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

JUN 16 2000

MEMORANDUM FOR ALMAJCOM/SG
AFMSA/CC

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

SUBJECT: Medical Systems Augmentation Team Concept of Operations (CONOPs)

In support of the Air Force Theater Hospital concept, AFMC has developed the CONOPs, Mission Capabilities Statement (MISCAP), and a draft Allowance Standard for the Medical Systems Augmentation Team. The attached Medical Systems Augmentation Team (FFSYS) CONOPs and MISCAP statement are approved. AFMC/SG is requested to complete the Allowance Standard for this assemblage by 7 Sep 00. This Systems Augmentation Team provides the medical automation and systems support comparable to what is found in fixed peacetime medical facilities of similar (100+ beds) size. My point of contact on this issue is Col Pete Walsh, HQ USAF/SGXR, DSN 297-0020.

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Lieutenant General, USAF, MC, CFS
Surgeon General

Attachments:
1. Med Systems Augmentation Team CONOPs
2. Med Systems Augmentation Team MISCAP

AIR FORCE MEDICAL SERVICE

CONCEPT OF OPERATIONS

FOR THE

MEDICAL SYSTEMS AUGMENTATION TEAM

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19 January 2000

OPR: HQ AFMC/SGAM

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SUBJECT

EXECUTIVE SUMMARY

GENERAL. This document provides the Concept of Operations (CONOPS) for the Medical Systems Augmentation Team. It describes the use, employment, deployment, and redeployment of the team.

DESCRIPTION. The team consists of technically trained computer and information systems personnel that are required to establish, operate, and maintain the necessary level of computer and communication system support at an Expeditionary Medical Support (EMEDS)/Air Force Theater Hospital (AFTH). Team members are outfitted with the tools and test equipment required to provide this level of service. The required system hardware and software is provided via the Theater Medical Information Program (TMIP) and is not included in this unit type code (UTC). The capabilities this team supports include health care delivery, command and control, and medical logistics. Team members provide systems operations; manage the medical systems security program; provide medical systems planning; accomplish inventory management; provide medical systems management and control; operate a microcomputer information center; provide training for medical information systems; and provide liaison with base command personnel to assure Wide Area Network (WAN) connectivity.

OPERATIONS. The team is deployed to an EMEDS/AFTH (greater than 100 beds) where it provides basic medical automation, to a similar level as is found in fixed peacetime medical treatment facilities.

COMMAND & CONTROL RELATIONSHIPS STRUCTURE. The medical information systems officer serves as team chief and reports to the Director, Base Medical Services (DBMS).

INTELLIGENCE NATIONAL AGENCY/SPACE SUPPORT. Classified medical information is received/transmitted via Global Command and Control System (GCCS).

COMMUNICATIONS/COMPUTER SYSTEM SUPPORT. The team will be responsible for the Local Area Network (LAN) to a termination point for the connection to the WAN. The connection to the WAN and all infrastructure is the responsibility of the base commander. The team member working communication issues will liaison with the base communications office.

INTEGRATION AND INTEROPERABILITY. The system operated and maintained by the team is comprised of TMIP hardware and software and provides a flexible solution for connectivity and or interoperability with organic communications and/or the base communications infrastructure and other DoD ADPE systems.

SECURITY. All aspects of Communications Security (COMSEC) and Operations Security (OPSEC) are fully implemented and rigidly enforced. Medical information is not classified but can become an OPSEC indicator if not protected. In addition, patient information is considered sensitive and requires employment of safeguards to ensure that it is adequately protected. Base security is provided by base operating support (BOS) agencies. Team members will ensure systems hardware and software are provided an appropriate level of physical security.

TRAINING. All team members must have a working knowledge of the LAN and all operating systems used in the deployed facility. V4A0XX personnel must know all system manager functions. Team members must be knowledgeable in at least three areas of Composite Health Care System (CHCS) functionality.

