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THE SECRETARY OF THE AIR FORCE**

**AIR FORCE TACTICS, TECHNIQUES, AND
PROCEDURES 3-42.8
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Tactical Doctrine

**MEDICAL LOGISTICS AND
BLOOD SUPPORT OPERATIONS**

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OPR: HQ USAF/SGMD (Lt Col Fred P. Stone)

Certified by: HQ AFDC/CC
(Maj Gen David F. MacGhee)
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SUMMARY OF REVISIONS: Revisions include the addition of Air Force Forces Surgeon (AFFOR/SG) and Deploying Unit Home Base roles and responsibilities. Additional roles and responsibilities were added for the Sustaining Base, Medical/Operational Planners and Deployed Medical Unit. Several major areas were added for consideration in the planning phases. These major areas are: 1) Support for Aeromedical Evacuation (AE) Units 2) Support for Air Force Special Operations Command (AFSOC) Medical Units 3) Joint Operations Support. Two Expeditionary Medical Logistics (EML) System planning considerations that were added are Simplified Priority System and Repair and Return. The Theater Medical Logistics Support Management (TMLSM) was added as a component in joint operations. Other sections were updated and expanded to provide the reader more in-depth information on tactics, techniques and procedures for expeditionary medical logistics support.

PURPOSE: The Air Force Tactics, Techniques, and Procedures (AFTTP) 3-42 series of publications is the primary reference for medical combat support capability. This document, AFTTP 3-42.8, provides tactics, techniques, and procedures (TTP) for the expeditionary medical logistics (EML) system and the Air Force blood program.

APPLICATION: This publication applies to all Air Force military and civilian personnel (including Air Force Reserve Command (AFRC) and Air National Guard (ANG) units and members). The doctrine in this document is authoritative but not directive.

SCOPE: The EML system was designed and is executed to provide support and sustainment to Air and Space Expeditionary Force (AEF) forces. To meet this requirement, medical logistics personnel must have the knowledge and training to successfully sustain a deployed medical force through the full spectrum of military operations. The medical logistics function also plans for

expeditionary blood support. It is imperative that planners and medical personnel understand logistics and blood distribution processes in order to meet the deployment and sustainment challenges of AEF forces. Ensure that all records created by this AFI are maintained and disposed of IAW AFMAN 37-139, "Records Disposition Schedule."

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Chapter 1

MEDICAL LOGISTICS

Section 1A—Combat Support

1.1. Expeditionary Medical Logistics (EML) System. An Air and Space Expeditionary Force (AEF) consists of tailored and rapidly deployable forces—a fundamental shift from the previous philosophy of massive reinforcement of fixed overseas support structures and basing. To support and sustain an AEF and expeditionary medical forces, the Air Force Surgeon General directed an EML system be developed and executed. The Air Force Medical Logistics Office (AFMLO) designed and developed the EML system to provide crucial guidance to medical personnel during all phases of deployment. Medical logistics personnel must have the knowledge and training to successfully sustain a deployed medical unit through the full spectrum of military operations. The EML system consists of focused logistics and agile combat support concepts, which provide tailored logistics packages to the deployed medical unit by utilizing a predetermined supply chain. Both concepts are required to meet AEF deployment and sustainment challenges.

Combat Support

"...resupply of deployed forces will begin upon arrival, reducing initial lift requirements. Time-definite delivery will form the basis for all resupply in the theater, thus reducing the total lift requirement. When combat commanders require an item, the system will reachback to CONUS and deliver it where and when needed."

-AFDD 2-4, *Combat Support*

1.2. Focused Logistics.

1.2.1. The primary goal of focused logistics is a compression of the customer wait time—customers get their materiel faster. To achieve this goal, customers and suppliers must employ effective information management practices and have timely access to reliable and secure telecommunication channels.

1.2.2. Focused logistics is the combination of information and logistics technologies to ensure required materiel arrives at the right time at the right place, every time, no matter where or at what level the conflict. New transportation systems will enable the shift from supply-based systems to manufacturer direct or prime vendor delivery. The management of mission and logistics requirements relies on high velocity, time definite transportation systems while minimizing reliance on existing on-hand stock.

1.3. Agile Combat Support. Agile combat support is crucial to the Air Force philosophy of power-projection—the deployment of Air Force personnel primarily from the continental United

States (CONUS). Agile combat support is the rapid movement of required materiel directly from “factory to flight line,” providing a “reachback” sustainment capability for medical and other deployed personnel, which allows for a much smaller logistical footprint in the operating theater. Given the reliance on reachback the deployment and sustainment challenges are tremendous. Air and sealift may be severely limited. (Refer to the Joint Chiefs of Staff [JCS] *Focused Logistics Roadmap* for more information on lift requirements and capabilities.)

Section 1B—Roles and Responsibilities

1.4. Air Force Surgeon General (SG). The Air Force Surgeon General ensures medical units are sourced and supported with deployable medical assets to meet the full spectrum of military operations. The Surgeon General also determines EML doctrine and policy, as well as, provides the required resources necessary to execute and sustain the EML process, both at the major command (MAJCOM) and unit levels.

1.5. Assistant Surgeon General, Health Care Operations. The Assistant Surgeon General, Health Care Operations provides oversight authority for all aspects of training related to EML and sustainment to include the incorporation of EML concepts into all applicable Air Force Medical Services education and training courses. The Assistant Surgeon General also coordinates and consolidates Program Objective Memorandum (POM) submissions to support EML execution, training, and war reserve materiel (WRM) requirements.

1.6. The Air Force Medical Logistics Operations Center.

1.6.1. The Air Force Medical Logistics Operation Center (AFMLOC), located at Ft. Detrick, Maryland, is the center for Air Force medical supply chain management. The AFMLOC coordinates with Total Force (Active Duty, Guard, and Reserve) component medical planners and logisticians of the unified commands to ensure medical requirements are identified in operation plans (OPLANs), exercises, and real-time operations. The AFMLOC executes, monitors, and reports the supply chain process to the Surgeon General as required; validates resource requirements for supply chain nodes and requests manpower assistance as appropriate; and communicates issues, problems, or solutions to the Air Force Surgeon General, MAJCOMs and Air Force Forces (AFFOR) Surgeon staff.

1.6.2. The AFMLOC develops, publishes, and monitors guidance on supply chain management for MAJCOMs and deployed medical units. Additionally, the AFMLOC obtains and manages the funding stream for shipping costs. Specifically the AFMLOC will maintain information on airflow operations and Logistics points of contact.

1.6.3. The AFMLOC is the primary point of contact for the deployed unit and the sustaining base on materiel and supply chain issues. The AFMLOC will maintain a log with the issues and coordinate resolution with various agencies and commands.

1.7. Major Command Surgeon (MAJCOM/SG). Each MAJCOM surgeon ensures assigned medical logistics personnel are trained on EML concepts. MAJCOM/SGs also provide

designated manpower to staff transit nodes and communicate logistics issues to the AFMLOC. Communication between the AFMLOC and MAJCOM medical logistics staff is critical to EML success. To ensure this vital communication link is established, the MAJCOM/SG will provide the AFMLOC the medical logistics points of contact for the operation.

