BY ORDER OF THE SECRETARY OF THE AIR FORCE

AIR FORCE MANUAL 10-2909

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Operations

AEROMEDICAL EVACUATION (AE) EQUIPMENT STANDARDS

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This manual implements Air Force Policy Directive, 10-29, *Worldwide Aeromedical Evacuation Operations*. This manual is consistent with Air Force Policy Directive (AFPD) 11-2, *Aircrew Operations*, and supports Air Force Instruction (AFI) 11-200, *Aircrew Training, Standardization/Evaluation, and General Operations Structure*, and Air Force Manual (AFMAN) 11-202V3, *Flight Operations*, by establishing specific guidance for Aeromedical Evacuation. This is a specialized publication intended for use by Airmen who have graduated from technical training related to this publication. This manual applies to all commanders, operations supervisors, and aircrew assigned or attached to all flying activities of commands of Aeromedical Evacuation. This manual applies to all civilian and uniformed members in the Regular Air Force (RegAF), Air Force Reserve (AFR), and Air National Guard (ANG). This manual does not apply to the United States Space Force. Ensure all records generated as a result of processes prescribed in this publication adhere to Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System. Refer recommended changes and questions about this publication to the office of primary responsibility (OPR) using the DAF Form 847, *Recommendation for Change of Publication* and route through the appropriate functional chain of command. This publication may be supplemented at any level, but all Supplements must be routed to the OPR of this publication for coordination prior to certification and approval. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See DAFMAN 90-161, *Publications Processes and Procedures*, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the requestor's commander for

non-tiered compliance items. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

This manual is to be used in conjunction with Air Force Manual (AFMAN) 41-209, *Medical Logistics Support*, DAFI 48-107 V1, *En Route Care and Aeromedical Evacuation Medical Operations*, DAFI 48-107 V2, *En Route Critical Care*, AFMAN 11-2AE V1, *Aeromedical Evacuation Aircrew Training*, AFMAN 11-2AE V2, *Aeromedical Evacuation Aircrew Evaluation Criteria*, AFMAN 11-2AE V3, *Aeromedical Evacuation Operations Procedures*, and Air Force Research Laboratory; Safe to Fly Matrix, Status Report On Medical Materiel Items Tested and Evaluated For Use In The USAF Aeromedical Evacuation (AE) System, and AE Medical Equipment Compendium and Combined Initial Capability Documents (ICDs). Send comments and suggested improvements to this manual on a DAF Form 847, Recommendation for Change of Publication, through appropriate channels to AMC/A3VM at **amc.a3vm@us.af.mil** in accordance with procedures in AFI 11-215, *Flight Manuals Program* (FMP), and MAJCOM Supplement.

SUMMARY OF CHANGES

This document revises AFMAN 10-2909 by updating office symbol changes, content changes, form changes, and source document changes/updates.

Chapter 1

GENERAL

1.1. Overview. This manual provides guidance on medical equipment that has completed airworthiness testing through the Aeromedical Test Lab and has Safe-to-Fly (StF) certification on both fixed and rotary wing aircraft. Use this manual with the AE Medical Equipment Compendium and Combined Initial Capabilities Document (ICDs), which provides a comprehensive listing of medical equipment and standardized methods for accomplishing preflight, function checks, and safe operations of equipment.

1.1.1. All medical equipment will be tested, deemed airworthy and approved prior to use in the AE system by Air Force Life Cycle Management Center Aeromedical Test Lab (AFLCMC/WNU) and special programs office. **(T-1)** A specific test protocol establishing test and evaluation methods is developed for each piece of equipment. Tests include altitude/rapid decompression, vibration, electromagnetic interference, and in-flight performance. In addition, explosive vapor testing has been added to all applicable equipment to ensure safety of operation in a Fuel Vapor Area (i.e., any refueling aircraft such as the KC-135).

1.1.2. Medical equipment and supplies are vital to the AE mission. AE equipment must operate under constantly changing and hazardous flight conditions not encountered in fixed facilities. It is essential aeromedical evacuation crewmembers (AECMs) know the capability and performance limitations of each specific equipment item. Air Mobility Command (AMC), Surgeon General (SG) Medical Logistics Readiness Branch (AMC/SGXM) is the AE medical equipment program manager and the gatekeeper for all AE items to be StF tested by AFLCMC/WNU.

1.1.3. Newly fielded AE medical equipment will be implemented for use upon delivery from AMC/SGXM, receipt of the ICD from AMC Aircrew Standardization and Evaluation, Aeromedical Evacuation Branch, (AMC/A3VM), and the equipment training plan document from AMC Aeromedical Operations and Training Branch (AMC/A3TM). **(T-2)** Upon receipt of all three items, RegAF and deployed units will implement use of the equipment within 90 days. Air Reserve Component (ARC) units will implement use of the equipment within 180 days. **(T-2)**

1.2. Key Words Explained.

1.2.1. “Will” indicates a mandatory requirement.

1.2.2. “Should” indicates a preferred, but not mandatory, method of accomplishment.

