and USAMEDCOM's Assistant Chief of Staff for Logistics have primary staff responsibility for developing policies and procedures and providing guidance in the area of medical materiel management. Through its subordinate commands, the USAMEDCOM executes TSG's combat development and materiel development responsibilities and provides strategic and operational MEDLOG support to the Army's operating forces during deployments and at home station.

United States Army Medical Department Center and School

1-24. The Surgeon General's combat developer function is further delegated to the Commanding General of the United States Army Medical Department Center and School. The United States Army Medical Department Center and School also provides medical education and training for AMEDD personnel including medical logisticians.

United States Army Medical Research and Materiel Command

1-25. The USAMRMC serves as the AMEDD's medical materiel developer and life cycle management command responsible for managing strategic Army programs to field, project, and sustain the Army medical force. The United States Army Medical Materiel Agency (USAMMA) and the United States Army Medical Materiel Development Activity, both subordinate units of the USAMRMC, are responsible for executing the materiel development function within the command. The USAMMA executes the life cycle management function for Class VIII and serves as the materiel developer for commercial and nondevelopmental items, while the United States Army Medical Materiel Development Activity serves as the materiel developer for military unique items. The USAMMA is also responsible for implementation and management of medical materiel readiness programs in support of Army wide MEDLOG.

1-26. The AHS includes generating force organizations whose primary mission is to generate and sustain operational capabilities for employment by joint force commanders. These responsibilities include support of readiness, Army Force Generation, and the routine performance of functions specified and implied in 10 USC. The capabilities of AHS organizations in the generating force are employed by or in direct support of operating forces. Chapter 3 of this ATP contains a more detailed description of the USAMRMC and other USAMEDCOM operating and generating force organizations involved in projection and sustainment of deployed forces.

MEDICAL LOGISTICS SUPPORT TO UNIFIED LAND OPERATIONS

- 1-27. The AHS provides HSS and FHP in support of unified land operations, which include offensive, defensive, stability, and defense support of civil authorities (DSCA) tasks. In the past, the Army's emphasis, in terms of both planning and structure, focused on major combat operations, which are dominated by offensive and defensive tasks. Now, Army doctrine equally weights tasks associated with stability and DSCA with those related to offensive and defensive tasks. Throughout an engagement, offensive, defensive, stability, or DSCA tasks may occur simultaneously and have their own set of difficulties, which makes the logistician's mission very challenging.
- 1-28. Offensive tasks are conducted to defeat and destroy enemy forces and seize terrain, resources, and population centers (ADRP 3-0). The high level of intensity that exists when conducting offensive tasks increases the requirement for sustainment support. Higher casualty rates associated with the offensive may increase the requirement for medical resources, which makes it essential that AHS assets be positioned as close to supported units as is tactically possible to reduce response times for critical support. Supply Classes I (potable water), III, V, and VIII will be the most critical supplies required. Medical planners must work closely with staffs within the other warfighting functions to determine the scope of the operation, develop estimates for the quantity and types of support required, and develop a priority of support based on the anticipated need. In-transit visibility and/or total asset visibility is a major contributing factor in the success of any mission.
- 1-29. Defensive tasks are conducted to defeat an enemy attack, gain time, economize forces, and develop conditions favorable for offensive or stability tasks (ADRP 3-0). Positioning of sustainment resources is also critical when conducting defensive tasks. Locating assets in the wrong place can impede friendly maneuver, or worse, may allow sustainment units to be overrun. Generally, when conducting defensive tasks, sustainment assets are located closer to the sustainment area. However, this can vary depending on the type of defense. Refer to ADRP 3-0 and ADRP 3-90 for additional information on offensive and defensive tasks.
- 1-30. Stability tasks are conducted outside the U.S. in coordination with other instruments of national power to maintain or reestablish a safe and secure environment, provide essential governmental services, emergency infrastructure reconstruction, and humanitarian relief. Stability tasks are an important part of unified land operations and may occur simultaneously, with combinations of offensive and defensive tasks, or separately, usually at the lower end of the range of military operations. Army forces engaged in stability tasks establish, safeguard, or restore basic civil services and act directly and in support of governmental agencies. Under conditions such as those found in the various types of stability tasks, medical logisticians may be required to operate in small, task-organized units formed using the concepts of modularity and split-based operations. Medical units may be tasked to provide support far from traditional command channels and be required to assist civilian agencies that lack the ability to sustain themselves. Tailoring such support in this ever-changing environment is critical to sustainment success. Contractor and host-nation support assets will be invaluable in the less combat-related roles, releasing uniformed personnel for high intensity, high-risk requirements.
- 1-31. Stability and DSCA tasks generate medical materiel requirements beyond what is normally represented in medical capabilities provided in support of offensive and defensive tasks, which makes it necessary to rapidly assess and identify requirements and optimal sources of support and distribution. When supporting stability and DSCA tasks, the AHS employs MEDLOG capabilities in both the generating and operating force, in coordination with DOD logistics and transportation organizations.
- 1-32. Defense support of civil authorities tasks are defined as support provided by U.S. Federal military forces, DOD civilians, DOD contract personnel, DOD Component assets, and National Guard forces (when the Secretary of Defense, in coordination with the governors of the affected states, request to use those forces in Title 32, United States Code [32 USC] status) in response to requests for assistance from civil authorities, or from qualifying entities for special events. Most tasks necessary to conduct DSCA are similar to stability tasks, but are conducted in the U.S. and its territories. See Chapter 3 of this manual for a more detailed description of AHS support to DSCA tasks. Refer to ADRPs 3-07, 3-0, and 3-28, as well as FM 4-02, and ATP 4-02.42 for additional information on stability and DSCA tasks.

1-33. Operations conducted by Army special operations forces are also a major element of unified land operations. Army Special Operations Forces possess unique capabilities to support United States Special Operations Command's missions and functions as directed by Congress. The provision of AHS support for Army special operations forces is challenging. These forces are lightly equipped with few organic support assets and routinely enter austere theaters before adequate support structure can be established. The Army special operations forces surgeon, at all levels of command, is responsible for planning, coordinating, and synchronizing AHS support functions and missions including the coordination necessary to ensure that medical support is available when requirements exceed the organic capabilities of deployed special operations forces. The Army special operations forces surgeon is also responsible for determining medical requirements and providing oversight for the requisition, procurement, storage, maintenance, distribution management, and documentation of medical supplies and equipment, as well as a host of other AHS support tasks. Refer to FM 4-02.43 for additional information on AHS support to special operations forces.



Chapter 2

Medical Logistics Organizational Structure

The MEDLOG support structure must provide the medical materiel necessary to ensure quality care in any operational environment. It is important for medical planners and logisticians to be familiar with the organizational structure and capabilities of units in the force. This chapter describes the structure of the MEDLOG organizations resident in the operating force to include the mission, capabilities, and dependencies of each unit.

SECTION I — THEATER MEDICAL LOGISTICS SUPPORT

- 2-1. Theater MEDLOG operations require thorough planning and execution to ensure sustainment of supported units. In theater, Army MEDLOG is planned and executed as part of the combatant commander and ASCC medical support plan and must be structured and managed to be responsive to health care requirements as part of an integrated jointly operating AHS.
- 2-2. The commander prioritizes the mix of forces based on the time-phased force and deployment data. The time-phased force and deployment data must incorporate detailed MEDLOG planning to ensure that the logistics infrastructure supports austere and mature theater requirements by synchronizing force deployments with functional MEDLOG units and resources prior to operations. Active and continuous command involvement in all stages of force projection, coupled with detailed reversed planning, combine to ensure that the right forces with the right support are available and ready to conduct operations.

SECTION II — MEDICAL LOGISTICS SUPPORT ORGANIZATIONS IN THE OPERATING FORCE

- 2-3. Medical logistics is anticipatory with select units capable of operating in a split-based mode. Medical logistics is provided by a combination of the following organizations:
 - Medical logistics company.
 - Logistics support company.
 - Medical detachment (blood support).
 - Optometry detachment (organizational structure and functions covered in Chapter 6).
 - Medical logistics management center.

MEDICAL LOGISTICS COMPANY

2-4. The mission of the MLC (Table of Organization and Equipment [TOE] 08488R000) is to provide direct support for medical materiel, medical equipment maintenance, and single and multivision optical lens fabrication and repair to BCTs and EAB medical units. The MLC has no organic blood support capability. Figure 2-1 on page 2-2 depicts the organizational structure of the MLC.

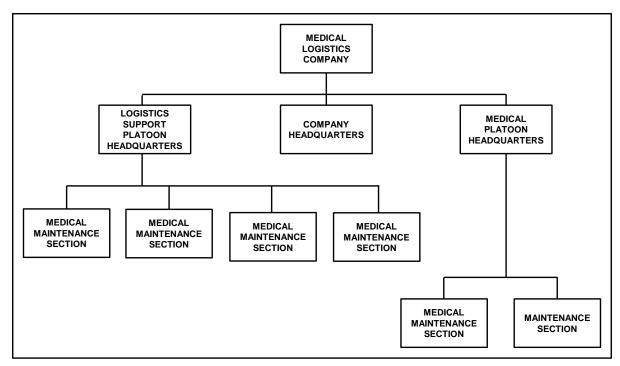


Figure 2-1. Medical logistics company

- 2-5. The MLC is assigned to the medical battalion (multifunctional) (MMB) or senior medical mission command headquarters within the area of operations. The company has the capability for limited self-sustainment during initial operations, meeting the requirement for early entry into the area of operations or as part of a task organization and is dependent on—
 - Appropriate elements of the theater for religious, legal, AHS support, financial management, personnel and other administrative services.
 - Unit to which it is assigned for food service support.
 - The headquarters and headquarters detachment of the MMB for communications maintenance support.

CAPABILITY

- 2-6. One MLC is allocated per 11.1 short tons of Class VIII issued per day. The MLC—
 - Provides Class VIII, single and multivision optical fabrication and repair, and medical equipment maintenance support to a maximum force of 22,000 Soldiers.
 - Receives, classifies, and issues up to 11.1 short tons of Class VIII supplies per day.
 - Provides storage for up to 51 short tons of Class VIII supplies.
 - Builds and positions Class VIII configured loads, as required in support of BCTs and EAB medical units or contingencies.
 - Provides field- and sustainment-level medical equipment maintenance for medical equipment belonging to medical units operating within the supported area and is capable of deploying three mobile medical maintenance support teams.
 - Provides reconstitution of MEDLOG units, sections, or teams.
 - Coordinates for emergency delivery of Class VIII supplies.
 - Provides field maintenance on all organic unit equipment except communications security equipment.
 - Fulfills the SIMLM supply and requisition processing mission for all joint forces in the theater, when so designated by the combatant commander.

ORGANIZATIONAL STRUCTURE

2-7. The MLC consists of the company headquarters, logistics support platoon headquarters, and maintenance platoon headquarters.

Company Headquarters

2-8. The company headquarters provides mission command of the MLC. Personnel assigned to this section supervise and perform unit plans, operations, and general supply functions.

Logistics Support Platoon Headquarters

2-9. The logistics support platoon headquarters provides mission command of the platoon. The platoon headquarters is responsible for ensuring that stocks remain in an issuable condition while in storage. This includes the planning prior to receipt of supplies, locating stocks, ensuring first-in/first-out handling, using space efficiently, and maintaining segregation and disposition of stock as determined by the accountable officer.

Receiving and Storage Section

2-10. This section is responsible for the storage, preservation, location, and accountability for medical supplies and equipment. The section prepares and processes receipt documents for incoming shipments and is capable of deploying a five person mobile forward distribution team for dual-based operations.

Shipping Section

2-11. This section plans for the release of materiel to transportation, coordinates for vehicles, stages shipments for pick up, and prepares movement documents. This section maintains close communication and synchronization with the distribution management center (DMC) of the theater sustainment command/expeditionary sustainment command, the supported brigade medical supply office (BMSO), and the brigade support battalion support operations section for distribution management in order to use theater transportation assets to deliver supplies. This section is capable of deploying a five-person mobile forward distribution team for dual-based operations.

Stock Control Section

2-12. This section maintains accountability for all medical materiel and coordinates all stock control functions. The section also maintains accountability for all materiel received, stored, and issued in the MLC. This section is capable of deploying a three-person mobile forward distribution team in support of dual-based operations.

Optical Support Section

2-13. The optical support section performs optical fabrication and repair of single and multivision eyewear.

Maintenance Platoon Headquarters

2-14. The maintenance platoon headquarters provides mission command for the platoon. The platoon headquarters also oversees the performance of field and sustainment medical equipment maintenance services on an area basis. The platoon also provides oversight of organizational maintenance for all vehicles and power generation equipment organic to the company.

Medical Maintenance Section

2-15. This section performs limited sustainment maintenance services to all units within the company's area of operations. It also performs field maintenance for units in its area of operations that do not have organic medical equipment maintenance personnel assigned or attached or are not supported by biomedical equipment specialists from other units. This section can deploy three mobile contact repair teams.

Maintenance Section

2-16. This section is responsible for vehicle maintenance, equipment records and repair parts, unit fuel distribution, and power generation repair for organic company assets.

LOGISTICS SUPPORT COMPANY

2-17. The mission of the logistics support company (TOE 08497R000) (Figure 2-2 below) is to provide direct support for Class VIII materiel, medical equipment maintenance and repair, and single and multivision optical lens fabrication and repair to EAB medical units operating within the supported area. It also provides backup support to the MLC (TOE 08488R000). The logistics support company is assigned to the MMB.

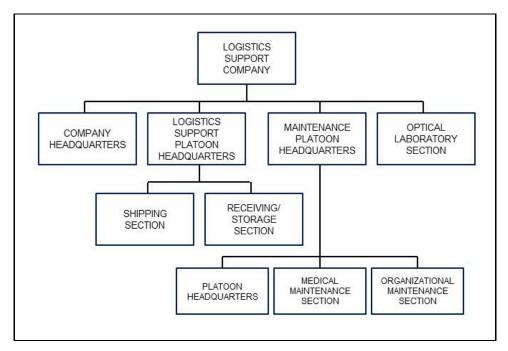


Figure 2-2. Logistics support company

CAPABILITY

2-18. The company is capable of receiving, classifying, and issuing up to 24 short tons of medical supplies per day and storage for up to 415 short tons of Class VIII supplies. The logistics support company also—

- Builds and pre-positions medical resupply sets from components assembled in CONUS in support of brigade and EAB units or contingencies, as required.
- Provides sustainment maintenance for brigade and EAB units operating in the supported area.
- Performs field maintenance for the medical detachment (blood support) and units operating in the area that do not have organic biomedical equipment specialists assigned.
- Provides reconstitution of MEDLOG units, sections, or teams.
- Coordinates for emergency delivery of Class VIII supplies.
- Performs the theater SIMLM supply and requisition processing mission for all Services, as directed.

ORGANIZATIONAL STRUCTURE

2-19. The logistics support company consists of a company headquarters, logistics support platoon headquarters, maintenance platoon, and optical laboratory section.

Company Headquarters

2-20. The company headquarters provides mission command of the logistics support company. Company personnel supervise and perform unit plans/operations and general supply functions. The company provides food service personnel to augment the MMB, medical detachment (blood support), MLMC support teams, and other assigned or attached MLCs.

Logistics Support Platoon Headquarters

- 2-21. The logistics support platoon headquarters ensures that stocks remain in an issuable condition while in storage. This includes planning prior to receipt of supplies, locating stocks to provide first-in/first-out handling, using space efficiently, and maintaining segregation and disposition of stock as determined by the accountable officer. This platoon consists of the following sections:
 - Receiving/storage section, which is responsible for storage, preservation, location, and accountability of medical supplies and equipment. The section prepares and processes receiving documents for incoming shipments. This section is also capable of deploying a five-person mobile forward cell for dual-based operations.
 - Shipping section plans and coordinates for release of materiel to transportation, coordinates for vehicles, stages shipments for pickup, and prepares movement documents. This section is also capable of deploying a five-person mobile forward support cell in support of dual-based operations.

Maintenance Platoon Headquarters

- 2-22. Maintenance platoon headquarters is responsible for providing field maintenance support (on an area basis) to units that do not have organic biomedical equipment specialists assigned and field maintenance for organizational equipment within the company. The platoon consists of the following sections:
 - Medical maintenance section performs field medical maintenance services for units in its area of
 operations that do not have organic medical equipment maintenance personnel assigned or
 attached or not supported by biomedical equipment specialists from other units. This section can
 also deploy three mobile support teams.
 - Organizational maintenance section is responsible for vehicle maintenance, equipment records and repair parts, fuel distribution, and power generation repair.

Optical Laboratory Section

2-23. Optical laboratory section provides mission command and quality assurance over the optical fabrication mission within the area of operations. This section provides single and multivision optical fabrication and repair. All requisitions for contact lenses (for Attack Helicopter-64 aviators only) are also submitted to and approved by this section.

MEDICAL DETACHMENT (BLOOD SUPPORT)

2-24. The medical detachment (blood support) (TOE 08430R000) provides collection, manufacturing, storage, and distribution of blood and blood products to BCT, EAB medical units, and to other Services as required. Figure 2-3 on page 2-6 depicts the organizational structure of the medical detachment (blood support). Refer to Chapter 7 for additional information on blood support operations.

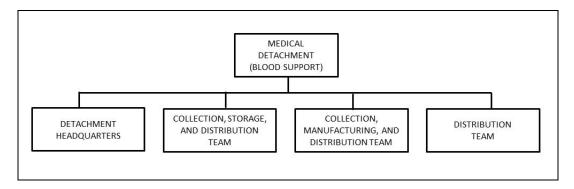


Figure 2-3. Medical detachment (blood support)

2-25. The medical detachment (blood support) is assigned to the MMB (TOE 08485R000) and is capable of 72-hours limited self-sustainment during initial operations. The detachment is dependent upon higher level medical elements, usually the headquarters and headquarters detachment, MMB and appropriate elements of the theater medical brigade (support) (MEDBDE [SPT]) for AHS support, religious, legal, financial management, administrative services, supplemental transportation, power generator maintenance support, communications maintenance support and additional automotive and utilities maintenance support. The detachment headquarters may forward deploy any of the teams, which include the collection, storage, and distribution team; collection, manufacturing, and distribution team; and the distribution team. The teams, when deployed separately from the base, will be dependent upon a host unit for life support operations. See Chapter 7 for additional information on blood management.

2-26. The detachment must coordinate with the major blood storage unit (if required), such as the USAF Expeditionary Blood Transshipment Center (EBTC), for resupply purposes. The detachment provides flexibility to shift personnel between collection and distribution missions, as required. The detachment is dependent upon appropriate EAB elements for AHS support, medical equipment maintenance and repair, supplemental transportation, financial management, human resources support, religious, and legal services, and technical intelligence for captured medical materiel. The detachment also requires augmentation in a CBRN environment for decontamination and may require supplemental signal assets for bandwidth communications. Additionally, the detachment requires support from the USAF EBTCs for blood requirements from CONUS blood donor centers and the Armed Services Whole Blood Processing Laboratory.

CAPABILITY

- 2-27. This unit is capable of—
 - Establishing the theater blood distribution plan within the joint operations area, including storage levels, locations, and the schedule of resupply.
 - Providing consultation with commanders from company to theater level regarding blood support.
 - Receiving and accounting for blood and blood product shipments from the Armed Services Whole Blood Processing Laboratory or USAF EBTC.
 - Receiving and storing up to 5,100 refrigerated and/or frozen blood products from CONUS or other U.S. MTFs, and further distribute those products to supported MTFs and medical units.
 - Operating blood distribution hubs and other critical nodes over a large geographic area.
 - Conducting and coordinating administrative and logistical support to sustain operations.
 - Distributing blood and blood products to MTFs down to and including Role 2 MTFs.
 - Maintaining a theater blood storage depot to store blood and blood products pending transfer to distribution and collection sections.
 - Determining and providing the appropriate blood products and blood types to each facility according to the role of care of the MTF and the capabilities available.

- Coordinating movement of blood and blood products and tracking shipments in transit to ensure proper delivery.
- Ensuring proper screening of potential emergency whole blood donors and initiating retrospective viral marker testing on locally collected whole blood. Collecting processing and testing whole blood from the available donor pool when needed for a specific emergent medical condition, such as massive blood loss coupled with a coagulopathy requiring the transfusion of certain coagulation factors found only in fresh blood products. The detachment is also capable of ensuring the proper processing of blood, which may include testing and/or treatment of blood to render potential viruses and bacteria inactive.
- Collecting single-donor platelets by apheresis when needed to address specific medical
 conditions, such as uncontrolled bleeding requiring the transfusion of platelets and coagulation
 factors. Proper processing of blood may include testing and/or treatment of blood to render
 potential viruses and bacteria inactive.
- Ensuring proper screening of emergency platelet-apheresis donors and initiate retrospective viral marker testing on locally collected platelet products.
- Ensuring that DOD Armed Services Blood Program Office policy and procedures are followed with respect to emergency blood donations and transfusions.
- Preparing and submitting joint operations area blood reports to the combatant command Joint Blood Program Office (JBPO) and the Armed Services Blood Program Office.
- Implementing, monitoring, and enforcing Armed Services Blood Program Office and JBPO policies and procedures within the joint operations area.

ORGANIZATIONAL STRUCTURE

- 2-28. The medical detachment (blood support) consists of the following elements:
 - Detachment headquarters.
 - Collection, storage, and distribution team.
 - Collection, manufacturing, and distribution team.
 - Distribution team.

Detachment Headquarters

- 2-29. The detachment headquarters (TOE 08489RA00) provides mission command for the medical detachment (blood support). The detachment headquarters supervises the activities of the teams under its control and provides technical guidance and subject matter expertise to commanders on blood operations. This headquarters also performs unit plans, operations, general supply support activities, and operates as the Area Joint Blood Program Office to support joint MTFs in the BCTs and at EAB. This headquarters deploys when any other team of the medical detachment (blood support) is called into service.
- 2-30. The headquarters detachment is assigned to the medical detachment (blood support) and is dependent upon—
 - Appropriate elements within the theater for religious, legal, AHS support, financial management, personnel, and administrative services.
 - The BCT and EAB transportation assets to provide unit distribution and signal assets for bandwidth communications and requires augmentation and support for decontamination in a CBRN environment.
 - The MLC and logistics support company for medical equipment maintenance and unit level supply support.
 - The MMB for food service support, power generator maintenance support, communications and additional automotive and utilities maintenance support.
- 2-31. The unit is located at EAB. It provides mission command for blood teams and operates as the Area Joint Blood Program Office to support joint medical treatment facilities in the BCTs and at EAB. It is tactically located where it can best perform the blood management mission and control unit assets.

One detachment headquarters is assigned per medical detachment (blood support). The headquarters detachment—

- Manages and controls forward deployed blood teams.
- Provides consultation to commanders regarding blood support.
- Monitors, maintains, and ensures blood inventory levels.
- Ensures the safety, purity, and potency of blood products and reports and quarantines suspect stock.
- Coordinates with the USAF EBTC and the Armed Services Blood Program Office.
- Provides maintenance personnel to augment the maintenance capabilities of the supporting unit that performs field maintenance on detachment vehicles and power equipment.

Collection, Storage, and Distribution Team

- 2-32. The collection, storage, and distribution team (TOE 08489RB00) provides collection, manufacturing, storage, and distribution of blood and blood products to BCTs, EAB medical units, and to other Services as required. The team is assigned to the medical detachment (blood support) at EAB where it provides blood and blood products to support joint MTFs. The team is dependent upon the following:
 - Appropriate elements within the theater for AHS support, religious, legal, financial management, personnel, and other administrative services.
 - Brigade combat team and EAB transportation assets to provide unit distribution and signal assets for bandwidth communications.
 - The MLC and logistics support company for medical equipment maintenance and unit level supply support.
 - The MMB for food service support, power generator maintenance support, communications and additional automotive and utilities maintenance support, as well as support for decontamination in a CBRN environment.
- 2-33. The collection, storage, and distribution team is also responsible for the—
 - Receipt, re-icing, and transshipment of packed red blood cells and blood products from the USAF EBTC.
 - Refrigerated storage for 3,900 units of packed red blood cells.
 - Distribution of boxes of packed red blood cells and other blood products to the BCTs and EAB MTFs while not collecting and/or manufacturing blood. Deploys as a forward distribution team as required.
 - Collection of up to 100 units of whole blood every 24 hours and/or up to eight apheresis platelets every 24 hours after an initial 24-hour delay, while not distributing blood.

Collection, Manufacturing, and Distribution Team

- 2-34. The collection, manufacturing, and distribution team (TOE 08489RC00) provides collection, manufacturing, storage, and distribution of blood and blood products to BCT and EAB medical units and other Services as required. The team is assigned to the medical detachment (blood support) at EAB where it provides blood and blood products to support joint MTFs. The team is dependent upon the following:
 - Appropriate elements within the theater for AHS support, religious, legal, financial management, personnel, and other administrative services.
 - Brigade combat team and EAB transportation assets to provide unit distribution and signal assets for bandwidth communications.
 - The MLC and logistics support company for medical equipment maintenance and unit-level supply support.
 - The MMB for food service support, automotive maintenance, communications and power generator maintenance support, as well as support for decontamination in a CBRN environment.

- 2-35. The collection, manufacturing, and distribution team provides—
 - Blood and blood products to MTFs operating in the BCT and EAB area of operations.
 - Receipt, re-icing, and transshipment of packed red blood cells and blood products from the USAF EBTC.
 - Refrigerated storage for 900 units of packed red blood cells.
 - Distribution of boxes of packed red blood cells and other blood products to the BCTs and EAB MTFs while not collecting and/or manufacturing blood. Deploys as a forward distribution team as required.
 - Collection of up to 100 units of whole blood every 24 hours and/or up to eight apheresis platelets every 24 hours after an initial 24-hour delay, while not distributing blood.

Distribution Team

2-36. The distribution team (TOE 08489RD00) provides storage and distribution of blood and blood products to BCTs, EAB medical units, and to other Services as required. The team is assigned to the medical detachment (blood support) at EAB where it provides blood and blood products to support joint MTFs. The team is dependent upon the following:

- Appropriate elements within the theater for AHS support, religious, legal, financial management, personnel, and other administrative services.
- Brigade combat team and EAB transportation assets to provide unit distribution and signal assets for bandwidth communications.
- The MLC and logistics support company for medical equipment maintenance and medical supply support.
- The MMB for food service support, automotive maintenance, communications and power generator maintenance support, as well as support for decontamination in a CBRN environment.
- 2-37. The distribution team provides—
 - Blood and blood products to MTFs operating in the BCT and EAB area of operations.
 - Receipt and transshipment of packed red blood cells and blood products from the USAF EBTC.
 - Refrigerated storage for 300 units of packed red blood cells.
 - Distribution of boxes of packed red blood cells and other blood products to the BCTs and EAB MTFs. Deploys as a forward distribution team as required.

MEDICAL LOGISTICS MANAGEMENT CENTER

2-38. The MLMC's (TOE 08670R000) mission is to provide centralized, theater-level commodity management of Class VIII materiel in accordance with the ASCC surgeon's policies. This organization operates in a split-based mode, with a nondeployable base, two forward support teams (early entry), and two forward support teams (follow-on). The MLMC is capable of deploying these teams while maintaining base operations in CONUS. One team deploys to support each theater. When deployed, the MLMC forward support team is assigned to the MEDCOM (DS). The organizational structure for the MLMC is shown in Figure 2-4 on page 2-10.

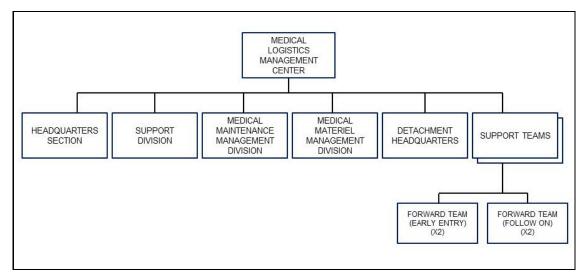


Figure 2-4. Medical logistics management center

2-39. The MLMC provides centralized, strategic-level management of critical Class VIII materiel, PMIs, optical fabrication, contracting, and medical equipment maintenance support. When deployed, the MLMC forward support team is assigned to the MEDCOM (DS) and collocates with the DMC of the theater sustainment command/expeditionary sustainment command, as well as the joint deployment distribution operations center, if established. The forward support team serves as a link between national-level support and theater-level distribution and is dependent upon appropriate elements of the ASCC for AHS support, food service support, transportation, laundry and bath, financial management, personnel and administrative services, religious, legal, communications, and unit-level maintenance support.

CAPABILITY

- 2-40. The MLMC is capable of—
 - Monitoring the operation and mission command of MEDLOG units in all areas of operation.
 - Monitoring receipt and processing of Class VIII requisitions from MEDLOG units of all Services.
 - Reviewing and analyzing demands and computing theater requirements for Class VIII supplies, medical equipment, medical equipment maintenance, and optical fabrication.
 - Monitoring and evaluating workload, capabilities, and asset position of the supported MEDLOG
 units of all Services and directs cross-leveling of workload or resources to achieve compatibility
 and maximum efficiency.
 - Implementing plans, procedures, and programs for medical material management systems.
 - Conducting limited predeployment training of MEDLOG management systems for deploying medical units.
 - Preparing medical materiel management data and reports as required.
 - Providing medical contracting support.
 - Performing the SIMLM information management and distribution coordination mission to joint forces, as directed.
 - Serving as the management interface with CONUS Class VIII national inventory control points and strategic partners.
 - Managing critical items and analysis of production capabilities.
 - Serving as liaison with the materiel distribution manager at EAB for distribution of Class VIII supplies within the area of operations.
 - Deploying two MLMC forward support teams into multiple areas of operation, as required.

ORGANIZATIONAL STRUCTURE

2-41. The MLMC consists of a headquarters section, support division, medical maintenance management division, medical material management division, detachment headquarters, and two forward support teams.

Headquarters Section

2-42. The headquarters section provides mission command, planning, direction, and administrative support for the MLMC.

Support Division

2-43. The support division coordinates staff functions pertaining to MEDLOG. It is responsible for the placement and operation of the MLMC forward support teams and the execution of operational plans.

Medical Materiel Management Division

- 2-44. The materiel management division is responsible for monitoring Class VIII materiel management in CONUS and in multiple theaters, as well as the following:
 - Maintains daily visibility of medical materiel assets positioned in multiple theaters and the availability of CONUS-based stocks.
 - Monitors requisitions for critical items and analyzes stockage objectives.
 - Performs special studies and analysis of logistical data and interfaces with the national inventory control point.
 - Receives all Army requisitions in theater for Class VIII materiel for resupply or replenishment actions.
 - Establishes and monitors contracts for critical medical items and services and provides technical guidance to medical contracting personnel within the area of operations.

Medical Maintenance Management Division

2-45. The medical maintenance management division is responsible for the theater medical equipment maintenance program. It serves as the medical maintenance consultant to multiple ASCC surgeons. Analysis of workload data, bench stock management (which includes the management of repair parts, medical device alerts, and field change orders), and maintenance programs are part of this division's activities. The division reviews maintenance status and performance reports and manages allocation of maintenance personnel assets and Medical Standby Equipment Program (MEDSTEP) items or other maintenance regeneration enablers. It also provides assistance to units with maintenance backlogs through resource allocation and equipment evacuation policies.

Detachment Headquarters

2-46. The detachment headquarters provides mission command of the MLMC. The personnel of this section supervise and perform unit and general supply functions, billeting, discipline, security, readiness, and training for the MLMC. Maintenance personnel will supplement a collocated unit for daily work assignments in support of the MLMC.

Forward Support Teams

2-47. The MLMC forward support teams provide centralized management of medical materiel, medical maintenance, and coordination for the distribution of Class VIII materiel within the area of operations in support of force projection operations. These teams also provide medical contracting support for the theater and transmit automated management data back to the MLMC base via satellite communications. The teams are dependent on elements of the theater sustainment command (when collocated with the DMC) for food service support, transportation, laundry and bath, financial management, personnel and administrative services, legal, religious support, communications, and unit maintenance.

2-48. The forward support teams collocate with the senior DMC to coordinate the movement of Class VIII within the area of operations. The MLMC support team will have the capability to prioritize, redirect shipments, and direct theaterwide cross-leveling of Class VIII assets. When designated, the teams provide the information management and distribution coordination portion of the SIMLM mission for joint operations. The MLMC is capable of split-based operations, deploying two forward teams consisting of sufficient personnel and equipment to support two different large-scale combat operations. Each MLMC forward team consists of two distinct elements, one forward team (early entry) combines with one forward team (follow-on) to make one complete team. Each element is capable of the following:

- The two forward teams (early entry) are capable of deploying as an early entry element to provide centralized management of medical materiel, medical maintenance, medical contracting operations, and coordination of the distribution of Class VIII materiel within the area of operations. The team's logistics chief will serve as the team chief when deployed. The early entry team can provide liaison officers (or noncommissioned officer) to each deployed MEDLOG unit of all Services and to the ASCC surgeon's location as required. The team will provide the information management and distribution coordination portion of the SIMLM mission, when the Army is designated as the SIMLM by the combatant commander, for joint operations. When deployed, the team will be subordinate to the MEDCOM (DS) and collocates with the DMC of the theater sustainment command or expeditionary sustainment command.
- The two forward teams (follow-on) augment the early entry teams to provide additional centralized theater-level inventory management of Class VIII materiel in accordance with the ASCC surgeon's policy. The forward teams (follow-on) are capable of deploying as a follow-on element to provide additional centralized management of critical Class VIII materiel, PMIs, medical maintenance, and optical fabrication support. These teams are not meant to deploy independently of the forward teams (early entry).

Chapter 3

Medical Logistics Operations

Army MEDLOG operations are integral to the generation, projection, and sustainment of AHS capabilities in support of unified land operations. This chapter discusses medical support to Army Force Generation, the available mix of operating and generating force MEDLOG capabilities, and processes required to project, sustain, and redeploy operational forces in support of unified land operations.

SECTION I — MEDICAL FORCE GENERATION AND READINESS

3-1. Army force structure is divided into operating forces and generating forces. The operating force consists of Army organizations whose primary purpose is to fulfill global operational requirements. The generating force is that part of the Army whose primary purpose is to generate and sustain Army units by performing functions specified and implied by law. The AMEDD provides both the operating and generating force capabilities necessary to project, sustain, and redeploy the force in support of unified land operations. Among those capabilities are the Army hospitals in the generating and operating force that provide organic MEDLOG capabilities in support of internal and external customers. The AMEDD must synchronize the efforts of deployed operational medical forces and AHS assets in the generating force to ensure a continuous system of health from the point of injury through successive roles of medical care within the theater to definitive care in CONUS. To ensure optimal Soldier health, a cooperative effort between operating force medical personnel, line commanders, and generating force medical activities at all installations is required throughout the Army Force Generation process.

ARMY FORCE GENERATION

3-2. Army Regulation 525-29 defines Army Force Generation as the structured progression of unit readiness over time to produce trained, ready, and cohesive units prepared for operational deployment in support of the combatant commander and other Army requirements. Army Force Generation is the Army's core process that is designed to produce operational units that are task-organized, equipped, manned, and trained to become an expeditionary force package. The current DA Equipping Strategy is to equip deploying forces to meet mission requirements in support of Army Force Generation. The AHS supports Army Force Generation through a materiel equipping and fielding strategy executed in accordance with DA force management and modernization policies and priorities. The AHS maintains strategic readiness through Class VIII contingency programs designed to support the immediate requirements of mobilization, deployment, and initial sustainment of its operational medical forces. To the extent possible, the AHS defers investment in Class VIII materiel, especially potency and dated items and high dollar value medical technology in order to conserve Army resources and maximize flexibility to project AHS units that are fully capable of meeting the mission requirements of the joint force commander.

