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Medical

THE AIR FORCE BLOOD PROGRAM

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(Col James J. Berger)
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This instruction implements AFD 44-1, DoD Instruction 6480.4, DoD Directive 6000.12 NAVMED P-5120, and AFMAN 41-119. It provides the standardized procedures and required standards for managing the Air Force Blood Program (AFBP). It discusses the program and the operation of two key Armed Services Blood Program (ASBP) elements, the Armed Services Whole Blood Processing Laboratories (ASWBPLs) and the Blood Transshipment Centers (BTC's). This guidance stems from mandated standardized procedures set forth by the Food and Drug Administration (FDA) and the American Association of Blood Banks (AABB). Use this AFI in conjunction with AFI 44-112 and NAVMED P-5120. This instruction directs collecting and maintaining information subject to the Privacy Act of 1974 authorized by 10 U.S.C. 8013. System of records notice F168 SG F applies. This instruction applies to the Air National Guard (ANG) only upon mobilization.

SUMMARY OF REVISIONS

This revision updates all aspects of the previous regulation in accordance with recent FDA and AABB guidance and tasks specific agencies with responsibilities to the program. Increases requirement for activation of blood donor centers from semi-annually to quarterly. Deletes requirement for the Chief, Air Force Blood Program to monitor AF participation in the American Red Cross (ARC) COMPASS Program. Deletes requirement for the Chief, Air Force Blood Program to monitor AF frozen blood purchases, including equipment purchases to support this program. Updates office symbols and job titles. Mandates that Memorandums of Understanding/Agreement with civilian blood agencies be reviewed and approved by HQ USAF/SGXR. Updates **Attachment 1**, references to include current AFIs. Updates **Attachment 2** to include FDA registration numbers as well as license numbers; identified facilities as to host and satellite blood donor centers. DD Form 2255, **Armed Services Blood Program/Operational Report**, RCS: DD-HA(Q)1831, supersedes AF Form 275, **Blood Bank Operational Report**, RCS: HAF-SGH(Q)7601. A | indicates revisions from the previous edition.

Section A—Program Definition and Purpose

1. Program Definition. The Air Force Blood Program (AFBP) is an integral part of the Armed Services Blood Program (ASBP). The AFBP collects, tests, distributes, and transfuses blood products to military personnel worldwide during peace or war. The Assistant Secretary of Defense for Health Affairs charters the Director, Armed Services Blood Program Office (ASBPO) to monitor military blood policies and to coordinate the military blood programs. The Air Force Surgeon General directs the AFBP.

Section B—The Air Force Blood Program

2. AF Blood Program Elements. There are eighteen elements required for the overall operation of the Air Force program. Each element contributes to a tri-service blood distribution system that collects blood in CONUS and distributes it to military treatment facilities (MTFs) in CONUS during peacetime or to MTFs in theater during wartime. The Air Force Blood Program Office (AFBPO) plans, manages, and coordinates these elements.

2.1. Responsibilities:

2.1.1. The Air Force Surgeon General (AF/SG) will:

2.1.1.1. Serve as the "responsible head" for the AF FDA U.S. License 610 and ensure all AF blood banks, blood donor centers, transfusion services, and other blood-related agencies gain FDA licensure or registration as appropriate and comply with applicable portions of Title 21, Code of Federal Regulations. The AF/SG will establish an evaluation program to review all AF related FDA Inspection Observations (Form FDA 483) to ensure appropriate action is taken to prevent recurrence of each "observation" cited. The AF/SG will retain indefinitely all copies of application and inspection reports with corrective actions taken.

2.1.1.2. Appoint the Director, Medical Readiness to serve as the designated representative to assist him or her.

2.1.1.3. Provide for continuing education programs for clinical laboratory officers and blood bank officers to ensure they are current in matters of FDA compliance and regulations.

2.1.1.4. Appoint the Chief, Air Force Blood Program Office (AFBPO). Candidate names will be provided by the Associate Chief of Clinical Laboratory Officers.

2.1.1.5. Provide consultation to requesting MAJCOMs in the FDA licensure program and other blood related matters.

2.1.1.6. Notify immediately the Director, Office of Compliance, Center of Biologics Evaluation and Research (CBER), in the event of a transfusion-associated fatality or when the post-transfusion cause of death is unknown.

2.1.1.7. Notify CBER when blood products that have a potential health hazard have been transfused, shipped, or made available for transfusion, or when any complaint implying a health hazard has been made.

2.1.1.8. Assign a licensed physician qualified by training and/or experience to serve as the Medical Director for ASWBPL East and West.