1.2.3. “May” indicates an acceptable or suggested means of accomplishment.

1.2.4. **“Note”** indicates operating procedures, techniques, etc., that are considered essential to emphasize.

1.2.5. “**WARNING**’ indicates operating procedures, techniques etc., which could result in personal injury or loss of life if not carefully followed.

1.3. Safety. Safety is paramount to ensure that crew, equipment, and patients are not injured or damaged. See AFMAN 11-2AE V3 and DAFI 48-107 V1 for guidance.

Chapter 2

ROLES AND RESPONSIBILITIES

2.1. Aeromedical Evacuation Squadron (AES) Commander and En Route Patient Staging System (ERPSS) Commander (CC) and/or Equivalent Level CC at Deployed Locations.

2.1.1. Will ensure each assigned member supporting AE elements receives training on the applicable equipment contained in the AE Medical Equipment Compendium and ICDs.

2.1.2. Will ensure a copy of this publication and AE Medical Equipment Compendium and Combined ICDs are available on each individual AE mission, staging location, each individual supporting medical Unit Type Code (UTC), and determine further distribution, as necessary.

2.1.3. Will appoint a property custodian to support Medical Logistics in the requisition, management, accountability and maintenance of supplies and equipment.

2.2. Property Custodian.

2.2.1. Will maintain and monitor equipment using activity cost center with the host medical treatment facility (MTF).

2.2.2. Will be the responsible property officer for the unit as designated by the organization commander.

2.2.3. Will maintain equipment inventory records and ensure current authorized and in-use assets are recorded on the Custody Receipt/Locator List.

2.2.4. Will ensure RegAF units submit operational AE In-Flight Kit (IFK) re-supply and equipment requests to the host MTF or base supply, depending on item type. ARC units will submit and coordinate re-supply requests for operational kit supplies to AMC/SGXM per the Air Air Mobility Command-Command Surgeon (AMC/SG) Operational Kit Support Program Concept of Operations located on the following links for **https://usaf.dps.mil/teams/12956/All%20Document%20Sets/Forms/AllItems.aspx?id=%2Fteams%2F12956%2FAll%20Document%20Sets%2FEquipment%20UTCs%2FFFQDM%20%2D%20INFLIGHT%20KITS%201%2FShopping%20Guide%20%2D%20Allowance%20Standard%2FShopping%20Guide&viewid=697b1704%2Dfb0e%2D4316%2D8349%2Df1ce6e43a145** and **https://usaf.dps.mil/teams/12956/All%20Document%20Sets/Forms/AllItems.aspx?id=%2Fteams%2F12956%2FAll%20Document%20Sets%2FEquipment%20UTCs%2FFFCC4%20%2D%20CRIT%20CARE%20AIR%20TRNS%20TM%20EQUIP%2FShopping%20Guide%20%2D%20Allowance%20Standard%2FShopping%20Guide&viewid=697b1704%2Dfb0e%2D4316%2D8349%2Df1ce6e43a145**. **Note**: AMC/SGXM does not support refrigerated or narcotics item requests in accordance with the AMC/SG Operational Kit Support Program. These items must be obtained from the host MTF.

2.2.5. Will accomplish necessary coordination with appropriate base activities (e.g., Medical Logistics, Medical Maintenance, Accounting and Finance, Base Contracting, Base Supply) as appropriate.

2.2.6. Will submit all materiel complaints through the base MTF. In accordance with AFMAN 41-209 if the item is part of an operational AE IFK, notify the UTC/FFQDM Pilot Unit (375 AES Pilot Program), organizational e-mail: **AEPILOTPROGRAM@US.AF.MIL** and the Manpower and Equipment Force Packages (MEFPAK) Responsible Agency (AMC/SGXM), organizational e-mail: **SGXM.OPKITS@US.AF.MIL** in accordance with DAFI 10-401, *Operations Planning and Execution*. **Note:** Request assistance from the MTF prior to forwarding request for assistance to the MAJCOM.

2.2.7. Will receive initial training and follow-on training in accordance with AFMAN 41-209.

Chapter 3

OPERATION

3.1. Equipment.

3.1.1. The host base medical equipment maintenance activity provides organizational maintenance for all AE medical equipment as outlined in AFI 41-201, *Managing Clinical Engineering Programs*. This includes initial inspections, preventive maintenance inspections, calibrations, repairs, modifications, incident investigations, equipment defect reporting, and disposal. All AE certified and PMI equipment will have the AF Form 4033, *PMI/AE Certification Label*, and the DD Form 2163, *Medical Equipment Verification/Certification*. Equipment that has potential to be used in a tri-service environment including AE, PMI, and War Reserve Material (WRM) will have DD Form 2163 affixed after completing scheduled maintenance.