GENERATING FORCE SUPPORT

3-3. The generating force projects and sustains Army operational capabilities and fulfills numerous critical roles in support of the deployed force. The USAMEDCOM provides operational reach through the generating force to leverage personnel, infrastructure, and materiel within the AHS to ensure that Soldiers receive the best medical care possible no matter their location. The USAMEDCOM integrates the capabilities of subordinate operational Army units with its generating force assets such as military MTFs, research, development, and acquisition capabilities. The USAMEDCOM's generating force capabilities not only augment those of the operating force, but also provide significant assistance in coping with unanticipated health threats. During deployments, organizations within the generating force can provide

reachback support from the different medical specialty areas and deploy teams of physicians, scientists, technicians, and other health care professionals to provide solutions to unique health threats, medical conditions, or other issues occurring in a theater.

OPERATING FORCE SUPPORT

3-4. Medical units in the operating force project the core MEDLOG capabilities required to support the theater medical system. Medical logistics capabilities are organic to AHS organizations that generate high demand. Organic MEDLOG capabilities provide the proximity, mobility, and control essential to sustain specified levels of self-sufficiency and enable uninterrupted support to modular medical elements engaged in unified land operations. Medical units in the operating force contribute to Army Force Generation by providing the HSS and FHP necessary for sustainment of deployed forces in support of unified land operations. However, limited medical resources make it necessary for AHS assets in the generating force to provide support to Soldiers and eligible beneficiaries at home station, while mobilizing to augment theater-specific requirements. The ability of the deployed medical commander to reach into the CONUS-support base for augmentation of medical, technical, clinical, and materiel support is vital to enhance the medical outcomes of our Soldiers who become wounded, injured, or ill while on deployments and maximizes the employment of limited AHS resources. Upon completion of the mission, the generating force assets revert back to their original function.

SECTION II — FORCE PROJECTION

- 3-5. Army Regulation 525-93 defines force projection as the ability to project the military element of national power from CONUS or another theater, in response to requirements for military operations. Force projection encompasses a range of processes including mobilization, deployment, employment, sustainment, and redeployment as follows:
 - Mobilization is defined as: 1. The process of assembling and organizing national resources to support national objectives in time of war or other emergencies. 2. The process by which the Armed Forces of the United States or part of them are brought to a state of readiness for war or other national emergency, which includes activating all or part of the Reserve Component as well as assembling and organizing personnel, supplies, and materiel (Joint Publication [JP] 4-05). Upon notification of mobilization for deployment, the AHS ensures that medical forces are appropriately manned through the AMEDD Professional Filler System and appropriately equipped through the issue of medical supplies and equipment necessary to fill unit shortages.
 - *Deployment* is defined as the rotation of forces into and out of operational area (JP 3-35). The AHS supports force deployment by ensuring that scarce medical material resources are provided according to time phased deployment requirements.
 - *Employment* is defined as the strategic, operational, or tactical use of forces (JP 5-0). The AHS supports employment through the issue of pre-positioned materiel in theater to arriving forces during reception, staging, onward movement, and integration and providing Class VIII sustainment during theater opening and follow-on operations.
 - Sustainment is defined as the provision of logistics, personnel services, and health service support necessary to maintain operations until successful mission completion (ADP 4-0).
 - Redeployment is defined as the transfer of forces and materiel to home and/or demobilization stations for reintegration and/or out-processing (ATP 3-35). The AHS supports redeployment by continuing to provide HSS and FHP until the mission is completed and all personnel have departed the theater, as well as through the methodical withdrawal of serviceable materiel and responsible disposal of materiel that is inappropriate for return.
- 3-6. Deployment, employment, and sustainment are closely linked, making it difficult to successfully plan one process without the others. Generating force capabilities provide direct support to mobilization and deployment activities at Army installations and serve as a source of materiel and technical support for operational medical units.
- 3-7. Force projection operations are inherently joint and require detailed planning and synchronization. The goal is a combat ready force deployed to an operational area before the enemy is ready or the situation

deteriorates. The intent and purpose of force projection requires that sustainment commanders deploy only those forces needed to support the task force, making it necessary to tailor units with the proper personnel, equipment, and supplies to meet those requirements.

3-8. Force projection requires early critical analysis of the tactical commander's intent and the threat (to include the health threat). Analysis is required at every level of logistics—strategic, operational, and tactical—across the range of military operations. The keys are anticipation of requirements and the synchronization of AHS support to the joint force commander's mission. Refer to AR 525-93 and ATP 3-35 for additional information on Army deployment and redeployment.

MEDICAL SUPPORT TO FORCE PROJECTION

- 3-9. Force projection processes are a continuous, overlapping, and repeating sequence of events that are repeated throughout an operation. The USAMEDCOM, through its USAMRMC, directly supports force projection by providing the final equipping and provisioning of deploying medical units to ensure that they arrive in theater prepared to execute the mission. Medical logistics support is coordinated and executed by organizations within the USAMRMC to leverage the strategic acquisition framework established by the Defense Logistics Agency, linking operational forces directly with national-level industry partners. The USAMEDCOM and USAMRMC activities supporting force projection platforms employ organizations such as—
 - The United States Army Medical Materiel Agency.
 - The United States Army Medical Materiel Centers.
 - Army regional health commands.
 - Installation medical supply activities.

UNITED STATES ARMY MEDICAL MATERIEL AGENCY

3-10. The USAMMA, a subordinate command of USAMRMC, is responsible for execution of the AMEDD's strategic MEDLOG programs and initiatives. The agency has a wide range of strategic roles involving centrally managed MEDLOG programs, Army supply Class VIII cataloging and set assembly, medical equipment maintenance planning and operations, and Army Force Generation integration and synchronization. The USAMMA has operational oversight of medical materiel acquisition programs and serves as the agency responsible for fielding new medical equipment sets (MES) for Army operational forces in support of force projection, sustainment, and redeployment. The USAMMA Medical Logistics Support Team and Forward Repair Activity—Medical team are deployable elements employed to—

- Issue APS unit sets and sustainment stock.
- Serve as a liaison with the U.S. Army Materiel Command for the integration of APS Classes II and VII materiel for supported medical units.
- Provide sustainment-level medical equipment maintenance support and technical expertise to deployed medical units in theater.

Medical Logistics Support Team

3-11. The Medical Logistics Support Team is a deployable table of distribution and allowances (TDA) organization comprised of up to 48 USAMMA personnel (military, DA civilians, and contractors). The Medical Logistics Support Team deploys to designated locations worldwide to deliver MEDLOG capabilities and solutions in support of Army contingency programs. The team is capable of supporting multiple simultaneous APS fieldings anywhere in the world. The team also supports the reception, staging, onward movement, and integration issue of APS unit sets and sustainment stock pre-positioned around the world, pushed in from the APS located ashore or afloat. This includes the introduction of additional Class VIII materiel not previously pre-positioned.

- 3-12. The Medical Logistics Support Team is configured based on the equipment density of APS materiel being issued, but typically the team is organized into hand-off teams for APS hospital (Role 3) and BCT (Roles 1 and 2) equipment. The team's capabilities include—
 - Initial fielding and hand-off of APS, TSG contingency stock or unit deployment packages, and TSG-directed modernization medical equipment (not sustainment).
 - Medical equipment maintenance, technical inspection, and repair (type- or density-dependent).
 - Initial APS Class VIII sustainment stock transfer to the designated theater SIMLM.
 - Class VIII technical and staff assistance to medical units within the operational area.
 - Medical material transfer and training of key unit personnel on inserted medical technology.
- 3-13. Refer to Supply Bulletin (SB) 8-75-S7 for additional information on the USAMMA Medical Logistics Support Team and Chapter 5 of this ATP for a description of the Forward Repair Activity—Medical teams.

Class VIII Contingency Programs

- 3-14. Under the direction of TSG, the AHS provides centralized management of Army Class VIII materiel to support the readiness and operational reach of deploying medical forces. Class VIII contingency programs are funded by Headquarters, DA and managed by the USAMMA. The USAMMA was designated by the OTSG as the agency responsible for coordination, management, and control of all Class VIII contingency programs. The primary contingency programs for Army Class VIII materiel are—
 - Army Pre-positioned Stocks, which consists of—
 - Activity/Brigade/and Unit Sets.
 - Operational Projects.
 - War Reserve Sustainment.
 - The Surgeon General's Contingency Stock consists of—
 - Medical Chemical Defense Materiel (MCDM).
 - Centrally Managed Medical Potency and Dated (P&D) Materiel Program (Unit Deployment Packages).
 - Medical Materiel Readiness Program.
- 3-15. The OTSG's Class VIII contingency programs are discussed in greater detail in Section V of this chapter and SB 8-75-S7.

MEDICAL MATERIEL CENTERS

3-16. The USAMRMC's United States Army Medical Materiel Center–Europe and United States Army Medical Materiel Center–Korea provide theater-level MEDLOG support to Army generating and operating medical forces assigned or attached to the supported geographic combatant command. The medical materiel centers provide theater-level medical materiel management, medical equipment maintenance and repair, optical fabrication, medical set assembly and reconstitution, and customer support operations in peacetime and throughout the range of military operations. The medical materiel centers receive prepositioned materiel (including cold chain and controlled substances), provide Class VIII supply support, and build preconfigured resupply packages as required. Both Army medical materiel centers have been designated as TLAMMs for Class VIII supply chain support of joint forces assigned or attached to the supported geographic combatant command. The medical materiel centers also support the execution of SIMLM responsibilities assigned to the ASCC. The medical materiel centers may be augmented, as required, by operational MEDLOG units to rapidly expand and scale capabilities. The USAMRMC medical materiel centers and MTFs of the USAMEDCOM operate within the Defense Logistics Agency's Defense Working Capital Fund, which enables movement of materiel without financial transaction until point of sale to the customer.

REGIONAL HEALTH COMMANDS

3-17. The regional health commands are subordinate commands of the USAMEDCOM with operational control of Army MTFs and other AMEDD organizations within the designated geographical area. Each regional health command headquarters has command oversight for MEDLOG processes including compliance with AHS policies and programs for medical materiel management such as materiel sourcing and standardization, materiel readiness, and support to medical force projection. The regional health commands shift assets to support major mobilization requirements and provide resource management and contracting support to adequately support installation and deploying unit requirements at the direction of the USAMEDCOM.

INSTALLATION MEDICAL SUPPLY ACTIVITIES

3-18. Army Regulation 40-61 defines the installation medical supply activity, in the continental United States, as the supply support activity (SSA) for medical materiel for an installation or geographic area. Outside the continental United States, it normally is the primary supply support activity for medical materiel for a designated geographic area (AR 40-61). The installation medical supply activity is an organic element of the logistics division of Army MTFs within the regional health commands. The installation medical supply activities—provide local medical materiel management and supply support for internal customers of the MTF; serve as the installation Class VIII SSA for operating forces at home station; and provide installation-level support to strategic programs for force projection and mobilization of deploying units. An installation medical supply activity may also perform local storage and maintenance of contingency materiel for TSG centrally managed programs. An installation medical supply activity may (on order) provide reachback Class VIII supply support for deployed medical forces such as support provided during early entry operations or to DSCA tasks. Under the strategic partnership between the USAMEDCOM and Defense Logistics Agency, installation medical supply activities at designated Army installations conduct medical materiel management and supply support operations using the Defense Working Capital Fund. The installation medical supply activities, in coordination with deploying medical units, also provide preconfigured push-packages to support early entry operations until line item requisitioning is established.

SECTION III — FORCE SUSTAINMENT

- 3-19. The sustainment of theater AHS support requires continuous synchronization within the theater medical system and with supporting capabilities of the USAMEDCOM and the Defense Logistics Agency. Medical unit commanders interface with sustainment providers and coordinate across command and Service lines to ensure unity of medical effort and continuity of care. The ASCC surgeon ensures that support for Class VIII materiel is fully integrated into the joint medical plan and that the appropriate MEDLOG units and capabilities are included in the theater medical force pool.
- 3-20. The development of forward logistics bases, intermediate staging bases, and lodgments in a theater may be required. The theater may have full port facilities (air and sea) or it may require over-the-shore or austere airflow operations. To ensure the necessary support, MEDLOG planners must consider contract support, host-nation support, international STANAGs, the Logistics Civil Augmentation Program, and other Services (if available) as a means to augment and assist military capabilities. This is critical during the initial phases of an operation.

INTEGRATED MEDICAL LOGISTICS MANAGEMENT

3-21. In a land-based theater, the joint force commander may task the ASCC to provide SIMLM support to all or designated forces in the area of operations. Army medical materiel centers designated as the TLAMM, in close coordination with the Defense Logistics Agency (as the Executive Agent for Medical Materiel), provide Class VIII supply support to joint medical forces and multinational partners, when required. Military Health System partners at the national and theater level must be continuously engaged to ensure compatibility of MEDLOG systems, processes, information, and visibility of materiel requirements to adjust levels of theater stocks and other capabilities as necessary.

EXECUTIVE AGENT FOR MEDICAL MATERIEL

3-22. Department of Defense Directive 5101.9 designates the Defense Logistics Agency as the DOD Executive Agent for medical materiel. As the Executive Agent, the Defense Logistics Agency is designated as the single point of contact responsible for establishing the strategic capabilities and systems integration necessary for effective and efficient Class VIII supply chain support to the combatant commander. The Executive Agent formalizes the roles and responsibility necessary to leverage the strategic acquisition framework established by the Defense Logistics Agency that enables the Services to obtain materiel support directly from industry sources such as CONUS medical prime vendor and other commercial sources, rather than traditional government wholesale-level depots. This designation strengthens collaboration between the combatant commands and the Services for requirements planning and synchronizes Defense Logistics Agency and Army medical capabilities to improve end-to-end supply chain management in support of joint HSS and FHP.

THEATER LEAD AGENT FOR MEDICAL MATERIEL

- 3-23. Theater lead agent for medical materiel is an organization or unit designated to serve as a major theater medical distribution node and provide the customer support interface for MEDLOG and supply chain management. The designation of a Service organization to serve as the TLAMM is a critical element of the Defense Logistics Agency's implementation of the Executive Agent for Medical Materiel. A TLAMM operates in the DOD medical supply chain using business processes and systems developed and standardized by the Defense Logistics Agency and Military Health System to promote effectiveness and efficiency.
- 3-24. According to Department of Defense Instruction (DODI) 5101.15, the Defense Logistics Agency Director, in coordination with the combatant commander, Chairman of the Joint Chiefs of Staff, and the Secretaries of the Military Departments, recommend the designation of a TLAMM as necessary to ensure effective and efficient medical supply chain support to the combatant commander. Once designated, the unit serving as the TLAMM remains within the chain of command of their parent organization (such as the parent combatant command, DOD component, or other headquarters element). Upon designation, the unit serving as the TLAMM has—
 - Responsibility to provide medical materiel supply chain support to all Service members assigned
 or attached to the combatant command and to multinational or other non-U.S. customers
 specified by the command.
 - Authority for direct communication with supported customers, the Executive Agent for medical materiel, and supporting national-level organizations.
 - Authority for joint augmentation as appropriate for the demographics of personnel within the Military Departments as validated by the combatant command and directed by the Chairman of the Joint Chiefs of Staff.
 - Authority to operate within the Defense Working Capital Fund, when extended within the scope
 of performance based agreements or other formal agreements established between the Defense
 Logistics Agency and the parent Military Department.
- 3-25. A TLAMM designation may be conferred upon an existing organization that is part of the institutional Military Health System or upon a provisional organization created as required by aggregating deployed MEDLOG units to provide the scale of capability required. The TLAMM serves as the single point of contact between supported customers and numerous national-level industry partners. It receives, stores, ships, and/or transships medical materiel from strategic suppliers and manages intratheater Class VIII distribution in close coordination with theater transportation and movement management activities in support of the combatant command's logistics plan. The TLAMM provides direct medical materiel support to theater medical forces, ensures that tactical units are integrated into the end-to-end medical supply chain, and assists combatant commands and the Military Department component command assigned to support the combatant command in planning MEDLOG support. Refer to DODI 5101.15 and JP 4-02 for additional information.

SINGLE INTEGRATED MEDICAL LOGISTICS MANAGEMENT

- 3-26. Title 10, United States Code requires that each Service provide its own logistics support, which makes MEDLOG support a Service responsibility. However, in joint operations, a combatant commander may assign specific common user logistics functions, to include both planning and execution, to a lead Service. The Army is typically the predominant provider of forces in unified land operations and owns the preponderance of MEDLOG capability. Therefore, combatant commanders often assign the ASCC (or Army component of a joint task force) responsibility to plan and execute MEDLOG support to all Services and multinational partners (when directed) operating in the theater. This function is known as the SIMLM. When assigning SIMLM responsibility, the combatant commander specifies the scope and duration of MEDLOG support to be provided (such as medical supply, medical equipment maintenance, or optical fabrication).
- 3-27. The SIMLM is established to promote supply chain efficiency and minimize the theater MEDLOG footprint. The activation of the SIMLM mission is dependent upon the time phased force deployment list supporting the contingency. The Army medical material centers in Europe and Korea have been tasked in accordance with AR 40-61 to execute the SIMLM mission in their respective theaters of operation.
- 3-28. The SIMLM encompasses the provision of MEDLOG (medical supplies, medical equipment maintenance and repair, blood management, and optical fabrication) to all joint forces within the theater, except Navy gray hull ships. Medical logistics support can be provided to Navy hospital ships for common, demand-supported medical supplies in the later stages of theater development. The performance of SIMLM responsibilities requires close coordination with medical elements of supported Services to ensure mutual understanding of requirements, expectations, and processes for MEDLOG support.

Note. It is important to note that no single organization serves as the SIMLM and that MEDLOG support to joint force does not convey authority to cross-level medical materiel assets across the Services. Such responsibilities are inherent in the combatant commander's Directive Authority for Logistics and cannot be further delegated.

3-29. When directed, the SIMLM, in coordination with the ASCC surgeon, Defense Logistics Agency, and supporting TLAMM (if designated), will develop the theater MEDLOG support plan and identify additional requirements necessary to provide MEDLOG support to forward medical elements and all designated customers in theater. The assignment of the SIMLM is mission-specific and depends on the composition of the supported force and the complexity of intratheater distribution. Refer to JP 4-02 for additional information on SIMLM and TLAMM operations.

MISSION COMMAND FOR THEATER MEDICAL LOGISTICS

- 3-30. Medical logistics capabilities are scaled with other joint HSS and FHP capabilities across the complete mission cycle, from the theater opening phase through expeditionary and follow-on operations. These capabilities are a critical component of AHS support for U.S. and multinational forces, enemy prisoners of war and detained personnel, foreign humanitarian assistance, disaster relief, and assistance to improve or rebuild host-nation medical infrastructure.
- 3-31. The ASCC surgeon develops the MEDLOG plan to meet joint HSS and FHP requirements that are specific to the region and medical concept of operations of assigned medical missions across the range of military operations. The MEDCOM (DS) executes and directs theater Class VIII support through use of the modular MEDLOG units described in Chapter 2 to include the MLC, logistics support company, and MLMC assigned to the theater force pool and task-organized as required to the MEDBDE (SPT) assigned to the MEDCOM (DS) or attached to the ASCC. The following paragraphs within this section describe the additional MEDLOG capabilities available in the MEDCOM (DS), MEDBDE (SPT), and MMB to support the deployed force.

MEDICAL COMMAND (DEPLOYMENT SUPPORT)

3-32. The MEDCOM (DS) (TOE 08640R000) serves as the senior medical command within the theater in support of the ASCC. The MEDCOM (DS), as the theater medical force provider, delivers the medical

mission command necessary to provide quality health care in support of deployed forces. The MEDCOM (DS) is a dedicated, regionally focused command with a basis of allocation of one per theater and provides subordinate medical organizations that operate under the MEDBDE (SPT) and/or MMB. The MEDCOM (DS) is a versatile, modular medical mission command structure composed of a main command post and an operational command post. The main command post and operational command post are standard requirements code identified modules capable of providing scalable medical mission command to the combatant command. The operational command post can be early deployed as the medical element of the MEDCOM (DS). The main command post can be deployed to augment the operational command post or remain in sanctuary as the primary mission command element of the headquarters and headquarters company, MEDCOM (DS).

3-33. The role of the MEDCOM (DS) in MEDLOG support is to control and supervise Class VIII supply and resupply (including blood management) within the theater. The health services materiel officers and MEDLOG specialists (Military Occupational Specialty 68J) within the MEDCOM (DS) are responsible for the coordination and orchestration of MEDLOG operations to include Class VIII supply, distribution, medical equipment maintenance and repair support, optical fabrication, and blood management including planning and support for the SIMLM, when designated. Refer to FM 4-02 for more definitive information on the MEDCOM (DS).

3-34. The MEDLOG functions of the MEDCOM (DS) are area of operations or joint operations area focused providing oversight or mission command of MEDLOG functions within subordinate units including the functions of the MLMC. The MEDCOM (DS) maintains the *command* link between the MEDBDE (SPT) and the *coordination* link with the theater sustainment command through the MLMC. The MLMC, in conjunction with the MLC or MMB and supported by the MEDCOM (DS), may be designated by the combatant commander to serve as the SIMLM for joint operations. Medical logistics support operations within the MEDCOM (DS) are conducted by MEDLOG personnel within the office of the deputy chief of staff, logistics and the MEDLOG support section. Medical logistics personnel are assigned within the main command post and operational command post and deploy with the element to which they are assigned.

MEDICAL LOGISTICS SUPPORT SECTION

3-35. The MEDLOG support section of the MEDCOM (DS) establishes policy, monitors, coordinates, and facilitates MEDLOG operations within the theater including Class VIII supply and resupply, blood management, medical equipment maintenance, and optical fabrication. This section also—

- Establishes a liaison with the theater sustainment command, through the MLMC forward support team.
- Coordinates with and provides MEDLOG support for all Services deployed in the area of operations including planning and support for the SIMLM mission (when the Army is designated).
- Coordinates with the theater distribution centers for all transportation issues related to the distribution of Class VIII materiel in the theater.
- Coordinates the fielding of APS.
- Provides health facility planning support for the theater.
- Coordinates and facilitates contracting operations in support of the theater medical mission.

MEDICAL BRIGADE (SUPPORT)

3-36. The MEDBDE (SPT) (TOE 08420R000) provides a scalable expeditionary medical mission command capability for assigned and attached medical functional organizations task-organized for support of the BCTs and supported units at EAB. The MEDBDE (SPT) provides all of the medical mission command and planning capabilities necessary to deliver responsive and effective AHS support. The MEDBDE (SPT) ensures the right mixture of medical professional (operational, technical, and clinical) expertise to synchronize the complex system of medical functions required to maintain the health of the force by preventing casualties from disease and nonbattle injury, promoting fitness, and promptly treating and evacuating those injured on the battlefield.

- 3-37. The design and flexibility of the MEDBDE (SPT) facilitates the AHS's ability to meet expeditionary health care support requirements in support of early entry forces. As the supported forces grow in both size and complexity, the MEDBDE (SPT) can deploy additional modules that build upon one another to support unified land operations. The MEDBDE (SPT) provides the appropriate medical mission command to continue to build medical force capabilities through the integration of Army, joint, and multinational medical forces to ensure the identification and countermeasures to address any health threats in the area of operations. This permits the MEDBDE (SPT) to transition from expeditionary health care support operations to providing quality AHS support in the area of operations. The MEDBDE (SPT) in coordination with the MEDCOM (DS) provides health facility planning support to the theater. See Chapter 8 for health facility planning support provided in the theater.
- 3-38. The MEDBDE (SPT) consists of an early entry module, expansion module, and campaign module. These modules enable the commander to tailor the unit to meet the requirements of a specific mission based on mission, enemy, terrain and weather, troops and support available-time available and civil considerations. When required, an MMB may be employed to provide medical mission command and operational planning for task-organized medical functional teams, detachments, and companies.
- 3-39. The role of the MEDBDE (SPT) in MEDLOG operations is to plan, coordinate, and supervise Class VIII supply and resupply (including blood management) support within the unit's area of operations. Medical logistics operations within the MEDBDE (SPT) are conducted by the logistics staff officer (S-4) in the logistics operations branch and the S-4 logistics plans branch of the MEDBDE (SPT) S-4 shop. The MEDBDE (SPT) can also serve as the SIMLM, when designated by the combatant commander. See FM 4-02 for a full description of the MEDBDE (SPT).

S-4 Logistics Operations Branch

- 3-40. The S-4 logistics operations branch within the MEDBDE (SPT) monitors, coordinates, and facilitates MEDLOG operations within the command. The logistics operations branch plans, coordinates, controls, and manages the functional areas pertaining to the highly specialized and technical material and services used in support of the health care delivery system. The logistics operations branch chief exercises staff responsibility for units engaged in medical supply, optical fabrication, medical maintenance, blood support, quality control operations and other MEDLOG support. The MEDLOG personnel assigned to the S-4 logistics operations branch also—
 - Provide command policy and monitor the collection, evacuation, and accountability of all MEDLOG items of supply classified as salvage, surplus, abandoned, or uneconomically repairable.
 - Plan, direct, and implement the multifunctional areas of medical materiel management and their
 integration into the overall DOD logistics system, as well as the support interface between the
 deployed medical logistics resources and reach to the wholesale logistics system and industry in
 the CONUS-support base.
 - Provide oversight of units engaged in the receipt, storage and preservation, issue, and distribution of medical equipment, medical equipment maintenance and repair parts, optical fabrication, blood support, and medical supplies.
 - Serve as the focal point for medical property management and accountability procedures.
 - Synchronize formularies within the theater with the logistics support available to ensure efficiencies are met and pharmacological supply requests are processed accurately.
 - Provide the status of all Class VIII items, critical item shortages, and the status of the automated supply systems.
 - Develop, coordinate, and supervise the supply support portion of the integrated logistics support plan.
 - Provide planning, direction, and guidance for medical equipment maintenance programs for the MEDBDE (SPT).
 - Coordinates and facilitates contracting operations in support of the brigade medical mission.
 - Provides health facility planning support for the brigade and supported units.

S-4 Logistics Plans Branch

3-41. The S-4 logistics plans branch completes the logistics staffing within the MEDBDE (SPT). This branch—

- Monitors, coordinates, and facilitates MEDLOG operations within the MEDBDE (SPT) including Class VIII supply and resupply, blood management and distribution, medical equipment maintenance and repair, medical gases, and optical lens fabrication and repair.
- Plans general logistics support for the MEDBDE (SPT) and its assigned or attached units.
- Monitors internal MEDLOG support and readiness in conjunction with the S-4 section.
- Provides additional medical contracting support for the brigade and supported units.
- Coordinates MEDBDE (SPT) distribution of medical supplies with subordinate units.

MEDICAL BATTALION (MULTIFUNCTIONAL)

3-42. The MMB (TOE 08485R000) is designed as a multifunctional medical battalion headquarters. It provides medical mission command, administrative assistance, MEDLOG support, and technical supervision for assigned and attached medical functional organizations (companies, detachments, and teams) task-organized for support of BCTs in its area of responsibility. The MMB has an S-4 section responsible for monitoring general logistics and internal MEDLOG support and readiness, as well as the MEDLOG section within the FHP operations section. It can also be deployed to provide medical mission command to expeditionary forces in early entry operations and facilitate the reception, staging, onward movement, and integration of theater medical forces. All EAB medical companies, detachments, and teams in theater may be assigned, attached, or placed under the operational control of an MMB. The MMB is under the mission command of the MEDBDE (SPT) and/or MEDCOM (DS). Refer to FM 4-02 for additional information on the MMB.

S-4 Section

3-43. The S-4 section of the MMB is responsible for management, control, and coordination of general logistics for the MMB and its assigned or attached units. This section monitors MEDLOG support and readiness internal to the MMB in conjunction with the FHP operation's MEDLOG section. The S-4 section is responsible for the following:

- Maintenance of a consolidated property book for assigned or attached units.
- Logistics and maintenance planning and operations for the unit.
- Oversight of battalion motor maintenance including advice on equipment system compatibility, replacement, and economical retention as well as the evaluation of equipment performance and quality.

Medical Logistics Section

3-44. The MEDLOG section of the MMB is part of the FHP operations section and is responsible for planning, coordination, and execution of the Class VIII mission within the MMB area of operations. The MEDLOG personnel assigned to this section are responsible for—

- Providing an accountable officer to the MLC (when assigned) for the management and oversight
 of Class VIII stocks maintained by the company.
- Medical logistics support operations and the SIMLM mission, when designated.
- Providing direction and guidance for medical equipment maintenance and repair programs in the MMB.
- Facilitation of reception, staging, onward movement, and integration operations and coordination with subordinate MEDLOG units for the distribution of medical supplies.
- Oversight of pharmacy operations within the battalion to ensure compliance with regulatory requirements and establishing policy and procedures for dispensing over-the-counter drugs.

- Implementation of the MMB quality assurance program for all optical fabrication production within the battalion area of operations.
- Management of blood and blood products as well as consultation services, technical advice for medical laboratory operations, and coordination for area medical laboratory services.

CLASS VIII SUPPORT DURING EARLY ENTRY OPERATIONS

- 3-45. Medical resupply sets and preconfigured push-packages are used to support initial sustainment operations and are not intended to replace the existing theater sustainment process. The medical resupply sets for initial sustainment operations are maintained by the USAMMA as part of the APS program's Army War Reserve Sustainment stocks. The Army War Reserve Sustainment stock is used to resupply a unit after they have consumed their unit basic load and is discussed further in paragraph 3-86.
- 3-46. During the initial employment phase, the brigade support medical company (BSMC) of the BCT receives medical resupply sets or preconfigured push-packages, as needed, from the supporting SSA (MLC or higher). During early entry operations supported medical units and elements operate from planned, prescribed loads and existing APS identified in applicable logistics plans. Initial resupply efforts may consist of preconfigured medical support packages tailored to meet specific mission requirements. Anticipatory logistics facilitates the shipment of medical resupply sets and push-packages directly from CONUS to BSMCs and medical companies (area support) until replenishment line-item requisitioning is established. Class VIII resupply may also be directed from sources outside the continental U.S., such as the medical materiel centers in Germany and Korea.
- 3-47. Resupply by push-package is intended to provide support during early entry operations, but may continue through the initial phase. Continuation may be dictated by operational needs (mission, enemy, terrain and weather, troops and support available, time available and civil considerations) and in accordance with patient estimates. Planning for such a contingency must be directly coordinated between the medical planners, brigade and division surgeon's section with the supporting MLC (refer to Appendix C for Class VIII planning factors).
- 3-48. During port operations and reception, staging, onward movement, and integration, medical units must be capable of operations immediately upon initial entry of forces. Therefore, MEDLOG support must be included in planning for port opening and early entry operations. Port operations may also include the issue of medical unit sets from APS, integration of P&D items, refrigerated, and controlled substances with those assemblages. In almost every operation, lessons learned reflect that theater MEDLOG units must also provide Class VIII materiel for unit shortages that were not filled prior to unit deployment. Paragraphs 3-49 through 3-62 describe the MEDLOG process at each role of care.

CLASS VIII SUPPLY OPERATIONS FOR ROLES 1 AND 2 MEDICAL TREATMENT FACILITIES

3-49. Medical logistics units are organized to leverage distribution and information management in order to minimize, to the extent possible, the number of layers of inventory storage and materiel management. Combat casualty care in the most forward operating units relies on a total supply chain strategy that is based on rapid and direct access to commercial inventories at the national level and the ability to transport and distribute medical materiel quickly enough to respond to clinical requirements emerging from the theater. The BCT support battalions have the organic MEDLOG capabilities needed to provide in stride replenishment to far-forward medical elements and carry operating stocks to support health care operations for limited periods (typically three days). Figure 3-1 on page 3-12 depicts the Class VIII materiel flow in theater.

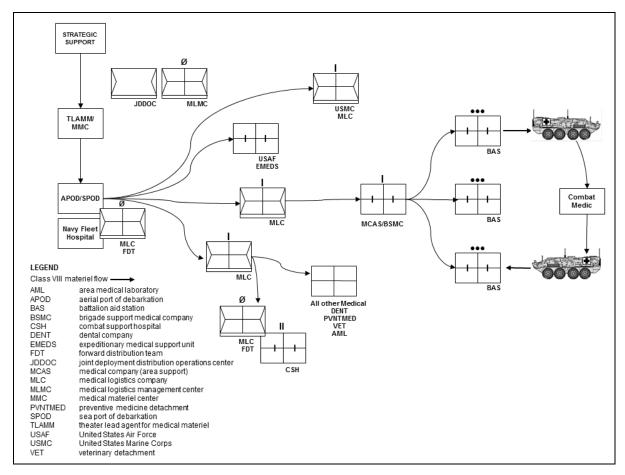


Figure 3-1. Class VIII materiel flow

3-50. The Class VIII supply functions for medical units/elements operating Roles 1 and 2 MTFs are primarily the management of MES and basic ordering for replenishment. The replenishment function within the BCT is performed by the BMSO of the BSMC. Medical equipment maintenance and repair, optical fabrication, and blood support will be addressed in detail in Chapters 5, 6, and 7 of this publication.

COMBAT LIFESAVER

- 3-51. The combat lifesaver is a nonmedical Soldier trained to perform enhanced first aid and lifesaving procedures beyond the level of self-aid or buddy aid. Although not a health care provider, the Soldier is a recipient or consumer of medical materiel. The combat lifesaver assigned to a unit with organic medical support receives normal resupply through the medical platoon. Combat lifesavers assigned to units without organic medical support will be resupplied by the medical element providing area medical support. Individual Soldiers requesting resupply of the Improved First Aid Kit should follow the same process for replenishment as the combat lifesaver.
- 3-52. The combat medic can also provide emergency resupply to the combat lifesaver. However, this type of resupply should not be practiced on a routine basis as it degrades the capability of the combat medic and diverts the Soldier from his primary task. The combat medic does not carry the same medical items carried by the combat lifesaver.

COMBAT MEDIC

3-53. The combat medic requests Class VIII supplies from the medical platoon or battalion aid station (BAS). The requests are communicated to the BAS by whatever means available and can be oral or written. Usually the ambulance team returning to the BAS with patients will pass along the request.

Ambulances may be used to transport the requester's supplies forward from the BAS as the ambulance returns to the maneuver unit. The combat medic in the maneuver company should use the current automated information system (AIS) (such as Blue Force Tracker) to coordinate Class VIII resupply with their supporting medical platoon. The ambulance crew can also resupply the combat medic from supplies in the ambulance MES. The ambulance crew can then replenish its Warrior Aid Litter Kit and other Class VIII stocks upon returning to the BAS.

MEDICAL PLATOONS AND SECTIONS OF THE BATTALION AID STATION

3-54. The medical platoons and sections of a BCT operating Role 1 MTFs (BASs) request their Class VIII supplies from the BMSO of the BSMC. The medical platoons and sections have limited capability for internal MEDLOG management and are primarily customers of the BMSO. Routine requisitions are sent by the Role 1 MTFs (BASs) via digital request to the supporting BMSO. If a high priority request cannot be filled by the BMSO, it is sent to the next higher MEDLOG SSA that can fill the requisition and meet the requirement. Emergency requisition of Class VIII supplies for the BCT is completed in accordance with the theater and unit tactical standard operating procedure.

3-55. Class VIII materiel is packed and configured for shipment to the requesting unit through available distribution channels. In-transit visibility of medical materiel moving through the distribution pipeline is provided through Global Transportation Network and the Army in-transit visibility system, both of which are visible through the Battle Command Sustainment Support System.

BRIGADE SUPPORT MEDICAL COMPANY

3-56. The BSMC's medical supply element is the BMSO. The BMSO is an informal SSA as defined in AR 40-61 and serves as the forward distribution point responsible for facilitating the resupply and distribution of all Class VIII materiel for the brigade. The BMSO maintains a small authorized stockage list of Class VIII materiel that is managed as a safety level and released to support the brigade when routine replenishment operations do not meet mission requirements. The authorized stockage list has a limited amount of supplies (100 to 300 lines of *critical* line items) to support Roles 1 and 2 medical requirements for the BCT. The MES organic to the treatment and ambulance platoons in the BSMC can also be used as a backup source of supply for emergency resupply to the medical platoons operating Role 1 MTFs (BASs).

