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THE SECRETARY OF THE AIR FORCE**

**AIR FORCE TACTICS, TECHNIQUES
AND PROCEDURES 3-42.711**



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Tactical Doctrine

BLOOD SUPPORT OPERATIONS

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PURPOSE: The Air Force Tactics, Techniques, and Procedures (AFTTP) 3-42 series of publications is the primary reference for medical combat support capability. This publication, AFTTP 3-42.711, provides the tactics, techniques, and procedures (TTP) for the Blood Donor Center (BDC), Armed Services Whole Blood Processing Laboratory (ASWBPL), Medical Expeditionary Blood Transshipment Center (EBTC), Medical Expeditionary Blood Support Center (EBSC), and Medical Expeditionary Frozen Blood Product Team (FBPT). This publication covers the following Unit Type Codes (UTCs):

- FFBD1, Medical Expeditionary Frozen Blood Product Team
- FFBE1, Medical Expeditionary Blood Transshipment Center Equipment
- FFBP1, Medical Expeditionary Blood Transshipment Center, Module 1
- FFBP2, Medical Expeditionary Blood Transshipment Center, Module 2
- FFBP3, Medical Expeditionary Blood Transshipment Center, Module 3
- FFLBB, Medical Expeditionary Blood Support Center Team
- FFLB1, Medical Expeditionary Blood Support Center Equipment
- FZNBPU, Medical Expeditionary Frozen Blood Program Equipment

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SUMMARY OF CHANGES:

This publication has been substantially revised and should be completely reviewed. This publication combines the Concept of Operations (CONOPS) and

AFTTPs for the BDC, ASWBPL, EBTC, EBSC, and FBPT. Example Operating Instructions (OIs) were removed and are now available for download on the Air Combat Command (ACC) Manpower and Equipment Force Packaging (MEFPAK) Playbook.

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: This AFTTP for the BDC, ASWBPL, EBTC, EBSC, and FBPT describes each team's capability, deployment, employment, and redeployment. This AFTTP may be used as a guide for validating future requirements and revisions to appropriate planning and training concepts. It focuses on pertinent aspects of capabilities, employment, and interoperability and is not intended to detail all aspects of operations. ACC is the MEFPAK responsible agency (MRA).

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CHAPTER 1

INTRODUCTION

1.1. Purpose. This document describes the tactics, techniques, and procedures (TTP) for the Blood Donor Center (BDC), Armed Services Whole Blood Processing Laboratory (ASWBPL), Medical Expeditionary Blood Transshipment Center (EBTC), Medical Expeditionary Blood Support Center (EBSC), and the Medical Expeditionary Frozen Blood Product Team (FBPT). It describes command relationships, assigns tasks, and provides general guidance for EBTC, EBSC, and FBPT teams assigned to support the full range of military operations. It provides a source document for developing policies, standard operating procedures, and training programs and for validating future requirements and revisions to planning and training concepts. Unit Type Code (UTC) Mission Capability (MISCAP) statements are available for review on the Air Combat Command (ACC) Manpower and Equipment Force Packaging (MEFPAK) Playbook.

1.2. Background. The blood capability developed during the Cold War centered on the shipping capabilities of the Blood Transshipment Center (BTC) and Transportable Blood Transshipment Center (TBTC) along with the frozen blood deglycerolization capabilities of the FBPT. This monolithic approach relied on large, prepositioned assets that carried a large footprint and were heavy in personnel, equipment, and supplies. It proved to be unusable in terms of maintenance, rapid mobility, and flexibility.

1.2.1. EBTC Background. The lessons learned in the Gulf War highlighted the need for a reengineered theater capability designed to meet the needs of future contingencies, while recognizing anticipated limitations in manpower and equipment funding. As a first step, the modular, building-block approach used by the Expeditionary Medical Support (EMEDS) system was used as a template for combining the BTC and TBTC into the EBTC outlined in this AFTTP.

1.2.2. EBSC Background. The need for apheresis platelet (APLT) and whole blood collection in theater became apparent during Operation Enduring Freedom and Operation Iraqi Freedom. The EBSC was formed to address the need for these expanded theater blood support capabilities. The EBSC functions primarily as an APLT collection team, but can switch operations to perform whole blood collection when required.

1.3. Blood Component Therapy. Blood component therapy is the recognized standard of medical care in the continental United States (CONUS) and all Department of Defense (DOD) medical treatment facilities (MTFs). It plays a significant role in combat-casualty trauma care. The availability of blood components at a deployed medical facility (DMF) depends on several factors, including CONUS blood supply, logistical support (e.g., blood transshipment, air-frame availability, etc.), and the component utilization rate.

1.3.1. Blood Products. Collected blood products include fresh whole blood (FWB), APLT, and apheresis fresh frozen plasma (AFFP). FWB provides red blood cells (RBCs) (oxygen-carry capacity), coagulation factors (to include factors V and VIII), plasma (proteins,

volume), and platelets. The freshly collected whole blood must be transfused within 24 hours of collection. In accordance with (IAW) the Joint Theater Trauma System Clinical Practice Guideline, *Fresh Whole Blood (FWB) Transfusion*, all blood stored at room temperature for more than 24 hours must be destroyed due to the risk of bacterial growth. Whole blood refrigerated within 8 hours of collection may be stored up to 5 days. Blood platelets are collected through a selective process called apheresis and are essential to hemostasis (stoppage of bleeding). Once collected, the platelet product has a 5-day shelf life.

1.3.2. Frozen Blood Deglycerolization. RBCs are frozen at designated DOD sites in CONUS in a cryoprotective agent (typically glycerol) to be stockpiled for use in deployed settings to support the full range of military operations. Frozen red blood cells (FRBCs) can be stored for 10 years from the time of collection. The FRBC units must be thawed and deglycerolized before transfusion. Deglycerolization is the process used to remove the residual glycerol concentration from the FRBC unit to a level of less than 1 percent and replace it with isotonic solution (saline) before the blood is transfused. The shelf-life for deglycerolized blood is 14 days, post thaw.

CHAPTER 2

CAPABILITIES

2.1. Blood Donor Center (BDC). BDCs provide blood and blood products in support of peacetime and wartime contingencies. BDCs can collect, manufacture, and ship packed red blood cells (PRBC); fresh frozen plasma (FFP); cryoprecipitate (CRYO); plasma frozen within 24 hours of phlebotomy (PF24); APLT; AFFP; apheresis red blood cells (ARBCs); and RBCs destined for freezing (FRBC). The BDC is typically a fixed facility under the operational control (OPCON) of the MTF commander at the installation where the BDC is located.

2.1.1. Mission/Tasks. The BDC serves as the primary collection facility for PRBC, FFP, CRYO, PF24, APLT, AFFP, ARBC, and FRBC. The BDC ships the required quota of blood and blood components to the ASWBPL on a weekly basis. The weekly blood quota is set by the Air Force Blood Program Office (AFBPO) in coordination with the Armed Services Blood Program Office (ASBPO), Combatant Command (COCOM) Joint Blood Program Office (JBPO), and the Area Joint Blood Program Office (AJBPO).

2.1.2. Manpower. The BDC teams are comprised of the team chief (laboratory officer) and medical laboratory technicians. BDCs may also be staffed by medical materiel technicians and administrative personnel. These teams are normally employed in-place at a BDC collocated with an MTF. All members are responsible for the full scope of team activities as directed by the team chief. The BDC can be augmented by additional BDC manpower teams or by EBTC personnel.

2.1.3. Capabilities. BDCs provide blood products to the ASWBPLs on a continuing basis to support worldwide contingencies. They schedule and conduct blood drives to maximize the military donor base available to the Armed Services Blood Program. Donors are screened IAW the donor criteria specified in AFMAN 41-111, *Standard for Blood Banks and Transfusion Services*, Food and Drug Administration (FDA) guidance, and supplemental guidance from the ASBPO. Blood storage and shipping requirements are IAW TM 8-227-11/NAVMED P-5123/AFI 44-118, *Operational Procedures for the Armed Services Blood Program Elements*. BDCs have the following capabilities:

2.1.3.1. Process and coordinate serological testing of all blood donations IAW current regulatory agency guidelines.

2.1.3.2. Store liquid RBCs, FFP, PF24, and CRYO at the proper temperatures. Refrigerators and freezers used for storage have audible alarms, an emergency power source, and a continuous temperature recording system.

2.1.3.3. Containers and a sufficient supply of cubed wet ice and absorbent materials to ship liquid RBC and maintain proper temperatures for 48 hours.

2.1.3.4. Containers and a sufficient supply of pelletized dry ice to ship up to 15 units of FFP/PF24 or 30 units of CRYO and maintain a frozen state and proper temperatures for 48 hours.

2.2. Armed Services Whole Blood Processing Laboratory (ASWBPL). The ASWBPLs serve as the central receiving and shipment points in CONUS for blood shipments from the BDCs. There are two ASWBPLs, one located at Joint Base McGuire-Dix-Lakehurst, New Jersey (ASWBPL-East) and one at Travis Air Force Base, California (ASWBPL-West), to facilitate blood shipments to MTFs in CONUS and around the world. They are operationally controlled by the AFBPO.

2.2.1. Mission/Tasks. The ASWBPLs accept, inspect, and store blood and blood products shipped from the BDCs and are responsible for shipping these products to the EBTCs, Army Blood Supply Detachments (BSDs), and other blood-related contingency operations. Liquid RBCs are also tested to confirm that the ABO and Rh blood typing are correct. The ASWBPLs are the centralized freezing and deglycerolization centers for FRBCs. They accept PRBCs for manufacture (glycerolization) into FRBCs, which are then stored or shipped. They can also thaw and deglycerolize the FRBCs for redistribution. The capability for shipment, receipt, and distribution of blood products must be included in deliberate planning and operation plans (OPLANs).

