

DEPARTMENT OF DEFENSE HEALTH CARE QUALITY REPORT TO CONGRESS



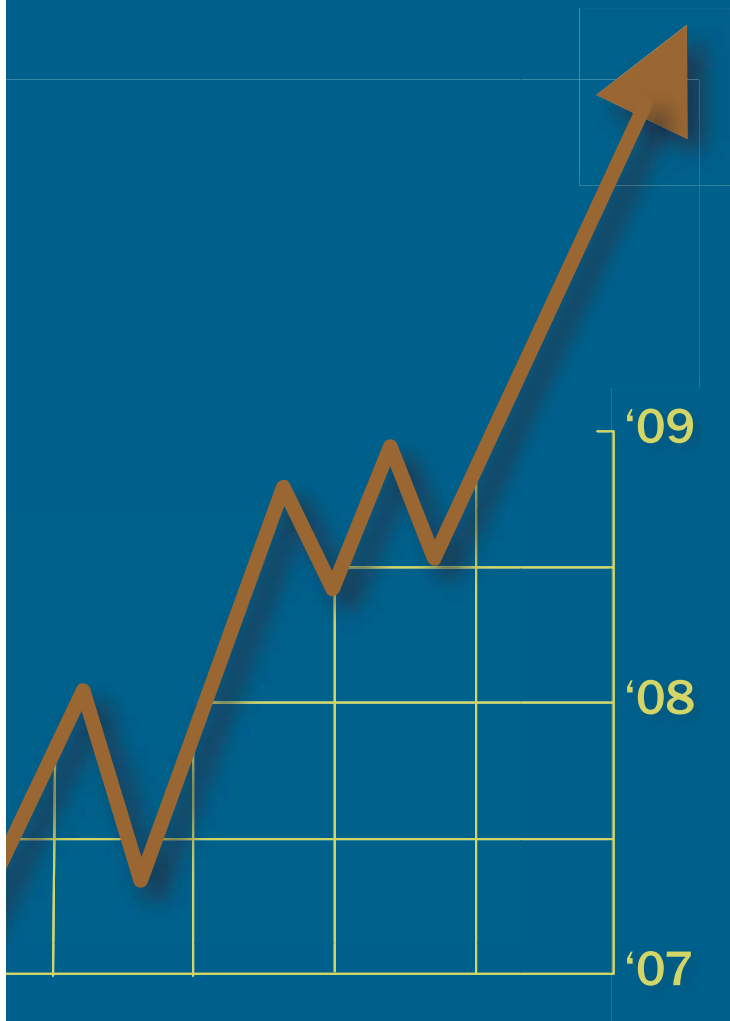
**ANYTIME,
ANYWHERE...**

2009



The Fiscal Year (FY) 2009, covering FY 2008, Department of Defense Health Care Report to Congress is provided by the TRICARE Management Activity, Office of the Chief Medical Officer (OCMO), Clinical Quality Division, in the Office of the Assistant Secretary of Defense (Health Affairs) (OASD/HA).

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INTRODUCTION

- p. III** | Table of Contents
- p. IV** | Requirements for Report
- p. V** | Message from the Assistant Secretary of Defense for Health Affairs
Ellen P. Embrey.
- p. VI** | Executive Summary



- p. 1 | CLINICAL QUALITY MANAGEMENT**
- p. 2 |** MHS Overview
- p. 2 |** Commitment to Quality
- p. 5 |** Clinical Quality Architecture
- p. 8 |** Systems and Processes Supporting Quality Outcomes
- p. 10 |** Quality Assurance
- p. 10 |** Accreditation
- p. 11 |** Medical Management Education and Training
- p. 11 |** Review of DOD Medical Quality Improvement Program

- p. 13 | EVIDENCE-BASED PRACTICE AND CLINICAL QUALITY MEASUREMENT**
- p. 14 |** Clinical Practice Guidelines
- p. 15 |** Quality Measures
- p. 26 |** MHS Special Studies

- p. 33 | POPULATION HEALTH AND MHS MEDICAL MANAGEMENT**
- p. 34 |** Health Programs Overview
- p. 39 |** Medical Management
- p. 40 |** Utilization Management
- p. 40 |** Case Management
- p. 41 |** Disease Management

- p. 43 | PATIENT SAFETY**
- p. 44 |** DoD Patient Safety Program Office
- p. 44 |** Key Indicators of PSP Impact
- p. 45 |** Patient Safety Program Office
- p. 48 |** DoD Patient Safety Center
- p. 50 |** Publications and Presentations
- p. 51 |** Center for Education and Research in Patient Safety
- p. 52 |** Healthcare Team Coordination Program
- p. 56 |** Plans for FY 2009



- p. 57 | ACCESS TO CARE AND PATIENT SATISFACTION**
- p. 58 |** Health Care Survey of DoD Beneficiaries
- p. 62 |** TRICARE Outpatient Satisfaction Survey (TROSS)

- p. 63 | INNOVATIONS AND POLICY INITIATIVES TO ENHANCE CLINICAL QUALITY**
- p. 64 |** Behavioral Medicine Initiatives
- p. 65 |** Telemedicine and Advanced Technology Research Center Initiatives
- p. 67 |** MHS Transparency
- p. 67 |** Patient Centered Medical Home
- p. 68 |** Pay-for-Performance

- p. 69 | BIOSURVEILLANCE**
- p. 70 |** Global Emerging Infections Surveillance and Response System
- p. 75 |** Early Warning Systems

- p. 77 | APPENDICES**
- p. 78 |** Appendix A: Acronyms
- p. 81 |** Appendix B: Certifications and Accreditations

REQUIREMENTS FOR THE REPORT

The requirement for the Department of Defense (DoD) report to Congress on health care quality is outlined in Public Law and Congressional direction. The following references depict the guidelines utilized to develop the report.

National Defense Authorization Act Requirement

Section 723(e) of the National Defense Authorization Act for Fiscal Year 2000, Public Law 106-65, mandated an annual report on the quality of health care furnished under the health care program and included the measures to be reported upon. These measures were modified by Section 742 of the National Defense Authorization Act for Fiscal Year 2006, Public Law 109-163.

The Assistant Secretary of Defense for Health Affairs (HA) shall submit to Congress on an annual basis a report on the quality of health care furnished under the health care programs of the Department of Defense (DoD). The report shall cover the most recent fiscal year ending before the date the report is submitted and shall contain a discussion of the quality of the health care measured on the basis of each statistical and customer satisfaction factor that the Assistant Secretary determines appropriate, including, at a minimum, a discussion of the following:

- Measures of the quality of health care furnished, including timeliness and accessibility of care;
- Population health;
- Patient safety;
- Patient satisfaction;
- The extent of use of evidence-based health care practices; and
- The effectiveness of Biosurveillance in detecting an emerging epidemic.

The Healthcare Quality Initiative Review Panel Recommendation

The Healthcare Quality Initiative Review Panel report from July 2001 provided recommendations considered essential to ensure continued improvement in the DoD health system. The recommendations included the reestablishment of the Quality Management Report as a comprehensive information product for communicating with and educating leadership within Congress, the Office of the Assistant Secretary of Defense for Health Affairs, TRICARE Management Activity (TMA), the Services, and the military treatment facilities (MTFs) on the status of quality in the Military Health System (MHS).

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A MESSAGE FROM
ELLEN EMBREY,
PERFORMING THE
DUTIES OF THE
ASSISTANT SECRETARY
OF DEFENSE
(HEALTH AFFAIRS)
ACTING DIRECTOR
OF THE TRICARE
MANAGEMENT
ACTIVITY

It is with great pride that I submit the FY2009 Department of Defense Report to Congress on Health Care Quality. The men and women of America's Armed Forces are our country's greatest strategic asset. Apart from defending the Nation, the Department has no higher priority than to provide the highest quality care and support to our forces and their families.

As Secretary Gates has said, "At the heart of the all-volunteer force is a contract between the United States of America and the men and women who serve ... A contract that is ... legal, social, and sacred. When young Americans step forward of their own free will to serve," he said, "they do so with the expectation that they, and their families, will be properly taken care of ..."

The MHS serves 9.5 million beneficiaries, including retired military personnel and their families. Indeed, the MHS has one over-arching mission: to provide optimal health services in support of our Nation's military mission – any time, anywhere.

In addition to force health protection and family support, the MHS provides humanitarian assistance at home and around the world, and supports world class medical education, training, and research.

Our strategic plan, developed in concert with the Surgeons General and the Joint Staff – supports all of these mission components. It also recognizes the outcomes the American people expect from their investment in military medicine.

The Department of Defense Report to Congress on Health Care Quality highlights quality initiatives, demonstrating our commitment to continuously assess and improve the care provided to our beneficiaries. This report focuses on MHS activity, performance, and achievements occurring between 1 October 2007 and 30 September 2008. As required by law, the report covers six areas: measures of health care quality,

population health, patient safety, patient satisfaction, use of evidence-based health care practice, and effectiveness of biosurveillance for emerging epidemics.

“At the heart of the all-volunteer force is a contract between the United States of America and the men and women who serve ... When young Americans step forward of their own free will to serve” *-Secretary Gates*

It is an incredible honor and privilege to serve with the world's finest team of men

and women dedicated to defending our freedom by caring for the Nation's fighting forces and their families. Further, we appreciate the support Congress has provided to help us provide the very best health care for our forces and their families, and in particular for the wounded ill and injured. While there is always much more that must be done, I believe we have made significant progress toward each of our goals, and I would like to tell you where we are, and what we have accomplished. *-Ellen P. Embrey.*

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EXECUTIVE SUMMARY

Clinical Quality Management in the Military Health System

The Military Health System (MHS) is a worldwide health care delivery system operated by the Department of Defense (DoD), offering health care benefits to an estimated over 9.5 million beneficiaries through the TRICARE network. The MHS assumes a tripartite responsibility to provide medical capability for military operations to promote a fit, protected, and healthy fighting force; assist in humanitarian efforts and in times of natural disasters; and provide health care to all DoD eligible beneficiaries. The system consists of the Office of the Assistant Secretary of Defense for Health Affairs; the medical departments of the Army, Navy, and Air Force; Joint Chiefs of Staff and the Combatant Command surgeons; and TRICARE Management Activity (TMA). The MHS has two complementary arms: the direct care (DC) system provides services to patients in military treatment facilities (MTFs) while the purchased care (PC) system provides care to military beneficiaries through civilian providers in private offices or non-military facilities.

TRICARE continues to refine and enhance benefit and health programs in a manner consistent with industry standards for care practices and statutes to meet the changing health care needs of beneficiaries. The MHS efforts to provide high-quality health care and to improve performance include these elements:

- **Commitment to Quality and Quality Patient Care:** The MHS uses best practices in health care delivery, partnering with our beneficiaries in an integrated health delivery system. Globally accessible health and business information enable patient-centered, evidence-based processes that are both effective and efficient.
- **Guiding Principles:** The MHS is a worldwide system delivering health services anytime, anywhere that adheres to principles for quality adopted from the Institute of Medicine (IOM); these include safety, effectiveness, timeliness, patient centered, efficient, and equitable. These principles are essential to accomplishing the mission and achieving our vision.
- **Quality Architecture:** The management of quality in the MHS depends on continuous, multidirectional communication across various components and specialties within the system. Structures and processes have been implemented to support clinical quality management and facilitate consistent communication of opportunities to enhance the care provided throughout the system. Communication to support quality management in the MHS is accomplished through the inclusion of quality management in key leadership committees and the development of a select number of quality-focused committees. These committees successfully connect information flow from policy development to implementation. The lead committees include the Senior Military Medicine Advisory Council (SMMAC), the Clinical Proponency Steering Committee (CPSC), and the MHS Clinical Quality Forum. The assessment of the quality of health care provided by DoD is assessed in various ways, including centralized credentialing and quality assurance, subject matter expertise and support for the MHS programs managed by other entities, the National Quality Management Program, the National Quality Monitoring Contract, information obtained from electronic administrative and clinical data, abstraction of medical records, oversight by the MHS Clinical Quality Forum, and the Clinical Measures Steering Panel.
- **Systems and Processes Supporting Quality Outcomes:** Systems and processes supporting quality outcomes include the MHS Population Health Portal (MHSPHP), AHLTA (the military's electronic health record), quality assurance, certifications and accreditations, medical management education and training, and the external review of DoD's Medical Quality Improvement Program.

Evidence-Based Practice and Clinical Quality Measurement

DoD continues to build on its commitment to providing evidence-based medicine that is derived from scientific evidence, ensuring beneficiaries receive the highest quality of health care possible. Specific strategies used to accomplish this include the continued development and utilization of evidence-based clinical practice guidelines (CPGs) and continuous quality measurement using metrics that are widely accepted in the industry. In addition, the MHS supports special studies that are focused on finding opportunities to improve the quality of health care across the MHS.

DoD and the Department of Veterans Affairs (VA) are committed to evidence-based provision of care to achieve more consistency and improved quality of care and cost-effectiveness in the delivery of health care for their beneficiaries. Through a collaborative relationship, the DoD and VA continue to work together to develop and maintain CPGs. As of 2008, 25 CPGs serve as the foundation for interagency condition management initiatives. Continued collaboration will result in further improvements in care quality and cost-effectiveness across the MHS.

DoD and the Department of Veterans Affairs (VA) are committed to evidence-based standardization of care to achieve more consistency and improved quality care and cost-effectiveness in the delivery of health care for their beneficiaries.

Standardized and consensus-based quality measures assist MHS beneficiaries in comparing the quality of care provided in medical facilities and in making informed decisions about the quality of health services available to them and their families. Moreover, these metrics are integral for leaders charged with evaluating and improving the quality of health care delivered in both the DC and PC networks of the MHS.

Among the metrics used by DoD are process-of-care measures that are included on the Hospital Compare website. Hospital Compare was created by the Centers for Medicare & Medicaid Services (CMS) and the Hospital Quality Alliance (HQA), a public-private collaboration established to promote reporting on hospital quality of care. These metrics are endorsed by the National Quality Forum and include those developed by CMS and The Joint Commission. In 2008, Hospital Compare measures collected by the MHS included Acute Myocardial Infarction, Heart Failure, Pneumonia, Surgical Care Improvement Project, Children's Asthma Care, and Pregnancy. Performance for these measures, in both the DC and PC networks, were either comparable or slightly higher than the national rates in 2008. In 2008, the MHS collected metrics using Hospital Compare methodology for Acute Myocardial Infarction, Heart Failure, Pneumonia, Surgical Care Improvement Project, and Children's Asthma Care. In addition, DoD also evaluates performance on the Joint Commission's pregnancy-related measures to reflect the sizeable pregnancy related volume in the MHS.

In addition, DC MTFs continued their partnership with the National Perinatal Information Center (NPIC). In 2008, performance on these outcomes-based measures generally exceeded the national averages reported by hospitals outside DoD.

Like performance measurement of hospital-based care, DoD also evaluates how well it is doing for outpatient and preventive care. DoD uses a methodology similar to the National Committee on Quality Assurance's (NCQA) Healthcare Effectiveness Data and Information Set (HEDIS®) to monitor the performance of the system's preventive care (e.g., cervical cancer screening, breast cancer screening, and colorectal cancer

screening) and disease management (e.g., asthma, and diabetes care) programs. Data available for DC facilities demonstrates that DoD performance ranged between the 50th and 90th percentiles, except for appropriate use of asthma medication, in which DoD exceeded the 90th percentile.

The Agency for Healthcare Research and Quality's (AHRQ) Patient Safety Indicators (PSIs) are a set of metrics

The NQMP education program translates these research findings and recommendations into solutions that may be applied to clinical practices.

providing information on potential in-hospital complications and adverse events following surgeries, procedures, and childbirth. Like many health system leaders in the private sector, the MHS is using the PSIs as a tool to help identify potential adverse events occurring during hospitalization. Performance on PSIs is tracked and discussed in the MHS

Clinical Measures Steering Panel (CMSP) and in the MHS Clinical Quality Forum (CQF).

The National Quality Management Program (NQMP) conducted five clinical studies in 2008 that had a quality focus. These studies evaluated specific issues across the MHS and included private sector comparable data when available. The aim of these studies is to provide DoD leadership and health care providers with independent, impartial analyses of MHS clinical data so that they may evaluate policy and practice in the MHS. The NQMP education program translates these research findings and recommendations into solutions that may be applied to clinical practices.

The MHS Population Health and Medical Management

Population Health (PH) seeks to step beyond the individual-level focus of

medicine by addressing a broad range of factors that affect health at the population level, such as environment, social structure, and resource distribution. The MHS Population Health Healthy Choices for Life initiatives in 2008 continued to address tobacco cessation ("Tobacco Free Me"), obesity ("Healthy Eating and Active Living in TRICARE Households"), and alcohol abuse prevention ("Program for Alcohol Training, Research, and On-line Learning" [PATROL], and "That Guy").

Results from these projects were monitored in 2008 to evaluate how they addressed the key health behaviors associated with premature and preventable death in

the targeted population and whether they positively influenced attitudes and behaviors related to tobacco use, obesity, and alcohol abuse.

The tobacco-cessation demonstration project began in May 2006 and concluded in September 2008. It included a Quitline, providing telephone-based tobacco cessation counseling 24 hours per day, 7 days per week; web-based support and educational programs; and pharmacotherapy. Preliminary demonstration study results indicated increased cessation rates as measured at the completion of each milestone quarterly survey.

The weight-management demonstration project for addressing obesity was launched in July 2006 and concluded in September 2008. The demonstration study provided health/weight loss coaching, as well as telephone and web-based educational and motivational information designed to help TRICARE beneficiaries make and sustain lifestyle changes. The tobacco cessation demonstration project results indicated increased cessation rates as measured at the completion of each milestone quarterly survey. Demonstration results showed study participants

had clinically significant, sustained reductions in measured weight loss as well as beneficiary reports of increased incidence of regular physical activity and improved dietary behaviors. The weight management demonstration project outcomes provide evidence that behavioral modification is possible in a military beneficiary population using a targeted web-based interface.

PATROL was a web-based alcohol abuse education pilot project targeted at young, Active Duty (AD) service members at eight military installations; the pilot project began in May 2006 and ended in September 2007. The program results will be used to enhance and complement other efforts being undertaken in this important area, which will result in an improved state of military readiness. Currently, coordinated Joint Service efforts are underway to leverage tools and programs to decrease heavy drinking and binge drinking across the Services.

That Guy, an alcohol abuse prevention campaign, expanded worldwide in 2008 and overall awareness of the program increased significantly among all branches of the Service. Awareness for 2008 more than doubled to 30 percent since 2007. In addition, attitudes toward excessive drinking continued to shift in a positive direction, showing support for the campaign's key messages.

The program also received recognition from:

- Public Relations Society of America (PRSA): Silver Anvil Award of Excellence, Bronze Anvil Award for Research, two Bronze Anvil Award Commendations;
- The Holmes Group: Silver SABRE, Government Agencies Category; and
- National Association of Government Communicators (NAGC): Blue Pencil and Gold Screen Award.

In addition to the three demonstration projects on tobacco cessation, obesity, and alcohol abuse prevention, social marketing campaigns to counter tobacco

use and alcohol misuse/abuse were also developed. These projects are targeted toward young, enlisted AD members, who are more likely to use tobacco products and drink alcohol.

The goal of Medical Management (MM) is to enhance the coordination of patient care and create an efficient and effective high-quality health care system. DoD Instruction (DoDI) 6025.20 establishes MM requirements while its companion publication, the TMA Medical Management Guide, contains implementation direction. The MM guide provides specific “how to” guidance for MTF staff in establishing MM programs, including information on outcomes management and resources such as sample forms, website links, and tools that can be customized at the local level. MM provides a managed care model linking Utilization Management (UM), Case Management (CM), and Disease Management (DM) into a synergistic, integrated approach to patient care management while also connecting MHS clinical processes to business planning. It includes evidence-based, outcome-oriented UM, with an emphasis on integrating CPGs into the MM process.

The purpose of UM within each MTF is to identify, monitor, evaluate, and resolve issues that may result in inefficient delivery of care or that may have an impact on resources and services. UM at the MTF level is accomplished through ongoing proactive data analysis, utilization review, CM, and referral management.

CM is a key clinical process that supports the MHS's ability to provide seamless continuity of care through the coordination of needed services to meet beneficiaries' health care needs. TMA focuses on three CM areas: 1) Policy, 2) Education and Training, and 3) Information Management/Data Sharing. TMA, Office of the Chief Medical Officer (OCMO), developed interim policy for the implementation of clinical CM in the MHS. CM web-based and

virtual instructor-led training via the MHS Learn platform also are being developed. TMA continues working toward acquisition of an enterprise-wide automated CM tool to assist with documentation and tracking of a patient's individualized care plan.

The goals of DM are to improve health status (clinical outcomes), increase patient and provider satisfaction, and ensure appropriate utilization of resources. Currently, the MHS DM program addresses asthma, congestive heart failure (CHF), and diabetes. Chronic obstructive pulmonary disease (COPD) is being added in FY2009. Further expansion, to include depression and anxiety disorders, along with cancer screening will follow shortly thereafter. The Department is pursuing necessary regulatory changes to implement DM as a full benefit, in accordance with the John Warner National Defense Authorization Act (NDAA) for FY2007; Section 734: Disease and Chronic Care Management.

The scorecard evaluation for these three diseases has shown outcome measures are moving in the direction anticipated—i.e., lower emergency use and lower inpatient care, lower medical costs, and (with a few exceptions) a greater percentage of patients receiving appropriate medications and tests. In 2008 annual cost estimates an annual per-patient reductions in medical costs of \$457/year for asthma, \$900/year for CHF, and \$861/year for diabetes, and an overall return on investment of about \$1.43 per dollar expended on DM services.

Patient Safety

The DoD Patient Safety Program Office in TMA, OCMO, oversees DoD systemwide patient safety related policy development, program design, and initiative implementation. The Patient Safety Program's infrastructure includes three core components: the DoD Patient Safety Center, which conducts analyses and provides enterprise-wide recommendations based on near-miss

and adverse events within the MHS; the Center for Education and Research in Patient Safety, which facilitates patient safety education, training, best practices, and research on the effectiveness of program outcomes; and the Healthcare Team Coordination Program, which develops and deploys tools to reduce the potential of harm to patients while delivering care.

In FY2008, the Patient Safety Program's major accomplishments included the following:

- Partnered with the Centers for Disease Control and Prevention (CDC) to prevent Healthcare Associated Infections (HAIs). As of September 2008, nine MTFs joined CDC's National Healthcare Safety Network, all with plans to submit data for HAI prevention efforts.
- Assessed the MHS culture of patient safety through the Tri-Service Survey on Patient Safety. The DoD-wide survey response rate in FY2008 was 58 percent, a 5-percent increase compared with participation in FY2005/2006.
- Selected a commercial web-based product for MHS-wide patient safety event reporting. In 2008, a Tri-Service selection board completed the acquisition process to select a commercial off-the-shelf product for the patient safety reporting system. Enterprise testing and validation processes of the system are planned for FY2009.
- In collaboration with the U.S. Department of Health and Human Services' AHRQ, launched the TeamSTEPPS™ National Implementation Project to build an infrastructure for integration and sustainment of team-based care throughout the U.S. health care system. During FY2008, TeamSTEPPS spread into operational and reserve units, particularly in Iraq. In 2008, 700 staff were trained and, subsequently, were reporting on how TeamSTEPPS prevented harm. A snapshot of TeamSTEPPS training included the following: held 50 onsite sessions at

36 MTFs, graduated 481 trainers/coaches, granted 4,989 continuing education units and continuing medical education credits, and saved \$1.4 million in training/travel dollars (over 2 years). In addition, reports from Clinical Microsystems-trained MTFs indicated improved quality and safety of care to include inpatient medication reconciliation, medical team communication, radiology technician competency in performing diagnostic tests, and patient access to care. Efficiency improvements include administration turnaround for inpatient admissions, Relative Value Unit capture, ICD-9 coding, and reduced lengths of stay in intensive care units.

Review of our patient safety reporting indicates positive data indicates associations with dedicated patient safety initiatives.

- Tri-Service participation in the Institute for Healthcare Improvement's (IHI) 5 Million Lives International Campaign. Twenty-eight (40 percent) of those MTFs that enrolled submitted data to IHI as part of the learning and sharing initiative of the campaign. The data-sharing partnership with IHI paved the way for DoD to exchange quality improvement information with non-DoD external organizations such as CDC.
- The Patient Safety Program website capabilities expanded to include robust "What's New" and archive sections, access to distance learning programs, and levels of secured access, with additional enhancements planned for FY2009.
- The DoD Patient Safety Center serves as the repository for all DoD patient safety data and manages the Patient Safety Registry. In FY2008, near misses (defined as events that did not reach the patient; these provide critical opportunities for facilities to find and fix potential problems before they cause harm) continued to rise in

total number, remaining the majority of overall event reports. The increasing number of near-miss reports may reflect the increased awareness of and utility in voluntary reporting. Review of our patient safety reporting indicates data indicates positive associations with dedicated patient safety initiatives.

Access to Care and Patient Satisfaction

The MHS uses survey tools to obtain ongoing information from beneficiaries on their satisfaction with access to, and use of health care provided across the system. The Health Care Survey of DoD Beneficiaries (HCSDB) is a population-based survey that is conducted quarterly and provides information on ease of access to health care and

preventative services for adults and children as well as satisfaction with providers, care provided, the health plan, and customer service. The HCSDB allows for comparison with the general U.S. population

covered by commercial health plans by using CAHPS metrics, a public-private initiative to develop standardized surveys of patients' experiences with ambulatory and facility-level care. The TRICARE Inpatient Satisfaction Survey (TRISS) focuses on inpatient experiences of adults who receive medical, surgical, and obstetrical services at DC and PC system hospitals. The TRISS questions align with the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey used by CMS, thus allowing for comparison with civilian hospitals across the Nation. The TRICARE Outpatient Satisfaction Survey (TROSS) focuses on how patients feel about the MHS and TRICARE. TROSS reports on outpatient experiences of adults who receive ambulatory services from an MHS DC MTF or through the MHS PC civilian network of providers. The survey is conducted monthly by mail and phone.

TRISS results for two key indicators of satisfaction showed that the MHS was below the HCAHPS benchmark, which

represents the results of three product lines (medical, surgical, and obstetrics) combined. Fifty-six percent of MHS beneficiaries rated their overall hospital experience with a 9 or 10 compared with HCAHPS respondents, of which 65 percent rated their overall experience with a 9 or 10. Sixty percent of MHS beneficiaries indicated that they would definitely recommend their hospital to family and friends, compared with 70 percent of HCAHPS respondents.