3.1.2. Initial issue and refresh (modernization) of medical equipment for the operational AE IFK will be furnished by the PMI Program Office, AMC/SGXM, and will be maintained on accountable records at the host base Medical Equipment Management Office (MEMO)/MTF on an account with designation XX5881. Biomedical equipment maintenance services support will be provided by the supporting activity and/or regional Medical Equipment Repair Center (MERC). The unit of the aircrew with custody of the aeromedical evacuation equipment is responsible for establishing an appropriate Memorandum of Understanding and/or Memorandum of Agreement (MOA) with the host MTF in accordance with DAFDP 25-2, *Support Agreements*. An expense for normal repair and/or replacement due to loss/damage is the responsibility of the owning unit. AMC/SGXM will provide the initial outfitting quantities of the equipment, program for replacement when a change in the make and or model is designated, and manage system-wide modifications to equipment. For re-supply process see **paragraph 2.2.4**.

3.1.3. The unit AE medical equipment section at home station is responsible for user maintenance of assigned AE operational IFK. This includes establishing procedures to ensure monitor/defibrillator batteries are properly conditioned and annotated, ensuring proper operation and use of equipment, cleaning, minor operational adjustments, and replacement of consumable accessories. They also ensure that all mission-assigned equipment is within standards.

3.1.3.1. Maintain equipment in accordance with this guidance, AFMAN 41-209, and AE Medical Equipment Compendium and Combined ICDs.

3.1.3.2. Ensure all medical equipment is properly scanned into PMI-ATS. Follow guidelines established in the PMI-ATS User guide located at **https://usaf.dps.mil/sites/amcsg/sgx/sgxl/Lists/Announcements/DispForm.aspx?ID=7&Source=https%3A%2F%2Fusaf.dps.mil%2Fsites%2Famcsg%2Fsgx%2Fsgxl%2FSitePages%2FHome.aspx**.

3.1.3.3. Within calibration requirement dates and that this date will not be exceeded during the planned mission scenarios. These dates are recorded on the DD Form 2163, or equivalent, affixed to the equipment.

3.1.3.4. Made available for preventive maintenance inspections and calibration verification as required by the local Biomedical Maintenance Equipment Technician (BMET).

3.1.3.5. Maintained in mission-ready status, to include: calibrated, charged, cleaned, and having required equipment accessories.

3.1.3.6. Meets the precautions and guidance of the infection control program, outlined in AFI 44-108, *Infection Prevention and Control Program*.

3.1.3.7. Identified with an AMC/SGXM PMI-ATS bar code label and passive radio frequency identification tag in accordance with AFMAN 41-209.

3.1.3.8. AE units and other medical elements handling PMI (except in-garrison CCATT crews) track PMI assets leaving and entering their facilities in PMI-ATS in accordance with AFMAN 41-209.

3.1.4. The AE crew and/or qualified AE personnel are responsible for performing an operational preflight of medical equipment within 24 hours prior to mission launch or assuming alert posture. An operational preflight is a complete and thorough check of the condition and status of medical equipment. **Note:** An operational preflight on aircraft power is performed on medical equipment that left home station and/or 24 hours has passed since last operational preflight (e.g., off-station trainers, typhoon evacuations). A functional check is not required if a preflight was accomplished on aircraft power.

3.1.5. Mission assigned AECMs must complete a function check of the medical equipment on the mission's aircraft prior to boarding patients. A function check is an abbreviated assessment of the medical equipment on aircraft power and verifying the presence of each piece of equipment in accordance with AE Medical Equipment Compendium and Combined ICDs, and/or AE Checklist Insert B.

3.1.5.1. AECMs must ensure all medical equipment is scanned using the applicable status RDY/OUT/QA/DRMO into PMI-ATS to identify location and personnel assuming accountability. Follow guidelines established in the PMI-ATS user's guide for user/aircrew operations. See link in **paragraph 3.1.3.2**.

3.1.5.2. The mission assigned AE crew is responsible for the actual infection control cleaning, maintenance, and inventorying of the medical equipment. At locations away from home station the AE crew is responsible for storing their medical equipment.

3.1.6. The mission assigned CCATT crew is responsible for the actual infection control cleaning, maintenance inventorying, and storing their medical equipment. CCATT crew performs an operational preflight on all medical equipment that accompanies patients to the aircraft prior to mission launch.

3.2. Equipment Accountability.

3.2.1. Per Department of Defense Instruction 6000.11, *Patient Movement*, the Commander United States Transportation Command (USTRANSCOM), serves as the DoD single manager for Global Patient Movement and PMI. Per Joint Publication (JP) 4-02, *Joint Health Services*, AMC/SG, SGXM executes the PMI program and functions as the PMI Program Management Office.

3.2.2. All assigned medical equipment will be kept in a mission ready status and will be maintained on the host base Defense Medical Logistics Standard Support (DMLSS) records in accordance with AFMAN 41-209 to ensure proper asset accountability, quality assurance and maintenance histories. All AE IFK operational PMI equipment will be assigned to a DMLSS account number identified as XX5881 in accordance with AFMAN 41-209. All other medical or non-medical equipment and maintenance for significant assets, to include training assets, will be maintained on a separate equipment account.