3-57. The BMSO, upon arrival into the theater, will be resupplied by medical resupply sets or preconfigured push-packages until line item requisitioning is established. Once the automated ordering system is implemented, the BMSO will begin the immediate requisition of materiel to replace consumed line items. These orders will be routed to the supporting MLC. Critical line items will be filled from the authorized stockage list maintained by the BMSO where the customer wait time exceeds mission requirements and an immediate resupply to the unit for these lines is required. Routine supply ordering procedures that are used by the unit prior to deployment will also be used upon arrival in theater when Nonsecure Internet Protocol Router connectivity is established. Upon receipt of a requisition, the supporting MLC or SSA will fill and package the items for distribution to the requesting unit. The BMSO receives and accounts for this materiel upon arrival to the distribution control point located in the sustainment area. The BMSO will then integrate the materiel with other critical Class VIII supply items and nonmedical materiel and forward it (via the established battlefield distribution flow of materiel) to the battalions. The BMSO also receives packaged materiel for issue to medical elements located within the BSMC, as well as materiel packaged as replacement stock for the authorized stockage list.

MEDICAL COMPANY (AREA SUPPORT) (AREA TREATMENT SQUADS AND TEAMS)

3-58. The medical company (area support) is a Role 2 MTF responsible for providing AHS support to EAB units. Each medical company is assigned to the MMB maintains its own basic load that includes three days of medical supplies. Class VIII resupply must be coordinated directly with the supporting MLC. The area support treatment squads and teams deployed throughout EAB area of operations request medical supplies from their supporting MLC using the procedures identified for digital request of Class VIII. The MEDLOG element in each company maintains a small authorized stockage list of medical supplies that may be used to resupply these elements. The MES organic to the treatment and ambulance platoons of the

medical company (area support) can be used as a backup source of supply for emergency resupply to these treatment squads and teams.

CLASS VIII SUPPLY OPERATIONS FOR ROLES 3 MEDICAL TREATMENT FACILITIES

- 3-59. Theater hospitalization is provided by Army Role 3 combat support hospitals (CSHs) or other hospitalization facilities located at EAB. Class VIII support for the Role 3 CSH is a vital part of the AHS mission and includes management of a commodity that must be adapted to specific theater health care requirements, distribution plans, and capabilities provided by theater sustainment organizations.
- 3-60. During port operations and reception, staging, onward movement, and integration Role 3 MTFs must be capable of operations immediately upon initial entry of forces. It is imperative that Role 3 MTFs deploy with their complete unit basic load or have it pushed into theater for integration prior to the required date for patient reception. Therefore, MEDLOG support must be included in planning for port opening and early entry operations. Port operations may include the issue of medical unit sets from APS, receipt of unit deployment packages, and integration of refrigerated and controlled substances. Early entry operations may also include reachback support to a designated installation medical supply activity.
- 3-61. Class VIII sustainment of CSHs present the most complex medical materiel requirements and may consume materiel at a tremendous rate when providing trauma care in support of combat operations. Specialty care for burn injuries, orthopedic injuries and surgeries, and neurosurgery often require materiel and equipment that is not standard and may not have been anticipated or stocked in sufficient quantities prior to deployment. Combat support hospitals are typically made direct customers of an MLC that is capable of meeting the unit's mission requirements. Forward surgical teams deployed from the CSH are dependent on their supporting medical company for Class VIII resupply, medical equipment maintenance and repair, and blood distribution support.
- 3-62. The hospital center, field hospital, and its associated medical detachments and specialty teams have been approved to replace the CSH. The extended fielding of these new organizations will result in a mixed inventory of hospitalization capabilities in the near term. However, like the CSH, the hospital center, field hospital, and its associated medical detachments and specialty teams will rely on the supporting MLC for Class VIII support and augmentation of personnel for medical equipment maintenance and repair, as required.

CLASS VIII SUPPORT FOR ECHELONS ABOVE BRIGADE MEDICAL UNITS

- 3-63. The MLCs are the primary Army MEDLOG units in the theater serving as the SSA responsible for providing Class VIII resupply support for all medical units and elements within the area of operations to include the dental companies, medical detachment (preventive medicine), medical detachment (veterinary service support), medical company (ground ambulance), area medical laboratory, and all other medical units. The MLCs provide scalable theater capabilities for support to BMSOs and medical units that may be widely dispersed and operating as elements of a jointly interoperable and interdependent medical system. The MLC can also deploy teams forward to provide medical material distribution and services in support of division-level operations or support on an area basis.
- 3-64. The MLC has the capability to build customized support packages to meet incoming requests and throughput them to the unit. Once supplies are identified and configured for movement to the customer, the MLC coordinates through the MMB FHP operations section for appropriate transportation assets for distribution.

DISTRIBUTION OF CLASS VIII

3-65. Critical to ensuring that sustainment distribution meets the Soldiers' needs, is establishing a functional theater distribution plan that enables a responsive end-to-end supply chain from the strategic sustaining base to customers at the tactical level. General support transportation assets are the primary

means of movement for sustainment resupply of Class VIII materiel. The MLC must coordinate shipment of medical supplies with their supporting movement control team. Usually, theater transportation assets will be used to deliver medical supplies from the sustainment area to the supported units. In some instances, air ambulances may be used to transport emergency Class VIII or blood resupply to requesting units. The MLC serves as the Class VIII SSA for the BCTs. Items not available for issue at the MLC are fulfilled by the supporting medical materiel center or TLAMM. The MLC coordinates with the support operations section of the brigade support area for standard and emergency transportation of Class VIII supplies that cannot be picked up by the requesting unit. The MLC will coordinate emergency Class VIII requests that cannot be met from BSMC or MLC stock directly with the supporting Army medical materiel center or TLAMM. The emergency requests for Class VIII will be monitored by the MMB and MEDBDE (SPT) until received by the requesting unit.

FORWARD DISTRIBUTION

3-66. Medical logistics units are organized to leverage distribution and information management in order to minimize, to the extent possible, the number of layers of inventory storage and materiel management. Combat casualty care in the most forward operating units relies on a total supply chain strategy that is based on rapid and direct access to commercial inventories at the national level and the ability to transport and distribute medical materiel quickly enough to respond to clinical requirements emerging from the theater.

3-67. The MLCs facilitates the forward distribution of Class VIII to medical units/elements throughout the area of operations and tailors stockage to meet mission-specific requirements. The MLC has two five-person mobile forward support cells and one three-person mobile forward support cell. These mobile cells may be used as forward distribution teams to provide the necessary support. The BCT support battalions have the organic MEDLOG capabilities to manage distribution to far-forward medical elements and carry operating stocks to support health care operations for limited periods (typically three days).

3-68. The mobile teams can be deployed upon request, but are only equipped with individual equipment and are dependent upon the requesting unit for sustainment and life support to include material handling equipment, special storage capability, and MEDLOG automation.

Note. It is important for MEDLOG units to have trained and certified 463L pallet loaders (USAF pallets) to ensure the proper load distribution and height of pallets when loaded. Personnel must also be trained in proper marking, handling, and transportation of hazardous material as many Class VIII items are considered hazardous.

TRANSSHIPMENT OF CLASS VIII

3-69. Class VIII shipments that pass through aerial and sea ports of embarkation or other transshipment points may be consolidated by those activities. Pure palleting is the process of consolidating shipments for delivery to a specific customer Department of Defense Activity Address Code (DODAAC). When Class VIII shipments do not fill a pallet, they may be combined with other commodities (usually Class II, III (P), IV, or IX) creating a mixed pallet that must be broken down at a port of debarkation or SSA for follow-on shipment. Class VIII materiel (with the exception of oxygen and fluids) is typically low weight and cube, which may cause it to be held at consolidation points for several days if it is not combined with other commodities to make maximum use of transportation assets.

3-70. Pure palleting is the preferred method for shipment of Class VIII to reduce the risk of loss, misdirection, or spoilage of temperature sensitive materiel. Army medical materiel centers and MLCs normally ship in pure pallet configuration because the stock they issue is almost exclusively Class VIII. However, consolidation into mixed pallets may occur at any transshipment point with the associated risks. Several actions can be taken by MEDLOG personnel to mitigate these risks to include—

- Ensuring that medical shipments are clearly marked as Class VIII and temperature sensitive labels are clearly displayed (large placards displaying the Red Cross are especially useful).
- Coordinating with Army mission commanders at each level to establish the appropriate priority for Class VIII in distribution channels.

- Coordinating closely with the theater deployment distribution operations center and other distribution management activities to plan and synchronize the presentation of Class VIII shipments (especially temperature sensitive medical products) with the availability of lift.
- Avoiding or expediting movement of temperature sensitive medical products through transshipment points that do not have cold storage capability.
- Deploying forward distribution teams to transshipment nodes to take custody of Class VIII materiel and expedite onward movement.
- Conducting site visits to transshipment points to identify Class VIII shipments that may be backlogged, especially those containing temperature sensitive medical products.
- Ensuring that MEDLOG organizations have trained and certified 463L pallet loaders (USAF pallets) that can present pure pallet shipments with proper load distribution and height.
- Ensuring that MEDLOG organizations have personnel that are trained and certified to pack and mark shipments of hazardous material.
- Conducting site visits to nonmedical SSAs in the brigade area to identify and take custody of Class VIII materiel that has been misdirected.

HOST-NATION SUPPORT

3-71. Host-nation support is the civil and military assistance provided by host nations to multinational forces and organizations. This support may occur in any operational environment. The U.S. continues to rely on multinational partners to supplement the organic support capabilities of its forces. Host-nation support during major combat operations may be used in such areas as transportation, maintenance, construction, civilian labor, communications, facilities, utilities, air and/or seaport operations, sustainment area security, and the movement of U.S. forces and materiel between the ports of debarkation and operational areas. The location of forces on the battlefield generally determines whether you can use host-nation support. Secure areas are ideal for this support. In an austere theater, host-nation support may be used wherever needed. Army Regulation 570-9 outlines DA policies and responsibilities for host-nation support. In the past, U.S. forces relied on organic support. Today, logisticians must keep abreast of agreements on how host nations can help support the operation logistically.

AGREEMENTS

3-72. Normally, multinational compatibility agreements are used to document commitments for host-nation support. Through agreements, the host nation sets forth its intent and willingness to support U.S. requirements. Support available in a given theater will depend on the host-nation's political climate; national laws; industrial development; and military, civilian, and commercial resources.

LOGISTICS CIVIL AUGMENTATION PROGRAM

3-73. In the event host-nation support in wartime is incapable of satisfying all support requirements, the Logistics Civil Augmentation Program will be initiated to fill the shortfalls. The Logistics Civil Augmentation Program is designed to obtain civilian contractual assistance in peace to meet U.S. crisis and wartime support requirements worldwide through the advanced identification, planned acquisition, and use of global corporate assets. Primarily the program supports infrastructure and distribution but not supply support. Logistics Civil Augmentation Program planning must include considerations to ensure that no violations of 10 USC occur. Refer to AR 700-137 and JP 4-08 for additional information pertaining to agreements and host-nation support.

MEDICAL CONTRACTING SUPPORT

3-74. The USAMEDCOM, through its subordinate research, acquisition, educational, and training institutions, leverage assets to ensure deployed Soldiers receive the best possible health care regardless of their geographic location. Due to stringent requirements of the Food and Drug Administration for pharmaceuticals and the provision of medical care, contracting for host-nation support is not always feasible for medical activities and may be restricted to nonmedical functions. However, if medical

contingency contracting support is required during deployment, it can be obtained via reachback to the USAMEDCOM's Health Care Acquisition Activity. When required, a request for forces is forwarded to the USAMEDCOM and contracting officers from the Health Care Acquisition Activity deploy as part of the MLMC forward support team. The MLMC deploys a forward support team to provide centralized theater-level inventory management of Class VIII materiel for the theater. The MLMC has two forward support teams; one team is deployed per theater. The MLMC forward support team is subordinate to the MEDCOM (DS) or senior medical mission command headquarters and collocates with the DMC of the theater sustainment command or expeditionary sustainment command. As part of the MLMC forward support team, the USAMEDCOM contracting officers remain under the mission command of the MEDCOM (DS), maintain home station contracting warrant authority under the Commander, Health Care Acquisition Activity, and collocates with the contracting cell of the contracting support brigade.

SECTION IV — REDEPLOYMENT

- 3-75. Army Regulation 525-93 defines redeployment as the transfer of forces and materiel to support another joint force commander's operational requirements or to return personnel, equipment, and materiel to the home and/or demobilization stations for reintegration and/or outprocessing. Redeployment is considered an operational movement that is critical in reestablishing force readiness.
- 3-76. In addition to supporting task force deployments and combat operations, logistics and sustainment planners must also plan for and execute post-conflict support (including redeployment). Certain medical units should plan to be among the first into an area of operations and the last to redeploy. This is primarily due to the need for AHS support and Class VIII supplies before, during, and after operations.

RETROGRADE OPERATIONS

- 3-77. The United States Army Materiel Command coordinates, monitors, controls, receives, accounts for, and arranges the retrograde shipment of all materiel when released by the maneuver force commander and/or theater combatant commander. This includes inspection, condition coding, repackaging, preservation, marking, coding, documentation, loading, and accountability to ensure the orderly and timely movement of all materiel and munitions no longer required in the theater.
- 3-78. The ASCC is responsible for establishing a military customs inspection program to perform U.S. customs preclearance and United States Department of Agriculture inspection and wash down on all materiel retrograded to the U.S. in accordance with Defense Transportation Regulation 4500.9-R (Part V). An approved military customs inspection program must be in place prior to redeployment for preclearance of redeployment materiel and battle damaged equipment for shipment back to CONUS for repair. The customs inspection may also include host nation or other inspection requirements.
- 3-79. Retrograde equipment and materiel is consolidated at the lowest level SSA and reported through support operations channels to the designated commodity manager for distribution instructions. The SSA packages, documents, labels, and produces radio frequency (RF) tags for retrograde items for shipment based on distribution instructions received. Retrograde cargo must be cleaned, inventoried, inspected, and packed in containers for shipment to demobilization and/or home station or another theater of operations. All containers must be marked with the appropriate in-transit visibility marker. Once the containers are inspected and sealed for movement to the port of embarkation they cannot be reopened until they reach the demobilization and/or home station or their ultimate destination without repeating the inspection process.
- 3-80. All medical equipment will be inspected and serviced in accordance with Technical Manual (TM) 10- and 20-series standards. Shortages or nonmission capable equipment will be documented on appropriate shortage annexes to assist home stations or inform the gaining unit in another theater of possible deficiencies. All equipment and shortage information will be loaded into the designated AIS prior to shipment.
- 3-81. The rapid return of reparable medical equipment to repair facilities is critical to maintain unit readiness levels. The theater sustainment command can designate specific major end items to be sent directly to the depot for repair/rebuild/refurbishment. Disposition of major end items of Class VIII materiel

is directed by USAMMA in accordance with SBs 8-75-S4, 8-75-S7, and 8-75-11. Once designated, those end items will be removed from the unit's property book.

DISPOSAL OF CLASS VIII

3-82. Disposal of Class VIII items and other medical waste must be carefully monitored and coordinated by MEDLOG personnel. This is especially important because of the sensitivity and health risks associated with the materiel. Expired nonradioactive and unusable medical supplies (exception Federal Supply Classification 6505 [drugs and biologicals]) are disposed of through Defense Reutilization and Marketing Service activities. Federal Supply Classification 6505 items will be returned to the supporting SSA for consideration for turn-in to prime vendor. Due to the sensitivity of some medical items, hazardous materials, environmental hazards, and their potential use by terrorist organizations, retrograde and disposal may be required. Turn-in of excess medical materiel on-hand that is no longer required to meet mission requirements is also important. For additional information regarding Federal Supply Classification 6505 items, refer to the Defense Logistics Agency, Federal Supply Classification, Groups and Classes, Cataloging Handbook H2. Refer to AR 40-61, SB 8-75-S4 and 8-75-11 for information on the turn-in of excess medical materiel and disposal of medical materiel. Technical Manual 3-34.56/MCIP 4-11.01 and Technical Bulletin (Medical) (TB MED) 593 also contain information regarding waste management for deployed forces.

SECTION V — CLASS VIII CONTINGENCY MATERIEL

3-83. The primary contingency programs for Army Class VIII materiel are the—

- Army Pre-positioned Stocks Program.
- Surgeon General's Contingency Stocks.

ARMY PRE-POSITIONED STOCKS

3-84. The APS program supports mobilization requirements and sustains unified land operations until resupply can be established and expanded. Army Pre-positioned Stocks consist of a common-user stockpile of equipment and supplies strategically located in a potential theater (usually land-based), afloat, or in CONUS to meet the requirements of the supported combatant commander. Army Pre-positioned Stocks Program encompasses four categories of materiel, including—

- Pre-positioned Activity/Brigade/Unit sets.
- Operational projects.
- Army War Reserve Sustainment stocks.
- Army Pre-positioned Stocks for allies, which are contingency stocks available through crossservicing agreements to assist our allies in acquiring and maintaining the readiness necessary to be an effective partner in times of conflict. Class VIII materiel is not included in the APS for allies program.

3-85. The Chief of Staff of the Army assigned responsibility for management and accountability of the Class VIII portion of the APS Program to the OTSG. The Surgeon General maintains release authority for all Class VIII APS materiel and designated the USAMMA as the agency responsible for logistical management of program assets in accordance with AR 710-1. As the APS program manager, the USAMMA provides total item property records for Class VIII APS and ensures coordinated and central materiel requirements determination, acquisition, accountability, and funding for care of supplies in storage and other support costs. Class VIII APS is centrally managed by USAMMA as directed by Headquarters, DA. The Agency must receive approval from Headquarters, DA prior to release of any APS stocks. Army Pre-positioned assets are grouped into four regions:

- Army Pre-positioned Stocks-1 consists of CONUS-based stocks.
- Army Pre-positioned Stocks-2 is stored in Europe.
- Army Pre-positioned Stocks-3 is pre-positioned aboard ships.
- Army Pre-positioned Stocks-4 is located in the Pacific Region.

• Army Pre-positioned Stocks-5 is located in Southwest Asia.

3-86. The APS materiel managed by the USAMMA consists of three out of the four categories of APS stock including—

- Pre-positioned activity, brigade, and unit sets, which are complete unit sets of end items, supplies, and secondary items. The sets are documented as unmanned TOE organizations with a designated unit identification code. The United States Army Materiel Command manages the nonmedical materiel in brigade and units sets and is responsible for APS unit status reporting.
- Operational project stocks, which consists of materiel above a unit's normal authorization documents that enable commanders to identify additional materiel authorized for a specific mission. Operational projects are used to support operations, contingencies, and war plans. Army operational project stocks can contain many of the same items as pre-positioned sets; however, it is not necessarily stored in unit sets.
- Army War Reserve Sustainment stocks, which are the primary source of resupply until the supply chain can support operational demand rates. These stocks contain large amounts of Class VIII materiel and are used to resupply a unit's basic load and other Class VIII requirements. The USAMMA develops an Army War Reserve Sustainment requirement based on the time phased force and deployment data.

3-87. Policies and procedures for the management of APS are described in ARs 710-1, 710-2, and 40-61. Also refer to the SB 8-75-series, published annually by the USAMMA, for additional information.

THE SURGEON GENERAL'S CONTINGENCY STOCK

3-88. The OTSG is responsible for the centralized funding, management, and distribution of medical P&D materiel for early deploying medical units at EAB deploying in the first 31 days of an operation. The OTSG is the release authority for Class VIII contingency programs. The OTSG designated the USAMMA as the agency responsible for executing the Army's Class VIII contingency programs, which include the—

- Centrally Managed Medical Potency and Dated Materiel Program.
- Medical Chemical Defense Materiel.
- Medical Materiel Readiness Program.

CENTRALLY MANAGED MEDICAL POTENCY AND DATED MATERIEL PROGRAM

3-89. The Centrally Managed Medical P&D Materiel Program provides unit deployment packages for early deploying EAB medical units deploying from CONUS home stations. *Unit deployment package* is a term coined within the Centrally Managed Medical P&D Materiel Program that represents a unit's basic load of medical P&D materiel. In the event of a deployment, this program gives USAMMA the ability to *push* deployment packages (minus support kit items) to early deploying EAB medical units at home station or another location. The deployment package quantities are based on the same unit *days of supply* schedule as the unit assemblages the unit is authorized. The USAMMA Army War Reserve Sustainment stocks, in conjunction with theater SIMLM operations, support and maintain the medical requirements of deployed units after initial issue of a deployment package.

3-90. A unit deployment package consists of medical and nonmedical P&D materiel with medical unit assemblage group codes 1 and 4 through 9 and a shelf life code of less than 60 months (shelf life code A through H, J through N, P through S for Type I national stock numbers, and 1 through 9 for Type II national stock numbers). Active Army, Reserve Component, and National Guard early deploying EAB units will receive Types I and II medical, as well as nonmedical unit deployment package items (medical unit assemblage group 1) with a shelf life of less than 60 months.

3-91. Strategies for providing this materiel include the positioning of supplies at various CONUS and outside the continental U.S. locations and contracting for specific national stock number items. Based on the time phased force and deployment list and projected funding, the USAMMA develops unit deployment package requirements by P&D national stock numbers in unit assemblages for generic early deploying EAB medical unit through deployment plus 31. The OTSG is the release authority for this materiel. Unit deployment packages are released at no cost for validated EAB units that deploy on or before deployment

plus 31 of a declared contingency operation or conflict. The unit deployment packages may also be released to support humanitarian relief efforts.

3-92. The Centrally Managed Medical P&D Materiel Program is designed to provide materiel to units deploying on or before deployment plus 31. However, units must keep in mind that the time phased force and deployment list is a flexible and fluctuating schedule. Should a unit with an initial deployment date sooner than deployment plus 31 suddenly find itself deploying beyond deployment plus 31, that unit will be deleted from USAMMA's list of units scheduled to receive a unit deployment package. Therefore, units must plan appropriately.

3-93. The Centrally Managed P&D Materiel Program does not include support kits for authorized unit assemblage equipment. Medical P&D support items are now recognized components of the unit assemblage and as such are components of the unit deployment package. Refer to SB 8-75-S7 for definitive information pertaining to unit deployment packages and the Centrally Managed P&D Materiel Program.

MEDICAL CHEMICAL DEFENSE MATERIEL

3-94. The OTSG sustains the initial issue inventory of consumable medical CBRN materiel countermeasures for all Army Forces, to include military working dogs that deploy in support of combatant command theater-strategic and operational requirements. These countermeasures provide the individual Soldier with the capability to administer self-aid, buddy aid, or combat lifesaver support for injuries resulting from CBRN warfare agents. The program also sustains the initial issue of P&D CBRN items for the MES, Chemical Agent Patient Treatment, which provides deploying medical units with the capability to treat and protect chemical casualties.

3-95. As the Army program manager, the USAMMA is responsible for the acquisition, storage, release, and overall accountability of Army-owned initial issue MCDM stock. The Agency tracks materiel stockpiled by lot number, expiration date, and shelf life and provides this information to the OTSG for budgeting, replacement of the materiel, and readiness. Initial issue P&D MCDM assets are strategically stored at select SSA or MTFs throughout the world, based on the Army Campaign Plan. The OTSG and USAMMA determine the MCDM inventory at each SSA or MTF based on requirements needed to support deploying units and forward deployed forces.

3-96. The MCDM points of contact at the SSAs or MTFs are the item managers responsible for—

- Physical accountability and management of initial issue MCDM stock placed in their care.
- Identification of MCDM stock levels at their locations according to applicable deployment forecasts.
- Release of initial issue MCDM to deploying and forward deployed forces as required, at no cost, when authorized by OTSG. Refer to SB 8-75 S7 for definitive information concerning this program.

MEDICAL MATERIEL READINESS PROGRAM

3-97. The Medical Materiel Readiness Program is an OTSG program that is planned and centrally managed by USAMMA to improve support to the deployed force. The program began in 2007 as part of the AMEDD Investment Strategy to support Army Force Generation. In 2013, following the disestablishment of the Reserve Component Hospital Decrement Program, a time-phased transition to the centrally managed Medical Materiel Readiness Program was initiated. The Medical Materiel Readiness Program was designed to ensure that CSHs managed as part of this initiative are maintained in a maximum state of readiness. The program was also developed to ensure proper life cycle management of equipment by taking advantage of centralized storage and maintenance versus unit-based equipping. The program is a deliberate process to reduce unit-owned equipment while increasing the unit leased concept based on proven business practices and lessons learned through APS and other Class VIII centrally managed programs.

3-98. The Medical Materiel Readiness Program focuses on maintaining full CSH requirements in equipment and supplies for rapid deployment worldwide. The program leverages pooled maintenance

efforts and efficient purchasing to deliver the highest readiness level possible. The CSHs will be intensively managed to ensure that they are consistently upgraded and appropriately serviced (including annual maintenance inspections and services).

3-99. Under this program, the CSH equipment maintained by USAMEDCOM in the Reserve Component Hospital Decrement Program is no longer associated with numbered Reserve Component CSH units. Combat support hospital equipment sets maintained in the program will be available through USAMEDCOM (as the lead Army integrator for medical materiel) for alignment with units in the Army Force Generation process. The sets maintained as part of the program will continue to be managed, funded, and maintained by USAMEDCOM and made available to CSH commanders based on Army Force Generation requirements.

3-100. The OTSG, as the release authority for Medical Materiel Readiness Program assets, directs the release of program materiel in coordination with the United States Army Forces Command to meet contingency, emergency, and peacetime requirements. If required, a Unit Deployment Package is released through the USAMMA Emergency Operations Center at no cost for validated EAB units that deploy on or before day 31 of a declared contingency operation or conflict. Refer to SB 8-75-S7 for additional information regarding release of Medical Materiel Readiness Program assets.

ISSUE OF CLASS VIII CONTINGENCY MATERIEL

3-101. Headquarters, DA approves the release of all APS materiel. Approval for release of Class VIII contingency materiel is normally communicated through operational channels to the OTSG. Once released by OTSG, the USAMMA executes or coordinates the transfer of medical contingency materiel to gaining units at home station or power projection platform through the supporting installation medical supply activity. The agency also—

- Issues contingency materiel on a nonreimbursable basis to meet validated Headquarters, DA requirements.
- Coordinates fielding of equipment sets from the Medical Materiel Readiness Program through the United States Army Forces Command.
- Coordinates with the Army Materiel Command for issue of APS materiel to deployed forces.
- Deploys the Medical Logistics Support Team to issue Class VIII contingency materiel.

SECTION VI — DEFENSE SUPPORT OF CIVIL AUTHORITIES

3-102. Department of Defense Directive 3025.18 defines DSCA as support provided by U.S. federal military forces, DOD civilians, contract personnel, DOD component assets, and National Guard forces (when the Secretary of Defense, in coordination with the Governors of the affected States, elects and requests to use those forces in 32 USC status) in response to requests for assistance for civil authorities for domestic emergencies, law enforcement support, and other domestic activities, or from qualifying entities for special events. Defense support of civil authorities tasks focus on the consequences of natural or manmade disasters, accidents, terrorist attacks, and incidents within the U.S. and its territories.

DEFENSE SUPPORT OF CIVIL AUTHORITIES TASKS

3-103. Army forces conduct DSCA tasks when the size and scope of events exceed the capabilities or capacities of the local and state civil authorities requiring federal assistance for disaster relief. The key to employing military forces to conduct DSCA tasks is recognizing that the civil authorities have primary authority and responsibility for domestic operations. Within the U.S., military operations are limited by laws such as Section 1385, Title 18, United States Code (18 USC 1385) or the Posse Comitatus Act and Section 331 to 335, Title 10, United States Code (10 USC 331 to 335) the Insurrection Act, which substantially limit the powers of the federal government to use the military in certain circumstances. However, when authorized, Army forces can conduct DSCA tasks (limited to supporting civil authorities and law enforcement agencies and preventing civil disturbances) and provide Army resources, expertise, and capabilities in support of the lead agency.

3-104. Under the National Response Framework, the lead organization responsible for acting in response to a health threat is the Department of Health and Human Services. The DOD is a participating coordinating agent under Emergency Support Function #8 in support of the National Response Framework. Additional information on the National Response Framework, DOD corresponding tasks, and the National Disaster Medical System can be found on the Department of Health and Human Services and Federal Emergency Management Agency Web sites as identified in the references.

MEDICAL LOGISTICS SUPPORT TO DEFENSE SUPPORT OF CIVIL AUTHORITIES

- 3-105. The Defense Logistics Agency is the DOD Executive Agent for Medical Materiel. When supporting DSCA tasks, the USAMEDCOM is the designated TLAMM to United States Northern Command. The commander United States Northern Command may designate one of the Service components to be the SIMLM. The TLAMM and SIMLM work together to develop the MEDLOG support plan that synchronizes medical requirements or capabilities, and Class VIII distribution to joint task force supported medical units and DSCA tasks.
- 3-106. The TLAMM uses the Army MEDLOG system of existing Class VIII support infrastructure, contracts, and relationships in coordination with DOD logistics and transportation organizations and regional SSAs. The TLAMM may designate USAMEDCOM master ordering facilities to provide MEDLOG support to United States Northern Command's joint task force deploying medical units. The master ordering facility provides Class VIII support through Defense Logistics Agency prime vendor contracted suppliers and other habitual sources of supply. The SIMLM synchronizes MEDLOG support requirements of all deployed medical forces in the United States Northern Command joint operations area. The SIMLM coordinates with the TLAMM and supported medical forces to develop the Class VIII concept of support. The MMB, MLMC early entry element of the forward support team, MLC, and the DMC within the theater sustainment command are some of the enablers in providing MEDLOG support to a joint task force in support of DSCA tasks. This capability helps ensure uninterrupted medical operations for all DOD medical units.
- 3-107. Other Class VIII resources and medical materiel assets are also available in support of DSCA tasks such as federally managed stocks within the Centers for Disease Control and Prevention's Strategic National Stockpile and other pre-positioned assets that may be used depending on the situation and size of the response required. For additional information, refer to the USAMMA and Centers for Disease Control and Prevention Web sites as outlined in the references.
- 3-108. The primary DOD requisitioning system is Defense Medical Logistics Standard Support (DMLSS). Deployed medical units requiring Class VIII must establish accounts with their supporting activity. Supported units use Defense Medical Logistics Standard Support Customer Assistance Module (DCAM) to requisition Class VIII supplies. Class VIII requisitions flow through the TLAMM designated master ordering facilities to the Defense Logistics Agency prime vendor medical supply contracts to fill the requisitions. The supporting master ordering facilities are part of the Defense Working Capital Fund which is used for financial accounting, tracking, and auditing of Class VIII supplies expended in support of Army deployed forces for reimbursement. The TLAMM conducts a post operational financial reconciliation with other Service components as required. Units deploy with their full unit basic load of Class VIII. It is the Service component's responsibility to resupply their forces with Class VIII until the TLAMM and/or SIMLM supply chain is established and operational.
- 3-109. Medical equipment maintenance is accomplished by the medical equipment maintenance section of the MLC. Medical maintenance support that is beyond the capability of the MLC is provided by the master ordering facility designated by the TLAMM. If tasked, the MLC can assist in civilian medical equipment evaluation and services.

Chapter 4

Medical Logistics Information Systems and Communications

The success of AHS operations is dependent on the medical logistician's ability to monitor the operation, coordinate, and communicate with the staffs of higher headquarters, supporting and supported organizations, and other sustainment partners. The MEDLOG information management and communications systems and applications are part of a larger family of medical systems implemented under Medical Communications for Combat Casualty Care (MC4) in support of the Army's current and future force. This chapter describes the current operational- and tactical-level Joint and Army-unique communications and information management systems used by medical units.

SECTION I — CURRENT SYSTEMS

- 4-1. The Defense Health Agency Health Information Technology Directorate provides program management for solutions development and delivery of health information systems within the Military Health System. The senior Service representatives for each of the Military Departments represent the Services interests for generation of systems change requests through design, development, test, evaluation, deployment, and sustainment of medical information systems. The Defense Health Agency Health Information Technology Directorate exists to deliver quality products in support of the Military Health System. The Directorate has three goals: deliver customer-driven, high quality information technology solutions; provide high quality, responsive, customer-oriented support; and deliver efficient and effective information technology services.
- 4-2. The Defense Health Agency Medical Logistics Division, in coordination with the Services, generates the business functional requirements for the Defense Medical Logistics-Enterprise Solution suite of applications. Army MEDLOG has transitioned to the Defense Medical Logistics-Enterprise Solution suite of applications, which include the following list of MEDLOG products:
 - Defense Medical Logistics Standard Support.
 - Joint Medical Asset Repository.
 - Patient Movement Item Tracking System (PMITS).
 - Theater Enterprise-Wide Logistics System.
- 4-3. The Defense Health Agency Health Information Technology Directorate also provides automated capabilities to support the delivery of health services in a deployed environment such as the Theater Medical Information Program-Joint applications, which facilitates the transmission of electronic health records and other medical information from the theater to home-based repositories. The home-based repositories include—
 - Medical Situational Awareness in the Theater.
 - Theater Medical Data Store.
 - Clinical Data Repository.
- 4-4. The Medical Situational Awareness in the Theater system is a web-based application that combines information from multiple databases to provide worldwide asset visibility and decision support for the combatant command and the medical staff of the joint task force. Some key capabilities of the Medical Situational Awareness in the Theater system include—the Geographic Information System, worldwide

asset visibility, decision support, and theater blood tracking and reporting through the Theater Blood Application.

COMMUNICATIONS SUPPORT

- 4-5. The communication assets and AISs used to support MEDLOG operations are designed to work with current and future communication systems. These communications assets include high frequency and very high frequency frequency-modulated radios, Tri-Service Tactical Communications Program, mobile subscriber equipment, and interim commercial technologies used as a bridge to the future capabilities of the Warfighter Information Network-Tactical. The goal of these systems is to provide reliable, redundant, and timely net-centric communications leveraging the power of the Global Information Grid.
- 4-6. The Army's MEDLOG AISs at all roles of care must be web-based and net-centric and provide store-and-forward capability, as well as support *mobile users*. Interconnectivity of information systems is critical in garrison and field environments. Communications must provide reliable connectivity for a seamless flow of information throughout the strategic, operational, and tactical levels. Tactical logistics automation systems currently rely on a mix of tactical and local communications systems. In a deployed environment, tactical communications systems provide the majority of the communications support.

COMMUNICATIONS PLANNING

4-7. Extensive communications planning is required for all military operations. The unit's operations and/or communications designee is responsible to the commander for all aspects of coordination/planning for communications requirements and usage. Each phase of military operations—predeployment, deployment, sustainment operations, and redeployment must be addressed in all contingency plans. A host-nation commercial communications system may be available for use by the unit in communications planning. The communications networks should interface with existing joint and combined communications systems and any available local host-nation telephone systems. This interface is accomplished as outlined in applicable NATO STANAGs and host-nation support agreements. It should be noted that military, civilian agencies and civilian law enforcement communications systems may not be interoperable and could require additional coordination. Each unit staff element is responsible for adhering to the unit's tactical standard operating procedure and signal support policies during their daily operations.

SIGNAL SUPPORT

4-8. Communications support for organizations within a theater is based on the unit's level of operations. Signal support is not static and changes as the mission and circumstances change. The requesting unit's assistant chief of staff, signal (G-6) or signal staff officer (S-6) is responsible for determining what signal support is required for the current mission based on information contained in the operations order. The ASCC G-6, who is also the senior signal commander of a signal command (theater) (except in CONUS), tasks signal assets to support the requesting unit. When tasked to a division, G-6 or S-6 of the requesting unit, in conjunction with the assistant chief of staff, operations (G-3) or operations staff officer (S-3), coordinates through the division G-6 to the ASCC G-6 to determine the extent of the support required. Any unit not tasked to a division should coordinate directly with the ASCC G-6. Refer to FM 6-02 for additional information on signal support.