In addition to measuring patients' overall satisfaction with the hospital, HCAHPS measured the aspects of care that matter most to patients. The HCAHPS composites of patient-centered care include the following: communications with nurses, communications with doctors, communications about medications, responsiveness of hospital staff, pain management; and discharge information. Statistical comparisons were made between the MHS and the HCAHPS benchmark (e.g., DC vs. HCAHPS or a Service versus HCAHPS). The MHS (DC and/or PC systems hospitals) received ratings that were higher than or equal to the national benchmark in two of the six composites.

Individual product lines (surgical, medical, and obstetrics) were not compared with the HCAHPS benchmark, but comparisons were made between DC and PC systems hospitals:

- **Satisfaction with Surgical Services.**

The ratings for nurse and doctor communications and discharge information for DC and PC were comparable. DC had higher ratings than PC for communication with nurses and doctors, medications communication, and responsiveness of hospital staff. PC and DC hospitals had comparable ratings for pain management and discharge information.

- **Satisfaction with Medical Services.**

The survey results revealed that patients who received their care at DC MTFs rated all services higher than patients who received their care in a PC hospital.

- **Satisfaction with Obstetrics Services.**

Women who received obstetrical care through a TRICARE network hospital rated their level of satisfaction higher than women who received care through DC hospitals for all of the six composites.

TROSS overall outpatient satisfaction showed fifty-four percent of MHS beneficiaries who had a DC outpatient visit during 2008 rated satisfaction with their health care with an 8, 9, or 10 compared with 78 percent of PC respondents. Likewise, approximately 62 percent of DC respondents rated satisfaction with their health plan with an 8, 9, or 10 compared with 78 percent of PC respondents during 2008.

Innovations and Policy Initiatives To Enhance Clinical Quality

DoD has a range of supplemental programs focused on enhancing the overall quality and breadth of health care provided across the enterprise. To this aim, the MHS has instituted several policy initiatives aimed at improving the quality of care across the system. Examples include promoting increased transparency and supporting a Pay-For-Performance program that rewards Services based on performance on a range of criteria. Efforts to increase transparency were fueled by a 2006 Presidential Order mandating that applicable health care programs measure the quality of health care services and report results to providers and beneficiaries. During FY2008, DoD continued to work in alignment with VA and the Indian Health Service on transparency in the clinical quality arena. Specifically, inpatient ORYX[®] data for MTFs is now available for patients to see on the MHS Clinical Quality Management website (<https://www.mhs-cqm.info>).

The MHS' Pay-For Performance program is another policy initiative aimed at improving the quality of health care provided to DoD beneficiaries. This initiative provides financial rewards to Services based on their MTF's performance in the areas of quality,

satisfaction, and access to care. Incentives are determined by performance on a range of attributes and metrics, which include comparisons to DoD and civilian averages. Payments for quality of clinical care are based on performance of HEDIS and ORYX measures.

The MHS also has established programs to further support specific areas of medicine. For example, with increased

research, leveraging other programs to maximize benefits to military medicine. In FY2008, much of TATRC's \$350 million in funding was spent on partnering with numerous universities, commercial enterprises, and other federal agencies in support of approximately 500 research projects. TATRC's research initiatives are designed to address the ever-changing world of medical requirements both on the battlefield and in hospitals of the future.

DoD-GEIS' vision is to successfully develop, implement, support, and evaluate an integrated global emerging infectious disease surveillance and response system that promotes preparedness in U.S. forces, the MHS, and the global public health community.

utilization of mental and behavioral health services, DoD/TMA established a dedicated entity that addresses policy issues in this area, to include evaluating whether programs meet established standards of care. The Behavioral Medicine Division (BMD) was created in 2006 in recognition of the need for behavioral medicine input into a number of activities carried out at the DoD level within OCMO/TMA. Specifically, BMD provides leadership on beneficiary behavioral health issues affecting both the DC and PC components of TRICARE. In addition, BMD acts as the DoD lead on developing clinical guidance for the implementation of collaborative care within the DC system. Looking toward the future, DoD is committed to research and evaluation of future technologies that will yield benefits and improvements to military medicine. The Telemedicine & Advanced Technology Research Center (TATRC), a component of the Army's Medical Research and Materiel Command (USAMRMC), is a central laboratory for advanced technology and telemedicine for DoD. TATRC's mission is to explore science and engineering technologies ahead of programmed

Biosurveillance

DoD remains fully committed to preventing, detecting, and responding to potential infectious disease threats worldwide. The DoD Global Emerging Infections Surveillance and Response System (DoD-GEIS) is a Tri-Service organization focused

on timely recognition and control of emerging infectious diseases. DoD-GEIS' vision is to successfully develop, implement, support, and evaluate an integrated global emerging infectious disease surveillance and response system that promotes preparedness in U.S. forces, the MHS, and the global public health community.

In 2008, DoD-GEIS became a core component of the newly formed Armed Forces Health Surveillance Center (AFHSC). Within this new organizational framework, the worldwide partnership that is GEIS continued to promote and facilitate national and international preparedness for emerging infections while maintaining its focus on protecting the health of all DoD health care beneficiaries. Specifically, GEIS continued to promote, expand, and execute its strategic goals of surveillance and detection, response and readiness, integration and innovation, and cooperation and capacity building. Five categories of infectious diseases and associated clinical states remain the priority surveillance conditions of GEIS: respiratory diseases, especially influenza; gastroenteritis syndromes; febrile

illness syndromes, especially dengue and malaria; antimicrobial resistance; and sexually transmitted infections. Throughout FY2008, the programs GEIS has put in place continued to generate essential data that bolstered DoD and global public health efforts.

GEIS and its partners have developed several automated syndromic surveillance systems. Two examples are Early Warning Outbreak Recognition System (EWORS) and Electronic Surveillance System for Early Notification of Community-based Epidemics (ESSENCE). EWORS is an innovative syndromic surveillance system for early detection of disease outbreaks that was developed and successfully implemented in Indonesia with partial GEIS funding and in collaboration

with CDC. EWORS, subsequently, expanded to Cambodia, Lao PDR, and Peru. EWORS collects real-time data on disease outbreaks submitted by hospital and health facilities in those countries. In 2008, statistical, technological, and training enhancements were being explored that could be applied to other EWORS locations and early warning surveillance systems in resource-poor settings. Similarly, ESSENCE is a web-based syndromic surveillance application that examines DoD health care data for rapid or unusual increases in the frequency of certain syndromes. Begun in 1999 to collect health data in the Washington, DC, area, ESSENCE now monitors much of the MHS, which includes more than 400 facilities around the world.

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CLINICAL
QUALITY
MANAGEMENT

The Military Health System (MHS) is a unique partnership among health care professionals, practitioners, educators, researchers, and support personnel who are responsible for the delivery of world-class health care to all DoD service members, retirees, and their families. The MHS assumes a tripartite responsibility for providing a worldwide medical capability for military operations to promote a fit, protected, and healthy fighting force; natural disaster and humanitarian efforts; and health care to all DoD-eligible beneficiaries (Figure 2-1).



Figure 2-1. The Military Health System's Tripartite Mission



CLINICAL QUALITY MANAGEMENT
IN THE MILITARY HEALTH SYSTEM



MHS OVERVIEW

The system consists of the Office of the Assistant Secretary of Defense for Health Affairs; the medical departments of the Army, Navy, and Air Force; Joint Chiefs of Staff and the Combatant Command surgeons; and TRICARE Management Activity (TMA).

TRICARE is the health care provision brand of the MHS. A fully integrated health care delivery system under the authority of the Assistant Secretary of Defense (Health Affairs) and operated by DoD, TRICARE provides the full spectrum of health care services to more than over 9.5 million eligible beneficiaries worldwide. TRICARE is composed of two complementary care delivery structures: the direct care (DC) system provides services to patients in Military Treatment Facilities (MTFs) while the purchased care (PC) system provides care to military beneficiaries through civilian providers in private offices or civilian health care facilities. TMA is responsible for the oversight of the contracted health care services and works very closely with the Services, which provide direct care in the MTFs.

The DC system, composed of the combined health care resources of the Air Force, Army, and Navy, serves beneficiaries throughout the United States and overseas, including those deployed to operational settings and assigned to support natural disasters and humanitarian efforts. The Surgeon General for each of the Armed Services shoulders the leadership responsibilities for addressing beneficiary care needs and managing the health care resources for his or her individual Service.

The PC network is administered by three managed care support contractors (MCSCs), one in each of three geographic regions that each have responsibility for approximately 2.3 million beneficiaries. Currently, the MCSCs are Humana Military Healthcare Services in the South Region, Triwest Healthcare Alliance in the West Region, and Health Net Federal Services in the North Region. These MCSCs are responsible for administering health care networks to provide best-value health care to TRICARE beneficiaries. In addition, there are six United States Family Health Plan (USFHP) designated provider (DP) programs (Johns Hopkins Medicine, Pacific Medical Center, CHRISTUS Health, Brighton Marine Health Center, Martin's Point Health Care, and Saint Vincent Catholic Medical Centers), which provide care for an additional 100,000 TRICARE beneficiaries. The maps (Figure 2.2) show the geographical area covered by the MCSCs and DPs.



COMMITMENT TO QUALITY

Quality Patient Care

The MHS is committed to the health and well-being of those entrusted to its care. MHS leaders are passionate about the care and well-being of Service members, retirees, and their families. The MHS works to improve health and fitness through prevention and evidence-based disease treatment—keys to operational force effectiveness and improvement in the quality of life for our beneficiaries. The overall goal is to achieve optimal health.

As a patient-centered organization, the MHS employs the best practices in health care delivery, partnering with patients to involve them as members of the team focused on improving their health. The MHS also builds partnerships with beneficiaries in an integrated health delivery system that encompasses military treatment facilities, private sector care, and other federal health facilities, including the Department of Veterans Affairs (VA). Globally accessible health and business information enables patient-centered, evidence-based processes that are both effective and efficient.

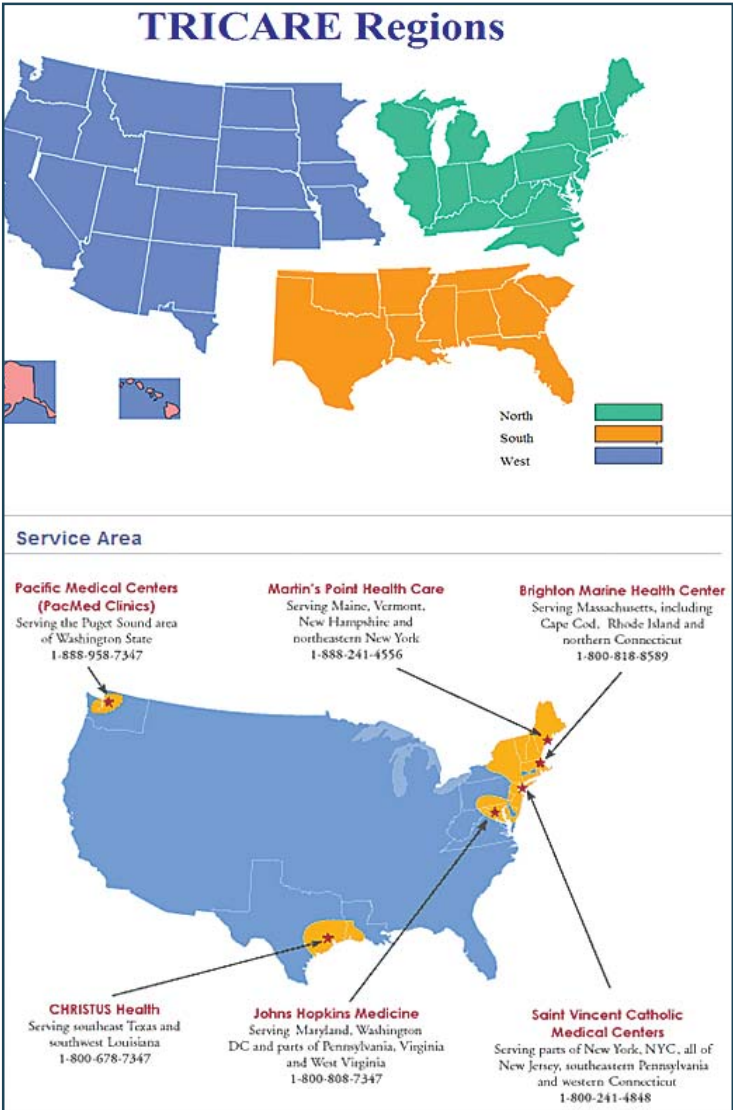


Figure 2-2. TRICARE Regions Covered by MCSCs and DPs

The MHS strives daily to simultaneously accomplish four interconnected goals. These are to promote—

- A healthy, fit, and protected force;
- Casualty care and humanitarian assistance;
- Healthy and resilient individuals, families, and communities; and

Education, training, and research
These goals are not mutually exclusive. Commanders and Service members partner with the MHS to achieve individual medical readiness and enhanced performance. They expect and deserve responsive, capable, coordinated medical services anywhere, anytime. No other health system in the world can provide what the MHS must provide. Because of a rapidly changing national security environment, the MHS must excel at developing and deploying innovative products and services that meet mission requirements.

MHS beneficiaries desire health services that are convenient and tailored to their individual health and medical needs. Providing superb, evidence-based care to our beneficiaries in a seamless way across our health system of military providers and strategic partners encourages them to develop a strong partnership with the MHS that will result in behavior that promotes health and conserves resources. The key success factor is our ability to do the simple things well every time. Stated simply, if beneficiaries are delighted with the MHS every time they “touch” the system, they will be more likely to work with the system to help them manage their health over the long term.

TRICARE works aggressively to sustain the program through good fiscal stewardship along with continuous efforts to refine and enhance benefits and programs in a manner consistent with industry standards of care practices and statutes to meet the changing health care needs of beneficiaries.

The quality of health care provided by DoD is measured in a variety of ways, with the use of civilian benchmarks whenever possible. Sources to be evaluated include information obtained from electronic administrative and clinical data, abstraction of medical records, and, perhaps most importantly, surveys of DoD beneficiaries.

Guiding Principles

Based on the Institute of Medicine's (IOM) six aims for quality—safe, effective, timely, patient centered, efficient, and equitable—TRICARE through Clinical Quality Management focuses on:

- Promoting clinical quality across the MHS in alignment with the strategic plan;
- Preventing possible causes of medical error through the use of measurement;
- Utilizing a variety of clinical quality measures to continually assess the care provided across the system and at each level of the organization;
- Aligning with the national agenda to develop health care quality consensus measures and comparisons; and to develop a health care quality consensus measure and comparison; and
- Ensuring that the MHS remains in the forefront of health care quality measurement by seeking current

information on clinical measures that are used to improve clinical quality.

In addition, as a global health delivery system, the MHS provides services anytime and anywhere. To achieve this mission, these principles are also embedded into MHS processes and its culture.

- Health care is the ultimate team sport—we work as an integrated team.
- You have to know the score to win the game—best information leads to best decisions.
- Breakthrough performance through innovation—holding leaders accountable for providing an environment and resources that foster innovation.
- Reward outcomes, not outputs—provide incentives to reward mission success.
- Health-creating partnerships—committed to caring and long-term relationships.



CLINICAL QUALITY ARCHITECTURE

The management of quality in the MHS relies on continuous, multidirectional communication across the various components and specialties within the system. Structures and processes have been designed to support clinical quality management and facilitate consistent communication of opportunities to enhance the care provided throughout the system.

System Committees

Including quality management in key leadership committees and developing a select number of quality-focused committees helps to establish and maintain strong lines of communication to support quality management in the MHS as a whole. These committees successfully connect information flow from policy development to implementation.

Senior Military Medicine Advisory Council

The strategic plan, including the direction of clinical quality management in the

MHS is established by senior leaders from across the system under the aegis of the Senior Military Medicine Advisory Council (SMMAC). SMMAC is responsible for decisionmaking and periodic monitoring of key strategic and operation milestones. The membership of SMMAC includes the Assistant Secretary of Defense (Health Affairs), the Service Surgeons General, Joint Staff Surgeon, Principle Deputy Assistant Secretary of Defense (Health Affairs), the Deputy Assistant Secretary of Defense (Clinical & Program Policy), Deputy Assistant Secretary of Defense (Force Health Protection & Readiness), Deputy Assistant Secretary of Defense (Health Budget & Financial Policy), Deputy Assistant Secretary of Defense (Health Plan Administration), and the MHS Chief Information Officer.

Clinical Proponency Steering Committee

Oversight of the development and implementation of clinical policies, practices, and systems to support

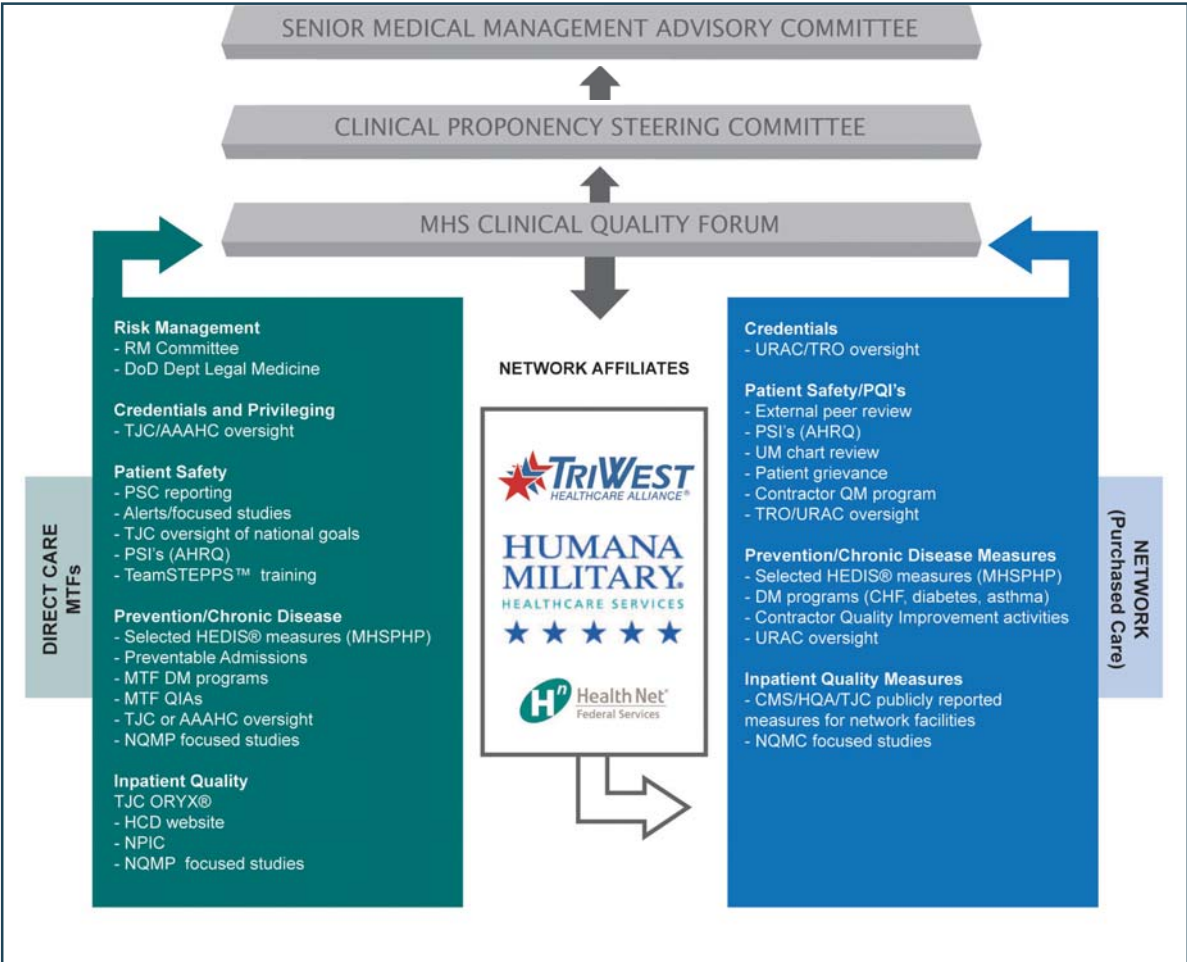


Figure 2-3. Clinical Quality Architecture for Direct and Purchased Care

implementation of the strategic goals of the MHS is the responsibility of the Clinical Proponency Steering Committee (CPSC). CPSC serves as the Quality Council for the MHS. The membership of CPSC includes Deputy Assistant Secretary of Defense (Clinical & Program Policy), Service Deputy Surgeons General, Deputy Surgeon General United States Public Health Service, Deputy Assistant Secretary of Defense (Force Health Protection & Readiness), Deputy Assistant Secretary of Defense (Health Budgets and Financial Policy) and Deputy Assistant Secretary of Defense (Health Plan Administration), and Chief Information Officer TRICARE Management Activity.

The MHS Clinical Quality Forum
 The Clinical Quality Forum is a collaborative committee sponsored by Office of the Assistant Secretary of Defense (OASD) HA/TMA with oversight responsibility for clinical quality assessment across the MHS. The Forum's primary responsibilities are to continually monitor key performance indicators and evaluate the quality of health care provided to DoD beneficiaries. The Forum provides ongoing updates and recommendations to senior leadership through regular reporting to the CPSC.

A number of working groups and panels, aligned under the MHS Clinical Quality Forum, focus on specific quality initiatives

and programs. This Forum facilitates collaborative work through initiating and implementing clinical quality-related activities. For example, the Scientific Advisory Panel (SAP) identifies potential performance improvement opportunities for study and analysis, while the Clinical Measures Steering Panel focuses on MHS performance in clinical quality measures.

Quality Oversight

Direct Care System: The Office of the Surgeon General for each of the Services is responsible for and provides oversight for the quality of care and services provided to enrolled beneficiaries within each Service's health care facilities. This oversight is accomplished with the aid of subject matter experts on health care quality at the regional and/or facility level. The Surgeons General for the Services develop a strategic plan for their Service that is aligned with the strategic direction of the MHS. Quality plans are developed at the facility level to guide and direct the organization's quality-related functions and initiatives.

Purchased Care System: PC contractors are required to design and administer a clinical quality management program (CQMP) in accordance with their contract and the TRICARE Operations Manual, (Chapter 7, Section 4). Section 4 states that contractors shall operate a CQMP that results in demonstrable improvement in the quality of health care provided to beneficiaries and in the processes and services delivered by the contractor. CQMP is defined as the integrated processes, both clinical and administrative, that provide the framework for the contractor to objectively define and measure the quality of care given to beneficiaries. CQMP shall demonstrate how the contractor's goals and objectives, leadership, structure, and operational components are designed to achieve the efficient and effective provision of timely access to high-quality health care. Each of the regional contractors works collaboratively with a TRICARE Regional Office (TRO) to monitor the quality of the program and the care provided across the region.

Clinical operations representatives from the TROs participate in quality management, utilization management, and credentialing activities of the contractor. All facilities that are invited to become TRICARE network providers are required to be accredited by The Joint Commission (TJC) or the Healthcare Facilities Accreditation Program (HFAP) of the American Osteopathic Association (AOA) and to participate with the Centers for Medicare and Medicaid (CMS).

Contracts Supporting Clinical Quality Management in the MHS

The MHS Clinical Quality

Management Support Contract: The MHS Clinical Quality Management Support Contract (MHS CQM_{SC}) is part of an overall TMA strategy to become a provider of world-class health care. Currently, this contract is administered by Lockheed Martin Health Solutions. The MHS CQM_{SC} collects, manages and reports DoD's performance measures and accreditation requirements, including TJC's ORYX[®] measures, the CMS National Hospital Measures, health plan quality measures, and the Agency for Healthcare Research and Quality (AHRQ) measures. These data focus mainly on the DC facilities and are analyzed to identify areas of excellence and opportunities for improvement. The MHS CQM_{SC} contractor also conducts clinical studies that evaluate specific processes and outcomes of care and utilizes private-sector comparable data when available. DoD leadership and health care providers use these independent, impartial analyses of MHS clinical data to evaluate policy and practices in the MHS.

Education programs are developed from the studies to translate findings and recommendations into solutions that can be applied to clinical practices. Free online continuing medical education (CME) and continuing nursing education credits (CNE) are given to participants through a partnership with the Uniformed Services University of the Health Sciences (USUHS). The online educational activities are

available to policymakers and health care professionals at every level of the MHS. In addition, the MHS CQMSC provides for consultative site visits to military inpatient and ambulatory facilities to help organizations use their external data (e.g., TJC ORYX® and the Special Studies) for performance improvement initiatives.

National Quality Monitoring Contract
The National Quality Monitoring Contractor (NQMC) provides an external review of care function for care delivered to TRICARE beneficiaries in the networks provided by the MCSCs and DP programs. Currently, this

function is accomplished by MAXIMUS through the retrospective review of approximately 1,400 charts per month that are selected based on paid claims. The following chart (Figure 2-4) indicates the types of cases selected for review and the approximate number of cases per month.

When the contractors are provided findings from the NQMC review, they are required to further review those episodes of care and either agree, partially agree, or disagree with the identified potential quality issues. This is one mechanism meant to provide reassurance to TRICARE that there is no apparent fraud, bias, or systematic up-coding occurring. In addition, the NQMC can perform special focused studies of relevance to the PC network. MCSC and DPs also perform focused studies relevant to their particular populations aimed toward improving the delivery of health care and enhancing the well-being of the beneficiary population.

The other category of review with appreciable findings is that of preventable admissions. AHRQ has identified 16 categories of ambulatory care-sensitive conditions in which prudent and appropriate outpatient care may preclude the need for a hospital admission. Through additional records review for the entire episode of care, this screening mechanism provides a basis for TMA to further evaluate whether this care could have actually been achieved in an outpatient setting, and is an excellent example of the interface between NQMC and the managed care support contractors. The majority of these cases involve diagnoses of pneumonia and chronic heart failure and the findings are broadly dispersed geographically in that no particular facility has an extraordinary number of these potentially preventable admissions.