2.2.2. Manpower. The ASWBPLs consist of nine tri-service staff (three per military service). The officer in charge (OIC) position is filled by the Air Force, and the non-commissioned officer in charge (NCOIC) position is filled by the Army. These positions are service-managed, special-duty assignments and are not covered by a UTC. In the event that quota requirements exceed 1,500-2,000 units per week, additional manpower may be required from the services, or an EBTC may be employed. All members are responsible for the full scope of team activities as directed by the team chief.

2.2.3. Capabilities. An ASWBPL can store and process up to 1,000 PRBCs, 1,000 FFP/PF24, 500 CRYO, and 500 FRBC units per week. An ASWBPL can also store an additional 1,000 FFP/PF24 and 2,000 FRBC units held in reserve for contingencies. The ASWBPL includes the following capabilities:

2.2.3.1. Freezers with 24-hour monitoring and alarm capability that provide sufficient capacity to receive and store up to 5,000 units of frozen products.

2.2.3.2. Refrigerators with 24-hour monitoring and alarm capability that provide sufficient capacity to receive and store up to 2,000 PRBC.

2.2.3.3. Re-icing operations sufficient to produce and store 2,400 pounds of wet ice every 24 hours for the shipment of PRBC. Dry ice for shipping frozen products will be obtained through contract services.

2.2.3.4. Frozen blood deglycerolization equipment and supplies to manufacture and further process deglycerolized red blood cells (DRBCs) for transfusion.

2.2.3.5. Freezers and refrigerators require emergency backup power in case of a power outage.

2.3. Expeditionary Blood Transshipment Center (EBTC). The EBTC provides the capability to receive, store, inventory, and ship blood products. EBTCs are normally located at major airfields, with one or more EBTCs located in an area of responsibility (AOR). They are operationally controlled by the COCOM JBPO or the AJBPO.

2.3.1. Mission/Tasks. The EBTC serves as the central receiving and shipment point in an AOR for shipments from the ASWBPL. An EBTC can store and distribute up to 3,000 units of blood per week. The capability for shipment, receipt, and distribution of blood products must be included in deliberate planning and OPLANs. EBTC UTCs must be represented in Time-Phased Force and Deployment Data (TPFDDs) for these OPLANs.

2.3.2. Manpower. The EBTC personnel UTCs FFBP1, FFBP2, and FFBP3 are modular in design and capability. The addition of FFBP2 and FFBP3 to FFBP1 incrementally add throughput capability. The EBTC team’s manpower is comprised of the team chief (laboratory officer) as well as medical laboratory craftsmen and journeymen. The teams may be employed in support of other blood movement components such as an ASWBPL. All members are responsible for the full scope of team activities as directed by the team chief.

2.3.2.1. EBTC Module 1 (UTC FFBP1) Manpower. FFBP1 personnel provide 24-hour operational support of the EBTC in the deployed setting. This module functions as an intermediate receiving, blood inventory management, re-icing, holding, and distribution facility for liquid and frozen products, including PRBC, FFP, CRYO, PF24, and FRBC. It can process up to 1,000 units of liquid and frozen blood products per week. The team is responsible for setting up and sustaining EBTC equipment.

| AFSC | DESCRIPTION | GRADE | QUANTITY |
|--------|-------------------------------|-------|----------|
| 043T3A | Biomedical Laboratory Officer | 04 | 1 |
| 4T071 | Medical Laboratory Craftsman | | 1 |
| 4T051 | Medical Laboratory Journeyman | | 1 |
| 4A171 | Medical Materiel Craftsman | | 1 |

2.3.2.2. EBTC Module 2 (UTC FFBP2) Manpower. FFBP2 adds two additional laboratory technicians to support 24-hour operations of the EBTC. This team normally augments FFBP1. With the addition of this team, the EBTC’s throughput increases to up to 2,000 units of liquid and frozen blood products per week.

| AFSC | DESCRIPTION | GRADE | QUANTITY |
|-------|-------------------------------|-------|----------|
| 4T071 | Medical Laboratory Craftsman | | 1 |
| 4T051 | Medical Laboratory Journeyman | | 1 |

2.3.2.3. EBTC Module 3 (UTC FFBP3) Manpower. FFBP3 provides additional support personnel for the EBTC. This team normally augments FFBP1 and FFBP2.

With the addition of this team, the EBTC's throughput increases to up to 3,000 units of liquid and frozen blood products per week.

| AFSC | DESCRIPTION | GRADE | QUANTITY |
|-------------|-------------------------------|--------------|-----------------|
| 4T051 | Medical Laboratory Journeyman | | 2 |
| 4A151 | Medical Materiel Journeyman | | 1 |

2.3.2.4. EBTC Air Force Specialty Code (AFSC) Substitutions. Lower-level grade/skill substitutions are not allowed for the medical laboratory positions. AFSC 4T090 or above is the only authorized substitute for 4T071. AFSC 4T071 or above is the only authorized substitute for 4T051. Other AFSC substitutions are authorized IAW the *War and Mobilization Plan, Volume 1 (WMP-1)*, Air Force Medical Service (AFMS) Supplement. Other grade/skill-level substitutions are authorized IAW AFI 10-403, *Deployment Planning and Execution*.

2.3.3. Capabilities. The EBTC is capable of worldwide operations under extreme climatic conditions (-20°F to 140°F) where medical operations can be effectively employed. It includes the following capabilities:

2.3.3.1. Freezers with 24-hour monitoring and alarm capabilities and sufficient capacity to receive and store up to 2,000 units of frozen products.

2.3.3.2. Refrigerators with 24-hour monitoring and alarm capabilities and sufficient capacity to receive and store up to 1,000 PRBC.

2.3.3.3. Re-icing operations sufficient to produce and store 2,400 pounds of wet ice every 24 hours for the re-icing of PRBC. Dry ice requirements for the shipment of frozen products will be obtained through contract services.

2.3.3.4. Adequate administrative storage space and environmentally controlled work areas.

2.3.3.5. Associated support equipment, including computer/data processing equipment, environmental control units/field deployable environmental control units (ECU/FDECU), support equipment, and alarm systems. Emergency power must be provided to ensure full mission capabilities and protection of stored blood products.

2.4. Expeditionary Blood Support Center (EBSC). The EBSC team expands blood support capabilities in-theater by providing advanced capabilities in the collection and preparation of blood components. EBSCs are not standalone and must be co-located with an Air Force Theater Hospital (AFTH) or equivalent Joint DMF. The team is operationally controlled by the AFTH/Joint DMF commander. For more information about AFTH/Joint DMF dependencies, see paragraph 2.4.4.

2.4.1. Mission/Tasks. The EBSC is a deployable laboratory team that is intended to augment an AFTH or equivalent Joint DMF. The team collects and prepares blood

components for transfusion to support emergency trauma situations. The goal of component transfusion therapy is to provide the most appropriate blood component to the patient. This ability to provide specialized blood components can greatly improve transfusion treatment outcome. The capability for the shipment, receipt, and distribution of blood products must be included in deliberate planning and OPLANs. EBSC UTCs must be represented in TPFDDs for these OPLANs.

2.4.1.1. Allogeneic Donor Selection and Screening. Blood component collection requires access to a large population to recruit potential donors. Once recruited, all potential donors will be prescreened IAW theater guidelines for blood donor collection.

2.4.1.2. FWB Collection. Whole blood collection will be conducted when fresh, warm, whole blood is required for emergency transfusions related to traumatic coagulopathy, in the absence of component therapy, or when whole blood is deemed clinically necessary to save life or limb. FWB is not FDA-approved and is not intended for routine use. The decision to use FWB is a medical decision that must be made by a physician who has full knowledge of the clinical situation and the availability of compatible blood components. (See the Joint Theater Trauma System Clinical Practice Guideline for FWB Transfusion for guidance.) Healthy donors will be recruited and phlebotomized using approved collection protocol to minimize bacterial contamination. EBSC personnel will test the collected whole blood to confirm ABO/Rh and to minimize the risk of transferring infection. This testing will be conducted in the AFTH/Joint DMF lab. Once testing is complete, the labeled unit will be issued for transfusion. The AFTH/Joint DMF can store up to 60 units of FWB. If refrigerated within 8 hours of collection, whole blood may be stored up to 5 days.

2.4.1.3. APLT Collection. The selective removal of blood platelets from blood donors will be accomplished using commercially available apheresis instruments. Before APLT collection occurs, platelet donors must be tested using the full panel of FDA-licensed donor infectious disease tests and found to be negative for all tests. Once this donor prescreening is complete, platelets are collected following the manufacturer's protocol. EBSC personnel will use quality control measures (e.g., platelet count, pH, and culture) to ensure product quality. These quality control measures will be performed in the AFTH lab.