2.2. The Chief, Air Force Blood Program (AFBPO) will:

- 2.2.1. Activate AF blood donor centers (BDCs) to meet the taskings of ASBPO.
 - 2.2.2. Supervise the Directors, Armed Services Whole Blood Processing Laboratories (ASWBPL) East and West and oversee their blood operations. AFBPO will establish peacetime quotas for blood shipments from BDCs to the ASWBPLs.
 - 2.2.3. Track, maintain, and report the aggregate blood readiness and requirements to appropriate levels in the chain of command.
 - 2.2.4. Monitor blood distribution network effectiveness during peacetime and wartime.
 - 2.2.5. Provide AFBP operational guidance to AF MTFs.
 - 2.2.6. Provide operational guidance to MAJCOM and MTF Medical Readiness sections.
 - 2.2.7. Serve as the AF/SG point of contact for FDA, AABB, American Blood Centers (ABC) the American Red Cross (ARC), and the Corporate Information Management Blood Subgroup. Ensures AF compliance with guidance from these agencies.
 - 2.2.8. Chair the Wartime Medical System (WARMED) Blood Program Work Center Committee.
 - 2.2.9. Serve as the AF/SG point of contact for all blood program research, development, training, educational, and communication packages.
 - 2.2.10. Operate the AF HIV Lookback Program, interfacing with DoD, the other military services, civilian blood agencies, and other government agencies. AFBPO will serve as the central contact point for all cases tracked within the AF.
 - 2.2.11. Assist in developing AF policies on Acquired Immunodeficiency Syndrome (AIDS), hepatitis, Human T Lymphotropic Virus, Type I (HTLVI), and blood donation criteria.
 - 2.2.12. Create and edit AF Blood Program instructions and forms.
 - 2.2.13. Compile AF Blood Program statistics, including donor infectious disease results.
 - 2.2.14. Assist in the development and deployment of the Defense Blood Standard System (DBSS) in support of the AFBP.
 - 2.2.15. Develop requirements, provide technical guidance, and assess progress toward deployment of Transportable Blood Transshipment Centers (TBTCs).
 - 2.2.16. Assist the Associate Chief of Clinical Laboratory Sciences in determining training and manning requirements for enlisted laboratory technicians and laboratory officers serving in blood bank operational missions.
- 2.3. The MAJCOM Surgeon will:
- 2.3.1. Support the AFBP and ensure adequate resources are available to meet command blood taskings.
 - 2.3.2. Appoint a Command Blood Consultant. This officer should be a clinical laboratory officer certified as a Specialist in Blood Banking or a pathologist with blood banking experience.
 - 2.3.3. Review FDA licensure applications and corrective actions from command inspections.

2.3.4. Assign trained personnel to staff command BDCs, BTCs and TBTCs in accordance with the AF War and Mobilization Plan-1 (WMP-1). Personnel assigned to BDCs will not be available for deployment. BTCs and TBTCs will be staffed from mobility personnel.

2.3.5. Ensure the supplies listed in the TA 893 are current, in good condition, and are prepositioned to support wartime blood programs.

2.3.6. Activate command BDCs quarterly and BTCs annually. BDCs and BTCs must be fully operational within 24 hours of notification.

2.3.7. Notify HQ USAF/SGXR when the MAJCOM cannot meet assigned blood quotas.

2.3.8. In coordination with the AFBPO and other MAJCOMs (if applicable), will ensure that host BDCs perform annual site visits to their respective satellite facilities.

2.3.8.1. Host BDCs will be responsible for formulating, deploying, and enforcing donor collection and processing OI's to their respective satellite facilities.

2.3.8.2. Host BDCs will coordinate activation of their satellite donor facilities through their respective MAJCOMS during wartime and contingency operations, and through the AFBPO during peacetime.

2.4. The Installation Commander will:

2.4.1. Strongly encourage and recommend that commanders and personnel support installation blood drives.

2.4.2. Provide and support the logistical, transportation, and media marketing requirements to perform the installation taskings of the AFBP.

2.4.3. Appoint in writing, a nonmedical officer or civilian employee (GS-7 or higher) to be as the Base Blood Program Officer (BBPO). The clinical laboratory officer may assist in technical guidance, but will not be the appointed BBPO.

2.5. The Base Blood Program Officer (BBPO) will:

2.5.1. Develop and maintain a program of continuing donor education and motivation. Unit competitions recognizing highest percentage of donors and highest raw count of donors are encouraged. AFM 177-372A, paragraph 2-18, provides guidance on compensatory time for civilian blood donations.

2.5.2. Develop a system with points-of-contact for each installation unit to provide donors in sufficient quantities to meet the blood collection taskings.

2.5.3. Update the installation commander on donor programs activities and unit blood collections.

2.5.4. Coordinate administrative and promotional materials used to recruit donors with the clinical laboratory or blood donor center officer.

2.5.5. Ensure that individual donors are recognized using AF Form 2297, **AF Blood Program (Donor Record)**, AF Form 2298, **Blood Donor Recruiter Citation**, and AF Form 2299, **Gallon Blood Donor Citation**, in conjunction with other incentives.

2.6. The Director of Base Medical Services (DBMS) will:

2.6.1. Ensure applicable portions of Title 21, Code of Federal Regulations, relating to blood are implemented.

2.6.2. Take the necessary corrective actions to ensure compliance with FDA regulations and will notify HQ USAF/SGXR of any unresolved problems.

3. Motivating Donors. It is a command responsibility to provide donors at the frequency and in the quantity necessary to enable AF MTFs to maintain a working inventory of and to meet contingency needs for blood products. Close coordination and cooperation between the Base and MTF commanders is essential to minimize interruption to work and training schedules while soliciting blood donors during normal duty hours. The Air Force tasks the Base Blood Program Officer (BBPO) with providing a system to notify units and schedule donors in an orderly fashion such that the MTF can process donors and collect blood.

