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Memorandum | TMIS Mission Needs Statement

MISSION NEED STATEMENT
FOR THE
THEATER MEDICAL INFORMATION PROGRAM (TMIP)

1. **Defense Planning Guidance Element.** This need responds to the guidance contained in the Department of Defense Planning Guidance (DPG) FY 1997-2001; ASD(HA) Memorandum, 31 Mar 1995, *Medical Program Guidance, FY 1997-2001*; ASD(HA) *DoD Corporate Information Management Strategic Plan and Enterprise Integration Implementing Strategy*, Goals 2, 3, and 4; the Military Health Services System Automated Information Systems Plan: ASD(HA) *Medical Readiness Strategic Plan 2001*, 20 Mar 1995.

2. **Mission Analysis.**

a. Mission. The mission of the Theater Medical Information Program (TMIP) is to provide integrated automation of the theater medical environment. The TMIP will provide for information linking all echelons of medical care to the theater commanders in support of time-sensitive decisions critical to the success of theater operations. In addition, the TMIP will provide support integrating medical capabilities under a joint concept of operations to assist the medical commander/theater surgeon and to support the delivery of seamless combat medical care. The TMIP will support field medical operations and decision making concerning theater medical capability by providing oversight and evaluation of critical command, control, communications, computer and intelligence (C4I) health decision support systems to assure readiness for mission execution. The TMIP will support all echelons of care through an aggregation of medical data and situational reports that serves the theater of operations as well as the CONUS sustaining base medical missions. The TMIP goal is to provide a global medical information system linking information databases and integration centers that are accessible to the warfighter, anywhere, anytime, in any mission. The TMIP establishes the means and a standard for tying existing, developing, and future medical information systems (software and equipment) into an interoperable system that supports Theater Health Services. The TMIP will provide seamless, integrated, automated medical information addressing all functional areas including command and control (including planning functions), medical logistics, blood management, patient regulation and evacuation, medical threat/intelligence, health care delivery, manpower/training, and medical capabilities assessment and sustainability analysis.

b. Shortfalls/Deficiencies. The Theater CINCs, Joint Task Force (JTF) Commanders, or their medical support activities have not had the data they need to make informed and timely decisions regarding Theater Health Services. Specific deficiencies are: inadequate automated c2 systems insufficient interoperability, limited electronic data collection, and inadequate communication support.

c. Timing of Need. Current medical support systems' capabilities can marginally support current medical operations at a high cost and with limited flexibility. The timing of this need is based on emerging digital technologies and advanced technology demonstrations which have shown that integrating these information management technologies in the mission area will significantly improve theater military health care.

d. Proposed Process Improvements. The TMIP will enhance the effectiveness and efficiency of operations by providing timely and accurate essential elements of information to all decision makers. It will provide the ability to quickly and accurately evaluate the status of medical support and the supportability of operational plans. Medical capability assessment and sustainability

analysis answers the following questions: what is the requirement, what is the capability, what is the readiness of the capability, what is the trend, and what is the current medical support status/posture?

- The TMIP will serve medical decision makers at all levels including the operational medical units, warfighting CINCs, JTF Commanders, the Military Services, the Joint Staff, and OSD through an integrated set of information systems.
- The TMIP will support field medical operations and decision making concerning theater medical capability by providing oversight and evaluation of critical command, control, communications, computer and intelligence (C4I) health decision support systems to assure readiness for mission execution.
- The TMIP will support all echelons of care through an aggregation of medical data and situational reports that serves the theater of operations as well as the CONUS sustaining base medical missions.

3. Non-materiel Alternatives. None. Doctrine, training, leadership, and organization have been reviewed for possible solutions. There are no non-materiel solutions that completely satisfy the requirement.

4. Potential Materiel Alternatives.

- a. Adapt/modify existing military standard software and equipment to satisfy the need.
- b. Adapt/modify commercial software and communication/electronic equipment to satisfy the need.
- c. Develop software and communication/electronic equipment to satisfy the need.
- d. Combine elements of paragraphs 4.a.-c., above, to satisfy the need.

5. Constraints. Mission needs must be met with no degradation of current MHSS capability. Standardization efforts will conform to existing standards and future guidelines intended to evolve DoD's automated architectural standards.

