



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON, DC

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MEMORANDUM FOR ALMAJCOM/SG
AFMSA/CC

FROM: HQ USAF/SG
110 Luke Ave. Room 400
Bolling AFB, DC 20332-7050

SUBJECT: Revision of Critical Care Augmentation Team Concept of Operations (CONOPS)

In February 1999, I directed my staff to reevaluate our CONOPS for expanding critical care capability in our expeditionary medical assemblages. The attached CONOPS is approved and all previous FFCCU and FFCCV CONOPS are superceded. The previous FFCCV – 10 Bed ICU Expansion UTC has been modified into a 4 Bed ICU Expansion UTC. It will utilize the existing FFCCU Allowance Standard. I encourage your staff to review this CONOPS to ensure appropriate expansion of critical care capability. As a result of these changes, the wartime requirement for these UTCs has been changed to 19 FFCCUs and 15 FFCCVs. This results in the same ICU expansion capability availability for operational health support.

The AFMLO will cancel procurement of the two FFCCVs as planned for in FY00. My point of contact on this issue is Lt Col Peter T. Walsh, HQ USAF/SGXR, DSN 297-0020.

A handwritten signature in black ink, appearing to read "L. M. Randolph, Jr.", written in a cursive style.

LEONARD M. RANDOLPH, JR.
Major General, USAF, MC
Deputy Surgeon General

Attachments:

1. Revised FFCCU/FFCCV CONOPS
2. Revised FFCCU MISCAP
3. Revised FFCCV MISCAP

**AIR FORCE MEDICAL SERVICE
(AFMS)**

CONCEPT OF OPERATIONS

FOR THE

CRITICAL CARE AND CRITICAL CARE AUGMENTATION TEAMS

(UTC FFCCU AND FFCCV)

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21 April 2000

OPR: HQ AETC/SGX
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EXECUTIVE SUMMARY

This document provides the concept of operations (CONOPS) for the Critical Care Team (UTC FFCCU) and the Critical Care Augmentation Team (FFCCV). It describes the use and employment of these UTCs as medical systems. In addition, this CONOPS may be used as a guide for validating future requirements and revising appropriate planning and training concepts. It focuses on pertinent aspects of capabilities, employment, and interoperability, and is not intended to provide minute detail of all aspects of operations. In addition, it describes the Critical Care Augmentation Team (UTC FFCCV), and 4 bed critical care augmentation UTC.

SECTION 1 - GENERAL 1.1. Purpose FFCCU/V is committed to providing high quality care to the critically ill patient and is an integral component in the continuum of in-theater critical care, which includes the Expeditionary Medical Support (EMEDS) modules and the Critical Care Aeromedical Transport Team (CCATT). This unit is a modular UTC that provides 4 intensive care beds. FFCCU/V is not a stand-alone component, but a supplement to the Air Transportable Hospital/Air Force Theater Hospital (ATH/AFTH). The initial module (FFCCU) is deployed with a 25 bed or greater ATH or EMEDS+25 bed AFTH when mission requirements indicate a need for sustained critical care capability. When required additional critical capability may be added via FFCCVs in appropriate ratios. The critical care team mission is to provide intensive care to adult patients with disorders of oxygenation, ventilation and circulatory perfusion and post anesthesia care for stable patients requiring mechanical ventilation (when critical care beds are available). Pediatric patients can be cared for with support from FFPED. The deployment of FFCCU/V care is to be undertaken by personnel trained and experienced in the management of critically ill patients. The employment of a FFCCU/V unit will allow for support of general surgery, neurosurgery, cardiothoracic surgery, and other surgical subspecialty teams. In practice, the critical care physician assigned to the CCU will be the primary bedside manager for the patient. This will free up the surgical staff from immediate postoperative care and allow for better utilization of operating room time. Since most patients requiring FFCCU/V care will not be returned to duty at the theater level, essential care and stabilization for transfer is the prime objective for this team. Close cooperation with the aeromedical evacuation system is required for coordinated urgent transfer of stabilized critically ill patients to definitive care. Timely urgent evacuation is absolutely essential to minimize in theater medical footprint and maximize sustainability for the FFCCU/V. Most patients admitted to the CCU would be transferred within 24-48 hours. Modularity of the FFCCU/V component is achieved by establishing the appropriate Allowance Standard and Manpower Element Force Listing to meet potential mission requirements.

1.2. Background. The ATH and EMEDS/AFTH is the main deployable Air Force asset to support a variety of military missions, with an emphasis on treating injuries and illnesses associated with armed conflict. In recent years, the USAF has become involved in an increasing number of Small Scale Contingencies (SSCs) and Humanitarian Relief Operations (HUMRO). Experience demonstrates various modular units representing multiple capabilities are required along the continuum of operations. FFCCU/V is a modular unit, which allows plug-in critical care capability, better providing the flexibility to meet the wide range of medical support provided by the ATH/AFTH.