1.8. Air Force Forces Surgeon (AFFOR/SG).

1.8.1. The AFFOR/SG will provide the AFMLOC and deploying medical logistics personnel information on intra-theater airflow and identify distribution nodes. This distribution channel information along with AFFOR logistician points of contacts ensures the most efficient and effective supply chain is developed for the operation. To ensure mission requirements can be met and ensure all activities in the supply chain are focusing on procurement and distribution of the necessary materiel, the AFFOR/SG establishes equipment and supply review policy to aid deployed commanders in validating requirements.

1.8.2. Base Operating Support (BOS) information will be provided to deploying units to ensure infrastructure and environment of care requirements are supported. Examples of the type of BOS support the AFFOR/SG might provide include local oxygen support capability, local linen support, and local hazardous waste disposable.

1.8.3. When Medical Logistics enablers are assigned in the theater to support supply chain operations, the AFFOR/SG facilitates coordination between the enablers and deployed medical personnel. This ensures the deploying enabler and the local commander have a clear understanding of the responsibilities and duties the enabler is to provide in support of the operation.

1.9. Sustaining Base.

1.9.1. The sustaining base is the materiel lifeline of any deployed medical unit. It augments the deployed medical unit's limited logistical capability by assuming the bulk of the supply chain's administrative, sourcing, and tracking functions. The AFFOR/SG, in coordination with the AFMLOC, determines the sustaining base and includes this tasking in AFFOR Annex Q, Medical Logistics. The sustaining base is typically located within the CONUS, in close proximity to available commercial materiel resources and can leverage a wider array of transportation options. A sustaining base located outside the continental US (OCONUS) may be utilized if it increases the expediency of the supply chain and is more cost effective than a CONUS sustaining base.

1.9.2. The sustaining base normally activates an extended workday or on-call operations center to respond to short notice deployments. Once activated, the sustaining base establishes secure communications with the deployed medical unit(s) and acts as the logistics link for deployed medical units through the duration of the deployment or until a theater supply chain is established. As the deployed medical unit's "one-stop shop" for materiel sustainment and information, the sustaining base will notify the deployed unit of substitutions and fill initial outfitting shortages identified by the deploying units home base.

1.9.3. The sustaining base also ensures that equipment concerns receive special consideration due to limited spare part inventories, tools and test equipment, and experienced biomedical equipment repair technicians in deployed medical assemblages. The sustaining base uses a combination of rapid spare part procurement, replacement equipment procurement, and (potentially) repair and return from a central location.

1.9.4. The sustaining base also may activate the “Prime Vendor” (PV) AEF’s contract clause and act as primary conduit of information and guidance for resupply of deployed medical units. (PV AEF clauses require vendors to make requested materiel available for transport within 8 hours, 7 days a week.)

1.9.5. In a mature theater, there may be a jointly staffed Theater Medical Logistics Support (TMLSM) element linked to the combatant commanders, joint task force (JTF)/SG, AFFOR/SG, deployed medical units, CONUS sustaining base, and the AFMLOC. The TMLSM will then be the deployed units primary point of contact for materiel and equipment support in theater. The sustaining bases will still be available for emergencies and support when the TMLSM is unable to provide support.

1.10. Medical/Operational Planners.

1.10.1. MAJCOM, and Air Force component medical and operational planners verify with the AFMLOC that medical logistics requirements are identified in OPLANS, exercises, and real-time operations. Some important logistics considerations are local oxygen support capability, local linen support, local hazardous waste disposable, and available power, fuel and communications capability.

1.10.2. Patient Movement Items (PMI) Program. PMI are the supplies and equipment necessary to support patient movement and aeromedical evacuation (AE). Medical logistics personnel manage inventory availability (at PMI centers and cells), asset visibility, and flow of PMI through available transportation methods to meet requirements. The main purpose of the PMI program is to prevent degradation of the capabilities of medical units due to an outflow of PMI with patients in the AE system. The program manages all PMI assets and provides sufficient assets to sustain AE operations or provide for in-kind exchange when PMI accompanies a patient in the AE system. The USAF/SG has oversight responsibility for the US Air Force program and Air Mobility Command (AMC)/SG is responsible for program management.

1.11. Deployed Medical Unit.

1.11.1. The deployed medical unit is normally a unit type code (UTC) with one or more war reserve material (WRM) assemblages providing medical support in response to war, contingency operations, disaster and humanitarian relief, exercises, or any operation that requires the assemblage to be moved from storage to operational use. A deployed medical unit accomplishes unit resupply responsibilities as referenced in applicable Air Force

instructions, manuals and deployment orders/guidance. They coordinate with the MAJCOM, AFMLOC, and CONUS sustaining base prior to deployment to obtain specific instructions required during all phases of deployment. Personnel should be familiar with the EML concept of operations (CONOPS). Upon arrival in theater, the deployed medical unit initiates communication with the sustaining base and works with deployed communications personnel and/or systems to secure a permanent communications solution. They notify the sustaining base of issues related to supply maintenance and ensure that resupply requirements are identified and coordinated. Resupply requirements are identified as one of three priorities, urgent (96 hours), immediate (7 days) or routine (30 days). Communications and coordination by the deployed unit with the AFMLOC and sustaining base on materiel and maintenance issues is critical to meet EML time-definite-delivery goals.

1.11.2. The deployed medical unit appoints a primary point of contact to communicate various logistics issues with all nodes and update appropriate contingency and annual training or exercise schedules to ensure EML personnel, equipment, and training are incorporated to meet CONOPS requirements. Deployed personnel identify shortfalls in personnel, equipment, and training, and educate line and medical personnel, especially commanders, on the EML process and capabilities. When required supplies are received, the deployed medical unit notifies either the sustaining base, AFMLOC, or they update the automated information system to ensure the transaction is closed within the Global Transportation Network (GTN).

1.11.3. Once deployed and mission capable, a unit takes action to ensure logistics support. Logistics personnel must sign-up to Medical Logistics List Servers to receive Quality Assurance/Recall Notices, the Air Force Medical Logistics Letter and Medical Equipment Device Alerts. They coordinate with the local Office of Special Investigation (OSI) to validate local vendors outside the pre-approved list and communicate with other medical units in the area to understand their mission and possible resupply requirements. Coordination with AE units is necessary to establish a process for obtaining PMI in-kind exchange replacements and establish supply chain synergies. Deployed units should closely coordinate with the AFFOR/SG to ensure requirements beyond the units Allowance Standard are reviewed prior to submission to the sustaining base.

Section 1C—Planning

1.12. Deploying Unit Home Base. The Deploying Units Home Base requests funding and activates deferred procurement plans once deployment notification/warning order is received. All shortages that can be obtained before deployment are included as part of the deployment shipment. A shortage list is provided to the deploying staff and the sustaining base. The sustaining base and AFMLOC takes responsibility to obtain the remaining shortages and expedite delivery to the deployed unit. Equipment should have proper preventive maintenance and calibrations completed before the unit deploys, thereby maximizing mission capability while a repair and return channel is being established for the theater.

1.13. Expeditionary Medical Support (EMEDS) and the Air Force Theater Hospital (AFTH). The Air Force Medical Service fields small, lightweight, medical packages that can be tailored from small man-portable sets to a 100+ bed AFTH with specialty sets. EMEDS modules initially deploy with 7 days of materiel; therefore, agile combat support must begin immediately at deployment. (See AFTTP 3-42.7, *Aerospace Medical Contingency Ground Support System*, for more information on EMEDS modules and AFTH capabilities.)