3.2.3. All supplies and equipment assigned to a WRM project are owned by the Medical Dental Division until deployed and will be maintained on DMLSS WRM records in accordance with AFMAN 41-209. (OPR: AFMOA/SGM)

3.2.4. When a UTC is required to support training, follow procedures in AFMAN 41-209 and contact AMC/SGXM to request loan of WRM and complete a MOA. While this equipment may be temporarily loaned and used for training, it is a deployable asset; therefore, it will not be marked "For Training Use Only" or other similar wording. If an item is not serviceable when received, it will be turned in for evaluation to the host medical equipment maintenance team for investigation and reported to AMC/SGXM. **(T-2)**

3.3. Equipment Waiver Process.

3.3.1. At times, patient medical requirements may necessitate the use of non-certified/non-allowance standard medical equipment that has not been approved for flight.

3.3.1.1. The AE Medical Equipment Compendium and Combined ICDs and respective equipment user's manual provides general guidance to safely secure and monitor frequently used/approved PMI and non-certified/non-allowance standard medical equipment and can be located in the Electronic Flight Bag (EFB) and/or **https://usaf.dps.mil/teams/12679/Aircrew%20Pubs%20Library/Forms/Better.aspx?FolderCTID=0x0120004E29D3C151194645806B4035F132FC90&id=%2Fteams%2F12679%2FAircrew%20Pubs%20Library%2FMaster%5FLibrary%5FVerified%2FAE%2F10%5FSeries%5FOperations%2FMedical%20Equipment%20Compendium%2Epdf&viewid=8d6a520c%2Dd6ea%2D4afd%2D84bf%2D9b10d78ccd6e&parent=%2Fteams%2F12679%2FAircrew%20Pubs%20Library%2FMaster%5FLibrary%5FVerified%2FAE%2F10%5FSeries%5FOperations**.

3.3.1.2. For a listing of approved medical equipment, refer to Air Force Research Laboratory's **https://usaf.dps.mil/sites/WNU-AeroMed/TFL/_layouts/15/AccessDenied.aspx?Source=https%3A%2F%2Fusaf%2Edps%2Emil%2Fsites%2FWNU%2DAeroMed%2FTFL%2Fpages%2FATLHOME%2Easpx&correlation=ecab28a1%2D902b%2D0000%2D1d63%2D20b0273bd2b5&Type=item&name=cb729331%2Dca3d%2D4df1%2D9741%2Dbd586378ba53&listItemId=2&listItemUniqueId=665c18e4%2D0669%2D462a%2D9925%2Db4f5a144629b** (this is updated periodically) or for **https://usaf.dps.mil/teams/12679/Aircrew%20Pubs%20Library/Forms/Better.aspx?FolderCTID=0x0120004E29D3C151194645806B4035F132FC90&id=%2Fteams%2F12679%2FAircrew%20Pubs%20Library%2FMaster%5FLibrary%5FVerified%2FAE%2F10%5FSeries%5FOperations%2FStF%20Documents&viewid=8d6a520c%2Dd6ea%2D4afd%2D84bf%2D9b10d78ccd6e**. **Note**: In order to prevent mission

delays, verbal waivers from AMC/A3VM are authorized with written documentation completed as soon as practicable.

3.3.2. AMC/A3VM is the waiver authority for non-certified/non-allowance standard medical equipment during operational and contingency patient moves. Waiver requests are routed as follows:

3.3.2.1. Hospital/MTF notifies the appropriate Patient Movement Requirements Center (PMRC).

3.3.2.2. Validating flight surgeon (VFS) makes the medical recommendation for patient use of non-certified equipment and PMRC contacts the appropriate Command and Control (C2) agency. **Note:** Equipment for medical attendants e.g., breast pumps/rhythm generators for training that can be classified as non-transmitting Portable Electronic Devices (PEDs) do not require waivers or must have the transmitting capability turned off for the duration of flight (i.e., disable Bluetooth and Wi-fi). Refer to AFMAN 11-202V3 AMC Sup Flight Operations for additional guidance on PEDs.

3.3.2.3. C2 agency contacts AMC/A3VM.

3.3.2.4. AMC/A3VM consults with the AE equipment lab during their hours of operation.

3.3.2.5. AMC/A3VM approval/disapproval waiver is sent back to the AE C2 through the AOC AE Cell. The AE C2 then makes the following notifications to PMRC and Aeromedical Evacuation Control Team (AECT).

3.3.2.6. PMRC and/or AECT advises the flight crew and specialty team of the known operational limitations of the equipment and the possible effect this equipment may have on the patient's/aircraft status in-flight. Notify ground support teams, if applicable.

3.3.2.7. PMRC will input waiver information into the USTRANSCOM Transportation Command Regulating and Command & Control Evacuation System (TRAC2ES).