MEDICAL COMMUNICATIONS FOR COMBAT CASUALTY CARE

4-9. Medical Communications for Combat Casualty Care integrates the Military Health Systems' suite of applications onto the Army's MC4 hardware. The program integrates, fields, and supports a medical information management system for Army tactical medical forces. Thereby, enabling a comprehensive, lifelong electronic medical record for all Soldiers and enhancing medical situational understanding for operational commanders. The MC4 support staff performs systems engineering and integration to ensure compatibility between software applications and reliable hardware devices, such as ruggedized servers, printers, notebook computers, and portable handheld devices. They also provide new equipment training on newly fielded equipment as part of the implementation process.

- 4-10. The MC4 system offers deployable medical units a wide range of integrated applications that bridge tactical and sustaining base information management and information technology health care systems. Medical Communications for Combat Casualty Care has the following mission:
 - Provide the Army computer infrastructure to enable automated medical data collection and sharing throughout the continuum of medical care, from the point of injury to the sustaining base.
 - Provide timely medical situational understanding and unit status information to commanders at all levels.
 - Provide medical units the ability to capture and transmit high-density medical data to higher roles of medical care. This is an interim requirement until future improvements in the Army communications infrastructure capable of handling this type of high-density data are adequately fielded.

DEFENSE MEDICAL LOGISTICS STANDARD SUPPORT

- 4-11. The DMLSS AIS is a DOD standard application, jointly developed to provide the Military Health System with a single solution for joint MEDLOG to meet both generating and operating force requirements. The DMLSS AIS uses interfaces with Military Health System clinical information systems and maturing technologies such as *point-of-use* to sense and initiate replenishment requirements based upon actual or anticipated medical procedures or patient encounters. The application enables MTFs in the Military Health System to serve as supply distribution nodes or sources of local procurement in support of operational MEDLOG units at home station. This provides access to clinical, as well as logistical expertise of the AMEDD generating force in resolving materiel requirements. The DMLSS application centralizes information processing for MEDLOG, minimizing layers of materiel management and reducing complexity and workload of logistics processes at forward operational levels. The DMLSS application is supported in theater by MC4.
- 4-12. The DMLSS AIS is a fully integrated suite of MEDLOG applications that support the management of medical supply, medical equipment maintenance, medical assembly management, property accountability, and facility management at the fixed TDA MTFs. The DMLSS AIS is the primary support system for all MEDLOG functions associated with TDA MTFs and is deployed to virtually all MTFs worldwide.
- 4-13. The only DMLSS modules currently being used by deployed medical forces are the DCAM application and the Equipment and Technology Management module. The DCAM application was also deployed to support Army movement and maneuver units. The Equipment and Technology Management module has a maintenance management submodule which automates the medical maintenance functions in the CSH at Role 3. The CSH uses the DMLSS Equipment and Technology Management Module to manage the complex maintenance requirements for all assigned medical equipment.
- 4-14. The DCAM application provides secure communication and auditing capability and operates as the remote customer module for the MEDLOG support system. The DCAM application allows the electronic exchange of files back and forth between two separate DCAM devices to facilitate the transfer of automated information between Roles 1 and 2 MTFs. The DCAM portion of DMLSS is the primary module used by deployed units. The DCAM application also—
 - Allows remote supported units that have no other MEDLOG automation to create automated Class VIII requests with minimal hardware requirements (requires a laptop computer with a network connection).
 - Permits users to view the suppliers' catalogs and provides the capability to perform basic customer-level medical supply functions such as ordering, receiving, managing dues-in, and inventory control.
 - Allows units to perform functions off-line and exchange files with the supporting SSA when Nonsecure Internet Protocol Router communications are available. This exchange includes the download of selected catalog files from the SSA's DMLSS application, which makes it possible for customers to research the catalog for prime and substitute items. When Nonsecure Internet

- Protocol Router capability is not available, customer files can be exported to compact disc or printed copy for physical delivery to the supporting SSA.
- Automates the Class VIII supply process at Roles 1 and 2 and allows nonlogisticians, who maintain their medical supplies as an additional duty, to electronically exchange, catalog, order, and status information with their supply activity.

THEATER ENTERPRISE-WIDE LOGISTICS SYSTEM

4-15. The Theater Enterprise-Wide Logistics System application was designed to transfer the capability for theater-level Class VIII supply chain management into enterprise architecture. The Theater Enterprise-Wide Logistics System builds on the enterprise resource planning implementation started at the USAMMA in May 2002 and brings theater Class VIII management into the same system architecture that is used for the production of Army MES and medical materiel sets. The Theater Enterprise-Wide Logistics System supports the intermediate MEDLOG functions for distribution and materiel management and ties together national, regional, and deployed units into a single business environment. The system supports the development, production, and ultimate theater sustainment of medical assemblages that are the basic building blocks of operational medical capabilities. The Theater Enterprise-Wide Logistics System also supports the operation of Army organizations serving as the TLAMM and provides materiel management within a single operational instance or common operational picture for tactical-level MEDLOG units. The Theater Enterprise-Wide Logistics System is an Army-sponsored initiative that serves as the theater-level solution for medical supply chain management.

THEATER BLOOD APPLICATION

4-16. The Theater Blood Application replaces the Theater Defense Blood Standard System and Joint Medical Workstation for blood management, reporting, and asset visibility. The application portal exists within the Theater Medical Data Store and Medical Situational Awareness in the Theater web-based applications, which reside in the Theater Medical Information Program framework. The Theater Blood Application is authorized for use to collect, track, disposition, and report blood products in the deployed environment. The application allows deployed medical units managing blood assets to document inventory, collections and testing, and final disposition of blood and blood products.

JOINT MEDICAL ASSET REPOSITORY

4-17. The Joint Medical Asset Repository serves as a component of the DMLSS AIS that supports the military's joint MEDLOG information management effort and the Military Health System. This repository provides visibility of DOD medical asset data. This web-based application provides access to integrated joint Service medical asset information for any user, any time, and on any machine. The DOD recognizes Joint Medical Asset Repository as the single integrated, authoritative source for joint MEDLOG information provided to the joint total asset visibility system. The Joint Medical Asset Repository application receives data daily from a multitude of government legacy systems including DMLSS. This application is constantly evolving and currently has report and *ad hoc* asset query capabilities for assemblages, blood, facilities, inventory, prime vendor, medical maintenance, global transportation visibility, and materiel and asset visibility that can be queried. In the near future, the Joint Medical Asset Repository will be replaced with a data warehouse which will have increased capability to perform more extensive data mining and contain detailed supply transaction data for use within the Military Health System.

PATIENT MOVEMENT ITEM TRACKING SYSTEM

4-18. The PMITS application tracks the storage of PMIs during peacetime and their movement during contingency and wartime operations. This application directly supports the sustainment mission by ensuring critical patient movement equipment is available to evacuate critically injured Soldiers. Commanders use PMITS to manage and redistribute PMI assets in order to avoid shortages during patient evacuations. The PMITS application has the ability to show location and status of PMI assets to assist in eliminating shortages and overages of essential patient evacuation equipment.

SPECTACLE REQUEST TRANSMISSION SYSTEM

4-19. The Spectacle Request Transmission System-II application automates the patient record portion of the optical prescription and order transmission process to MEDLOG units and optical fabrication laboratories at EAB as described in Chapter 6 of this publication.

SECTION II — EXTERNAL ENABLERS

4-20. The Army is also in the process of developing a new *set of capabilities* integrated into what is known as the Single Army Logistics Enterprise. The Single Army Logistics Enterprise initiative will bring about a single logistics enterprise technology ensemble for all Army supply support processes. This initiative will use a commercial enterprise resource planning software product that will standardize and reduce the current number of individual Logistics Information System applications employed Armywide at the tactical and strategic logistics levels.

SINGLE ARMY LOGISTICS ENTERPRISE

- 4-21. The Single Army Logistics Enterprise initiative represents the Army's vision of a fully integrated knowledge environment that builds, sustains, and generates operational capability by joining tactical- and strategic-level logistics systems into a unified, cohesive environment. The Single Army Logistics Enterprise applications are used to achieve an integrated enterprise environment that brings the data and processes of logistics organizations together as one (including the incorporation of data from all SSAs).
- 4-22. The Single Army Logistics Enterprise consists of three components, the U.S. Army Materiel Command's Logistics Modernization Program, the Global Combat Support System-Army, and the Army Enterprise System Integration Program (formerly the Global Combat Support System-Army Product Life Cycle Management Plus). The Global Combat Support System-Army and Logistics Modernization Program are linked together by the Army Enterprise System Integration Program. All three components are configured using the same enterprise resource planning software applications and are designed to work together in a seamless, integrated web-based environment.
- 4-23. The Global Combat Support System-Army is the tactical component of the Single Army Logistics Enterprise end-to-end concept that reengineers more than a dozen outdated Army logistics information systems. The Global Combat Support System-Army modernizes automated logistics processes by streamlining supply and maintenance operations, property accountability and logistics management, and integration procedures. The Global Combat Support System-Army will be fielded to all units currently operating Logistics Information Systems products and will eventually replace all of the Army's existing independent (or stand-alone) legacy supply and maintenance systems.
- 4-24. The Logistics Modernization Program incorporates all strategic materiel support processes currently performed in individual purpose standalone systems. Incorporation of processes at the strategic level will result in terminating more than 2,000 individual purpose systems while centralizing all processes in one widespread logistics enterprise system.
- 4-25. The Army Enterprise System Integration Program is the key component used to bring the strategic-level and tactical components together into a single logistics integrated environment. The Army Enterprise System Integration Program provides a single point of entry for continued use of other individual purpose automation systems. The application also provides master data sharing of logistics processes in a single common operational picture visible at the national or strategic, operational, and tactical levels. This set of capabilities significantly improves logistics processing linking the national or strategic and tactical supply chain together while reducing the number of individual purpose systems currently employed Armywide.

AUTOMATED MOVEMENT AND IDENTIFICATION SOLUTIONS

4-26. Automated Movement and Identification Solutions combine complimentary and collective capabilities of Transportation Coordinators'-Automated Information for Movements System II and RF intransit visibility. Automated Movement and Identification Solutions provide RF identification and automatic identification technology-enabling technologies, products, and services to assist the DOD in

improving asset visibility worldwide. Transportation Coordinators'-Automated Information for Movements System II automates and manages the movement of personnel, equipment, and sustainment cargo, while maintaining visibility at the strategic, operational, and tactical levels. Radio Frequency intransit visibility produces, collects, and integrates movement and in-transit visibility information through a worldwide infrastructure of mobile and fixed RF in-transit visibility read and write stations, satellite transponder-equipped vehicles, and servers to make in-transit visibility data available to users through a web-based tracking portal and shares data with 35 other DOD systems. These capabilities automate the planning, coordination, execution, and tracking of the deployment, movement, and sustainment of units.

INTEGRATED DATA ENVIRONMENT AND GLOBAL TRANSPORTATION NETWORK CONVERGENCE PROGRAM

4-27. The Integrated Data Environment and Global Transportation Network Convergence Program is a partnership between the United States Transportation Command and Defense Logistics Agency to provide the DOD with an integrated set of networked, end-to-end visibility, deployment, and distribution capabilities. The end goal of the convergence is to actively support the joint force commander's ability to make decisions based on actionable logistics information. The Convergence Program creates a single source for the Defense Logistics Agency and United States Transportation Command to access common, authoritative data, business standards, and information. The Convergence Program leverages existing systems and commercial-off-the-shelf technology to eliminate redundancy, streamline access to data, and optimize resources.

4-28. The Integrated Data Environment and Global Transportation Network Convergence Program is the DOD system of record for in-transit visibility and asset visibility. The enabling in-transit visibility capabilities leverage real time supply data generated by the Services and within the Defense Logistics Agency. The data is then consolidated and made available for users. The enabling asset visibility capabilities provide global visibility of assets in all classes of supply. The Convergence Program allows United States Transportation Command to optimize the effectiveness and efficiency of the DOD logistics pipeline in support of users across the Services.

BATTLE COMMAND SUSTAINMENT SUPPORT SYSTEM

4-29. The Battle Command Sustainment Support System supports the mission command warfighting function and operation management process by rapidly processing large volumes of logistical, and personnel information. The Battle Command Sustainment Support System facilitates quicker, more accurate decisionmaking by providing an effective means for force-level commanders (logistics and sustainment commanders) to determine the sustainability and supportability of current and planned operations. The Battle Command Sustainment Support System collects and processes selected logistics and sustainment data in a seamless manner from logistics and sustainment Logistics Information System and manual systems or processes, and other related source data and hierarchical automated mission command systems (such as Force XXI Battle Command—Brigade and Below and the Global Command and Control System family of systems). Based on these inputs, the Battle Command Sustainment Support System generates and disseminates near real-time logistics and sustainment mission command reports and responses to logistics and sustainment related *ad hoc* queries, updates the database an average of every 3 hours, and provides sustainment warfighting function information in support of the Army Battle Command System common operational picture.

4-30. The common operational picture is an Army Battle Command System universal product based on the selected sharing of warfighting function proponent force-level information common to the other Army Battle Command System warfighting functions. Army Battle Command System common operational picture products include situational maps (terrain, disposition of friendly and enemy forces), battle resource reports, and other intelligence products. Access to Army force-level information and the common operational picture displays support the effective assessment and integration of the warfighting functions.

SECTION III — COMMON OPERATIONAL PICTURE

- 4-31. Army Doctrine Reference Publication 6-0 defines common operational picture as a single display of relevant information within a commander's area of interest tailored to the user's requirements and based on common data and information shared by more than one command. A logistics common operational picture is a single accounting of logistics capabilities, requirements, and shortfalls in an area of operations shared between supporting and supported elements. Information systems or computer-generated data is the most widely used format for communicating the common operational picture. The common operational picture, observations of commanders, and running estimates are the primary means of assessing an operation to ensure that the concept of operations, mission, and commander's intent are met. Running estimates provide information, conclusions, and recommendations from the perspective of each staff section. These estimates help to refine the common operational picture and supplement that information with data that is not readily displayed. The logistics common operational picture allows supporting units to determine unit capabilities, project requirements, coordinate movements, and disseminate information that improves the situational understanding of commanders on multiple levels of command within the area of operations. Once gathered, this information enables commanders to make informed decisions on how best to apply resources and focus efforts to accomplish the mission. Information systems are continually being modernized throughout the DOD to give leaders the information necessary to enhance and focus the support required to sustain the force. These information systems also allow subordinates to see the overall operation and their contributions to it as the mission progresses.
- 4-32. Currently, there is no *single* Army MEDLOG automated common operational picture available to obtain readiness information across all MEDLOG functions (including Class VIII supply or resupply, optical fabrication, medical equipment maintenance, and blood management). This information is collected using a combination of systems over several disparate channels. In most cases, the information is not reconciled or timely. The ultimate goal of a MEDLOG common operational picture is to provide real-time and relevant situational understanding at all levels, making it possible for commanders to assess the readiness of their command at a glance. This new capability should enable commanders to identify large-scale MEDLOG challenges and drill down to detect lower level issues. Once developed, this application must be net-centric and available for use throughout the AHS to assess and analyze MEDLOG capabilities and readiness.
- 4-33. The Global Combat Support System-Joint provides a single, end-to-end capability to manage and monitor personnel and equipment through the mobilization process. Global Combat Support System-Joint provides a logistics common operational picture, ensuring the right personnel, equipment, supplies, and support are in the right place, at the right time, in the right quantities across the range of military operations. The Global Combat Support System-Joint provides enhanced situational understanding of the resources and capabilities available in the operational area of. Visualizations, in the form of map layers, watchboards, and a user-defined logistics common operational picture give users and organizations the ability to customize how information is viewed, meeting the needs of both the individual action officer and organizations in support of the operational mission.
- 4-34. The Global Combat Support System-Joint is designed for both Secure Internet Protocol Router network and Nonsecure Internet Protocol Router network environments with different single sign-on and data source connections. The Global Combat Support System Nonsecure Internet Protocol Router network suites have many of the capabilities of the Secure Internet Protocol Router network and are only connected to data sources that have unclassified data. The system serves as a one stop shop for logistics by providing access to several disparate authoritative data sources and applications by single sign-on to the web. The system is accessible by any authorized user over the Nonsecure Internet Protocol Router network using a Common Access Card or via the Secure Internet Protocol Router network with a Public Key Infrastructure.

SECTION IV — MEDICAL LOGISTICS AUTOMATED INFORMATION SYSTEM OPERATIONAL CONCEPT

4-35. This section describes the MEDLOG automated information systems available to facilitate the ordering process for Class VIII resupply support to deployed medical elements at Roles 1, 2, and 3.

ROLE 1 MEDICAL LOGISTICS SUPPORT

4-36. Combat lifesavers and combat medics at Role 1 use a manual ordering process for resupply of medical materiel. At the BAS, DCAM is the preferred method for submission of Class VIII requisitions. However, requests may be sent to the BMSO for fill by any means available, to include manually, verbally, or via electronic mail.

ROLE 2 MEDICAL LOGISTICS SUPPORT

4-37. At Role 2 MTFs (BSMCs and medical companies [area support]), the same applications are used for MEDLOG support as those seen at Role 1 and may be augmented with a forward distribution team from the MLC. The Theater Blood Application is used for blood management at Role 2 and the Spectacle Request Transmission System-II is also available for ordering and tracking optical requisitions.

ROLE 3 MEDICAL LOGISTICS SUPPORT

4-38. Army medical care at Role 3 is provided by the CSH located at EAB. The MC4 links all of the medical functions and equip users with mobile computers for the collection and forwarding of medical information to the supporting MTF. The MC4 devices are loaded with the appropriate software and functionality to provide Class VIII (including medical supply and equipment tracking, patient movement visibility, optical requisitioning capability, and blood management) automated system linking the theater to the CONUS-sustaining base. The CSH uses the Theater Blood Application for blood management, the DMLSS Equipment and Technology Management Module for management of medical equipment maintenance, and some CSHs are also using the DCAM application to provide Class VIII in support of the hospital. The MLC serves as the primary SSA responsible for providing MEDLOG support for the CSH.

MEDICAL LOGISTICS COMPANY

4-39. The MLC is a flexible organization and serves as the principle SSA responsible for providing MEDLOG support to the brigades and the medical company (area support). The medical company (area support) is an EAB asset that provides Role 2 medical support. The MLC also serves as the primary SSA responsible for providing support to the Role 3 CSHs.

4-40. The MMB, using many of the same automated tools as the other commodity managers, assists and coordinates distribution of Class VIII resupply through the battlefield distribution system. The Defense Health Services System will automate linkage of Class VIII supply to the transportation system. Management of complex medical sets and quality control of Class VIII materiel is also automated, improving efficiency over the current manual system.

MEDICAL LOGISTICS MANAGEMENT CENTER FORWARD SUPPORT TEAM

4-41. The MLMC forward support team serves as the theater Class VIII manager and operates the current AIS.

Chapter 5

Medical Equipment Maintenance

Medical equipment maintenance is a primary task of Army MEDLOG and is critical to ensure patient safety and overall AHS support. Medical treatment of wounded Soldiers in the deployed force relies heavily on the AHS's ability to rapidly respond, project, and maintain the latest medical equipment on the battlefield. Technology used to develop medical equipment changes rapidly. This new technology requires well trained and highly skilled health service maintenance technicians (Area of Concentration 670A), biomedical equipment specialists (Military Occupational Specialty 68A), DOD civilians, and contractors for life cycle and maintenance management, field and sustainment maintenance support, and calibration verification. This chapter describes medical equipment maintenance support provided within an area of operations to include external CONUS-based support for all medical units in theater.

Note. In accordance with 10 USC, medical equipment maintenance is the responsibility of TSG. Therefore, other than operator preventive maintenance checks and services (PMCS), no other military occupational specialty is authorized to perform scheduled or unscheduled medical equipment maintenance, calibration, and verification and/or certification on medical equipment.

SECTION I — ROLE OF MEDICAL EQUIPMENT MAINTENANCE

5-1. Medical equipment maintenance and repair supports the readiness of Army medical elements by sustaining systems and equipment as effectively, responsively, economically, and as close to the point of use as the situation permits. Materiel readiness is defined as the availability of materiel required by a military organization to support its wartime activities or contingencies, disaster relief (floods, earthquakes, and so on), or other emergencies. Maintenance of medical materiel includes medical maintenance engineering and medical maintenance operations.

ARMY MEDICAL DEPARTMENT MAINTENANCE SYSTEM

- 5-2. Medical equipment maintenance operations are primarily based on the policies contained in AR 750-1, AR 40-61, TB MED 750-1, and SB 8-75-11. The specific objectives of the AMEDD maintenance system are to—
 - Provide a more responsive maintenance system; improve operational readiness, and increase mobility and flexibility at the lowest overall cost.
 - Establish a medical maintenance management structure through which maintenance can be performed effectively and economically ensuring the highest level of care available.
 - Establish procedures where equipment is supported in peacetime as in war commensurate with available time and other resources.
 - Optimize repair by component replacement of medical equipment.
 - Integrate the forward support maintenance concept (AR 750-1) to minimize equipment maintenance service time.
 - Establish equipment design criteria that emphasize modular design of end items that will promote the following maintenance priorities: repair forward, evacuate, and replace with medical maintenance regeneration enablers, if available.

Note. Authorized Army medical maintenance regeneration enablers include operational readiness float, repair cycle float, and Medical Standby Equipment Program items. Medical maintenance regeneration enablers involve positioning end items, components, assemblies, and subassemblies with the MLC and CSH for sustainment medical maintenance in support of theater operations.

5-3. Army transformation requires that the AMEDD has the capability to deploy powerful forces quickly, without a large logistics footprint. Army maintenance transformation consolidated the four-level maintenance system at the direct support level into a tiered two-level maintenance system, which consists of field and sustainment maintenance. The Army's two-level maintenance system (on or near system replacement and off system repair of components and end items) allows operating forces to continue with the mission. These two levels are key to keeping equipment in a mission-ready condition, restoring equipment to a serviceable condition, and providing approved equipment modifications. The goal of the two-level maintenance system is a simplified structure that provides a reduced repair-cycle time with greater efficiency in all maintenance processes. See ATP 4-33 for additional information on Army maintenance operations.

FIELD MAINTENANCE

- 5-4. Field maintenance is the first function of the Army maintenance system. Field maintenance consists of *on-system maintenance, repair, and return to the user* including maintenance actions performed by operators. Field maintenance is often performed on or near the unserviceable piece of equipment or weapon system utilizing line replaceable units or modules and component replacement or repair (ATP 4-33). The greatest enabler of field maintenance is operator/crew PMCS. The operator/crew PMCS provides the most rapid identification of equipment faults and engagement of the maintenance repair system. Commanders are responsible for providing resources, assigning responsibility, and training their Soldiers to operator-level standards to conduct PMCSs. Commanders are also responsible for ensuring that adequate time is set aside for Soldiers to conduct operator-level PMCS. The basic task of field maintenance is to perform scheduled periodic services and other maintenance functions (TM 10 and 20 series publications, maintenance allocation charts, and/or the original equipment manufacturers service literature) required to attain a high level of operational readiness. All repair functions for medical equipment beyond operator or crew PMCS is the sole responsibility of the Area of Concentration 670A/Military Occupational Specialty 68A. Responsibilities include the requirement to—
 - Schedule and perform PMCS.
 - Perform electrical safety inspections and tests, calibration, verification, and certification services.
 - Provide diagnosis and fault isolation charts prior to evacuation. Emphasis is placed on early consideration of equipment replacement with medical maintenance regeneration enablers.
 - Replace unserviceable components, modules, and assemblies as authorized by the maintenance allocation chart.
 - Inspect by sight and touch external and other easily accessible components.
 - Lubricate, clean, preserve, tighten, replace, and make minor adjustments.
 - Requisition, receive, store, account for, and issue repair parts to include managing authorized stockage list/bench stock for medical equipment.
 - Maintain a technical library for medical equipment.
 - Perform technical inspections on new or transferred medical equipment in accordance with AR 40-61.
 - Maintain required manual equipment files and automated equipment files in the medical equipment management AIS.
 - Request, manage, maintain, and report medical maintenance regeneration enabler assets.
 - Perform management and maintenance functions on PMI located within the operational area.
 - Report material condition and status codes to include operational readiness in accordance with AR 700-138.

- Inspect items to verify serviceability.
- Report items rendered unserviceable due to other than fair wear and tear through the chain of command. Any equipment not located during scheduled services will be reported to the commander or property book officer monthly to ensure property accountability. If negligence or willful misconduct is suspected, repair will not be made until a release statement is received per AR 735-5.
- Determine economic reparability in accordance with TB MED 750-1.
- Repair unserviceable economically reparable end items. Equipment will be repaired and returned to the user.
- Provide proactive materiel readiness and technical assistance to unit maintenance elements including—
 - Visits to supported units on a regular basis.
 - Advice to supported units in proper methods for performing maintenance and related logistics support.
 - Coordination with supported units to perform technical inspections when requested.
 - Assistance to supported units on-site.
 - Area support to other field units and evacuate equipment requiring support to sustainment maintenance units, as necessary.

SUSTAINMENT MAINTENANCE

- 5-5. Sustainment maintenance is the second function of the Army Maintenance system. Sustainment maintenance consists of *off-system component repair and/or end item repair and return* to the supply system or by exception to the owning unit, performed by national level maintenance providers. The sustainment maintenance function can be employed at any point in the logistics chain. The intent of this level is to perform commodity-oriented repairs to return items to a national standard, providing a consistent and measureable level of reliability and to execute maintenance actions not able to be performed at the field level of maintenance. Sustainment maintenance supports both operational forces and the Army supply system (ATP 4-33). Ideally, sustainment maintenance activities (MLC and CSH) would support closest to the area of operations, however, the operational pace and technical requirements may dictate that sustainment maintenance activities are located in CONUS (depot) to provide the required repair support. Responsibilities include the requirement to—
 - Diagnose, isolate, and repair faults.
 - Repair selected line replaceable units and printed circuit boards in accordance with the maintenance allocation chart.
 - Provide area maintenance support to include technical assistance and on-site maintenance as required or requested.
 - Collect and classify Class VIII materiel for proper disposition.
 - Operate cannibalization points, when authorized by the Army command, ASCC, or direct reporting unit (in accordance with AR 710-2).
 - Evacuate unserviceable end items and components through the appropriate SSA.
 - Fabricate or manufacture repair parts, assemblies, components, jigs, and fixtures when approved by the Army command, ASCC, or direct reporting unit.
 - Request depot or manufacturer technical support as required.
 - Repair all economically reparable components when the maintenance allocation chart F-codedlevel repair will return the items to a serviceable condition. These items will be repaired and returned to the requesting maintenance or supply activity.
 - Provide fabrication as identified by the appropriate TM.
 - Provide overhaul and rebuild end items and components in support of the wholesale supply system and as repair and return actions.
 - Perform special inspections, tests, and modification program actions.
 - Perform maintenance services and functions for the wholesale supply system.

- Provide end items, components, and repair parts through established programs in support of both TOE and TDA medical units.
- Provide on-site medical maintenance contact repair teams and logistics assistance representatives to support BCTs and forward operating bases, as required.
- 5-6. Responsive maintenance is the result of the combined efforts of many individuals. The actions of these individuals are guided and influenced by maintenance factors common to all maintenance operations. These factors function like a chain. If one area is neglected, the overall system is weakened. The factors required for responsive maintenance include—command interest, management, supervision, skill, and resources. Refer to AR 750-1 and ATP 4-33 for additional information.

COMMAND INTEREST

5-7. This is the active involvement of commanders and supervisors at all levels of medical equipment maintenance operations for which they are responsible. The commander is responsible for the readiness of medical equipment assigned to the unit whether it is a reportable end item, subassembly, or component of a medical materiel set or MES. To ensure deployable readiness, commanders must provide written emphasis, set goals, objectives, and priorities in support of the maintenance program. Commanders are required to publish a commander's maintenance directive in accordance with TB MED 750-1. They must stay informed of maintenance requirements, status, and capabilities and provide guidance, motivation, and direction to unit personnel. The leadership or interest of unit commanders, supervisors, and maintenance managers helps to motivate personnel to accomplish the maintenance objectives. Commanders must also develop training plans that ensure appropriate personnel receive training and certification on equipment.

MANAGEMENT

5-8. Managers use available resources to accomplish the mission in the most efficient manner. Maintenance management involves all members of the chain of command, as well as designated individuals who manage the maintenance resources under their control in accordance with command supply discipline. The manager plans, organizes, directs, coordinates, and controls resources to accomplish the maintenance mission.

SUPERVISION

5-9. Maintenance supervisors ensure that personnel perform required tasks in a correct, safe, and timely manner. Supervisors also take an active interest in the training and welfare of their personnel. Supervisors should set goals to maximize the training and certification of section personnel on assigned equipment.

SKILL

5-10. Skill is the technical ability of personnel to perform the tasks required by their duty position. Skill development is important to all personnel but particularly to inexperienced Soldiers joining the unit. Commanders and supervisors must provide continuous technical training, licensing programs, and medical proficiency training to ensure that learned skills are sustained over time.

RESOURCES

5-11. Resources include personnel, publications, consumables, repair parts, medical maintenance regeneration enablers, tools, test, measurement, and diagnostic equipment, facilities, training, and time. Commanders and supervisors at all levels must ensure that their subordinates are adequately resourced to accomplish the mission they are assigned.

SECTION II — MEDICAL EQUIPMENT MAINTENANCE CAPABILITIES AND RESPONSIBILITIES AT EACH ROLE OF CARE

5-12. This section describes the medical equipment maintenance capabilities available to sustain deployed medical units at each role of care.

MEDICAL MAINTENANCE CAPABILITIES

- 5-13. Health care delivery at every role of the AHS relies heavily on specialized and highly technical medical equipment requiring service and repair that can only be provided by appropriately trained biomedical equipment specialists. Efforts made by the Army, along with the other Services, to standardize equipment and biomedical equipment specialist training have increased the AHS's capabilities for joint interoperability, providing technicians and repairers that are exceptionally versatile and better prepared to support technology demands. In addition to the maintenance and repair of medical equipment, biomedical equipment specialists are also responsible for assuring the adequacy and safety of the power system, equipment fielding, and conducting new equipment training for clinical personnel once the items are fielded.
- 5-14. Medical logistics planners must understand the organic medical equipment maintenance capabilities of medical units throughout the area of operations to ensure that resources are properly scaled to support the mission. This helps to avoid interruptions in the availability of essential medical equipment.
- 5-15. At forward locations, the capabilities of the biomedical equipment specialist are limited to first response diagnosis, component exchange, and relatively simple repair (including preventive maintenance checks and services). Medical companies in theater are assigned one biomedical equipment specialist that is normally capable of providing field-level maintenance for organic equipment. Limitations may exist with highly specialized systems such as laboratory and diagnostic imaging services that may require sustainment maintenance support.
- 5-16. Theater MEDLOG capabilities are provided by the TLAMM and/or operational MLC which have personnel and expertise to provide field and sustainment-level medical equipment maintenance support to medical units on a direct support or area basis. They also maintain theater assets for equipment exchange, calibrate highly sophisticated equipment such as anesthesia machines and imaging systems, and manage critical repair parts needed to maintain equipment used in theater. Theater medical maintenance functions include both maintenance operations and the provision of contact repair teams to support forward units and manage or coordinate contractor support provided by theater or national-level contracting activities.
- 5-17. National-level medical maintenance capabilities are provided by the USAMMA Medical Maintenance Management Directorate in conjunction with the Defense Logistics Agency (Troop Support). Capabilities at this level include—
 - Equipment acquisition and integrated logistics support.
 - Service-level maintenance operations that also support new equipment acquisition and fielding.
 - Coordination with original equipment manufacturers and third party maintenance vendors.
 - Provision of national contracts and/or one-time contracts for maintenance and repair services.
- 5-18. These MEDLOG agencies are also able to project medical equipment maintenance assistance teams into the theater at the request of the combatant commander.

MEDICAL EQUIPMENT MAINTENANCE SUPPORT AT ROLES 1 AND 2

MEDICAL PLATOONS, SECTIONS, AND BATTALION AID STATION

5-19. At the Role 1 MTF (BAS), the medical platoon leader is responsible for ensuring that operator maintenance is performed on assigned equipment and that a medical maintenance support plan is established and coordinated with the BSMC. The medical platoon is composed of treatment teams, which are authorized MES that contain multiple maintenance significant items. When a repair is needed, the medical platoon leader reports the equipment status immediately to the BMSO. The medical equipment is then transported to the BSMC via logistics or medical vehicle, if available. If the medical equipment cannot be evacuated to the BSMC, a contact repair team from the MLC will be dispatched to diagnose and remedy the fault through on-system repair or by issuing a medical maintenance regeneration enabler. Any medical element operating in the sustainment area of the supported BCT will follow these procedures.

- 5-20. The medical platoon requests medical equipment maintenance support from the supporting BCT BMSO. The BSMC has one biomedical equipment specialist assigned. Therefore, medical equipment maintenance support will be possible on a limited basis while the treatment squad is forward deployed in the area of operations. However, during *stand-down* periods, a contact repair team from the MLC can be requested to provide field and limited sustainment maintenance at the unit's location. Normally, minimal equipment contained in these sets requires sustainment maintenance. User/operator maintenance tasks and field maintenance repair parts will be identified in the technical manual or operator manuals and applicable materiel fielding plans.
- 5-21. The MES ground ambulance used by the ambulance squads in the BASs and BSMC contain several maintenance-significant items. User or operator personnel are not trained to repair malfunctions using standard operator-level repair parts and therefore are not authorized to repair medical equipment contained in these sets. The ambulance squads request repairs to medical equipment through the BMSO in the BCT or directly from the MLC. However, due to the nature of these units and the limited space available, medical maintenance services provided by the BCT are restricted and must be coordinated to ensure maximum support. The MLC contact repair teams are primarily responsible for medical equipment maintenance for all units (including medical equipment maintenance support for air ambulance units) in the BCT area other than the BSMC. Figure 5-1 below depicts medical maintenance support at Roles 1 and 2 when a forward surgical team is attached to the BSMC and the contact repair team is deployed forward to assist the unit biomedical equipment specialist in providing medical equipment maintenance and repair support.

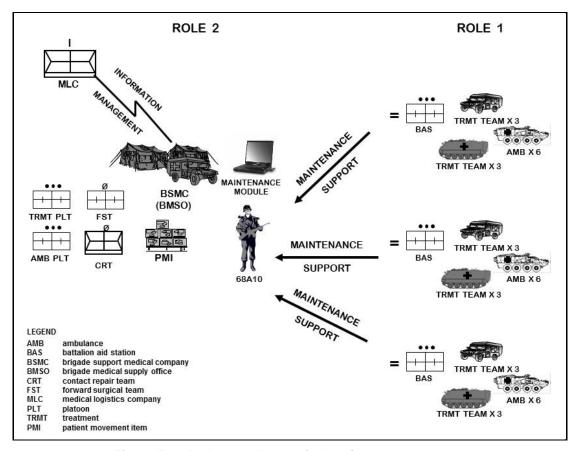


Figure 5-1. Roles 1 and 2 medical maintenance support

BRIGADE SUPPORT MEDICAL COMPANY

5-22. The BSMC's BMSO provides primary field maintenance for the company and may provide emergency medical equipment maintenance for the medical platoons in the BCT. The BMSO provides

medical equipment reporting and oversight for all medical equipment within the brigade. Units within the BCT that do not have organic medical equipment maintenance and repair capabilities are required to coordinate with the BMSO for field maintenance support. Units in the BCT must also coordinate with the BMSO for sustainment maintenance support, which is provided by the MLC contact repair teams through the supporting MMB. The BMSO carries minimal Class VIII repair parts in support of the brigade. When required, Class VIII repair parts are requested from the supporting MLC. All medical equipment within the brigade shall be reported through the theater-approved AIS to the supporting MLC.