3.1. Donor Nourishment. Refreshments such as pastries, fruit juices, and soft drinks should be provided to donors to minimize donor reactions. Sustenance items should be purchased through Medical Logistics using AF Form 287, **Subsistence Request**, O&M funds. Donor nourishment items must not be purchased with medical subsistence funds.

4. Donor and Blood Product Priorities. Access to the military blood donor base and use of blood collections is ultimately the responsibility of the installation commander. With proper education and motivation, most installations will have an adequate number of donors to support competing requirements. When requirements exceed collections, follow this priority system:

4.1. Contingency requirements, including support of ASWBPL activities.

4.2. Routine requirements of military MTFs.

4.3. Routine requirements of local federal hospitals (VA, PHS).

4.4. Requests from nonprofit civilian blood banks that have reciprocal agreements with the military (e.g. American Red Cross, American Association of Blood Banks, American Blood Centers, etc.)

5. Obtaining Blood and Blood Products. MTFs should obtain blood from sources in the priority listed below. During times of national emergency, mobilization, or war, ASBPO may activate Memoranda of Agreement with civilian agencies to augment the need for large quantities of blood.

5.1. Voluntary Donation. AF blood donors centers (BDCs) will collect blood on DOD or federal facilities only. Collections for civilians can be made if unsolicited and if transportation is not provided at government expense. (Aircrew members who donate blood [200 ml or more] will be disqualified from flying for a minimum of 72 hours, post-donation). Donors will complete a DD Form 572, **Blood Donor Record**, for each donation or potential donation.

5.2. Other Area Military or Federal MTFs. AF MTFs that do not have blood donor center capability or when demand for blood exceeds BDC capacity, should attempt to obtain blood from other military or federal MTFs in their local area. Interfacility shipments may be made by either military or commercial transportation, but will be charged to the receiving MTF's operations and maintenance funds.

5.3. Civilian Blood Banks. MTFs may obtain blood products from local civilian blood banks that are FDA licensed. Any use of blood from the civilian sector must be approved in writing, with a copy of the agreement forwarded to HQ USAF/SGXR. Individual AF MTFs that use civilian blood sources

will negotiate annually with civilian suppliers to obtain the best price. Blood product costs specified in these agreements should be no greater than the prevailing rates charged in the local community. Installations with a contingency BDC mission must include a short-notice discontinuation clause in any agreements for peacetime blood products support. MTFs may also subcontract with civilian blood banks for infectious disease marker testing. Such agreements should specify the maximum turnaround time for results in order that collected blood will be available for priority shipment to ASWBPL or immediate local use.

6. Donor ABO and Rh Group Records. The Director of Base Medical Services (DBMS) must ensure the proper performance of testing and maintenance of records of ABO and Rh groups for each active duty person on base. Enlisted AF personnel are ABO and Rh grouped during basic training and officers are ABO and Rh grouped at their first base of assignment.

6.1. ABO Classification. The International ABO (Landsteiner) classification will be used. As noted in AFI 36-3001 the designated issuing officer must record the ABO and Rh groups on DD Form 2AF, **Armed Forces Identification Card**. Use the letters "A", "B", "AB", or "O", to record the ABO blood group, and the abbreviations "POS" or "NEG" to record the Rh group.

6.2. Base Blood Groups Alpha Roster. The Military Personnel Flight (MPF) will generate a quarterly aspha roster of base active duty personnel listing names by ABO and Rh blood groups of each unit. Forward the alpha roster to the MTF blood bank for contingency purposes.

7. Inventory Control. Effective management of blood resources is vital to maintaining sufficient blood products to meet all requirements. The blood bank officer must efficiently manage and monitor several key areas of control:

7.1. Minimum Stock Level: Each blood bank must establish a minimum number of each blood product by blood type needed for routine, daily operation. Maintaining stock levels near this threshold will ensure maximum coverage with minimum outdating. List the minimum stock levels in the operating instructions (OIs) and post for quick access and review.

7.2. Outdating and Loss Control: Blood banks must monitor the expiration dates of all blood products to ensure minimal outdating resulting in loss of blood products. The hospital committee assigned to review blood product usage and policies should participate in the methods to control outdating and loss control. Recommended procedures to preclude outdating are:

7.2.1. Avoid maintaining stock levels above the established minimum.

7.2.2. Develop and monitor adherence to a Maximum Surgical Blood Order Schedule (MSBOS) comparing individual MTF blood ordering and usage against national averages.

7.2.3. Utilize the Type and Screen procedure in lieu of Type and Crossmatch whenever the risk for blood usage is low.

7.2.4. Return crossmatched, but unused blood units to the general inventory after 72 hours.

7.2.5. Transfer blood products nearing expiration to other military or federal hospitals, or as a last resort to other civilian hospitals or agencies through existing Memorandum of Agreement or Memorandum of Understanding. (MOA/MOU).

7.2.6. Before discarding, outdated blood products should be utilized for training and research, or recovered through expired red cell and salvaged plasma agreements.

8. Special Hemotherapy Considerations. Transfusion of human derived blood products carries a small, but genuine risk of transmitting disease and other adverse immune modulation side effects. Alternative interventions or transfusion of synthetic (e.g. Factor VIII or IX) or processed blood products (e.g. albumin) that do not pose the disease transmission risks should be considered first.