Length of stay is another category of review conducted by NQMC that provides actionable information for TMA. In the year reported, many of the findings of NQMC regarding length of

Sampling Categories for Retrospective Records Review

INSTITUTIONAL

SNF Care Beyond Medicare Limits	All available cases
High cost (Paid >\$1000,000)	All available cases
Complications	100
Discharge by Death	100
Mother	100
Baby	100
AMI	75
Heart Failure	75
Pneumonia	75
SCIP	75
Short stay (1 or 2 bed days)	100
Residential Treatment Center	All available cases
Medical Surgical inpatient	All needed to Total of 1,110 Cases
Mental Health	All needed to Total of 100 Cases
Total Institutional	1200

NON-INSTITUTIONAL

Ambulatory Surgery	100
Partial Hospitalization	100
Total Non-institutional	200

GRAND TOTAL	1400
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Figure 2-4. PC Network Sampling Categories for Retrospective Records Review

stay are related to beneficiaries remaining in inpatient psychiatric settings when release to intensive outpatient services would have been appropriate. These findings provided support for the inclusion of intensive outpatient programs as an appropriate intervention level for TRICARE beneficiaries and supported changes to the TRICARE Policy Manual to allow for intensive outpatient therapy.

NQMC also suggests an additional mechanism by which retrospective chart review may be used to evaluate the occurrence of harm, by definition, “an unintended physical injury resulting from or contributed to by medical care (including the absence of indicated

medical treatment), that required additional monitoring, treatment, or hospitalization or that results in death. Such injury is considered to be a medical harm whether or not it is considered preventable, whether or not it resulted from a medical error, and whether or not it occurred within a hospital.” Evaluations of four areas of harm were added to the retrospective chart review process in January 2008 and include surgical site infections, pressure ulcers, falls, and venous thromboembolism or blood clot. Corrective action plans are requested if a facility demonstrates recurrence of particular harms. Patient safety events are also monitored using the National Quality Forum (NQF) serious reportable events (SRE) classifications.



SYSTEMS AND PROCESSES SUPPORTING QUALITY OUTCOMES

DoD is committed to using information technology to enhance the delivery and quality of health care, improve the continuity and flow of medical information, increase access to care, and help contain costs. The MHS continues to innovate and to optimize the role of technology to meet this mission and create a “world class” health care system.

The MHS Population Health Portal

The MHS Population Health Portal (MHSPHP) is



a Tri-Service web-based tool that generates detailed action lists and prevalence lists for clinical preventive services and disease and condition management at the provider and clinic level for enrolled TRICARE beneficiaries. The MHSPHP also allows both MTFs and headquarters-level users to track aggregate information and benchmark MTFs against the HEDIS and guidelines for numerous measures. The portal is easily accessible and intended to assist clinic managers, health care integrators, clinical epidemiologists, and other clinic personnel in proactively managing health care delivery.

The Portal provides access to data that allows for—

- Assessment of population health demographics;
- Demand forecasting for health preventive services and disease management needs of enrolled populations;
- Patient-specific information by providers;
- Analysis of primary care high utilization for possible case management patients;
- Allocation of resources where most needed; and
- Identification of opportunities for improvement.

AHLTA: The Military’s Electronic Health Record

The MHS



continues to expand and improve AHLTA, DoD’s worldwide electronic health record (EHR) system. AHLTA supports MHS professionals who are responsible for health care delivery, clinical analysis, medical surveillance, development of evidence-based clinical practice guidelines, and outcomes research. A key

GLOBAL INFORMATION
for QUALITY CARE

AHLTA IS—	
POWERFUL ▶	Valuable, life-saving beneficiary information is available 24/7;
LEGIBLE ▶	Beneficiary records are complete, accurate, and clear;
SECURE ▶	Only authorized users can access records, and they are protected from natural or man-made disasters;
KNOWLEDGEABLE ▶	Offers health care providers wellness reminders for their patients;
EFFICIENT ▶	Interoperability ensures that costly tests, labs, and scans are not needlessly duplicated; and
PROACTIVE ▶	AHLTA provides critical information that lets health care providers know about disease outbreaks, allowing early intervention in targeted populations. This medical surveillance facilitates military force health protection.

with enterprise-wide deployment. These enhancements improve AHLTA's usability and reliability by enhancing provider workflow processes and minimizing the time required to document clinical encounters. Steps taken to optimize network operations at the MTFs during implementation of the AHLTA enhancements will improve system reliability in the near term; planned architecture improvements will further enhance reliability. New software capabilities include support for automated clinical practice guidelines, electronic patient

Figure 2-5. AHLTA Overview. For more information, visit www.health.mil/ahlta/default.cfm.

enabler of military medical readiness, AHLTA captures and stores structured data in its Clinical Data Repository (CDR), and gives health care providers secure 24/7 access to the medical records of more than 9.2 million, highly mobile beneficiaries. AHLTA's reach extends to deployed treatment settings in Iraq, Kuwait, and Afghanistan, where AHLTA Theater (AHLTA-T) is used to capture outpatient encounter records and transfer them to the AHLTA CDR. Records in AHLTA CDR are retrievable at points of care worldwide, including nearly 900 medical and dental treatment facilities, fixed and deployed. The medical component of AHLTA has been in use worldwide in military medical fixed and deployed facilities except naval vessels since December 2006. The next generation of the military's EHR system includes software and performance enhancements for the medical component and integrates electronic dental charting and eyewear order entry and tracking capabilities into AHLTA.

In FY 2008, enhancements to AHLTA's medical component were tested in Service MTFs prior to moving forward

signatures, health history modules that allow patients to self-report information, and multisite AHLTA access for "circuit riders"—providers who provide care at different physical locations.

Testing for the dental component also occurred in FY2008. AHLTA Dental was in use in six Service dental clinics that served as test sites. AHLTA Dental received a full deployment milestone decision and, beginning in the second quarter of FY 2009, this new integrated version of AHLTA will be fielded throughout the 375 dental facilities in the MHS. Fielding an integrated medical and dental EHR represents a major milestone in health care information sharing. For the first time in the MHS, dental providers will have fully electronic dental charting tools, complimented by point-of-care access to complete medical records. Transparency of health information among medical and dental provider groups can prevent missed care opportunities before adverse events occur and reinforce health promotion and disease prevention activities. Use of the integrated record in dental care will support early identification and

documentation of oral symptoms that may indicate the presence of systemic health conditions. Through AHLTA, dental providers document a patient's screening results in the integrated record, making that information accessible to the patient's primary care provider, and arrange medical consultations when necessary.

In FY 2008, AHLTA advanced patient safety efforts by providing automated support for the prevention of drug-drug interactions and drug-allergy reactions. As of the first quarter of FY2008, all DoD MTF sites have the capability to exchange computable outpatient pharmacy and medication allergy data with VA treatment facilities. This exchange enables drug-drug interaction checking and drug-allergy checking using consolidated pharmacy and allergy data from both DoD and Department of Veterans Affairs (VA).

By leveraging AHLTA, DoD significantly improved the secure sharing of appropriate electronic health information with the VA. Data sharing initiatives are enhancing health care delivery to beneficiaries and improving the continuity of care for those who have served our country. DoD data, including allergy, outpatient pharmacy, inpatient and outpatient laboratory and radiology

reports, demographic data, procedures, and vital signs data are viewable by the VA. This information is available when patients present to the VA for care or evaluation.

ESSENTRIS (the MHS Interim Inpatient Solution)

Essentris, the MHS Interim Inpatient Solution for AHLTA, is a comprehensive clinical documentation system for use in inpatient settings. Essentris improves productivity by eliminating the majority of paper based inpatient documentation. The core of Essentris is automated clinical documentation, freeing users to attend to direct patient care. It provides point-of-care data capture at the patient's bedside for physiological monitors, fetal/uterine monitors, ventilators, and other patient care machines. All clinical documentation is created and stored in Essentris. This clinical data may be aggregated, trended and analyzed to manage care for a single patient or for an entire patient population. Additionally, the use of this interim inpatient solution allows for standardization of processes and sharing of documentation across DoD and VA treatment facilities. This level of interoperability will help ensure continuity of care for wounded warriors returning to the U.S. for additional care in DoD or VA facilities. In 2008, Essentris was deployed at 12 sites.

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QUALITY ASSURANCE

Quality assurance activities are concentrated at the MTF or health care facility treatment level.

These activities include:

- Credentialing;
- Peer Reviews;
- Privileging Reviews; and
- Risk Management.



ACCREDITATION

Hospitals and freestanding clinics across the MHS are required to achieve accreditation from external agencies. These agencies, granted “deemed status” by the Centers for Medicare and Medicaid Services (CMS), utilize proven and evidence-based best practices in their evaluation methods. The mandate for external accreditation reflects DoD’s commitment to ensuring the structures and processes for delivering care are of the highest quality possible. A product of the accreditation process is the development of performance improvement strategies that assist DC and PC providers to continuously improve the safety and quality of care.

The Joint Commission

The Joint Commission  **The Joint Commission (TJC)**

evaluates and accredits more than 16,000 health care organizations and programs in the United States. An independent, not-for-profit organization, TJC’s mission is to continuously improve the safety and quality of care provided to the public through the provision of health care accreditation and related services that support performance improvement in health care organizations. TJC’s accreditation process seeks to help organizations identify and correct problems and to improve the safety and quality of care and services provided. The process focuses on systems critical to the safety and the quality of care, treatment, and services. The TJC accreditation process comprises three major components: annual self-assessment, quarterly performance measures, and a triennial onsite survey. The annual self-assessments require organizations to determine their compliance with each of the standards. If non-compliance is found in any area, the organization must develop and implement an action plan to remedy the deficiency.

The Accreditation Association of Ambulatory Health Care, Inc.

The Accreditation  **ASSOCIATION for AMBULATORY HEALTH CARE**

Association of Ambulatory Health Care, Inc. (AAAHC) is a private, non-profit organization that accredits more than 4,000 organizations in a wide variety of ambulatory health care settings. Accreditation is a voluntary process through which an organization is able to measure the quality of its services and performance against nationally recognized standards. The accreditation process involves self-assessment by the organization, as well as a thorough review by the Accreditation Association’s expert surveyors, who themselves have extensive experience in the ambulatory health care environment.

After an extensive evaluation process, in 2006 the Air Force determined the Accreditation Association was a more appropriate accrediting body than TJC for its ambulatory clinics. The conversion was made with the approval of the Assistant Secretary of Defense for Health Affairs. The Air Force continues to maintain accreditation for its hospitals through TJC just as the Army and Navy do.

Certifications and Accreditations

The MHS maintains certifications and accreditations in many areas including:

- The Joint Commission on Accreditation of Healthcare Organizations;
- Accreditation Association of Ambulatory Health Care;
- College of American Pathologists;
- American College of Radiology; and
- American Association of Blood Banks.

Appendix B lists the major certifications and accreditations found at MTFs based on services provided.



MEDICAL MANAGEMENT EDUCATION AND TRAINING

TMA continues to meet the challenge of providing MHS personnel with the knowledge and training to meet the requirements of DoD policy. The Population Health and Medical Management Division (PHMMD) is involved in training via classroom instruction and can be accessed online at www.neweditions.net/phmmd/index.asp. This site provides information about registering for the onsite and online web-based courses offered by the TMA and PHMMD. The onsite classroom instruction is an expert-led, interactive, four-day, Medical Management Course based on the principles and business planning tools outlined in

the TRICARE Medical Management Guide. Six Medical Management Courses are offered throughout the three TRICARE regions annually, which offer Continuing Medical Education (CME) and Continuing Nursing Education (CNE) units. Also available from the Military Health System Clinical Quality Management website are online educational activities based on evidence-based research studies that also offer free CME and CNE units. These activities are available at www.mhs-cqm.info. Medical management education is also included in presentations at national meetings (e.g., National TRICARE Conferences) and through written publications.

EXTERNAL REVIEW OF DOD MEDICAL QUALITY IMPROVEMENT PROGRAM

The FY2007 National Defense Authorization Act (Public Law 109-364) required the Secretary of Defense to contract with a qualified independent academic medical organization for the purpose of conducting a review of the DoD medical quality improvement program. The key areas of assessment include:

- Monitoring of medical quality in services provided in military hospitals and clinics and in services provided in civilian hospitals and by providers under the military health care system;
- Utilization and performance measures for military and civilian health care providers;
- Transparency and public reporting mechanisms;
- Patient safety programs;
- Mechanisms for addressing particular medical errors and an assessment of the adequacy of such efforts;
- Accountability for preventable negative outcomes involving negligence; and
- Assessment of the collaboration with national initiatives to develop evidence-based quality measures and intervention strategies.

To complete the review of the Medical Quality Improvement Program, DoD entered into a contract with an independent, nonprofit research and analysis organization (Lumetra) that had experience in health care quality. In FY2008, this organization completed the data collection portion of the review. The project team completed an extensive review of: quality and patient safety regulations and directives, previous reports on quality and patient safety, the published literature, and information available on the Internet about MHS medical quality and patient safety. Interviews and a survey completed by clinical and quality leaders from TMA, the three branches of Service, and the Managed Care Support Contractors were conducted to obtain a comprehensive understanding of the structures, systems, and processes of the quality and safety programs.

This report outlines the findings and recommendations from Lumetra's review and is in the final stages of being completed. The MHS looks forward to receiving the information provided on the DoD clinical quality and patient safety programs by the external review panel and to capitalizing on identified opportunities for improvement.

EVIDENCE-BASED PRACTICE AND CLINICAL QUALITY MEASUREMENT

The Institute of Medicine's (IOM) Roundtable on Evidence-Based Medicine defines evidence-based medicine (EBM) to mean that to the greatest extent possible, the decisions that shape the health and health care of Americans—by patients, providers, payers, and policymakers alike—will be grounded on a reliable evidence base, will account appropriately for individual variation in patient needs, and will support the generation of new insights on clinical effectiveness. EBM seeks to clarify aspects of medical practice that are in principle subject to scientific methods and to apply these methods to ensure the best prediction of outcomes in medical treatment.



EVIDENCE-BASED PRACTICE AND CLINICAL QUALITY MEASUREMENT

DoD is committed to EBM and has incorporated evidence-based clinical practices into the MHS to ensure DoD beneficiaries receive the best possible care based on the most current scientific evidence available. Strategies identified to accomplish this mission include the development and communication of evidence-based clinical practice guidelines followed by ongoing measurement.

Throughout the United States, health care leaders in the private and public sectors alike recognize the need to measure the quality of care delivered by health care organizations. Measurement is essential for evaluating and comparing the quality of care provided in medical facilities, and for improving the quality of care delivered in the MHS. Like its civilian counterparts, the MHS is concerned about the quality and cost of health care. Fortunately, the highest quality care grounded in scientific evidence is often the most effective care.

MHS staff members actively participate in the development, review, and acceptance of quality measures established by the National Quality Forum (NQF) and the Agency for Healthcare Research and Quality (AHRQ). DoD utilizes these nationally recognized clinical quality measures as well as accreditation by external agencies with industry-wide accepted standards to assess the care provided in the MHS. Specifically, the Clinical Quality Forum and the MHS Clinical Measures Steering Panel are central to this effort to promote clinical quality across the MHS in alignment with the MHS strategic plan. The Forum provides ongoing updates and recommendations to senior leadership and disseminates quality information across the MHS to advocate adoption of best practices. The Clinical Measures Steering Panel provides guidance and overall direction for MHS clinical quality measures initiatives.



CLINICAL PRACTICE GUIDELINES

DoD and the Department of Veterans Affairs (VA) are committed to evidence-based standardization of care to achieve more consistency and improved quality of care and cost-effectiveness in the delivery of health care for their beneficiaries. Through a collaborative relationship, both DoD and the VA continue to work together to develop and maintain clinical practice guidelines (CPGs). Currently, 25 CPGs serve as the foundation for interagency condition management initiatives. Continued collaboration will result in improvements in care quality and cost-effectiveness across the MHS. Guidelines available for use throughout the MHS and VA include:

- | | |
|---|--|
| 1. Amputation [New] | 13. Major Depressive Disorder |
| 2. Asthma | 14. Medical Unexplained Symptoms |
| 3. Chronic Obstructive Pulmonary Disease (COPD) | 15. Nuclear Biological Chemical Illness* |
| 4. Congestive Heart Failure (CHF) | 16. Obesity |
| 5. Diabetes Mellitus | 17. Opioid Therapy for Chronic Pain |
| 6. Disease Prevention | 18. Pregnancy, uncomplicated [New] |
| 7. Dyslipidemia | 19. Post-Deployment Health |
| 8. Gastro-Esophageal Reflux Disease (GERD) | 20. Post-Operative Pain |
| 9. Hypertension | 21. Post-Traumatic Stress Disorder |
| 10. Ischemic Heart Disease | 22. Stroke Rehabilitation |
| 11. Kidney Disease | 23. Substance Use Disorder |
| 12. Low Back Pain | 24. Traumatic Brain Injury (TBI), mild [New] |
| | 25. Tobacco Use Cessation |

*CHPPM Pocket Card: Nuclear Biological Chemical Illness



QUALITY MEASURES

Quality measures assist MHS beneficiaries in comparing the quality of care provided in medical facilities and in making informed decisions about the quality of health services available to them and their families. Additionally, standardized and consensus-based metrics are integral for leaders and stakeholders who are focused on evaluating and improving the quality of health care delivered in the Direct Care (DC) and Purchased Care (PC) Network of the MHS.

The MHS utilizes national consensus measures for analyzing the quality of care provided in the DC and PC systems. Many of these have been formally endorsed by the National Quality Forum (NQF), a multistakeholder organization that comprises more than 350 organizations representing consumers, purchasers, health care professionals, providers, health systems, insurers, state governments, and federal agencies. Metrics that have been endorsed by NQF include but are not limited to many of The Joint Commission's ORYX® quality measures and the National Committee for Quality Assurance's (NCQA) Healthcare Effectiveness Data and Information Set (HEDIS®).

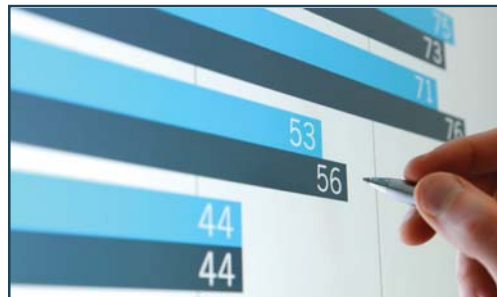
Hospital Quality Measures

DoD analyzes a range of hospital quality data to assess its clinical performance against established national average benchmarks. These data provide clinically relevant information regarding the quality

of care being delivered within the MHS. Among the metrics used by DoD are the Process of Care measures included on the Hospital Compare website.

Hospital Compare is a website that includes hospital process of care measures that show whether or not hospitals provide some of the care that is recommended for patients being treated for a heart attack, heart failure, pneumonia, asthma (children only), or patients having surgery. Measures included in the Hospital Compare website are consensus based and endorsed by the NQF. Hospital Compare was created through collaboration between the Centers for Medicare & Medicaid Services (CMS) and the Hospital Quality Alliance (HQA), a public-private collaboration established to promote reporting on hospital quality of care. Metrics used on the website include those collected for CMS and The Joint Commission. HQA expects to expand the number of measures and the types of conditions and treatments that hospitals will report over time.

In addition to metrics found on Hospital Compare, DoD also evaluates performance on pregnancy-related measures to reflect the sizeable pregnancy-related patient volume in the MHS. Metrics include The Joint Commission's Pregnancy measures and the National Perinatal Information Center's (NPIC) Comparative Data.



Acute Myocardial Infarction (AMI)

A heart attack (also called an acute myocardial infarction) happens when the arteries leading to the heart become blocked and the blood supply is slowed or stopped. When the heart muscle can't get the oxygen and nutrients it needs, the part of the heart tissue that is affected may die. To evaluate performance in this critical area, the MHS collected data on seven process of care measures for the Acute Myocardial Infarction (AMI) population. Figure 3-1 shows DoD's performance rates were either comparable or slightly higher than the national rates for six of the seven measures. One measure (AMI-7) had insufficient data for direct care hospitals due to low population. AMI-8 lags the national average in direct care hospitals, but the metric continues to be a challenge due to a low volume of patients that meet the definition for this metric.

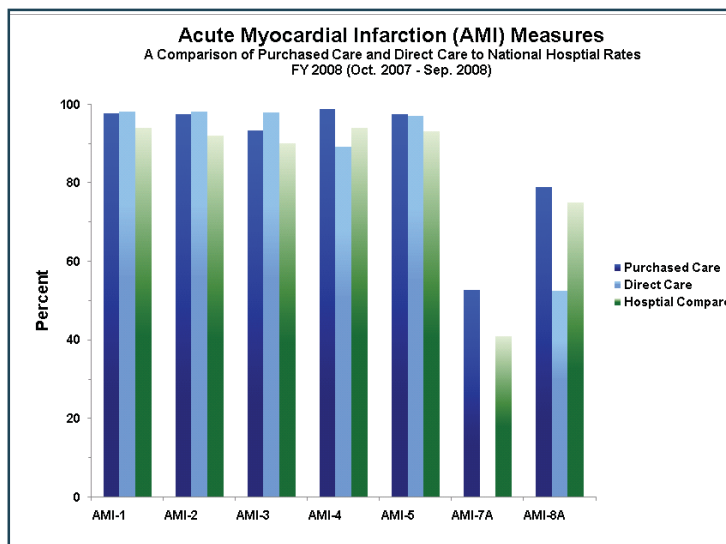


Figure 3-1. Acute Myocardial Infarction Measures

Acute Myocardial Infarction Core Measures

- AMI – 1 AMI patients without aspirin contraindication who received aspirin within 24 hours.
- AMI – 2 AMI patients without aspirin contraindication prescribed aspirin at discharge.
- AMI – 3 AMI patients given ACE Inhibitor or ARB for Left Ventricular Systolic Dysfunction (LVSD).
- AMI – 4 AMI patients given smoking cessation advice/counseling.
- AMI – 5 AMI patients given beta blocker at hospital discharge.
- AMI – 7 AMI patients given fibrinolytic medication within 30 minutes of arrival.
- AMI – 8 AMI patients given percutaneous coronary intervention (PCI) within 90 minutes of arrival.

Heart Failure (HF)

With heart failure, the body doesn't get enough oxygen and nutrients to meet its needs. As the heart tries to pump more blood, the muscle walls become weaker over time. The MHS collected data on four Heart Failure process measures. Figure 3-2 below shows DoD's performance rates were either comparable or higher than the national rates for three of the four measures. Performance in the DC system was below the national rates for HF-1, but has shown substantial improvement since FY2007.



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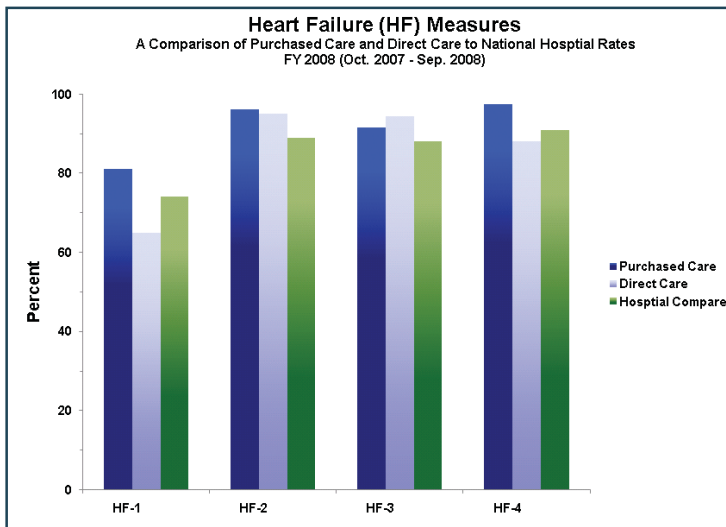


Figure 3-2. Heart Failure Measures

Heart Failure Core Measures

- HF – 1 HF patients who received discharge instructions.
- HF – 2 HF patients with documentation of evaluation of Left Ventricular Systolic Dysfunction (LVSD), before, during, or planned for after discharge.
- HF – 3 HF patients given an ACE inhibitor or ARB for LVSD.
- HF – 4 HF patients with a history of cigarette smoking who received smoking cessation counseling.

Performance in the DC system was below the national rates for HF-1, but has shown substantial improvement since FY2007.

Pneumonia (PN)

Pneumonia is caused by a viral or bacterial infection that fills the patient’s lungs with mucus, thus lowering the oxygen level in the blood. Figure 3-3 shows DoD’s performance rates exceeded or were similar to national rates in five of seven metrics. Although network hospitals exceeded national rates for all measures, performance was lower than the national average in the DC system for PN-2 and PN-4, highlighting areas that need continued improvement.

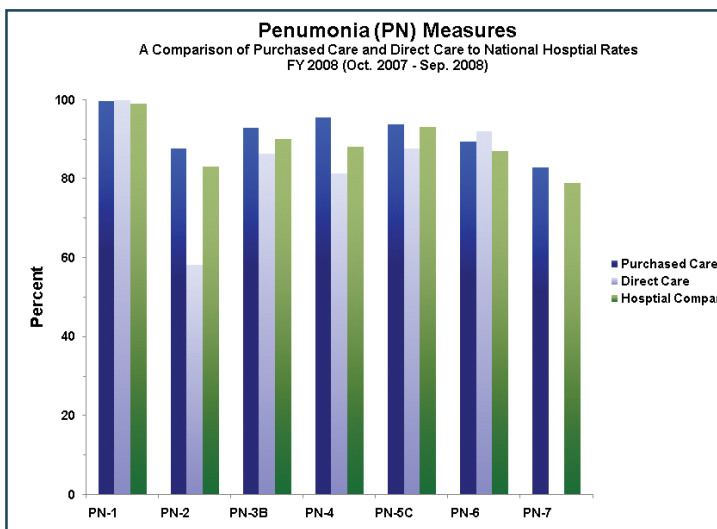


Figure 3-3. Pneumonia Measures

Pneumonia Core Measures

- PN – 1 Pneumonia patients who had an arterial oxygen assessment within 24 hours of hospital arrival.
- PN – 2 Pneumonia patients, 65 years and older, who were screened for pneumococcal vaccine status and administered vaccine prior to discharge, if indicated.
- PN – 3 Pneumonia patients who had blood cultures performed in the emergency department prior to receiving an initial dose of antibiotic in the hospital.
- PN – 4 Pneumonia patients with history of cigarette smoking given smoking cessation advice/counseling during their hospital stay.
- PN – 5 Pneumonia patients who received first antibiotic dose within 6 hours of hospital arrival.
- PN – 6 Immunocompetent patients with Community-Acquired Pneumonia who received an initial antibiotic regimen during the first 24 hours that is consistent with current guidelines.
- PN – 7 Pneumonia patients 50 years and older, hospitalized during October through March who were screened for influenza vaccine status and were vaccinated prior to discharge, if indicated.