- 5-23. All command maintenance reports will be submitted using the approved medical maintenance management system. Requests for medical specific test, measurement, and diagnostic equipment, medical maintenance regeneration enablers, medical equipment turn-in, and PMIs are supported through the MLC. The BMSO is responsible for ensuring that an accurate density list of all medical equipment in the BCT is developed, accounted for, and forwarded to the MLC through the medical maintenance AIS daily.
- 5-24. The biomedical equipment specialist at the BSMC is responsible for field maintenance (scheduled and unscheduled) on medical equipment within the brigade. The biomedical equipment specialist also maintains PMI assets as deemed necessary, as well as the following:
 - Troubleshoot the equipment in accordance with the maintenance allocation chart and/or the original equipment manufacturers service literature.
 - Repair and return the equipment if the repair is within the scope of field maintenance and the parts are on hand.
 - Turn the equipment in to the battalion or brigade S-4 for evacuation to the MLC, if the repair exceeds field-level capabilities.
 - Coordinate with the supporting MLC for medical maintenance regeneration enablers, if the equipment is a critical item.
 - Generate a parts requisition through MEDLOG channels if a part is needed and the equipment is not a critical item.
- 5-25. When the BSMC is deployed and a forward surgical team is attached, a contact repair team is dispatched from the MLC to the BSMC's location to assist the unit biomedical equipment specialist in providing the necessary medical equipment maintenance and repair support. The contact repair team remains with the BSMC as long as the forward surgical team is forward engaged to provide the necessary medical equipment maintenance and repair support to all units in the BCT's area of operations. The contact repair team can also be called forward of the BSMC to support medical evacuation platforms and other medical assets, then return to the BSMC location once repairs are made.

MEDICAL COMPANY (AREA SUPPORT) (AREA TREATMENT SQUADS/TEAMS)

- 5-26. Area treatment squads and/or teams of the medical company (area support) are also authorized trauma and sick call MES. Multiple maintenance significant items are contained in these sets. As with the BSMC, all medical equipment within the medical company (area support) is reported to the supporting MLC. All command maintenance reports will be submitted using the approved medical maintenance management system. Medical specific test, measurement, and diagnostic equipment, MEDSTEP (and other regeneration enablers), and medical equipment turn-in are supported through the MLC.
- 5-27. The biomedical equipment specialist assigned to the medical company (area support) (and the MLC) is responsible for all field-level medical maintenance (scheduled and unscheduled) to include PMI assets within the medical company (area support). The contact repair teams from the MLC are primarily responsible for maintenance of medical elements deployed away from the medical company (area support).
- 5-28. The biomedical equipment specialist troubleshoots the equipment based on the Soldier's level of training and the test, measurement, and diagnostic equipment available in accordance with the maintenance

allocation chart. When a repair part is needed and the equipment is not a critical item, the biomedical equipment specialist generates a parts requisition through MEDLOG channels. If the—

- Repair is within the scope of field maintenance and the parts are on hand, the biomedical equipment specialist will repair and return the equipment to the supported unit.
- Repair exceeds field maintenance capabilities, the biomedical equipment specialist will request contact repair team support from the supporting MLC.
- Equipment is a mission critical item; a medical maintenance regeneration enabler is issued from the supporting contact repair team/MLC.

MEDICAL EQUIPMENT MAINTENANCE SUPPORT AT ROLE 3

5-29. Medical units assigned a medical maintenance mission at EAB include the MLC, CSH, medical company (area support), and dental company (area support). Of the units listed, the CSH is the only Role 3 MTF operating at EAB.

COMBAT SUPPORT HOSPITAL

5-30. The biomedical equipment specialists and the health services maintenance technician at the CSH are responsible for field maintenance for medical equipment assigned or attached to the CSH including the forward surgical team that is collocated with the CSH when it is not deployed to supported units. When deployed, the forward surgical team is collocated with a medical company and receives medical maintenance support through that company and the MLC covering that supported area. The CSH provides limited field maintenance for special and augmentation medical equipment on an area basis. Medical elements assigned or attached to the CSH may include head and neck teams (computed tomography scan), special care teams, pathology teams, renal hemodialysis teams, infectious disease team, ambulance squads, and treatment teams. The CSH also maintains automated maintenance records on assigned medical equipment and supported medical units or elements in the approved medical maintenance management system. The MLC provides augmentation support for sustainment maintenance and biomedical equipment specialists at the CSH.

MEDICAL LOGISTICS COMPANY

- 5-31. The MLC is responsible for maintaining medical maintenance regeneration enablers and PMIs, deploying contact repair teams, and providing field and limited sustainment maintenance to units within the BCT and EAB areas including blood support detachments and units operating within the area without organic biomedical equipment specialists. Equipment is evacuated through supply channels to the MLC if repairs exceed the field and sustainment maintenance level in accordance with the maintenance allocation chart or as defined in AR 750-1 or AR 40-61. Parts are requisitioned through MEDLOG channels.
- 5-32. The MLC is staffed with required biomedical equipment specialists (Military Occupational Specialty 68A) and a health services maintenance technician, Warrant Officer Area of Concentration 670A. They are equipped with the appropriate tools and test, measurement, and diagnostic equipment to perform field and sustainment maintenance in accordance with the maintenance allocation chart. The MLC is staffed and equipped to provide three fully operational contact repair teams with expandable tactical vehicles. The MLC maintains automated maintenance records on all assigned medical equipment and the equipment of supported medical units or elements within the company area of operations.

MEDICAL BATTALION (MULTIFUNCTIONAL)

- 5-33. The MMB provides MEDLOG oversight and medical mission command to include—
 - Providing transportation.
 - Facilitating in-transit visibility of Class VIII repair parts and equipment.
 - Providing medical contact repair team missions.
 - Ensuring medical equipment quality control for units task-organized under the MMB.
 - Establishing medical maintenance priorities for equipment repair or exchange.
 - Monitoring maintenance distribution flow for supported units.

- Coordinating electronics, calibration, and automotive maintenance operations.
- Directing the cross-leveling of medical assets (parts or equipment).
- Contracting medical maintenance support and integrating host-nation support as required.
- Assisting in medical equipment readiness sustainment and reporting.
- Ensuring viable medical equipment maintenance.
- Ensuring that biomedical equipment specialist training programs are in place.

MEDICAL BRIGADE (SUPPORT)

- 5-34. The medical equipment maintenance personnel in the MEDBDE (SPT)—
 - Conduct planning and provide direction and guidance for medical equipment maintenance and unit maintenance programs for the MEDBDE (SPT).
 - Develop and evaluate brigade maintenance policies, training, and maintenance support resources in support of the theater mission plan.
 - Manage repair parts and maintenance for all medical equipment within the MEDBDE (SPT).
 - Compile operational status reports and direct the disposition of unserviceable medical equipment.

MEDICAL LOGISTICS MANAGEMENT CENTER FORWARD SUPPORT TEAM

5-35. The MLMC support team provides maintenance management capabilities and advice to the ASCC surgeon. Responsibilities include maintaining visibility of unit equipment status and medical maintenance assets in the theater, recommending cross-leveling of assets, redirecting shipments, coordinating contractor support, and providing a direct link back to CONUS AIS support. The maintenance posture of the theater is managed and monitored through applicable AIS.

- 5-36. The medical equipment maintenance personnel in the MLMC provide the following support:
 - Establish and provide oversight for medical equipment maintenance information systems plans and architecture.
 - Plan, organize, and provide technical assistance.
 - Plan, supervise, and conduct training in all phases of medical equipment maintenance management.
 - Develop operating procedures and analyze or interpret technical data pertaining to medical equipment maintenance for the theater.

MEDICAL COMMAND (DEPLOYMENT SUPPORT)

- 5-37. The medical equipment maintenance personnel in the MEDCOM (DS)—
 - Provide senior leadership, guidance, and technical expertise for supported elements, staff agencies, and commanders at all levels within the theater.
 - Evaluate and develop theater medical equipment maintenance policies and training.
 - Develop medical equipment support plans for the theater.
 - Provide oversight for medical maintenance quality assurance operations.
 - Coordinate, publish, and enforce maintenance directives.
 - Develop and coordinate materiel training, support, and personnel implementation plans for the theater.

NONSTANDARD REPAIR PARTS

5-38. Over 98 percent of Army medical equipment is commercial-off-the-shelf and often requires nonstandard Class VIII repair parts that are not part of the medical catalogue. Units requiring nonstandard repair parts can obtain instructions for ordering these parts through the U.S. Army Medical Materiel Center-Europe or the USAMMA Web site as identified in the references.

SECTION III — CONTINENTAL UNITED STATES-BASED ORGANIZATIONS

5-39. The CONUS-based organizations supporting the medical maintenance mission in theater include the MLMC base (as described in Chapter 2 of this ATP), the National Maintenance Program (medical), and the USAMMA. These organizations provide the link from the strategic level to the field or tactical level. They monitor the maintenance posture of the theater and anticipate medical maintenance requirements that can be supported from the national level. These organizations ensure that tactical medical units are able to provide quality support to the deployed force. These organizations provide support and coordination in the areas of logistics assistance representatives, repair parts, contract maintenance, equipment fielding, manufacturer support, training, depot maintenance, quality assurance, modification work orders, and tools. Test, measurement, and diagnostic equipment, and program management assistance are also provided. The USAMMA operates three medical maintenance operations divisions for medical equipment. The medical maintenance operations divisions are responsible for overhauling, rebuilding, and refurbishing medical equipment on a national-level. This can be accomplished through the use of maintenance assets at the facility, the biomedical equipment specialists in the MLCs during Army Force Generation, or by USAMMA establishing contracts with civilian industry (in that order).

5-40. The USAMMA may also deploy a Forward Repair Activity—Medical team. The Forward Repair Activity—Medical team is resourced, directed, and controlled by TSG to provide sustainment-level medical equipment maintenance support and technical expertise to deployed medical units in theater. The Forward Repair Activity—Medical is operated as a deployable section within the USAMMA depot-level maintenance activities to extend sustainment medical equipment maintenance capabilities to augment theater intermediate-level organizations as required. An overseas Forward Repair Activity—Medical team may also be established by TSG when it has been determined that forward depot-level maintenance support is needed to sustain mission critical systems or components.

5-41. The members of the Forward Repair Activity—Medical team are technical experts on one of the following commodities: laboratory equipment, pulmonary, oxygen generation, and anesthesia equipment, or medical imaging systems. Requests for Forward Repair Activity—Medical assistance should be initiated by the activity or theater requiring depot-level expertise and service. The USAMMA Forward Repair Activity—Medical team may provide—

- Specialized tools.
- Test, measurement, and diagnostic equipment.
- Skills for specific equipment technologies (such as computed tomography and magnetic resonance imaging).
- Augmentation of theater medical equipment maintenance capabilities for a specific period or event, such as material fielding or retrograde operations.

5-42. During contingency operations, members of the Forward Repair Activity—Medical team deploy as part of the USAMMA Medical Logistics Support Team. Upon completion of the handoff of Class VIII contingency materiel, the Forward Repair Activity—Medical team may be retained in theater to provide sustainment maintenance support. The Forward Repair Activity—Medical team may also be requested at any time, if the theater determines their expertise is warranted. Requests for Forward Repair Activity—Medical team support must be sent to the OTSG.

Chapter 6

Optical Support

Optometry support from the MEDLOG perspective focuses primarily on optical fabrication for the replacement of spectacles and frame repair. This support is a critical aspect of preventive health care and key to ensuring readiness. The loss of eyewear (spectacles or glasses, contact lenses, and gas mask and protective inserts) can degrade performance and make a Soldier combat ineffective. The proper eye care support allows the Soldier to quickly return to duty without visual impairment. This chapter outlines optical support available in the theater.

SECTION I — THEATER OPTICAL SUPPORT

- 6-1. Optical support includes—
 - Fabrication of:
 - Single vision and multivision prescription lenses.
 - Standard spectacles.
 - Aviation spectacles.
 - Protective mask inserts.
 - Military combat eye protection inserts.
 - Provision of military standard spectacle frame repair.
 - Provision of contact lenses for Attack Helicopter-64 Apache pilots or military personnel on a mission-required basis.
- 6-2. Optometry teams and optical fabrication laboratories are responsible for making only those spectacles and protective vision devices that require corrective prescription lenses. Replacement spectacles and protective mask inserts requiring standard single vision lenses may be fabricated at optical support units in theater, afloat, or in fixed facilities. In the event the optical fabrication laboratory cannot fabricate a prescription, eyewear may be requested from the supporting full service optical fabrication laboratory in CONUS or outside the continental U.S. that has lens surfacing capability. Nonprescription lenses are a Class II item and are the quartermaster's responsibility.
- 6-3. Prior to deployment, commanders ensure that Soldiers have the following:
 - Two pairs of military spectacles (a civilian or frame of choice pair of spectacles may count towards this requirement).
 - One pair of protective mask inserts or 6-month supply of contact lenses (mission required only).
 - One pair of military combat eye protection inserts.
 - One pair of military combat eye protection goggle inserts.
- 6-4. Optometrists provide essential support to the operational aviation community for the Aviation Contact Lens Program. Contact lenses should not be used in theater unless medically or operationally indicated for specific mission purposes.
- 6-5. Patients requiring optometric services initially report to their supporting BAS or medical company. For those patients requiring only routine replacement of spectacles or inserts, necessary information is obtained from the individual's treatment record and forwarded to the supporting optical fabrication activity. The required spectacles are fabricated and returned to the BAS or medical company for issue to the individual.

- 6-6. Brigade combat team medical companies request replacement of corrective eyewear for units in the sustainment area. The BSMC submits replacement requests to the supporting optical fabrication activity via the best communications available with delivery back to the requester. For those units operating at EAB, requests for replacement spectacles or frame repair are submitted by the supporting MTF or medical company (area support).
- 6-7. Medical supply offices generally do not have organic optical support capability. However, they can act as a relay for requests for optical support within their area of operations.

OPTOMETRY DETACHMENT

- 6-8. The optometry detachment (TOE 08567GA00) provides optometry care and optical fabrication to the BCT on an area basis. They are assigned to the MEDCOM (DS) or MEDBDE (SPT) with further attachment to an MMB and may be further attached to the medical company of a BCT.
- 6-9. The detachment is employed in all intensities of conflict when a BCT is deployed. Task-organized elements of the detachment are deployed, as necessary, in support of brigade-sized elements conducting unified land operations. The optometry detachment consists of six personnel that can be divided into two teams. Each team has the capability to provide optometry support limited to eye examinations, spectacle fabrication, frame assembly, and repair services to brigade and EAB units in the area of operations as far forward as possible.
- 6-10. The optometry detachment's capabilities include—
 - Initial diagnosis and management of eye injuries on the battlefield.
 - Examinations, to detect, prevent, diagnose, treat, and manage ocular-related disorders, injuries, diseases, and visual dysfunctions.
 - Assembly, repair, and fabrication of single vision spectacles.
- 6-11. Prescriptions and/or replacement requests that cannot be filled from on-hand stock or that exceed the MMB capability are passed to the CONUS or outside the continental U.S. support base. Once filled, prescriptions are delivered to the optical laboratory section of the supporting MLC.

MEDICAL LOGISTICS COMPANY OPTICAL SUPPORT SECTION

- 6-12. The optometry section of the MLC is responsible for providing single vision and multivision fabrication and repair of corrective eyewear for units on an area basis. Prescriptions and/or replacement requests which cannot be filled from on-hand stock or which exceed the MMB capability are passed to the MLC via the best communications available with delivery back to the requester.
- 6-13. The MLC provides limited single vision and multivision optical fabrication to EAB. All prescriptions requested from the MLC optical section that cannot be filled are passed to the full service optical fabrication laboratory in CONUS or outside the continental U.S. with delivery back to the requestor. See Chapter 2 for a full description of the support provided by the MLC.

OTHER OPTICAL SUPPORT

6-14. Deployed units and Army clinics also submit requests to the Naval Ophthalmic Support and Training Activity for assistance in providing optical fabrication support.

SECTION II — OPTICAL EQUIPMENT SETS

- 6-15. Currently, there are three optical equipment sets in the Army medical supply system. The sets are—
 - Unit assemblage 324A Optical Equipment Set, Field Combat (Line Item Number N23712). This optical equipment set is used by the Optometrist and the Eye Specialist to complete optical examinations. It replaces unit assemblages 1324 and 3324.
 - Unit assemblage 003A Optical Equipment Set, Optical Fabrication Unit Portable Field (Line Item Number N22073). This optical equipment set provides single vision capability. It replaces unit assemblage 3003.
 - Unit assemblage 006A Optical Equipment Set, Multivision Augmentation (Line Item Number P47705). This optical equipment set provides multivision optical support to the BCT and EAB units. The set contains the materiel required to provide for the casting of multivision and limited single vision lenses. This set augments the Optical Equipment Set, Optical Fabrication Unit Portable Field (Line Item Number N22073) standardizing optical fabrication across all roles of care. The new unit assemblage 006A is the replacement for unit assemblage 2006.
- 6-16. Current unit assemblage listings may be obtained from the USAMMA Web site, which can be accessed via the web address posted in the references section of this publication.



Chapter 7

Blood Support

The Army's blood support system is a part of the Armed Services Blood Program. Upon mobilization, donor centers and CONUS MTFs increase their blood drawing capabilities as directed by the Army Blood Program Officer. These facilities draw, process, and prepare blood and blood components in accordance with Food and Drug Administration guidelines and ARs for shipment to one of the Armed Services Whole Blood Processing Laboratories. This chapter describes blood support during contingency operations and the roles and responsibilities of organizations and individuals involved in this process.

SECTION I — THEATER BLOOD SUPPORT

- 7-1. Theater blood support consists of CONUS-based resupply of blood components. In a developing theater during the buildup period, immediate blood requirements may be provided by pre-positioned frozen blood components. The amount of liquid and frozen blood components is determined by the urgency of need and availability of resources in the area of operations. These stocks are designed to meet initial blood requirements until the logistical system can deliver blood components to the theater.
- 7-2. Blood and blood components are more than just another commodity of supply. Blood is live tissue that requires special handling. Air transportation is the primary mode of transportation used for blood distribution. Blood support during major combat operations is a dynamic and ever-evolving process, heavily influenced by—
 - Stringent storage and handling requirements.
 - Inventory management constraints.
 - Limited potency periods.
 - Innovative technology.
- 7-3. Successful blood support requires a highly organized and coordinated effort on the part of—
 - Medical detachment (blood support) personnel.
 - Medical logistics personnel.
 - Operations or plans personnel.
 - Blood bank personnel.
 - Laboratory personnel.
 - Transportation personnel.
 - Primary medical care providers.
- 7-4. Blood is managed as fractional portions called components and is used in rather specific quantities based on a patient's injury and condition. The blood products likely to be present in a theater include packed red blood cells, fresh frozen plasma, apheresis platelets, cryoprecipitate, and fresh whole blood (only if collected in theater). Blood services in a theater consist of a combination of missions. Of primary importance are the following:
 - Receiving blood components from CONUS.
 - Storing, issuing, and distributing blood components to MTFs.
 - Collecting and processing of blood on an emergency basis in the theater for fresh whole blood
 and apheresis platelets. Fresh whole blood is to be used only when other blood products are
 unable to be delivered at an acceptable rate to sustain the resuscitation of an actively bleeding

- patient, when specific stored components are not available, or when stored components are not adequately resuscitating a patient with an immediately life-threatening injury.
- Storing, processing, issuing, and distributing frozen blood components pre-positioned within designated theaters.
- Tracking and maintaining pertinent information for donor and/or unit testing, as well as followup requirements and patient transfusion information to include the use or transfusion of non-Food and Drug Administration compliant blood products.
- 7-5. Theater blood support is provided to U.S. military and, as directed, multinational military and local civilian MTFs. The Army, United States Navy, and USAF maintain individual blood programs to meet normal peacetime requirements. During contingency operations, a single blood management program is established under the combatant commander to provide blood support in theater. The program interfaces with the CONUS blood banking system and receives blood components directly from established DOD joint Service programs. The JBPO—
 - Serves as the single blood program manager in the theater.
 - Serves as the single interface with the Armed Services Blood Program Office in CONUS.
 - Coordinates, monitors, and ensures that component blood programs, blood product requirements, and capabilities within the joint operations area are managed and maintained according to Food and Drug Administration guidelines and requirements.
 - Forms, organizes, and operates Area Joint Blood Program Offices.
 - Briefs the combatant commander on the status of the blood supply, as required.
 - Prepares the concept of operations and the joint blood program portion of Annex Q to the combatant command plans and operations orders.
 - Advises the combatant command surgeon regarding management, policies, and procedures for handling blood and blood products.
 - Coordinates blood distribution for and between Service components within the combatant command.
 - Monitors combatant command blood status through the daily blood report.
 - Coordinates with theater MEDLOG representatives to establish procedures and publish instructions for disposal or destruction of excess and outdated blood products.
 - Maintains liaison with the blood support detachments, EBTCs, and the Area Joint Blood Program Office at any joint task force within the combatant commander's area of responsibility.
 - Plans the handling, storage, and distribution of blood components within the combatant commander's area of responsibility.
 - Consolidates and forwards requirements for resupply of blood products to the Armed Services Blood Program and the joint logistics staff section.
 - Assesses the need for the Area Joint Blood Program Office.
 - Assists the combatant command surgeon with the development and dissemination of theater blood management policies, procedures, and guidance.
 - Compiles area blood reports and forwards as appropriate.
- 7-6. As the combatant command's blood program office, the JBPO requests assistance from the Armed Services Blood Program Office when requirements exceed theater resources. The Armed Services Blood Program Office requests support from the Joint Services. Blood collected and processed by DOD blood donor centers in CONUS is shipped to one of two Armed Services Whole Blood Processing Laboratories. The Armed Services Whole Blood Processing Laboratory sends the blood products to an EBTC located at major airfields in the theater. Once received at the EBTC, blood components are under JBPO control.
- 7-7. The JBPO establishes Area Joint Blood Program Offices to—
 - Implement theater blood program policies.
 - Coordinate blood component use and inventory protocol on a geographical basis.
 - Direct the movement of blood components from the EBTC to the medical detachment (blood support). For information on blood support in joint operations see JP 4-02.

7-8. The medical detachment (blood support) is the direct issue source for MTFs, medical units, and other users such as the other Services' MTFs and nonmilitary facilities as directed by the JBPO and/or Area Joint Blood Program Office. The commander of the medical detachment (blood support) may serve as the Area Joint Blood Program Officer. Combinations of sources are required to satisfy the theater's initial blood needs. Limited in-theater collections (medical detachment [blood support] personnel and hospital-based collections), initial deployed supply, and pre-positioned frozen blood inventories are all necessary to meet requirements during the first few days of a developing theater. Full CONUS-based blood support capability is mature within ten days of notification. As the theater matures, the primary source of blood components comes directly from the CONUS base.

EMERGENCY BLOOD COLLECTIONS

- 7-9. With proper planning, the Armed Services Blood Program will normally be able to provide adequate inventories of blood products to meet mission requirements. However, emergency situations may arise where the amount of blood products needed to complete a transfusion exceeds the available supply. In such cases, in-theater collection and processing is required to provide apheresis platelets and fresh whole blood. In-theater collections are not conducted using the same rigorous screening and viral marker testing as CONUS-based donor centers. When conducting emergency collections, there are two general types of non-Food and Drug Administration compliant blood products that may be used including—
 - Blood products (usually whole blood or apheresis platelets) collected in theater and released for transfusion prior to the completion of required Food and Drug Administration testing.
 - Blood products, acquired from the host nation or other countries, which may not be subject to the same set of stringent standards as is required by the Food and Drug Administration.

DONOR SELECTION

7-10. Whenever emergency blood collections are required, every attempt will be made to ensure that donors are pre-screened with the required Food and Drug Administration-licensed blood donor testing not more than 90 days prior to donation. On the day of donation, donors should be tested using Armed Services Blood Program Office and/or JBPO-approved rapid infectious disease screening test kits. A set of specimen sample tubes must also be collected for retrospective Food and Drug Administration-required blood donor testing using licensed methodologies. Patients receiving blood products from in-theater collection must be followed for up to 1 year after transfusion for infectious diseases such as human immunodeficiency virus and Hepatitis B and C. Experience has shown in-theater collection to be the only choice for massively transfused patients when platelets and/or fresh frozen plasma are not available in sufficient quantities. Refer to TM 8-227-12/NAVMED P-6530/AFH 44-152_P for additional information on emergency blood collection including donor selection and apheresis collection.

Note. The employment of emergency transfusion protocols involving the use of non-Food and Drug Administration compliant blood products should be limited to instances where such products are not available or when these products cannot be delivered at an acceptable rate to sustain resuscitation of a bleeding patient. The decision to use fresh whole blood that has not been screened using rapid field tests and/or complete Food and Drug Administration-approved donor testing for infectious agents is a medical decision that must be made after thorough consideration of the risks and benefits.

MEDICAL IMPLICATIONS FOR RH NEGATIVE PATIENTS

7-11. Transfusing rhesus (Rh) positive red blood cells to Rh negative females at Role 2 facilities where blood grouping and typing capabilities are not available, can result in future complications if the patient is of child-bearing age and develops an anti-D antibody. If a future fetus of the patient is Rh positive, hemolytic disease of the newborn may result. Once a D antibody is formed, Rh immune globulin is no longer effective. Therefore, it is paramount to reduce the transfusion of Rh positive blood to Rh negative females of child-bearing age. The impact of sensitization in males is not as great. For this reason, priority for Rh negative blood is given to females of child-bearing age. In extreme cases where there may not be

enough Rh negative blood to meet all the needs of female patients, the use of Rh positive blood becomes an emergency requirement in saving a patient's life.

Note. Unless otherwise specified, 15 percent of blood requested should be Rh negative. The blood distribution system plans for 15 percent of all blood distributed in theater to be Rh negative. This is true for all MTFs in theater. The medical companies have very limited storage capacity. However, they are also required to ensure that approximately 15 percent of their total blood products are Rh negative.

ROLE 2 BLOOD SUPPORT

7-12. No blood or blood product support is provided at the Role 1 MTF (BAS). Varying levels of blood support exist at Role 2.

BRIGADE SUPPORT MEDICAL COMPANY

- 7-13. The BSMC generally does not have organic blood storage capability and only requires blood support when collocated with a forward surgical team. However, they can act as a relay for requests for blood support within their area of operations to the supporting medical detachment (blood support).
- 7-14. The brigade surgeon determines blood requirements for the brigade. Blood inventory and supply are functional responsibilities of the medical logistics officer in the support operations section of the brigade support battalion and the Area Joint Blood Program Office and/or JPBO. Only packed liquid red blood cells are expected to be available to the BCTs. The forward cell of the medical detachment (blood support) provides blood products to the medical companies and troops in the BCT. Most of the demands for emergency resupply come from the BSMCs when collocated with the forward surgical team.
- 7-15. The BSMC medical laboratory specialist (Military Occupational Specialty 68K) informs the medical logistics officer in the brigade surgeon section of the current availability of blood in the brigade. The laboratory has the capability to conduct limited emergency fresh whole blood collections. The brigade surgeon section prioritizes the movement of blood products, as required. Air assets should be considered along with ground assets for the transportation of blood. Requests for resupply of blood and blood products should be submitted to the supporting medical detachment (blood support) or other supporting blood supply unit. The Theater Blood Application can be used by the BSMC to manage blood inventory to include donations and transfusions.

FORWARD SURGICAL TEAM

7-16. Blood support at the forward surgical team consists of Type O liquid red blood cells (both Rh positive and negative blood types) and fresh frozen plasma (Types A and AB) in limited quantities as dictated by the specific contingency and expected casualty rate. The forward surgical team has a 20-unit storage capability for fresh frozen plasma and 50-unit blood storage capability for liquid red blood cells, which requires frequent resupply. Fresh whole blood may also be collected during emergency situations when the need for blood and blood products exceed the available supply. Blood inventory management and resupply operations are coordinated directly with the supporting medical company.

MEDICAL COMPANY (AREA SUPPORT)

7-17. The process for obtaining blood support in the medical company (area support) mirrors that of the BSMC. The medical laboratory specialist in the medical company (area support) informs the S-3 at the MMB of the current availability of blood in the unit. The medical laboratory specialists of each area support treatment squad are the technical advisors to the medical company commanders and treatment platoon leaders on all matters pertaining to the blood program. The laboratory has the capability to conduct limited emergency fresh whole blood collections. The S-3 prioritizes the movement of blood products, as required.

7-18. Blood support at the medical company (area support) consists of Type O liquid red blood cells (both Rh positive and negative blood types) and fresh frozen plasma (Types A and AB) in limited quantities as

dictated by the specific contingency and expected casualty rate. The forward surgical team has a 20-unit storage capability for fresh frozen plasma and 50-unit blood storage capability for liquid red blood cells, which requires frequent resupply. Fresh whole blood may also be collected during emergency situations when the need for blood and blood products exceed the available supply. During other operations, the division surgeon will establish inventory levels. Blood stockage levels will be adjusted as necessary to meet blood requirements.

ROLE 3 BLOOD SUPPORT

7-19. Varying levels of blood support also exist at Role 3. The primary medical units responsible for blood support at Role 3 are the CSH and the medical detachment (blood support).

COMBAT SUPPORT HOSPITAL

7-20. In the CSHs, blood support has evolved significantly with the fielding of the Deployable Medical System (DEPMEDS) blood laboratory and shelters, tactical expandable (also known as the International Organization for Standardization [ISO] shelters).

Note. The ISO shelters are hard-walled shelters used in the DEPMEDS-equipped CSHs.

7-21. The transfusion capability at the CSH has improved with the implementation of greater storage capacity, basic compatibility testing, multicomponent availability, and staffing with a laboratory officer and noncommissioned officers with specific blood bank training.

7-22. Combat support hospital blood inventory management and resupply operations are coordinated directly with the supporting medical detachment (blood support) or other supporting blood supply unit. The CSH has the storage capacity to maintain—

- 480 units of Groups A, B, and O liquid red blood cells of both Rh positive and negative blood types.
- 100 units of Groups A, B, O, and AB fresh frozen plasma of both Rh positive and negative blood types.
- Five units of Groups A, B, O, and AB platelets of both Rh positive and negative blood types.
- 50 units of Groups A, B, O, and AB cryoprecipitate (antihemophilic factor) of both Rh positive and negative blood types.

7-23. The CSH has the capability to conduct limited emergency fresh whole blood and apheresis platelet collections, but does not have the capability to perform infectious disease testing of the donor units (rapid screening methods for hepatitis, human immunodeficiency virus, and syphilis testing may be available). The decision to transfuse blood collected in a theater is governed by theater policy.

7-24. The relatively large quantity of blood maintained at the CSH requires the use of large-capacity, blood bank-type refrigerators equipped with audible and visual temperature alarm systems. Freezers for fresh frozen plasma storage are similarly monitored. See TM 4-02.70/NAVMED P-5120/AFMAN 41-111_IP for additional information on blood banking and transfusion services.

MEDICAL DETACHMENT (BLOOD SUPPORT)

7-25. The medical detachment (blood support) is an EAB level asset. Each team of the medical detachment (blood support) can operate as a single unit in up to three distinct geographic locations, which provide for a greater span of blood support. The headquarters element of the medical detachment (blood support) provides mission command for the unit. The collection team, storage and distribution team, and collection, manufacturing and distribution team provides two distinct elements that are capable of performing emergency collection of 3900 units of fresh whole blood and 900 units of apheresis platelets, as well as the receipt, storage, and distribution mission for the blood products collected. The distribution team, the third element of the detachment, has a 300 unit storage capacity and can deploy independently in support of specific missions that do not require emergency blood collection. These teams can also be

task-organized to support missions that do not need a complete detachment to perform blood distribution and collection activities.

7-26. Supported medical units communicate directly with the medical detachment (blood support) for blood resupply by submission of daily blood reports. See Chapter 2 of this manual for additional information on the mission and capabilities of the medical detachment (blood support). Table 7-1 below lists the approximate distribution of blood products at each role of care.

SECTION II — STORAGE AND DISTRIBUTION OF BLOOD PRODUCTS

7-27. Units of packed red blood cells are harvested from whole blood by centrifugation and removal of most of the plasma. Red blood cells can be stored in either the liquid or frozen state. The primary differences are the storage requirements, shelf life, and the additional processing required to freeze and thaw frozen cells. Plasma removed during red blood cell processing is promptly frozen and termed fresh frozen plasma. Additionally, apheresis platelets (cell fragments involved in forming a plug at the site of bleeding) can be harvested using an automated apheresis collection device that harvests only the platelet product and returns the remaining blood products back to the donor.

STORAGE OF BLOOD PRODUCTS

7-28. Blood storage requirements are extremely important and present a real challenge to field storage facilities. The conditions required for storing various components have very little tolerance; entire inventories of blood can be lost if conditions are not maintained correctly. Refer to Table 7-1 below for the storage temperatures and shelf life of theater blood components.

7-29. Conditions for transporting blood components are essentially the same as for prolonged storage with the exception of—

- Packed red blood cells. When shipping packed red blood cells, a temperature range of 1° Celsius (C) to 10°C is acceptable.
- Fresh frozen plasma. Once thawed, fresh frozen plasma must be transfused within 24 hours. When shipping fresh frozen plasma, it must be kept in a frozen state using dry ice or a system that can sustain a temperature not greater than -18°C.
- Platelets. During shipment, platelets must remain as close to 20°C to 24°C as possible. The maximum time that platelets can be stored without agitation is 24 hours.

Table 7-1. Storage requirements for theater blood component

| Blood component | Storage temperature | Storage shelf life |
|--------------------------|-------------------------|--------------------|
| Red blood cells (Liquid) | 1°C to 6°C | 35 or 42 Days |
| Red blood cells (Frozen) | Not greater than - 65°C | 10 Years |
| Fresh frozen plasma | Not greater than -18°C | 12 Months |
| Platelets | 20°C to 24°C | 5 Days |
| Fresh whole blood | 1°C to 6°C | 24 Hours |
| LECEND. | | |

LEGEND:

C Celsius

° degree

Note. Fresh whole blood may also be stored at room temperature (20°C to 24°C) for eight hours post collection.

7-30. Specially built containers and packaging methods are prescribed in TM 8-227-11/NAVMED P-5123/AFI 44-118. Fresh whole blood should not be used after 24 hours post collection and is normally destroyed at this point, as the coagulation factor half-life would have expired.

DISTRIBUTION OF BLOOD PRODUCTS

7-31. Blood will be shipped by air when circumstances permit. During shipment, blood will be continuously maintained at temperatures indicated in paragraph 7-29 and Table 7-1 above. Blood still on hand 5 days before the expiration date will be kept properly refrigerated and returned to the medical detachment (blood support).

7-32. Shipment of blood from the sustainment area to the supported units is either coordinated by the MMB's operations section with the EAB movement control center or accomplished by backhaul on medical vehicles (air and ground). Air ambulances from the general support aviation battalion can accomplish emergency resupply.

SECTION III — BLOOD REPORTING SYSTEM

7-33. The blood reporting system has been standardized to enhance blood requirements projection, blood requests, blood inventory reports, and to provide information on the overall blood element operations of all Services, to include joint Services, in the theater. The Armed Services Blood Program Office developed the contingency blood reports and use of the U.S. Joint Message Text Format. The two standard joint message text format reports used to report blood program operations are the—

- Blood report. The standardized report used in the Armed Services Blood Program to report blood inventories, request blood, and project requirements.
- Blood shipment report. A standardized report used in the Armed Services Blood Program to report blood shipments. This report should be used by any MTF to notify the receiving facility that blood has been shipped.

7-34. Medical units will consolidate and submit requirements and reports according to timelines provided by the JBPO and/or medical detachment (blood support). For additional information on the blood reporting system, see JP 4-02 and TM 8-227-12/NAVMED P-6530/AFH 44-152_IP.