3.3.2.8. Medical Crew Director (MCD) obtains waiver for specific mission prior to use of non-certified/non-allowance standard equipment onboard the aircraft. The MCD must inform the flight crew when waived medical equipment is used and any characteristics that may affect aircraft systems. **(T-3)**

3.3.3. Patient Movement Clinical Coordinators (PMCCs) and AECMs must ensure that equipment brought to the aircraft from originating hospitals is either StF or approved with an A3VM Waiver Request Form. **(T-1)**

3.3.4. Temporary or permanent waivers will be placed on a DAF Form 679, *Department of the Air Force Publication Compliance Item Waiver Request/Approval*, for non-certified/non-allowance standard equipment that has not completed StF testing or is required for mission/exercise objectives. The waiver will be initiated by the requester with coordination between AMC/A3V, AMC/SGXM and approved by AMC/A3. **(T-1)**

3.4. Minimum Equipment and Supplies.

3.4.1. AECMs are responsible for all AE medical supplies and equipment. AE IFK, Packaging Guide/AS establishes a standardized packaging guide for all medications, supplies, and equipment carried in the AE IFK. Each unit is provided a minimum of two operational IFKs. The 887A Version 7 AS provides flexibility for supporting missions from 1-50 patients which can be increased or decreased based on patient acuity and/or mission requirements. **Exception:** Due to the training environment, the 375 AETS, Formal Training Unit's (FTU) IFKs will be non-operational and may contain expired medications and/or supplies. They are authorized to be marked "For Training Use Only." The AE FTU will ensure all IFK medications and supply quantities still meet 887A AS/pack-out guide standards. All medical equipment will be mission ready.

3.4.1.1. The Squadron CC or designee is the final authority to determine which modules and specialty kits best meets patient care requirements and can increase or decrease medication and supply quantities to meet mission requirements, however notification to theater C2 must be communicated.

3.4.1.2. Written justification to AMC En Route Medical Care Division (AMC/SGK) and AMC/A3VM within 60 days of the change must be provided. **(T-3) Note:** AMC/SGK is the waiver authority for deviations of critical levels and medication substitutions. Send request to **AMC.SGK@US.AF.MIL**.

3.4.2. Utilize the AE IFK 887A AS/pack-out guide to inventory the kit and when completed, turn in the completed form to the AE equipment management section. Units will not deviate from the medical equipment standard without concurrence from AMC/A3VM. **(T-2)** Unit procedures will be established to replenish medications, equipment, supplies and ensure proper equipment maintenance at home and remain overnight stations. **(T-2)** Download the most current AE IFK 887A AS/pack-out guide on the first duty of each quarter (Jan, Apr, Jul and Oct) from the link below.

3.4.2.1. Personnel can download and review pack-out guides, packaging guides and allowance standard at: **https://medlog.us.af.mil/apps/asms/**

3.4.3. When the IFK is formally tasked for deployment, all modules and specialty kits will be deployed. **(T- 2)**

3.5. Minimum Equipment List for Flight.

3.5.1. Each mission has unique equipment requirements based on aircraft type, available aircraft systems, distances/times and the types of patients being airlifted and the frequency of urgent patient movement requests. To ensure a minimum level of equipment on all patient flights, **Table 3.1** lists the required items that will be carried. Waiver authority for minimum equipment to be carried during Aeromedical Readiness Missions (ARMs) and Contingency Exercise Training Missions (CETMs) can be referenced in AFMAN 11-2AEV1.

3.5.2. Minimum equipment waivers are not required for AE patient movement on opportune aircraft if utilizing AS 887A and notification to theater C2.

3.5.3. During degraded warfare operations reference Unregulated Patient Movement in Dispersed Operations CONOP for required/suggested equipment, medications, and supplies.

Table 3.1. Minimum Medical Equipment for All Patient Flights.

AE Minimum Equipment	**C-17**	**C-130**	**KC-135**	**KC-46**	**C-21**	**C-12**
Electrical Cable Assembly Set (ECAS)	X	X	X	X		
Cardiac Monitor/Defibrillator	X	X	X	X	X	X
Portable Suction Unit	X	X	X	X	X, **Note** 1	X, **Note** 1
In-Flight Kit	X	X	X	X	X	X
IV Infusion Pump	X	X	X	X	X	X
Oxygen	75L, **Note** 4	X, **Note** 2	X, **Note** 2	X, **Note** 2	X, **Note** 1	X, **Note** 1
Vital Signs Monitor	X	X	X	X		
Frequency Converter	X	X	X	X, **No**te 4		
Spectrum ®					X, **Note** 3	X, **Note** 3

Notes:

1. Alternate oxygen and suction source must be brought on without Spectrum ®.

2. Utilize NPTLOX/PTLOX. Determine amount. (If patient oxygen requirement is under 5 liters, then add 1 liter to the minimum oxygen calculations.)

3. Only necessary on missions with a litter patient requirement.

4. Equipment will be brought in case of a tail swap or system failure.

Table 3.2. Use of 887A Version 7.