- a. **Logistics.** This capability will be met with either associated items of support equipment to medical materiel sets and/or medical equipment sets, or stand-alone items. Capabilities must conform to standard DoD supply and maintenance policies and procedures. Contractor maintenance may be used where required.
- b. **Transportation.** All items must be transportable by organic or support transportation assets.
- c. **Manpower and Personnel.** No new military occupational specialties are required; however, additional skill identifiers may be required.
- d. **Training.** Introduction of the capability will require institutional and individual training. Training will be integrated into existing courses. The requirement for new equipment training at fielding will be evaluated on a case-by-case basis. If needs for training devices are shown through analyses? they must be documented in the operational requirements document (ORD) and developed, tested, and fielded concurrently with the equipment or systems.
- e. **Command, Control, Communications, and Intelligence Interface.** The fielding of this capability will have an impact upon these areas. The impact will be evaluated on a case-by-case basis as each technology is developed.
- f. **Standardization and Interoperability.** Standardization with allies and/or DoD components is desired. The capability must maximize use of applicable standards intended to improve compatibility and common support across all of DoD.
- g. **Operational Environment.** This capability must operate in the same climatic conditions as the

supported combined Armed Forces. Nuclear, biological, and chemical survivability will be evaluated for each technology fielded.

6. Joint Potential Designator (JPD). Joint program with the Army, Navy and Air Force.

**JOINT REQUIREMENTS
OVERSIGHT COUNCIL**

THE JOINT STAFF JROCM-005-90

WASHINGTON, D.C. 20318-7000 29 January 1990

MEMORANDUM FOR THE UNDER SECRETARY OF DEFENSE (ACQUISITION)

Subject: Mission Need Statement for a Theater Medical Information System

The attached Mission Need Statement for a Theater Medical Information System (TMIS) has been validated by the Joint Requirements Oversight Council. Recommend that the Army be designated to lead a joint effort to explore how to fulfill this requirement.

ROBERT T. HERRES

Vice Chairman

Joint Chiefs of Staff

Chairman, JROC

Attachment

Copy to:

Secretaries of the Military Departments

MISSION NEED STATEMENT (MNS)

THEATER MEDICAL INFORMATION SYSTEM

1. **DEFENSE GUIDANCE ELEMENT**. This acquisition responds generally to sections IE2, 5, & 10, IIIG1, & 2, and IIIJ1 of the Defense Guidance under the areas of sustainability; command, control, communications, and intelligence (C3I); medical readiness; force readiness; command and control, and supporting functions. The acquisition applies specifically to section IIIH4, health care information systems.

2. **MISSION AND THREAT**.

A. **Mission Area**. Primary: Operational headquarters activities (481); information system and defense communications systems (390); theater C2 (341). Secondary: Theater and tactical C3 (340); training, and medical and other general personnel activities (476); management support (470). Defense Guidance mission areas: Defense wide C3, (10).

B. **Mission Area Need**. A quad-Service Theater Medical Information System (TMIS) is required to provide automation of the theater medical environment. TMIS will provide information to theater commanders in support of time-sensitive decisions critical to the success of theater operations and the medical mission. In addition, TMIS will provide support in integrating medical capabilities under joint concept of operations to assist the medical unit commander/theater surgeon and to support the delivery of combat medical care. The goals of TMIS are to meet the information processing need of all Services operating in a joint environment, and enhance the ability to provide accurate and timely information in combat and contingency situations. In addition, it should support CONUS emergencies. TMIS functional areas include patient evacuation, blood products management, patient administration, medical logistics, command and control, nursing, laboratory, pharmacy, and radiology. The Joint Staff prioritized the first five TMIS functional areas for initial development. TMIS functions are as follows:

(1.) **Patient Evacuation**. The patient evacuation function supports medical regulating, patient tracking, patient transportation, and bed status reporting while increasing the overall effectiveness and efficiency of patient evacuation within the theater of operations. Requirements supported should include those of the Department of Veterans Affairs and the National Disaster Medical System. To the greatest extent possible, the majority of the patient evacuation calculations and outputs will be accomplished by the automated system.

(2.) **Blood Products Management**. The blood products function provides for the management of blood products supplies in theater, i.e., provide rapid, comprehensive forecasting, ordering inventory tracking and control of blood products without

requiring extensive manual data input

(3.) Patient Administration. The patient administration function should provide for rapid and accurate collection and maintenance of medical information, e.g., bed status, admissions, current status anticipated and actual dispositions, condition codes, such as diagnosis severity index, MOS, NOBC, etc. Additionally, the system should collect, maintain, and provide baseline information for other functional areas such as patient evacuation and command and control. While doing this, the system must not slow or in any way hinder the patient care process.