8.1. Ordering Blood. The requester will complete Section I of the Standard Form (SF) 518, **Blood or Blood Component Transfusion**, to request and record transfusions.

8.1.1. The clinician will brief the patient or guardian on the dangers posed by hemotherapy and alternative transfusion methods prior to actual transfusion. The clinician will document this discussion on the AF Form 1225, **Informed Consent for Blood Transfusion**. Use one AF Form 1225 for each admission, or outpatient transfusion therapy course regardless of the number of blood units anticipated. HQ USAF/SGXR provides standardized patient and clinician briefing materials which can be obtained by each MTF blood bank.

8.1.2. Blood units released for transfusion must be assigned a transfusion transaction number unique to the local blood bank. Nursing staff will document transfusion outcome in section III of the SF 518. The original SF 518 must be placed in the patients "in-patient" medical record. A copy of the SF 518 must be returned to the blood bank and must be maintained in accordance with AFMAN 37-139. The third copy of the SF 518 should be placed in the patients "outpatient" medical record which accompanies individuals during PCS moves and extended TDY's. In the case of outpatient transfusion therapy, the original of the SF 518 should be placed in the patients "outpatient" medical record.

8.2. Issuing Blood. Blood bank personnel will select blood units and perform testing in accordance with local operating procedures. For blood units collected by military BDCs, the blood bag numbers provided by HQ USAF/SGXR will be used on all units of blood and corresponding paperwork to track blood units from origination to disposition. The unique number assigned to the unit of blood will be documented on the SF 518 and the locally developed Issue Log maintained in the blood bank. For units obtained from civilian sources, the unique number assigned to the unit of blood will likewise be documented on the SF 518 and the locally developed Issue Log. (See Attachment 2 for the HQ USAF/SGXR blood bag numbers, FDA Registration Number and FDA License Numbers for each MTF).

8.2.1. Securely attach a completed AF Form 205, **Transfusion Tag**, to the blood product container. Other methods to properly identify the intended recipient are acceptable only if the method meets FDA and AABB guidance.

8.2.2. Blood bank personnel will issue blood units to ward or clinic personnel only after verifying that all data on the SF 518, the unit label, the AF Form 205, and the Issue Log match exactly.

8.2.3. Each blood bank will establish local policy to provide minimum standards for compatibility testing, required paperwork, and issuance steps for emergency issue of blood.

9. Transfusion Reaction Investigation. Each blood bank or transfusion service must have a written system to promptly investigate any transfusion reaction, regardless of its severity. Use AF Form 1224, **Blood Transfusion Reaction Investigation**, to record results of that investigation. A locally devised transfusion reaction operating instruction must be available at all sites where transfusions are given. HQ USAF/SGXR (DSN 297-5054) must be notified within 24 hours of a transfusion-related death. HQ USAF/SGXR will in turn generate a written report which must be forwarded to: CBER, Director, Office

of Compliance, Attn: Fatality Program Manager (HFM-650), 1401 Rockville Pike, Rockville, MD 2852-1448.

10. Serologic Testing Requirements. All donor units (allogeneic, autologous, or directed) intended for transfusion will be fully tested in accordance with current FDA and AABB guidance.

11. Tracking Blood and Blood Products. All blood banks and transfusion services must utilize the Defense Blood Standard System (DBSS) to promptly and accurately track each unit of blood or blood product as required by the FDA. This system specifically identifies the donor or the agency providing the unit, the recipient or the shipping location or reason for destruction and the dates. All tracking records must be maintained indefinitely in an environment that provides physical and privacy protection.

12. Human Immunodeficiency Virus "Lookback" Program. Previously donated blood from donors who now test positive for anti-HIV (Type 1 or 2) must be tracked to inform those recipients of the increased risk to disease. HQ USAF/SGXR will be the central point of contact for all Air Force Lookback cases. Use the indefinitely maintained tracking records discussed above to determine disposition of those suspect units of blood. Organize these records for easy review and identification prior to placing them on microfiche.

13. Required Reports. AF MTFs that collect, store, ship, or transfuse blood must send a computer disk (3 1/2") and printed copy with quarterly data on DD Form 2555, **Armed Services Blood Program/Blood Bank Operational Report**, RCS: DD-HA(Q)1831. The report is due to HQ USAF/SGXR no later than 21 days following the end of the quarter. The software program for this automated form and instructions for completion are available from HQ USAF/SGXR.

14. FDA Licensure and Registration Program. A DoD/FDA MOU requires each military department, through its Surgeon General, to operate its own blood program in accordance with FDA requirements. The MOU requires FDA registration of all military blood banks, transfusion services, and blood donor centers (BDCs). All active BDCs must be licensed by the FDA. Contingency BDCs must also be licensed as satellite facilities under a licensed host BDC. The AF Surgeon General serves as the responsible head for the FDA U.S. License 610 assigned to the AF and exercises control over all matters relating to compliance with FDA requirements as detailed in the applicable Code of Federal Regulations. The Director, Medical Readiness, and Chief Air Force Blood Program may be appointed by the SG to serve as the alternate signatory representatives. MTFs that draw autologous donors for inhouse transfusion only or draw blood for therapeutic purposes may opt for the less stringent FDA registration. Route all FDA license and registration applications, requests for procedural changes, additions or deletions to blood product manufacturing through HQ USAF/SGXR. All requests for modifications to an FDA license must be received at the FDA at least 30 days before intended change and approval must be granted prior to implementation. The FDA annually inspects licensed and registered facilities to monitor compliance with standards. Compliance with FDA standards is legally required by civil law and provides recognition that AF blood banks operate under nationally accepted standards of blood product quality and safety. Such recognition allows the AF to freely exchange blood products with military and civilian blood banks across state lines when necessary.