AE In-Flight Kit Requirements						
887A Bag	**AA**	**BA**	**CA**	**DA**	**EA**	**FA**
Module 1 (1-5 pts)	X				As required.	
Module 1 (6-10 pts)	X	X				
Module 2 (11-31 pts)	X	X	X			
Module 3 (32-50 pts)	X	X	X	X		
887A IJ are miscellaneous items. Items will be taken as needed to meet Mission/patient requirements with the exception of the backboard which will be taken on each mission.						
887A Bags HA (ACLS/Pharmacy Kit), GA (Highly Contagious Disease Kit), and HB/HC (Narcotic Box 1 & 2) should be utilized for all missions. The addition of bags in the table below make up each module.						
Specialty Kits taken as required 887A Bag EA- Burns and Trauma 887A Bag FA- Pediatric/Obstetric						

3.5.4. The Squadron CC/Director of Operations (DO)/CN shall be kept appraised of unit's ability to meet minimum equipment requirements by the medical equipment section. **(T-3)**.

3.5.5. Authorized controlled medications list is established by AMC/SGK. See 887A. Send request for additions to AMC/SGK at **AMC.SGK@US.AF.MIL**.

3.6. Equipment Malfunction/Failure.

3.6.1. Notify local or unit MAJCOM/A3 supported Biomedical Equipment Maintenance services support as soon as possible of unusual or repeated equipment failure and safety incidents.

3.6.2. Equipment Malfunction Procedures: The first responsibility is the safety of the aircrew and patients. Once the emergency caused by the equipment failure is under control the following actions need to be taken:

3.6.2.1. Sequester all equipment and supplies that interfaced with the malfunctioning piece of equipment. For example, if a ventilator malfunctions, sequester the ventilator, Electrical Cable Assembly System cord, frequency converter, oxygen/air hose, and Next-generation Portable Therapeutic Liquid Oxygen (NPTLOX) unit. **Note:** Do not change any settings on the equipment or disconnect any equipment adjuncts/power supplies, unless required to make it safe. This is important for the BMET to try to replicate the issue.

3.6.2.2. Complete AF Form 4449, *En Route Care Equipment Malfunction Report Tag*, (or only if unavailable complete AFTO Form 350, *Repairable Item Processing Tag*), and tag the equipment that malfunctioned to include a statement that the equipment failed while in use on a patient if appropriate.

3.6.2.3. Complete a Joint Patient Safety Report (JPSR) worksheet or DD Form 2852, *Patient Movement Event/Near Miss Report* with a detailed account of the malfunction. Include the name of the equipment's owning unit, Equipment Control Number, serial number, and enough details in the report so that the circumstances and situation surrounding the malfunction can be reproduced in a lab if necessary. Provide circumstances leading to the event and include any pertinent information such as: oxygen source, patient activity, turbulence, cabin altitude, trouble-shooting attempted, etc. Also, provide names of the individuals' involved and contact information. Submit the form to the unit's Patient Safety Monitor for entry into the Patient Movement Quality Report (PMQR) in TRAC2ES (if not available then use JPSR). **https://patientsafety.csd.disa.mil/**

3.6.2.4. Turn in the malfunctioning piece of equipment and all sequestered interfacing equipment to the same host medical equipment maintenance activity or MTF at the end of the mission. **WARNING:** Verbal communication must be accomplished during the hand-off of malfunctioned equipment, interfaced equipment and supplies to prevent items from being cycled back into patient care circulation before an equipment investigation is completed. **Note:** BMETs report equipment defects in accordance with AFI 41-201. **Note:** MERC will input data on Optional Form OF 380, *Reporting and Processing medical Material Complaints/Quality Improvement Report* (or equivalent), Reporting and Processing Medical Materiel Complaints Quality/Improvement Report and notify the MRA, AMC/SGXM. Entry of OF 380 on-line alerts Air Force Medical Operations Agency (AFMOA) of the incident. AFMOA will provide MERC with disposition action direction. Senior BMET located at MERC, will perform an incident investigation to determine the cause of the malfunction. If additional StF testing is required, AMC/SGXM will forward authorization to AFLCMC/WNU Aeromedical Test Lab for further evaluation and facilitate shipping arrangements. **(T-3)**

3.6.2.5. When equipment malfunction affects the aircraft, notify the Pilot in Command (PIC) and provide details of the incident to facilitate mishap reporting and fill out the Aviation Safety Action Program (ASAP) form via the flight safety link: **https://asap.safety.af.mil** (to be forwarded to wing safety). **(T-2)**

3.7. Resource Protection.

3.7.1. Resource protection is the responsibility of all Air Force personnel; however, medical material specialists, because of the very nature of their job, must be particularly sensitive to the protection of material for which they are responsible, in accordance with AFMAN 41-209.

3.7.2. Medical materiel is susceptible to theft, vandalism, or unintentional damage; therefore, procedures to prevent such occurrences will be established for all units. **(T-3)**

3.7.3. Medical equipment supplied with protective cases will be kept in its case except when in use or when circumstances or maintenance dictate otherwise. Equipment items will be protected to preclude them from being accidentally damaged or destroyed. **(T-3)**

3.7.4. Equipment items will be permanently bar-coded to identify the unit. This marking should be coordinated with the host MTF and accomplished with the intention of not defacing the equipment. **(T-3)**.

3.8. Allowance Standard Changes.

3.8.1. Recommended changes to the allowance standard should be emailed to the appropriate Pilot Unit and courtesy copy sent to the AMC/SGXM organizational e-mail: **SGXM.OPKITS@US.AF.MIL**.