7-35. The Theater Blood Application can be used by medical units to collect, track, disposition, and report blood products in the deployed environment. The application allows deployed medical units managing blood assets to document inventory, collections and testing, and final disposition of blood and blood products. Use of the Theater Blood Application by medical units provides the medical detachment (blood support) and other blood supply unit's visibility of a facility's blood inventory via the web. The Theater Blood Application can also generate required blood reports for distribution. Figure 7-1 on page 7-8 depicts a sample message blood report.

| BLOOD REPORT | | | | |
|---|----------|--|--|--|
| FM: CDR CHARLIE MED 34BSB | | | | |
| TO: MEDICAL DETACHMENT (BLOOD SUPPORT) | | | | |
| INFO: DIVISION SURGEON | | | | |
| CLAS UNCLAS | | | | |
| OPER/VALIANT EAGLE | | | | |
| MSGID/BLDREP/CMED34BSB/1012221// | | | | |
| REF/A/CDRUSACOM/090300ZJAN15/-/TOTAL// | | | | |
| ASOFDTG/100001ZJAN15// | (Line 1) | | | |
| REPUNIT/CMED34BSB/G/BZ44327432// | (Line 2) | | | |
| BLDINVT/20JS// | (Line 3) | | | |
| BLDREQ/30JSW// | (Line 4) | | | |
| BLDEXP/2JS// | (Line 5) | | | |
| BLDEST/30JS// | (Line 6) | | | |
| RMKS/RECEIVED 30JS/TRANSFUSED 30JS/SHIPPED O/ | (Line 7) | | | |
| REFRIGERATOR NEEDS REPAIR// | | | | |
| DECLAS | (Line 8) | | | |
| | | | | |

*Report Explanation:

- Line 1, ASOFDTG: Day-time group of the BLDREP.
- 2) Line 2, REPUNIT: Name, designator code, and activity brevity code of reporting unit.
- (3) Line 3, BLDINVT: Used to report the total number of each blood product on hand at the end of the reporting period. Total the blood products at the end of the reporting period.
- (4) Line 4, BLDREQ: Used to report the total number of each blood product requested and time frame needed.
- (5) Line 5, BLDEXP: Used to report the estimate of the number of each blood product which will expire within the next seven days.
- (6) Line 6, BLDEST: Used to report the estimate of the total number of each blood product required for resupply within the next 7 days.
- (7) Line 7, CLOSETEXT OR RMKS: Used to provide additional amplifying information if required.
- (8) Line 8, DECLAS: Mandatory if the message is classified.

| LEGEND | | | |
|---------|---------------------------|--------|----------------------------|
| BLDEST | BLOOD ESTIMATE | INFO | INFORMATION |
| BLDEXP | BLOOD EXPIRATION | JAN | JANUARY |
| BLDINVT | BLOOD INVENTORY | MED | MEDICAL |
| BLDREP | BLOOD REPORT | MSGID | MESSAGE IDENTIFICATION |
| BLDREQ | BLOOD REQUIREMENT | OPER | OPERATION |
| BSB | BRIGADE SUPPORT BATTALION | REP | REPORTING |
| CDR | COMMANDER | REF | REFERENCE |
| CLAS | CLASSIFICATION | RMKS | REMARKS |
| CMED | CHARLIE MEDICAL | UNCLAS | UNCLASSIFIED |
| DECLAS | DECLASSIFICATION | USACOM | UNITED STATES ARMY COMMAND |
| DTG | DATE-TIME GROUP | Z | ZULU |
| FM | FROM | | |
| | | | |

Figure 7-1. Sample message blood report

Chapter 8

Health Facility Planning and Management

During major combat operations, health facility planning and management in a developing theater (during the buildup period) is extremely limited. However, during contingency operations, opportunities to provide health facility assessments and technical evaluations may present themselves. Many of these assessments may involve interactions with the host-nation ministry of health, medical facility administrators, and members of the medical staff. As combat operations transition and the theater medical footprint begins to stabilize, the need for deliberate planning and management of health facilities increases. Planning and management of expedient and/or deliberately planned infrastructure requires close coordination with the component assistant chief of staff, information operations staff, Logistics Civil Augmentation Program contractor, and contingency operating base command group, along with supporting engineering brigade facility engineering teams and detachments. For the purposes of this chapter, the planning and management of facilities is limited to buildings of opportunity and construction of expeditionary structures and management of infrastructure necessary to support sustainment of the deployed medical force. The use of DEPMEDS as a type of facility is discussed in this chapter, but the management of the system, general and special purpose tentage, and generators will not be discussed.

SECTION I — EXPEDITIONARY HEALTH FACILITY MANAGEMENT

- 8-1. Managing health facility infrastructure is a complex task requiring interaction between multiple engineering disciplines and trades (such as carpentry, masonry, electricians, plumbing, and mechanical). Sustainment of health facilities is a complex process (at times), heavily influenced by the—
 - Role of health care to be provided.
 - Length of sustainment period anticipated.
 - Statutory and regulatory restrictions on construction funding.
 - Operational footprint (mobile versus static) and availability of evacuation assets.
 - Operational theater maturity level and distance to MTFs outside of the theater.
 - Level of technology (medical equipment) deployed into theater.
 - Construction, sustainment, and engineering capabilities present in theater.
- 8-2. Health facility management consists of planning, organizing, staffing, directing, and controlling all facility functions. The United States Army Health Facility Planning Agency is responsible to the Commander, USAMEDCOM for the centralized management of the Army Health Facility Life Cycle Management Program. The United States Army Health Facility Planning Agency plans, projects, and executes innovative facility capital investment solutions to enhance the delivery of health care and medical research to support Service members and the military Family across the range of military operations.

- 8-3. The provision of facility support requires organized and coordinated efforts between—
 - Medical logistics personnel.
 - Operations or plans personnel.
 - Clinical personnel.
 - Engineering personnel.
 - Acquisition personnel.
 - Funding or resource management personnel.
- 8-4. The United States Army Health Facility Planning Agency is based in CONUS and supports health facility planning requirements in the theater. The agency provides the health facilities planning link from the strategic to the tactical level and provides reachback technical assistance to the forward deployed health facility planners located in the MEDCOM (DS), MEDBDE (SPT), ASCC surgeon's office, or joint force surgeon's office. This reachback technical assistance includes—
 - Planning and design.
 - Design concept of operations development.
 - Space programming.
 - Equipment planning.
 - Medical systems planning.
 - Initial outfitting and transition planning.
 - Architectural and engineering planning.
 - Assistance in preparation (provide input and review) of the Department of Defense (DD) Form 1391 (FY___ Military Construction Project Data).
 - Cost estimating.
 - Health information system (facility related) planning.

SECTION II — ROLES AND RESPONSIBILITIES

8-5. The theater-level mission is likely to remain highly fluid as the area of operations develops and This can be based on military mission requirements, U.S. and international political developments, existing and evolving health care infrastructure in the host nation or occupied country, and the variability of local threat assessments. As such, the facility planning and management support required will remain fluid as the area of operations develops. The requirements at this level will include reachback support, but often requires assigned staff with specific health facility planner (Area of Concentration 70K9I) training. This need is based on theater/area of operations command-level requests for this specialized skill set, the ability for the health facility planner to have full situational understanding, and the operational pace. The health facility planner will likely serve as assigned staff in the joint task force surgeon's office. A primary function of this position is not only to understand the medical operational needs and the associated health facility requirements, but also to coordinate in a collaborative fashion with theater-level engineering sections, base sustainment operations, reachback agency support, contracting, subordinate command-level facility management personnel, funding streams, and in some cases host-nation entities. Often this health facility planner is tasked to provide direct health care facility advice to the command surgeon and provide support in command briefings. Due to the breadth of knowledge required for the health facility planner, reachback support is required to sustain the health facility planner's mission execution. It is important to determine up front the abilities of the assigned health facility planner and structure the reachback support in a symbiotic fashion. The level of support and reachback needs will change with each assigned health facility planner, based on their varied skills and experience. The health facility planner relies heavily on a successful and coordinated working relationship with the EAB engineering staff. The health facility planner provides direct advice and input to the EAB engineering staff with regard to all health facility planning above the brigade and/or BAS level to ensure appropriate alignment with the theater or area of operations medical concept of operations. There is one health facility planner in the MEDCOM (DS) and one in the MEDBDE (SPT). During small scale contingencies the MEDCOM (DS) and MEDBDE (SPT) may not be deployed. In these cases, the joint task force surgeon or

medical task force commander would request reachback support or that a health facility planner be assigned on staff.

BRIGADE SUPPORT MEDICAL COMPANY

8-6. The BSMC mission is likely to remain highly mobile and in many instances geographically dispersed in order to support multiple brigade contingency operating sites. The BSMC commander coordinates for real estate through the S-3 of the brigade support battalion and requests facility engineering support exceeding local engineer support capabilities through the brigade support battalion S-4 to the supporting engineering unit or element. Work orders exceeding local engineering support capabilities should be submitted under the supervision of company leadership for day-to-day management.

MEDICAL COMPANY (AREA SUPPORT)

8-7. The process for obtaining facility engineering support in the medical company (area support) mirrors that of the BSMC. The medical company (area support) commander informs the S-3 at the MMB of the need for real estate and further requests facility engineering support exceeding local engineering support capabilities through the S-4 at the MMB. Work orders exceeding local engineering support capabilities should be submitted under the supervision of company leadership for day-to-day management.

COMBAT SUPPORT HOSPITAL

8-8. In the CSH, facility management requirements expand exponentially as do the organic resources to support those requirements. Continuous use and incorporation of initial entry and expeditionary DEPMEDS equipment (including tactical expandable shelters and tents) into facility planning and management solutions should be carefully monitored, particularly when the operations extend into multiple months and years.

Note. The ISO shelters (hard-walled shelters) are used in the DEPMEDS-equipped CSH.

8-9. The facility management capability at the CSH consists of the utilities operation and maintenance warrant officer (Area of Concentration 210A) who generally serves as the overall maintenance officer (nonmedical). This individual provides technical expertise to operate, maintain, and repair the Army's utility systems. Units should plan for long-term sustainment of power generation equipment and may consider shifting this requirement (tactical or commercial generators) to the Logistics Civil Augmentation Program or other contract support. Additional capabilities available at the CSH include utilities equipment repairers, motor pool, and laundry and bath. Other personnel may be further assigned or tasked to perform repairs or facility management functions.

MEDICAL BRIGADE

8-10. There is one health facility planner on the MEDBDE (SPT) staff. The MEDBDE (SPT) health facility planner is responsible for—

- Monitoring facility engineering support to subordinate medical units.
- Assisting medical units in identifying and developing project requirements.
- Establishing brigade facility management and construction policies in accordance with theater policies.
- Coordinating through the MEDCOM (DS) for reachback technical support to CONUS-based organizations.
- Assisting the next higher headquarters (MEDCOM [DS]), joint task force, or ASCC surgeon) in
 planning for and managing health facility planning and construction requirements external to the
 MEDBDE (SPT).
- Coordinating with the theater operations staff for facility engineering support, base master planning, and extended or long-term sustainability of MTFs and health care infrastructure.

MEDICAL COMMAND (DEPLOYMENT SUPPORT)

- 8-11. The MEDCOM (DS) has one health services materiel officer/health facility planner (Area of Concentration 70K9I) on staff. The health facility planner in the MEDCOM (DS) serves as the principle advisor to the chief, logistics for health care facility planning in theater. The health facility planning responsibilities at this level include—
 - Coordinating and integrating medical facility requirements into the Joint Engineering Planning and Execution System.
 - Generating time-phased facility requirements based on the operational plan.
 - Providing facility feasibility assessments and recommendations on facilities of opportunity.
 - Providing medically specific infrastructure requirements to assist in mission analysis and course of action development.
 - Providing real-time monitoring/tracking plan for project execution.
 - Disposing of medical facilities upon completion of the contingency operation or transfer to local national entities.
 - Integrating health care facility delivery across multiple branches of the DOD or multinational forces.

NONMEDICAL FACILITY ENGINEERING SUPPORT

- 8-12. Depending on the size of the joint task force Army component and sustainment base or contingency operating base, location or site can vary widely. In general, contingency operating bases will have an identified base commander who coordinates requests for real estate, facilities, land use, or facility engineering support. Some level of engineering support is available either directly or on an area support basis to assist the base mayor's cell in managing facility infrastructure. This support may include a facility engineering detachment or team that performs functions similar to a department of public works in garrison environment outside the continental U.S. or in CONUS. Additional engineering units (Army Engineer Brigade, Naval Construction Force [Seabees], Air Force Facility Engineers/Red Horse Squadrons), Logistics Civil Augmentation Program construction services, and other contract engineering support may also be available depending on the size of the contingency operating base and maturity of the theater.
- 8-13. Contracting support can vary greatly depending on the size and maturity of the theater. In larger theaters, United States Army Corps of Engineers region and district structures may be established or contracting and management of military construction-sized and appropriated projects may be handled by established districts outside the continental U.S. (such as the United States Army Corps of Engineers Transatlantic Division or Europe District). Coordination and planning must take place to establish a solution that best supports the required project time, quality, and cost constraints. Keeping the contracting authority and execution as close to the theater (within theater where applicable) is recommended, provided the capacity and required technical skill sets are available. Sequencing procurement and execution handoff of contractual authority may also be a part of the planning process (such as request for proposal development and contracting outside the theater, then moving contract authority within theater for design and/or construction execution).
- 8-14. Initial outfitting, also referred to as fixtures, furniture and equipment, and transitional type expenses associated with larger medical facility projects are often funded differently in contingency operations than typical medical military construction projects. These requirements must be considered and coordinated to ensure an operational facility when completed. Other important considerations include communications equipment, which may include both unclassified and classified (secret and top secret) requirements that may be higher than most CONUS-based MTFs.

SECTION III — HEALTH FACILITY PLANNING CONSIDERATIONS DURING CONTINGENCY OPERATIONS

8-15. The planning of health facilities in a contingency operation is similar to noncontingency environments. However, there are some unique factors influencing the planning process which need to be

considered for each contingency facility. Army Techniques Publication 3-34.40/MCWP 3-17.7 and JP 3-34 provide construction standards and engineering planning guidance in contingency operations which are fundamental and applicable to health care facility planning. This section focuses on health facility planning and execution in a contingency operation above the BAS.

8-16. It is important to balance facility durability and maintainability (quality), construction time (schedule), and cost with mission and the evolutionary nature of contingency operations. It is unwise to make significant facility investments in an austere theater or too early in the development of an operation. This may hinder the medical commander's ability to adapt the medical facilities to meet the needs of an operation once the environment becomes more stable (logistically, militarily, and politically).

8-17. Facility requirements for contingency operations can vary widely based on the operational pace, type of unit supported, evolving nature of the theater or area of operations, local infrastructure, threat level, and local abilities to maintain a given facility type.

DESIGN CONSIDERATIONS

8-18. Military designers must be knowledgeable of local construction standards and materials commonly used in a particular region. Designs must include the use of local materials or provide flexibility within the design for use of substitute materials. Many designs may not be practical because of logistical considerations. For example, although the Theater Construction Management System's designs are adjusted for various climates (desert, tropic, and arctic), they may be difficult to construct because required construction materials are unavailable in the region. Suitable materials could be brought into the region from CONUS; however, the level or length of the U.S. commitment may not support this action. The engineers have developed theater-specific design books that consider regional requirements and standards such as the Redbook which is the theater construction standard for the European Command and the Sand Book which is the United States Central Command standard. These references provide very specific recommended minimum planning factors for construction of facilities within those regions.

8-19. Designers must also be aware of contingency construction standards that apply to the theater. Joint Publication 3-34 provides joint contingency construction standards to be used as initial planning guidance for engineers within the theater. Figure 8-1 on page 8-6 illustrates the joint beddown and base development standards in accordance with JP 3-34 and highlights the need for early master planning efforts to help facilitate the transition to more permanent facilities as an operation develops.

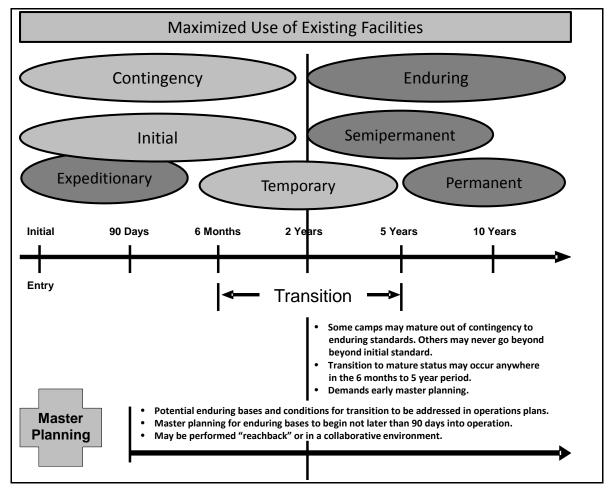


Figure 8-1. Force beddown and base development

8-20. Department of Defense construction agents, such as the United States Army Corps of Engineers, Naval Facilities Engineering Command, or other DOD approved activities, are the principle organizations used to design, award, and manage construction contracts in support of base camp development. The joint construction standards for base camp development center on the anticipated lifespan of a facility and are broken down into two phases, the contingency phase and the enduring phase. The construction standards used during those phases are as follows:

- Contingency phase (zero to two years)—
 - Expeditionary standard construction is established on an expedient basis with no external engineer support. This type of construction uses unit organic equipment and systems and/or host-nation resources. Organic construction is intended for use in support of missions with a typical duration of 1 to 90 days. Organic construction is provided for initial force presence and maneuver activities until force flow supports the arrival of engineer resources.
 - Initial standard construction is characterized by austere facilities requiring minimal engineer effort. This type of construction is intended for immediate operational use by units upon arrival in theater for a limited time (up to six months). Initial standard construction may also require replacement by more substantial or durable facilities during the course of operations.
 - Temporary standard construction is characterized by austere facilities requiring additional engineer effort above that required for initial standard facilities. It is intended to increase efficiency of operations for use up to 24 months. Temporary standard construction provides for sustained operations and may replace initial standard in some cases where mission requirements dictate. Temporary standard construction can be used during initial operations if directed by the combatant commander.

- Enduring phase (typically two years and beyond) are—
 - Semipermanent construction which is designed and constructed with finishes, materials, and systems selected for moderate energy efficiency, maintenance, and life cycle cost. Semipermanent construction has a life expectancy of more than two, but less than ten years. The types of structures used will depend on the duration. If directed by the combatant commander, it may be used initially after carefully considering the political situation, cost, quality of life, and other criteria.
 - Permanent construction is designed and constructed with finishes, materials, and systems selected for high energy efficiency, and low maintenance and life cycle costs. Permanent standard construction has a life expectancy of more than ten years. Construction standards should also consider the final disposition and use of facilities, and any long-term goals for these facilities to support host-nation reconstruction. The combatant commander must specifically approve permanent construction.
- 8-21. Contingency construction standards provide a framework to ensure efficient application of limited engineering assets and responsively support the commander's intent and execution of the theater concept of operations. Timelines provide a framework to plan for the transition of standards, but the actual trigger for transition will be based on conditions. The Joint Facilities Utilization Board should also be used to periodically revalidate construction standards based on current operational issues and provide recommendations to the joint force commander on potential changes. Ultimately, the combatant commander determines the exact construction type based on the location, materials available, and other planning factors (such as U.S. policy and host-nation limitations on permanency). See JP 3-34 for additional information.
- 8-22. The MEDCOM (DS) health facility planner, in coordination with theater engineering planners, must recommend the most feasible solutions to each requirement. Construction standards are guidelines and the health facility planner must consider a number of other factors during planning as well.

MEDICAL CONSIDERATIONS

- 8-23. Service standard designs should be considered for use in support of joint operations and are starting points for Service component general engineer planners. The designs may be modified based on operational, environmental, and unusual site conditions or unique customer requirements. Examples of Service standard designs can be found in the Army's Theater Construction Management System and the Navy's Advanced Base Functional Component System. Army Techniques Publication 3-34.40/MCWP 3-17.7 outlines Army contingency construction considerations and other general engineering planning guidance.
- 8-24. The longer the anticipated duration of the conflict, the greater the need to support medical treatment through fixed facilities. While medical facilities always entail a considerable amount of environmental considerations in both temporary and fixed facilities, the importance of these considerations will tend to increase over time and should be considered and applied as early in the process as possible to minimize their effects over time. These facilities must have the capacity and degree of sophistication to treat injuries and other health problems sustained during the contingency. Design for a CBRN environment may also be appropriate and must promote rapid, high-quality treatment within the theater to expedite the Soldiers' return to duty.
- 8-25. As a theater or contingency matures, the need to establish or improve physical plants and ensure an environment of care that is more supportive of clinical and operational requirements increases. Facilities should provide the right medical capability at the appropriate location. Continuous improvements in quality and safety result in cleaner and more durable facilities with reliable power, water, lighting, climate control, public address, and patient care systems. Units will naturally transition from expeditionary and initial facilities (tentage, extendable or modular, personnel tents) to temporary or semipermanent (preengineered or site built) facilities. This will occur deliberately or spontaneously based on availability of buildings of opportunity. The underlying driver is an inherent need to upgrade facilities to support ever increasing equipment modernization, greater electrical loads, improved utilities reliability, and greater safety of patients and staff (such as electrical safety, life safety, and other code requirements).

8-26. The level of medical support and type of facilities will vary, but should be taken into consideration when planning base camps. The specifics range from aid stations through clinics (dental and medical) to CSHs. The actual requirements will directly relate to the mission, medical and dental support requirements, and the expectations of the command. The following considerations approach health facility planning as a fluid and responsive asset to support a progressively developing theater.

INITIAL OR EXPEDITIONARY FACILITY SOLUTIONS

8-27. Expeditionary facility solutions include the medical platoon's and company's organic equipment (extendable, modular, and personnel tentage and expandable ISO containers) that make up DEPMEDS. These solutions are often focused on minimal site prep requirements (typically stable foundations, walkways, access roads, parking and minimalist utility infrastructure) which are quickly assembled on-site.

8-28. Due to the unstable and fluid environment within the area of responsibility, expeditionary facility projects should include as much independent utility support as possible. This may include potable water storage containers, continuous electrical generator capacity for 100 percent of the facility loads, and effluent collection tanks. Expeditionary facilities, like the Deployable Rapid Assembly Shelter or DEPMEDS, generally are not hardened facilities. If necessary, nonhardened facilities are protected by other measures (such as T-wall and overhead catchment systems) based on the threat. Mechanical systems in expeditionary solutions are minimal in nature both in construction and maintainability on the ground. Where specialized mechanical systems are needed to support the health care mission, it is generally more oriented towards point of use approaches from room to room as opposed to buildingwide system solutions. Expect these facilities to be replaced (in whole or in part) over the course of extended contingency operations that remain fluid or unstable. In addition, these facilities do not typically have centralized fire suppression systems; instead designs are geared toward maximizing egress and localized fire suppression (A, B, and/or C type fire extinguishers).

8-29. The DEPMEDS facility solutions are organic to military medical units and are used across the DOD. These facility solutions are mobile/deployable, modular in nature (thus scalable), capable of being relocated, existing (no immediate procurement action required), coordinated, and outfitted with the associated medical equipment. However, these facility solutions also have limitations in durability, survivability, and are generally intended to operate on dual voltage/frequency systems (110/220 volt and 50/60 hertz). Furthermore, commercial-off-the-shelf equipment procured to augment critical medical capabilities is often limited to 110 volt/60 hertz. Supporting two parallel electrical systems can be more costly than other types of expeditionary or even enduring solutions. In the absence of DEPMEDS hospitals, existing MTFs or facilities that are easily adaptable for use as MTFs should be considered.

TEMPORARY FACILITIES

8-30. Temporary facility solutions range from Southeast Asia huts and prefabricated trailers on the lower end to higher end pre-engineered modular buildings or steel frame construction purposely designed and built for medical use. Both of these temporary solutions provide a higher level of protection from the environment beyond the various types of organic tentage (such as extendable, modular, and personnel tentage) in the DEPMEDS solution. These solutions may incorporate elements of the DEPMEDS configuration such as radiology ISO containers or trailers and are typically designed around a modular platform.

8-31. Facility solutions beyond DEPMEDS typically include more site and infrastructure development, a level of contracting support, design, construction, and initial outfitting and transitional/standup costs. These solutions may also require increasing levels of maintenance support beyond those skills and assets inherent in military units. While solutions beyond DEPMEDS are scalable, the complexity of these solutions becomes more difficult as the utilities required become more complex and decisions are made concerning construction materials to be used. Adaptability to changing mission requirements also becomes more complicated with temporary construction types as the ability to disassemble and transport the facility decreases significantly. These considerations must be taken into account to ensure the users (medical), resource managers, and engineering support staffs appropriately balance cost, schedule, and quality.

- 8-32. While the life span and quality of each individual solution may vary, the general relationship to life span is valuable and relevant for quick alignment of mission with durability and quality expectations. Often in a contingency environment, the rapid evolution of operations supports trading shorter durability for cost savings and allowing more frequent adaptation of facility solutions to changing mission requirements.
- 8-33. It should be noted that certain aspects of temporary versus semipermanent standards for health care facilities may overlap, making it desirable (for quality of care, patient and staff safety, environmental or even economic concerns) to apply key characteristics of semipermanent standards but still be within the parameters of temporary standards. Such items may include, but are not limited to: interior finishes; fire suppression systems; piped medical gas systems (particularly oxygen); compressed air; and suction (mainly for support of enduring base camps). This must be done deliberately and the benefits (quality of care and patient and staff safety) should be the primary concern.
- 8-34. There may also be instances where organic equipment is retained and incorporated into temporary solutions, even though it would normally be classified as initial standard construction. One example would be the reuse of DEPMEDS ISO shelters such as those used to support radiology requirements. The benefit of such use is the ability to rapidly replace or relocate an item if necessary for maintenance or modernization. This is particularly important if the equipment represents a large capital equipment expense or if local construction methods do not provide an adequate environment for key capabilities.

SEMIPERMANENT AND PERMANENT FACILITIES

- 8-35. During the life cycle of a base camp or forward operating site, authorized facilities may progress from initial to semipermanent or may be immediately established at any level depending on operational requirements. Development of semipermanent and permanent standard facilities would include Southeast Asia huts, local site built construction, and prefabricated buildings according to their life expectancy.
- 8-36. Permanent facilities are designed and constructed with finishes, materials, and systems selected for energy efficiency, low maintenance, and low life cycle costs with a life expectancy greater than ten years. Permanent facility solutions are traditional buildings and are recommended with a commitment by the U.S. government to maintain a defined presence indefinitely in a particular location. A permanent solution will likely be chosen when the medical mission is determined to be stable and predictable in nature. Permanent solutions are expected to meet the same design and construction requirements prescribed for permanent CONUS health care facilities. Therefore, local building techniques, availability of materials, and maintenance skills available are considered when permanent facilities are established. Due to the decreased flexibility of permanent facilities, complexity of construction and maintenance, and significant increase in costs, permanent facilities are often not recommended for contingency operations nor do they effectively support the pace of the medical mission during most contingency operations. Figure 8-2 on page 8-10 lists examples of initial, temporary, and semipermanent health care facilities.

| TYPE OF INITIAL (EXPEDITIONARY) | | TEMPORARY | SEMIPERMANENT |
|---|---|---|---|
| HOSPITAL | Deployable Medical System Medical Materiel Sets; unit tactical generators; organic environmental control units; water points and bladders; fuel bladders | buildings of opportunity; refrigerated containers; tactical generators: high and low voltage distribution; automatic transfer and backup uninterruptible power source on critical systems; field expedient med gas distribution; potable water production | Site built construction; metal pre- fabricated buildings (2 to 10 years); Masonry and prefabricated buildings (10 or more years) or buildings of opportunity; Nontactical or commercial power, high or low voltage and automatic transfer/backup uninterruptible power source; pressurized potable water distribution systems; limited piped med gas (oxygen, air, vacuum) distribution system (at enduring locations only) |
| CLINIC | Unit tents; unit tactical generators | Backup generator with manual transfer switch | Site built construction; relocateable structures; modular building systems or buildings of opportunity |
| CLINIC (with FORWARD SURGICAL) | Unit tents; unit tactical generators | Backup generator with transfer switch; Southeast Asia huts; modular building systems; pre-engineered buildings | Same as clinic; backup generators with automatic transfer switch; limited piped gas if at enduring location and workload merits |
| AID STATION | Unit tents; unit tactical generators | Southeast Asia huts; modular building systems; pre-engineered buildings | Site built construction; relocateable structures; modular building systems or buildings of opportunity |
| DENTAL CLINIC | Unit tents; unit tactical generators Southeast Asia huts; modular building systems; pre-engineered buildings | | Site built construction, relocateable structures and modular building systems or buildings of opportunity |
| VETERINARY CLINIC | Unit tents; unit tactical generators | Southeast Asia huts; modular building systems; pre-engineered buildings | Site built construction; relocateable structures; modular building systems or buildings of opportunity |
| MEDICAL FORWARD DISTRIBUTION WAREHOUSE | Tents; organic environmental control units | Backup generator; portable refrigeration with freezer units for medical | Backup generator; portable refrigeration with freezer units for medical |
| LOGISTICS environmental control refr | | Backup generator; portable refrigeration with freezer units for medical | Backup generator; portable refrigeration with freezer units for medical |

Figure 8-2. Examples of initial, temporary, and semipermanent health care facilities

HEALTH FACILITY PLANNING

8-37. The health facility planning process provides the framework in which MTF projects are developed from planning and programming through design. The steps used in the development of general engineering projects are defined in FM 3-34.40/MCWP 3-17.7, JP 3-34, and theater specific standards. The medical planning team, which consists of clinical, operational, logistics, and facilities staff with reachback support

from the United States Army Health Facility Planning Agency, produces various products that can be submitted to initiate the health facility planning process. The following is a list of those unique health care related products that can be submitted for further development, decision, and/or execution:

- Design concept of operations.
- Space program.
- Equipment program (room by room).
- Concept or functional design (ten percent).
- Initial outfitting budget estimate.
- Medical specific room guide plates.

8-38. Once developed, these documents would be submitted to the theater engineering staff, construction agent (United States Army Corps of Engineers or Naval Facilities Engineering Command), clinical staff, contracting, and medical logisticians.

DESIGN CONCEPT OF OPERATIONS

8-39. The design concept of operations is a tool that health facility planners use to aid in the investigation and understanding of key capabilities, scope of services, and interactions within an MTF. The concept of operations is a foundational document that helps to direct the design development of a health facility project. Additionally, it gives design consultants a conceptual view of the future facility and scope of services to be provided in the new or remodeled space. The design concept of operations is used to describe how an area operates and should allow the reader to *walk* through the new area and *see* the operation in action. It should describe the integration of each of the following functional elements, all in support of the services offered:

- Mission.
- Population served.
- Scope of services.
- Manpower.
- Equipment.
- Supply.
- Traffic patterns.
- Procedural policies.
- Adjacencies.

8-40. In effect, the concept of operations helps to simplify the complexity that surrounds day-to-day operations of a hospital organization. It also provides substance and unity in the planning between multidisciplinary functional areas to avoid assumptions on the part of medical planners, clinicians, engineers, and logisticians.

8-41. The space program or program for design is a room by room, department by department listing of space requirements for the entire facility. The program for design is tied directly to and derived from the concept of operations. The program for design translates the clinical and operational capabilities, personnel, and other functional requirements outlined in the concept of operations into space requirements for the architect to develop a workable solution or design. The program for design is based on DOD space planning criteria. The DOD Space and Equipment Planning System is an automated space and equipment planning tool for health care projects. The Space and Equipment Planning System uses a series of mathematical and logical formulas to create a baseline space program based on answers to questions entered into the system. The Space and Equipment Planning System can also produce an equipment plan/cost estimate for a health care project driven by space planning criteria and equipment guides.

8-42. The review, refinement, and approval of the space program is an iterative process between the health facility planner, clinical personnel, engineering staff, and reachback support from United States Army Health Facility Planning Agency. Primary criteria used to assess and refine the space plan include scope (relevance and quantity) and cost (within project funding constraints). Guide plates are detailed

- architectural layouts that include equipment, furnishings, and utility placement. Guide plates are available for many functional room layouts normally found in an MTF setting.
- 8-43. As previously mentioned, the health facility planning process is an iterative process. The process above describes the practical application of documenting the operational concept and scope of services for MTFs providing medical support during contingency operations. Due to the rapid changes that take place in health care in general, (especially in a large, rapidly maturing theater of operations) a clear operational concept and accurate scope of services is essential for hospital commanders and medical planners.
- 8-44. A highly structured, yet flexible collaborative approach to health facility requirements development begins with the design concept of operations. The concept of operations has been used successfully time and again to translate clinical capabilities into building systems and the facility space required to support them. Initial, up-front investment of time in the requirements development process and subsequent reviews and revisions result in a definitive description of the clinical and operational requirements. Those requirements in turn become the authoritative source for space, building systems, equipment, functional arrangements, and financial justification.

SYNCHRONIZING MISSION DEMANDS AND FACILITY CONSIDERATIONS

- 8-45. As a theater develops through contingency operations, the facility posture at a given location will likely mature over time. The general evolution of the health care facility will likely progress from initial to temporary, semipermanent, and finally to a permanent solution. Additionally, situations within the theater or at a given location may accelerate the progression from DEPMEDS to more enduring facility solutions (such as buildings of opportunity suited for rapid and minimal conversion to support the medical mission or increased operational area security requirements).
- 8-46. Balancing durability, construction time, and cost are all elements of every health facility project. The pace of many contingency operations require rapid placement of medical support facilities to meet immediate health care missions, which more enduring facility construction solutions would fail to meet in a timely fashion. Until an operational area stabilizes, the facility requirements may be highly evolutionary. Employing expensive or nonflexible health care facilities too early, may adversely affect the ability to adapt or replace existing facilities to meet current medical missions. Complex building solutions may also be impractical to implement or functionally sustain until the area of operations stabilizes and matures.
- 8-47. When planning a facility, it is critical to assess the timeframe in which a facility is needed to help make informed command decisions about which type of facility is appropriate to meet mission requirements and timelines. The construction time required for each facility type should include the time needed for project definition and design. Generally, the more permanent and complex the facility solution is correlates to increased construction time needed until the solution is available for use.
- 8-48. Cost can vary greatly from facility solution to facility solution and is highly influenced by the stability of the area of operations, availability of materials, skilled craftsmen, and complexity of the facility. In a contingency operation, with local support not familiar with complex infrastructure systems, the only viable solution for maintenance may possibly be to contract this support from sources outside the theater. A high threat level can also complicate the process.
- 8-49. Other considerations include medical equipment selection and the ability to maintain it. Medical contingency operations often require dual power and voltage support, which can increase the complexity and expense of more enduring medical facilities. See Appendix C of this FM as well as FM 3-34.40/MCWP 3-17.7 and JP 3-34 for additional construction standard and facility planning considerations.

Appendix A

Patient Movement Items

Patient movement items are particular medical equipment and durable items required to conduct patient movement. For the purposes of this appendix, PMIs are the more expensive or low-density equipment requiring accountability. The less expensive items such as litters, blankets, and litter straps will not be discussed as PMIs.

SECTION I — PATIENT MOVEMENT ITEMS SYSTEM OVERVIEW

- A-1. The purpose of the PMI system is to support patient movement through the pre-positioning, exchange, maintenance, and recycle or replacement of PMIs to ensure that special medical equipment is at the proper location and available for use when needed. The objective of the PMI system is to sustain patient movement and ensure continuity of care without diminishing the capability of forward deployed medical units. The PMI system—
 - Supports in-transit patients.
 - Exchanges in-kind PMIs without degrading medical capabilities.
 - Provides prompt recycling of PMIs.
 - Provides seamless in-transit visibility of the equipment management process from initial movement to the patient's final destination.
- A-2. Patient movement items (such as ventilators, patient monitors, and pulse oximeters) accompany a patient throughout the evacuation process, from the originating MTF to the destination MTF. Once patient care is transferred from the patient movement system to the receiving MTF, PMI equipment must be returned immediately for inspection and redistribution.