Surgical Care Improvement Project

Hospitals can improve surgical care and reduce the risk of wound infection after surgery by providing the right medicines at the right time on the day of surgery. To this aim, figure 3-4 shows five SCIP measures that the MHS collected in FY2008. Of these, both the DC system and PC network met or exceeded the National Hospital Compare rates for four of the five measures. Only direct care MTFs lag behind the national rate for SCIP-INF-1. The cause of this lag may in part be explained by a change in documentation practices and may not be a reflection of the care provided.

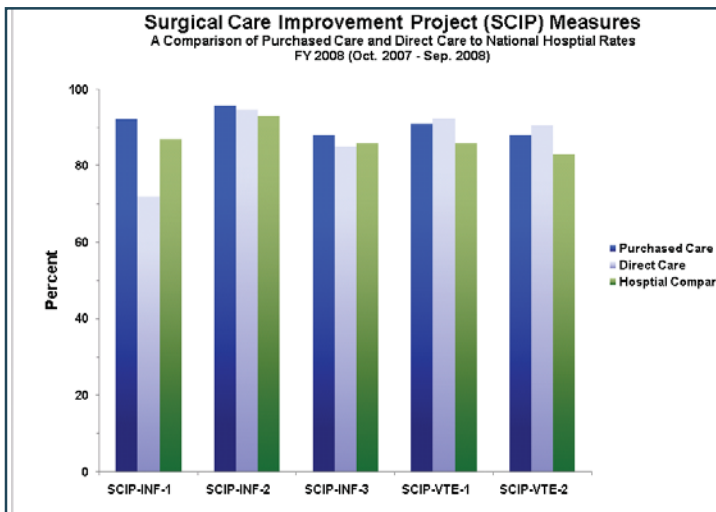


Figure 3-4. Surgical Care Improvement Project Measures

Surgical Care Improvement Project Core Measures

SCIP – 1 Prophylactic antibiotic received within one hour prior to surgical incision – overall rate.

SCIP – 2 Prophylactic antibiotic selections for surgical patients – overall rate.

SCIP – 3 Prophylactic antibiotics discontinued within 24 hours after surgery end time – overall rate.

SCIP – VTE1 Surgery patients with recommended venous thromboembolism prophylaxis ordered.

SCIP – VTE2 Surgery patients who received appropriate venous thromboembolism prophylaxis within 24 hours prior to surgery to 24 hours after surgery.

III



Both the DC system and PC network met or exceeded the National Hospital Compare rates for four of the five measures.

Children’s Asthma Care (CAC)

The MHS collected data on two metrics that examine the quality of asthma care for children. Asthma is a chronic lung condition that causes problems getting air in and out of the lungs. National guidelines for treating children with asthma in the hospital recommend using a reliever medication and a systemic corticosteroid medication in the severe phase and gradually cutting down the dosage of medications to provide control of the asthma symptoms. As shown in figure 3-5, MHS compliance is near 100 percent for both these measures.



Pregnancy

The category of evidence-based measures assesses the overall quality of care provided to pregnant patients. This set of metrics is unique in that it includes outcomes for two distinct patient populations: mothers and neonates. These measures are risk adjusted using a statistical process to identify and adjust for variation in patient outcomes that stem from differences in patient characteristics (or risk factors) across health care organizations. Depending on the presence of risk factors at the time of health care encounters, patients may experience different outcomes regardless of the quality of care provided by the health care organization. By adjusting for risks associated with outcomes that are beyond the control of the health care organization, risk adjustment allows fair and accurate inter-organizational comparisons.

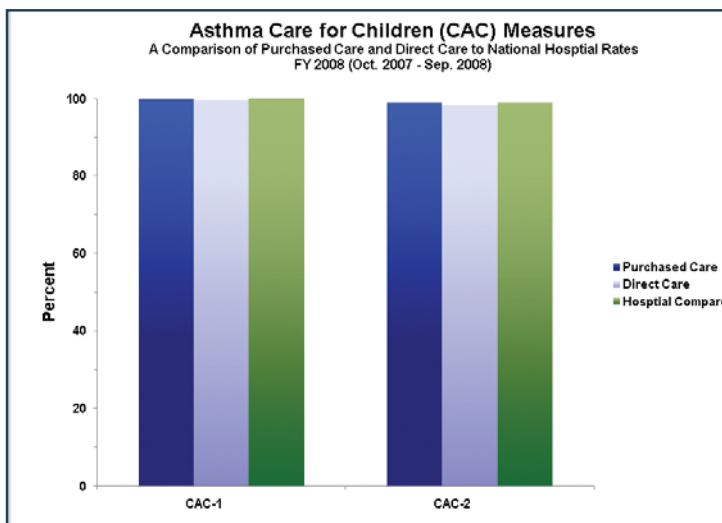


Figure 3-5 Asthma Care for Children (CAC) Measures

- CAC – 1 Percentage of children who received reliever medication while hospitalized for asthma.
- CAC – 2 Percentage of children who received systemic corticosteroid medication (oral and IV medication that reduces inflammation and controls symptoms) while hospitalized for asthma.

All three pregnancy-related outcome measures are risk adjusted. For each metric, two values are reported: The “actual rate” for the measure for the time period being reported, and the “expected risk-predicted rate” for the measure for the time period being reported. Reporting both rates provides a basis for evaluating hospital performance for risk-adjusted measures. The expected risk-predicted rate can be compared to the actual rate; if the expected rate is higher than the actual rate, the hospital

ORYX Pregnancy Core Measure Sets 2008					
MEAS NUM	MEAS NAME	NUMERATOR	DENOMINATOR	OBSERVED RATE	PREDICTED RATE
14547	VBAC	905	5805	0.155900	0.118524
14548	Neonatal Mortality**	123	49706	0.002475	0.002454
14555	3rd- and 4th-Degree Lacerations***	1173	36148	0.032450	0.031273

Figure 3-6. DoD Pregnancy-related Outcome Measures Statistics for the period 10-1-07 to 9-30-08

Definitions of Predicted Rate Core Measures

Vaginal birth after caesarean section VBAC*: The vaginal birth after caesarean section (VBAC) measure is used to assess prenatal patient evaluation, management, and treatment selection concerning vaginal deliveries in patients who have a history of previous caesarean section. A trial of labor may be offered to women who have had a previous caesarean section. Although trial of labor is usually successful and is relatively safe, major maternal complications can occur. The rate of VBAC along with other performance measures such as primary caesarean section, repeat caesarean section, and neonatal complications will assist organizations in understanding whether an increase or a decrease in the rate of VBAC is desirable. This measure is not required by TJC

presently although the organization collects data on this measure.

Neonatal mortality:** The inpatient neonatal mortality measure reports how often infants died after 28 days of birth. Neonatal (0 to less than 28 days of age) mortality continues to account for the largest proportion of infant (0 through 11 months of age) deaths. This measure is adjusted to reflect the fact that some babies are sicker than others at or shortly after birth. Low birth weight is a very important risk factor of neonatal mortality.

Third- and Fourth-degree lacerations*:** The vaginal tears during delivery measure reports how often patients have significant tears between the vagina and anus while having a baby. Third- and fourth-degree perineal lacerations can produce significant long-term morbidity in women undergoing childbirth. Therefore, the percentage of deliveries involving third- and fourth-degree lacerations is a useful quality indicator of obstetrical care and can assist in reducing the morbidity from extensive perineal tears.



III

National Perinatal Information Center Comparative Data, Calendar Year 2008

OUTCOME MEASURE	MILITARY TREATMENT FACILITIES	PERINATAL CENTER DATABASE
Caesarean birth rates	26.02%	34.35%
Major complication rates	4.77%	7.00%
Extreme complication rates-	0.10%	0.375%
Operative delivery rate*	8.25%	7.03%
Induction rate	19.12%	19.90%
Major complications for the neonates	3.60%	5.80%
Extreme complications for the neonates	0.22%	1.25%
Mortality rate for special care neonates	0.25%	2.37%

* Includes non-breech vaginal instrument delivery cases such as forceps or vacuum extraction deliveries. ** A low rate is favorable.-

Figure 3-7. National Perinatal Information Center Comparative Data

has performed better than anticipated based on the illness of the patients being treated. MTF pregnancy core measures

Outpatient and Preventive Care Measures Based on HEDIS Methodology

- Cervical cancer screening rates (Pap tests);
- Breast cancer screening rates (mammography);
- Colorectal cancer screening;
- Use of appropriate medications for people with asthma; and
- Diabetes care (HbA1c testing and control, retinal exams, low-density lipoprotein screening and control).

Figure 3-8. Outpatient and preventive care measures based on HEDIS Methodology.

were close to or slightly above the expected risk-predicted rate based on the illness of the patients being treated.

National Perinatal Information Center

Young families represent a significant portion of the MHS beneficiary population. Childbirth remains the leading reason for hospitalization in the MHS with more than 50,000 births in military hospitals each year.

The MHS participates in the National Perinatal Information Center, thereby providing a means to closely compare childbirth data from across the Nation in a national perinatal database with data from 50 MTFs that deliver infants. Validated, risk-adjusted perinatal information from multiple women and infants' hospitals is analyzed to provide benchmarks for infant and maternal outcomes, patient safety,

and utilization of services, costs, and staffing data.

Data from participating MTFs across the three Services were used in the analysis of perinatal processes and outcomes. Key findings are summarized in Figure 3-7. Note that in seven of the eight measures the MTFs have significantly better rates for this data (a low rate is favorable). In the one measure that is higher, they are just over by one percent.

The MHS continues to exceed the national norms established through the Perinatal Information Center benchmark database, attesting to the high quality of care provided to mothers and newborns delivered in MTFs.

Outpatient and Preventive Care Measures HEDIS

NCQA developed HEDIS® to provide reliable, comparative health plan data about clinical quality.

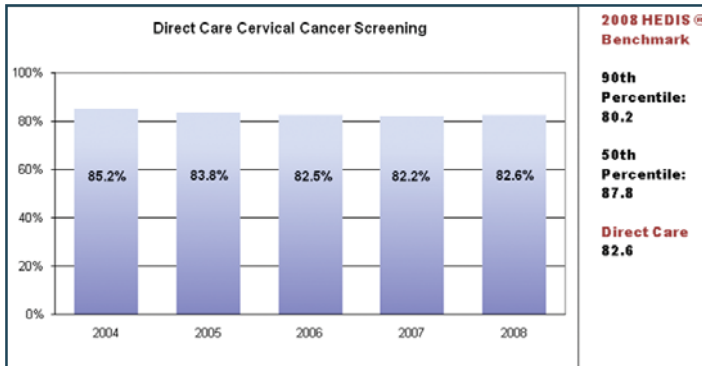


Figure 3-9. Direct Care Cervical Cancer Screening, FY2004 – 2008

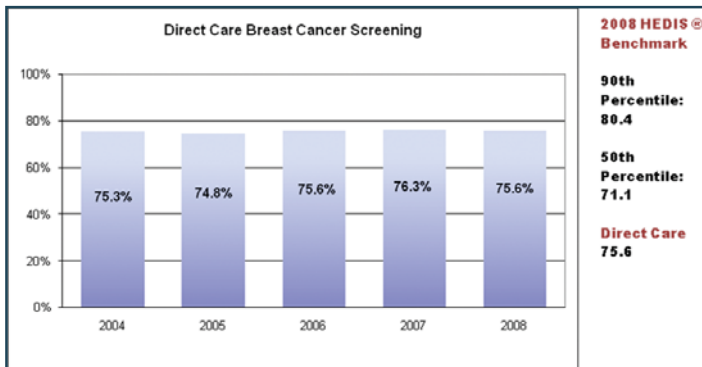


Figure 3-10. Direct Care Breast Cancer Screening, FY 2004 – 2008

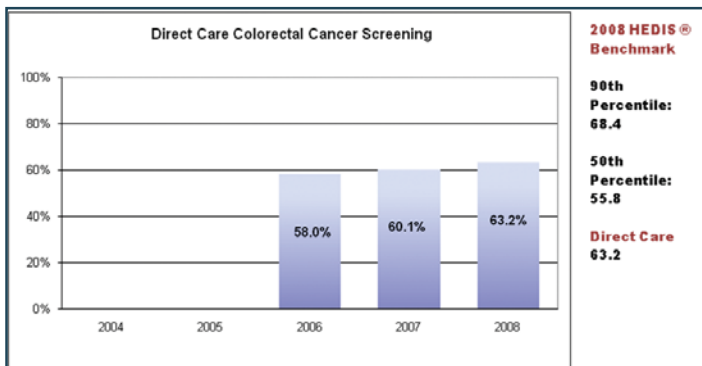


Figure 3-11. Direct Care Colorectal Cancer Screening, FY2004 – 2008

The MHS Population Health Portal uses methodologies similar to HEDIS® to monitor the performance of the system’s preventive care (Figure 3-8) (e.g., breast cancer screening, cervical cancer screening) and disease management (e.g., asthma, diabetes) programs. The data for these clinical performance metrics were gathered from an MHS electronic central database that includes inpatient, outpatient, and pharmacy information. Reports on the clinical performance measures are provided to MTF and MHS leadership to assess the performance of health care delivered across the system. Actionable information permits providers to deliver timely, evidence-based medical services. The following clinical performance data and analysis demonstrate the DoD’s commitment to utilizing nationally recognized clinical performance measures.

As shown in Figure 3-9 the 2008 Cervical Cancer Screening in the Direct Care system is 82.6 percent, up from 2007. As shown in Figure 3-10 the Breast Cancer screening rate falls between the HEDIS 50th and 75th percentiles at 75.6 percent.

As shown in Figure 3-11 the Colorectal Cancer rate is 63.2 percent, an improvement from 2007. It falls now between the 50th and 90th percentiles.



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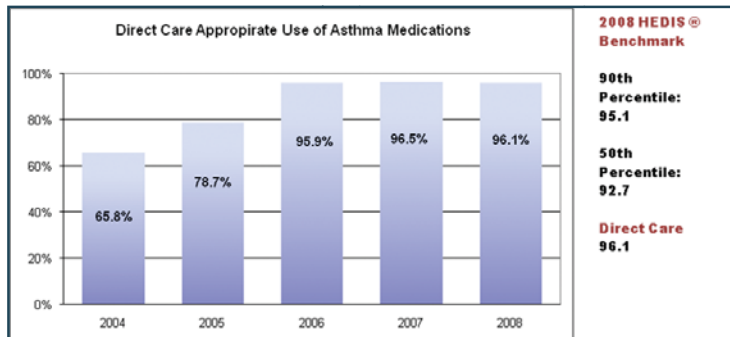


Figure 3-12. Direct Care Appropriate Use of Asthma Medications, FY2004 – 2008

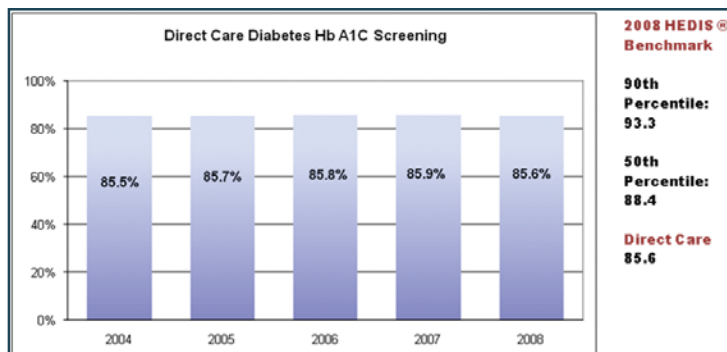


Figure 3-13. Direct Care Diabetes Hb A1C Screening, FY2004 – 2008

Use of Asthma Medications is 96.1 percent and exceeds the HEDIS 90th percentile. Figure 3-13 shows the Annual Diabetes HbA1c screening is 85.6 percent and continues to be an area for improvement in the Direct Care network.

Like direct care, network care is also evaluated from claims data related to the HEDIS process of care measures. The current measures evaluated include breast, cervical, and colon cancer screening; the use of appropriate asthma through HbA1c testing, lipid testing, and diabetic eye examinations. All of the contractors have quality improvement initiatives underway to improve compliance with these measures.

AHRQ Patient Safety Indicators
 The Agency for Healthcare Research and Quality (AHRQ) Quality Indicators

(QIs) measure health care quality by using readily available hospital inpatient administrative data. The Patient Safety Indicators (PSIs) are a set of metrics that provide information on potential in-hospital complications and adverse events following surgeries, procedures, and childbirth. The PSIs were developed after a comprehensive literature review, analysis of ICD-9-CM codes, review by a clinician panel, implementation of risk adjustment, and empirical analyses.

Like many health system leaders in the private sector, the MHS is using the PSIs as a tool to help identify potential adverse events occurring during hospitalization. The MHS Population Health Portal (MHSPHP) provides a means to collect, manipulate, and display the data for clinicians, quality improvement professionals, and other leaders within the MHS. Performance on PSIs is tracked and discussed in the MHS Clinical Measures Steering Panel and up to the MHS Clinical Quality Forum (CQF). Looking to the future, the MHS plans to develop the next iteration of the MHSPHP (version 3.0), which is expected to go live in fall 2009.

In 2008, several of the MCSCs in the PC network initiated use of the AHRQ patient safety indicators. This free software program facilitates the evaluation of administrative data for patient safety concerns. This is the first opportunity that TMA has had to look across all of purchased care for potential problem areas. The contractors analyze geographic patterns or occurrence patterns and perform chart reviews if there are specific areas of concern. These reviews helped validate the use of the indicators with administrative data for AHRQ. This was the first time administrative data was used as a data source to help identify and report potential patient safety events. In prior years, patient safety occurrences were identified primarily through self-reported data, to include event reports submitted by providers and staff who witnessed events, and relevant patient complaints.

Supplementary Measurement Efforts in the Purchased Care Network

In the Purchased Care network, the National Quality Monitoring Contractor (NQMC) provides an external review of care function for care delivered to TRICARE beneficiaries provided by the MCSCs and Designated Provider (DP) programs. Currently this function is accomplished through retrospective review of approximately 1,400 charts selected per month based on paid claims. The MCSCs and DPs also perform focused studies relevant to their particular populations aimed at improving the delivery of health care and the well-being of the beneficiary population.

The other category of review with appreciable findings is that of preventable admissions. There are 16 categories of ambulatory care-sensitive conditions that the AHRQ has identified in which prudent and appropriate outpatient care may preclude the need for a hospital admission. In the last year, there were approximately 2,339 cases out of 16,688 reviewed in which there may have been potential to accomplish all care in an outpatient setting. This screening mechanism provides a basis for TMA to further evaluate whether this care could have been accomplished in an outpatient setting through additional records review for the entire episode of care, not just the inpatient admission. This is an excellent example of the interface between the NQMC and the MCSCs. The majority of these cases involve diagnoses of pneumonia and chronic heart failure, and the findings are broadly dispersed geographically in that no particular facility has an extraordinary number of these potentially preventable admissions.

Length of stay, another category of review conducted by the NQMC, provides actionable information for

TMA. In the year reported, many of the findings of the NQMC regarding length of stay are related to beneficiaries remaining in inpatient psychiatric settings when release to intensive outpatient services would be appropriate. These findings provided support for the inclusion of intensive outpatient programs as an appropriate intervention level for TRICARE beneficiaries and supported changes to the TRICARE Policy Manual to allow for intensive outpatient therapy.

The NQMC also suggests additional mechanisms by which retrospective chart review may be used to evaluate the occurrence of HARMs—by definition, “an unintended physical injury resulting from, or contributed to by medical care (including the absence of indicated medical treatment)—that required additional monitoring, treatment, or hospitalization or that resulted in death. Such injury is considered to be a medical harm whether or not it is considered preventable, whether or not it resulted from a medical error, and whether or not it occurred within a hospital”. Evaluations for surgical site infections, pressure ulcers, falls, and venous thromboembolism or blood clot were added to the retrospective chart review process in January 2008. The rate of findings is approximately 0.15 percent and the contractors are provided with the information to investigate, track, and identify trends. Corrective action plans are requested if a facility demonstrates recurrence of particular harms. Patient safety events are also monitored using the National Quality Forum (NQF) serious reportable events (SRE) classifications. Fourteen patient safety events were identified in the 16,688 random charts reviewed and investigated by the appropriate MCSCs or DP.

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MHS SPECIAL STUDIES

The National Quality Management Program (NQMP) is part of an overall TMA strategy to become a provider of world-class health care. NQMP collects, manages, and reports DoD's performance measures and accreditation requirements, including Joint Commission ORYX® and the MHS Balanced Scorecard data. NQMP also conducts clinical studies that evaluate specific outcomes across the MHS and utilizes private sector comparable data when available. DoD leadership and health care providers use these independent, impartial analyses of the MHS clinical data to evaluate policy and practice in the MHS.

The NQMP education program translates these research findings and recommendations into solutions that may be applied to clinical practices. Online free continuing medical education and continuing nursing education credits are given to participants through a partnership with the Uniformed Services University of the Health Sciences (USUHS). These online educational activities are available to policymakers and health care professionals at every level of the MHS. In addition, NQMP provides consultative site visits to military in-patient and ambulatory facilities to help

organizations use their external data, (i.e. Joint Commission ORYX® and the Special Studies) for performance improvement initiatives.

NQMP 2008 Special Studies
The following FY 2008 studies were conducted as part of the overall initiative of NQMP External Review of Care Scientific Advisory Panel (SAP).

Study Title: Evaluation of Hypertension Among Beneficiaries With Diabetes Mellitus: Blood Pressure Control in the DoD Direct Care System

Background: As many as 49,000 TRICARE beneficiaries may have been diagnosed with diabetes within a given year. The majority of beneficiaries are non-active duty (NAD) adults over the age of 45 (NQMP, 2002). Often, hypertension co-occurs with diabetes necessitating blood pressure (BP) control to reduce the complications of hypertension associated with diabetes (Schrier et al., 2007).

This study identified a population of more than 50,000 hypertensive diabetic beneficiaries who were enrolled in TRICARE Prime/Plus as of October 2007 as meeting inclusion criteria based on age and utilization of primary care health services in 2007. A random sample of beneficiaries was selected based on their enrollment site, yielding a study sample (n) of 11,635 hypertensive diabetic beneficiaries.

Findings: Findings from the study revealed that 33% of the hypertensive diabetic beneficiaries met the BP target of 130/80 (HEDIS 2007 percentile) and 61% met the BP target of 140/90 (HEDIS 2007 50th percentile). The study also demonstrated variation among the blood pressure control rates observed at individual enrollment sites.

It also appeared that BP control varied according to beneficiary characteristics. Control appeared less likely among beneficiaries determined to be underweight or obese. Older

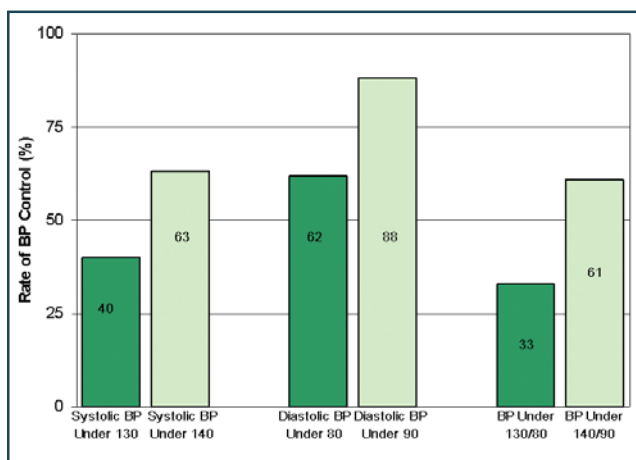


Figure 3-14. Blood Pressure Control Among Beneficiaries With Diabetes Mellitus

beneficiaries (ages 60–75) were less likely to meet the standard definition of control (< 140/90 mm/Hg).

Recommendations: Promote the continued rapid development of “point of care” patient registries at the individual provider and primary care team level (patient centered medical home model) that will facilitate high risk patient monitoring and goal setting to achieve recommended targets and engineer system incentives such as Pay 4 Performance that will reinforce widespread improvements in BP control throughout the MHS.

Study Title: Evaluation of Hypertension Among Beneficiaries With Diabetes Mellitus: Military Health System Angiotensin-Converting Enzyme Inhibitor Formulary Change

Background: In an effort to streamline and improve the cost-effectiveness of the MHS’s pharmacy benefit, the DoD Pharmacy and Therapeutics (P&T) Committee recommended in 2005 a change to the formulary status of several angiotensin-converting enzyme inhibitor (ACEI) medications commonly used to control high blood pressure. They recommended that four of six ACEI medications (i.e., quinapril, moexipril, perindopril, and ramipril) be placed on Tier 3 of the DoD Uniform Formulary (UF), in effect downgrading them to nonformulary (NF) status. The other two, lisinopril and captopril, were placed on the Basic Core Formulary (BCF), meaning they were required to be on the formulary at all DoD MTFs.

For this study, 4,000 beneficiaries whose index dispensing included an NF ACEI were randomly selected for the study, as the NF group. An additional 500 beneficiaries whose index dispensing included an ACEI that would not be affected by formulary change were also randomly selected for the study as the UF group or control group. Blood pressures for these beneficiaries were collected

during three separate periods of time: 1) Time 1: pre-formulary announcement (13 October 2004 – 12 October 2005), 2) Time 2: post-formulary announcement (13 October 2005 – 14 February 2006), and 3) Time 3: post-formulary implementation (15 February 2006 – 14 February 2007).

Findings: Following implementation of formulary change, overall filled prescriptions were found for 84 percent of the NF group and 92 percent of the control group. Among NF group beneficiaries, filled prescriptions for UF ACEI increased with time and that of NF ACEI medications decreased with time. However, 35 percent of filled prescriptions for NF ACEI medications continued following implementation of formulary change. Lisinopril represented the most dispensed UF ACEI medication, while the most prescribed/dispensed NF ACEI medication was ramipril. Angiotensin II receptor (ARB) dispensing increased with time in both groups. NF and Control group beneficiaries did not differ in average systolic and diastolic blood pressure or rate of blood pressure control. Moreover there was no difference in blood pressure average or control over time in both groups.

Conclusions: There was no evidence to suggest that the ACEI formulary change policy affected blood pressure control among TRICARE beneficiaries with comorbid diabetes and hypertension. Overall, it appears the MHS was able to migrate diabetic and hypertensive beneficiaries to more cost-effective hypertensive pharmaceutical medications, without adversely affecting clinical outcomes.