ADRIAN L. SPAIN, Maj Gen, USAF
Deputy Chief of Staff, Operations

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

DAFI 90-161, *Publications Process and Procedures*, 18 October 2023

DoDI 6000.11, *Patient Movement*, 22 June 2018

JP 4-02, *Joint Health Services*, 29 August 2023

DAFI 10-401, *Operations Planning and Execution*, 12 January 2021

AFMAN 11-2AE Vol 1, *Aeromedical Evacuation Aircrew Training*, 7 December 2020

AFMAN 11-2AE Vol 2, *Aeromedical Evacuation Aircrew Evaluation Criteria*, 7 February 2023

AFMAN 11-2AE Vol 3, *Aeromedical Evacuation Operations Procedures*, 28 September 2023

AFI 11-215, *Flight Manuals Program* (FMP), 25 March 2019

AFMAN 41-209, *Medical Logistics Support*, 4 Jan 2019

AFI 33-322, *Records Management and Information Governance Program*, 23 Mar 2020

AFI 41-201, *Managing Clinical Engineering Programs*, 10 Oct 2017

AFI 44-108, *Infection Prevention and Control Program*, 5 Jun 2019

DAFI 48-107 Vol 1, *En Route Care and Aeromedical Evacuation Medical Operations*, 15 December 2020

DAFI 48-107 Vol 2, *En Route Critical Care*, 24 November 2020

AFPD 10-29, *Worldwide Aeromedical Evacuation Operations*, 13 February 2019

DAFDP 25-2, *Support Agreements*, 14 November 2023

Aeromedical *Evacuation In-Flight Kit Packaging Guide*

Current *AE Medical Equipment Compendium* and *Combined Initial Capability Documents*

Air Force *Research Library Safe to Fly Matrix*

Prescribed Forms

None

Adopted Forms

AMC/A3VM *Waiver Request Form*

DAF Form 679, *Department of the Air Force Publication Compliance Item Waiver Request/Approval*

DAF Form 847, *Recommendation for Change of Publication*

DD Form 2852, *Patient Movement Event/Near Miss Report*

AF Form 4033, *PMI/AE Certification Label*

AF Form 4449, *En Route Care Equipment Malfunction Report Tag*

AFTO Form 350, *Repairable Item Processing Tag*

DD Form 2163, *Medical Equipment Verification/Certification*

OF 380, *Reporting and Processing Medical Material Complaints Quality Improvement Report*

Abbreviations and Acronyms

A3—Director of Operations

AE—Aeromedical Evacuation

AECM—Aeromedical Evacuation Crewmember

AECT—Aeromedical Evacuation Control Team

AES—Aeromedical Evacuation Squadron

AET—Aeromedical Evacuation Technician

AETS—Aeromedical Evacuation Training Squadron

AFLCMC/WNU—Air Force Life Cycle Management Center Aeromedical Test Lab

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFMOA—Air Force Medical Operations Agency

AFR—Airforce Reserves

AMC—Air Mobility Command

AMC/SGK—AMC En Route Medical Care Division

ANG—Air National Guard

ARC—Air Reserve Component

ARM—Aeromedical Readiness Mission

ARMS—Aviation Resource Management System

AS—Allowance Standard

ASAP—Aviation Safety Action Program

BMET—Biomedical Maintenance Equipment Technician

C2—Command and Control

CCATT—Critical Care Air Transport Team

CETM—Contingency Exercise Training Mission

CONOP—Concept of Operations

DMLSS—Defense Medical Logistics Standard Support

DO—Director of Operations

ECAS—Electrical Cable Assembly Set

ERPSS—En Route Patient Staging System

EFB—Electronic Flight Bag

FCIF—Flight Crew Information File

FMP—Flight Manual Programs

FN—Flight Nurse

FTU—Formal Training Unit

ICD—Initial Capability Document

ITV—In-transit Visibility

IFK—In-Flight Kit

JPSR—Joint Patient Safety Report

MAJCOM—Major Command

MEFPAK—Manpower and Equipment Force Packaging

MCD—Medical Crew Director

MEMO—Medical Equipment Management Office

MERC—Medical Equipment Repair Center

MOA—Memorandum of Agreement

MOU—Memorandum of Understanding

MTF—Medical Treatment Facility

NPTLOX—Next-generation Portable Therapeutic Oxygen unit

OPR—Office of Primary Responsibility

P/AV—Patient/Asset Visibility

PED—Portable Electronic Devices

PIC—Pilot in Command

PMCC—Patient Movement Clinical Coordinator

PMI—Patient Movement Item

PMI-ATS—Patient Movement Asset Tracking System

PMQR—Patient Movement Quality Report

PMRC—Patient Movement Requirement Center

PTLOX—Portable Therapeutic Oxygen unit

RegAF—Regular Air Force

SG—Surgeon General

SORN—System of Record Notices

StF—Safe to Fly

TRAC2ES—Transportation Command Regulating and Command & Control Evacuation System