RESPONSIBILITIES

- A-3. The DODI 6000.11 implements policy governing the management and use of DOD conveyances for patient movement. The DODI establishes policy, defines roles, and assigns responsibilities for the implementation of the DOD global patient movement mission. The policy also designates the United States Transportation Command as the DOD's single manager for patient movement and PMIs.
- A-4. The United States Transportation Command, in coordination with the Secretaries of the Military Departments and geographic combatant commanders, is responsible for the development and publication of patient movement and PMI procedures. The Commander, United States Transportation Command is also responsible for development and publication of standardized procedures for all automated information systems supporting patient movement and PMIs. The Secretaries of the Military Departments are responsible for equipping deployable field assemblages with sufficient PMIs to support patient movement requirements in accordance with joint policy and theater guidance regarding MEDLOG support in a contingency.
- A-5. The Defense Health Agency Medical Logistics Division, formerly the Defense Medical Materiel Program Office, has assumed responsibility for all tasks previously performed by that office. As a result, the Defense Health Agency's Medical Logistics Division is now responsible for coordinating with and providing support to the United States Transportation Command for the acquisition and life cycle management of selected PMI equipment and materiel. Once selected, medical equipment items designated for use as PMIs must be tested and certified for use on the appropriate patient evacuation platform (such as fixed- or rotary-wing). A joint certification label is required to designate airworthiness certification for all PMI equipment determined to be suitable for use and must be affixed to each piece of equipment. Refer to DODI 6430.02 for additional information.

A-6. The geographic combatant commanders are responsible for assisting the United States Transportation Command with intratheater medical regulating and management of the theater patient movement requirements centers in their respective areas of responsibility. As the theater matures, the combatant commander may establish a SIMLM. If established, the Services coordinate (as necessary) with the SIMLM to obtain support in the areas of requisitioning, storage, maintenance, and distribution of PMIs. Forward distribution and exchange of PMIs is a SIMLM or Service responsibility. The plan for a PMI exchange system and the return of PMIs to the originating MTF should be addressed in theater operations plans. See JP 4-02 for a complete description of the PMI system.

ARMY PATIENT MOVEMENT ITEMS

- A-7. The PMI system for Army medical units or elements begins with the request for evacuation from the originating MTF, which may include the forward surgical team, BSMC or medical troop, medical company (area support), or a higher role medical unit, depending on the force structure. Patient movement items required to accompany the patient are identified on the evacuation request. The requesting MTF is responsible for properly preparing the patient for evacuation. The attending physicians must ensure that a one to three day supply of medications and rations (except in the combat zone) accompany the patients.
- A-8. Movement of the patient activates two systems—the automated monitoring and tracking system, which follows the PMIs throughout the evacuation process and maintains accountability of the items; and the MEDLOG system, which moves PMIs from the supporting MEDLOG element to the original/requesting unit. Return of PMIs to the MEDLOG system comes from two sources—MTFs when no longer needed by the patient and from the aeromedical evacuation system when PMIs are returned after use with patients being evacuated to the CONUS-sustaining base or other safe haven.
- A-9. Responsibility for oversight of PMIs within medical units operating Roles 2 and 3 MTFs rests with the medical unit commanders. Accountability for PMIs is automated using the PMITS application and employs consolidated electronic records for maintenance and accountability, as well as tagging and sensing monitors for visibility. As patients move through the evacuation system, PMI accountability and replenishment information activates the issue of replacement items to treatment units to ensure that basic levels of PMIs are maintained. It is essential for the Army PMI system to interface with the supporting USAF system. The plan for a PMI exchange system and the return of PMIs to the originating unit will be addressed in the combatant command's operations plan.

SECTION II — EXECUTION

A-10. This section describes the responsibility for management and maintenance of patient movement items at each role of care.

PATIENT MOVEMENT ITEMS AT ROLE 2

A-11. The medical company (area support), BSMC, or forward surgical team at Role 2 is responsible for preparing a patient for evacuation. Certain PMIs may be used to support, monitor, and sustain the patient during evacuation. During initial entry into an austere theater, the PMI process may require a *one-for-one* replacement (to include consumables) at the battle hand-off point from the forward surgical team to the CSH or to the USAF aeromedical evacuation system or from the USAF back to the Army PMI system. The BSMC commander has overall responsibility for maintaining total asset visibility of the PMIs in his area of operations. The PMITS application enables that visibility. A push-package of PMIs (based on mission, enemy, terrain and weather, troops and support available-time available and civil considerations) supports the initial PMI requirements of the BSMC and forward surgical team. The BSMC commander issues PMIs to the forward surgical team as required.

PATIENT MOVEMENT ITEMS AT ROLE 3

A-12. The CSH is responsible for receiving patients from lower roles of care and/or from within the area of operations. Normally, personnel from the CSH remove PMIs from the patient to conduct further treatment. Patient movement items are normally removed by the EMT section. However, various treatment protocols

could dictate that PMIs accompany the patient to the operating room preparation area. Therefore, it is imperative that CSH personnel maintain total asset visibility of PMI (via an equipment tracking system) within the hospital. The CSH has further responsibility for collecting and consolidating PMIs, as well as cleaning, and conducting operator PMCS on the equipment. Equipment considered fully mission capable is placed on a medical evacuation platform and returned to the losing unit as directed by the PMI manager of the supporting MEDLOG element. Patient movement items remaining at the CSH are moved to the supporting MLC by the logistical element's transportation assets, generally via backhaul from a Class VIII resupply delivery.

MEDICAL LOGISTICS COMPANY

A-13. In accordance with AR 40-61, PMIs are fielded to and considered components of the authorized stockage lists for the MLCs and/or logistics support company and are not to be placed on the unit property book. The AR also tasks the MLC and the logistics support company as the units responsible for managing the PMI program for Army medical units, to include providing medical equipment maintenance and asset distribution for supported units within their area of operations.

MEDICAL LOGISTICS MANAGEMENT CENTER

A-14. The two MLMC forward teams (early entry) are capable of deploying as early entry elements to provide theater-level centralized management of critical Class VIII materiel, PMIs, medical equipment maintenance, and optical fabrication. The two forward teams (follow-on) augment the early entry teams as follow-on elements to provide additional centralized management of critical Class VIII materiel, PMIs, medical equipment maintenance, and optical fabrication support. These teams are not meant to deploy independently of the forward teams (early entry).



Appendix B

Automatic Identification Technology

Automatic identification technology is a suite of technologies that enable the automatic capture of data to enhance the ability to identify, track, document, and control assets for deploying and redeploying forces. This appendix describes the contributions that automatic identification technology can make to distribution management operations and the different types of automatic identification technology equipment, hardware, and technology available to the force.

SECTION I — AUTOMATIC IDENTIFICATION TECHNOLOGY DATA STORAGE DEVICES

- B-1. Radio frequency identification (RFID) technology is an assemblage of commercial-off-the-shelf equipment built around identification tags that have embedded data of container contents, shipment information, and vehicle identification. The RFID tags are mounted on containers, equipment, or vehicles at the source (such as a shipping depot or supply point for supply items) and can be read by fixed or mobile RFID tag readers/interrogators located at various en route locations, ports of embarkation, ports of debarkation, installations, and at the final destination. Data input for the RFID tags is generated at the source supply activity. For sustainment shipments flowing from EAB, supply item data is entered through a fixed burn station into the RFID tag. For remote EAB supply locations, supply item data may be entered using a portable handheld interrogator.
- B-2. Automatic identification technology captures identification information for individual items of materiel and materiel consolidated for shipment to ensure that in-transit visibility can be established. Information is captured electronically and passed to distribution-related AISs, where it is incorporated with other information relevant to that item or shipment. Automatic identification technology includes a variety of *read and write* data storage technologies used to process asset identification information. These technologies include bar codes, magnetic strips, integrated circuit or *smart* cards; optical memory cards, RFID tags, and magnetic storage media. These identification tools are used for marking or *tagging* individual items, multipacks, unit equipment, air pallets, or containers. Automatic identification technology offers a wide range of data storage capacities, from a few characters to thousands of bytes. The information on each automatic identification technology device can extend from something as small as a single part number up to a self-contained database.
- B-3. As automatic identification technology devices are interrogated, their information is fed electronically into AISs to update status records. The primary function of automatic identification technology is the storage of information in a device that accepts storage in a coded form that can be retrieved by being read, either by scanning or interrogation. The device is hand carried by personnel or attached in some way to equipment and containers. The following lists four basic components of automatic identification technology:
 - Automatic identification data storage device (such as bar code label, optical memory card, smart card, RFID tag, or contact memory button).
 - Automatic identification technology hardware used to write information onto the data storage devices and later, read the data from the devices.
 - Automatic information systems that can receive and use automatic identification technology data.
 - Reliable communications infrastructure linking the automatic identification technology hardware to the AISs and further connection to global in-transit and total asset visibility systems.

B-4. Automatic identification technology enablers allow the Transportation Coordinator's Automated Information for Movement System II users to create and attach RFID tags on cargo and equipment. When the tags are interrogated, the tag data is sent to appropriate CONUS or regional in-transit visibility servers, which in turn sends the interrogated tag data to the Global Transportation Network. The Global Transportation Network updates the Global Command and Control System. The automatic identification technology, in conjunction with the Transportation Coordinator's Automated Information for Movement System II, will ultimately provide the theater with a joint transportation system capability supporting the force with visibility of transportation assets in the distribution pipeline. A goal of logistics transformation is to have the nodes of the DOD global distribution system to read and write to or from automatic identification technology devices.

SECTION II — BAR CODED DATA

B-5. The DOD and the Army use two types of bar codes; linear and two-dimensional. All logistics nodes are used to read and write both types. Each node of the DOD transportation system, including commercial vendors, reads and writes linear and two-dimensional bar coded shipping labels that contain both transportation and supply information. Reader equipment scans the bar code, decodes it, and transfers the data to supporting AIS.

LINEAR BAR CODE

B-6. The linear bar code provides item identification and document control information for individual items and shipments. Linear bar codes have limited storage capacity, normally consisting of approximately 20 characters. The commercial automatic identification manufacturer's bar code-1 (Code 39), the standard for linear bar codes, is used throughout the DOD. Linear bar codes are used to represent essential data elements (for example a national stock number, document number, or transportation control number). Figure B-1 below shows an example of a linear bar code.



Figure B-1. Linear bar code example

TWO-DIMENSIONAL BAR CODE

B-7. A two-dimensional bar code has a much greater data storage capacity than a linear bar code. It is currently capable of holding 1,850 characters. A two-dimensional bar code can sustain considerable damage and still be read because of the redundancy of data within the bar code. The DOD standard two-dimensional bar code is the commercial standard Portable Data File 417. The two-dimensional symbology provides comprehensive data on documents, individual items, or shipments, and consolidation data on multipacks and air pallets. Military shipping labels incorporate two-dimensional bar code fields, as well as linear bar codes. Using bar code redundancy on military shipping labels ensures against the loss of shipping data. Figure B-2 on page B-3 shows an example of a two-dimensional bar code matrix.



Figure B-2. Two-dimensional bar code example

B-8. Optical memory cards use compact disk technology. Data is etched into the card with a high-intensity laser creating a series of pits in the card. A low-power light beam is used to read the pits and collect the data. Data is written to an optical memory card in sequential order. As changes occur, all the shipment data is rewritten on the card (data on the card cannot be overwritten). The card can be reused until all available memory space is filled. The optical memory card has a very large data capacity (2.4 megabytes), and DOD accepts the Drexler European License Association standard format. Optical memory cards are relatively inexpensive, reusable, and unaffected by climatic changes. They are best used to carry large amounts of shipment data to facilitate receipt processing at final destination. Optical memory cards are normally used for sustainment cargo that is being containerized. Army supply practices strive to create single consignee packs that can be throughput to the end user's location.

B-9. Optical memory cards can also be used to support container movement in a unit movement operation. Optical memory cards can be used to account for detailed container and pallet content. The unit movement officer uses the Transportation Coordinator's Automated Information for Movement System II handheld reader to scan bar codes as items are packed into the container. Once the container is loaded, the unit movement officer coordinates to produce optical memory cards for containers, using the supporting Transportation Coordinator's Automated Information for Movement System II. (This scenario would require advance coordination with intermediate and destination nodes, as use of optical memory cards for unit packed containers is not a normal business practice.)

SMART CARDS

B-10. A smart card (also known as the common access card) is a plastic card similar in shape to a credit card. Unlike a credit card, the smart card contains an integrated circuit chip with an 8-bit embedded microprocessor and 1 to 8 kilobyte memory capacities. Smart cards may also contain one or more other methods (such as magnetic strip, bar code, digitized photo, printed information) for storing information related to the cardholder. Newer cards will have 16- and 32-bit microprocessors and a data storage capacity between 16 and 32 kilobytes. In addition to memory capacity, smart cards can contain security measures such as personal identification numbers, passwords, encrypted data, photos, or thumb print technology.

SECTION II — RADIO FREQUENCY IDENTIFICATION TECHNOLOGY

B-11. Radio frequency identification technology is used to provide automated data capture of movements at transportation nodes. Radio frequency identification technology also provides commanders container or pallet content visibility and can be used to locate tagged items in congested ports, container yards, or staging areas.

TECHNOLOGY ENABLERS

B-12. Radio frequency identification technology tags contain a microchip, a long-life battery, and an RFID transceiver. The microchip contains unique tag identification information and can be loaded with data to identify the items traveling with the tag. Frequency identification technology write stations are used at the point of origin to write supply and transportation data to the tag and to report the same information to a central database. As the tag passes an interrogator during movement, the tag responds by sending data to the interrogator. The interrogator then passes this information and a date-time stamp to a supporting AIS or a regional in-transit visibility server. The interrogator can also be set to activate a tag beeper for all the tags

within its range or activate a specific tag number. Using this option, operators can find specific tags and associated equipment.

TYPES OF RADIO FREQUENCY IDENTIFICATION TAGS

B-13. The Army is currently using two RFID tags, the Seal Tag II and the Tag 410. Eventually the Army intends to transition to a single tag. Both tags hold data in the same format and transmit the data on the same frequency. Each tag has a unique tag number, has a *beeper* option, and can store up to 128 kilobytes of data. The tags have an omnidirectional, unobstructed range of approximately 300 feet. The battery life of the tag is approximately nine years, based on two collections per day. Battery life is an important consideration and should be checked closely when source data is written to the tag. The organization writing the tag should ensure that low batteries are replaced. Additionally, the theater in-transit visibility plan will identify nodes in the force projection process where the battery life should be checked and low batteries replaced. Battery life can be checked by a fixed or handheld interrogator or by viewing the regional in-transit visibility server low battery pages.

CONTACT MEMORY BUTTONS

B-14. Contact memory buttons are an automatic identification technology tool used by the Department of the Navy. The Naval Supply Systems Command attaches the buttons to pieces of equipment to provide ready access to a component's maintenance history. The Army Logistics Integration Agency and the Army maintenance community are currently exploring the use of contact memory buttons for similar purposes on Army equipment. A contact memory button is a very small, fast, read-write data storage device impervious to the elements in most harsh operating environments. It has a data storage capacity of between 128 and 32,000 bytes. A button does not require a battery to retain its memory and has a life expectancy of 100 years or one million read-write cycles. Contact memory buttons cannot be read remotely. Data is read from the button by touching a probe to the outside of the container. Contact memory buttons can be read-only, write-once-read-many-times, or read/write to allow updates.

AUTOMATIC IDENTIFICATION TECHNOLOGY HARDWARE

B-15. Automatic identification technology hardware consists of tools used by operators to write information to automatic identification technology data storage devices and to interrogate and read the data stored on the data storage device. Some of the tools currently used by the Army are discussed in the paragraphs below.

RADIO FREQUENCY IDENTIFICATION WRITE STATION

B-16. The RFID write station is a hardware interface unit called a tag docking station, which is connected to AIS. The tag docking station is used to write data to RFID tags, one tag at a time. The tags are inserted into the docking station and data is transferred.

Note. It is normally not recommended to change information on a tag using a handheld interrogator unless it is certain that the changed data will be uploaded to the regional in-transit visibility server. If the data is not uploaded, viewers of the tag data on the regional in-transit visibility server (via the World Wide Web) will see different tag information than what is actually on the tag.

SECTION III — RADIO FREQUENCY RELAY

B-17. The RF relay functions as a wireless modem and is used as a substitute for cable connections between fixed interrogators and the host computer. The RF relay has a 7,500-foot range (unobstructed). Radio frequency relays can be used in pairs to form a repeater for data transmission over longer distances or around obstructions.

HANDHELD INTERROGATORS, SCANNERS, AND DATA COLLECTION DEVICES

B-18. Handheld interrogators and scanners operate much like fixed interrogators but are not directly connected to the host computer. Data from handheld interrogators are downloaded to the host computer using a cable or infrared port. The handheld interrogators can be used to locate a specific tag, view the tag details, or to locate a specific item contained within one of several tagged containers or pallets. The tag data on handheld interrogators can change (update) without using a tag docking station, and can write data to a new RFID tag (see note above). Handheld interrogators are also used to scan bar codes if that feature is available.

B-19. Handheld data collection devices are used by personnel to scan and record bar coded data. Some of the devices are directly connected to the computer (tethered), while others are portable. The portable devices store information for a connected download to the computer system or they may have the ability to transmit data directly to the computer using a wireless local area network.

BAR CODE LABEL PRINTER

B-20. Bar code readability is affected by print quality, smears, poor contrast, improper label stock, incorrect ink, and poor printer adjustment. Operational tests have found these factors can cause as much as 50 percent of the bar code labels printed at some locations to be unreadable. Proper printer maintenance and care is important for producing readable bar codes.

ENABLING DISTRIBUTION MANAGEMENT WITH RADIO FREQUENCY IDENTIFICATION TECHNOLOGY

B-21. Radio frequency identification technology equipment supports the function of total asset visibility for the movement of materiel. Radio frequency identification's main purpose is to provide stand-off in-the-box visibility of container contents, as well as in-transit visibility of the container and its contents. The RF tags and interrogators (handheld or fixed) are used to identify cargo and monitor movement from the point of origin to the port of embarkation to the port of debarkation to theater nodes. A fixed RFID interrogator transmits queries to and receives data from all active RFID tags in its area. The maximum unobstructed radius is approximately 300 feet. At the depot or distribution terminal, air pallet and container content data is written to the RF tag by RF or docking station and the tag is attached to the container/pallet. Omnidirectional interrogators, installed at key transportation and supply nodes, read the tagged containers as they arrive and depart those nodes. The interrogators pass data to a regional server in support of the Army total asset visibility program. Fixed RFID interrogators are positioned permanently in warehouses, central receiving points, and selected points within transportation networks. The interrogator operates by sending a wake-up signal to the RFID tag, which then transmits data back to the interrogator on a different frequency. In some configurations, such as a Gate Reader, a motion sensor is included to activate the interrogator for data collection of tags on vehicles approaching the sensor. The RF relay functions as a wireless modem and is used as a substitute for cable connections between fixed interrogators and the host computer.

B-22. Automatic identification technology devices enhance the visibility and control of assets during the logistical process from the identification of cargo to receipt by the user. Some automatic identification technology devices use RF as the method of communicating data to AISs. Automatic identification technology is used virtually anywhere the requirement exists to capture data automatically that otherwise would require manual labor to capture and turn it into usable information. Automatic identification technology includes a wide range of capabilities, which may or may not require an operator as part of the data entry or retrieval. Automatic identification means that a single event can result in the capture of a stream of data. It eliminates many of the manual techniques used in all retail and wholesale logistics operations. Automatic identification technology supports all operations of SSAs, ports, terminals, warehouses, installations, and depots.

B-23. A satellite-tracking system provides the ability to track the exact location of sustainment vehicles and convoys. The latitude and longitude locations of trucks, trains, and other transportation assets equipped with a transceiver are transmitted periodically via a satellite to a ground station. Some systems also

provide two-way communications between a vehicle operator and a ground station for safety, security, and rerouting. Satellite tracking uses a cellular or satellite-based transmitter or transceiver unit to communicate positional information, encoded and text messages, and (in the case of sensitive DOD ordnance movements in the CONUS) emergency messages from in-transit conveyances to the ground station. Transceiver-based technologies also permit communications from a ground station to the in-transit conveyance. A user can compose, transmit, and receive messages with small handheld devices or with units integrated with computers.

B-24. At the SSA, automatic identification technology is integrated into operations to provide a paperless, automated capability for data identification, collection, entry, processing, storage, and retrieval. Automatic identification technology is used at one or more locations within the overall distribution system. At the EAB SSA, the predominant technology will be RFID, which is omnidirectional; read/write RF for in-transit visibility; and inside the box visibility. Tactical units place demands for supplies and equipment on a designated SSA responsible for providing field support on a unit or area basis. The operational efficiency of field and/or sustainment unit support may be enhanced by the suite of automatic identification technology (RFID, Automated Manifest System readers/writers, and interrogators, handheld and fixed). This information, along with other pertinent data unique to the requisitions, is to be uploaded into Global Combat Support System-Army, which manages the commodity, including the Logistics Intelligence File and the Global Transportation Network. All of these systems will be alerted to shipment actions as they occur or are about to occur. This process represents the upward flow of information. The downward flow of information is initiated at the wholesale supply level. Commodities are prepared for shipment based on requisitions that reach wholesale level. This is after requisitions have not been satisfied at intermediate levels or replenishment requisitions have not been filled. Automatic identification technology enables distribution management by coupling a network of laser cards and RF tags or interrogators with the Movement Tracking System and the Standard Army Retail Supply System. The laser cards note the individual contents of a multipack and tie the multipack to a tracking control number. The tracking control number is subsequently assigned to a specific conveyance (pallet, flatrack, or container). The RF tag, which carries transportation control and movement documents and individual DD Form 1348-6 (DOD Single Line Item Requisition System Document [Manual—Long Form]) record information, is then attached to the conveyance. The RF interrogators are placed at appropriate distribution nodes, railheads, bridges, and trailer transfer points. They detect the arrival and/or departure of the conveyance and pass this information to a web-based in-transit visibility server and Global Combat Support System-Army. The Movement Tracking System is being enhanced with direct tag reading and tag reporting capability that will also feed information to the in-transit visibility server.

B-25. Key activities for automatic identification technology application include critical item identification for arriving supplies at the SSA, researching national stock numbers, and finding sources of supply. In addition, automatic identification technology assists in arrival status activities, stockage (sorting, binning, and accounting), updating the Standard Army Retail Supply System, and shipping activities. Other Standard Army Retail Supply System functions supported by automatic identification technology are requisition routes, lateral searches, visibility of excess position, summary record asset visibility of sub-Standard Army Retail Supply System activities, and selective item visibility.

B-26. The Automated Manifest System is a multimodular cargo inventory control and release notification system for sea, air, and rail carriers. The Automated Manifest System speeds the flow of cargo and entry processing and provides participants with electronic authorization to move cargo prior to arrival. The Automated Manifest System facilitates the intermodal movement and delivery of cargo by rail and trucks through the in-bound system.

B-27. The Automated Manifest System reduces reliance on paper documents and speeds the processing of manifest and waybill data. As a result, cargo remains on the dock for less time, participants realize faster tracking, and logisticians provide better service to the deployed force. Although not as visible at the EAB level, the Automated Manifest System provides the input for the Transportation Coordinator's Automated Information for Movement System II and Movement Tracking System to pick-up once the cargo is incountry.

Appendix C

Medical Logistics Planning

The intense planning and management of all aspects of MEDLOG support within a developing or mature theater is essential. Continuous logistics planning is a must, given the probable change in requirements as the theater matures. This appendix is intended to provide general planning considerations for MEDLOG support, a sample MEDLOG operations plan, and the latest Class VIII planning factors that can be used to assist in the planning process. See ATP 4-02.55 for a detailed description of AHS support planning requirements.

SECTION I — ARMY HEALTH SYSTEM SUPPORT PLANNING

- C-1. The provision of AHS support is a complex process that requires continuous coordination, synchronization, and comprehensive planning. Army Health System planners must be involved early-on in the planning process and be prepared to support numerous types of operations simultaneously. By taking part in the development of the operations plan, the medical planner can determine the capabilities needed and plan for assets required to support the mission. To ensure effective and efficient support, medical plans must adhere to the principles of AHS support, the commander's planning guidance, medical intelligence related to the operational area, and other planning considerations.
- C-2. Development of the AHS support estimate and concept of operations are important steps in the planning process. The medical planner must also conduct planning to address unforeseen contingencies and ensure coordination of efforts among the Services to maximize the use of available resources. Normally, in joint operations each Service operates its own health care delivery system. However, medical support (such as medical facilities, medical equipment and supplies, and personnel) may be provided on a joint basis.
- C-3. The theater evacuation policy, health threat, troop strength or size of the population supported, the type, intensity, and duration of the operation are some of the factors that must be considered when determining medical requirements to support the operations plan. The medical staff's running estimates and medical workload (patient estimates) are also developed during planning. The patient estimate is derived from the casualty estimate which is prepared and disseminated by the assistant chief of staff, personnel (human resources staff officer). In-depth analysis is critical at every level of the operation to ensure the flexibility to quickly react to changes in the mission and continue to provide the required support. The commander's assessment, disease and nonbattle injury rates, and running estimates are the primary means of assessing an operation to ensure that the concept of operations, mission, and commander's intent are met. These factors and continuous analysis help to make certain that once developed, the plan includes the right number and combination of medical assets to support the operation.
- C-4. The key to mission success is anticipation of requirements and the synchronization of AHS support to the tactical commander's mission. Availability of information and open lines of communication are also vital. Common data and information must be shared among the various elements of command from the tactical to the strategic level. The commanders and medical planners must maintain situational understanding, in-transit visibility and tracking of patients and equipment, and a common operational picture of the area of operations. This information is obtained through various plans, reports, and information systems available to commanders and planners to facilitate the decision making process. See ATP 4-02.55 for additional information on the medical planning process.

SECTION II — MEDICAL LOGISTICS PLANNING

C-5. Resupply to the theater is preplanned and defined in appropriate logistical plans. Due to the technical nature of the MEDLOG system, coupled with the likelihood of a rapidly changing operating environment, planners must build flexibility into the plans.

MEDICAL LOGISTICS SUPPORT PLANNING

- C-6. The MEDLOG planner must have a comprehensive understanding of operational and tactical plans as well as a thorough knowledge of the entire logistics system (including those organizations and activities responsible for specific aspects of support).
- C-7. Planning for mobilization of MEDLOG units to arrive early in the time-phased force and deployment data flow and the buildup of MEDLOG support will need to be synchronized to support the flow of the medical force. To enhance Class VIII support, the MEDLOG planner will—
 - Identify the specified and implied time-phased material requirements necessary to support the operations plan.
 - Identify the capabilities, limitations, and requirements of aerial and sea ports of debarkation.
 - Ensure the distribution of medical supplies and equipment.
 - Identify pre-positioned stocks in theater.
 - Identify host-nation support, if available.
 - Identify joint and multinational logistics support requirements to include the distribution plan.
- C-8. Class VIII supply support (including blood management), optical fabrication, medical maintenance, medical contracting, and health facilities planning are all key aspects of the MEDLOG support plan, which is a part of the AHS support plan. When approved, the MEDLOG plan becomes a directive to medical logisticians in subordinate commands and serves as a guide for working out the details involved in the provision of Class VIII supply support for the command.

MEDICAL LOGISTICS CONSIDERATIONS

- C-9. The following is a list of considerations for use in developing the MEDLOG plan (this list is provided as a guide only and is not intended to be all inclusive):
 - Are procedures unique to medical supply described?
 - Are resupply procedures established?
 - Does the command address authorized stockage list objectives?
 - Are special medical supply requirements identified based on the mission and the area of operations?
 - Are special storage requirements satisfied?
 - Is the transportation support system described?
 - Have the proper quantities of special containers and materiel packaging supplies and equipment needed to support distribution been identified and planned?
 - Are special handling procedures for cold-chain managed material properly described in the appropriate annexes so they can be followed by transportation personnel tasked to support Class VIII distribution?
 - Are procedures in place to ensure proper handling of controlled and regulated Class VIII materiel items (including maintaining the proper chain-of-custody)?
 - Are medical oxygen requirements identified and resupply procedures described?
 - How are blood management functions conducted?
 - Which unit is responsible for optical fabrication support?
 - Are procedures identified for handling medical materiel and equipment captured from the enemy?
 - What are the support requirements for collection and disposal of medical waste?

- Do disposal procedures meet applicable environmental standards?
- Have sources of funding been identified?
- Is local purchase an option?
- Have individuals been trained and appointed for local procurement?
- Has the command established local purchase procedures?
- Are there adequate provisions in the plan for contracting support?
- Have an adequate number of contracting officers with the proper warrants been provided?
- Are procedures in place for managing the reverse flow (retrograde operations) of medical equipment and materiel?

MEDICAL MAINTENANCE CONSIDERATIONS

C-10. The following are a list of considerations for use in developing the medical maintenance support portion of the MEDLOG plan (this list is not intended to be all inclusive, but to serve as a guide only):

- Are special medical maintenance requirements addressed?
- Are mandatory parts lists or bench stock requirements specified?
- Have power requirements been identified (voltage, phase, frequency, and anticipated load)?
- Does the plan cover test, measurement, and diagnostic equipment repair and calibration?
- Does the plan address how field and sustainment maintenance is to be provided?
- Are procedures for medical maintenance regenerations enablers or reparable items covered (including evacuation of reparable items)?
- Are replacement items addressed?
- Are new equipment capability request procedures addressed?
- Is contractor support integrated into the maintenance plan?

HEALTH FACILITIES PLANNING CONSIDERATIONS

C-11. Health facility planning, design, and management decisions must be executable and sustainable. The construction, maintenance, and operations capabilities within the theater of operations must also be adequate to ensure that the facility will meet the needs of the health care mission. Planning, design, and management considerations include—

- Site selection—
 - Does the site drain water adequately?
 - Is there appropriate access to the building or campus site for helicopters, ground ambulances, ambulance buses, and pedestrians?
- Function and flow—
 - Does the layout of the facility support the natural flow of patients through the facility?
 - Are ancillary services adjacent to the departments they support?
 - Is a proper sterilization path provided to prevent the crossing of clean and dirty functions?
- Architectural elements—
 - Are the interior finishes durable and cleanable?
 - Are seamless finishes provided in critical care areas?
 - Are the doors in the emergency, radiology, surgical, and intensive care areas of sufficient durability to withstand extreme use and regular contact with beds and equipment?
- Electrical systems—
 - Are 110 voltage alternating current and/or 220 voltage alternating current power required for the facility? The equipment plan needs to be coordinated with the electrical plan to ensure adequate power is provided in order to avoid overloaded circuits.
 - What is the source of primary power?
 - Is back-up power required?
 - How is back-up power being provided?

- Mechanical systems—
 - How are temperature and humidity controls being provided within the building?
 - How are positive and negative pressures being provided?
 - How is filtration being provided in critical care areas?
 - How will waste anesthesia gas be removed from the operating rooms?
 - How is suction being provided?
- Plumbing systems—
 - How is steam being provided for sterilization?
 - Do surgical and hand washing sinks have goose neck faucets, touchless controls, and/or paddle handles to facilitate appropriate hand washing?
- Medical gas systems—
 - How will medical gases be provided within the facility?
 - If hard piped gases are desired, is a certified installer available within the theater of operations?
- Medical equipment—
 - What DEPMEDS equipment is going to be used?
 - What non-DEPMEDS equipment is going to be used? Coordinate the mechanical, electrical, and plumbing requirements for each piece of equipment with the building's design.
 - Which organization is responsible for coordinating and funding the initial outfitting and transition of equipment?
- Facility management—
 - Has a command facility management policy been established?
 - Has a unit-level point of contact been identified for facilities work order submissions?
 - Are work orders reconciled (at least monthly) for follow-up or close out?
 - What organization is responsible for performing operations and maintenance for the facility?
 - What organization is responsible for funding regular operations and maintenance?

MEDICAL LOGISTICS SUPPORT PLAN

C-12. Figure C-1 on page C-5 is an example that can be used when developing the MEDLOG support plan. The sample follows the operations order or operations plan format provided in FM 6-0. At a minimum the plan should provide special general supply instructions applicable to medical units; special medical supply procedures applicable to the current operation (such as procedures for procurement, storage, and distribution); transportation instructions; details for the provision of medical maintenance support; optical support; and blood distribution support. The plan should also include policy statements for the inspection of locally procured items, captured medical supplies, and CBRN contaminated Class VIII. Refer to Chairman of the Joint Chiefs of Staff Manual 3130.03 for an example of Appendix Q—Annex Q Medical Services to include Appendix 2 for the Joint Blood Program and Appendix 5 Medical Logistics (Class 8A) System.

[CLASSIFICATION]

Place the classification at the top and bottom of each page of the estimate. Place the classification marking at the front of each paragraph and subparagraph in parentheses. Refer to Army Regulation 380-5 for classification and release marking instructions.

Copy ___ of ___copies
Issuing headquarters
Place of issue
Date-time group of signature
Message reference number

TAB A-MEDICAL LOGISTICS TO APPENDIX 3-HEALTH SERVICE SUPPORT TO ANNEX F (SUSTAINMENT) TO OPERATIONS PLAN/ORDER [number] [(code name)] [(classification of title)] Number plans and orders consecutively by calendar year. Include code name, if any.

- (U) References: List documents essential to understanding the medical logistics requirements in support of the operations plan or operations order. List references concerning a specific function in the appropriate attachments.
- a. List maps and charts first. Map entries include series number, country, sheet names, or numbers, edition, and scale.
 - b. List other references in subparagraphs.
- c. Doctrinal references for medical logistics support to operations include ADRP 3-0, ADRP 4-0, FM 4-02, and ATP 4-02.1.
- (U) Time Zone Used Throughout the Operations Plan or Operations order: State the time zone used in the area of operations during execution. When the operations plan or operations order applies to units in different time zones, use Greenwich Mean (ZULU) Time.
- **1.** (U) <u>Situation</u>. This paragraph describes the conditions of the operational environment that may impact medical logistics support operations in the following subparagraphs:
- a. (U) Area of Interest. Describe the area of interest as it impacts medical logistics support. Identify area of interest characteristics and hazards (including health hazards) that require coordinated medical logistics support. Refer to Annex B (Intelligence) as required.
- b. (U) <u>Area of Operations</u>. Describe the area of operations as it impact medical logistics. Refer to Appendix 2 (Operations Overlay) to Annex C (Operations) as required.
- (1) (U) Terrain. Describe the aspects of terrain that impact medical logistics support operations. Refer to Annex B (Intelligence) as required.
- (2) (U) Weather. Describe the aspects of weather that impact medical logistics support operations. Refer to Annex B (Intelligence) as required.
- c. (U) Enemy forces. List known and templated locations and activities of enemy units for one echelon up and two echelons down. List enemy maneuver and other capabilities that will impact or influence friendly medical logistics support operations, such as enemy activities on or near main supply routes. If available, state expected enemy courses of action and employment of enemy assets. If available, list the enemy logistics situation, to include information on how well supplied the enemy/opposition force is with food, clothing, or other vital logistics factors. Refer to Annex B (Intelligence) as required.
- d. (U) Friendly forces. List pertinent information concerning friendly forces [other than those referenced in the operations plan/operations order or that subsequent paragraphs of this plan/order include] that might directly influence the medical logistics support mission. This is addressed from the perspective of the host nation or U.S.-backed group and U.S. national interests. Emphasis should also be placed on Class VIII supply support operations and responsibilities for higher and adjacent units. Also list the logistics situation as it relates to friendly forces. Since medical evacuation vehicles are used to conduct emergency resupply of forward deployed medical units, the medical logistics planner must maintain visibility of the availability of medical evacuation assets.