LOGISTICS. Logistics support for fielded systems is currently being developed as part of the TMIP system procurement process. Current planning for TMIP infrastructure maintenance is focused on employing a two-level maintenance approach. System maintenance will primarily be limited to fault isolation of components (e.g., monitor, CPU) and removal from service for return to CONUS for repair or replacement. It is envisioned that a central equipment storage and dispersal activity will manage the replacement of warranted equipment from the original provider, warehouse a pre-determined number of systems, and maintain the equipment in a ready state.

SUMMARY. The Medical Systems Augmentation Team provides basic medical automation in an AFTH at a similar level as in fixed peacetime medical treatment facilities. It uses the TMIP hardware and software provided by other UTCs to accomplish it's mission.

SECTION 1 GENERAL.

1.1. Purpose. This document provides the concept of operations (CONOPS) for the Medical Systems Augmentation Team. It describes the team's function, deployment, employment, and redeployment. In addition, this CONOPS may be used as a guide for validating future requirements and revisions to appropriate planning and training concepts. It focuses on pertinent aspects of capabilities, employment, and interoperability and is not intended to provide minute detail in all aspects of operations.

1.2. Background. The requirements for basic medical information and systems automation in an AFTH are similar to any fixed peacetime medical treatment facility. However, very little automation is employed in these facilities as they are currently configured. This realization, coupled with experience gained during Air Transportable Hospital (ATH) deployments over the past several years led to the creation of a separate UTC to provide systems personnel support capability for large AFTHs (greater than 100 beds).

SECTION 2 DESCRIPTION.

2.1. Mission. The team consists of technically trained computer and information systems personnel that are required to install, operate, and maintain the necessary level of computer and communications support at an AFTH. Team members are outfitted with the tools and test equipment required to provide this level of service. The required system hardware and software is provided via the Theater Medical Information Program (TMIP) and is not included in this UTC.

2.2. Capabilities. The TMIP hardware and software define the team's capabilities. TMIP software applications, currently under development, will be a federation of medical information systems. That is, the applications will be a set of medical information systems integrated to provide enhanced automated information management and command and control support. The software applications will be deployed in blocks or versions that allow increased capability and updates over time. In Block One, the TMIP will integrate existing medical component information management systems that satisfy functional requirements defined by all of the Services. The Services are working to field the supporting computer hardware and communication systems infrastructure that will allow operational TMIP system capability. User-defined functional requirements that are identified in the TMIP Block 1.0 Operational Requirements Document (ORD) include the following capabilities:

Health Care Delivery (including health surveillance and blood management)

- Personal Information Carrier (PIC) interface
- Collection of patient demographic data
- Scheduling of encounters and resources
- Initiation of encounter documentation
- Tracking of patients and their personal effects
- Collection and documentation of health data (to include symptoms, environmental and occupational exposures, immunizations, diagnoses)

- Decision support tool (i.e., reference materials) access
- Documentation of care plan objectives, alternatives, patient education, health care services provided, patient disposition instructions, and disposition of remains
- Generation of orders to execute health care plans
- Reporting of patient disposition
- Documentation and analysis of health risk assessments and risk management options and strategies
- Management of blood and blood product inventories

Medical Logistics

- Resupply management
- Medical logistics inventory management
- Medical logistics assemblage management
- Hazardous medical waste disposal management
- Product identification and cataloging

Command and Control

- Calculation of time-phased medical requirements for: beds, patient evacuees, theater Class VIII (medical supplies and blood), physicians, operating room tables, returns to duty, and numbers of losses to be replaced
- Analysis of medical sustainability (Class VIII) and supportability assessments
- Generation of reports

2.3. TMIP systems included the following features:

- Compliance with appropriate Department of Defense (DoD) and health industry standards
- Consistent open architecture interfaces between software and hardware applications to ensure interoperability standards compliance
- Compliance with privacy, legal, and DoD classified information protection standards
- Compatibility among Service provided infrastructure systems
- Capable of performing critical health service activities during periods of external communications failure

2.4. Additional information on TMIP systems is available in the following documents:

- Joint Concept of Operations for the TMIP, June 1998
- AF TMIP Infrastructure Requirements Document, 15 July 1998 (Draft)
- TMIP Program Management Office (TMIP-PMO) Concept of Operations for Theater Medical Information Management, July 1997 (draft)
- TMIP-PMO Capstone Requirements Document (CRD) for the Theater Medical Information Program, Version 3.1, 15 January 1998 (Draft)
- TMIP-AF CONOPS for the Aeromedical Evacuation System, 31 Oct 1996