Recommendations: Periodically conduct similar analyses of other widespread formulary changes to validate the achievement of optimal clinical and resource outcomes resulting from policy decisions.

Study Title: Influenza Immunization Rates Among Enrolled Beneficiaries With Diagnosed Asthma, Heart Failure, and/or Acute Myocardial Infarction

Background: Every year, the influenza virus infects millions of people in the United States, resulting in hundreds of thousands of hospitalizations and tens of thousands of premature deaths. The primary prevention for influenza outbreaks is the annual vaccine (Nichol, Treanor, 2006). The objective of this study was to report influenza immunization rates during the FY2008 influenza season for beneficiaries with a history of asthma, heart failure, and/or myocardial infarction—all

health conditions for which annual immunization is recommended. A random sample of enrolled beneficiaries was selected for inclusion in the study resulting in a sample of 27,214 MTF enrolled beneficiaries with a history of asthma, heart failure, and/or myocardial infarction being examined.

Conclusions: Overall documentation of influenza vaccination in this high risk population ranged from 27 percent for CHF patients, 27.7 percent for those with a history of AMI and 35.5 percent for Asthma patients. It was noted, as a quality control issue, that in several instances the nasal influenza vaccine was used in groups in whom the IM route

Characteristic	DoD Enrolled	DoD Enrolled	Navy MTF Enrolled	Air Force MTF Enrolled
Asthma Vaccination Status				
N	10,797	2,737	1,864	6,196
Vaccinated	3,834 (35.5%)	774 (28.4%)	530 (28.5%)	2,520 (40.7%)
Missing	12	7	5	0
CHF Vaccination Status				
N	8,872	2,617	1,437	4,818
Vaccinated	2,394 (27.0%)	505 (19.4%)	368 (25.6%)	1,521 (31.6%)
Missing	11	9	2	0
AMI Vaccination Status				
N	7,545	2,427	1,233	3,885
Vaccinated	2,088 (27.7%)	563 (23.3%)	327 (26.6%)	1,198 (30.8%)
Missing	12	10	2	0

Figure 3-15. Immunization Rates by Enrollment Service and Health Condition

Characteristic	DoD Enrolled	Army MTF Enrolled	Navy MTF Enrolled	Air Force MTF Enrolled
Asthma				
Overall	1,477	485	279	713
Vaccinated	1,210 (81.9%)	415 (85.6%)	211 (75.6%)	584 (81.9%)
Chronic Heart Failure				
Overall	775	118	93	293
Vaccinated	400 (79.4%)	91 (77.1%)	59 (63.4%)	250 (85.3%)
Acute Myocardial Infarction				
Overall	543	174	119	250
Vaccinated	427 (78.6%)	136 (78.2%)	80 (67.2%)	211 (84.4%)

Figure 3-16. Active-Duty Immunization Rates by Enrollment Service and Health Condition

is the recommended option. The nasal vaccine contains a live virus and is not recommended for high risk patients or for patients over the age of 50 years. Populations ranged from 27 percent to 36 percent (Figure 3-15). Among AD beneficiaries, documentation of influenza immunization during the FY2008 influenza season ranged from 63 percent to 86 percent (Figure 3-16).

Generally, vaccinated beneficiaries recorded more outpatient health care visits, but fewer hospitalizations and fewer Emergency Department (ED) visits than the unvaccinated

beneficiaries. Beneficiaries with asthma were an exception in that the vaccinated beneficiaries recorded more hospitalizations both before and during flu season.

Recommendations:

- MTFs need to review their current procedures and consider developing a point of care electronic alert to prevent the inappropriate administration of the live virus/LAIV nasal spray.
- Improve influenza vaccination programs to target high-risk patients diagnosed with Asthma, CHF, or AMI and consider additional venues for influenza vaccination to enhance access to high risk patients.
- Develop a consistent immunization tracking process across the MHS.

Study Title: Pregnancy Among Active Duty Women in the Military Health System

Background: Given the importance of women to military operations, their increased roles in theater in the past five years, and the fact that these assignments occur during their childbearing years, this study examined pregnancy care and selected outcomes for AD female Service members. The panel was most interested in evaluating the impact of prior deployment on AD women as it related to the care received during pregnancy, pregnancy outcomes, and pregnancy-related separation from the Service.

For this study, analyses were stratified by deployment status prior to the pregnancy. DMDC provided all deployment start dates and locations that occurred during Calendar Year (CY)2004–2006 for the AD cohort. Based on these data, each woman was assigned to one of three deployment groups for CY2004–2006. Group 1 was defined by a deployment to Iraq or Afghanistan. Group 2 was defined by a deployment to any foreign country other than Iraq or Afghanistan; overall, 95 percent of women in this category were stationed in four countries: Kuwait,

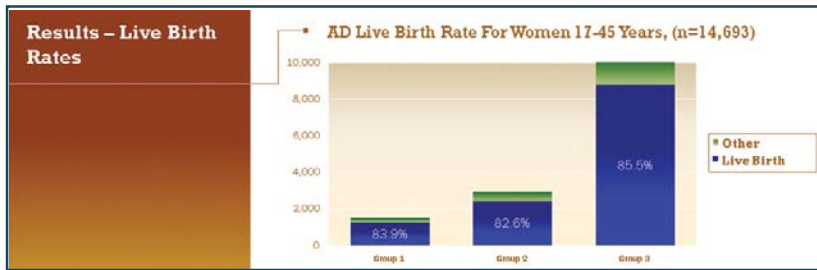


Figure 3-17. AD Pregnancy Rate, Women 17–45 Years (n=198,576)

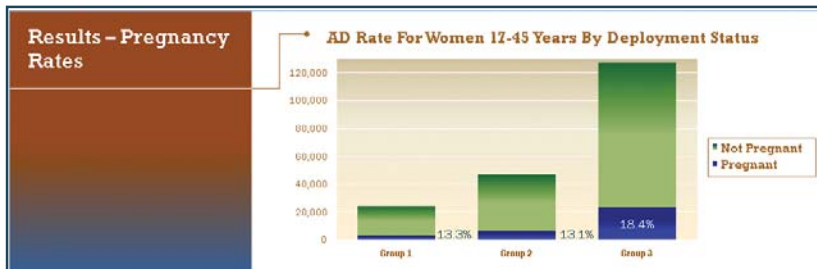


Figure 3-18. AD Live Birth Rate, Women 17–45 Years (n=14,693)

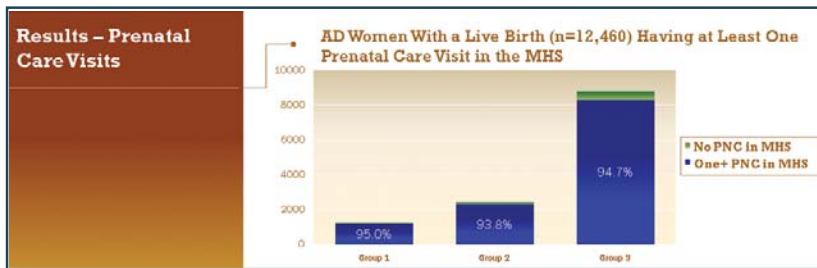


Figure 3-19. AD Women with a Live Birth (n=12,460) Having at Least One Prenatal Care Visit

Qatar, Kyrgyzstan, and Bahrain, or they were in a category labeled as deployed, location unknown, which occurred mainly among Navy personnel. Finally, Group 3 was defined as having no deployment dates or locations noted for CY2004–2006 for the individual in the DMDC file.

Findings: The CY2006 pregnancy rate for the study population of 198,576 AD women was 16.5 percent. Women with no deployment (Group 3) had a significantly higher rate of pregnancy—18.4 percent—than the approximately 13 percent noted among women who were either deployed to Afghanistan or Iraq (Group 1) or deployed in other locations (Group 2). The pregnancy rate for AD females was higher than the general U.S. population, which was 10.3 percent.

Outcomes: Four pregnancy outcomes—live births, miscarriages, ectopic pregnancies, and stillbirths—were examined for the 14,693 AD women who had a pregnancy confirmed by a pregnancy test. The overall live birth rate was 84.8 percent. Women in Group 2 had the lowest live birth rate (82.7%), followed closely by women in Group 1 (83.9%). Miscarriages were the second most frequently noted pregnancy outcome, affecting 12.9 percent of women in Group 3, 15.4 percent of women in Group 1, and 15.8 percent of women in Group 2.

Prenatal Visits. Overall, prenatal care visits were noted for 94.6 percent of AD women, ranging from 93.8 percent for women in Group 2 to 95 percent for women in Group 1.

On average, AD women were seen for 7 prenatal visits during their pregnancy. Women in Group 2 had significantly fewer visits (6.7) on average than women in Group 1 (7.4). The average number of visits for women in Group 3 was 7.1.

Service Separation. Approximately 25 percent of the study cohort separated from the Service during the study

period. The largest group separated after completing their term of service (41.9%). Women deployed in 2005 and 2006 (Groups 1 and 2) were more likely to separate for family reasons than women without a deployment (Group 3).

Conclusion: Findings indicate lower pregnancy prevalence among women deployed (Groups 1 and 2) than for those with no history of a deployment during this time period (Group 3). There was no significant difference in live birth rates and prenatal care visits for women deployed to Iraq or Afghanistan and women who were not deployed. Women in Group 2 had significantly fewer live births and prenatal care visits than women in Groups 1 and 3.

Recommendations: DoD should consider conducting a more detailed study of women deployed to locations other than Afghanistan or Iraq given the lower live birth rate, increased miscarriage rate, and fewer prenatal care visits observed among this group.

The DoD should conduct a more detailed study in areas of prematurity and low birth weight in the active duty population to identify potentially modifiable risk factors. DoD should also consider ways to improve the documentation regarding prenatal care visits and pregnancies by establishing standardized electronic capture of key elements from patient assessment and treatment notes.

Study Title: Evaluation of Tobacco Use Cessation Programs in the Military Health System

Tobacco use among AD service members is costly in terms of increased health care utilization and physically detrimental as it degrades physical fitness (MMWR, 2000). However, prevalence rates for tobacco use are not readily available at the MTF level other than through dental service data for AD service members and self-reports by beneficiaries. The primary objective of this 2008 study was to evaluate the status of tobacco control and tobacco use

Smoking Prevalence Rates	MHS	CDC National Benchmark
History, Lifetime Smoking	46.7%	50.2%
Current Smokers	19.1%	20.8%
Everyday Smokers	66.3%	80.1%
Someday Smokers	33.7%	19.9%

Figure 3-20. Self-Reported Active Duty Smoking Prevalence Rates

Program Content Areas	MTFS		PROGRAM CONTENT AREAS	MTFS	
	N	%		N	%
Pre-Program Interviews	82	63.1%	Handling Withdrawal	125	96.2%
Assessing Readiness to Quit	119	91.5%	Problem-Solving Skills	117	90.0%
Understanding Nicotine Addiction	126	96.9%	Preventing Weight Gain	125	96.2%
Setting a Quit Date	127	97.7%	Finding Support	124	95.4%
Understanding Triggers	127	97.7%	Relapse Prevention / Management	127	97.7%
Stress Management	124	95.4%	Telephonic Support After the Classes	96	73.8%

Figure 3-21. Tobacco Cessation Program Content Areas

cessation (TUC) policies and programs at the Service level and at military installations.

This cross-sectional research study used both administrative and self-reported data. A data collection instrument was developed and interviews were conducted to gather information on TUC programs. Data were then analyzed to gain, to the extent possible, a comprehensive description and catalog of local TUC practices.

Response rates for the MTF TUC evaluation tool were over 90 percent, with good representation among medical centers, hospitals, and clinics within the United States and overseas. In general, all three Services provide both individual and group TUC intervention programs, although intervention efforts did vary by site.

Findings: This study represented the first systematic evaluation of tobacco control and tobacco use cessation programs within the MHS, targeting existing and available data sources, including survey, dental, and MHS

Data Repository data to construct a comprehensive review of the MHS TUC programs.

Figure 3-20 is based on an analysis of the 2007 Health Care Survey of DoD Beneficiaries (HCSDB). This secondary data analysis revealed a lifetime smoking prevalence of 46.7 percent for the MHS as compared with the 50.2 percent CDC national benchmark. Among the 19.1 percent of MHS beneficiaries who are current smokers, two-thirds reported smoking every day (66.3%). Both rates are lower than the CDC benchmarks of 20.8 percent and 80.1 percent respectively.

The study affirmed that the MHS offers comprehensive programs for both tobacco use prevention and intervention. These programs feature common processes, with most MTFs offering formal TUC programs that engage in some type of outreach activity (figure 3-21).

The use of tobacco control websites and telephone quit lines was common across most MTFs. Data on quit

rate information for TUC program participants was sparsely reported by facilities, particularly for tobacco users other than smokers. When quit rates were monitored, they were generally reported as 7-day point prevalence, and at 30-day and 6-month followups. Onsite interviews revealed central themes for success including the importance of strong and involved leaders, motivated TUC program managers, and a multidisciplinary team approach.

Nicotine replacement therapy (NRT) and non-NRT drugs such as bupropion and varenicline are readily available and widely used in the treatment of tobacco addiction, although annual cost estimates for these medications are not reliably reported by most MTFs.

Use of the Tobacco Use Cessation Clinical Practice Guideline, developed jointly by the VA and DoD, was endorsed by just over one-half of the MTFs (53.5%) responding to the survey.

Recommendations: The study recommended several opportunities for

improvement along several different levels of the MHS. For DoD and the Services, it would be beneficial to update policy guidance on pricing and TUC interventions.

Recommendations for MTF Commands included requiring regular reporting of TUC activities and measures including: prevalence estimate; smoking cessation counseling; program participation and completion rates; quit rates; cost of TUC medications and a per-person or per-population estimate. Implement and advertise restrictions on the sale and/or use of tobacco products. Ensure programs utilize practices outlined in the VA/DoD Clinical Practice Guideline on Tobacco Use Cessation. Establish a multidisciplinary approach to tobacco use cessation with interdepartmental collaboration between clinics and health promotions and involve the entire Command, including the MFT Hospital Commander and Base Commander in these efforts. For DoD and the Services, it would be beneficial to update policy guidance on pricing and TUC interventions.

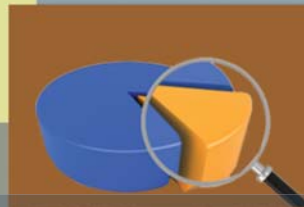
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MHS
POPULATION
HEALTH

Population Health (PH) focuses on maintaining and enhancing the health of the MHS population while ensuring the most efficient and effective possible use of resources. Population Health Improvement (PHI) is the balance of awareness, education, prevention and intervention activities required to improve the health of a specified population. This model connects the individual, Military Treatment Facilities (MTFs), worksite and community-based wellness and prevention activities with medical interventions that are centered on primary, secondary, and tertiary prevention to improve overall health and reduce morbidity and premature mortality.

IV



**POPULATION HEALTH
AND MHS MEDICAL MANAGEMENT**



The strategies and initiatives focus on modifying personal disease and injury risk, effectively changing behaviors to optimize health and enhance fitness, allowing health services providers to render necessary care while reducing unwarranted treatment variation, and achieving measurable improvements in performance and health status. The MHSPH initiatives include demonstration projects on Healthy Choices for Life, which in 2008 continued to address tobacco, obesity, and alcohol.



HEALTH PROGRAMS OVERVIEW

In support of behavioral change, the DoD developed and implemented a series of demonstration and pilot projects to address key health behaviors associated with premature and preventable death identified in the 2005 Health Related Behavior Survey.

“Healthy Choices for Life,” initiatives are evidence-based projects that address the increase in tobacco use, obesity, and alcohol misuse and abuse among Active Duty (AD) beneficiaries. These initiatives focused primarily on health-promotion activities for disease prevention and the adoption of healthy behaviors, while testing the effectiveness of comprehensive benefits not currently covered by TRICARE.

The tobacco-cessation and weight-management demonstration projects were comprehensive behavioral interventions designed to encourage beneficiary lifestyle modifications. The tobacco-cessation demonstration project began in May 2006 and concluded in September 2008. The project included a Quitline, which provided telephone-based tobacco cessation counseling 24 hours a day, 7 days a week, web-based support and educational programs, and pharmacotherapy. The tobacco cessation demonstration project results indicated increased cessation rates as measured at the completion of each milestone quarterly survey.

The weight-management demonstration, Healthy Eating and Active Living in TRICARE Households (HEALTH), was launched in July 2006 and concluded in September 2008. The demonstration study provided health/weight loss coaching, as well as telephone and web-based educational and motivational information designed to help TRICARE beneficiaries make and sustain lifestyle changes. These changes included regular physical activity and healthy diet behaviors, which enabled study participants to lose weight and maintain weight loss. Study participants were enrolled in randomized control trials and participated in self-motivated programs. Preliminary demonstration results showed that participation in the study resulted in clinically significant, sustained reductions in measured weight loss as well as beneficiary reports of increased incidence of regular physical activity and improved dietary behaviors. The results of the weight management demonstration project provide evidence that behavioral modification is possible using a targeted web-based interface.

The Program for Alcohol, Training, Research and Online Learning (PATROL) was a web-based alcohol abuse pilot project targeting young, AD service members on eight military installations; the pilot project began in May 2006 and ended in September 2007. One month after the pilot study rollout, participants reported a significant reduction in heavy and binge drinking. These results were sustained at the six month follow-up survey. The program results will be used to enhance and complement other efforts being undertaken in this important area, which will result in an improved state of military readiness. Currently, coordinated Joint Service efforts are underway to leverage tools and programs to decrease heavy drinking and binge drinking across the Services.

The Defense Manpower Data Center (DMDC)

The DMDC conducts annual both Web-based and paper-and-pencil surveys to support the personnel information needs of the Under Secretary of Defense for Personnel and Readiness. These surveys assess the attitudes and opinions of the entire DoD community on a wide-range of issues.

Figure 4-1: Duties of the DMDC

In addition to these three studies, social marketing campaigns to counter tobacco use and alcohol misuse/abuse were developed. These projects targeted young enlisted AD members, who were more likely to use tobacco products and drink alcohol.

Tobacco Cessation Marketing and Education Campaign

Despite decades of efforts to reduce tobacco use in military populations, tobacco use remains firmly entrenched in a significant segment of the military population with new smokers and tobacco chewers starting every day. As measured in 2008, the prevalence of smoking among 18 to 25-year-olds on AD was 38 percent. Young, enlisted

soldiers and Marines smoke cigarettes at rates that exceed those of their civilian counterparts, and soldiers smoke cigarettes at a significantly higher rate than members of any other Service. Also of concern is the fact that many personnel initiate tobacco use after entering the Service.

Responding to increased tobacco use among junior AD military personnel, the DoD implemented, and evaluated a national marketing and education campaign: “Quit Tobacco. Make Everyone Proud.” This campaign was aimed at helping our active military personnel quit tobacco and lead healthier lives. The campaign targeted 18- to 24-year-old AD, junior, enlisted personnel, particularly those with an expressed intention to quit.

Through marketing and outreach strategies that included leadership briefings, collateral materials distribution, and web and electronic marketing, the campaign encouraged its audience to visit www.ucanquit2.org, a web-based cessation support and education tool that



Figure 4-2: Sampling of Customizable Flyers from the Quit Tobacco Website

featured a personalized quit plan, facts, games, multimedia features, and private chat with trained cessation counselors.

The key elements of the tobacco cessation project – “Tobacco Free Me” included:

- Program launched in May 2006;
- Targeted TRICARE Prime beneficiaries 18-64 years of age (not eligible for Medicare) residing in non-catchment areas in Colorado, Kansas, Missouri, and Minnesota; and
- Study elements included a DoD-sponsored 1-800 telephone quit line, behavioral counseling, a web-based educational tool, and access to a pharmacotherapy benefit including nicotine replacement and bupropion products available through the TRICARE Mail Order Pharmacy.



Figure 4-3: Healthy Choices for Life Campaign

Weight Management Demonstration Project

Obesity is one of the leading causes of preventable death in the United States. According to the Health Care Survey of DoD Beneficiaries, fielded January 2005, nearly two-thirds of all MHS beneficiaries were overweight (41%) or obese (22%) as measured by their body mass index (BMI). In particular, nearly two thirds of the AD population was classed as overweight or obese; however, only 12 percent of AD personnel were obese. Obesity was much higher among retirees under age 65 (33%).



Figure 4-4: Healthy Choices for Life Website

To combat this epidemic, TRICARE launched the HEALTH program in July 2006, which concluded in September 2008. HEALTH was designed to help non-AD participants reach their desired weight and to teach them how to live a healthier lifestyle. Program participants—

- Received information on

healthy meal planning;

- Created personalized exercise programs; and
- Worked with a phone counselor and primary care manager to determine weight-loss goals and receive instructions on how to maintain a healthy weight.

The key elements of the HEALTH demonstration project included the following:

- Program launched in July 2006 and concluded in September 2008.
- Targeted overweight and obese, non-AD TRICARE Prime beneficiaries 18 to 64 years of age (not eligible for Medicare) residing in Indiana, Illinois, Ohio, and Michigan; and
- Design elements included access to behavioral modification tools, educational support, and pharmacotherapy drugs to aide in weight-loss efforts. Study design followed the National Heart, Lung, and Blood Institute’s recommendations that include consideration of pharmacotherapy for patients with a BMI greater than 27 with risk factors or a BMI of 30 without risk factors.

The HEALTH demonstration project tested several methods of education and prevention to inform and educate AD family members and retired beneficiaries about the negative effects of obesity. The program website provided access to various tools, including a calorie calculator, body mass index (BMI) calculator, calories burned calculator and physical activity logs. Participants also had access to eHealth and teleHealth capabilities, which included weight-loss counseling. The targeted eligible population for the demonstration project included TRICARE Prime non-AD beneficiaries who live in Indiana, Illinois, Michigan, and Ohio. Eligible participants were required to be between ages 18 and 64 with a BMI between 25 and 51. TRICARE designed the study to collect data on the feasibility, usefulness, and cost effectiveness of

program components to assist in the development of a weight management benefit for all TRICARE beneficiaries.

Evaluation Outcomes:

- Participant weight loss after six months averaged 9.6 pounds;
- The average cost per participant ranged from \$145 to \$390 depending on the level of intervention sought;
- Participants reported an improvement



Figure 4-5 That Guy Program



Figure 4-6: thatguy.com

in their health status;

- Participants experienced improved diastolic and systolic blood pressure;
- Participants reported increased levels of physical activity;
- Participants reported decreased food intake;
- Almost 4,000 eligible beneficiaries were interested in participating; 61 percent completed the enrollment process;
- The mean age was 48, the mean BMI was 32; and 70 percent of program participants were female;
- Program retention averaged 67.4 percent at six months and 42.5 percent at 12 months; and
- Participants reported satisfaction with the demonstration program.

That Guy Campaign–DMDC August 2008 Status of Forces Survey of Active-Duty Members

In an effort to determine the potential impact of the That Guy campaign, TMA/FH inserted questions about awareness of the campaign and attitudes toward excessive drinking into the August 2007 and 2008 Status of Forces Survey of AD members. (These questions also will be included in the 2009 survey.) This summary provides a top-line perspective of E1 to E4 AD service members' awareness of That Guy, their attitudes toward excessive drinking, and their drinking behaviors.

Baseline: That Guy-specific questions were added to the DMDC survey prior to the launch of That Guy (December 2006). Results from the 2006 survey indicate a “phantom awareness” of That Guy (two percent said they recalled something about That Guy). This figure, along with other results, serves as the baseline measure for awareness of the That Guy campaign as it goes forward.

Total awareness of That Guy rose from two percent in 2006 to 14 percent in 2007 to 30 percent in 2008. Awareness of That Guy is greatest in the Air Force (20%) and the Marine Corps (15%). High levels of awareness are likely a result of targeted outreach efforts such as the

Air Mobility Command's engagement in the campaign during its 101 Critical Days of Summer initiative, and the Marine Corps Semper Fit campaign promotion.

- **Attitudes.** That Guy is beginning to have a positive and significant impact on changing some attitudes about excessive drinking. Service members were asked to rate the extent to which they agree or disagree with ten statements about drinking. Between 2006 and 2008, the proportion of service members who "strongly" agreed with the statements "It's important to me that I keep my drinking under control and act responsibly," and "When I drink, I appoint a designated driver," increased by a statistically significant amount.
- **Behaviors.** Between 2006 and 2008, binge drinking behaviors among E1s to E4s who were 21 years of age and older have remained the same. The proportion of service members who have participated in binge drinking in the past 30 days has remained stable since 2006. The shift of a few percentage points (up or down) among the branches of Service was not statistically significant.
- **Information Sources.** Almost three-fourths of E1s to E4s recall hearing or seeing something about the importance of not drinking an excessive amount of alcoholic beverages from their supervisors (72%). Other common information sources include TV advertisements (57%), friends and peers (53%), and posters (55%). Except for radio advertisements (especially in the Army and Navy), there have been no significant changes between 2006 and 2008 in the types of information sources that service members recall communicating this message. It is relevant to note that this question is not specific to That Guy and reflects all the different information sources from which service members heard or saw something about the importance of not drinking excessively.

The key elements of the web-based alcohol abuse prevention education pilot project, "Program for Alcohol Training, Research, and Online Learning" or PATROL, include the following:

- Program launched in April 2006;
- Targets young AD service members on eight military installations representing each of the Services;
- Design elements include pre- and post-intervention assessment, web-based educational material, access to interactive telephone counseling, and follow-up to evaluate the intervention's impact on alcohol consumption; and
- Complements existing Service-level alcohol abuse and misuse prevention efforts.

Key Findings for 2008

- Overall awareness of That Guy increased significantly among all branches of service between August 2006 and August 2007, rising sevenfold to 14 percent. (Actual 2007 awareness is 12 percent, which accounts for and subtracts out the phantom awareness level of two percent in 2006). TMA/FH has increased its outreach efforts since the August 2007 survey. Current awareness for 2008 has more than doubled to 30 percent since 2007.
- Attitudes toward excessive drinking are beginning to shift in a positive direction, showing support of the campaign's key messages.
- Behavior has remained stable as anticipated in this social change campaign.

Accomplishments for 2008

- That Guy expanded worldwide in 2008.
- Public Relations Society of America's (PRSA) Silver Anvil Award of Excellence.
- PRSA Bronze Anvil Award for Research.
- Two PRSA's Bronze Anvil Award Commendations.
- The Holmes Group's Silver SABRE, Government Agencies Category.
- National Association of Government Communicators' (NAGC) Blue Pencil and Gold Screen Award.