2.4.2. EBSC (UTC FFLBB) Manpower. FFLBB provides medical laboratory personnel to locally collect APLT and FWB in a deployed location. The team's maximum collection capability is 10 APLT units or 50 units of FWB within a 12-hour duty day. (For planning purposes, note that the allowance standard [AS] provides 150 APLT kits and 200 whole blood bags.) EBSC manpower is comprised of the team chief (blood bank officer) as well as medical laboratory craftsmen and journeymen. Personnel must receive just-in-time skills training in blood collection before deployment. All members are responsible for the full scope of team activities as directed by the team chief.

| AFSC | DESCRIPTION | GRADE | QUANTITY |
|--------|------------------------------------|-------|----------|
| 043T3E | Biomedical Laboratory – Blood Bank | 04 | 1 |
| 4T071 | Medical Laboratory Craftsman | | 2 |
| 4T051 | Medical Laboratory Journeyman | | 3 |

2.4.2.1. EBSC Air Force Specialty Code (AFSC) Substitutions. The only authorized substitute for the blood bank laboratory officer is a biomedical laboratory officer (043T3A) with blood bank experience. AFSC 4T090 or above is the only authorized substitute for 4T071 (lower-level grade/skill substitutions not allowed). Other grade/skill-level substitutions are authorized IAW AFI 10-403.

2.4.2.2. EBSC Augmentation. The EBSC is not staffed to concurrently meet the maximum daily throughputs for APLT and FWB collection. Apheresis collection is suspended during emergency FWB collection. The AFTH/Joint DMF commander should plan to augment the EBSC with staff/volunteers from the medical facility to support whole blood collection operations as needed.

2.4.3. Capabilities. The EBSC is capable of worldwide operations under extreme climatic conditions (-20°F to 140°F) where medical operations can be effectively employed. It includes the following capabilities:

2.4.3.1. Platelet incubators with 24-hour monitoring and alarm capabilities and sufficient capacity to manage and store up to 30-40 APLTs.

2.4.3.2. Adequate administrative storage space and environmentally controlled work areas.

2.4.3.3. Associated support equipment, including computer/data processing equipment, environmental control units/field deployable environmental control units (ECU/FDECU), support equipment, and alarm systems. Emergency power must be provided to ensure full mission capabilities and protection of stored blood products.

2.4.4. AFTH/Joint DMF Dependencies. EBSCs rely on the AFTH/Joint DMF for basic hematology, chemistry analysis, and microbiology support. EBSC mission capabilities assume that the AFTH/Joint DMF laboratory has adequate space, supplies, and equipment to support the increased demand. EBSC team members require access to the AFTH/Joint DMF lab to perform quality control measures (e.g., platelet count, pH, and culture) on blood platelets. They also need lab access to perform required ABO/Rh testing of collected whole blood.

2.5. Expeditionary Frozen Blood Product Team (FBPT). The FBPT provides 24-hour coverage to support the processing of pre-positioned frozen blood stocks. When liquid RBCs are unavailable or below minimum advisable inventory levels, the team deglycerolizes FRBCs stockpiled for mass casualty situations to remove the cryoprotectant. Special care is taken to ensure optimal RBC recovery.

2.5.1. Mission/Tasks. The FBPT is responsible for receiving, thawing, washing, deglycerolizing, re-icing, managing, and distributing pre-positioned frozen blood products. They can deglycerolize up to 24 units of FRBCs in a 24-hour period (one unit every two hours with two machines operating). These frozen stockpiles are good for 14 days and provide the initial liquid blood units needed to sustain the collocated MTFs until the liquid pipeline is fully operational.

2.5.2. FBPT (UTC FFBD1) Manpower. FBPT personnel are assigned to a unit that has AS 893F. The medical laboratory craftsman (4T071) is the team chief and functions under the direction of the officer in charge of the in-place facility. Other personnel include medical laboratory, medical materiel, and medical administrative personnel. All FBPT members are responsible for the full scope of team activities as directed by the team chief.

| AFSC | DESCRIPTION | GRADE | QUANTITY |
|-------------|--------------------------------|--------------|-----------------|
| 4A051 | Health Service Mgmt Journeyman | | 2 |
| 4T071 | Medical Laboratory Craftsman | | 1 |
| 4T051 | Medical Laboratory Journeyman | | 3 |
| 4A151 | Medical Materiel Craftsman | | 1 |

AFSC 4T090 or above is the only authorized substitute for 4T071 (lower-level grade/skill substitutions not allowed). Any 4XXXX AFSC may substitute for AFSC 4A051. No AFSC substitutions are authorized for AFSC 4A151. Other skill-level substitutions are authorized IAW AFI 10-403.

2.5.3. Capabilities. FBPT personnel deploy only to in-place facilities and, therefore, are capable of fully performing their mission once in place. The AS includes sufficient equipment and supplies to thaw or deglycerize 200 units of FRBCs with a maximum throughput of 24 units per day.

CHAPTER 3

OPERATIONS

3.1. Deployment. The EBTC and EBSC are deployable war reserve materiel (WRM) assets. These teams are deployed to provide advanced blood collection, preparation, storage, and shipment support. The teams can be deployed to assist other Air Force medical deployed UTCs. They may also be deployed to augment other theater teams to support joint force operations. The teams deploy with their equipment packages, which can be assembled within 8 hours by as few as 4 medical personnel. The teams rely on expeditionary combat support (ECS) for transporting equipment and for other goods and services required to sustain operations. See Chapter 7 of this AFTTP for more information about ECS requirements. See Chapter 10 of this AFTTP for more information about equipment and supplies.

3.1.1. Cargo Processing. The processing of deploying cargo begins immediately after a unit is tasked for deployment (notification stage) and continues until the cargo arrives at the deployed destination. The Deployment Control Center will publish a cargo processing schedule, which details the unit's deployment process and critical deployment actions required to meet movement departure times. Each deploying unit should have a currently certified hazardous cargo courier.

3.1.2. Equipment Preparation. When notified of a deployment tasking, equipment and supplies must be readied for transport. Units should have checklists or flowcharts to ensure that proper procedures are followed. Equipment mobility paperwork packages contain load and packing lists, hazardous materials declarations, and hazardous cargo placards IAW AFI 10-403, *Deployment Planning and Execution*.

3.1.3. Weapons Courier Requirements. Each UTC should have a currently certified weapons courier to accompany all shipments of weapons. Couriers must be fully knowledgeable of all aspects of weapons control and trained IAW DOD 5100.76-M, *Physical Security of Sensitive Conventional Arms, Ammunitions, and Explosives*.

3.1.4. Collective Protection (CP). If deploying to an area with a high chemical, biological, radiological, and nuclear (CBRN) threat, the EBTC and EBSC may deploy with FFCPS, Collective Protection Medical Tent. FFCPS provides the equipment and supplies needed to collectively protect one shelter and maintain operations for a maximum of 72 hours. See the *Operation and Maintenance Manual for the Collectively Protected Expeditionary Medical Support/Air Force Theater Hospital (CP EMEDS)* for more information. See AFMAN 10-2503, *Operations in a Chemical, Biological, Radiological, Nuclear, and High-Yield Explosive (CBRNE) Environment*, for more information on operating in a CBRN environment.

3.2. BDC Employment. The BDC is normally employed in conjunction with a fixed MTF and serves as the primary collection facility for PRBC, FFP, CRYO, PF24, and FRBC. The BDC

ships blood and blood components to the ASWBPLs IAW the quotas established by the ASBPO, COCOM JBPO, and AJBPO.

3.3. ASWBPL Employment. The ASWBPLs are CONUS-based facilities that provide intermediate storage and shipment of blood products as designated by the ASBPO. The Air Force is responsible for maintaining full-time peacetime operation and for providing administrative support during peacetime and contingencies. The ASWBPLs are located near major military air terminals to facilitate blood shipments worldwide. The ASWBPLs are capable of expanding operations to meet blood support requirements as necessary.

3.4. EBTC Employment. The EBTC is normally employed in conjunction with an EMEDS/DMF at an aerial port of debarkation and is available to support military contingency operations. The EBTC is responsible for receiving blood products from the ASWBPLs, blood product depot, or another EBTC. The EBTC receives, stores, inventories, and ships blood products as requested by area BSDs. Real-time blood inventory management is vital. Proper rotation of blood components ensures the best end dates going into the AOR. The EBTC also issues blood products to designated BSDs based on daily allocations established by the JBPO/AJBPO.

3.4.1. Personnel UTCs (FFBP1, 2, 3) support expeditionary and fixed-site BTCs.

3.4.2. ECS is required to connect this system to the base infrastructure. The EBTC team chief or designate should establish contact with ECS elements as soon as possible to ensure base services are provided. See Chapter 7 of this AFTTP for more information about ECS.

3.4.3. EBTC personnel must initiate contact with the JBPO/AJBPO, Air Tactical Operations Center (ATOC), and the Joint Movement Center (JMC) to establish and coordinate the Department of Defense Activity Address Codes (DODAAC), Transportation Account Codes (TAC), and movement requirements.

3.5. EBTC Site Planning. EBTC staff and other medical personnel are responsible for erecting the EBTC at the operating location. Optimal requirements for an EBTC site include a 100 x 100-foot graded pad near the DMF. EBTC site requirements should be considered during the installation's bed-down planning.

3.5.1. Tent Assembly. The EBTC is equipped with special flooring. Ensure this flooring is installed before installing equipment. See Attachment 4 for tent layout information.

3.5.2. Ice Machine Assembly. Instructions for ice machine assembly are available on the ACC MEFPAK Playbook under FFBE1.

3.6. EBSC Employment. The EBSC is a deployable laboratory team that provides expanded blood component collection and preparation capabilities to support casualty trauma treatment. The team must be attached to an AFTH or equivalent Joint DMF.

3.6.1. EBSC staff and other medical personnel are responsible for erecting the EBSC at the operating location. EBSC site requirements should be considered during bed-down planning.