15. American Association of Blood Banks Inspections. The AABB accreditation program is a peer educational program motivating its members to strive for the highest level of performance in all aspects of

transfusion medicine; medical, technical, scientific, and administrative. Compliance with AABB standards is voluntary. The AF Surgeon General encourages AABB accreditation for MTFs that crossmatch or transfuse as little as one unit per month.

16. Civilian Collections of Military Donors. MTFs may enter into a MOU/MOA with civilian blood collection agencies to collect blood from military donors in return for reduced rates on purchased blood products. Preference will be given to other federal or military agencies to collect blood before negotiating with civilian agencies. The MOU/MOA should be negotiated annually to obtain the best return rate for the Air Force and should be no higher than five to one (one free unit for every five units of blood collected). The negotiating team for the MOU/MOA will consist of, as a minimum, a representative of the installation commander's staff, a physician, the blood bank or clinical laboratory officer, and the MTF associate administrator. Permission for initial negotiation and final approval of the MOU/MOA will be sought from the installation commander. The MOU/MOA must also be reviewed, approved and signed by HQ USAF/SGXR. MOU/MOA will not be used as a substitute for proper blood bank management practices and will not involve accumulation of high exchange account balances (neither credit nor debit). Total credits/debits will not exceed 2000 credit or debit units (not equivalent to units of blood). Credits will only be used for obtaining blood products. MOU/MOA will not be used to barter for "dollar credits", equipment, donor recruitment incentives, nor education or training expenses.

Section C—Emergency, Mobilization, and Wartime Blood Program

17. National Blood Program (NBP). The Federal Emergency Management Agency (FEMA) created the NBP to meet the nation's need for blood, blood components, derivatives, and plasma expanders in the event of mobilization or national emergency. DoD's responsibility under this program is to ensure that blood collecting facilities, distribution points, and processing laboratories are in place when needed. Anticipated blood product usage is established by "Mobilization Planning Factors for Blood, Electrolytes, and Colloids" outlined in various Operational Plans (OPlans). These factors are precise estimations of the blood requirements of cumulative casualties.

Table 1. Mobilization Planning Factors for Blood, Electrolytes, and Colloids.

BLOOD COMPONENT	AMOUNT	FACTOR	REMARKS
Red Blood Cells (RCZ)	250 ml	4 units ea*	Factor applied (RCZ)
Fresh Frozen Plasma (FFP)	220 ml	0.08 units ea*	
Platelets (PC)	300-400 ml	0.04 units ea*	6-8 PCs usually pooled
Crystalloid	1000 ml	3 units ea*	3% min NS or LR
Colloids	100 ml 0.09 units ea* HSA**, 25%		
*WIA or NBI			
**Human Serum Albumin			

18. Blood Bank Procedures. Wartime blood bank procedures should be written in accordance with Deployable Medical Systems (DEPMEDS) Policies/Guidelines Treatment Briefs, which are available from USAF/SGXR through the MAJCOMs.

18.1. Blood Donor Centers. All FDA licensed BDCs in the continental United States (CONUS) and overseas BDCs specifically tasked by the War and Mobilization Plan-1 (WMP-1) are liable for activation in support of the NBP. Taskings will be made by higher headquarters or HQ USAF/SGXR. Each designated BDC must:

18.1.1. Be fully supported and staffed by the DBMS. The DBMS will provide technical supervision and control.

18.1.2. Have a written emergency and/or contingency plan (per AFI 44-103).

18.1.3. Prepare for continuous operation at maximum tasking as stated in AF WMP-1. Preparation includes technical operations (as identified in NAVMED P-5120), product shipping activities, and administrative operations as identified in AFI 44-118

18.1.4. Organize and operate according to the AABB Technical Manual, AFMAN 41-119, NAVMED P-5120, AFI 44-118, and Title 21, Code of Federal Regulations, parts 200-299, 600-799, and 800-899. (Obtain copies through local GPO or AABB).

18.1.5. Conduct quarterly BDC exercises. Contingency BDCs will collect and ship a minimum of 20 units of packed red blood cells to their respective host facilities only. The host facility will in turn fully process the units received from the BDCs prior to shipping to the ASWBPLs. Blood must be collected in current stocklisted blood collection/dispensing bags.

18.1.6. Collect, process, and ship required blood when tasked. The BDCs at Lackland AFB or Keesler AFB may be tasked in unusual situations to meet quick turnaround times for direct shipment directly to ASWBPL, other BTCs, or intended users. When direct shipment to other BDCs or intended users is required, the Keesler or Lackland BDC will provide confirmatory testing of ABO and Rh (for Rh negatives only) prior to shipment.