1.14. Expeditionary Medical Logistics (EML) System.

1.14.1. The EML process uses a sustaining base to receive a deployed medical unit's requirements and process orders to approved vendors or depots that meet strict Air Force availability, time, and shipping criteria. EML also uses the concept of repair and return in providing maintenance support. Commercial transportation is used as far forward as possible and may connect with the military transportation system.

1.14.2. The number of nodes should be minimized and consolidation points avoided allowing materiel to flow rapidly and nonstop. Reliable worldwide telecommunication support and internet access are essential to facilitate information flow among system users throughout the supply chain system users. The EML system is the linking process for a complex supply chain and consists of the following:

1.14.2.1. Intense Supply Chain Management—100 Percent Positive Control. Supply chain management is the oversight and control of all internal and external processes necessary to satisfy a supply order from acquisition, through shipment, to delivery. All medical supply chain users are linked through communication networks having rapid and multidirectional information flow. The AFMLOC establishes the supply chain(s) and orchestrates the sharing of information and the flow of materiel. The supply chain(s) must remain dynamic and respond quickly to unpredictable demand.

1.14.2.2. Information and Asset Visibility. The quick and unimpeded flow of information between all supply chain partners is critical. Most important is total asset visibility (TAV), including materiel in inventory, on-order, and in-transit. Medical logisticians should utilize existing military information systems and commercial services to maintain in-transit visibility (ITV) of medical cargo. This information should be "pushed" to all participants in the supply chain.

1.14.2.3. Commercial Business Practices. Commercial business practices include use of premium transportation, minimum inventory, highly responsive and reliable industry partners, and asset visibility at all times, especially when in-transit.

1.14.2.4. Sustaining Base. The sustaining base receives requests for materiel from deployed medical units and takes necessary actions to ensure that 100 percent of all requests are accepted by vendors/depots. The materiel is purchased, packed, marked, and

shipped to ensure deployed medical units receive materiel based on EML time-definite-delivery goals. If the deployment evolves into a long-term deployment, or for existing OCONUS medical units having separate medical logistics accounts, the sustaining base may not be the primary organization receiving supply orders. After the first AEF rotation, planning for long-term sustainment should be initiated. Long-term sustainment support should maintain a single source of supply. However, the sustaining base will remain available to provide any required support.

1.14.2.5. Simplified Priority System. To ensure the supply chain is responsive to customers needs the deployed unit prioritizes orders into one of three priorities. This simplified priority system provides a method to accurately define time definite delivery requirements and measure actual customer wait time against the customers stated need.

1.14.2.6. Repair and Return. During deployments Biomedical Equipment Technicians (BMET) operate the maintenance function much like it does at a fixed facility. Not every medical equipment item will have repair parts as part of the deployed package, nor does every item drive the need for test equipment. In extended deployments, repair and return capabilities are collocated at Medical Equipment Repair and PMI centers (MERC/PMI) to facilitate the repair and return process. Communications between the deployed BMET and the PMI Center providing repair and return support is vital. Repair and return equipment availability is part of the important information in maintenance planning.

1.15. Rapidly Deployable Medical Logistics "Enablers."

1.15.1. Medical Materiel Manpower Augmentation Teams.

1.15.1.1. The three-person medical materiel specialist team may deploy to various logistics nodes to facilitate the flow of materiel and information. These nodes include - vendors, manufacturers, distribution hubs, and medical treatment facilities (MTFs) located near aerial ports of debarkation or embarkation (APODs/APOEs). These teams will be sourced initially from the sustaining base to the greatest extent possible. A component of the planning process will be determining the number and locations to which these augmentation teams are deployed. These requirements are communicated to operational planners for inclusion in OPLANs.

1.15.1.2. Medical materiel manpower augmentation teams oversee, manage, and ensure the continuous, rapid, and unbroken flow of materiel and information from the source of supply to the deployed medical unit. The team also coordinates with the transportation management office (TMO) and the aerial port squadrons to ensure the GTN is updated on all cargo moves, providing in-transit materiel visibility at all times. In Europe, the team coordinates with the Theater -Distribution Management Cell (TDMC) that assists in resolving velocity problems, as required.

1.15.2. Buffer Stock and Resupply Packages. Buffer stock is materiel (usually 10-day resupply packages) located with the deployed medical unit as a "safety level" in the event of

supply chain disruption caused by - interdiction, inclement weather, sudden increases in demand, or infrequent/erratic transportation. Buffer stock can also be stored outside the theater, for ready, rapid movement to the deployed medical unit. Buffer stock is not considered nor used as operating inventory. Resupply packages can be “pushed” to deployed medical units compensating for potential disruption, (e.g., infrequent or erratic airflow).

1.16. Support for Aeromedical Evacuation (AE) Units.

1.16.1. Medical logistics personnel assigned to AE UTCs will be called on to fill the medical supply needs of the deployed UTC. There are several factors that will affect support, depending on the UTC being supported:

1.16.1.1. Mobile Aeromedical Staging Facility (MASF). The 10-bed MASF requires medical supply support to begin seven days after being set up. This may come from deployed medical logistics personnel in the PMI UTC. In this situation, medical logistics personnel will handle PMI equipment tracking and ordering of materiel required for the MASF. MASF resupply packages are available to support materiel sustainment efforts. Deployment of these assets is based on requirements derived from the Theater’s AE structure. Other support comes from the collocated deployed MTF using the EML processes. If there is no deployed MTF providing support, the AE forces receive guidance from the AE Command Squadron regarding reachback or alternate sources of supply.

1.16.1.2. AE Kits. These kits may have been “pared and tailored” for the deployment. If so, there may be supplies remaining at the home station that can be pushed forward, after coordination with the AFMLOC. The resupply of AE kits will normally start at the crew staging area. This may be with an AE Crew Management Cell or AE Stage Management Team. In these situations medical logistics personnel should receive guidance for resupply from the AE Command Squadron.

1.16.1.3. Critical Care Air Transport Team (CCATT). Although the CCATTs are not AE UTCs, they may look to a nearby medical logistician for medical materiel support. Many of the consumables are components of other AE equipment UTCs and can be a source for emergency resupply. CCATT resupply packages are available to support materiel sustainment efforts and can be deployed based on the theater’s AE structure.

1.17. Support for Air Force Special Operations Command (AFSOC) Medical Units.

1.17.1. Due to their unique mission requirements AFSOC medical units may require several different resupply strategies. Similar units may use different methods for resupply depending on location, type and mission duration. The key to providing effective medical logistics support to AFSOC medical units is communications in theater with Air Force EMEDS units and the AFMLOC. Medical logistics personnel need access to secure communication devices to communicate these requirements.

1.17.2. When an AFSOC medical unit is to remain in a location for an extended period, a Department of Defense Activity Address Code (DODAAC) may be assigned enabling the unit to reachback to the sustaining base. This resupply approach is similar to other EMEDS units. The mobile character of AFSOC units will most likely require their medical units to use a deployed EMEDS for resupply. Knowledge of AFSOC medical unit requirements early in an operation is important in ensuring the EMEDS unit can incorporate AFSOC requirements into their reachback process.

1.18. Joint Operations Support.

1.18.1. With the transition of military operations to expeditionary missions, Air Force EMEDS may be tasked on occasion to support other DOD Service components and coalition forces. Theater situational awareness is essential for medical logistics personnel to ensure they can support these unique materiel requirements.