3.6.2. ECS is required to connect this system to the base infrastructure. The EBSC team chief or designate should establish contact with ECS elements as soon as possible to ensure base services are provided. See Chapter 7 of this AFTTP for more information about ECS.

3.7. FBPT Employment. The FBPT provides support and sustainment to in-place frozen blood sites. FBPT personnel are only assigned to units that have AS 893F equipment packages in place.

3.8. Quality Assurance (QA) Procedures. An effective QA program is essential for the EBTC, EBSC, and FBPT to ensure blood products remain viable. Units should develop operating instructions (OIs) to ensure compliance with AFI 44-118, *Operational Procedures for the Armed Services Blood Program Elements*, JBPO/AJBPO, and local requirements. OIs should cover, at a minimum, the receipt, storage, inventory, and shipment of blood and blood products and the collection and first release of platelets and whole blood. Example OIs are available for download on the ACC MEFPK Playbook.

CHAPTER 4

COMMAND AND CONTROL RELATIONSHIPS

4.1. Operational, Tactical, and Administrative Control of Medical Teams. In accordance with AFDD 2, *Operations and Organization*, the supported Commander, Air Force Forces (COMAFFOR) retains OPCON of assigned and attached Air Force forces, including Air Force medical assets. When supporting Air Force operations, OPCON is normally exercised through the Air and Space Expeditionary Task Force (AETF) chain of command so that expeditionary teams operate under the local direction of the deployed expeditionary unit commander (usually the EMEDS or AFTH commander) to which they are attached. During day-to-day operations, EBTC, EBSC, and FBTP personnel usually fall under the biomedical laboratory function's chain of command.

4.2. Roles and Responsibilities. The COCOM JBPO/AJBPO provides OPCON over the EBTC mission, and the DMF commander has administrative control (ADCON). The EBSC is under the OPCON and ADCON of the AFTH commander. FBPT personnel are under the OPCON and ADCON of the commander at the fixed medical facility. The EBTC, EBSC, and FBPT team chiefs will supervise operations and ensure that all personnel assigned are thoroughly familiar with their responsibilities and adequately trained to perform their missions.

4.3. Team Chiefs. The EBTC team chief is the biomedical laboratory officer (043T3A). The EBSC team chief is the biomedical laboratory – blood bank officer (043T3E). The FBPT team chief is the senior medical laboratory craftsman (4T071). Each team chief is responsible for the following duties:

4.3.1. Ensure training is accomplished as required (see Chapter 9).

4.3.2. Directly supervise the team's operations.

4.3.3. Identify manning and equipment shortfalls and other limiting factors to the deployed medical commander for resolution.

4.3.4. Secure ECS for the team through the MTF or directly as needed.

4.3.5. Prepare and submit operational reports to the supporting command and the JBPO/AJBPO.

4.4. Joint Operations. In joint operations, where an EBTC, EBSC, or FBPT team supports a unit from another service, the COMAFFOR retains ADCON and is usually delegated tactical control (TACON) by the JTF commander. The COMAFFOR normally exercises these authorities through an air expeditionary unit (usually an Expeditionary Medical Group [EMDG]) in a direct support relationship.

4.5. Operation Plan (OPLAN)-Specific Command Relationships. Command arrangements for individual units employed in support of contingency operations will be outlined in the respective supporting OPLANs and execution orders and will be specific to the operation and theater supported.

4.6. Reporting Requirements. The JBPO has established standardized blood reporting requirements to effectively manage blood and blood products, project blood requirements, request blood, report blood inventories, and provide information on the overall blood element operations of all the service components. The JBPO determines the format, reporting frequency, and transmission methods for these reports. See JP 4-02, *Health Service Support*, for more information and report samples.

4.7. Team-Specific Reporting Requirements. EBSC personnel will report the number, sources, and types of blood components collected and tested, as well as potential mission implications, to the senior laboratory officer, attending physician, and other appropriate agencies. Blood component inventory, capability, and requirements must be reported to the corresponding theater JBPO. Additional coordination may be required with theater BSDs and EBTCs.

CHAPTER 5

INTELLIGENCE

5.1. Briefing Requirements. Accurate medical intelligence is critical to threat identification and the application of appropriate preventive medicine. Before deployment, units, groups, and individuals tasked to support an operation must receive deployment briefings IAW AFI 41-106, *Medical Readiness Program Management*, and AFI 10-402V1, *Mobilization Planning and Personnel Readiness*. During the employment stage of an operation, deployed personnel require periodic briefings for their location and for areas they transit during medical operations.

5.2. Intelligence Collection. The public health officer normally serves as the medical intelligence officer (MIO) for EMEDS/AFTH facilities. The MIO is responsible for collecting and disseminating medical intelligence as appropriate and recommending courses of action to leadership. The MIO relies on multiple information sources for medical intelligence, including the National Center for Medical Intelligence (NCMI) and line intelligence personnel.

5.3. Dissemination of Medical Intelligence. Medical intelligence is disseminated to all assigned units and personnel as prescribed by the COMAFFOR, Air Force Forces Surgeon (AFFOR/SG), or installation commander's policy. Wing and group commanders, IAW operational directives, coordinate the communication of medical intelligence with other base units, including the DMF.

CHAPTER 6

COMMUNICATIONS AND INFORMATION SYSTEMS SUPPORT

6.1. Communication Requirements. Communication links between supported units and EBTC, EBSC, and FBPT operations are vital to overall mission success. Communications within the blood distribution system will use standard ASBPO-approved Joint Interoperability of Tactical Command and Control Systems (JINTCCS). Due to the critical nature of blood product requests, communication through command channels should be minimized. Direct communication with the blood teams, coordination of communications with the AJPBO, and informational communication with command and control elements is imperative.

6.2. Organic Communications Equipment. Communications systems are required for internal communication within the AFTH/DMF and to link the AFTH/DMF to base communications, on-call personnel, and satellite functions. Support for the blood teams will be identified and coordinated with the assigned AFTH/DMF. The AFTH/DMF is equipped with organic communications equipment (non-tactical radios). ECS is required for telephones and computer network support. See Attachment 2 for more information about the organic communications equipment issued to each UTC.

6.3. Computer Software Specifications. Laptop computers issued to the blood teams include the DOD Standard Desktop Configuration (SDC) and the Theater Medical Information Program Air Force (TMIP-AF) package. TMIP-AF is an integrated software suite that includes mission-essential medical software applications. See Attachment 3 for more information about the required computer configuration and software specifications for each UTC.

6.3.1. Standard Desktop Configuration (SDC). The SDC includes the Microsoft Windows operating system and the following administrative software:

- Adobe Acrobat Reader
- IBM Lotus Form Viewer
- Internet Explorer
- Microsoft Office Suite
- WinZip

6.3.2. Theater Medical Information Program Air Force (TMIP-AF). TMIP-AF includes the following applications:

6.3.2.1. Armed Forces Health Longitudinal Technology Application (AHLTA) Mobile. AHLTA is an enterprise-wide medical and dental clinical information system that provides secure online access to longitudinal health records. AHLTA Mobile is a handheld device that lets first responders immediately document injury, illness, and care and store medical data until it can be transferred to AHLTA Theater.

6.3.2.2. AHLTA Theater. AHLTA Theater extends AHLTA's sustaining-base electronic medical record capability to the theater of operation. It lets healthcare providers document care, order laboratory services such as blood work, x-rays, and medications, and store medical data until communications are available to send the data to the Theater Medical Data Store and Clinical Data Repository.

6.3.2.3. Defense Medical Logistics Standard Support (DMLSS). DMLSS is an automated and integrated information system that standardizes medical logistics management across the military services. It provides a comprehensive range of medical materiel, equipment, WRM, and facilities management functions.

6.3.2.4. Defense Occupational and Environmental Health Readiness System (DOEHRS). DOEHRS is a web portal that provides access to exposure-based environmental surveillance data for the industrial health, environmental health, and hearing conservation communities. It provides support for capturing, analyzing, and maintaining data on environmental and occupational hazards, tracking long-term exposures, and reducing worksite hazards.

6.3.2.5. Joint Medical Analysis Tool (JMAT). JMAT provides joint medical planners and decision-makers an automated tool for deliberate and crisis action planning. It supports the calculation and generation of theater medical requirements, scenario development for course-of-action analysis, and risk assessment for planning the allocation of critical medical resources.

6.3.2.6. Joint Medical Workstation (JMeWS). JMeWS provides medical situational awareness, medical surveillance, and force health decision support. It reports on medical trends, analyzes the overall status of theater health, and shares medical intelligence with the Global Combat Support System (GCSS) and Global Command and Control System (GCCS).

6.3.2.7. Patient Movement Items Tracking System (PMITS). PMITS is a DOD Military Health System application that electronically tracks the location and operational status of the medical equipment needed to support patients during aeromedical evacuations.

6.3.2.8. Theater Medical Data Store (TMDS). TMDS is the authoritative theater database for collecting, distributing, and viewing service members' pertinent medical information. It updates the clinical data repository (CDR) where all service members' electronic health records (EHRs) reside and lets users view, track, and disposition patients through all levels of care.

6.3.2.9. TMIP Composite Health Care System (CHCS) Cache (TC2). TC2 lets military health care providers document inpatient healthcare, order ancillary services (such as laboratory, pharmacy, and radiology), and schedule outpatient clinic and radiology procedures in theater.

6.3.4. Specialty-Specific Clinical Applications. In addition to the medical applications included in TMIP-AF, blood teams may have access to the following specialty-specific applications.