[page number]

[CLASSIFICATION]

Figure C-1. Example of a medical logistics support plan

[CLASSIFICATION]

TAB A-MEDICAL LOGISTICS TO APPENDIX 3-HEALTH SERVICE SUPPORT TO ANNEX F (SUSTAINMENT) TO OPERATIONS PLAN/ORDER [number] [(code name)] [(classification of title)]

- (1) (U) <u>Higher Headquarters Mission and Intent</u>. *Identify and state the mission and commander's intent for headquarters two levels up and one level up from the issuing headquarters.*
 - (a) (U) Higher Headquarters Two Levels Up. Identify the higher headquarters two levels above.
 - 1. (U) Mission.
 - 2. (U) Commander's Intent.
 - (b) (U) Higher Headquarters. Identify the higher headquarters one echelon above.
 - 1. (U) Mission.
 - 2. (U) Commander's Intent.
- (2) (U) <u>Mission of Adjacent Units</u>. *Identify and state the missions of adjacent units and other units whose actions have a significant impact on the issuing headquarters.*
- e. (U) Interagency, Intergovernmental, and Nongovernmental Organizations. Identify and state the objectives or goals and primary tasks of those non-Department of Defense organizations that have a significant medical logistics role within the area of operations. Refer to Annex V (Interagency Coordination) as required.
- f. (U) <u>Civil Considerations</u>. Describe the critical aspects of the civil situation that impact medical logistics support operations. Refer to related operations plan/operations order or the civil-military operations annex.
- g. (U) <u>Attachments and Detachments</u>. List units attached to or detached from the issuing headquarters. State when each attachment or detachment is effective. Refer to related operations plan/operations order.
- h. (U) Assumptions. List assumptions used in the development of the operations plan/operations order including any that apply to the operation (such as common medical logistics assumptions that, should they occur or not occur as expected, would invalidate the entire plan). Refer to related operations plan/operations order.
- **2.** (U) <u>Mission</u>. Statement of the overall medical logistics support mission and the type of activity to be supported (such as offensive, defensive, stability or defense support of civil authorities tasks).
- **3.** (U) Execution. Describe how the commander intends to accomplish the mission in terms of the commander's intent, an overarching concept of operations, schemes of employment for each warfighting function, assessment, specified tasks to subordinate units, and key coordinating instructions in the subparagraphs below.
- a. (U) Commander's Intent. Commanders develop their intent statement personally. The commander's intent is a clear, concise statement of what the force must do and conditions the force must establish with respect to the enemy, terrain, and civil considerations that represent the desired end state. It succinctly describes what constitutes the success of an operation and provides the purpose and conditions that define that desired end state. The commander's intent must be easy to remember and clearly understood two echelons down. The commander's intent includes—

Purpose-an expanded description of the operation's purpose beyond the "why" of the mission statement. **Key tasks**-those significant activities the force as a whole must perform to achieve the desired end state. **End state-** a description of the desired future conditions that represent success.

b. (U) <u>Concept of operations</u>. (Outline the general plan for Class VIII supply support and any instructions that succeeding paragraphs do not adequately cover.) The concept of operations is a statement that directs the manner in which subordinate units cooperate to accomplish the mission and establishes the sequence of actions the force will use to achieve the end state. It is normally expressed in terms of the commander's desired operational framework as discussed in ADRP 3-0. It states the principal tasks required, the responsible subordinate units, and how the principal tasks complement one another. Normally, the concept of operations projects the status of the force at the end of the operation.

[page number] [CLASSIFICATION]

Figure C-1. Example of a medical logistics support plan (continued)

TAB A-MEDICAL LOGISTICS TO APPENDIX 3-HEALTH SERVICE SUPPORT TO ANNEX F (SUSTAINMENT) TO OPERATIONS PLAN/ORDER [number] [(code name)] [(classification of title)]

If the mission dictates a significant change in tasks during the operation, the commander may phase the operation. The concept of operations may be a single paragraph, divided into two or more subparagraphs, or if unusually lengthy, summarize here with details. If the concept of operations is phased, describe each phase in a subparagraph. Label these subparagraphs as "Phase" followed by the appropriate Roman numeral, for example, "Phase I." If the operation is phased, all paragraphs and subparagraphs of the base order and all annexes must mirror the phasing established in the concept of operations. The operation overlay and graphic depictions of lines of effort help portray the concept of operations.

- c. (U) Scheme of Movement and Maneuver. Describe the employment of maneuver units in accordance with the concept of operations. Provide the primary tasks of maneuver units conducting the decisive operation and the purpose of each. Next, state the primary tasks of maneuver units conducting shaping operations, including security operations, and the purpose of each. For offensive tasks, identify the form of maneuver. For defensive tasks, identify the type of defense. For stability tasks, describe the role of maneuver units by primary stability tasks. If the operation is phased, identify the main effort by phase. Identify and include priorities for the reserve. Refer to Annex C (Operations) as required.
- d. (U) <u>Coordinating instructions</u>. List only instructions applicable to two or more units and not covered in the unit's tactical standard operating procedures.
- **4.** (U) **Sustainment.** Describe the concept of sustainment, including priorities of sustainment by unit or area. Include instructions for administrative movements, deployments, and transportation—or references to applicable appendices (if appropriate). Identify sustainment priorities for medical logistics support to key tasks within the operation and specify additional sustainment instructions as necessary. Use the following subparagraphs to provide the concept of support for medical logistics and line logistics support. Provide detailed instructions for each sustainment subfunction in the appendices to Annex F (Sustainment).
- a. (U) <u>Materiel and Services</u>. Refer to the standard operating procedures or another annex whenever practical. Class VIIIB or blood support, can be addressed here or in a separate tab.
- b. (U) <u>General supply</u>. Consider stockage levels for all classes of supply, as units will be operating in an austere environment and at extended distances from the full complement of medical resources.
- c. (U) <u>Class VIII (to include blood and blood products)</u>. Provide special procedures applicable to the operation.
- (1) (U) Requirements. Provide details of materiel required to sustain U.S. and multinational forces including resupply and stockage levels required. This includes estimates of the population to be supported or the number of patients anticipated to be treated as well as any supplies required for teaching or training.
- (2) (U) <u>Procurement</u>. Provide detailed discussion of procedures and/or contracting support for the operation. Funding sources should be identified and procedures for obtaining the supplies described, as well as any limitations or restrictions on the use of the supplies, should be included.
- (3) (U) <u>Storage</u>. List special procedures and equipment [such as cold storage, refrigeration, or other special handling] requirements for maintaining storage and the appropriate shelf life of medical materiel in an austere environment should be included.
- (4) (U) <u>Distribution</u>. This should include the method of distribution and any limitations or restrictions that are applicable. Additionally, if special transportation requirements exist, they should also be noted.
- $(5) (U) \ \underline{Coordination}. \ Inter-service, \ allied forces, \ U.S. \ agencies, \ multinational forces, \ host \ nation \ government, \ nongovernmental \ organizations, \ and \ means \ of \ communicating \ requests for \ supply.$

[page number]

[CLASSIFICATION]

Figure C-1. Example of a medical logistics support plan (continued)

TAB A-MEDICAL LOGISTICS TO APPENDIX 3-HEALTH SERVICE SUPPORT TO ANNEX F (SUSTAINMENT) TO OPERATIONS PLAN/ORDER [number] [(code name)] [(classification of title)]

- d. (U) <u>Supplies required for stability tasks and not for support of U.S. or multinational force</u>. This includes foreign humanitarian assistance, disaster relief, or other requirements in support of stability tasks.
- e. (U) <u>Medical logistics activities</u>. This includes the location of the medical supply support activity supporting the area of operations and means of communicating requests for resupply.
- (1) (U) <u>Salvaged medical equipment and supplies</u>. Ensure policy and procedures are in place for classification, storage, and use of such items. Example... Recaptured U.S. medical supplies will be turned over to the nearest medical treatment facility for determination of further use. Samples will be forwarded through command intelligence channels to the National Center for Medical Intelligence.
- (2) (U) <u>Captured medical supplies</u>. This should include disposition instructions. Example... Captured medical supplies and equipment will not be destroyed. Units having custody of enemy supplies and equipment will turn them over to the supporting medical facility. Local or captured Class VIII material will only be used to support enemy prisoners of war or civilian detained/retained personnel.
- (3) (U) <u>Civilian medical materiel</u>. This may include information or policy on purchasing medical supplies on the local economy. NOTE: The procurement of medical supplies on the local economy must be approved by the command surgeon. Due to the Food and Drug Administration's stringent standards for medications, the local procurement of these products is usually not feasible.) Example...Transfer of Class VIII to host nation: Units are forbidden by U.S. laws, Department of Defense directives, and Army policy from giving Class VIII supplies and equipment to host nation personnel except under limited authorizations or in order to prevent mission failure. Units must follow published guidance and seek legal review prior to transfer of any Class VIII.
- (4) (U) Other medical logistics matters. This can include the receipt, repackaging, storing and distribution of donated medical supplies for use in foreign humanitarian assistance operations. Requesting procedures should also be included. Other multinational concerns [such as supplies and equipment provided by the United Nations] and/or interagency operations should be considered).
- (5) (U) Medical equipment maintenance and repair. This should describe medical equipment maintenance and repair capability available for supported units including procedures for the requisition of required medical equipment and responsibilities for medical equipment repair. Include in separate subparagraphs the location, mission, hours of opening or closing of medical maintenance and/or repair teams.
- (6) (U) Optical fabrication and spectacle repair. Is this service available in the theater? If not, where are the supporting facilities located and what procedures are used to request this support?
- (7) (U) <u>Class VIIIB</u>, <u>blood and blood products</u>. This includes location of blood support units, reporting requirements, requisition procedures, coordination requirements (with other Services).
- f. (U) <u>Services to Army Health System units and facilities</u>. *Include information on the following services: laundry, bath, utilities, firefighting, construction, real estate, graves registration religious, personnel, and finance.*
- g. (U) <u>Transportation</u>. This includes use of various transportation assets and avenues (such as ground, rail, water, and air) available for resupply of Class VIII.

[page number]

[CLASSIFICATION]

Figure C-1. Example of a medical logistics support plan (continued)

TAB A-MEDICAL LOGISTICS TO APPENDIX 3-HEALTH SERVICE SUPPORT TO ANNEX F (SUSTAINMENT) TO OPERATIONS PLAN/ORDER [number] [(code name)] [(classification of title)]

- (1) (U) <u>Movement control and traffic regulation (if applicable)</u>. This can include requirements for armed escort; requirements for crossing international boundaries, convoy restrictions, or other circumstances affecting transport or supply route operations.
- (2) (U) <u>Security requirements</u>. Include information on physical security requirements for the storage of Class VIII.
- h. (U) <u>Labor</u>. Include policies with any restriction on using civilian internees or detainees and enemy prisoners of war in labor units. Allocate and prioritize available labor. Include designation and location of available labor units. Depending on the scenario, it may be possible to contract nonmedical personnel for support positions.
- i. (U) <u>Maintenance</u>. This includes priority of maintenance, location of facilities, collection points, maintenance time lines, and evacuation procedures.

5. (U) Command and Signal.

a. (U) Command.

- (1) (U) <u>Location of Commander and Key Leaders</u>. State the location where the commander and key leaders intend to be during the operation (by phase if the operation is phased).
- (2) (U) <u>Succession of Command</u>. State the succession of command if not covered in the unit's standard operating procedures.
- (3) (U) <u>Liaison Requirements</u>. State liaison requirements not covered in the unit's standard operating procedures.

b. (U) Control.

- (1) (U) Command Posts. Describe the employment of command posts, including the location of each command post and hours of operations, as appropriate. State the primary controlling command post for specific tasks or phases of the operation.
- (2) (U) Reports. List reports not covered in standard operating procedures. Refer to Annex R (Reports) as required.
- c. (U) <u>Signal</u>. Describe the concept of signal support, including location and movement of key signal nodes and critical electromagnetic spectrum considerations throughout the operation. Refer to Annex H (Signal) as required.

ACKNOWLEDGE: Provide instructions for the acknowledgement of receipt of the plan or order by addressees. The word "acknowledge" may suffice or you may refer to the message reference number. Acknowledgement of a plan or order means that it has been received and understood.

[Commander's last name] [Commander's rank]

The commander or authorized representative signs the original copy. If the representative signs the original, add the phrase "For the Commander." The signed copy is the historical copy and remains filed in headquarters files.

[page number]

[CLASSIFICATION]

Figure C-1. Example of a medical logistics support plan (continued)

TAB A-MEDICAL LOGISTICS TO APPENDIX 3-HEALTH SERVICE SUPPORT TO ANNEX F (SUSTAINMENT) TO OPERATIONS PLAN/ORDER [number] [(code name)] [(classification of title)]

OFFICIAL:

[Authenticator's Name]

[Authenticator's Position]

Use only if the commander does not sign the original order. If the commander signs the original, no further authentication is required and only the last name and rank of the commander appear in the signature block.

Use only if the commander does not sign the original order. If the commander signs the original, no further authentication is required. If the commander does not sign, the signature of the preparing staff officer requires authentication and only the last name and rank of the commander appear in the signature block.

ANNEXES: List annexes by letter and title. Army and joint operations plans or operations orders do not use Annexes I and O as attachments and in Army orders label these annexes "Not Used." Annexes T, X, and Y are available for use in Army operations plans and operations orders and are labeled as "Spare." When an attachment required by doctrine or a standard operating procedure is unnecessary, label it "Omitted."

[page number]

[CLASSIFICATION]

Figure C-1. Example of a medical logistics support plan (continued)

SECTION III — CLASS VIII CONSUMPTION COMPUTATION

C-13. There are several considerations used by MEDLOG planners when determining Class VIII support requirements. These include the computation of MEDLOG support and transportation requirements and the use of medical resupply sets during early entry operations. Medical resupply sets and preconfigured push-packages are the primary means of resupply within the BCT prior to the establishment of line item requisitioning. Demand history, casualty estimates, and specialty sets are used when basic mission requirements become more definitive.

MEDICAL LOGISTICS SUPPORT AND TRANSPORTATION REQUIREMENTS

C-14. A pounds-per-Soldier-per-day and pounds per wounded in action admitted computation is used by medical logisticians when planning for Class VIII support and transportation requirements. The patient estimate (derived from the casualty estimate) is the basis for applying these computations as discussed in Section I of this appendix. Table C-1 on page C-11 lists the Class VIII planning factor for Roles 1 through 3 and illustrates the consumption computation for the wounded in action patient category. The Class VIIIA (excludes Class VIIIB blood) planning factors presented here are no longer tied to a specific Total Army Analysis patient stream. They were developed using generic patient streams that are intended to include various types of patients.

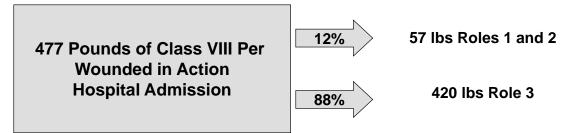
Table C-1. Class VIII planning factors

CLASS VIII PLANNING FACTOR PERCENTAGES BY ROLE OF CARE

| ROLE OF CARE | Wounded in Action Planning Factor = 477 pounds/ Hospital Admission | Disease and Nonbattle Injuries Planning Factor = 122 pounds/ Hospital Admission | Blister Planning Factor = 36 pounds/ Hospital Admission | Nerve Planning Factor = 110 pounds/ Hospital Admission |
|-----------------|--|---|--|---|
| Roles 1 and 2 | 12% | 22% | 7% | 6% |
| Role 3 | 88% | 78% | 93% | 94% |

NOTE: Population Supported Items Planning Factor = 0.19 Pounds per Soldier per day (such as sunscreen, foot powder, and other items as provided under Common Table of Allowance 8-100).

ILLUSTRATION



Note. The percentages and information presented in this section are provided as a guide and are not intended as a substitute for more specific data.

C-15. These planning factors are primarily used by medical planners at EAB to determine support requirements (during phases I through III) such as the number of MLCs necessary to support a specific mission based on their short ton delivery capability. These factors can also be applied to planning Class VIII distribution support when weight limitations are a factor (such as sling load or other aerial resupply operations). Table C-2 on page C-12 expands on the information provided in Table C-1 by converting the percentages to pounds per type of admission.

| ROLE OF CARE | Wounded in Action Planning Factor as Pounds/Wounded in Action Hospital Admission | Disease and Nonbattle Injuries Planning Factor as Pounds/Disease and Nonbattle Injuries Hospital Admission | Blister Planning Factor as Pounds/Blister Hospital Admission | Nerve Planning Factor as Pounds/Nerve Hospital Admission | |
|--|--|--|--|--|--|
| Roles 1 and 2 | 57 pounds | 27 pounds | 3 pounds | 7 pounds | |
| Role 3 | 420 pounds | 95 pounds | 33 pounds | 103 pounds | |
| NOTE: Population Supported Items Planning Factor – 0.19 Pounds per Soldier per day | | | | | |

NOTE: Population Supported Items Planning Factor = 0.19 Pounds per Soldier per day.

MEDICAL RESUPPLY SET AND PUSH-PACKAGE PLANNING

C-16. When estimating Class VIII requirements for major combat operations in the BCT, it is more practical to base initial planning on unit MES and medical resupply set capabilities. Medical equipment sets and medical resupply sets apply to TOE units only and are designed and updated based on historical precedents (patient numbers, mission types, and injury types from past major combat operations), operational experience, and emerging medical technologies. Periodic review of these sets by medical subject matter experts insure that the contents continue to meet the needs of medical professionals supporting the deployed force. Medical assemblage is also a term used to describe these medical sets as well as dental equipment sets, medical materiel sets, optical equipment sets, and others. An Army medical assemblage is an identified grouping of medical and nonmedical supplies and or equipment designated to facilitate a specific health care function based on a unit's minimum mission essential wartime requirements to support major combat operations. The Army has two types of medical assemblages, minor and major assemblages.

MINOR MEDICAL ASSEMBLAGES

C-17. Minor medical assemblages or MES are Army-unique assemblages consisting of a grouping of medical and nonmedical items under a single stock number including expendable (consumable) supplies, durables, and nonexpendable equipment developed to support a certain TOE mission or clinical function. Medical equipment sets are managed by the AMEDD and used primarily by the Army. Each MES is designed to meet minimum mission essential wartime requirements to sustain major combat operations or high intensity conflict for 72 hours or 3 days. They are used primarily in the BCT Roles 1 and 2 MTFs and the medical company (area support). Medical equipment sets are considered minor medical assemblages.

MAJOR MEDICAL ASSEMBLAGES

C-18. Major medical assemblages or medical materiel sets are DEPMEDS equivalent Army-unique sets that consist of a grouping of medical and nonmedical items under a single stock number managed by the AMEDD and are used primarily by the Army. Each medical materiel set is developed specifically for EAB medical units and is designed to meet the minimum mission essential wartime requirements to sustain major combat operations or high intensity conflict for 72 hours or 3 days. Potency and dated medical materiel is not included in the medical materiel set, but is provided separately upon deployment as part of the unit deployment package (refer to Chapter 3 for a description of the unit deployment package). These assemblages are traditionally found in the CSH at EAB. Medical materiel sets are considered major medical assemblages.

MEDICAL RESUPPLY SETS

C-19. The medical resupply set is a preconfigured list of supplies designed to refill MES (minor sets) for medical units operating at brigade and below (Roles 1 and 2 MTFs including the medical company [area support]). There are no resupply sets for the medical materiel sets (major sets) used by EAB medical units.

Each medical resupply set is designed by the AMEDD and is developed to replace consumable items in the MES. The medical resupply set constitutes an additional 7 days of supply and is typically used until line item requisitioning is established. The medical resupply set is intended to operationally sustain the MES for which it was developed (such as the medical resupply set, Trauma, which would be used to resupply the MES, Trauma). The medical resupply set is used for contingency planning, does not have an assigned line item number, and is not authorized by TOE or modified TOE.

PUSH-PACKAGES

C-20. Push-packages are a predetermined amount of supplies designed and managed by the using unit in coordination with the supporting installation medical supply activity or SSA. Ideally, these packages are coordinated for by the unit prior to deployment and issued during early entry operations on a scheduled basis or upon request. The contents of the push-packages are standardized by the brigade or division surgeon.

SPECIALTY SETS

C-21. Stability and DSCA tasks require more definitive or tailored assemblages such as Humanitarian Assistance Sets. There are three types of Humanitarian Assistance Sets, the—

- Humanitarian Assistance Surgical Augmentation Set.
- Humanitarian Assistance Pediatric Augmentation Set.
- Humanitarian Assistance Adult Augmentation Set.

C-22. These sets were established to augment an existing CSH and are not intended for use as standalone sets. They contain special medical and surgical supplies and equipment that are not currently authorized in DEPMEDS-equipped hospitals, but are essential for providing AHS support to a civilian population during operations where stability or DSCA tasks are the primary focus. Humanitarian Assistance Sets do not have an assigned line item number and are not authorized by TOE or modified TOE. There is no basis of issue for these sets. Units must determine if there is a need for the sets during planning or as dictated by OTSG and medical mission requirements. Humanitarian Assistance Sets are managed by USAMMA. The Army Deputy Chief of Staff, Logistics is the release authority for these sets. For the latest information and questions concerning Humanitarian Assistance Sets refer to the USAMMA Web site as identified in the references.

TRANSITION TO LINE ITEM REQUISITION

C-23. As operations stabilize or transition from major combat operations to stability tasks, the Class VIII system will transition from medical resupply set and push-package use to line item requisitioning. This type of resupply relies upon an on-hand stock or authorized stockage list items (100 to 300 lines of *critical* line items) located at the BMSO and established resupply channels between higher levels of Class VIII sustainment.

ADDITIONAL INFORMATION

C-24. The USAMMA Web site has several automated tools that provide unit assemblages, functional descriptions, and detailed component listing reports. These component listings provide both hospital (Role 3) and nonhospital (Roles 1 and 2) unit assemblage reports. To research a particular set the Unit Assemblage database provides listings for multiple years under the same line item number. To research specific medical equipment items the Medical Services Information Logistics System provides a database that cross-references key unit assemblage component materiel data. Both databases have on-line tutorials. For additional information access the USAMMA Web site as identified in the references.



Glossary

This glossary lists acronyms and terms with Army or joint definitions. Where Army and joint definitions differ, (Army) preceded the definition. The proponent publication for terms is listed in parentheses after the definition. This publication is not the proponent for any Army terms.

SECTION I – ACRONYMS AND ABBREVIATIONS

| ADRP | Army doctrine reference publication | | |
|----------------|---|--|--|
| AHS | Army Health System | | |
| AIS | automated information system | | |
| AJP | Allied joint publication | | |
| AMEDD | Army Medical Department | | |
| AMedP | Allied medical publication | | |
| APS | Army pre-positioned stocks | | |
| AR | Army regulation | | |
| ASCC | Army Service component command | | |
| ATP | Army techniques publication | | |
| BAS | battalion aid station | | |
| BCT | brigade combat team | | |
| BMSO | brigade medical supply office | | |
| BSMC | brigade support medical company | | |
| C | Celsius | | |
| CBRN | chemical, biological, radiological, and nuclear | | |
| CONUS | continental United States | | |
| CSH | combat support hospital | | |
| DA | Department of the Army | | |
| DCAM | Defense Medical Logistics Standard Support Customer Assistance Module | | |
| DD | Department of Defense | | |
| DEPMEDS | Deployable Medical Systems | | |
| DMC | distribution management center | | |
| DMLSS | Defense Medical Logistics Standard Support | | |
| DOD | Department of Defense | | |
| DODAAC | Department of Defense Activity Address Code | | |
| DODD | Department of Defense directive | | |
| DODI | Department of Defense instruction | | |
| DSCA | defense support of civil authorities | | |
| EAB | echelons above brigade | | |
| EBTC | Expeditionary Blood Transshipment Center (United States Air Force) | | |
| FHP | force health protection | | |
| \mathbf{FM} | field manual | | |

G-3 assistant chief of staff, operations
G-6 assistant chief of staff, signal

HSS health service support

ISO International Organization for Standardization

JBPO Joint Blood Program Office

JP joint publication

MCDM medical chemical defense materiel

MC4 Medical Communications for Combat Casualty Care

MEDBDE medical brigade

MEDCOM (DS) medical command (deployment support)

MEDLOG medical logistics

MEDSTEP Medical Standby Equipment Program

MES medical equipment sets
MLC medical logistics company

MLMCmedical logistics management centerMMBmedical battalion (multifunctional)

MTF medical treatment facility

NATO North Atlantic Treaty Organization
OTSG Office of The Surgeon General

P&D potency and dated

PMCS preventive maintenance checks and services

PMI patient movement items

PMITS patient movement item tracking system

RF radio frequency

RFID radio frequency identification

Rh rhesus

S-3 operations staff officer
S-4 logistics staff officer
S-6 signal staff officer
SB supply bulletin

SIMLM single integrated medical logistics management

SSA supply support activity
STANAG Standardization Agreement
TB MED technical bulletin, medical

TDA table of distribution and allowances
TLAMM theater lead agent for medical materiel

TM technical manual

TOE table of organization and equipment

TSG The Surgeon General

U.S. United States

USAF United States Air Force

USAMEDCOM United States Army Medical Command

USAMMA United States Army Medical Materiel Agency

USAMRMC United States Army Medical Research and Materiel Command

USC United States Code

SECTION II – TERMS

deployment

The rotation of forces into and out of an operational area. (JP 3-35)

employment

The strategic, operational, or tactical use of forces. (JP 5-0)

installation medical supply activity

In the continental United States, the supply support activity for medical materiel for an installation or geographic area. Outside the continental United States, it is normally the primary supply support activity for medical materiel for a designated geographic area. (AR 40-61)

mobilization

1. The process of assembling and organizing national resources to support national objectives in time of war or other emergencies. 2. The process by which the Armed Forces of the United States or part of them are brought to a state of readiness for war or other national emergency, which includes activating all or part of the Reserve Component as well as assembling and organizing personnel, supplies, and materiel. (JP 4-05)

redeployment

(Army) The transfer of forces and materiel to home and/or demobilization stations for reintegration and/or out-processing. (ATP 3-35)

sustainment

The provision of logistics, personnel services, and health service support necessary to maintain operations until successful mission completion. (ADP 4-0)



References

REQUIRED PUBLICATIONS

These documents must be available to the intended users of this publication. Accessed on 31 August 2015.

These publications are available online at http://www.apd.army.mil.

ADP 4-0, Sustainment, 31 July 2012.

ADRP 1-02, Terms and Military Symbols, 2 February 2015.

ADRP 3-0, Unified Land Operations, 16 May 2012.

ADRP 3-90, Offense and Defense, 31 August 2012.

ADRP 4-0, Sustainment, 31 July 2012.

ADRP 6-0, Mission Command, 17 May 2012.

FM 4-02, Army Health System, 26 August 2013.

FM 6-0, Commander and Staff Organization and Operations, 5 May 2014.

These publications are available online at http://www.dtic.mil/doctrine. Accessed on 31 August 2015.

JP 1-02, Department of Defense Dictionary of Military and Associated Terms, 8 November 2010.

JP 4-02, Health Service Support, 26 July 2012.

RELATED PUBLICATIONS

These documents contain relevant supplemental information.

NORTH ATLANTIC TREATY ORGANIZATION STANDARDIZATION AGREEMENTS

These publications are available online at http://nso.nato.int/nso/. Accessed on 31 August 2015.

STANAG 2512, *Allied Joint Doctrine for Modes of Multinational Logistic Support*, Edition 2, 7 February 2013 (AJP-4.9, Edition A, Version 1, 7 February 2013).

STANAG 2571, Minimum Test Requirements for Laboratory Units of in Theatre Military Medical Treatment Facilities (MTFs), Edition 1, 30 October 2013 (AMedP-8.5, Edition A, Version 1, 30 October 2013).

STANAG 2939, Minimum Requirements for Blood, Blood Donors and Associated Equipment, Edition 5, 8 February 2010.

AMERICAN, BRITISH, CANADIAN, AUSTRALIAN, AND NEW ZEALAND PUBLICATIONS AND STANDARDS

These documents are available online at http://www.abca-armies.org. Accessed on 31 August 2015.

Publication 256, Coalition Health Interoperability Handbook, Edition 3, April 2013.

Standard 815, Blood Supply in the Area of Operations, Edition 1, 21 October 1991.

UNITED STATES CODES

These documents are available online at http://uscode.house.gov. Accessed on 31 August 2015.

10 USC.

10 USC 331 to 335.

10 USC 3031 to 3032.

18 USC 1385.

32 USC.

UNITED STATES DEPARTMENT OF HOMELAND SECURITY

This publication is available online at http://www.fema.gov/media-library/assets/documents/32230. Accessed on 25 September 2015.

National Response Framework, Second Edition, May 2013

CHAIRMAN, JOINT CHIEFS OF STAFF MANUALS

This document is available online at https://ca.dtic.mil/cjcs_directives/cjcs/manuals.htm. Accessed on 31 August 2015.

CJCSM 3130.03, Adaptive Planning and Execution (APEX) Planning Formats and Guidance, 18 October 2012.

DEPARTMENT OF DEFENSE PUBLICATIONS

These publications are available online at http://www.dtic.mil/whs/directives/. Accessed on 31 August 2015.

DODD 3025.18, Defense Support of Civil Authorities (DSCA), 29 December 2010.

DODD 5101.9, DOD Executive Agent for Medical Materiel, 23 August 2004.

DODI 5101.15, DOD Medical Materiel Executive Agent (MMEA) Implementation Guidance, 4 May 2012.

DODI 6000.11, Patient Movement (PMI), 4 May 2012.

DODI 6430.02, Defense Medical Materiel Program, 17 August 2011.

Defense Logistics Agency, Federal Supply Classification, Groups and Classes, Cataloging Handbook H2, February 2003.

http://www.dispositionservices.dla.mil/sales/Documents/Sales/h2book.pdf

DEFENSE TRANSPORTATION REGULATIONS

This publication is available online at: http://www.transcom.mil/dtr/part-v/dtr_part_v_toc.pdf. Accessed on 31 August 2015.

DTR 4500.9-R-Part V, Department of Defense Customs and Border Clearance Policies and Procedures, March 2011.

JOINT PUBLICATIONS

Most joint publications are available online at http://www.dtic.mil/doctrine/new_pubs/jointpub.htm. Accessed on 31 August 2015.

JP 3-34, Joint Engineer Operations, 30 June 2011.

JP 3-35, Deployment and Redeployment Operations, 31 January 2013.

JP 4-05, Joint Mobilization Planning, 21 February 2014.

JP 4-08, Logistic in Support of Multinational Operations, 21 February 2013.

JP 5-0, Joint Operation Planning, 11 August 2011.

MULTISERVICE PUBLICATIONS

Most multiservice doctrinal publications are available online at http://www.apd.army.mil. Accessed on 31 August 2015.

ATP 3-34.40/MCWP 3-17.7, General Engineering, 25 February 2015.

TM 3-34.56/MCIP 4-11.01, Waste Management for Deployed Forces, 19 July 2013.

TM 4-02.70/NAVMED P-5120/AFMAN 41-111_IP, Standards for Blood Banks and Transfusion Services, 2 May 2014.

These publications are available online at http://armypubs.army.mil/med/index.html. Accessed on 31 August 2015.

TM 8-227-11/NAVMED P-5123/AFI 44-118, Operational Procedures for the Armed Services Blood Program Elements, 1 September 2007.

TM 8-227-12/NAVMED P-6530/AFH 44-152_IP, Armed Services Blood Program Joint Blood Program Handbook, 1 December 2011.

ARMY PUBLICATIONS

Most Army doctrinal publications are available online at http://www.apd.army.mil. Accessed on 31 August 2015.

ADRP 3-07, Stability, 31 August 2012.

ADRP 3-28, Defense Support of Civil Authorities, 14 June 2013.

AR 40-61, Medical Services, Medical Logistics Policies, 28 January 2005.

AR 380-5, Security, Department of the Army Information Security Program, 29 September 2000.

AR 525-29, Military Operations, Army Force Generation, 14 March 2011.

AR 525-93, Military Operations, Army Deployment and Redeployment, 12 November 2014.

AR 570-9, Manpower and Equipment Control, Host Nation Support, 29 March 2006.

AR 700-137, Logistics, Logistics Civil Augmentation Program, 28 December 2012.

AR 700-138, Logistics, Army Logistics Readiness and Sustainability, 26 February 2004.

AR 710-1, Inventory Management, Centralized Inventory Management of the Army Supply System, 20 September 2007.

AR 710-2, Inventory Management, Supply Policy Below the National Level, 28 March 2008.

AR 735-5, Property Accountability, Property Accountability Policies, 10 May 2013.

AR 750-1, Maintenance of Supplies and Equipment, Army Materiel Maintenance Policy, 12 September 2013.

ATP 3-35, Army Deployment and Redeployment, 23 March 2015.

ATP 4-02.42, Army Health System Support to Stability and Defense Support of Civil Authorities Tasks, 9 June 2014.

ATP 4-02.55, Army Health System Support Planning, 16 September 2015.

ATP 4-33, Maintenance Operations, 14 April 2014.

FM 4-02.43, Force Health Protection Support for Army Special Operations Forces, 27 November 2006

FM 6-02, Signal Support to Operations, 22 January 2014.

FM 27-10, The Law of Land Warfare, 18 July 1956.

SB 8-75-S4, Army Medical Department Supply Information, 20 April 2014.

SB 8-75-S7, Army Medical Department Supply Information, 20 July 2013.

SB 8-75-11, Army Medical Department Supply Information, 28 November 2014.

TB MED 593, Guidelines for Field Waste Management, 15 September 2006.

TB MED 750-1, Operating Guide for Medical Equipment Maintenance, 13 April 1998.

TABLES OF ORGANIZATION AND EQUIPMENT

These documents are available online at https://fmsweb.army.mil/unprotected/splash/. Accessed on 25 September 2015.

TOE 08488R000, Medical logistics company.

TOE 08670R000, Medical logistics management center.

TOE 08430R000, Medical detachment (blood support).

TOE 08489RA00, Headquarters, medical detachment (blood support).

TOE 08489RB00, Collection, storage and distribution team, medical detachment (blood support).

TOE 08489RC00, Collection, manufacturing and distribution team, medical detachment (blood support).

TOE 08489RD00, Distribution team, medical detachment (blood support).

TOE 08497R000, Logistics support company.

TOE 08567GA00, Medical team, optometry.

TOE 08485R000, Medical battalion (multifunctional).

TOE 08420R000, Headquarters and headquarters company, medical brigade (support).

TOE 08640R000, Headquarters and headquarters company, medical command (deployment support).

WEB SITES

Centers for Disease Control and Prevention. < http://www.cdc.gov/phpr/stockpile/stockpile.htm >

Federal Emergency Management Agency. https://www.fema.gov/national-response-framework>

United States Army Medical Materiel Agency. http://www.usamma.amedd.army.mil>

United States Army Medical Materiel Center-Europe. < http://usammce.amedd.army.mil/>

United Stated Department of Health and Human Services.

http://www.phe.gov/preparedness/responders/ndms/pages/default.aspx

PRESCRIBED FORMS

None.

REFERENCED FORMS

Unless otherwise indicated, Department of the Army Forms are available on the Army Publishing Directorate (APD) Web site (www.apd.army.mil). Accessed on 31 August 2015.

DA Form 2028, Recommended Changes to Publications and Blank Forms.

Department of Defense (DD) Forms are available on the Office of the Secretary of Defense (OSD) Web site (www.dtic.mil/whs/directives/infomgt/forms/formsprogram.htm). Accessed on 31 August 2015.

DD Form 1348-6, DOD Single Line Item Requisition System Document (Manual—Long Form)

DD Form 1391, FY ___ Military Construction Project Data

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