MEDICAL MANAGEMENT

The MHS has developed a Medical Management (MM) model that promotes the integration of utilization, case, and disease management as a hybrid approach to managing patient care. MM is a key process used to improve the clinical quality and business efficiency of health care services in the MHS. Further, MM includes a shift to evidence-based, outcome-oriented programs that place a greater emphasis on integrating clinical practice guidelines into the MM process, thereby holding the system accountable for patient outcomes

The DoD Instruction (DoDI) 6025.20 “Medical Management (MM) Programs in the Direct Care System (DCS) and Remote Areas” is the policy directing MTFs to implement MM. This DoDI establishes the requirements while the companion publication, the TMA Medical Management Guide, contains implementation direction. The MM Guide provides specific “how to” guidance for MTF staff in establishing MM programs, including information on outcomes management, resources such as sample forms, website links, and tools that can be customized at the local level.

IV

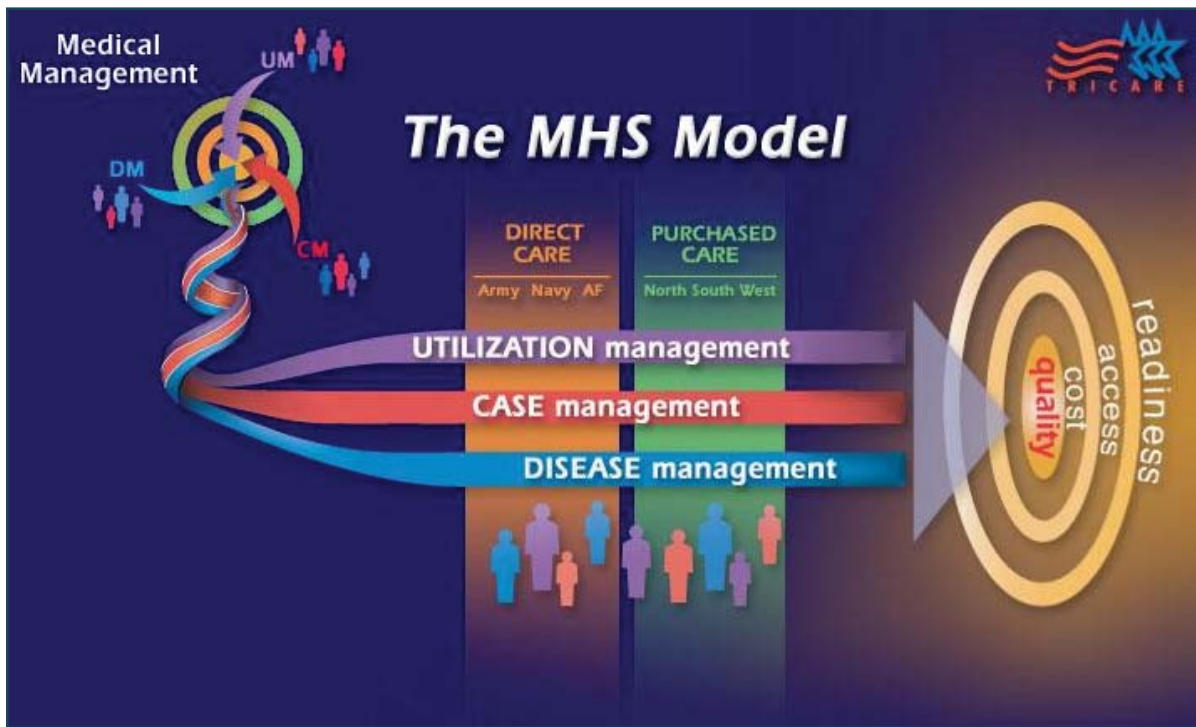


Figure 4-7: Medical Management

UTILIZATION
MANAGEMENT

Utilization Management (UM) is an organization-wide, interdisciplinary approach to balancing quality, risk, and cost concerns in the provision of patient care (Kongstevdt, 2001). It is the process of evaluating the medical necessity, appropriateness, and efficiency of health care services. Utilization management describes proactive procedures, discharge planning, concurrent planning, precertification, and clinical case appeals. It also covers processes, such as concurrent clinical reviews and appeals introduced by the provider, payer, or patient.

The goal of UM is to maintain the quality and efficiency of health care delivery by

caring for patients at the appropriate level of care, by coordinating health care benefits, ensuring the least costly but most effective treatment benefit and the presence of medical necessity. This goal is accomplished with the use of nationally accepted clinical practice guidelines.

The purpose of UM within the MTF is to identify, monitor, evaluate, and resolve issues that may result in inefficient delivery of care or that may have an impact on resources, services, and patient outcomes.. UM in the MTF is accomplished through proactive data analysis, utilization review, case management, and referral management.



CASE
MANAGEMENT

Case Management (CM) is defined by the DoDI 6025.20, and DoD Medical Management Guide, 5 (January 2006) as, “a collaborative process under the population health continuum, which assesses, plans, implements, coordinates, monitors, and evaluates options and services to meet an individual’s health needs through communication and available resources to promote quality cost-effective outcomes. In the MHS, CM is a key clinical process that supports the ability to provide seamless continuity of care through the coordination of needed services to meet beneficiaries’ health care needs. Case Management reduces fragmentation of care and generates a positive return-on-investment through the promotion of quality clinical outcomes and cost-avoidance of unnecessary health care services.

In May 2007, TMA established three CM focus areas: 1) Policy, 2) Education and Training, and 3) Information Management/Data Sharing. These three areas continue to be the primary focus of our CM efforts. TMA, Office of the Chief Medical Officer, developed interim policy for the implementation of clinical CM in the MHS. Case management web-based and virtual instructor-led training via the MHS Learn platform is also being developed. TMA continues working toward acquisition of an enterprise-wide automated CM tool to help document and track a patient’s individualized care plan. This tool will be used to enhance the provision of CM services to beneficiaries and to support interdisciplinary health team communication across multiple care settings.



DISEASE MANAGEMENT

Disease management (DM), as defined in the DoD Medical Management Guide 2006, is “An organized effort aimed at achieving desired health outcomes in populations with prevalent, often chronic diseases for which care practices may be subject to considerable variation.” The goals of DM are to improve health status (clinical outcomes), increase patient and provider satisfaction, and ensure appropriate utilization of resources. The DM focal point is on improving the quality of life for individuals by preventing or minimizing the effects of a disease, usually a chronic condition, through integrative care. The underlying premise is that when the right tools, expertise, and equipment are applied to a population, costs can be minimized in the near term, and/or resources can be provided more efficiently. DM’s focus on chronic conditions is intended to control and slow or arrest their progression rather than cure the disease. Improving the quality of life and activities for daily living are first and foremost in this approach to health care.

The MHS DM program directly supports the MHS strategic goal of Healthy and Resilient Individuals, Families, and Communities by providing proactive, patient-centered, evidence-based care using clinical practice guidelines (CPGs) and promoting sustained partnerships with our beneficiaries. The DM program currently has two parts: A national demonstration project being conducted through the Managed Care Support Contractors (MCSCs); and individual MTF programs that often work in concert with the nationwide program, but which may go beyond or focus on other disease areas as necessitated by local population requirements. The national MCSCs-implemented DM program targets certain chronic disease patients who have high medical service utilization patterns. This program has shown a positive return on investment.

The MHS implemented a groundbreaking DM initiative in September of 2006 by taking a nationally

uniform approach to DM. TRICARE’s approach to disease management is twofold: (1) keep the well healthy with a focus on healthy lifestyles, disease prevention, and health promotion and (2) maintain an active DM program for high-risk beneficiaries with specific chronic disease conditions. This revised uniform approach to DM, provides the MCSCs with risk-stratified patient lists and formally evaluates appropriate clinical, humanistic, financial, and utilization outcomes across all three regions using national benchmarks.

Currently, the MHS DM program addresses asthma, congestive heart failure (CHF), and diabetes. Chronic obstructive pulmonary disease (COPD) is being added in FY2009. Further expansion, to include depression and anxiety disorders, along with cancer screening, will follow shortly thereafter. The Department is pursuing necessary regulatory changes to implement DM as a full benefit, in accordance with the John Warner National Defense Authorization Act (NDAA) for Fiscal Year 2007; Section 734: Disease and Chronic Care Management.

The MTFs and the TRICARE network have also developed several effective DM interventions to address the needs of their specific communities. These interventions include: (1) publications and other resources sent to patients, (2) group education classes, (3) telephone care management, (4) web-based information, and (5) CM services as required.

The MHS continues to focus energies on identifying the best overall DM processes and practices to address the following questions:

- Who should be targeted for DM?
- What services should be provided?
- How can the MHS’s approach to DM be improved?
- How do MHS DM efforts compare with other health plans?

To this end, the MHS has developed a Disease Management Score Card, which

The overall goals of DM initiatives are to—

- Slow the progression of chronic disease;
- Promote healthy lifestyles;
- Ensure appropriate utilization of resources throughout the MHS;
- Increase patient and provider satisfaction;
- Utilize clinical preventive services; and
- Decrease co-morbidities.

Figure 4-8. Goals of DM Initiatives

is being used to quantify the impact of DM on—

- Health care utilization and expenditures;
- Calculating the return on investment;
- Patient health status, including quality of life; and
- Patient and provider satisfaction.

The goal of this initiative is to meet components of the nationally recognized accreditation standards of the Disease Management Association of America (DMAA), including population identification processes and evidence-based practice guidelines. A report on the design, development, and implementation plan for disease and chronic care management was submitted to Congress on March 1, 2008. It is important to

note that some significant areas of the NDAA 2007 Disease and Chronic Care Management requirements are already being met by existing Service and MCSCs DM initiatives, including having uniform processes in place such as patient identification, risk stratification, and evaluation.

As mentioned above, the national MHS DM program, as implemented through the MCSCs has targeted asthma, CHF, and diabetes patients who, despite recent patterns of high medical services utilization, have failed to receive known beneficial services or procedures related to their conditions. For all three diseases, the scorecard evaluation has shown that outcome measures are moving in the direction anticipated—i.e., lower emergency use and lower inpatient care, lower medical costs, and (with a few exceptions) a greater percentage of patients receiving appropriate medications and tests. Estimates for 2008 suggest annual per patient reductions in medical costs of \$457/year for asthma, \$900/year for CHF, and \$861/year for diabetes, and an overall return on investment of about \$1.43 per dollar expended on DM services. Surveys of participants indicate a high level of satisfaction with the program. Therefore, the Department currently intends to implement a full DM benefit in a manner that will be similar to the current DM demonstration program.

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PATIENT SAFETY

The Department of Defense (DoD) Patient Safety Program Office in the TRICARE Management Activity, Office of the Chief Medical Officer (OCMO), oversees DoD systemwide patient safety related policy development, program design, and initiative implementation.



PATIENT SAFETY



DOD PATIENT SAFETY PROGRAM OFFICE

The DoD Patient Safety Program (PSP) is leading the military health system (MHS) to a culture of safety by implementing effective actions, programs, and initiatives throughout the MHS to improve patient safety and overall health care quality. DoD PSP's core infrastructure includes:

- DoD PSP Office: Through Tri-Service collaboration, ensures continuity and consistency in the implementation of DoD PSP across the MHS.
- DoD Patient Safety Center (PSC): Collects, analyzes, and reports near-miss and adverse event data across DoD; produces reports and recommendations to improve patient safety.
- Center for Education and Research in Patient Safety (CERPS): Facilitates patient safety education, training, and the sharing of best practices.
- Health Care Team Coordination Program (HCTCP): Promotes the integration of teamwork principles into practice through education, training, research, and collaboration efforts.



KEY INDICATORS OF PSP IMPACT

PSC Adverse Event Database

- Overall reporting of error events increased by 66 percent from FY2004 to 2008, suggesting a growing awareness of the utility of event reporting and a movement toward a learning culture.
- Voluntary reporting of near-miss events (events that did not reach the patient) increased in FY2008 compared with FY2006 and FY2007, providing increased opportunities for facilities to learn from their mistakes and prevent recurrences.
- Reported harm events involving medications declined for both inpatients and outpatients from FY2004 to 2008. Declines were associated with implementation of new error reduction strategies and continued vigilance of DoD pharmacies and health care facilities.
- While the number of patient harm events increased in FY2008, most of the increase was of lesser degrees of harm and reflected efforts to identify and eliminate harm overall.
- Prospective Risk Assessment and Reduction Reports in FY2008 showed considerable improvements, including increased strength with which corrective actions were identified to target failure modes and process defects; more targeted problem areas; and corrective actions that were more specific, measurable, reasonable, and sustainable.

TeamSTEPPS™ Training Evaluation

- Training evaluation questionnaires completed by the MHS staff following TeamSTEPPS training show that participants like the training, think it useful and relevant to their jobs, and feel confident in their abilities to perform the teamwork skills in their work environments.
- Subjective reports from TeamSTEPPS-trained medical treatment facility (MTF) units indicate a positive impact on quality, safety, and efficiency of care. Examples include decreased patient harm events, increased adherence to best practices, better staff understanding of patient care plans, improved information transfer accuracy, increased staff and patient satisfaction, increased availability of patient appointments, and improved equipment and staff utilization and efficiency (e.g., decreased operating room start and turnover delays).

*TeamSTEPPS is a medical team performance improvement program designed to improve communications and other teamwork skills among health care providers to improve quality and safety of care.

Clinical Microsystems Training Evaluation**

- Reports from Clinical Microsystems-trained MTFs indicate improved quality and safety of care to include

FY2008 Patient Safety Program's Major Accomplishments

- Partnered with the Centers for Disease Control and Prevention to prevent Healthcare Associated Infections.
- Assessed the Military Health System (MHS) culture of patient safety through the Tri-Service Survey on Patient Safety.
- Selected a commercial web-based product for MHS-wide patient safety event reporting.
- In collaboration with the Department of Health and Human Services (DHHS) Agency for Healthcare Research and Quality, launched the TeamSTEPPS™ National Implementation Project to build an infrastructure for integration and sustainment of team-based care throughout the U.S. health care system.
- Tri-Service participation in the Institute for Healthcare Improvement's 5 Million Lives International Campaign.

inpatient medication reconciliation, medical team communication, radiology technician competency in performing diagnostic tests, and patient access to care. Efficiency improvements include administration turnaround for inpatient admissions, Relative Value Unit capture, ICD-9 coding, and reduced length of stay in intensive care units.

** Clinical Microsystems training provides a framework for health care teams to identify and improve processes at the provider-patient interface.

Tri-Service Survey on Patient Safety 2008:

- Of the 12 patient safety dimensions measured, 10 showed improvements, 2 remained stable, and none showed decreases after decreases over initial 2005/2006 survey.
- Greatest improvements from 2005/2006: Frequency of event reporting, organizational learning, management support for PS, handoffs, and transitions.
- Strengths: Teamwork within work areas, supervisor/manager expectations and actions promoting PS, and management support for patient safety.

Figure 5-1. Sampling of Important Accomplishments Made by the DOD Patient Safety Program

PATIENT SAFETY PROGRAM OFFICE

The Institute for Healthcare Improvement's 5 Million Lives Campaign
 Sixty-five MTFs registered to participate in Institute for Healthcare Improvement's (IHI's) 5 Million Lives campaign through a data-sharing agreement between DoD PSP and IHI. Twenty-eight (40 percent) of those MTFs submitted data to IHI as part of the learning and sharing initiative of the campaign. The data-sharing



partnership with IHI paved the way for DoD to exchange quality improvement information with non-DoD external organizations such as the Centers for Disease Control and Prevention (CDC).

CDC's National Healthcare Safety Network

Through participation in CDC's National Healthcare Safety Network (NHSN), DoD and MTFs are able to systematically collect, track, and analyze Healthcare Associated Infections (HAIs) to aid in prevention efforts. CDC's NHSN aims to:

- Analyze and report collected data to



- permit recognition of trends.
- Provide facilities with risk-adjusted data that can be used for interfacility comparisons and local quality improvement activities.
- Assist facilities in developing surveillance and analysis methods that permit timely recognition of patient and health care personnel safety problems and prompt intervention with appropriate measures.
- Conduct collaborative studies with participating facilities to assess the importance of potential risk factors, further characterize HAI pathogens and their mechanisms of resistance, and evaluate alternative surveillance and prevention strategies.

In August 2008, DoD PSP initiated a Tri-Service Infection Control Workgroup to devise an enterprise-wide HAI prevention strategy. The workgroup concurred that CDC’s NHSN would be the most appropriate HAI tracking mechanism. As of September 2008, nine MTFs joined CDC’s NHSN, all with plans to submit data for HAI prevention efforts.

Patient Safety Reporting System

The Patient Safety Reporting (PSR) system is a Tri-Service management system that will automate event reporting for the purposes of identifying and mitigating patient safety risks and hazards. The PSR system will enable the MHS to track and trend medication and non-medication health care events for de-identified data aggregation and reporting standardization. In 2008, a Tri-Service selection board completed the acquisition process to select a commercial off-the-shelf product for the PSR system. Enterprise testing and validation processes of the PSR system are planned for FY2010.

Patient Safety Culture Survey

In spring 2008, DoD PSP fielded the DoD Tri-Service Survey on Patient Safety based on the Agency for Healthcare Research and Quality’s (AHRQ’s) Hospital Survey on Patient Safety Culture, or HSOPS. The anonymous web-based survey assesses staff perceptions of various dimensions of patient safety within their work units and facilities. All staff working in Army, Navy, and Air Force MTFs were asked to complete the survey. The survey was first conducted across DoD in late 2005/early 2006.

The objectives of the survey are to:

- Understand the current status of patient safety culture across DoD facilities.
- Raise staff awareness about patient safety issues.
- Assess trends in staff attitudes.
- Provide a safer care environment in all DoD facility settings.

The DoD-wide survey response rate in FY2008 was 58 percent, a 5-percent increase compared with participation in FY2005/2006.

The survey is organized into 12 dimensions of patient safety. When compared with the initial survey, the 2008 survey results showed improvements in 10 of these dimensions,

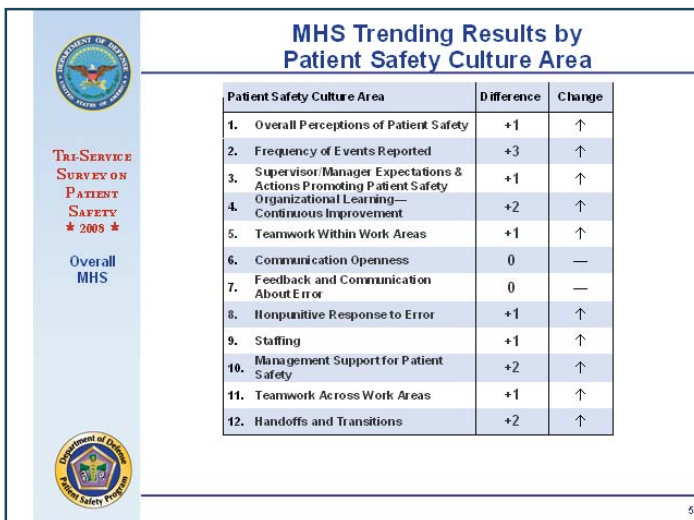


Figure 5-2. MHS Trending Results by Patient Safety Culture Area

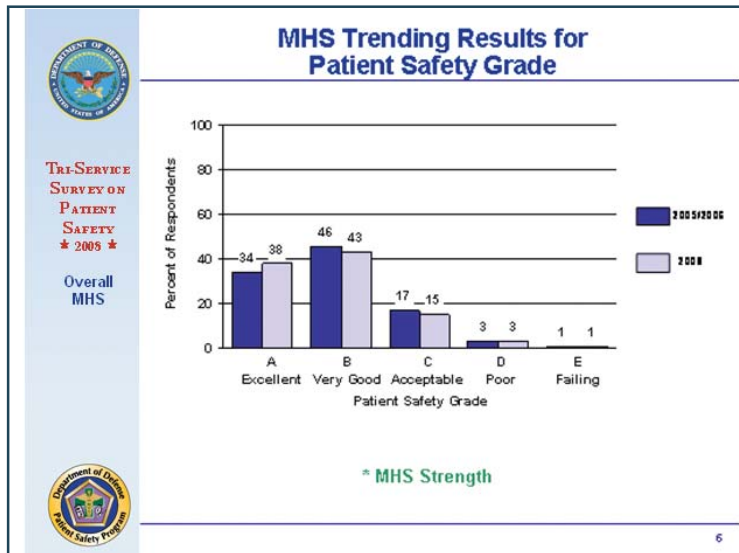


Figure 5-3. MHS Trending Results for Patient Safety Grade.

no change in 2 dimensions, and no decrements (Figure 5-2). Given the operational tempo due to Iraq and Afghanistan deployments, DoD PSP views this as a substantial accomplishment.

Beyond the 12 dimensions, the survey asks respondents to assign a grade to

their work area’s patient safety (Figure 5-3). Four percent more respondents graded their work area as “excellent” than in the previous survey; and 81 percent of respondents graded their work area as “excellent” or “very good.”

At the DoD level, (Figure 5-4) the same strengths were sustained while the opportunities remain unchanged across both survey periods. Scores improved in each of those dimensions following the first survey. The DoD survey results were comparable to AHRQ’s civilian database, comprised of 500 hospitals nationwide. Survey results were disseminated across DoD and to Services in September 2008. Reports were created for each MTF mirroring those provided in the initial survey period. Additional reports for MTFs were developed in 2008, including information on the DOD Service, and civilian comparisons. DoD PSP provides MTFs with facility-specific survey data to facilitate the MTF’s identification and prioritization of their local patient safety improvement opportunities.

The remainder of this section will highlight activities specific to the DoD PSP components: DOD PSC, CERPS, and HCTCP.

STRENGTHS	IMPROVEMENT OPPORTUNITIES
<input checked="" type="checkbox"/> Teamwork within work areas	<input type="checkbox"/> Handoffs and transitions
<input checked="" type="checkbox"/> Supervisor/manager expectations and actions promoting patient safety	<input type="checkbox"/> Staffing
<input checked="" type="checkbox"/> Management support for patient safety	<input type="checkbox"/> Non-punitive patient safety for response to error

Figure 5-4. DoD Patient Safety Culture Survey Identified Strengths and Opportunities



DOD PATIENT SAFETY CENTER

DoD PSC serves as the repository for all DoD patient safety data and manages the Patient Safety Registry, which in FY2008 included data from four sources:

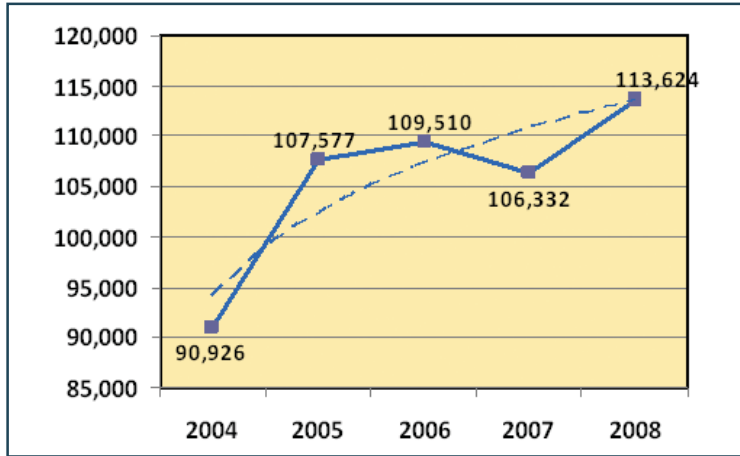


Figure 5-5: Reported Patient Safety Events in DoD MTFs, FY2004-2008

- Monthly Summary Reports: Utilized throughout the MHS and developed as an interim tool to report non-medication patient safety events. Provides facility aggregate non-medication events stratified by risk of harm to patients.
- MEDMARX®: United States Pharmacopeia operates DoD's web-based medication reporting system, which collects adverse event reports stratified by risk of harm to the patient. It incorporates a nationally recognized taxonomy to enhance data collection, reporting, and analysis.
- Root Cause Analyses (RCAs): Structured retrospective risk analyses performed in response to serious medical events or the risk thereof.
- Failure Mode and Effects Analyses: Proactive analysis of at-risk health care processes designed to identify and remedy any process defects.