6.3.4.1. Defense Blood Standard System (DBSS). DBSS automates the standards and safeguards of the blood supply for the DOD Military Health System. It collects, processes, and tracks blood product inventory information, provides automated support for remote blood collections, and regulates blood product safety transfusion practices.

6.3.4.2. Theater Medical Data Store (TMDS) Blood Management Module. The Blood Management Module of TMDS (also called the electronic mother of all spreadsheets [eMOAS]) is the designated computerized blood management system of record and will link the EBTC, EBSC, and FBPT with the worldwide distribution network. Units should outline in their OIs the procedures to follow when access to this module is not available.

6.4. Computer Security (COMPUSEC). COMPUSEC requirements are IAW AFI 33-200, *Information Assurance (IA) Management*, AFI 33-201V1, *Communications Security (COMSEC)*, AFI 33-201V2, *Communications Security (COMSEC) User Requirements*, and AFI 33-332, *Air Force Privacy Program*.

6.5. Secure/Non-Secure Communications. Classified information must be protected IAW DOD 5200.1-R, *Information Security Program*. All classified information must be transmitted by secure means. Situation reports (SITREPs), medical surveillance, site locations, and compiled patient data are all examples of information that can be classified and need safeguarding. Medical or casualty information becomes an operations security (OPSEC) issue when linked to a particular military mission or operation. While medical information itself is not normally classified in the context of a mission, it should be protected as part of the combatant commander's overall OPSEC program to deny information to the enemy.

CHAPTER 7

INTEGRATION AND INTEROPERABILITY

7.1. In-Theater Integration and Interoperability. Medical deployed assets in a theater or area of operation integrate and operate with the line elements of an Air Expeditionary Force (AEF), components of the aeromedical evacuation system, joint medical counterparts, Special Operations Forces (SOF) medical components, and other federal and civilian support systems. In some instances, theater planners may request a DMF to support Army or SOF bed-down locations not associated with typical AEF or ECS infrastructure. Logistical coordination, integration with other medical assets, and an understanding of command and control relationships are essential for a seamless casualty care continuum.

7.2. Medical Facility Integration and Interoperability. EBTC, EBSC, and FBPT personnel augment existing capabilities within the medical facility and are not stand-alone. They must be attached to a fixed or field medical facility (EMEDS/AFTH or other similar DMF) that has the capability to support biomedical laboratory functions. Access to basic hematology, chemistry analysis, and microbiology are required. The EBTC and EBSC teams deploy with an initial 30-day supply of equipment and supplies, but for sustained deployments, they rely on the medical facility's logistics system for resupply. See Chapter 10 for more information.

7.3. ECS Requirements. Integration with line counterparts is particularly critical for ECS. During deployments, ECS requirements for the EBTC and EBSC include but are not limited to contract support for dry-ice supply and blood product disposal; messing and other consumable materials; water; wet-ice; fuels; billeting; latrines; showers; laundry; waste management (including hazardous and biomedical waste); transportation (to include equipment transport and express specimen transport); non-medical equipment maintenance; general supplies; contracting; information and communications systems support; and security. ECS should be arranged before deployment by the COCOM planners, air component command planners, and JBPO/AJBPO. See Attachment 2 for more information about ECS requirements.

CHAPTER 8

SECURITY

8.1. Security Responsibilities. Medical personnel and equipment are non-combatant assets as defined by the Geneva Conventions and the Law of Armed Conflict (LOAC). Medical personnel are authorized arms IAW AFI 31-207, *Arming and Use of Force by Air Force Personnel*. Security within the immediate area for patients, blood donors, and personnel at each deployed medical site, with the exception of enemy prisoner of war (EPW) patients, is a medical responsibility. In most deployment scenarios, the EBTC and EBSC deploy to secure locations. Current threat assessments provided by the combatant commander and local threat conditions established by the Air Expeditionary Wing (AEW) commander dictate all local security measures. As part of the AFTH/DMF, blood team personnel are required to provide site security within the immediate area of their facilities. Protection of blood donors, patients, and personnel is the responsibility of the AFTH/DMF commander.

8.2. Physical Security. Medical assets (personnel, equipment, and supplies) are protected in accordance with AFI 31-101, *Integrated Defense*. Personnel are responsible for following all personal protective measures as outlined in AFI 31-101, AOR security briefings, established force protection requirements, and other guidance. All personnel should attend security and terrorism response training. The AFTH/DMF commander and security forces provide technical advice and recommendations on physical plant protection issues for the deployed EBTC and EBSC.

8.3. Operations Security (OPSEC). To prevent an adversary from gaining a military advantage, all staff must control mission critical information from inadvertent disclosure. All staff should be aware of how to protect critical information that may be of intelligence value to an adversary. Additionally, staff must understand what information is critical, how to protect it, from whom to protect it, and for how long to protect it.

8.4. Security of Weapons and Ammunition. All members must comply with AFI 31-207, AFMAN 31-229, *USAF Weapons Handling Manual*, and local procedures when securing weapons and ammunition. Personnel, other than security forces responding to a request for assistance, should not be allowed to enter the medical facility with a loaded weapon.

8.4.1. Staff Weapons. Normally, base security forces provide guidance and an armory to ensure the safe storage of the medical facility staff's weapons and ammunition. However, medical personnel maintain issued weapons and ammunition when authorized by the AFTH/DMF commander at the direction of the AEW/Air Expeditionary Group (AEG) commander and IAW the LOAC and the Geneva Conventions.

8.4.2. Donor Weapons. Weapons and ammunition belonging to blood donors should be transferred immediately to a member of the donor's unit. When not possible, the medical facility may temporarily store the weapons until the donor's unit or AEW/AEG armory can accept responsibility. Weapons must be properly cleared and secured in a locked container, if possible.

CHAPTER 9

TRAINING

9.1. General Training Requirements. Personnel training must be accomplished IAW AFI 41-106. Unit/team integrity should be maintained to the maximum extent possible. Ideally, personnel who deploy together should train together before deployment.

9.2. Expeditionary Training Requirements for Ground-based UTCs. All personnel assigned to deployable ground-based UTCs must meet the requirements in AFI 41-106, Attachment 3, Medical Readiness Training (MRT) Matrix.

9.3. Readiness Skills Verification Program (RSVP). The RSVP is the readiness portion of AFSC-specific sustainment training and applies to all individuals who hold a medical AFSC. The RSVP documents an individual's ability to perform required duties in support of military operations and training events for enhancing and maintaining operational skills. This training can include formal courses (i.e., Advanced Trauma Life Support [ATLS], Advanced Cardiac Life Support [ACLS], Trauma Nursing Course, Center for Sustainment of Trauma and Readiness Skills [C-STARS]), as well as exercises. RSVP knowledge and performance items, along with associated training sources, are listed on RSVP checklists, which are accessible in the Medical Readiness Decision Support System Unit Level Training Readiness Application (MRDSS ULTRA). Personnel will document completion of RSVP requirements in MRDSS ULTRA IAW the guidance in AFI 41-106.

9.4. UTC Team Chief Training Responsibilities. UTC team chiefs must ensure that team members receive the training required to be mission ready and maintain proficiency standards IAW AFI 41-106. They ensure that this training is documented in MRDSS ULTRA. Team chiefs conduct team training when required; establish a mechanism to identify individuals who require make-up training; and ensure make-up training is conducted within the timeframe established by the unit commander. Team chiefs maintain contact information for their team members and must be familiar with local deployment recall procedures.

9.5. Formal Training. The formal training course for EBTC, EBSC, and FBPT personnel will be conducted at an Air Force-designated training facility. The goal is for all personnel initially assigned to an EBTC, EBSC, or FBPT UTC to attend the in-residence course before deploying. Until a formal training course is developed, personnel should have a minimum of 30 days experience (preferably deployed) performing their associated duties with the same team they are tasked for. Ideally, formal training should occur between 60 to 90 days before deployment. IAW AFI 10-401, *Air Force Operations Planning and Execution*, during the 60-90 days before deployment, units should focus on specific deployment preparation activities and AOR-specific events, if known. Air Reserve Component (ARC) UTCs not apportioned in an AEF will meet formal UTC training requirements IAW AFI 41-106. When ARC personnel are unable to attend formal training with their assigned units as a complete unit, they should attend training with other units.

9.6. Cross Functionality. Assigned personnel must be able to adapt to changing training requirements to meet the needs of the mission. Training to enhance multi- and cross-functionality between AFSCs is encouraged; however, any training on tasks that are clearly beyond the scope of practice of any enlisted medical AFSC, as listed in the Career Field Education and Training Plan (CFETP), must have a scope of practice waiver submitted to the appropriate major command surgeon (MAJCOM/SG).

9.7. Field Training. Field training, such as Operational Readiness Exercises (OREs), local exercises, and joint exercises, gives EBTC, EBSC, and FBPT personnel an opportunity to reinforce the skills learned during formal training. The ability to operate various vehicles (i.e., forklifts) requires qualification training. Any Air Force personnel, officer or enlisted, may train for a vehicle license. Upon completion of EBTC, EBSC, or FBPT field training, each member is issued an AF Form 1098, *Special Task Certification and Recurring Training*, or equivalent to document all training received.

9.8. UTC Sustainment Training. Sustainment training involves team training in the skills and knowledge that a UTC must possess to fulfill MISCAP responsibilities. Sustainment training should occur IAW AFI 41-106, Attachment 3. Sustainment training is expected throughout each training cycle. Involvement of other medical and various support organizations should be encouraged, as this enhances the value of training. Training exercises are intended to consider the deployment, operational support, and supply aspects of a military contingency. It is the responsibility of the unit to allocate funds for the activation.