1.18.2. Medical logistics personnel may also be required to support movement of medical materiel through transportation nodes to ensure time-definite delivery goals are achieved. These critical nodes are usually identified by either AFFOR/SG medical logistics or the AFMLOC. Once identified, personnel taskings are entered into the Joint Operation Planning and Execution System (JOPES). The primary duties of these teams will be to identify and expedite medical shipments and ensure proper storage and repackaging of temperature-controlled materiel. Air Force personnel assigned to transportation nodes may also be required to provide assistance in the movement of other DOD Service component medical materiel.

Section 1D—Operations

1.19. Mission. The EML system provides time-definite resupply of materiel by synchronizing the flow of materiel, information, and funds from initial unit request to delivery. It uses a “pull” process for resupply and repair and return process for medical maintenance to minimize inventory (footprint) and airlift requirements.

1.20. Implementation of the EML System.

1.20.1. By adopting commercial business practices, the EML system streamlines the requisition process for the deployed medical unit and eliminates or significantly reduces support structures.

1.20.2. The AFFOR/SG is responsible for AFFOR medical logistics in the area of responsibility (AOR) to include: coordinating the AFFOR Annex Q, Medical Logistics Appendix; identifying requirements for medical logistics manpower augmentation team(s) through JOPES to support expeditionary AFFOR; documenting medical logistics manpower augmentation team(s) shortfalls to supporting MAJCOMS; and coordinating logistics support plans with the AFMLOC.

1.20.3. AFMLOC is responsible for reachback medical logistics in support of the AFFOR/SG and determines the strategy to support the AFFOR/SG medical logistics plan for the AOR. The sustaining base, in coordination with the AFMLOC, identifies requirements for medical logistics manpower augmentation team(s) to support the plan. The Medical Operations Center (MOC), through JOPES, begins the process to deploy medical logistics manpower augmentation teams(s) to the agreed upon logistics nodes. Shortfalls of these teams are coordinated with supporting MAJCOMs, if necessary.

1.20.4. The sustaining base and the AFMLOC coordinate with the United States Transportation Command (USTRANSCOM) and combatant commander planners to ensure the most expeditious transportation nodes are used for sustainment. Commercial contract carriers are used to the maximum extent possible. It is essential to minimize the number of nodes through which materiel must transit, and eliminate consolidation to reduce delays.

1.20.5. The supporting MERC/PMI acts as a hub for medical equipment repairs and calibrations that cannot be accomplished at the deployed site. AFFOR/SG will coordinate a support agreement between the MERC/PMI and deployed medical sites describing what services and equipment the MERC/PMI is capable of providing and how the deployed BMET should arrange for this support. If required due to increased workload, BMET personnel UTC will be requested to augment the MERC/PMI. Additionally, the deployed BMET will determine if the equipment can be repaired or calibrated locally, requires PMI support, or should be replaced.

1.21. Transportation.

1.21.1. Materiel for a deployed medical unit should be transported by fast and reliable lift. Cargo movement throughout the distribution chain must have 100 percent ITV. Several commercial carriers with individual systems provide tracking numbers that can be followed via internet sites. Shipments in the military transportation system are tracked via military ITV programs. Medical logisticians and the transportation community work hand-in-hand to develop executable medical cargo movement plans. Working relationships and agreements should be established to ensure uninterrupted medical cargo movement. Similar contracted or partnership agreements are pursued with commercial transporters to the greatest extent possible.

1.21.2. Each deployment of a medical assemblage can be unique. Therefore, the transportation scenario will dictate the nodes and methods of moving medical materiel to a deployed medical unit. Resupply materiel should be transported via the most expedient lift method and is dependent upon operational requirements and/or constraints.

1.22. Sustainment. A sustaining base is the materiel and information lifeline of deployed medical units and provides focused and high velocity logistics to deploying and deployed Air Force medical units worldwide. The sustaining base is normally collocated with a CONUS medical center and has two major advantages: 1) direct access to a large number of suppliers

experienced in large scale logistics support; and 2) in-house providers who can rapidly identify substitutes or alternatives for medical items not readily available.

1.23. Theater Medical Logistics Support Management. In theater, there may be a jointly staffed Theater Medical Logistics Support Management (TMLSM) element linked to the combatant commanders, joint task force (JTF)/SG, AFFOR/SG, deployed medical units, CONUS sustaining base, and the AFMLOC. The TMLSM supports the theater medical logistics manager in facilitating materiel movement and in providing medical asset visibility.

1.24. Training.

1.24.1. Training is tailored to help personnel meet the logistics challenges found at any node within the supply chain. Training is the key component to successful EML implementation. EML support training should be focused, readily available, and understandable by individuals at any experience level. Logisticians supporting deployed medical units should possess an in-depth knowledge of medical logistics and be knowledgeable regarding transportation options, associated ITV requirements and secure communications access and use.

1.24.2. Training on information systems, database business applications, installation and logistics (IL) planning tools, and web-based applications, particularly those generated outside the medical logistics community, should be conducted at the practical application and use level, not just for familiarization. To retain proficiency, regular use of these products, either in peacetime or in readiness exercises, is deemed essential.

1.24.3. Training is accomplished through various means. On-the-job, peacetime logistics functions provide a solid foundation of skills required for EML. On-line, computer-based instruction may be used for training on the GTN. Training available at the local base level should meet generic and specific requirements (hazardous materials, cargo preparation, pallet build-up, software products, etc.). In some instances, specific courses (e.g., EMEDS training at Brooks City Base AFB, Texas) are offered or specialized experts provide on-site training for information systems (such as the Defense Medical Logistics Standard Support (DMLSS) system), when required. Ultimately, logistics training on EMEDS must be incorporated into formal training programs for 3-level and advanced courses at the School of Health Sciences, as well as career development courses (CDCs) for AFSC 4A1X1s and 4A2X1s.

1.24.4. Detailed operating instructions should be available at each node or transit point within the supply chain to include adjunct nodes. These instructions ought to be based on a generic template developed by the sustaining base and posted on the AFMLO web page.

1.25. Deployed Medical Unit. The deployed medical unit is normally a UTC with one or more WRM assemblages providing medical support in response to war, contingency operations, disaster and humanitarian relief, exercises, or any operation that requires the assemblage to be moved from storage to operational use. The EML process is applicable to resupply at any level.

Section 1E—Command, Control, Communications, and Computers (C4)

1.26. Command and Control (C2). Medical operations C2 are defined in warning, execution, and operations orders. The gaining theater surgeon establishes theater medical policy based on these orders and passes them through the JTF staff to the medical logistics manpower augmentation team mission leader. The medical logistics manpower augmentation team falls under the control of the supported unit. When augmenting an existing medical resource, the medical materiel specialist team reports directly to the senior ranking medical officer or in accordance with the C2 structure of the AFTH. When employed to augment existing EMEDS/AFTH assets, the medical logistics manpower augmentation team integrates into the host's C2 structure. Medical Operations C2 of joint or coalition environments is normally defined in the warning, execution, and operations orders.

1.27. Responsibilities. The AFFOR/SG is responsible for the AFFOR Annex Q, Medical Logistics that identifies requirements for medical materiel specialist team(s) support to the AEF. The AFMLOC is responsible for CONUS-based reachback medical logistics in support of the AFFOR/SG. The AFMLOC determines the CONUS-based strategy to support the AFFOR/SG medical logistics plan for the AOR. The CONUS sustaining base, in coordination with the AFMLOC, identifies requirements for medical logistics manpower augmentation team(s) support to the CONUS support plan.