Harm Stratification	2004		2005		2006		2007		2008		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Events did not reach patient (Near miss)	53,964	59%	68,884	64%	72,810	66%	73,473	69%	75,390	66%	344,501	65%
Events reached patient, no harm	33,401	37%	34,818	32%	33,206	30%	29,439	28%	33,841	30%	164,705	31%
Events reached patient, harm	3,561	4%	3,875	4%	3,494	3%	3,440	3%	4,393	4%	18,763	4%
Total	90,926	100%	107,577	100%	109,510	100%	106,332	100%	113,624	100%	527,969	100%

Figure 5-6. Total Event Reports Stratified by Harm, FY2004-2008

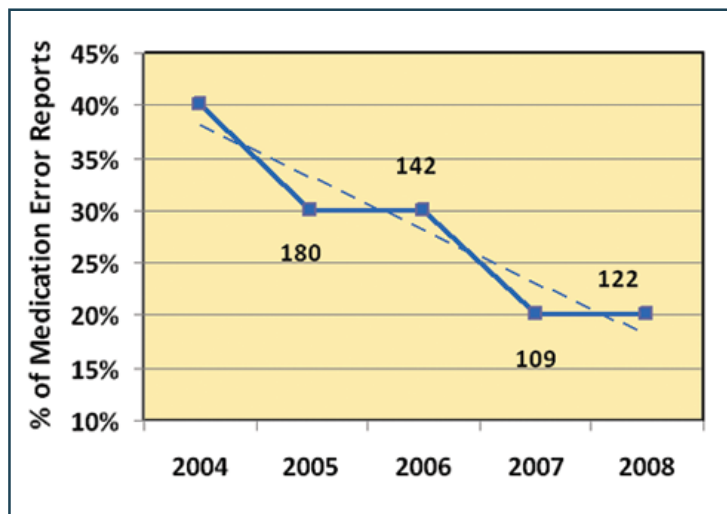


Figure 5-7. Harm Events Involving Medication as a Percentage of all Medication Event Reports, FY2004-2008

PSC encourages and relies heavily on the voluntary submission of MTF data for reporting and analytic purposes. DoD patient safety events, submitted by MTFs to PSC, which had declined three percent in FY2007, increased seven percent in FY2008 (Figure 5-5). In FY2008, near misses (defined as events that did not reach the patient) continued to rise in total number, remaining the majority of overall event reports (Figure 5-6). Near misses provide critical opportunities for facilities to find and fix potential problems before they cause harm. The increasing number of near-miss reports may reflect the increased awareness of and utility in voluntary reporting. Reported harm events, while reaching

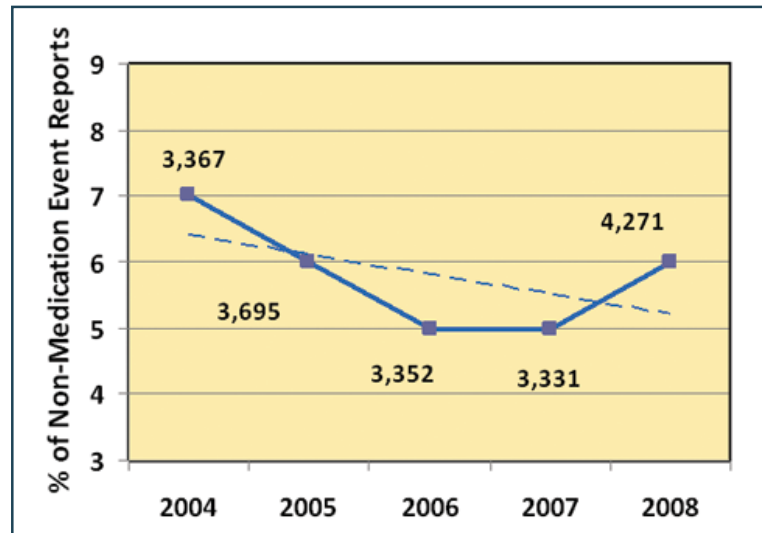


Figure 5-8. Harm Events Not Involving Medication as a Percentage of all Non-Medication Event Reports, FY2004–2008

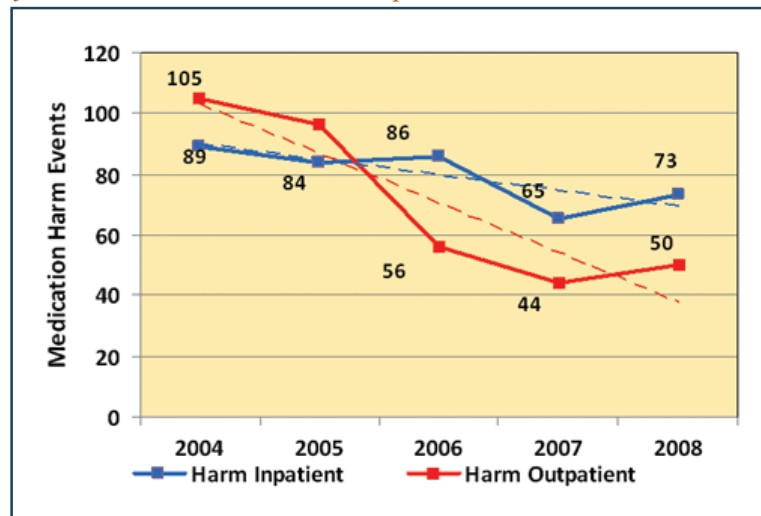


Figure 5-9. Inpatient and Outpatient Harm Events Involving Medication, FY2004–2008

a low in FY2007, increased in FY2008 (Figures 5-6, 5-7, 5-8,). Review of our data indicated associations with dedicated patient safety initiatives. Reduction in preventable harm to patients remains a key objective for patient safety reporting efforts.

Reported harm events involving medications (categories E-I on the National Coordinating Council for

Medication Error Reporting and Prevention harm scale) declined for both inpatient and outpatient harm events from FY2004 to 2008, which are particularly evident in outpatient care (Figure 5-9). These declines were associated with implementation of new error-reduction technologies and processes and continued vigilance on the part of DoD pharmacies and health care facilities.



PUBLICATIONS
AND
PRESENTATIONS

PSC creates and disseminates various publications, including focused responses to identified needs of senior MHS leadership, Services, and MTFs (Figure 5-10).

In FY2008, PSC’s publications included:

- Annual and quarterly summaries.
- Quarterly newsletters.
- Safety alerts, advisories, and medication safety notices targeting specific risks.
- Focused reviews examining issues identified through MTFs’ RCAs and current medical literature.

Under the Department of Veterans Affairs (VA)–DoD Joint Strategic Plan, PSC continued sharing information with the VA’s National Patient Safety Center, exchanging data related to safety alerts and advisories. Additionally, PSC pursued more robust data-sharing and collaborative opportunities with the VA. These efforts aim to deliver safer care to

our men and women of the uniformed services, veterans, and their families.



Figure 5-10. Various PSC Publications

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CENTER FOR
EDUCATION
AND RESEARCH
IN PATIENT
SAFETY

CERPS, located at the Uniformed Services University of the Health Sciences (USUHS), was established to provide the MHS community with the educational materials, tools, training, and resources necessary to improve the safety and quality of health care delivery within the MHS. CERPS focuses on:

- Facilitating the education and training necessary to develop a military health care culture of patient safety.
- Assisting MTFs to meet accreditation requirements related to safety.
- Incorporating and disseminating best practices.
- Evaluating outcome measures for patient safety educational programs and interventions.

Patient Safety Education and Training Program

CERPS offers various patient safety educational and training opportunities, both in-residence and onsite, to meet the individual and facility learning needs in the MHS. Through USUHS, continuing education credits are awarded to a wide range of health care professionals upon successful course or training completion. In FY2008, the standardized curriculum was expanded through the revision of the Basic Patient Safety Managers Course and addition of the Enhanced Patient Safety Managers Course. Figure 5-11 presents CERPS' patient safety courses offered in FY2008 with numbers of attendees.

PATIENT SAFETY COURSE DESCRIPTIONS	ATTENDEES
Overview: Addresses impact of errors on health care operations, barriers to change, epidemiology, and cost of error, culture, human factors, and system-based solutions for patient safety. Offered at sites inside and outside the continental United States based on <u>Service or medical treatment facility (MTF) requests.</u>	246
Introduction to Patient Safety: An online prerequisite for the Basic Patient Safety Managers Course, but open to all military health system individuals. CHE credits available to providers.	105
Basic Patient Safety Managers Course: Basic introduction for all new Department of Defense (DoD) Patient Safety Managers; provides intensive training on the use of patient safety data collection tools, root cause analysis (RCA) tools and software, incident analysis, <u>the clinical microsystem framework, and DoD Patient Safety Center reporting requirements.</u>	105
Enhanced Patient Safety Managers Course: Offers expanded training in the use of the Clinical Microsystem Framework, incident analysis techniques, and use and analysis of DoD and MTF medication error event data. Additional topics include briefing skills, principles of critical thinking, and an introduction to identification and <u>assessment of human factors issues</u>	10
Incident Analysis Training: Introduction and advanced training in the use of the RCA and RCA technical applications and software used by the DoD Patient Safety Program, : and more targeted training in the use of Failure Mode and Effects Analyses (FMEA).	RCA: 151, Tap Root Software 38, FMEA: 95
Medication Error Event Training: Aimed at improving the use of data related to medication errors and incidents obtained through the MEDMARX® reporting system. Course content includes data analysis and application.	85

Figure 5-11. CERPS' Patient Safety Courses and FY2008 Attendance





Figure 5-12. Patient Safety Program Website, dodpatientsafety.mil/

Patient Safety Program website
Expanding the availability of patient safety information across the MHS is essential for the continued advancement toward a culture of patient safety. Through USUHS, CERPS maintained the responsibility of housing, providing technical support, and coordinating the ongoing growth in capabilities of the DoD PSP website (Figure 5-12).

The website is designed to promote DoD PSP's mission, encompassing its three components as well as the Army, Navy, and Air Force.

The website includes resources on various patient safety topics, such as:

- Safe practices.
- National patient safety goals.
- Error reporting systems.
- Team training.
- Human factors and system redesign.
- Health care personnel training.
- Course offerings.
- Patient safety performance measures.
- HAIs.

In FY2008, the website's capabilities expanded to including a robust "What's New" and archive sections, access to distance learning programs, and levels of secured access. Additional enhancements are planned for FY2009.

Microsystems in the Clinical Environment

The Clinical Microsystems Framework offers frontline staff a skills-based approach for understanding their work environment and for applying systems-based continuous process improvement to the provider-patient interface. The Clinical Microsystems Framework for improvement was initially introduced into the CERPS curriculum in FY2006.

The microsystems educational intervention for MTFs consists of briefing the command leadership prework prior to formal training, a 3-day onsite training program conducted by CERPS faculty, and monthly follow up conference calls to provide guidance and support for 18 months. FY2008 efforts to expand the microsystems within the MHS included:

- Training of six teams at four sites.
- Integration of Clinical Microsystems education into USUHS Graduate School of Nursing and Medical School: the Graduate School of Nursing's peri-operative curriculum and the second-year medical student preventive medicine course.
- Initiation of the development of an online microsystems framework toolkit for frontline clinical team improvement. The toolkit will include explanations of the improvement methods used in the 3-day onsite training and a guide to their application.



**HEALTHCARE
TEAM
COORDINATION
PROGRAM**

Created under the Floyd D. Spence National Defense Authorization Act 2001, HCTCP focuses on the implementation of medical team training initiatives to reduce preventable harm. Building a culture of quality and safety requires broad transformation across the MHS. Given that communication continues to be the primary causal factor as reported by MTFs in their RCAs, the spread, impact, and sustainment of integrating teamwork principles into

practice is critical to transforming the culture in the MHS (figure 5-14).

Team Strategies and Tools to Enhance Performance and Patient Safety

TeamSTEPPS is HCTCP's cornerstone initiative and the platform around which all team coordination training, education, research, and collaboration efforts are grounded. Integrating and sustaining team-based care throughout the MHS is underway through widespread

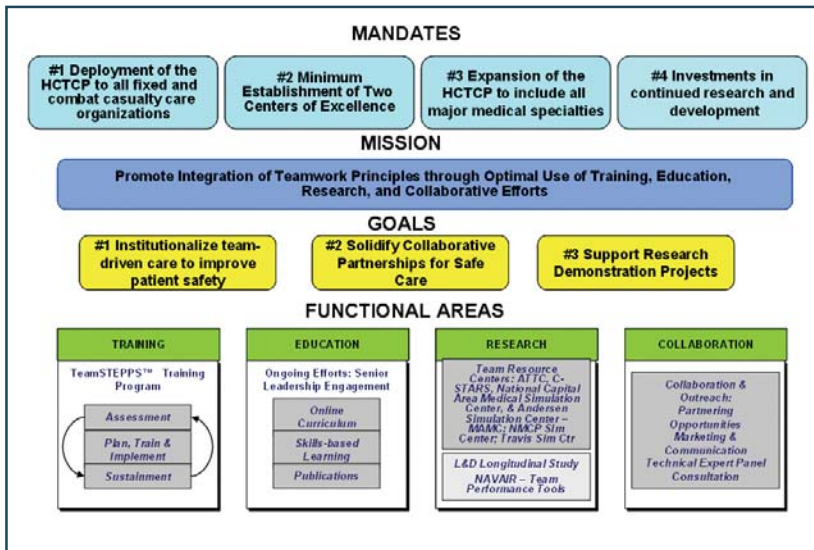


Figure 5-13. Mandates, Mission, Goals, and Functional Areas of TeamSTEPPS™



TeamSTEPPS training, implementation, and ongoing training effectiveness evaluations.

TeamSTEPPS Training in Iraqi Theater Operations

During FY2008, TeamSTEPPS spread into operational and reserve units, particularly in Iraq (Figure 5-13). TeamSTEPPS champions—both physicians and nurses—recognized upon arriving at the Combat Support Hospitals the benefit for all if teams coordinated care more effectively.

In 2008, 700 staff were trained and subsequently were reporting “good catches”—stories of how TeamSTEPPS prevented unintentional harm.

In FY2007, HCTCP convened an expert workgroup to develop an evidence-based plan to evaluate the effectiveness of TeamSTEPPS training at MTF and DoD levels. In FY2008, HCTCP launched the evaluation plan, which assesses training effectiveness at multiple levels: trainee reactions, learning, transfer of skills to the job, and impact on clinical process and patient outcomes. The plan also assesses organizational barriers and facilitators to TeamSTEPPS success. Preliminary results showed that participant reactions to training were very high—trainees liked it, thought it useful, and felt comfortable with their abilities to perform the skills. Additionally, subjective reports from TeamSTEPPS-trained MTF units indicate a positive impact on quality, safety, and efficiency of care (Figure 5-13). Reported facilitators and barriers to TeamSTEPPS implementation success are presented in Figure 5-14.

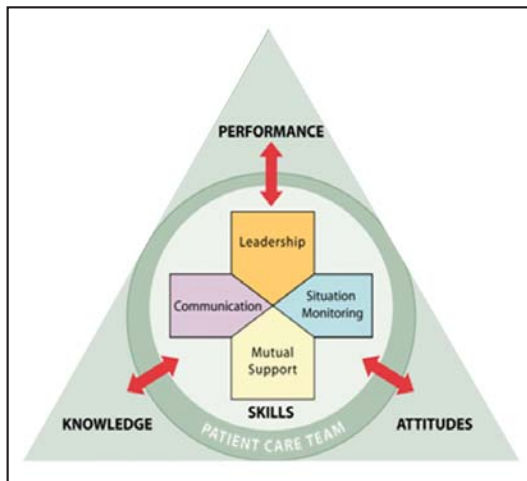


Figure 5-14. Patient Care Model for TeamSTEPPS™

Education

HCTCP employs various methods to share information and educate MTFs. FY2008 HCTCP key educational activities and accomplishments included:



FY2008 TRAINING SNAPSHOT

- Trained 36 medical treatment facilities at 50 onsite sessions.
- Created 481 trainers/coaches.
- Granted more than 4,989 CEU/Continuing Medical Education.
- Saved \$1.4M in training/travel dollars (over 2 years).

Figure 5-15. Training Snapshot

IMPACT OF TEAMSTEPS ON SAFETY, QUALITY, AND EFFICIENCY OF PATIENT CARE

- Staff have clear direction of plan (white boards).
- Decreased “patient harm” incidence and “patient safety event” reports.
- Increased adherence to best practices.
- Increased accuracy of information transfer.
- Glitch capture and correction (“glitch” is a recurrent systems-based gap or problem in knowledge, training, or equipment).
- Increased staff and patient satisfaction.
- Reduced nursing report time.
- Improved equipment/staff utilization efficiency (e.g., decreased OR start/turnover delays).
- Increased availability of patient appointments.
- Increased efficiency per patient encounter.

Figure 5-16 Subjective Reports from 14 Medical Treatment Facilities

- Expanding the Learning Action Network, a virtual forum for MTFs and civilian TeamSTEPPS adopters to collaboratively learn about implementation and sustainment efforts. HCTCP hosted 8 network sessions in FY2008 with 57 total participants. Post-session evaluations showed that 90 percent of the participants agreed that “the session fostered general understanding of important information or issues” and frequently downloaded from the website.
- Partnering with USUHS and integrating comprehensive TeamSTEPPS training into the

Graduate School of Nursing clinical peri-operative nurse specialist curriculum. This curriculum will become a model for TeamSTEPPS training in educational programs of other health professions.

In FY 2008, three self-paced online TeamSTEPPS education modules were developed to broaden the educational reach and address the MHS staff needs for time-efficient and flexible training:

- e-Guide to Action: Reviews TeamSTEPPS and orients potential learners on how to implement and sustain TeamSTEPPS locally.
- e-Learning Fundamentals: Focused on improving core team competencies.
- Blended Fundamentals: Integrates a self-paced online component with the classroom-based component of the fundamentals course.

Striving to create awareness nationally and internationally, members of HCTCP published 24 manuscripts with 13 in peer-reviewed academic journals. HCTCP members also were invited to present at many national conferences.

Research

As mandated by the NDAA 2001, HCTCP established and supports Centers of Excellence (Team Resource Centers [TRCs]) for the development, validation, proliferation, and sustainment of medical team training in fixed MTFs and combat casualty care organizations and also invests in additional research and development activities to improve teamwork in health care. Table 5 presents current TRC and research activities.

FY2008 Team Resource Center (TRC) Activities

TRC: Army Trauma Training Center | Miami, FL

- Integrated TeamSTEPPS into training of Forward and Combat Support Hospital Surgical Teams including simulation exercises.
- Ongoing usability studies using team performance hand-held assessments tools to automate.

TEAMSTEPS FACILITATORS	BARRIERS
<input checked="" type="checkbox"/> Visible leadership support	<input type="checkbox"/> Staff turnover and shortages
<input checked="" type="checkbox"/> Frontline champions and “coaching”, staff buy-in	<input type="checkbox"/> Leadership turnover
<input checked="" type="checkbox"/> Communications campaign	<input type="checkbox"/> Deployments
<input checked="" type="checkbox"/> Integration into normal operations	<input type="checkbox"/> Lack of visible leadership support
<input checked="" type="checkbox"/> Ongoing measurement (with feedback to staff) to monitor and show impact	<input type="checkbox"/> Lack of frontline staff support
<input checked="" type="checkbox"/> Planning	<input type="checkbox"/> “Bad actors”: No accountability system
<input checked="" type="checkbox"/> Training: Newcomer, refresher, customized to mission	<input type="checkbox"/> Limited time for training

Figure 5-18. Reported Organizational Facilitators and Barriers to TeamSTEPPS Success

KEY ACCOMPLISHMENTS
<ul style="list-style-type: none"> ■ Health care organizations conducting TeamSTEPPS master training: <ol style="list-style-type: none"> 1. DUKE MEDICAL SYSTEM 2. UNIVERSITY OF MINNESOTA/FAIRVIEW HEALTH SYSTEMS 3. CARILION CLINIC 4. CREIGHTON UNIVERSITY MEDICAL CENTER ■ Project website launched in March 2008. ■ TeamSTEPPS Master Trainer listserv created to facilitate collaborative learning and information sharing. ■ The Centers for Medicare and Medicaid Services included TeamSTEPPS in the Quality Improvement Organizations' 9th Scope of Work. ■ Second TeamSTEPPS Collaborative hosted by Duke University Medical Center; focused on sharing lessons learned and implementation strategies. ■ Held 20 sessions training 503 TeamSTEPPS master trainers from health care systems in 12 months.

Figure 5-19 Key Accomplishments for AHRQ/DoD National Implementation of TeamSTEPPS Project

TRC: National Capital Area Medical Simulation Center | Bethesda, MD

- Incorporated patient safety scenarios into Surgical Simulation Laboratory curriculum, and Fundamental Laparoscopic Surgery deployed to all 13 GME sites.
- Prototyped a Wide Area Virtual Environment to conduct combat teamwork scenarios.

TRC: Andersen Simulation Center at Madigan Army Medical Center | Tacoma, WA

- Distributed the Mobile Obstetrics Emergencies Simulator to all GME sites and continued training in FY2008.
- Awarded a 3-year accreditation by the American College of Surgeons, the only Department of Defense (DoD) educational institution and 1 of 21 in the United States to achieve this status

TRC: ANaval Medical Center Portsmouth | Portsmouth, VA

- Conducts training to sustain trainer capability in medical treatment facilities.
- Initiated studies to assess team performance.
- Serves as a site for validating new measurement tools.
- Serves as a site for comprehensive TeamSTEPPS intervention and pilot evaluation processes.

Other Research Partnership: RAND Corporation

- Teamwork Outcome Measures Study: Documented the state of knowledge about teamwork outcome and effectiveness measures through an extensive literature review; reviewed existing DoD health metrics to identify



team-sensitive measures. A technical report was published in FY2008.

- L&D Longitudinal Study: Evaluated teamwork implementation processes and the impact on patient outcomes for five hospital L&D units over 12 months; identified factors needed for successful implementation. A final report is in progress.

Other Research Partnership: A Naval Air Systems Command Developing two electronic tools to support team performance evaluation and debriefing processes:

- Medical Team Performance Assessment Tool: Assesses team performance during event-based scenarios; an adaptation of the Tactical Warfare Instructor Support Environment (TacWISE) used by Navy Carrier Strike Groups.
- Team Effectiveness Accelerator: Provides structured guidance for team debriefs to improve performance and reduce errors.

Collaboration

Collaboration is essential to spread TeamSTEPPS beyond DoD. Through an interagency partnership with DHHS' AHRQ, DoD cosponsored the 2-year National TeamSTEPPS Implementation Project. The project aims to build a national infrastructure to spread and sustain TeamSTEPPS throughout the

U.S. health care system. The lessons learned within DoD will be shared with the national health care community and vice versa. Through this project, civilian health care delivery systems benefit; in turn, MHS beneficiaries receiving care in the private sector do as well. Key accomplishments are presented in Figure 5-19.

Beyond DoD, Key TeamSTEPPS Partnerships

- Interagency partnership: Agency for Healthcare Research and Quality/ Department of Defense (DoD) National Implementation.
- Second Annual Technical Expert Panel (36 patient safety international thought leaders).
- International reach with several countries leveraging DoD resources.
- South Australia Department of Health piloted TS handoff initiative; recommended to expand countrywide.
- Collaborative activities with several professional organizations, including the American Association for Family Physicians and Association of Peri-Operative Registered Nurses.
- TeamSTEPPS resources included in the National Patient Safety Foundation "Stand Up Hospitals for Patient Safety" toolkit.



PLANS FOR FY2009

DoD PSP reflects on FY2008 as it plans for FY2009 endeavors. Many initiatives will continue, new initiatives will emerge, and others will evolve or take new shape.

Plans for FY2009 include:

- MTF systemwide Perinatal Education Initiative roll-out offering educational opportunities to improve skills leading to improved safe, reliable care.
- NHSN: Stand-up a Tri-Service working group to prevent HAIs using CDC's NHSN.
- Selected a commercial web-based product for MHS-wide patient safety event reporting.

- Patient Safety Culture Survey: Communicate MHS-level results enterprise-wide; use results for improvement efforts tailored to new patient safety managers.
- Perform testing for the PSR system
- Promote the spread and sustainment of TeamSTEPPS across the MHS and through the National Implementation Project.
- Launch a targeted communications campaign to focus patient safety efforts across the MHS.



ACCESS TO
CARE AND
PATIENT
SATISFACTION

To fulfill 1993 National Defense Authorization Act requirements, the Health Care Survey of Department of Defense Beneficiaries (HCSDB) was developed by TRICARE Management Activity (TMA) to assess Military Health System (MHS) beneficiaries' level of satisfaction with their health care. Conducted since 1995, HCSDB was designed to provide a comprehensive and ongoing look at beneficiary opinions about their DoD health care benefits.



VI

ACCESS TO CARE AND
PATIENT SATISFACTION



HEALTH CARE SURVEY OF DOD BENEFICIARIES

The population-based HCSDB comprises two distinct surveys, the Adult and the Child HCSDB, and both are conducted as large-scale mailed surveys. The Adult HCSDB is conducted once per calendar quarter every January, April, July, and October to a sample of 50,000 DoD beneficiaries worldwide (200,000 annually). The Child HCSDB is conducted annually in July to a sample of 30,000 children in the continental U.S. only.

Both surveys provide information on a wide range of health care issues such as the beneficiaries' ease of access to health care and preventative care services. In addition, the surveys provide information about beneficiaries' satisfaction with their doctors, health care, health plan, and the health care staff's communication and customer service efforts.

HCSDB questions are derived from the Consumer Assessment of Health Plans Survey (CAHPS®) program. CAHPS® is a public-private initiative to develop standardized surveys of patients' experiences with ambulatory and facility-level care. Because the HCSDB uses CAHPS® questions, TRICARE (DoD's health plan) can be benchmarked to civilian managed care health plans. More information on CAHPS® can be obtained at www.ahrq.gov/

MTF results of the HCSDB are provided to a Tri-Service work group. Each Service representative is responsible for ensuring that survey results are shared throughout his or her organization to enhance performance. The civilian facility data are also presented to the TRICARE Regional Offices for dissemination.

In FY2008, the HCSDB, compared the access to, and quality of, health care received

by the DoD population with the general U.S. population covered by commercial health plans (excluding Medicare and Medicaid). Satisfaction for all MHS beneficiaries with the overall TRICARE plan, health care, and one's specialty physician has improved from FY 2006 to FY 2008, yet continues to lag civilian benchmark rates. TRICARE Prime enrollee satisfaction with the health plan increased between FY 2006 and FY 2008, for those with military as well as civilian primary care managers. Satisfaction of members enrolled with civilian network providers reported the same or higher level of satisfaction as their civilian counterparts

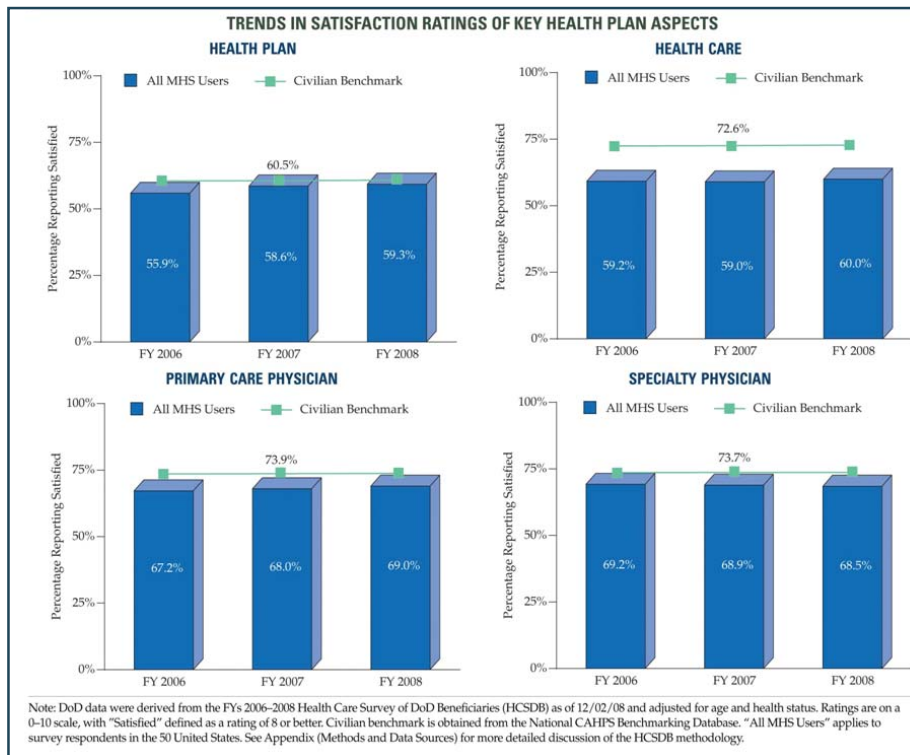


Figure 6-1. Customer Reported Satisfaction and Satisfaction with Key Aspects of Tricare

In addition, the HCSDB assesses performances of preventive care services.