9.9. CBRNE Defense Training (CBRNEDT). All EBTC, EBSC, and FBPT personnel will receive CBRNEDT training IAW AFI 41-106 and AFI 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations*. All personnel should be familiar with the concepts of the Air Force Counter-Chemical Warfare CONOPS as outlined in AFMAN 10-2503.

9.10. Recommended UTC-Specific Training. Team training must be performed at an Air Force-designated training center before deployment to give the team a theoretical and operational understanding of the blood support mission. The team may also train AFTH/DMF staff to assist in blood component collection and preparation as needed.

9.10.1. Skills-Related Training. Skills-related training must include but is not limited to the following areas:

9.10.1.1. APLT collection, whole blood collection, and FRBC deglycerolization.

9.10.1.2. Technical, operational, troubleshooting, maintenance, and assembly/reassembly of collection and deglycerolization equipment.

9.10.1.3. Allogeneic donor selection and blood collection.

9.10.1.4. Computer-based training (CBT) on proper blood shipments, the Blood Management Module in TMDS, and Expeditionary Medical Logistics (EML) as needed.

9.10.1.5. Review and implementation of new AFBPO, ASBPO, JPBO, and AJBPO training materials, policies, and procedures.

9.10.1.6. Documentation acquisition, preparation, review, and submissions (DD Form 1502, *Frozen Medical Materiel Shipment*; DD Form 1502-1, *Chilled Medical Materiel Shipment*; DD Form 573, *Shipping Inventory of Blood Products*; other applicable forms; blood inventory reports; etc.).

9.10.1.7. Blood receipt (product-specific temperature, appearance, condition requirements).

9.10.1.8. Blood product reicing.

9.10.1.9. Quality control.

9.10.2. Additional Training. Personnel should receive hands-on training in the following areas:

9.10.2.1. Pallet build-up and inspection.

9.10.2.2. Forklift operation.

9.10.2.3. Vehicle acquisition (motor pool/transportation).

9.10.2.4. Secure and non-secure communications (secret internet protocol router network [SIPRNET], non-secure internet protocol router network [NIPRNET], email, etc.).

9.10.2.5. DODAACs used for ordering supplies and services through the supporting medical logistics account.

9.10.2.6. TACs used for shipping supplies and blood products.

9.10.2.7. Facility setup and shelter management.

CHAPTER 10

LOGISTICS

10.1. Operational Availability. The EBTC, EBSC, and FBPT must maintain a total materiel availability percentage (MAP) of 95 percent and a critical equipment MAP of 100 percent to be fully functional. Warehoused EBTC, EBSC, and FBPT equipment requires annual preventive maintenance during storage. Routine preventive and corrective maintenance will be performed by medical equipment repair activities assigned to the designated WRM account. Required maintenance is identified by the device codes assigned to the equipment National Stock Numbers (NSN).

10.2. Logistics Supportability and Readiness. EBTC, EBSC, and FBPT rely on the AFTH/DMF to which they are assigned for consumable supplies. A separate Responsibility Center/Cost Center (RC/CC) code for the EBTC, EBSC, and FBPT must be established for funding purposes.

10.3. Supplies and Equipment. Each team's necessary medical supplies and equipment are documented in its AS. UTC team chiefs should contact their Medical Logistics Office for assistance in reviewing their AS. Table 10.1 lists the equipment package UTCs and corresponding AS for the EBTC, EBSC, and FBPT.

Table 10.1. Equipment UTCs and Allowance Standards

| Team | Equipment Package | AS |
|--|--|-----------|
| FFBD1, Medical Expeditionary Frozen Blood Product Team | FZNBPU, Medical Expeditionary Frozen Blood Program Equipment | 893F |
| FFLBB, Medical Expeditionary Blood Support Center Team | FFLB1, Medical Expeditionary Blood Support Center Equipment | 893C |
| FFBP1, Medical Expeditionary Blood Transshipment Center, Mod 1 | FFBE1, Medical Expeditionary Blood Transshipment Equipment | 893J |
| FFBP2, Medical Expeditionary Blood Transshipment Center, Mod 2 | FFBE1, Medical Expeditionary Blood Transshipment Equipment | 893J |
| FFBP3, Medical Expeditionary Blood Transshipment Center, Mod 3 | FFBE1, Medical Expeditionary Blood Transshipment Equipment | 893J |

10.3.1. Equipment Packages. The EBTC, EBSC, and FBPT equipment packages contain commonly used medical equipment and enough consumable supplies for 30-day operation before requiring resupply. The EBSC and FBPT equipment packages also contain specially developed medical equipment regulated by the FDA for screening donors, deglycerolizing FRBCs, and collecting platelets and whole blood. Consumable items for the blood team UTCs are, to the extent possible, standard DOD inventory items. EBSC and FBPT

equipment can be considered joint-use assets when a memorandum of agreement (MOA) appropriately documents use and responsibilities. EBTC, EBSC, and FBPT equipment is classified as WRM. See AFI 41-209, *Medical Logistics Support*, Chapter 13, for guidance on WRM assets and their use.

10.3.2. Initial Response Supplies. The EBTC, EBSC, and FBPT equipment sets contain no blood products. Once the EBTC and FBPT systems are online, they will require initial and ongoing blood product supplies to maintain capability. Additional equipment and general supplies are provided by the supporting medical unit.

10.3.3. Resupply. The EBTC, EBSC, and FBPT should coordinate resupply through the Medical Logistics function at their assigned medical facility. Personnel who are deployed in support of regional plans and are not attached to an AFTH/EMEDS require self sustainment through the DMLSS or reachback process. The EBTC, EBSC, and FBPT must eventually be aligned with the host medical supply account established to support the AOR. When established, the DMLSS will be used. Medical logistics personnel should establish liaison as soon as possible, provide a list of items that require routine resupply, and establish a supply accounting system. The Air Force Medical Logistics Operations Center (AFMLOC) can provide assistance in establishing the DODAACs used for supplies and services and TACs used to ship blood products. In those limited operations where a single MAJCOM provides all or nearly all of the deploying Air Force forces, that MAJCOM must be prepared to coordinate, arrange, and provide logistics resupply.

10.3.4. Standard Forms. Personnel do not deploy with the forms needed to ship and store blood products. The team chiefs will hand-carry all required forms. Team chiefs should contact the COCOM JBPO to coordinate the establishment of an International Council for Commonality in Blood Banking (ICCBBA) account to obtain blood labels.

10.4. Reagent Special Handling Requirements. The EBSC and FBPT UTC team chiefs should coordinate with the BSD or EBTC on the shipment and packing of reagents that require special handling (e.g., frozen storage). The UTC team chiefs should ensure sufficient volume and reagent types are available and should contact the designated reagent repository once mission needs are determined.

10.5. Transportation Support. Transportation and other resources are required on site, especially during deployment and redeployment phases. The EBTC, EBSC, and FBPT do not have their own transportation capabilities. ECS is required for transporting personnel and equipment and for moving pallets of blood to and from the deployed site. A 10K all-terrain forklift is required to set up the EBTC and EBSC at the deployed site. If the EBTC is not collocated with an EMEDS/DMF unit, a dedicated vehicle is required for the transport of blood products.

10.6. Equipment Maintenance and Repair. Deployed civil engineers are responsible for the maintenance of major equipment (e.g., generators and ECUs) while the EBTC and EBSC are deployed, per established MOAs. Other equipment maintenance and repair are handled by the biomedical equipment technicians deployed with the AFTH/DMF.

10.7. Electric Power and Water. EBTC, EBSC, and FBPT equipment is designed to interface with commercial, fixed installation, bare base, and tactical electric utility systems. EBTC and EBSC operators should coordinate as soon as possible with the deployed base civil engineer or bare base civil engineering commander to interface the EBTC and EBSC with base or civilian power and water systems. MOAs are required and must be established immediately upon arrival of the deployed EBTC and EBSC personnel.

10.8. Storage Requirements. The EBTC and EBSC equipment package is stored in a ready mode for rapid deployment. EBSC and FBPT equipment should be stored in a central location so that it can be quickly accessed during stressed times of blood bank inventory. All supplies and equipment must be stored in a covered area with temperature and humidity control.