(4.) Medical Logistics. The medical logistics function, while supporting a wide range of logistics requirements, should be able to complement the operational effectiveness of existing Service unique logistics systems. In accomplishing this, the system cannot become so complex it cannot be readily used without extensive training.

(5.) Command and Control. The command and control function should provide decision support information such as bed status reports to headquarters at all levels without requiring a significant increase in data input at the medical treatment facility level.

(6.) Clinical Services. Clinical services, which include nursing, laboratory, pharmacy, and radiology services, must be designated to support the rapid and accurate transfer of patient care information as well as collect, maintain, and pass information required for command and control, patient administration, patient evacuation, blood management, and logistics. In accomplishing these tasks, the system should not increase the current work load of the clinical services staff, and should, in fact, reduce the administrative work load to allow more time for direct patient care.

C. Threat. Medical support for the operating forces is provided worldwide across the full spectrum of conflict. DIA validated projected threat allies.

D. Shortfalls. No standard health care management information system currently exists that connect the Theater Commander with medical treatment facilities in the theater of operations or medical commanders with each other, manages medical logistical information for all Services, and supports the global patient evacuation function. TMIS will enhance the efficient and effective delivery of combat medical support through the functions of patient evacuation, blood products management, medical, logistics, patient administration, command and control, and clinical services (nursing, laboratory, pharmacy, and radiology services).

E. Timing. The DoD Medical Readiness Strategic Plan directs that the design, development and test of a theater medical information system by March 1993. Full implementation of the system worldwide is projected for 1997. The Joint Staff identified five functional areas for priority development: patient evacuation, blood products management, patient administration, medical logistics, and command and control.

3. **ALTERNATIVE CONCEPTS**. TMIS development will make maximum use of existing technology and US government owned software and hardware when feasible. In this regard the following existing and planned capabilities will enhance TMIS development:

a. **Theater Army Medical Management Information System (TAMMIS)**. TAMMIS is an Army system designed to support the Army's combat medical support structure. The Services and the Defense Medical System Support Center have evaluated TAMMIS and concluded that with some modifications it can serve as a baseline DoD standard Automated Information System. TAMMIS software is available now. The Army has approved of fielding TAMMIS hardware worldwide.

b. **Medical Material Management System (MMMS)**. MMMS is an on-line Air Force unique system that provides automated information system support for logistics activities in medical organizations.

c. **Composite Health Care System (CHCS)**. A multi-Service system developed to provide integrated automated information system capability to fixed medical treatment facilities in a peacetime environment.

d. **Defense Medical Regulating Information (DMRIS)**. DMRIS is a multi-Service system that provides automated information system support to medical treatment facilities (MTFs) and the Armed Services Medical Regulating Office in the execution of peacetime medical regulating. This system is currently in wide use within the United States and is being deployed to overseas commands for use by the Joint Medical Regulating Offices and MTFs.

e. **Defense Blood Management Information System (DBMIS)**. DBMIS is a planned multi-Service system for the control, tracking, inventory, and management of blood and blood products from points of donation to the point of transfusion. Phase I of this system includes the majority of these functions and is currently being installed for testing at a limited number of sites.

f. **Automated Patient Evacuation System (APES)**. APES is an on-line interactive microcomputer based system designed to automate the patient movement functions of the aeromedical evacuation system and to integrate patient movement data with DMRIS patient regulating data.

g. **Information Processing System (IPS)**. IPS automates lower echelon Military Airlift Command (MAC) functions for the management of airlift forces. It will provide fixed and deployed aeromedical units a hardened, secure communications array for medical operational data.

4. **COOPERATIVE OPPORTUNITIES DOCUMENT**. The TMIS technical solution may be one of a family of software applications working in concert to support combat casualty care. Cooperative development with Allied nations is not considered prudent at

this time since it will likely delay fielding of the system to US forces. At such time as our Allies acquire a similar capability, cooperative efforts may be desirable.

5. **TECHNOLOGY INVOLVED.** ...

6. **FUNDING IMPLICATIONS.** ...

7. **CONSTRAINTS.** TMIS will ensure interoperability with Service components. It will be compatible with Service unique medical management information systems and DoD mandated systems such as CHCS and Armed Services Medical Regulating Office (ASMRO) system requirements. TMIS also will be in consonance with the Joint Tactical Command Control Communications Agency combat service support architecture for C3 systems.

Validation Date: 06 Jan 1998

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