18.1.7. Perform all FDA and AABB required serologic testing prior to shipping blood to the ASWBPL. Record the results of technical operations as identified in AFI 44-111. Examples of

forms available for this purpose include AF Form 2048, **Donor Unit Processing Record**, AF Form 2049, **Blood Component Processing Record**, AF Form 2050, **Plasma Component Processing Record**, and forms noted in AFI 44-118.

18.1.8. Provide funding for blood shipments to specified destinations.

19. Armed Services Whole Blood Processing Laboratories. McGuire AFB (ASWBPL East) and Travis AFB (ASWBPL West, Douglas B. Kendrick Blood Processing Laboratory) will maintain active ASWBPLs as designated in the WMP-1. Each ASWBPL must:

19.1. Be technically supervised and controlled by a physician designated by HQ USAF/SGXR.

19.2. Have a written emergency/contingency implementation plan (per AFI 41-106).

19.3. Prepare for continuous operation at the maximum tasking noted in AF WMP-1 and AFI 44-118.

19.4. Organize and operate according to AFI 44-118.

19.5. Exercise in conjunction with command post and field training exercises.

19.6. Receive administrative support from the parent MAJCOM, program, budget, and finance all operations, maintenance and staff costs, by the parent MAJCOM's funds (except pay and allowances and PCS travel of assigned tri-service personnel).

19.7. Receive AF/SG prior approval before deactivation or the relocating of a contingency operation.

19.8. Support AF responsibility for the shipping of blood products from an ASWBPL to destinations specified by the ASBPO.

19.9. Provide monthly reports of blood products received and shipped to each service SBPO and ASBPO.

20. Blood Transshipment Centers and Transportable Blood Transshipment Centers (TBTC).

Bases designated in AF WMP-1 will maintain a BTC or TBTC capability. Each BTC/TBTC must:

20.1. Be technically supervised and controlled and by the DBMS through the Chief of Medical Logistics.

20.2. Have a written emergency or contingency implementation plan (per AFI 41-106).

20.3. Prepare to operate continuously at the maximum tasking noted in AFI 44-118, including support operations.

20.4. Organizes and operates according to AFI 44-118.

20.5. Conducts exercises annually as directed by the parent MAJCOM Surgeon.

21. NBP Program Implementation. BTCs and overseas BDCs will activate at the direction of the assigned host BDC and the parent MAJCOM Surgeon. CONUS BDCs and ASWBPLs will activate and prepare for full operational readiness posture when HQ USAF/SGXR directs activation.

22. Blood Products Requisition. CONUS MAJCOM Surgeons requiring blood may submit requisitions by the most expeditious methods available to HQ USAF/SGXR. Overseas MAJCOMs must route requests through unified or specified command headquarters. Requesting commands should not cite

funds on requisitions for blood product requirements which are generated under emergency mobilization conditions.

23. Wartime Contract Restrictions. Contractual or any other arrangements made by individual facilities with civilian sector organizations to provide blood products in support of the emergency, mobilization, and wartime blood program are not authorized.

24. Forms Prescribed. AF Form 205, **Transfusion Tag**; AF Form 1224, **Blood Transfusion Reaction Investigation**; AF Form 1225, **Informed Consent for Blood Transfusion**; AF Form 2048, **Donor Unit Processing Record**; AF Form 2049, **Blood Component Processing Record**; AF Form 2050, **Plasma Component Processing Record**; AF Form 2297, **AF Blood Program Record**; AF Form 2298, **Blood Donor Recruiter**; AF Form 2299, **Gallon Blood Donor Citation**; DD Form 2555, **Armed Services Blood Program Blood Bank Operational Report**.

CHARLES H. ROADMAN II, Lt General, USAF, MC
Surgeon General

Attachment 1

GLOSSARY OF REFERENCES, ABBREVIATIONS, ACRONYMS, AND TERMS

References

DoD Directive 6000.12, *Health Services Operations and Readiness*, 29 April 1996

DoD Instruction 6480.4, *Armed Services Blood Program (ASBP) Operational Procedures*, 5 August 1996

AFIND 26, *Index to Air Force Blood Program Technical Letters*

AFI 34-301, *Nonappropriated Personnel Management and Administration*, 25 July 1996

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AFMAN 41-119, *Technical Manual of the American Association of Blood Banks*, 1996

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AFPD 44-1, *Medical Operations*, 29 July 1994

War and Mobilization Plan - 1 (WMP-1)

Title 21, Code of Federal Regulations, Part 211 Current Good Manufacturing Practices

Title 21, Code of Federal Regulations, Parts 600-799, Food and Drugs

Abbreviations and Acronyms

AABB—American Association of Blood Banks

ABC—American Blood Centers

AF—Air Force

AFBP—Air Force Blood Program

AIDS—Acquired Immune Deficiency Syndrome

AJBPO—Area Joint Blood Program Office

ARC—American Red Cross

ASBP—Armed Services Blood Program
ASBPD—Armed Services Blood Product Depot
ASBPO—Armed Services Blood Program Office
ASWBPL—Armed Services Whole Blood Processing Laboratory
BBPO—Base Blood Program Office
BDC—Blood Donor Center
BSU—Blood Supply Unit
BTC—Blood Transshipment Center
CONUS—Continental United States
DBMS—Director, Base Medical Support
DBSS—Defense Blood Standard System
DEPMEDS—Deployable Medical Systems
DOC—Designated Operational Capability
DoD—Department of Defense
FDA—Food and Drug Administration
FFP—Fresh Frozen Plasma
HIV-1/2—Human Immunodeficiency Virus Type 1/2
HTLV-I—Human TCell Lymphotropic Virus Type I
JBPO—Joint Blood Program Office
LRA—Local Reproduction Authorized
MAJCOM—Major Command
ml—Milliliter
MOA—Memorandum of Agreement
MOU—Memorandum of Understanding
MSBOS—Maximum Surgical Blood Ordering Schedule
MTF—Medical Treatment Facility
NBI—Nonbattle Injury
OI—Operating Instruction
OPLAN—Operation Plan
PC—Platelet Concentrate
PCS—Permanent Change of Station
RBC—Red Blood Cells