THOMAS W. TRAVIS
Lieutenant General, USAF, MC, CFS
Surgeon General

ATTACHMENT 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

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Abbreviations and Acronyms

ACC—Air Combat Command

ACLS—Advanced Cardiac Life Support

ADCON—Administrative Control

AEF—Air Expeditionary Force

AEG—Air Expeditionary Group

AETF—Air and Space Expeditionary Task Force

AEW—Air Expeditionary Wing

AFBPO—Air Force Blood Program Office

AFDD—Air Force Doctrine Document

AFFOR—Air Force Forces

AFFP—Apheresis Fresh Frozen Plasma

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFMLOC—Air Force Medical Logistics Operations Center
AFMS—Air Force Medical Service
AFPD—Air Force Policy Directive
AFRC—Air Force Reserve Command
AFSC—Air Force Specialty Code
AFTH—Air Force Theater Hospital
AFTTP—Air Force Tactics, Techniques, and Procedures
AHLTA—Armed Forces Health Longitudinal Technology Application
AJBPO—Area Joint Blood Program Office
ANG—Air National Guard
AOR—Area of Responsibility
APLT—Apheresis Platelets
ARBC—Apheresis Red Blood Cells
ARC—Air Reserve Component
AS—Allowance Standard
ASBPO—Armed Services Blood Program Office
ASWBPL—Armed Services Whole Blood Processing Laboratory
ATLS—Advanced Trauma Life Support
ATOC—Air Tactical Operations Center
BDC—Blood Donor Center
BSD—Blood Supply Detachment
BTC—Blood Transshipment Center
C-STARS—Center for Sustainment of Trauma and Readiness Skills
CBRN—Chemical, Biological, Radiological, and Nuclear
CBRNE—Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives
CBRNEDT—CBRNE Defense Training
CBT—Computer-Based Training
CDA—Corporate Dental Application
CDR—Clinical Data Repository
CFETP—Career Field Education and Training Plan
COCOM—Combatant Command
COMAFFOR—Commander, Air Force Forces
COMPUSEC—Computer Security

COMSEC—Communications Security
CONOPS—Concept of Operations
CONUS—Continental United States
CP—Collective Protection; Collectively Protected
CPG—Clinical Practice Guideline
CRYO—Cryoprecipitate
DBSS—Defense Blood Standard System
DMF—Deployed Medical Facility
DMLSS—Defense Medical Logistics Standard Support
DOD—Department of Defense
DODI—Department of Defense Instruction
DODAAC—Department of Defense Activity Address Code
DOEHRS—Defense Occupational and Environmental Health Readiness System
DRBC—Deglycerolized Red Blood Cell
EBSC—Expeditionary Blood Support Center
EBTC—Expeditionary Blood Transshipment Center
ECS—Expeditionary Combat Support
ECU—Environmental Control Unit
EHR—Electronic Health Record
EM—Emergency Management
EMDG—Expeditionary Medical Group
EMEDS—Expeditionary Medical Support
EML—Expeditionary Medical Logistics
eMOAS—Electronic Mother of All Spreadsheets
EPW—Enemy Prisoner of War
FBPT—Frozen Blood Product Team
FDA—Food and Drug Administration
FDECU—Field Deployable Environmental Control Unit
FFP—Fresh Frozen Plasma
FRBC—Frozen Red Blood Cells
FWB—Fresh Whole Blood
GCCS—Global Command and Control System
GCSS—Global Combat Control System

IA—Information Assurance

IAW—In accordance with

ICCBBA—International Council for Commonality in Blood Banking Automation

JBPO—Joint Blood Program Office

JINTCCS—Joint Interoperability of Tactical Command and Control Systems

JMAT—Joint Medical Analysis Tool

JMC—Joint Movement Center

JMeWS—Joint Medical Workstation

JP—Joint Publication

JPTA—Joint Patient Tracking Application

LOAC—Law of Armed Conflict

MAJCOM—Major Command

MAP—Materiel Availability Percentage

MEFPAK—Manpower and Equipment Force Packaging

MIO—Medical Intelligence Officer

MISCAP—Mission Capability

MOA—Memorandum of Agreement

MRA—MEFPAK Responsible Agency

MRDSS ULTRA—Medical Readiness Decision Support System Unit Level Training Readiness Application

MRT—Medical Readiness Training

MTF—Medical Treatment Facility

NAVMED—Navy Medical

NCMI—National Center for Medical Intelligence

NCOIC—Non-Commissioned Officer in Charge

NIPRNET—Non-Secure Internet Protocol Router Network

NSN—National Stock Number

OI—Operating Instruction

OIC—Officer in Charge

OPCON—Operational Control

OPLAN—Operations Plan

OPSEC—Operations Security

ORE—Operational Readiness Exercise

PF24—Plasma Frozen within 24 Hours of Phlebotomy
PMITS—Patient Movement Items Tracking System
POL—Petroleum, Oil, and Lubricants
PRBC—Packed Red Blood Cells
QA—Quality Assurance
RBC—Red Blood Cell
RC/CC—Responsibility Center/Cost Center
RDS—Records Disposition Schedule
RSVP—Readiness Skills Verification Program
SDC—Standard Desktop Configuration
SG—Surgeon General; Surgeon
SIPRNET—Secret Internet Protocol Router Network
SITREP—Situation Report
SOF—Special Operations Forces
SRTS—Spectacle Request Transmission System
STE—Secure Telephone Equipment
TAC—Transportation Account Code
TACON—Tactical Control
TBTC—Transportable Blood Transshipment Center
TM—Technical Manual
TMDS—Theater Medical Data Store
TMIP-Air Force—Theater Medical Information Program Air Force
TPFDD—Time-Phased Force and Deployment Data
TRAC2ES—TRANSCOM Regulating and Command and Control Evacuation System
TRANSCOM—Transportation Command
TTP—Tactics, Techniques, and Procedures
UTC—Unit Type Code
WMP—War and Mobilization Plan
WRM—War Reserve Materiel

ATTACHMENT 2

EXPEDITIONARY COMBAT SUPPORT (ECS) REQUIREMENTS

| EXPEDITIONARY COMBAT SUPPORT REQUIREMENTS | | | | | |
|---|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-------------------------------------|
| **IAW AFPAM 10-219, Vols 5 & 6, where applicable and data provided | | | | | |
| | FFBP1 (P) FFBE1 (E) | FFBP2 (P) FFBE1 (E) | FFBP3 (P) FFBE1 (E) | FFLBB (P) FFLB1 (E) | FFBD1 (P) FZNBPu (E) |
| SITE PREPARATION | | | | | |
| Square Footage (slight grade required) | 1,200 | | | | |
| Tents | 1 | | | 1 | |
| BASIC EXPEDITIONARY AIRFIELD RESOURCES (BEAR) REQUIREMENTS | | | | | |
| Latrine/Showers (= # staff) | 4 | 2 | 3 | 6 | 7 |
| Billeting (= # Officer/Enlisted) | 1/3 | 0/2 | 0/3 | 1/5 | 0/7 |
| Meals (= # staff x 3 meals/day) | 12 | 6 | 9 | 18 | 21 |
| Laundry (lbs/week) (= # staff x 10 lbs/week) | 40 | 20 | 30 | 60 | 70 |
| Ice (lbs/day, staff) (= 4.4 lbs/person/day) | 17.6 | 8.8 | 13.2 | 26.4 | 30.8 |
| Dry Ice (lbs/day) | 300 | 300 | 300 | | |
| Power (kW) (3-phase) | 53 | 53 | 53 | 20 | 17.5 |
| ECUs (EMEDS Organic) Requiring Support (# units) | 2 | 2 | 2 | 1 | |
| Potable Water (gal/day) (= # staff x 10 gal/day) | 40 | 20 | 30 | 60 | 70 |
| CIVIL ENGINEERING REQUIREMENTS | | | | | |
| Medical/Biohazard Waste | | | | | |
| Liquid (gal/day) (= 0.7 x potable water rate) | 28 | 14 | 21 | 42 | 49 |
| Solid (lbs/day) (= 4 lbs/day x # staff) | 16 | 8 | 12 | 24 | 28 |
| Blood Product (lb/day) (= estimated lbs of blood product waste/donor x estimated daily throughput) | 100 | 100 | 100 | 75 | |
| *NOTE: Civil engineering (CE) maintenance support is required for generator and ECU equipment items. | | | | | |
| LOGISTICS REQUIREMENTS | | | | | |
| POL | | | | | |
| Unleaded Fuel (gal/day) (10kW organic generator) | 10 | | | 10 | |
| Vehicles | | | | | |

EXPEDITIONARY COMBAT SUPPORT REQUIREMENTS

****IAW AFPAM 10-219, Vols 5 & 6, where applicable and data provided**

| | FFBP1 (P) FFBE1 (E) | FFBP2 (P) FFBE1 (E) | FFBP3 (P) FFBE1 (E) | FFLBB (P) FFLB1 (E) | FFBD1 (P) FZNBPu (E) |
|-----------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-------------------------------------|
| Vehicle Requirements | Per Force Module | | | Per Force Module | |
| Equipment Movement | 10K Forklift, Flatbed Truck | | | 10K Forklift, Flatbed Truck | |

COMMUNICATIONS REQUIREMENTS

| | | | | | |
|---|-----|--|--|--|--|
| SIPRNET Access Required | Yes | | | | |
| NIPRNET Access Required | Yes | | | | |
| Phone Access Required | Yes | | | | |
| Satellite/Telemedicine Required (EMEDS organic requiring communications support) | Yes | | | | |
| Land Mobile Radios Required (EMEDS organic requiring communications network support) | Yes | | | | |
| Secure Telephone Equipment Maintenance Required (EMEDS Organic STE) | Yes | | | | |

MOVEMENT REQUIREMENTS

| | | | | | |
|--------------------------------------|---|--|--|---|--|
| C-27 (# aircraft) | 2 | | | 1 | |
| C-130 (# aircraft) | 1 | | | 1 | |
| C-141 (# aircraft) | 1 | | | 1 | |
| C-17 (# aircraft) | 1 | | | 1 | |
| C-5A (# aircraft) | 1 | | | 1 | |
| M-871 (#flatbed semitrailers) | 2 | | | 1 | |
| M872 (# flatbed semitrailers) | 1 | | | 1 | |

WEIGHT AND CUBE REQUIREMENTS

| | | | | | |
|------------------------|--------|--|--|-------|--|
| Weight (lbs) | 13,407 | | | 7,607 | |
| Short Tons (ST) | 6.7 | | | 3.8 | |
| # of Pallets | 4 | | | 3 | |

CHAPLAINCY SERVICE SUPPORT REQUIRED Yes

SECURITY FORCES REQUIREMENTS Security Force support will be required if EMEDS is not located on Air Base.

