

# Theater Medical Information Program (TMIP)

## Executive Summary

- The program manager is fielding the system in blocks of increasing capability. The Army is currently using parts of Block 1 in actual combat operations in Iraq and Afghanistan.
- The Air Force led a joint team in an operational assessment of Block 1 during 4QFY04. Evaluation of results continued into FY05. Block 1 was deficient in several capabilities that need further development in Block 2 to meet Air Force's operational requirements.
- The Army led a joint team in an IOT&E of Block 1 in an Army operational environment during 2QFY05. Block 1 is operationally effective, suitable, and survivable for the Army, but with some significant limitations.
- A limited fielding of Block 1 to Army units in combat has already been authorized. A decision to field Block 1 to remaining Army units is imminent, but will be subject to correction of some of the deficiencies noted during the IOT&E.

## System

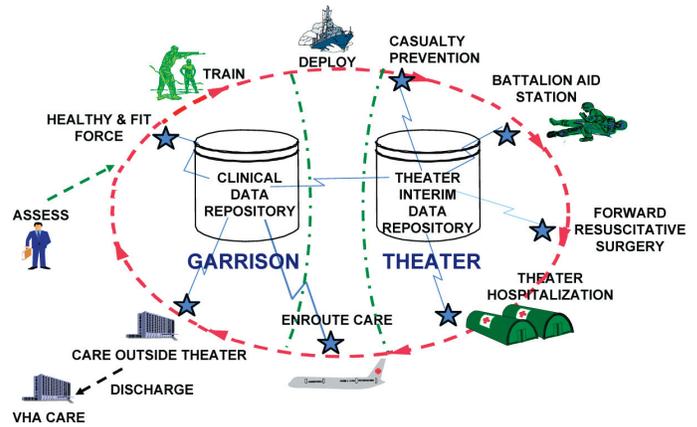
- The Theater Medical Information Program (TMIP) is a joint Major Automated Information System that integrates information from existing medical systems and provides it to deployed medical forces.
- Examples of integrated systems include the Composite Health Care System, Defense Blood Standard System, Defense Medical Logistics Standard Support, and Transportation Command Regulating and Command and Control Evacuation System.
- The Services provide their own infrastructure (networks and communications) and fund the computer hardware to host TMIP software applications in-theater.

## Mission

- Theater Combatant Commanders, Joint Task Force commanders, and their medical support equipped with TMIP

## Activity

- In 4QFY04, Air Force operational testers led a joint OT&E team in an operational assessment of TMIP Block 1, employing typical Air Force users in a simulated tactical operational environment at Fort Detrick, Maryland. The assessment was completed in early FY05.
- In 2QFY05, Army operational testers led a joint OT&E team in the IOT&E of TMIP Block 1 in a simulated tactical operational environment at Camp Bullis, Texas. Tactical satellite communications were used to connect to other test sites that included a simulated Joint Task Force headquarters



can make informed and timely decisions regarding theater health services.

- TMIP supports command and control, manpower and training, medical surveillance and reporting, and various medical functional areas that include:
  - Medical logistics
  - Blood management
  - Medical intelligence
  - Health care delivery
  - Medical capability assessment
  - Sustainment analysis
- TMIP provides situational awareness down to the lowest level of deployed health care activities such as:
  - Epidemiology monitoring
  - Bed status
  - Daily disposition
  - Patient status
  - Patient visibility

in Norfolk, Virginia. Twenty typical Army users executed more than 1,500 scenarios that exercised critical mission functions and sustainment procedures.

- The Army-led multi-Service test team evaluated joint capabilities (such as medical logistics) that the Army does not use in Block 1.
- Operational testing has been done in accordance with the DOT&E-approved Test and Evaluation Master Plan and test plans.

- The Assistant Secretary of Defense for Networks and Information Integration granted limited deployment of TMIP Block 1 in response to an urgent request from the Army Deputy Surgeon General to support combat operations in Iraq and Afghanistan.

## Assessment

The Air Force operational assessment showed that TMIP required further enhancements before it could fully meet that Service's operational requirements. There were numerous operational suitability deficiencies that included:

- Lack of accuracy and reliability of medical command and control reporting
- Immature system administration processes and procedures
- Inadequate integrated logistics support planning and training support package
- Human systems integration (not sufficiently user friendly)
- Immature medical concepts of operations
- Various software problems

The Army IOT&E reflected a high functional success rate (over 99 percent) and user survey responses were generally favorable. There were no major security or information assurance deficiencies identified. However, the testing uncovered some significant operational limitations:

- Patient encounter data were sometimes lost in transmission to higher headquarters
- Immunization module produced erroneous next-due immunization dates
- Inoperable joint medical logistics functions
- User friendliness and human-systems integration shortfalls

TMIP shows promise for tactical medical operations. It is steadily progressing toward a goal of making all medical records

electronic. The most serious limitation is the lack of mature Service concepts of operations for using the system.

## Recommendations

1. The Army should be authorized to complete its TMIP Block 1 fielding, subject to the incorporation of a message regenerator tool to remedy the problem of occasional patient encounter data lost. The Army must develop adequate operational procedures for using the tool.
2. The Army has no plans for using the immunization module, and should not be authorized to use it without providing the TMIP Program Manager the necessary information to update the immunization algorithm. Similarly, the Army has no plans to use the medical logistics functions, and should not be authorized to do so until multi-Service concepts of operations are developed and the capability is successfully operationally tested.
3. No Service should be authorized to field Block 1 without successful IOT&E or special authorization to meet wartime necessities.
4. The program manager should correct all of the problems found in Block 1 and work the solutions into Block 2. Since Block 2 reportedly is needed immediately for wartime operations, the independent operational test agencies should conduct a joint IOT&E of Block 2 for any Service(s) prepared to field it as soon as the software is ready. A second phase of Block 2 IOT&E should be conducted for the other Services when they are ready. However, before the fielding of Block 2 is considered by any of the Services, each must develop a mature concept of operations for using TMIP. Immature concepts of operations pose the greatest risk to the success of TMIP.