USTRANSCOM—United States Transportation Command

UTC—Unit Type Code

VFS—Validating Flight Surgeon

WRM—War Reserve Material

Office Symbols

AF/A3T—Director of Training and Readiness

AFLCMC/WNU—Air Force Life Cycle Management Center Aeromedical Test Lab

AFWCF/MDD—Air Force Working Capital Fund Medical-Dental Division

AMC/A3—Director of Operations, Strategic Deterrence and Nuclear Integration

AMC/A3TM—Aeromedical Training Branch

AMC/A3V—Aircrew Standards/Evaluations and Readiness Division

AMC/A3VM—Aeromedical Evacuation Standards sand Evaluation

AMC/SG—Air Mobility Command-Command Surgeon

AMC/SGXM—Medical Logistics Readiness Branch

AMC/SGK—AMC En Route Medical Care Division

Terms

Aeromedical Evacuation (AE)—AE provides time-sensitive En Route care of casualties to and between medical treatment facilities, using organic and/or contracted aircraft with medical aircrew trained explicitly for this mission. AE forces can operate as far forward as aircraft are able to conduct air operations, across the full range of military operations, and in all operating environments.

Aeromedical Evacuation Control Team (AECT)—A cell within the air operations center and one of the core teams in the air mobility division. Provides command and control for theater aeromedical evacuation elements. It is responsible to the director of mobility forces for current aeromedical evacuation operational planning and mission execution. The aeromedical evacuation control team analyzes patient movement requirements, coordinates airlift to meet aeromedical evacuation requirements, tasks the appropriate aeromedical evacuation elements including special medical requirements when necessary, and passes mission information to the patient movement requirement center.

Aeromedical Evacuation Crewmember (AECM)—Qualified Flight Nurses (FN) and Aeromedical Evacuation Technicians (AET).

Air Force Life Cycle Management Center Aeromedical Test Lab (AFLCMC/WNU)—Responsible for testing all medical devices that are used on aeromedical evacuations to ensure they will safely operate on the plane.

Air Reserve Component (ARC)—The Components of the USAF that includes Air Force Reserve and Air National Guard.

Allowance Standard (AS)—An equipment allowance document that prescribes basic allowances of organizational equipment and provides the control to develop, revise or change Equipment Authorization Inventory Data.

Aviation Safety Action Program (ASAP)—Reporting program to enhance aviation safety through the prevention of accidents and incidents. Its focus is to encourage voluntary reporting of safety issues and event that come to the attention of employees of certain certificate holders.

Command and Control (C2)—Exercise of direction and authority over assigned forces by a properly designated command echelon in the accomplishment of the mission.

Manpower and Equipment Force Packages (MEFPAK)—A data system designed to support contingency and general war planning with pre-defined and standardized manpower and equipment force packages.)

Medical Equipment Management Office (MEMO)—A functional element within each base Medical Logistics activity responsible for managing medical and non-medical in-use equipment at each MTF. The MEMO is a non-numbered account normally managed by the Medical Logistics Flight Commander.

Memorandum of Agreement (MOA)—An agreement that defines areas of responsibility and agreement between two or more parties. MOAs normally document the exchange of services and resources and establish parameters from which support agreements may be authorized.

Memorandum of Understanding (MOU)—An umbrella agreement that defines broad areas of understanding between two or more parties.

Patient Movement Clinical Coordinator (PMCC)—Deals directly with patients and health care providers and is responsible for maintaining patient information.

Patient Movement Item (PMI)—Items that are required to support a patient during aeromedical evacuation. For this program, PMI is generally confined to those items to be exchanged for patient care during transportation that are critical to sustain aeromedical evacuation operations and maintain medical capabilities.

Patient Movement Requirement Center (PMRC)—A joint activity that coordinates patient movement. Is the functional merging of joint medical regulating processes, services' medical regulating processes, and coordination with movement components of patient evacuation.

Property Custodian (PC)—An officer, enlisted member or civilian designated by the chief of the service, commander of the unit having the property, MTF Commander or the MTF Commander's designated representative, to maintain custody, care and safekeeping of property used by activities in the organization. The property custodian prepares and forwards requests for equipment and supplies.

Transportation Command Regulating and Command & Control Evacuation System (TRAC2ES)—Provide automated capabilities to support patient movement Command and Control (C2), including Patient/Asset Visibility (P/AV). P/AV encompasses In-transit Visibility (ITV), as well as management of lift-bed resources and collaborative decision support for Patient Movement Requests and mission execution within (intra) and between (inter) theaters, commander by geographic Commanders.

Unit Type Code (UTC)—A Joint Chiefs of Staff developed and assigned code, consisting of 5 characters the uniquely identify a "type unit."

War Reserve Material (WRM)—Materiel which must be on hand at the time a conflict begins. WRM, when added to peacetime operating stocks and mobility resources must be capable of sustaining combat consumption rates until resupply pipelines can become operative. WRM assets are procured with Air Force Working Capital Fund Medical-Dental Division (AFWCF/MDD) obligation authority (with the exception of investment equipment) and maintained in AFWCF/MDD-funded inventories.