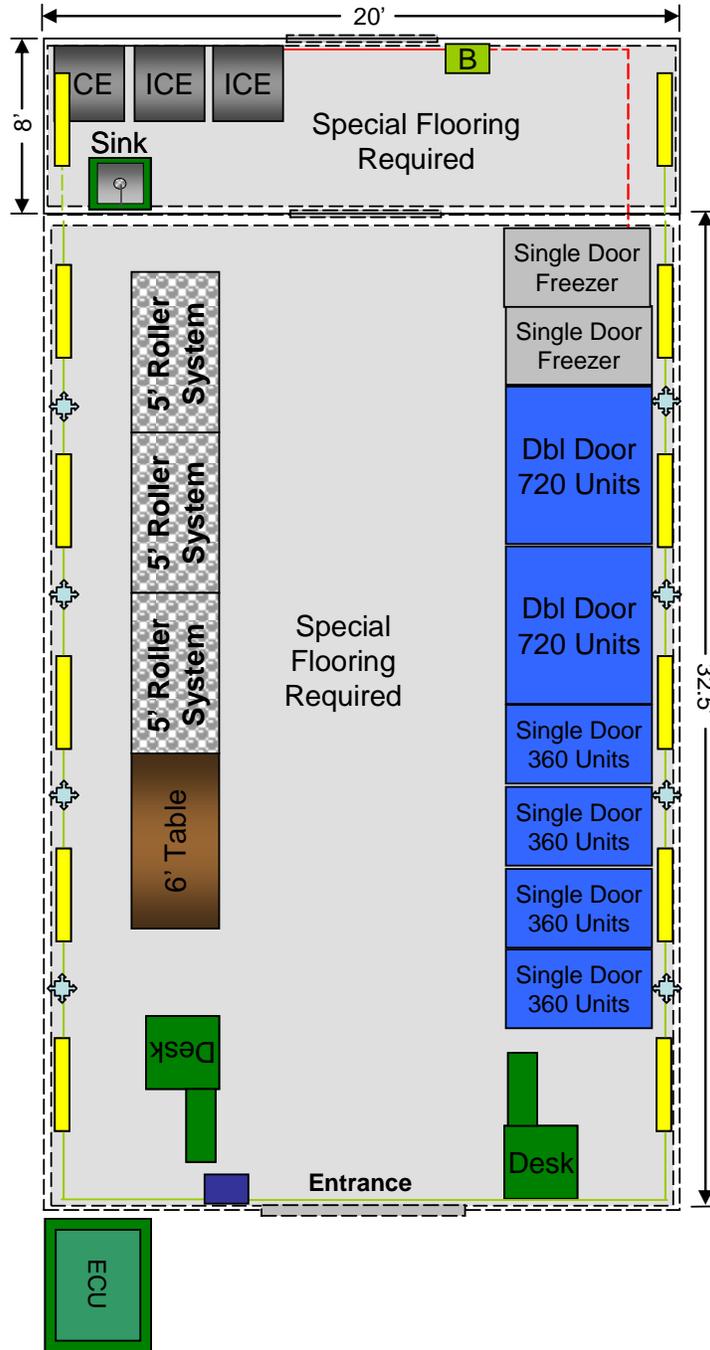
ATTACHMENT 3

ORGANIC COMPUTER INFORMATION

| Organic Computer Information | | | | | |
|---|---|------------------------|------------------------|------------------------|-------------------------|
| | FFBP1 (P) FFBE1 (E) | FFBP2 (P) FFBE1 (E) | FFBP3 (P) FFBE1 (E) | FFLBB (P) FFLB1 (E) | FFBD1 (P) FZNBPu (E) |
| HARDWARE INCLUDED IN AS | | | | | |
| Laptop | 0 | | | 2 | 0 |
| Printer | 0 | | | 1 | 0 |
| COMPUTER CONFIGURATION | | | | | |
| Operating System/ Administrative Applications | | | | SDE | |
| RAM/Hard Drive | | | | ITT standard | |
| CLINICAL APPLICATIONS | | | | | |
| TMIP-AF | Yes | | | | |
| CDA | | | | | |
| DBSS | Yes | | | | |
| Digital Imaging | | | | | |
| SRTS | | | | | |
| TMDS Blood Management Module | Yes | | | | |
| TRAC2ES | | | | | |
| NETWORK REQUIREMENTS | | | | | |
| SIPRNET Access | Yes | | | | |
| NIPRNET Access | Yes | | | | |
| Server Suite | No | | | | |
| IA CONFIGURATION | | | | | |
| Port Number/Protocol (TCP/UDP) | 21/TCP; 443/TCP; 8080/TCP | | | | |
| WEB SERVICES | | | | | |
| Access to the following web-based resources is available. | | | | | |
| AFCITA | https://www.afchips.brooks.af.mil/webApp/USG_Notice_Consent.aspx?NextForm=login.aspx | | | | |
| AHTLA Warrior | https://warrior-sa.lrmc.amedd.army.mil | | | | |
| DOEHRS | https://doehrswww.apgea.army.mil/front.htm | | | | |
| JMEWS | https://jmews.fhp.smil.mil/msa-app/home.do (SIPRNET only) | | | | |
| KX | https://kx.afms.mil/kxweb/home.do | | | | |
| NCMI | https://www.intelink.gov/ncmi/index.php | | | | |
| TRAC2ES | https://www.trac2es.transcom.mil/ | | | | |

ATTACHMENT 4

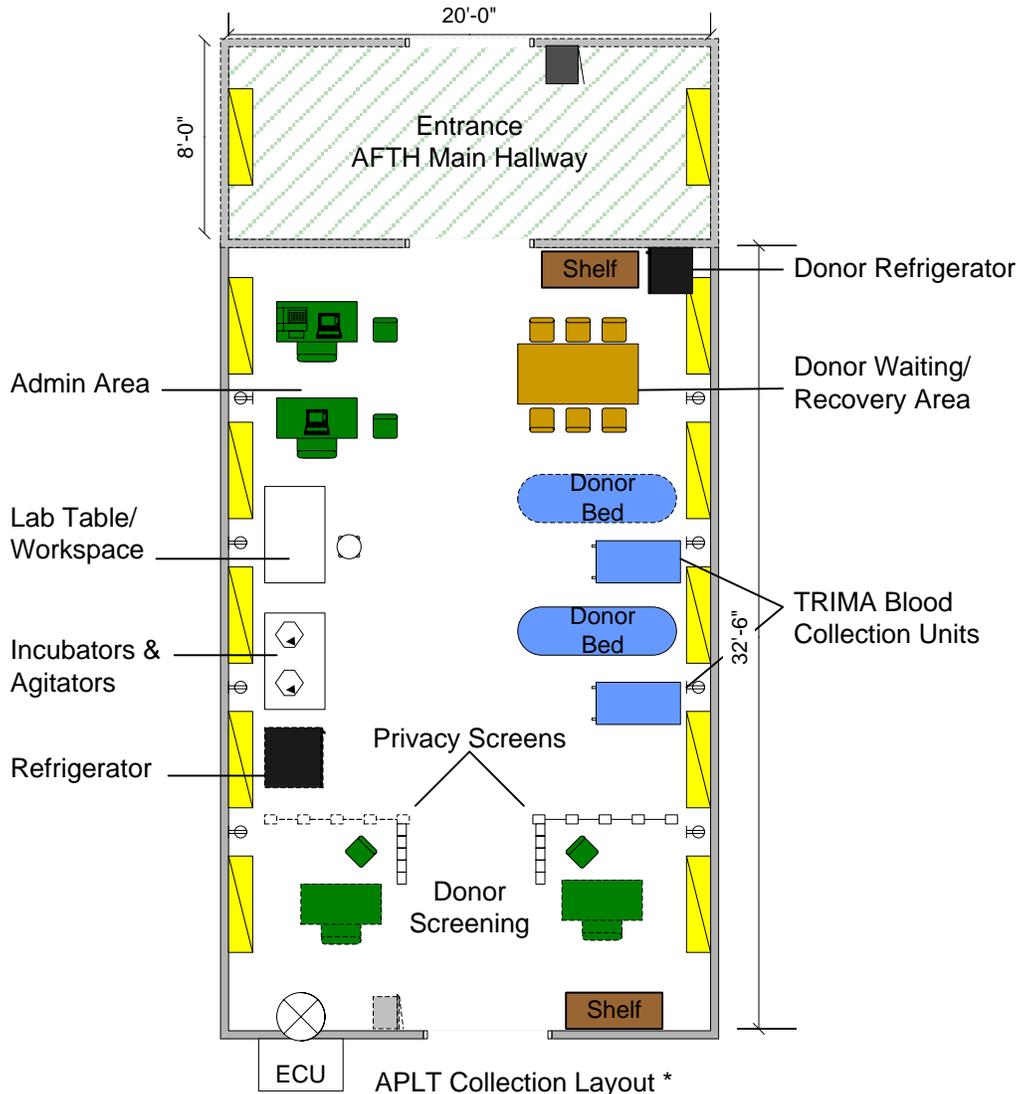
EBTC TENT LAYOUT



-  Convenience Outlets
-  Power Distribution Box (110v)
-  Power Distribution Box (208v)
-  Lighting

ATTACHMENT 5

EBSC TENT LAYOUT



* During WB drives, tent layout is reconfigured to accommodate 3 more donor beds. Admin and donor waiting/recovery may be moved to the AFTH hall.

-  Convenience Outlets
-  Power Distribution Box (110v)
-  Power Distribution Box (208v)
-  Lighting