1.28. Communications. Reliable communications are critical to the entire EML process and begin with proper planning in the predeployment phase. Communication requirements must be an integral part of all operation planning documents. Reliable worldwide telecommunications, including satellite communications (SATCOM) and access to the internet, are essential for establishing and sustaining effective resupply to deployed medical units. Communications may be unclassified or classified. The sustaining base and AFMLOC should ensure that the deploying unit has access to a provided remote access server (RAS). This will allow the deployed medical units to pass requisitions electronically via SATCOM or by other appropriate means as an interim solution until deployed communications provide the permanent connectivity solution. The sustaining base must establish a deliberate plan to connect the deploying unit with the RAS prior to actual deployment. This plan must include testing of remote connectivity with the sustaining base prior to deployment.

1.29. Nodes.

1.29.1. The primary nodes within the EML system include the AFMLOC, the deployed medical unit, and the sustaining base. Adjunct nodes include PV, JTF/SG, AFFOR/SG, and the TMLSM element. Depending on the node(s) and method(s) of transportation employed, the APOE/APOD may become critical adjunct nodes.

1.29.2. Node enabling functions or processes include transportation, automated information systems/technology, worldwide telecommunication capability (including SATCOM), access to the Internet, logistics manpower augmentation, and the appropriate level of training. All

nodes, functions, and processes related to the EML supply chain exist in every phase of a deployment, including post-deployment review and analysis.

1.30. Air Force Medical Logistics Operations Center. The AFMLOC is the focal point for coordinating and integrating medical logistics planning and support at the strategic level. The AFMLOC functions as the supply chain manager creating and maintaining responsive, visible sustainment to the theater combatant commander and to the deploying/deployed forces. The AFMLOC synchronizes information, commercial technology, logistics, and transportation strategies to meet the full spectrum of operational requirements.

1.31. Deployed Medical Unit. The deployed medical unit is a UTC with one or more WRM assemblages providing medical support in response to war, contingencies, disasters, humanitarian operations, exercises, or any operation that requires moving the assemblages from storage to operational use. The EML process provides materiel resupply to deployed medical units. The foundation of EML success is in pre-deployment actions. Maintaining a high readiness capability, such as a full complement of supplies and equipment and fully trained personnel is vital to EML success.

1.32. Sustaining Base. The sustaining base is the deployed medical unit's medical materiel information lifeline. The sustaining base is typically located in CONUS at a major medical center, although it may be located at an OCONUS medical facility that can rapidly source and move materiel to deployed units. Considerations in determining an alternate sustaining base location are its proximity to available commercial materiel resources and access to an array of transportation options.

1.33. Prime Vendors (PVs). The sustaining base requisitions the bulk of pharmaceutical and medical-surgical supplies to support deployed medical units from PVs. AEF requirements are inserted in PV contracts supporting the CONUS sustaining base. Vendor contracts normally contain the requirements to prepare cargo in accordance with (IAW) military guidance and requirements. This is especially important for hazardous and refrigerated materiel. (Refer to the EML CONOPS for further details regarding PV.)

1.34. Computers/Information Management/Technology.

1.34.1. EML information management will be accomplished through employment of three existing information system technologies: Medical Logistics (MEDLOG) System; Defense Medical Logistics Standard Support-Assemblage Management (DMLSS-AM); and USTRANSCOM's GTN.

1.34.1.1. The MEDLOG and DMLSS system are the primary information management systems used by the sustaining base to support asset management until the full deployment of the DMLSS. A mobile MEDLOG system may be deployed to support a large extended deployment.

1.34.1.2. MEDLOG and DMLSS are the primary automated information systems used by the deployed medical unit to support asset management and reorder. Both systems are mobile and are stand-alone information technology solutions.

1.34.1.3. USTRANSCOM's GTN integrates movement and schedule data from source systems and commercial transportation service providers and feeds this data into supply chain nodes in order to provide ITV.

1.34.2. Personnel should evaluate and incorporate, all technological enhancements into the EML process where beneficial. Data timeliness criteria follows the Under Secretary of Defense (Acquisition, Technology and Logistics) Implementation Plan for all military and commercial origin, in-transit, and receiving activities to report the arrival and departure of unit strategic and sustainment airlift movements, sustainment sealift movements, and intra-theater and CONUS movements.

Chapter 2

BLOOD SUPPORT OPERATIONS

Section 2A—The Blood Distribution System

2.1. Armed Services Blood Program. The Air Force Blood Program (AFBP) is a key component of the Armed Services Blood Program (ASBP). The ASBP provides transfusion products when required to US forces worldwide in support of operations from in-garrison to expeditionary deployments. The Armed Services Blood Program Office (ASBPO) is chartered by DOD and reports to the Assistant Secretary of Defense/Health Affairs (ASD/HA) to coordinate the provision of blood products through the Services' programs. Each of the Services maintains a blood program that meets or exceeds Food and Drug Administration (FDA) regulations. Each Service maintains its own FDA license for the manufacture of blood and blood products. The Surgeon General serves as the authorized agent for the license assuring compliance with FDA regulations. The Air Force, as the owner and operator of air transport and airheads, is the executive agent for the strategic movement of blood products worldwide.

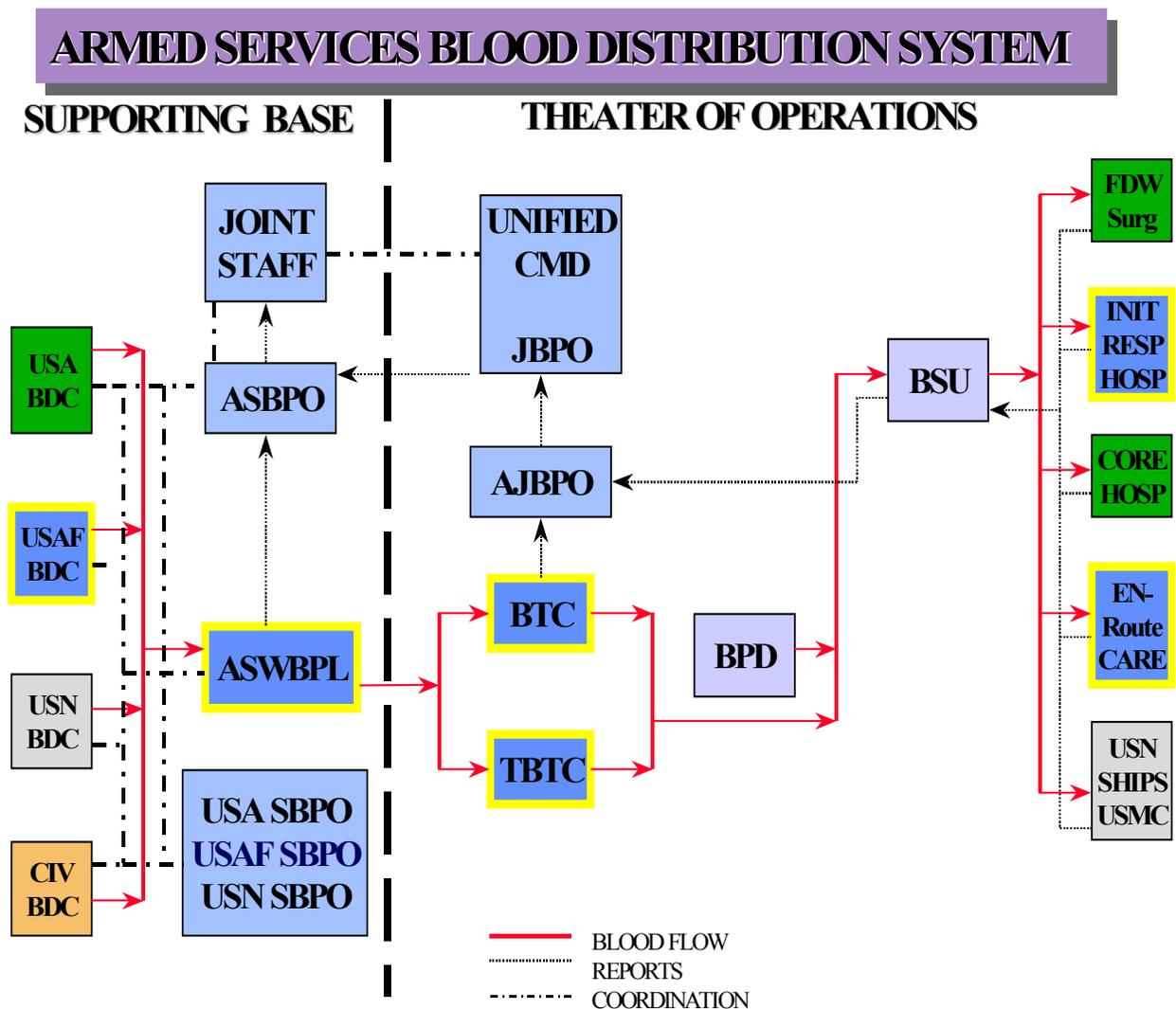
2.2. The Blood Distribution System. (See Figure 2.1.)