SBPO—Service Blood Program Officer
SG—Surgeon General
SGX—Director, Medical Readiness, Doctrine and Planning
SGXR—Medical Readiness Directorate
SOP—Standard Operating Procedure
TA—Table of Allowance
TBTC—Transportable Blood Transshipment Center
WARMED—Wartime Medical
WIA—Wounded in Action
WMP-1—War and Mobilization Plan 1

Terms

American Association of Blood Banks (AABB)—A scientific and technical group that establishes policy and standardizes procedures for the field of blood banking, including donor collections and transfusion services. Membership and inspections recognize high technical and administrative competence. AABB represents the "gold standard" of quality patient care and customer service.

Air Force Blood Program (AFBP)—The Blood Program operated for the Air Force Surgeon General. This function is located within the Medical Readiness Directorate at Headquarters Air Force. The Chief, Air Force Blood Program directs the peacetime and wartime operation of the program worldwide.

Acquired Immunodeficiency Syndrome (AIDS)—"AIDS" is a diverse group of clinical manifestations resulting from loss of immune function following infection by the Human Immunodeficiency Virus.

Area Joint Blood Program Office (AJBPO)—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 (BTC) and medical treatment facilities (MTF).

Armed Services Blood Program (ASBP)—The combined military blood programs of the individual services including unified and specified commands in an integrated blood products support system.

Armed Services Blood Product Depot (ASBPD)—A component staffed agency that is responsible for strategic storage of frozen blood products in a unified command. Each unified command component receives frozen blood products based on Joint Blood Program Office instructions.

Armed Services Blood Program Office (ASBPO)—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, 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.

Armed Services Whole Blood Processing Laboratory (ASWBPL)—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 (BTC). The Air Force is the executive agent for all ASWBPLs.

Blood Donor Center (BDC)—Component staffed CONUS agencies responsible for collecting and processing of blood products. Processed blood will be shipped from the BDC to the ASWBPL. BDCs may be collocated within a blood bank.

Blood Supply Unit (BSU)—A component staffed unit assigned to a geographic area by the Area Joint Blood Program Office (AJBPO) that is responsible for the receipt and storage of liquid and frozen blood products from BTCs or blood product depots (BPD). Received blood is stored within the BSU until requested by the area MTFs. BSUs may be collocated with one of the area MTFs.

Blood Transshipment Center (BTC)—An AF staffed agency responsible for receiving blood products from the ASWBPL, BPD, or another BTC, and storing those blood products until requested by area BSUs. BTCs are normally located at a major point of entry in theater.

Defense Blood Standard System (DBSS)—A computer system designed to assist the Armed Services blood program activities worldwide and to provide automated capabilities to meet the increased demands of contingency and wartime operations, as well as daily peacetime operations and regulatory requirements.

Food and Drug Administration (FDA)—The FDA Division of Blood and Blood Products establishes blood banking regulations and requirements for use by blood banks involved in interstate commerce (shipping blood and blood products across state lines), and grants licenses to blood banks that comply with those standards. The FDA considers blood as a manufactured drug. The military departments comply with these standards and each service Surgeon General holds an FDA license for the respective service's blood banks.

Fresh Frozen Plasma (FFP)—Plasma is the straw colored liquid obtained when separating red blood cells from whole blood. In peacetime, blood banks freeze and store this product for no more than one year at -18C or colder. For contingencies, military blood banks extend the shelf life to three years.

Joint Blood Program Office (JBPO)—A tri-service staffed office responsible for overall joint blood product management in a unified command theater of operations.

Maximum Surgical Blood Ordering Schedule (MSBOS)—A hospital approved list of recommended blood ordering practices by procedure based on national blood use averages. Adherence to the MSBOS prevents over utilization of limited blood bank resources and better manages blood inventory for when it is truly is needed.

Medical Treatment Facility (MTF)—A facility established for the purpose of furnishing medical and/or dental care to eligible individuals.

Platelet Concentrates (PC)—Platelets are cellular fragments in the blood that assist in blood clotting. Platelet concentrates are separated from whole blood by centrifugation and are stored at room temperature for up to five days with gentle agitation, or at -80C for two years.

Red Blood Cells (RBC)—RBCs are the oxygen carrying component of whole blood. RBCs are separated from whole blood by centrifugation or sedimentation and removal of residual plasma. When drawn in the anticoagulant CPDA-1, RBCs may be stored up to 35 days before transfusion. If frozen within three to six days after collection, RBCs can be stored for up to 10 years under FDA license, and up to 21 years in military contingencies. As late as three days beyond the expiration date, it is possible to chemically rejuvenate RBCs to restore their function and then store frozen for up to ten years.