1.3. Threat. The USAF will continue to globally engage a broad range of missions requiring medical care. The medical threats can be categorized into several types: Disease/Non-battle Injuries, conventional weapons, and weapons of mass destruction (WMD).

1.3.1. Disease, Non-Battle Injury (DNBI). This threat is variable, depending upon geographical location and is determined by endemic disease, climate, and socioeconomic conditions. Historically, the majority of casualties fall into this category.

1.3.2. Conventional, Exotic/Unconventional Weapons. These weapons have the potential for creating many traumatic sorts of injuries.

1.3.3. Weapons of Mass Destruction. WMD have the potential for creating very large numbers of casualties over a very short period of time. The threats of WMD are found in nuclear weapons, chemical weapons and biological weapons. Many of the casualties would be critically ill mandating a substantial critical care capability.

SECTION 2 - DESCRIPTION

2.1. Mission/Tasks, FFCCU/V will be involved in the management of all types of critically ill patients, however, most typically will directly support general surgery, neurosurgery, cardiothoracic surgery, and other surgical subspecialty teams. FFCCU/V would primarily manage patients with severe and acute disorders affecting oxygenation, ventilation and perfusion. The primary role of FFCCU/V is stabilization of critically ill patients in preparation for aeromedical evacuation. Anticipated length of stay for patients admitted to the Critical Care Unit is 24-48 hours. Personnel assigned to FFCCU/V should have expertise in airway management, invasive and non-invasive hemodynamic monitoring, fluid resuscitation, administration of vasoactive drugs and skills in performing life saving bedside procedures. FFCCU/V is most optimally positioned in close proximity to the operating room. The Allowance Standard for FFCCU/V (common allowance standard) includes a 32-foot TEMPER tent that has a multipurpose role. The tent can be used as a 4-bed patient care area and therefore the core ATH or EMEDS/AFTH does not have to give up bed space. However, when used as a 4-bed space, the extra tent can not hold all supplies associated with FFCCU/V. Therefore, the core ATH or EMEDS/AFTH will have to factor in additional supply space to support FFCCU/V. If the core ATH or EMEDS/AFTH can provide bed space without using the additional tent, this tent can be used to hold all CCU supplies. These tents may also be combined to form larger critical care units

2.2. Description/Capabilities. Staffing of a 4 bed Critical Care Unit (FFCCU) requires the following personnel:

Physician	2 Critical Care Physicians (44Y3)
Nurses	4 Critical Care Nurses (46N3E)
Technicians	4 Medical Service Journeyman (4NO51 with 487 SEI)
	4 Cardiopulmonary Lab Journeyman (4HO51)

Staffing of the 4 bed Critical Care Augmentation Unit (FFCCV) requires the following personnel:

Nurses	4 Critical Care Nurses (46N3E)
Technicians	4 Medical Service Journeyman (4N051 with 487 SEI)

2.2.1. FFCCU includes respiratory therapists to provide respiratory care to patients in the critical care unit. The respiratory therapists (RT) assigned to FFCCU are the only RTs associated with the ATH or EMEDS/AFTH except for those on the FFEP1 (Expeditionary Critical Care Team) that deploys with the EMEDS Basic.

2.2.2. Clinical specialty sets such as the FFCCU/V and surgical modules may drive significant ancillary support requirements. Due to acquisition of hand held STAT lab capability, FFCCU/V nurses and respiratory therapists will perform the vast majority of the STAT laboratory tests. Additional radiology, pharmacy, and laboratory support is usually provided by organic ATH/AFTH assets. If additional ancillary support is required, the FFANC UTC should be utilized.

2.2.3. Additional 4 bed supply and personnel increments are available with the FFCCV UTC. Utilization is recommended as follows: 4 additional beds (1 FFCCU); 8 additional beds (1 FFCCU, 1 FFCCV); 12 beds (1 FFCCU, 2 FFCCV); 16 beds (2 FFCCU, 2 FFCCV). For the very rare facility that requires greater than 16 beds this sequence should be repeated. The FFCCV will be deployed only to locations at which there is a pre-existing FFCCU.