2.2.1. The blood distribution system is a joint, integrated system that assures blood in the required amounts is delivered when and where needed. The ASBPO coordinates with the three Service blood programs to make the blood distribution system function smoothly. The system begins with the Blood Donor Centers (BDCs) of each Service that collect, test, label, and ship blood. Air Force BDCs take direction through their MAJCOM from the AFBPO. All CONUS BDCs ship their blood products to the closest Armed Services Whole Blood Processing Laboratory (ASWBPL).

2.2.2. An ASWBPL is a central collecting point for CONUS blood shipments in preparation for strategic airlift into the theater of operation. The ASBPO directs the ASWBPLs to ship blood products into the theater through blood transshipment centers (BTCs), transportable blood transshipment centers (TBTCs), and/or blood supply units (BSUs), which are intermediate re-icing and storage facilities. The MTF then sends transportation assets to the BTC or BSU to pick up needed products. Blood requests flow just the reverse of the blood distribution system.

2.2.3. Theater blood management is the responsibility of the Joint Blood Program Office (JBPO), which is a member of the unified command surgeon's staff. There is also one or more Area Joint Blood Program Offices (AJBPOs) in a theater that coordinates blood management within their respective geographic area. The AJBPO reports to the JBPO for blood management functions.

Figure 2.1. The Blood Distribution System.



Section 2B—Organizations and Responsibilities

2.3. Air Force Surgeon General. The Air Force Surgeon General is responsible for assuring the safety, purity, and potency of all blood and blood products manufactured in Air Force facilities.

2.4. Armed Services Blood Program Office (ASBPO).

2.4.1. The ASBPO is a tri-Service staffed DOD field operating agency responsible for coordinating the military blood programs and related blood activities of the military departments, the unified and specified commands, and various federal, civilian, and allied

military agencies. ASBPO is chartered by the DOD to monitor the policies established by the Assistant Secretary of Defense for Health Affairs.

2.4.2. The ASBPO coordinates and monitors the blood programs of the US Army, Navy, and Air Force, and that of each geographic combatant command. This office also coordinates standardization of policies through the office of ASD/HA for the collection of blood and the operation of the Services' blood programs. Other responsibilities include coordinating the development and submission of specifications on the essential characteristics of required blood program equipment to the Joint Readiness Clinical Advisory Board (JRCAB); performing liaison with other federal, civilian, allied and coalition agencies concerning blood related matters; and directing the Services, upon mobilization or during periods of increased blood needs for contingency operations, to meet required quotas of blood or blood products to be shipped to the designated Armed Services Whole Blood Processing Laboratory (ASWBPL).

2.5. Air Force Blood Program Office (AFBPO). The AFBPO activates Air Force blood donor centers (BDCs) to meet the taskings of the ASBPO and establishes blood product quotas for the BDCs. The AFBPO is responsible for the supervision of the directors of the ASWBPLs (East and West) and oversees their operations. Other responsibilities of the AFBPO include track, maintain, and report the aggregate blood readiness and requirements to appropriate levels in the chain of command; monitor blood distribution network effectiveness during peacetime and wartime; identify Air Force blood program UTC requirements to meet OPLAN taskings; and provide AFBP operational guidance and policies to Air Force medical treatment facilities.

2.6. Air Force Blood Donor Center (BDC). The Air Force BDC is comprised of OCONUS blood donor centers and in-place CONUS blood donor centers. The BDC collects, processes, and ships blood products in the amounts designated to the ASWBPL as directed by the AFBPO. All Air Force BDCs are licensed by the FDA for the manufacture and distribution of blood products. Blood donor centers may be collocated within a blood bank.

2.7. Armed Services Whole Blood Processing Laboratory (ASWBPL).

2.7.1. The ASWBPL is a tri-service staffed facility that is responsible for receipt and reprocessing of blood products from CONUS blood donor centers and shipment of these products to designated unified command blood transshipment centers.

2.7.2. The ASWBPL maintains a peacetime inventory of 250 units of liquid blood for use as a rapid response requirement. Additionally, the ASWBPL receives blood products from CONUS BDCs; retypes blood for ABO typing and Rh to detect labeling errors prior to shipment into a theater of operations; and ships blood products to the designated blood transshipment center or transportable blood transshipment center, as directed by the ASBPO.

2.8. Blood Transshipment Centers (BTC).

2.8.1. A BTC is an Air Force staffed agency responsible for receiving blood products from the ASWBPL, blood product depot, or another BTC. The BTC is responsible for receiving, storing, and shipping these blood products to area blood supply units. BTCs are normally located at a major point of entry in theater near areas of embarkation and debarkation.

2.8.2. In addition to receiving and storing blood products, Transportable BTCs (TBTC) issue blood products to designated blood supply units based on daily allocations established by the Area Joint Blood Program Office (AJBPO) or Joint Blood Program Office (JBPO). TBTC is a mobile BTC with a deployable manpower team.

2.9. Blood Supply Unit (BSU).

2.9.1. A BSU is a service-staffed unit assigned to a geographic area by the AJBPO that is responsible for the receipt and storage of liquid and frozen blood products from BTCs or blood product depots. Received blood is stored within the BSU until requested by the area MTFs. BSUs may be collocated with one of the area MTFs or the BTC.

2.9.2. BSUs are responsible for receiving, storing, and distributing blood within the theater of operations. The Air Force has Frozen Blood Product Teams responsible for deglycerolization of frozen blood.