2.5. Tasks. Information on most of the key tasks performed by team members was extracted from the work center description of the Air Force Manpower Standard for Medical Information Systems. Team members accomplish the following tasks:

- Provide systems operations
  - Operate equipment
  - Perform file management
  - Manage medical systems maintenance program, including both preventive and remedial maintenance
  - Provide network operations and telecommunications support
  - Create and Maintain user accounts
  - Install and maintain LAN
  - Install and maintain CHCS
  - Install and maintain Micromedex
  - Install and maintain an E-mail system
  - Perform software/system upgrades as needed
  - Replace and configure hardware as needed
- Manage medical systems security program
  - Implement a Terminal Area Security Officer (TASO) program
  - Manage Medical Systems Security Plan
  - Maintain Security Awareness Program
  - Control access for multi-user system
- Provide medical systems planning
  - Accomplish inventory management
  - Provide medical systems management and control
- Provide training for medical information systems
- Liaison with base communication personnel to assure WAN connectivity

2.6. Equipment. The team's allowance standard includes only the tools and test equipment needed to operate and maintain AFTH medical systems. The system hardware and software will be provided by the TMIP and is included in the UTCs that serve as building blocks for the AFTH or are prepositioned, as appropriate.

2.7. Infrastructure. The team will operate and maintain a systems infrastructure that includes:

- LAN with user devices as appropriate for the facility being supported
- Hardware required to connect the LAN to the WAN

2.8. Team Composition:

V41A3	Health Service Admin Officer (Systems)	1
V4A071	Health service Management Craftsman (Systems)	1
V4A051	Health service Management Journeyman (Systems)	2

2.9. Special Requirements. Each team member must a have working knowledge of LANs and the operating systems used in deployed systems. The V4A071 must understand system manager functions and be knowledgeable in multiple areas of CHCS functionality. An experienced medical systems officer, with any Air Force Specialty Code (AFSC), may be substituted for the V41A3. V4A051 personnel may be substituted for 3C051 personnel. Grade and skill level substitutions are authorized in accordance with Annex F, War and Mobilization Plan (WMP) Volume 1 and AFI 10-403, Deployment Planning.

SECTION 3 OPERATIONS.

3.1. Assumptions. The team is exercised annually. Personnel assigned to mobility positions for this UTC will be familiar with the associated TMIP hardware and software as well as the team's concept of operation and capability.

3.2. General. The Team is deployed in support of an AFTH where it provides basic medical automation, to a similar level as is found in fixed peacetime medical treatment facilities.

SECTION 4 COMMAND & CONTROL RELATIONSHIPS STRUCTURE.

The Systems Officer serves as team chief and reports to the DBMS (or Support Squadron Commander if an objective medical group structure is used).

SECTION 5 INTELLIGENCE NATIONAL AGENCY/SPACE SUPPORT.

Medical intelligence information is the responsibility of the medical intelligence officer (usually the Public Health Officer). It is disseminated to line agencies and personnel as prescribed by the DBMS and/or Site Commander's policy. Classified medical information is received/transmitted via the Global Command and Control System (GCCS).

SECTION 6 COMMUNICATIONS/COMPUTER SYSTEM SUPPORT.

6.1. The medical information functions associated with providing patient movement, health care and medical support are more effectively accomplished through the use of integrated and networked computer hardware and associated peripheral equipment. Computer hardware and peripheral equipment is linked to an internal LAN supports the medical information processes. The internal LAN connectivity includes interfaces to communication systems for transmitting and receiving medical information data external to the AFTH. System administration and operation of the computer hardware and peripheral equipment are the responsibility of personnel assigned to this team.