Service Blood Program Officer (SBPO)—The person responsible for coordinating, directing, and

management of a military service's blood program.

Table of Allowance (TA)—An equipment allowance document which prescribes basic allowances of organizational equipment, and provides the control to develop, revise, or change equipment authorization inventory data.

Transportable Blood Transshipment Center (TBTC)—A Blood Transshipment Center that is transportable. TBTCs are stored packed away at locations, ready for worldwide transport to areas needing blood support. TBTCs have all necessary equipment and supplies for operation.

Type and Crossmatch—A blood bank procedure to determine the ABO and Rh groups of a patient and the serologic compatibility test with a donor unit of red cells to ensure safe transfusion. A Type and Crossmatch procedure is used when the probability of actual blood usage is high.

Type and Screen—A blood bank procedure to determine ABO and Rh groups of a patient and the antibody screen to determine if the patient has any unusual antibodies that might complicate finding a compatible unit of red blood cells. A Type and Screen procedure is used when the probability of actual blood usage is low.

Attachment 2

DONOR UNIT NUMBERS AND FDA REGISTRATION/LICENSE NUMBERS ARMED SERVICES BLOOD PROGRAM ACTIVITY IDENTIFICATION NUMBERS

UNIT FACILITY	BLOOD BAG NUMBERS	FDA REGISTRATION	FDA LICENSE
10th Medical Grp USAF Academy CO	700	1721276	con BDC 610-002
77th Medical Grp Mather AFB		2951265	
81st Medical Group Keesler AFB MS	702-707	1077548	610-005
42nd Medical Grp Maxwell AFB AL	708	1051565	con BDC 610-005
82nd Medical Grp Sheppard AFB TX	709	1629268	con BDC 610-001
75th Medical Grp Hill AFB UT	710	1776315	con BDC 610-002
78th Medical Grp Robins AFB GA	711	1046607	con BDC 610-003
72nd Medical Grp Tinker AFB OK	712	1643528	con BDC 610-001
754th Medical Grp Wright Patterson AFB OH	713-717	1577551	610-003
89th Medical Grp Andrews AFB MD	718-722	1177549	610-006
436th Medical Grp Dover AFB DE		2577654	
375th Medical Grp Scott AFB IL	724-728	1477550	610-004
60th Medical Grp Travis AFB CA	729-733	2977555	610-002
2nd Medical Grp Barksdale AFB LA	734	2377785	con BDC 610-001
5th Medical Grp Minot AFB ND		1721277	
701st Medical Grp Fairchild AFB WA		3026876	
55th Medical Grp Offutt AFB NE	738	1930900	con BDC 610-004

UNIT FACILITY	BLOOD BAG NUMBERS	FDA REGISTRATION	FDA LICENSE
30th Medical Grp Vandenberg AFB CA		2077883	
96th Medical Grp Eglin AFB FL	740	1052138	con BDC 610-005
59th Medical Wing Lackland AFB TX	741-777	1677552	610-001
355th Medical Grp Davis-Monthan AFB AZ		2077880	
1st Medical Grp Langley AFB VA	779	1177774	con BDC 610-006
6th Medical Grp MacDill AFB FL	780	1052137	con BDC 610-003
56th Medical Grp Luke AFB AZ	781	2077881	con BDC 610-002
20th Medical Grp Shaw AFB SC		1046599	
325th Medical Grp Tyndall AFB FL	783	1052139	con BDC 610-005
52th Medical Grp Bitburg AB GE	800	9612081	con BDC 610-015
48th Medical Grp RAF Lakenheath UK	820	9612214	610-016
374th Medical Grp Yokota AB JA	920	9612177	610-014
3rd Medical Grp Elmendorf AFB AK	930	3020816	610-007
432nd Medical Grp Misawa AB, JA	940	9612293	610-013
ASWBPL-East McGuire AFB NJ		2277553	
ASWBPL-West Douglas B. Kendrick Blood Processing Laboratory Travis AFB CA		2951520	
97th Medical Grp Altus AFB OK		1646825	

UNIT FACILITY	BLOOD BAG NUMBERS	FDA REGISTRATION	FDA LICENSE
Armstrong Laboratory HIV Testing Brooks AFB TX		1648496	
27th Medical Grp Cannon AFB NM		1721715	
7th Medical Grp Dyess AFB TX		1646822	
95th Medical Grp Edwards AFB CA		2951183	
28th Medical Grp Ellsworth AFB SD		2132527	
90th Medical Grp FE Warren AFB WY		1722650	
319th Medical Grp Grand Forks AFB ND		2132526	
49th Medical Grp Holloman AFB NM		1721714	
314th Medical Grp Little Rock AFB AR		1646826	con BDC 610-004
366th Medical Grp Mountain Home AFB ID		3024813	
347th Medical Grp Moody AFB GA		1058480	
99th Medical Grp Nellis AFB NV		2951185	
51st Medical Grp Osan AB ROK		9613030	
45th Medical Grp Patrick AFB FL		1057931	
4th Medical Grp Sey- mour Johnson AFB NC		1058482	
509th Medical Grp Whiteman AFB MO		1932889	