2.10. Blood Product Depot (BPD). The BPD stores prepositioned frozen blood products and maintains the capability to thaw and deglycerolize frozen red blood cells (RBCs) for their own use or distribution to other MTFs (including ships offshore) as directed by AJBPO. The BPD can double as a BSU, if required, to distribute blood and blood products to MTFs.

2.11. Joint Blood Program Office (JBPO).

2.11.1. The JBPO is a tri-service staffed office responsible for overall joint blood product management in a unified command theater of operations. The JBPO functions as part of the unified command surgeon's office, but may establish an Area Joint Blood Program Office (AJBPO) for regional blood management.

2.11.2. The JBPO is the central point of contact to the ASBPO. Additionally, the JBPO coordinates joint blood product requirements and capabilities in the theater of operations and ensures blood is where it is needed, when it is needed.

2.12. Area Joint Blood Program Office (AJBPO).

2.12.1. An AJBPO is a tri-service staffed office responsible for joint blood product management in an assigned geographic area within a unified command. Each area includes at least one blood transshipment center and medical treatment facility.

2.12.2. An AJBPO may be established by the JBPO. The AJBPO coordinates requirements and distribution of all blood products to support the BSU and MTFs in a specific geographic area, regardless of the service component blood support planning process.

Section 2C—Blood Support Planning Considerations

2.13. Blood Support Planning Process.

2.13.1. The blood program is planned as a medical logistics function, however, blood is a living tissue and requires special handling, storage, and shipment to maintain its viability. Hence, the receipt, storage, and distribution of blood products require special consideration and procedures to ensure a successfully coordinated effort. RBCs are stored at 1-6 degrees Celsius and are shipped on wet, cubed ice for preservation purposes. Plans should be made to re-ice these products every 48 hours. This is the maximum validated storage time for the current DOD blood-shipping box.

2.13.2. The wartime planning factor for blood products in a theater is 4.0 units of liquid RBCs per wounded in action/nonbattle injury (WIA/NBI). Transfusion of these 4 units should be planned over the entire continuum of care (0 units of RBCs at Level 1, 1 unit of RBCs at Level 2 care, 2 units of RBCs at Level 3 care, and 1 unit of RBCs at Level 4 care) and not all in the forward-deployed medical assets.

2.13.3. The Armed Services Blood Program Office (ASBPO) reaction time should be considered in developing plans. Optimally, receipt by the requesting command of blood or blood products for sustainment of operations should take no longer than 72 hours. This is true for requests of less than 250 units that are maintained at the Armed Services Whole Blood Processing Laboratories (ASWBPLs) for such rapid response requirements. Requests for more than 250 units will require activation of CONUS BDCs that can take from 24-48 hours. Once activated, the absolute minimum time required to collect, test, label, and ship RBCs is 24-48 hours from the time of collection. These units are then shipped to the ASWBPLs adding another 24 hours. Consequently, the earliest timeframe RBCs will be available at the ASWBPLs (beyond the 250 rapid response inventory) for transshipment into theater is 72 hours from BDC activation.

2.13.4. The ASWBPLs are US Air Force managed, tri-service staffed, central repositories for blood required in contingencies/wartime. Each ASWBPL is capable of processing 7,200 units of RBCs/day (2 pallets full). There are two ASWBPLs: one is located at McGuire AFB, New Jersey (supplies USEUCOM and USCENTCOM); and the second is located at Travis AFB, California (serves United States Pacific Command (USPACOM) and United States Southern Command (USSOUTHCOM.)) The ASWBPLs maintain a peacetime inventory of 250 units of liquid blood for use as a rapid response requirement. An ASWBPL releases blood to unified commands upon approval by the ASBPO. As such, theater MTFs must contact their unified command Joint Blood Program Office (JBPO) or Area Joint Blood Program Office (AJBPO), versus contacting the ASWBPL directly.

2.13.5. The BTCs/ TBTCs serve as the central receiving point in theater for blood shipments from the ASWBPL and for issue of blood to the blood supply units (BSUs), MTFs, or other BTCs/TBTCs. A BTC/TBTC can store and process up to 7,200 units of blood daily. Air Force BTCs/TBTCs are located at major airfields with one or more BTCs/TBTCs located in each theater/area of operation and are managed by the JBPO or AJBPO.

2.13.6. Blood supply units (BSUs) are responsible for receiving, storing, and distributing blood within the theater of operations. They provide a 5-day storage supply of blood products based on MTF proposed requirements and blood reports. The BSU can be identified to provide support in a specific geographical area regardless of Service components. It can support up to 12 MTFs as designated by the JBPO. Most BSUs should have a 5-day inventory goal. Realistically, a planner may expect a 4 to 5 day resupply response time from outside the theater. Prepositioned frozen blood products are stored in some unified commands at blood product depots (BPDs). The BPDs can thaw and deglycerolyze frozen blood for use when directed by the JBPO. BPD throughput is limited and labor intensive; therefore, frozen blood should be planned as a stop-gap measure until liquid RBCs are available or as a supplement to the liquid RBC supply.

2.13.7. Most MTFs should plan to keep a 3-day supply of blood and blood products on hand. Currently, the health service logistics planner can expect RBCs to be at least 8 to 10 days old upon receipt. Blood collected in CPDA-1 (an anticoagulant preservation solution) and stored at 1 to 6 degrees C expires 35 days after collection. Units collected with an additive solution have an extended expiration to 42 days. This leaves a maximum shelf life of 25 to 32 days for use within the theater. Inventory replacement should be planned to allow for delivery times described above prior to expiration of supply on hand.

2.14. OCONUS Blood Donor Centers (BDCs). OCONUS BDCs provide in-theater blood collection capability for local blood need support that exceeds available liquid supply. BDCs should be able to stand up and begin collection within 48 hours and have ability to collect 50 units/day for a limited period of time. Most of the Air Force BDCs are small and have limited collection capabilities. Larger joint BDCs that will bring greater collection capacity to each theater will eventually replace Air Force BDCs.

2.15. Host-Nation Blood Resources. Alternative sources from host nations can be evaluated for use. US FDA licensed host-nation blood can be used. The host-nation supply can be evaluated and, if deemed equivalent to FDA standards, can be used when permission is granted by ASD/HA through the ASBPO. Local host-nation blood supplies should be evaluated during peacetime for possible use during emergencies and contingency operations.

Section 2D—Blood Support Operations

2.16. Peacetime Operations.

2.16.1. OCONUS blood donor centers (BDCs) can collect up to 50 units/day, mainly for local use or to support theater requirements. They are FDA licensed, full service, albeit small BDCs.

2.16.2. CONUS Air Force BDCs are classified into one of two categories based upon their capabilities: host BDCs or satellite BDCs. Host BDCs are FDA licensed, full service BDCs that collect up to 100 units/day. Additionally, host BDCs receive the units collected at satellite BDCs for processing. They process, label, and ship blood products in required amounts to ASWBPLs on a daily basis. Satellite BDCs are licensed collection centers under a designated host BDC. They collect up to 50 units/day and ship them to their designated host for processing.

2.17. Deployment Operations.

2.17.1. Expeditionary Medical Support (EMEDS) Basic. The EMEDS basic is capable of storing up to 60 units of Group O blood to be transfused without cross-matching. Rh should be considered, especially for females of child-bearing age relying upon dog tags for Rh compatibility. Locally collected blood should only be used as last resort in emergencies since there is currently no way to test in-theater collected blood for infectious agents.