SECTION 3 - OPERATIONS

3.1. Employment. Scope of practice includes the concept of providing care for either Major Theater War, small scale contingencies (SSCs), or humanitarian relief operations (HUMRO). FFCCU/V will integrate services with patient evacuation teams to provide a continuum of care for the critically ill patient between stages of evacuation. Since the primary mission for FFCCU/V is stabilization and preparation for transport of critically ill patients within 24-48 hours, well coordinated transfer of patients to the aerovac system is essential. Ideally, the need to transport a critically ill patient(s) would be communicated to the ATH or EMEDS/AFTH Medical Command Center who would then coordinate the mission with AE. A CCAT team would be mobilized to transport the patient(s). The patient(s) would be transported from the CCU to the Mobile Aeromedical Staging Facility (MASF) by CCU staff or a CCAT depending on the theater evacuation assets availability and capabilities. The CCAT team would assist in providing tactical or strategic aeromedical transport for the patient(s) to the designated definitive care facility. Since transporting critical care patients to the MASF will usually require 2-3 personnel (nurse, RT and possibly a provider), at times the CCU will need support from the ATH or EMEDS/AFTH to either transport patients or cover the CCU during times of short staffing due to ground transport missions. Alternately, the transfer support could be provided by a CCAT Team. The CCAT option would be preferable to maintain adequate FFCCU/V personnel in the ATH and would be the best option if a MASF were not involved in the ground transfer process.

3.2. Deployment/Redeployment. Deployment and redeployment will be conducted IAW the protocols of the ATH/AFTH to which assigned or attached.

SECTION 4 - COMMAND & CONTROL RELATIONSHIPS/STRUCTURES

The FFCCU/V Team Chief for administrative and tactical purposes is the senior ranking team member until attached to an MTF. The physician team member is the leader for clinical concerns and decision making. The Team Chief will report directly to the ATH or EMEDS/AFTH Commander.

SECTION 5 - INTELLIGENCE

FFCCU/V will rely on the ATH/AFTH for this support.

SECTION 6 - COMMUNICATIONS/COMPUTER SYSTEM SUPPORT

Communications systems are required to provide internal communications to the various clinical and non-clinical units within the ATH/AFTH. The system should allow for free exchange of clinical information without compromising patient privacy or COMSEC/OPSEC requirements. Although not mandatory, Internet access can be very advantageous in a deployed setting and therefore is a highly desirable capability for the ATH/AFTH.

In addition, a laptop computer is included in the Allowance Standard. FFCCU/V could benefit from robust Telemedicine support including teleradiography and teleultrasonography. The current configuration of the ATH and FFCCU/V has no built in Telemedicine capability, but the EMEDS/AFTH has limited telemedicine capability that has been field tested.

Communication and systems assets used by the FFCCU/V will be compatible with other assets in the Air Force Theater Medical Information Program (TMIP).

SECTION 7 - INTEGRATION/INTEROPERABILITY

7.1. Integration with Other Systems. FFCCU/V will deploy with an initial 30 day supply of medications and supplies, but for a sustained deployment will rely on resupply through the ATH and EMEDS/AFTH logistics systems. Future application of Agile Combat Support principles will allow a significantly more mobile UTC and much smaller initial footprint. Resupply of oxygen is the most critical resupply item (see below). Laboratory, radiological and pharmaceutical support will be required from the core ATH, EMEDS/AFTH or the FFANC UTC.

7.2. Interoperability. This function will be handled IAW guidelines of the ATH/AFTH to which assigned.

SECTION 8 - SECURITY

8.1. Operational. FFCCU/V will comply with all OPSEC/COMSEC/COMPUSEC guidance.

8.2. Physical. FFCCU/V will be collocated with the ATH/AFTH and rely upon local force protection measures provided by units to which assigned.

SECTION 9 - TRAINING

Readiness training will be conducted according to AF, MAJCOM, and local directives. Training will test both medical and non-medical skills and knowledge. Training may also be conducted in

conjunction with sponsored or local training exercises or in conjunction with operational deployments. Training should include as a minimum the proper operation and basic essential maintenance of all equipment assigned to this UTC, including communications, provisions of the Geneva Convention and Laws of Armed Conflict (LOAC), use of small arms (as required), chemical/biological warfare protection, Basic Life Support (BLS), Advanced Cardiac Life Support (ACLS), and principles of casualty evacuation. In addition, team members should deploy with a variety of medical references including the latest versions of AACN Core Curriculum, AACN Core Curriculum for Post Anesthesia Care, AACN Procedure Manual, Lippincott Manual of Nursing Practice, as well as other medical references useful in the intensive care setting. The most important training requirement for the FFCCU/V is routine exposure to the critical care environment.

SECTION 10 - LOGISTICS

10.1. The medical supplies and equipment necessary for operating the FFCCU are listed in the Allowance Standard (AS). The AS will accompany FFCCU personnel to its deployed location and will allow for 30 days' operation. The most critical resupply concern is medical quality oxygen. The AS for FFCCU does not include adequate oxygen supply for a 30-day operation due to size and weight constraints. Predeployment, a source of medical quality oxygen, either oxygen gas or liquid oxygen should be clearly identified, and arrangements made for timely resupply. FFCCU will coordinate resupply through the ATH/AFTH to which assigned. If a greater than 30 day requirement is required or more than 4 beds are deemed necessary, an incremental supply and personnel package would be deployed as mission requirements are identified. FFCCV utilizes the same AS as FFCCU. Air Components are responsible for resupply until such time as the Single Integrated Medical Logistics manager is operational.

