Telemedicine and Business Process Redesign at the Department of Defense

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This case is designed to relate the rationale used by the Department of Defense and the Test and Evaluation (T&E) Integrated Product Team, in order to determine the military utility of the Joint Medical Operations – Telemedicine Advanced Concept Technology Demonstration (JMO-T ACTD). The case also develops critical operational issues (COI) and measures of effectiveness (MOE) as methodologies for investigating military utility of telemedicine. In order to meet increasing global crises, the U.S. military must find ways to more effectively manage manpower and time. Joint Medical Operations –Telemedicine (JMO-T) has been developed by the Department of Defense (DOD) to collect and transmit near-real-time, far-forward medical data and to assess how this improved capability enhances medical management of the battlespace. JMO-T has been successful in resolving uncertain organizational and technological military deficiencies and in improving medical communications and information management. The deployable, mobile telemedicine teams are the centerpieces of JMO-T. These teams have the capability of inserting essential networking and communications capabilities into austere theaters and establishing an immediate means for enhancing health protection, collaborative planning, situational awareness, and strategic decision-making.

This case also focuses on developing a holistic model of transformation. The model synthesizes current thinking on transformation into a holistic model and also explains the integrative influence of vision on the other four model components—environment, people, methodology, and IT perspective.. The model was tested by T&E on the JMO-T ACTD. JMO-T ACTD has developed a very successful training program and is very aware of the importance of planned change. Top military officials are actively involved in change and are committed to people development through learning. The model served an applied

purpose by allowing us to see how well the military organization fit current theory. The model also fit a theoretical purpose by organizing a holistic, comprehensive framework. Accordingly, we have organized and synthesized the literature into five interrelated components that act as a fundamental guide for research. The model also helped us to identify a theoretical link and apply it to the internal operations of the military.

BACKGROUND

The Department of Defense (DOD) is an executive department of the United States government. The Secretary of Defense is a member of the President's Cabinet and is the head of the department. The DOD coordinates the work of the three military departments, which handle matters for the army, navy, and air force. It integrates the armed services into a team of land, sea, and air forces. It advises the President on matters of national defense and international security.

In November 1997 several town hall meetings were held among the three Services and the Demonstration Manager. These meetings served to identify customer requirements and Service positions on the delivery of health care to combatants in future military operations. The goal was to reach a balance between the technology developers' "technology push" and the sponsoring CINC's critical warfighting deficiencies "requirements pull." Operational Capabilities Issues were then developed, studied and disseminated to the centers of excellence and development, soliciting candidates that met the ACTD's criteria for inclusion.

At the conclusion of the November 1997 meeting, two "technologies" emerged as sufficiently mature and low risk. These technologies warranted submission to the proposed sponsoring CINC for deployment to his area of responsibility. These two "technologies" were the Medical Detachment-Telemedicine and the Healthcare Complex Model. The Healthcare Complex Model was developed for the intended use of Medical Research and Material Command. It was recommended by the Army Medical Department Board as a result of the benefits of performing prospective analysis using modeling and simulation in ACTDs.

In December 1997 a meeting was held at Camp Smith, Hawaii, with the proposed sponsoring CINC's Surgeon's staff. The CINCPAC Surgeon's office had become the leading contender to become the Operational Manager for the JMO-T ACTD. At this meeting an understanding of the CINC's operational requirements and the beginnings of a concept of operations were developed. From the meeting emerged the proposal to the critical issues for early planning in the ACTD. These included the following:

- **Enhance force medical protection through early, far-forward diagnosis and treatment**. This ACTD will evaluate the utility of early and far-forward detection and mitigation of diseases and injuries to minimize their operational impacts.
- **Enhance capability to keep combatants on station whenever possible**. This ACTD will evaluate emerging capabilities in order to minimize evacuation and the resulting need for personnel replacements and personnel movements that can disrupt the tempo of operations.
- **Enhance medical capabilities to employ the minimum assets required to meet**

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