2.17.2. EMEDS+10/25 Bed AFTH. The EMEDS+10/25 bed AFTH is capable of storing up to 60 units of red blood cells (of mixed types) that can be transfused following standard compatibility testing. Capability to store up to 20 units of Fresh Frozen Plasma (FFP) also exists; however, the likelihood of FFP availability is low due to the limitation of dry ice shipments on aircraft and availability of dry ice at BTCs/TBTCs. Locally collected blood should only be used as last resort in emergencies since there is currently no way to test in-theater collected blood for infectious agents.

2.17.3. Fixed Site MTFs. These MTFs are capable of storing a minimum of 48 units of blood. Most fixed site MTFs have much larger capacity, but will vary by site. Collection capabilities of fixed site MTFs will vary by location. Some fixed-site MTFs in United States Pacific Command are also designated as a BPD.

2.18. Rapid Deployments to Undeveloped Theaters of Operation. The blood distribution system described above is well established and should be used to obtain blood in the currently established theaters of operation. Deployments to undeveloped areas can present challenges for obtaining blood, but in such cases, consideration should be given to taking an initial stock with deploying medical forces. Storage limitations during transport and re-icing requirements (48 hours on wet, cubed ice) must be considered and accounted for. Storage at destination should also be planned in advance. Wet cubed ice is seldom available in undeveloped areas of the world. The EMEDS basic has a small field blood refrigerator that can be operated by direct

power, power source (battery), or vehicle. Upon arrival, the unit should be set-up to proper storage temperature immediately to avoid degradation of blood (due to lack of ice).

Section 2E—Communications

2.19. Joint Medical Asset Repository (JMAR). The JMAR is part of a DOD medical system that provides real-time asset visibility. It also provides global asset visibility for DOD blood assets; shipping information for all DOD blood shipments; expiration date information for all DOD blood assets; and global access to any user, anytime, on any machine via the internet.

2.20. Blood Report. The Blood Report (BLDREP) is a standardized report used in the worldwide Armed Services Blood Program (ASBP) to report blood inventories, request blood products, and project requirements. Originators of the BLDREP include MTFs, BSUs, BTCs, BPDs, AJBPOs, and JBPOs. Message traffic is the primary means of transmission. The SIPRNET is increasingly becoming the preferred message traffic method. Most deployed medical units include the BLDREPs as part of the daily MEDRED-C report.

2.21. Blood Shipment Report. The Blood Shipment Report (BLDSHIPREP) is a standardized report used in the worldwide ASBP to report blood shipments. The BLDSHIPREP should be used by any medical facility to notify the receiving facility that blood has been shipped. Originators of the BLDSHIPREP include ASWBPLs, BPDs, BSUs, and BTCs.

DAVID F. MacGHEE, Major General, USAF
Commander, Air Force Doctrine Center

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

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 AFTTP 3-42.1, [Draft] *Health Service Support Command and Control in Deployed Operations*
 AFI 44-118, Technical Manual, *Operational Procedures for the ASBP Elements*
 AFH 44-152, Technical Manual, *ASBP Joint Blood Program Handbook*
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 USCINCPACINST 6530-0.2J: J07, 1997, USPACOM JBP

Abbreviations and Acronyms

| | |
|------------|--------------------------------------------------|
| AE | aeromedical evacuation |
| AEF | air and space expeditionary force |
| AFBDC | Air Force Blood Donor Center |
| AFBP | Air Force Blood Program |
| AFFOR | Air Force forces |
| AFMLO | Air Force Medical Logistics Office |
| AFMLOC | Air Force Medical Logistics Operations Center |
| AFRC | Air Force Reserve Command |
| AFSOC | Air Force Special Operations Command |
| AFTH | Air Force theater hospital |
| AFTTP | Air Force Tactics, Techniques, and Procedures |
| AJBPO | Area Joint Blood Program Office |
| AMC | Air Mobility Command |
| ANG | Air National Guard |
| AOR | area of responsibility |
| APOD | aerial port of debarkation |
| APOE | aerial port of embarkation |
| ASBP | Armed Services Blood Program |
| ASBPO | Armed Services Blood Program Office |
| ASD/HA | Assistant Secretary of Defense/Health Affairs |
| ASWBPL | Armed Services Whole Blood Processing Laboratory |
| BDC | Blood Donor Center |
| BLDREP | blood report |
| BLDSHIPREP | blood shipment report |
| BMET | biomedical equipment technicians |
| BPD | blood product depot |
| BSU | blood supply unit |
| BTC | blood transshipment center |

| | |
|----------|------------------------------------------------------------------|
| C2 | command and control |
| C4 | command, control, communications, and computers |
| CCATT | critical care air transport team |
| CDC | career development course |
| CONUS | continental United States |
| DMLSS-AM | Defense Medical Logistics Standard Support-Assemblage Management |
| DOD | Department of Defense |
| DODAAC | Department of Defense Activity Address Code |
| EMEDS | expeditionary medical support |
| EML | expeditionary medical logistics |
| FDA | Food and Drug Administration |
| FFP | fresh frozen plasma |
| GTN | Global Transportation Network |
| GWOT | Global War on Terrorism |
| IAW | in accordance with |
| IT | information technology |
| ITV | in-transit visibility |
| JBPO | Joint Blood Program Office |
| JCS | Joint Chiefs of Staff |
| JMAR | Joint Medical Asset Repository |
| JOPEs | Joint Operation Planning and Execution System |
| JRCAB | Joint Readiness Clinical Advisory Board |
| JTF | joint task force |
| MAJCOM | major command |
| MEDLOG | medical logistics |
| MEDRED-C | medical report for emergencies, disasters, and contingencies |
| MERC/PMI | medical equipment repair and PMI Center |
| MLMC | medical logistics management center |
| MOC | medical operations center |
| MTF | medical treatment facility |
| OCONUS | outside the continental United States |
| OPCON | operational control |
| OPLAN | operation plan |
| PMI | patient movement item |
| POM | Program Objective Memorandum |
| PV | prime vendor |
| RAS | remote access server |
| RBC | red blood cell |
| SATCOM | satellite communications |
| SG | Surgeon General |
| TAV | total asset visibility |
| TBTC | transportable blood transshipment center |
| TDMC | theater distribution management cell |
| TMLSM | theater medical logistics support management |
| TMO | transportation management office |

| | |
|------------|--------------------------------------|
| TTP | tactics, techniques, and procedures |
| TSG | theater surgeon |
| USCENTCOM | United States Central Command |
| USEUCOM | United States European Command |
| USPACOM | United States Pacific Command |
| USSOUTHCOM | United States Southern Command |
| USTRANSCOM | United States Transportation Command |
| UTC | unit type code |
| WRM | war reserve materiel |

Terms

node—A location in a mobility system where a movement requirement is originated, processed for onward movement, or terminated. (JP 1-02) *[Nodes are specific locations along the supply chain where known processes change from one phase to another.] {Italicized definition in brackets applies only to the Air Force and is offered for clarity.}*

unit type code—A Joint Chiefs of Staff developed and assigned code, consisting of five characters that uniquely identify a “type code.” Also called UTC (JP 1-02.)

reachback — The process of obtaining products, services, and applications, or forces, or equipment, or material from organizations that are not forward deployed (JP 1-02.)