10.2. Transportation and other resources will be required on site, especially during deployment and redeployment phases. This support will include both personnel and forklift capability.

10.3. Medical equipment maintenance and repair will be carried out by biomedical equipment technicians deployed with the ATH/AFTH.

SECTION 11 - SUMMARY

FFCCU is an Air Force medical asset designed for worldwide deployment to support various medical contingencies. It deploys at the 25 bed ATH/AFTH level, and, in association with FFCCV, can be tailored to meet specific mission requirements. This capability enhances the ability of the Military Health Service to deliver adequate care to patients requiring intensive care support during wartime scenarios, Small Scale Contingencies and Humanitarian Relief Operations.

DRAFT

Manpower Force Element Listing

Mission Capability Statement

This UTC is used in conjunction with UTC's FFGK2, FFGK4, FFGK5, FFGK6, FFGK7, and FFGKA or FFEP1/2/3/4/5/6, FFGL2/3/4, FPDAB, FEMFS, FFEP1/2/3 provide the manpower and equip to establish a 4 bed intensive/critical care capability attached to a 25-bed ATH or EMEDS - ATH. This UTC contains enough supplies for 30 days, working 12 hour shifts daily on a 24-hour, seven day work week. This team provides intensive care to critically ill patients with moderate to severe disorders of oxygenation, ventilation and circulatory perfusion. AFSC cross-utilization for critical care physician is auth as follows: 44Y3, 44Y3A, 44M3G, 45S3, 44E3A, 45A3, 45S3A, 45S3B, 45S3C, 45S3D, 45S3E, 45S3H, 45S3I, and 44M3B. Grade/skill level substitutions restricted IAW AFI 10-403, CH 5. BOS required.

Manpower Detail

Position Title	AFSC	SEI	Grade	Quantity	NBR	Code	CRM	TLK	NUM
522002 522002*****									
Critical Care Med	044Y3		05	2	1	001			
Clinical Nurse	046N3E		04	4	2	002			
Cardio Lab JNMN	4H051			2	3	003			
Functional total 008									
520400 520400*****									
Cardio Lab	4H051			2	5	005			
Medical Service JNMN	4N051	487		4	6	006			

Functional total 006

UTC COMMAND ***JCS UNIT TYPE CODE NAME*** DEPLOY ID UIC
 FCCV AET MED 4-BED ICU EXPANSION UNIT PEOPLE ELE

*UTC CLASSIFICATION (U) *CAPABILITIES STATEMENT*

THIS UTC, USED IN CONJUNCTION WITH FFGK2, FFGK4, FFGK5, FFGK6, FFGK7, FCCU, AND FFGKA OR FEEPI/2/3/4/5/6, FFGI2/3/4, FFDAB, FCCU, AND FFMFS, PROVIDES MANPOWER AND EQUIPMENT TO AUGMENT AN EXISTING 4-BED OR LARGER CRITICAL CARE UNIT (FCCU) WITH 4 ADDITIONAL INTENSIVE CARE BEDS. LAYDOWN SEQUENCE FOLLOWS: 8-BED ICU REQUIREMENT (1 FCCU, 1 FCCV); 12-BED ICU REQUIREMENT (1 FCCU, 2 FCCV); 16-BED ICU REQUIREMENT (2 FCCU, 2 FCCV). FOR REQUIREMENTS IN EXCESS OF 16 BEDS THIS SEQUENCE SHOULD BE REPEATED. MAY ALSO BE USED TO AUGMENT AND ENHANCE ESSENTIAL MEDICAL TREATMENT AT THE THEATER HOSPITALS. THIS UTC CONTAINS ENOUGH SUPPLIES FOR 30 DAYS, WORKING 12 HOUR SHIFTS ON A 24 HOUR, SEVEN DAY WORK WEEK. THIS TEAM PROVIDES INTENSIVE AND PERIOPERATIVE CARE TO A VARIETY OF ACUTELY ILL, TRAUMA, AND SURGICAL PATIENTS. GRADE/SKILL LEVEL SUBSTITUTION RESTRICTED IAW 10-403, CH 5. BOS REQUIRED

AFSC DESCRIPTION	AFSC	PAC	GRADE	QUANT
CLINICAL NURSE	046N3E	5260	04	4
MEDICAL SERVICE JNMN	4N051, SEI	487	5260	4

RECAPITULATION	OFFICERS	AIRMEN	CIVILIANS	TOTAL
FCCV	4	4	0	8