6.2. The TMIP infrastructure will provide telephone, radio and satellite communications system capabilities, to include conducting both secure and non-secure communications operations in a networked environment. The infrastructure will connect to a WAN with capabilities to include

military and/or commercial satellite connectivity for high speed long haul telecommunications to and from deployed AFMS elements. Communication systems within the infrastructure will be standardized in accordance with DOD interoperability directives. Standard network interfaces to deployed BOS and theater deployable communication (TDC) systems will be included. The communication systems will be capable of transmitting and receiving voice, video, and computer data, to include electronic mail and medical graphic or image information.

6.3. The team is responsible for the LAN to a termination point for the connection to the WAN. The connection to the WAN and all infrastructure is the responsibility of the base commander. The team member working communication issues will provide liaison with the base communications office.

SECTION 7 INTEGRATION AND INTEROPERABILITY.

7.1. Base Communication Support. The TMIP hardware suite contains appropriate hardware to provide a flexible solution for connectivity and or interoperability with the base communications infrastructure and other DoD ADPE systems.

7.2. Telemedicine Team if employed. The team leader will provide liaison with the Telemedicine Team leader if any interoperability issues are identified

SECTION 8 SECURITY.

8.1. Operations.

8.1.1. TMIP systems process sensitive information which must be protected in accordance with the DOD Automated Information System (AIS) Security Program and Privacy Act of 1974. Patient data is sensitive and mandates the employment of technical and physical safeguards to ensure the information is adequately protected. TMIP systems have, as a minimum, command and control accreditation as defined in the DoD Trusted Computer Evaluation Criteria, published by the DoD Computer Security Center. TMIP systems also comply with DOD Computer Security Center publications applicable for the component system environment, the workstation environment, the data contained in, and transmitted by, the system, and the networked interconnections of the system. Select sub-systems are able to process up to SECRET information in accordance with Global Command and Control System (GCCS), Global Combat Support System (GCSS) and Defense Information Infrastructure (DII) common operating environment (COE) requirements.

8.1.2. Medical information in and of itself is not classified. However, medical information can become an operations security (OPSEC) indicator in the context of a particular military operation. Casualty and injury data can be valuable information for opposing forces during conflicts. OPSEC measures to reduce or eliminate these indicators may entail restrictions on medical information dissemination and are detailed in an operations plan (OPLAN) or operations order (OPORD). OPSEC measures may require encryption for transmission only (EFTO) of medical information. Additionally, operational details regarding airlift plans in support of aeromedical evacuation missions into/out of forward operating locations may require classification at the SECRET level.

The use of OPSEC measures for medical information is at the discretion of the Theater CINC. In consideration of this requirement, the TMIP equipment associated with this UTC will be equipped with communication security (COMSEC) and data encryption keying material to meet information protection and operational mission requirements.

8.2. Physical. Base security is provided by BOS agencies. Team members will be trained in the use of small arms and can be issued small arms for self-protection if required. The automated data processing equipment ADPE supporting TMIP systems will be protected in a controlled area in accordance with AFI 31-209, Resource Protection Program. Cryptologic keying materials, i.e. STU keys and equipment key tapes will be afforded security IAW AFI 33-211, Communications Security (COMSEC) User Requirements.

SECTION 9 TRAINING.

All team members must have working knowledge of the hardware and software required to install, operate, and maintain a LAN and all operating systems used in the AFTH. V4A0XX personnel must be proficient in all system manager functions. Team members must be knowledgeable in at least three areas of CHCS functionality. Training on office automation software and other standard commercial or government applications will be conducted at home station through established base channels. Training on TMIP unique applications will be conducted using TMIP infrastructure configurations at a centralized location or using computer-based training (CBT) program tutorials at home station, as appropriate.

SECTION 10 LOGISTICS.

10.1. Logistics support strategies for fielded systems are currently being developed as part of the TMIP hardware and software system procurement and fielding process. The current strategy is to place only the required number of equipment sets and software functionalities into the hands of the first responders and units conducting training. This necessitates forming a central equipment storage and dispersal function with logistics support teams that can deploy as necessary to provide needed assistance. As deployed operations mature, operational units will become more self-sufficient, reducing overall logistics support requirements.

10.2. Current planning for TMIP infrastructure maintenance is focused on employing a two-level maintenance approach. From a hardware perspective, this concept assumes that minimal repair activities will occur at the organizational maintenance level. System maintenance will primarily be limited to isolation of faulty components (e.g., monitor, CPU) and removal from service for return to CONUS for repair or replacement. The deployed unit will keep replacement items for critical components, while non-critical items would be replaced as they are made available.

10.3. The central equipment storage and dispersal activity will manage the replacement of warranted equipment from the original provider, warehouse a pre-determined number of systems, and maintain the equipment in a ready state. The support office will deploy the equipment on short notice as necessary. Support office personnel will orient unit personnel and man a help desk to provide continuous support.

10.4. TMIP infrastructure systems and components will be purchased with extended warranties, to the maximum extent possible. Therefore, repair and replacement equipment parts and supplies will not be required for the vast majority of the infrastructure. The exact level of spare components and end items will not be determined until the acquisition integration and testing phase for the TMIP infrastructure is completed. Consumable supplies, including mini disks, printer paper and toner cartridges, will be procured through the host medical logistics function.

10.5. TMIP components will be included in the other UTCs that are used as building blocks for the AFTH and will be packaged in suitable containers to provide environmental protection while in transit. As much as possible, components will be packaged in suitable containers to allow for a maximum of two persons to carry each container for equipment unpacking, setup and checkout. When not in use, the assets will be packed in the containers to prevent continuous exposure to the elements and to provide protection from radical changes in weather and temperature conditions. When in use, the TMIP infrastructure systems and components require the same environmental protective support as personnel. The equipment will also need protection from excessive vibration, extreme temperatures, standing or dripping water, and moisture condensation.

SECTION 11 SUMMARY.

The Medical Systems Augmentation Team provides basic medical automation in a large AFTH at a similar level as in fixed peacetime medical treatment facilities. The UTC uses TMIP hardware and software provided by other UTCs to accomplish it's mission.

*UTC CLASSIFICATION (U) *CAPABILITIES STATEMENT*

PROVIDES PERSONNEL & EQUIPMENT NEEDED TO ESTABLISH & MAINTAIN COMPUTER & COMM SYSTEMS AT AN AIR FORCE THEATER HOSPITAL. IS GENERALLY USED TO SUPPORT A 100 BED OR LARGER FACILITY AND PROVIDE SYSTEMS CAPABILITIES IN COMMAND & CONTROL, HEALTH CARE DELIVERY & THE THEATER MEDICAL INFOMATION PROGRAM (TMIP). ESTABLISHES & MAINTAINS LOCAL AREA NETWORK (LAN). RELIES ON BOS FOR CONNECTION TO WIDE AREA NETWORK INFRASTRUCTURE. EQUIPMENT INCLUDES TOOLS & TEST EQUIPMENT ONLY. ALL ASSIGNED PERSONNEL MUST HAVE WORKING KNOWLEDGE OF LAN'S & THE OPERATING SYSTEMS USED IN DEPLOYED SYSTEMS. V4A0X1 MUST UNDERSTAND SYSTEM MGT FUNCTIONS & BE KNOWLEDGEABLE IN MULTIPLE AREAS OF COMPOSIT HEALTH CARE SYSTEM (CHCS) FUNCTIONALITY. AN EXPERIENCED MEDICAL SYSTEMS OFFICER, ANY AFSC MAY BE SUBSTITUTED FOR THE V41A3. V4A051 PERSONNEL MAY BE SUBSTUTED FOR 3C051 PERSONNEL. GRADE/SKILL LEVEL SUBSTITUTIONS ARE AUTHORIZED IN ACCORDANCE WITH ANNEX F, WMP-1, AFI 10-403. BOS REQUIRED. HQ AFMC/XPM REV 02/00.

AFSC DESCRIPTION	AFSC	FAC	GRADE	QUANT
HEALTH SERVICE ADMIN	V041A3	5570	03	1
HEALTH SVC MGT JNMN	V4A051	5570		2
HEALTH SVC MGT CFMN	V4A071	5570		1
COM/COMPTR SYS JNMN	3C051	5570		3

RECAPITULATION	OFFICERS	AIRMEN	CIVILIANS	TOTAL
FFSYS	1	6	0	7