Healthy People (HP) goals represent the prevention agenda for the Nation over the past two decades. Beginning with goals established for Healthy People 2000 (HP 2000) and maturing most recently in Healthy People 2010 (HP 2010), this agenda is a statement of national health objectives designed to identify the most significant preventable threats to health and to establish national goals to reduce those threats. There are many indices by which to monitor the MHS relative to HP goals and reported civilian progress. The MHS has improved in several key areas and strives to improve in others.

The MHS has set as goals a subset of the health promotion and disease-prevention objectives specified by HHS in HP 2010. Over the past three years, the MHS has met or exceeded targeted HP 2010 goals in providing mammograms (for ages 40–49 years as well as 50+ categories). Also, the overall proportion of all MHS beneficiaries identified as non-obese is 76 percent, exceeding the most recently identified U.S. population average of 69 percent. Still other areas continue to be monitored in the absence of specified HP standards, such as smoking cessation counseling, which appears to be heading in the right direction, reaching almost 70 percent in FY 2008.

The HCSDB questionnaires and reports for the past three years and other satisfaction surveys conducted by the MHS are available on the TRICARE website for viewing by all beneficiaries, stakeholders, staff, and leadership. The HCSDB reports and documentation link is <http://www.tricare.osd.mil/survey/hcsurvey>.

TRICARE Inpatient Satisfaction Survey

The TRICARE Inpatient Satisfaction Survey (TRISS) reports on inpatient experiences of adults who receive medical, surgical, and obstetric services from the MHS’s 59 direct care (DC) MTFs and through the MHS purchased care (PC) civilian network of providers. This report was conducted by the Research Triangle Institute (RTI) and summarized survey results from a sample of inpatients discharged between July 1, 2008, and September 30, 2008.

The MHS survey results were compared with the results from the 2008 Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey of civilian hospitals. HCAHPS is an integrated set of tested and standardized survey questionnaires and reporting formats used to collect and report meaningful and reliable inpatient satisfaction information. HCAHPS results are used as a national benchmark for civilian hospitals.

The HCAHPS benchmark represents the results of three product lines (medical, surgical, and obstetrics) combined. Statistical comparisons between the MHS results and the HCAHPS benchmarks (e.g., DC vs. HCAHPS or a Service vs. HCAHPS) were made for combined product lines. Specific product lines (e.g. medical, surgical, and obstetrics) were not compared to the HCAHPS benchmark.

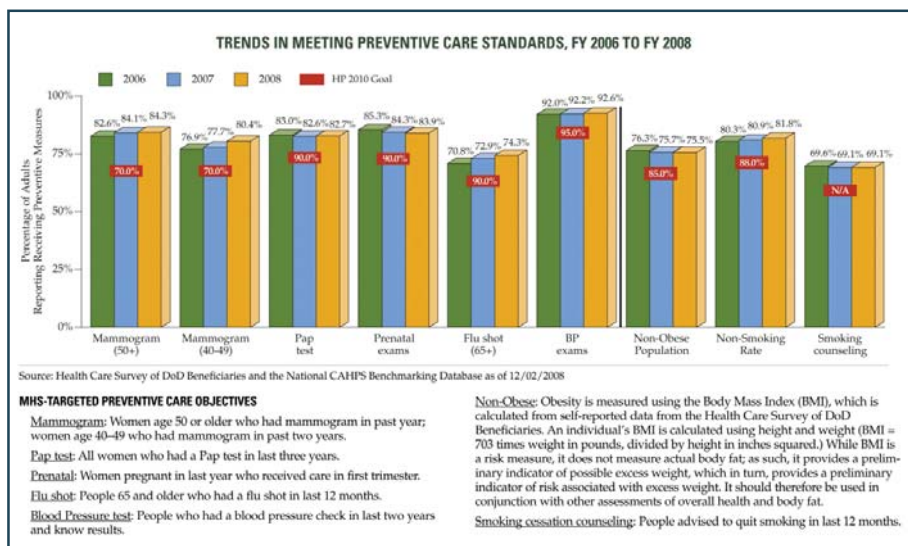


Figure 6-2. Building HP Communities

Overall Satisfaction

The TRISS results were based on statistical comparisons between the MHS results and the HCAHPS benchmark (e.g., DC vs. HCAHPS or a Service vs. HCAHPS) for combined product lines. A total of 41,254 TRICARE patients were surveyed. Of that number, 27,167 received care from an MTF and 14,087 received care from a civilian network facility.

The overall satisfaction rating of hospitals was determined by two key indicator questions (1) “Using any number from 0 to 10, where 0 is the worst hospital possible and 10 is the best hospital possible, what number would use to rate this hospital during your stay?” and (2) “Would you recommend this hospital to your friends and family?”

For both key indicators of satisfaction, the MHS was below the HCAHPS benchmark. Fifty-six percent of MHS beneficiaries rated their overall hospital experience with a 9 or 10 compared with HCAHPS respondents, of which 65 percent rated their overall experience with a 9 or 10. Sixty percent of MHS beneficiaries indicated that they would definitely recommend their hospital to family and friends, compared with 70 percent of HCAHPS respondents (figure 6-3).

HCAHPS Composites of Patient-Centered Care

In addition to measuring patients’ overall satisfaction with the hospital, HCAHPS measured the aspects of care that matter most to patients. The HCAHPS composites of patient-centered care include the following areas:

Composites of Patient-Centered Care

- Communications with Nurses;
- Communications with Doctors;
- Communications about Medications;
- Responsiveness of Hospital Staff;
- Pain Management; and
- Discharge Information.

A positive score is defined as the percentage of positive responses out of the total number of valid and applicable responses. Higher scores reflect higher levels of satisfaction.

The following chart provides a comparison between patient satisfaction survey results and the HCAHPS benchmarks by specific composites. The HCAHPS benchmark represents the results of all three product lines (medical, surgical, and obstetrics) combined. Statistical comparisons between the MHS and the HCAHPS benchmark (e.g. DC vs. HCAHPS or a Service vs.

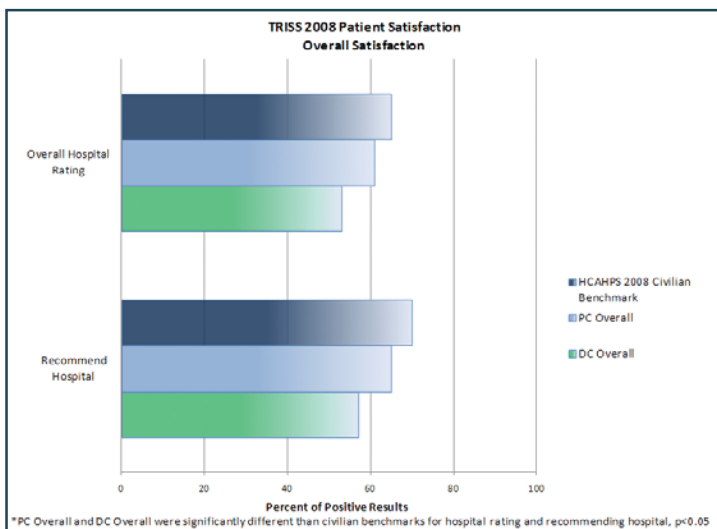


Figure 6-3. TRISS 2008 Patient Satisfaction, Overall Satisfaction

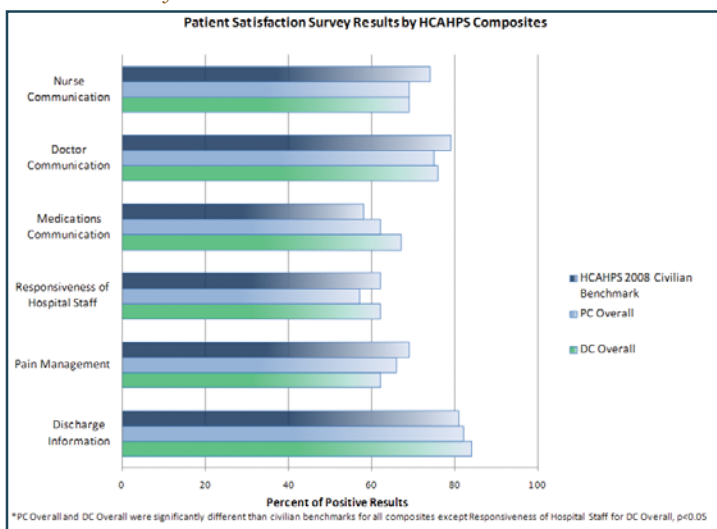


Figure 6-4. Patient Satisfaction Survey Results by HCAHPS Composites

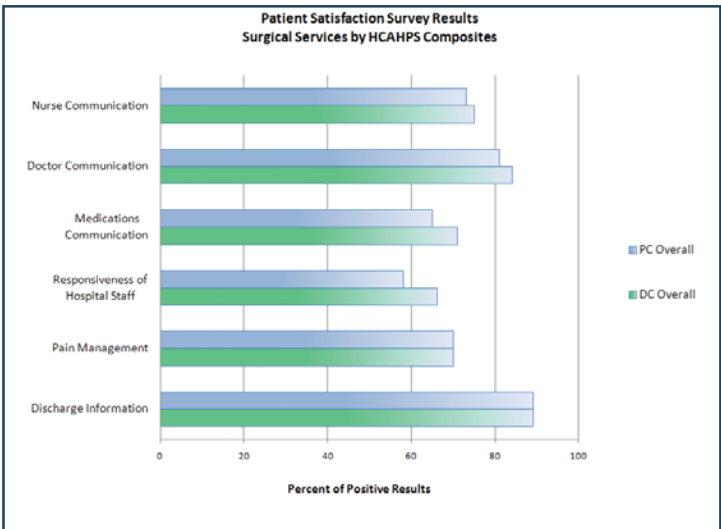


Figure 6-5. Patient Satisfaction Survey Results, Surgical Services by HCAHPS Composites

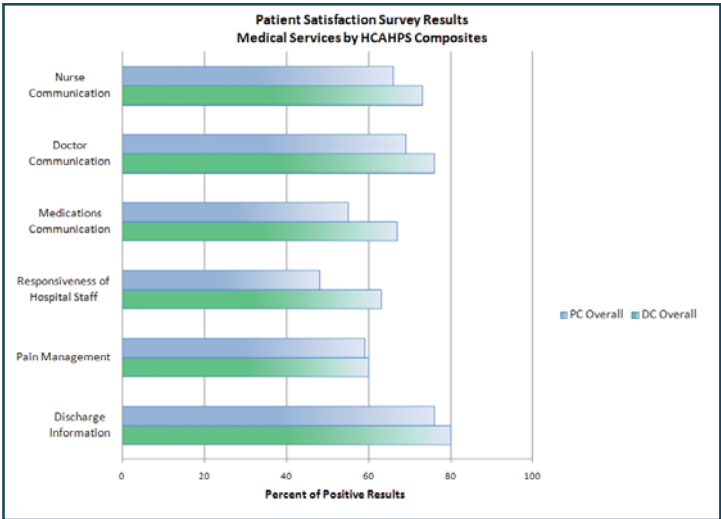


Figure 6-6. Patient Satisfaction Survey Results, Medical Services by HCAHPS Composites

HCAHPS) were made for combined product lines (figure 6-4).

The chart reveals that the MHS (DC and/or PC systems hospitals) received ratings that were higher than or equal to the national benchmark in two of the six composites.

Satisfaction with Surgical Services

Figure 6-5 shows ratings for Nurse and Doctor Communications and Discharge Information for DC and PC were comparable. Direct care had higher ratings than purchased care for Communication with Nurses and Doctors, Medications Communication, and Responsiveness of Hospital Staff. Purchased care and direct care hospitals had comparable ratings for Pain Management and Discharge Information.

Satisfaction with Medical Services

The survey results revealed that patients who received their care at direct care MTFs rated all services higher than patients who received their care in a purchased care hospital (figure 6-6).

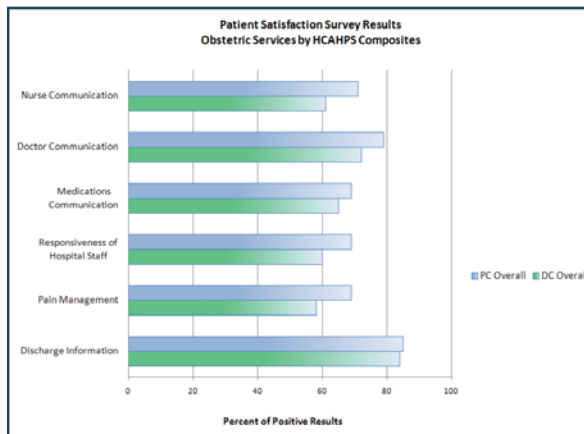


Figure 6-7. Patient Satisfaction Survey Results, Obstetric Services by HCAHPS Composites

Satisfaction with Obstetrics Services
 Women who received obstetric care through a TRICARE network hospital rated their level of satisfaction higher than women who received care through direct care hospitals for all of the six composites. The data show there are opportunities for improvement (figure 6-7).

**TRICARE
 OUTPATIENT
 SATISFACTION
 SURVEY (TROSS)**

The TRICARE Outpatient Satisfaction Survey (TROSS) reports on outpatient experiences of adults who receive ambulatory services from an MHS direct care (DC) MTF or through the MHS purchased care (PC) civilian network of providers. The survey is conducted monthly by mail and phone. Results here are presented from the more detailed mail survey. Results from the phone survey are consistent with those from the mail survey. This report summarizes mail survey results from a sample of patients who had an outpatient medical encounter sometime during 2008.

Of all the 2008 survey respondents, a total of 36,538 TRICARE patients responded in reference to a direct care outpatient medical encounter and 60,914 TRICARE patients responded in reference to a purchased care outpatient medical encounter.

Overall patient satisfaction was measured by the following two questions: (1) "Using any number from 0 to 10, where 0 is the worst health care possible and 10 is the best health care possible, what number would you use to rate your health care?" and (2) "Using any number from 0 to 10 where 0 is the worst health plan possible and 10 is the best health plan possible, what number would you use to rate TRICARE Prime?" Ratings of 8, 9, or 10 on an 11-point scale were indicative of patient satisfaction. For both indicators of satisfaction, direct care outpatient satisfaction fell below purchased care outpatient satisfaction. Fifty-four percent of MHS beneficiaries who had a direct care outpatient visit during 2008 rated satisfaction with their health care with an 8, 9, or 10 compared with 78 percent of purchased care respondents. Likewise, approximately 62 percent of direct care respondents rated satisfaction with their health plan with an 8, 9, or 10 compared with 78 percent of purchased care respondents during 2008.

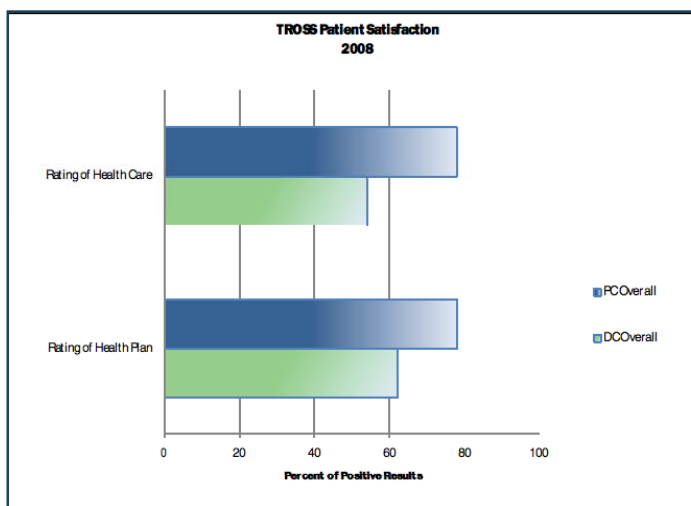


Figure 6-8. TROSS Patient Satisfaction 2008

INNOVATIONS
AND POLICY
TO ENHANCE
CLINICAL
QUALITY

The Department of Defense (DoD) has a range of supplemental programs and initiatives focused on enhancing the overall quality and breadth of health care provided across the enterprise. To this aim, the military health system (MHS) has instituted several policy initiatives aimed at improving the quality of care across the system. Examples of this include promoting increased transparency and supporting a pay-for-performance program that rewards Services based on performance on a range of criteria. The MHS has also established additional programs to further support specific areas of medicine. For example, with increased use of mental and behavioral health services, DoD/TRICARE Management Activity (TMA) established a dedicated entity that addresses policy issues in this area, to include evaluating whether programs meet established standards of care. Looking toward the future, DoD is committed to research and evaluation of future technologies that will yield benefits and improvements to military medicine.



VII

INNOVATIONS AND POLICY
TO ENHANCE CLINICAL QUALITY



44

BEHAVIORAL
MEDICINE
INITIATIVES

The Behavioral Medicine Division (BMD) was created in 2006 in recognition of the need for behavioral medicine input into a number of activities carried out at DoD level within the Office of the Chief Medical Officer/TMA. Specifically, BMD provides leadership on beneficiary behavioral health issues affecting both the direct care and purchased care components of TRICARE. In addition, BMD acts as the DoD lead in developing clinical guidance for the implementation of collaborative care within the direct care system.

Since its inception, BMD has focused on having an impact on technology, access to care, service integration and quality, and benefit evaluation and expansion. The following is a sample of programs and initiatives highlighting BMD's impact on quality of care in FY2008:

- **TRICARE Access Standards for Behavioral Health Care:** Clarified guidance for access standards for behavioral health care benefits for Service members and their families with TRICARE Prime with direct and purchased care, locator assistance for appointments, monitoring of access, and definitions of acuity.
- **Intensive Outpatient Services:** Clarified regulation and policy to permit the provision of intensive outpatient services for TRICARE beneficiaries at any TRICARE certified Partial Hospitalization Program.
- **National Defense Authorization Act for 2008 SEC 587—Autism RTC:** Advised on services, policy, and implementation of special education services to military-dependent children with autism. Monitored the evolving evidence base for effectiveness and

safety of interventions for autism. These actions led to the development of and participation in the implementation of the DoD Enhanced Access to Autism Services Demonstration, DoD's first demonstration project expanding access to services for military-dependent children with autism.

- **Respect-Mil Eval II:** Initiated and oversaw the clinical quality evaluation of the Army's RESPECT-MIL Behavioral Health in primary care programs. Study findings refuted a previous General Accounting Office report that most Service members identifying mental health concerns post-deployment are not referred for further care.
- **Primary Care Behavioral Health Integration:** Led an ambitious initiative to integrate behavioral health care into primary care clinics at DoD medical facilities around the world. A mental health integration working group was assembled in response to the DoD Mental Health Task Force Report to Congress 2007 recommendation 5.1.2.2: "The military Services should integrate mental health professionals into primary care settings." BMD provided service matter experts and led the working group comprised of Service primary care and behavioral health subject matter experts. BMD served as lead for the working group to develop standards and tools for quality evidence-based integration of behavioral health in primary care. Common terminology was defined and an evidence review was initiated. The working group will complete the evidence review, draw conclusions for standards based on review, and develop clinical, operational, and administrative recommendations to be vetted for health affairs policy.

Since its inception, BMD has focused on having an impact on technology, access to care, service integration and quality, and benefit evaluation and expansion.

- **DoD web resources:** Oversaw the development and implementation of DoD's most comprehensive web resource for Reserve, National Guard,

and Active Duty Service members and their families dealing with post-deployment mental health concerns www.afterdeployment.org.



TELEMEDICINE
AND ADVANCED
TECHNOLOGY
RESEARCH
CENTER
INITIATIVES

The Telemedicine & Advanced Technology Research Center (TATRC), a component of the Army's Medical Research and Materiel Command, is a central laboratory for advanced technology and telemedicine for DoD.

TATRC's mission is to explore science and engineering technologies ahead of programmed research, leveraging other programs to maximize benefits to military medicine. In FY2008, much of TATRC's \$350 million funding was spent on partnering with numerous

patients in fixed and mobile medical facilities and to locate, identify, assess, treat, and rescue battlefield casualties.

- **Health Information Technologies:** Oversees all health informatics-related programs within TATRC and is designated as the IM/IT research arm for the MHS Joint Medical Information Program Office.

- **Medical Imaging Technologies:** Focuses on four distinct research areas: Portable imaging and image-guided therapeutics, advanced high-performance imaging, computational methods and decision support in imaging, and optical/para-optical imaging techniques.

- **Biomonitoring Technologies:** Focuses on identifying and developing point-of-care medical technologies and support

architectures to improve military health care through the application of wireless information and sensor technologies.

- **Chronic Disease Management:** Reflects the use of advanced medical technology in primarily diabetes and heart disease. Current projects highlight the use of telemedicine, home care monitoring, evolving biosensor development, and advanced immunologic testing in vulnerable populations.

- **Neuroscience:** Leverages the latest technologies in prevention, diagnosis, treatment, and therapy to prevent injury or improve warfighter outcomes from traumatic brain injury (TBI), spinal cord and peripheral nerve injury, and the neuropsychologic effects of war. Advances in neuroprotection strategies, regenerative medicine, and materials science will enable retention

TATRC's mission is to explore science and engineering technologies ahead of programmed research, leveraging other programs to maximize benefits to military medicine.

universities, commercial enterprises, and other federal agencies in support of approximately 500 research projects.

TATRC's research projects are grouped and managed in portfolios, or program areas, along key product lines, and as new initiatives. Many of these overlap due to the nature of the research projects and the rapid growth in various technological areas, which generates new ideas and approaches. TATRC's research initiatives are designed to address the ever-changing world of medical requirements both on the battlefield and in hospitals of the future. Below is a sample of TATRC's research programs aimed at improving quality of care across the MHS:

- **Medical Robotics:** Adapts, integrates, and develops technologies to treat

or restoration of function.

- **Nano-Medicine and Biomaterials:** Focuses on identifying novel developments in materials science and biomaterials that can improve drugs and devices used for diagnosis and therapy in a broad range of medical conditions.

A sample of TATRC's 2008 accomplishments follows:

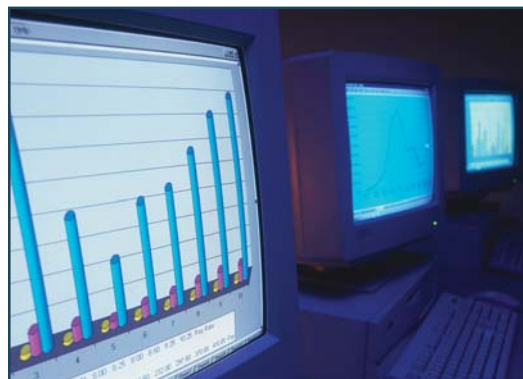
- Provided and helped deploy a brief neuropsychological test battery (ANAM4)—to be used for predeployment testing of every Service member to aid in the evaluation of functional changes and recovery of injured Service members—which was mandated for DoD-wide implementation by OSD(HA) (University of Oklahoma/OTSG Rehabilitation Medicine Proponency Office/TATRC).
- Convened the National Forum on the Future of the Defense Health Information System in partnership with Georgetown University and the Services' clinical informaticians to make recommendations for the longitudinal health record, effective

data warehousing, appropriate systems architecture, and syntactic and semantic interoperability for the DoD electronic health record.

- Provided a rapid turnaround fasciotomy procedures training program (DVD instructional video) to reduce damage from compartment syndrome; this training was offered to medical care providers before and in deployment (SBIR project developed in cooperation with TATRC, Institute of Surgical Research), and the American Academy of Orthopedic Surgeons).
- Established a tele-TBI program across Army regional medical commands to better connect injured Service members and their families to health care providers (requested by OTSG to support improvements in care, funding for TBI/post-traumatic stress disorder from OTSG).
- Contributed new concepts to the plan for the U.S. Army Dewitt Community Hospital (Fort Belvoir), in support of the Health Facilities Planning Agency, based on research in the "operating room of the future," surgical simulation and training, and device standardization conducted at TATRC-funded centers, including the University of Maryland, CIMIT, and Center for Advanced Surgical and Integrative Technology.

Advances in neuroprotection strategies, regenerative medicine, and materials science will enable retention or restoration of function.

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MHS
TRANSPARENCY

On August 22, 2006, President Bush issued Executive Order 13410: Promoting Quality and Efficient Health Care in Federal Government Administered or Sponsored Health Care Programs, which mandated that applicable health care programs measure the quality of health care services and report results to providers and beneficiaries. Subsequently, DoD began to work with the Veterans Administration (VA) and IHS to not only work on the transparency of these results, but also to align our work on transparency in the clinical quality arena.

During FY2008, DoD continued to work in alignment with the VA and IHS on transparency in the clinical quality arena. Specifically, inpatient ORYX® data for MTFs is now available for patients to see on the MHS Clinical Quality Management website (<https://www.mhs-cqm.info>). Plans are in place to add outpatient HEDIS® data in the near future. DoD is making strides to present MTF data side-by-side with civilian facility data so that our patients can make informed decisions about where they receive their care.



PATIENT
CENTERED
MEDICAL HOME

Despite evidence of providing high quality clinical care in the MTFs throughout the Services, and despite a medical benefit and health plan that is considered one of the most generous and comprehensive in the country, there are indications that military beneficiaries perceive their overall care to not be on a par with civilian counterparts. Specifically, areas identified as opportunities for improvement include perceptions of general satisfaction with health care, provider communication, access to care and continuity in comparisons with the civilian sector. To address these perceptions, in 2008, MHS leaders began the initial planning phase of a renewed approach to the delivery of health care. In short, the Patient-Centered Medical Home (PCMH) is a well-established model of primary care with an abundance of supporting evidence that offers the MHS an opportunity to seize the initiative and to successfully apply the principles and elements of the medical home for the military family. There is substantial evidence that care delivered by primary care providers in a PCMH is consistently associated with better outcomes, reduced mortality, fewer preventable hospital admissions for patients with chronic diseases, lower utilization, improved patient compliance with recommended care and lower medical spending.

The American Academy of Pediatrics (AAP), American Academy of Family Physicians (AAFP), American College of Physicians (ACP), and American Osteopathic Association (AOA), representing approximately 333,000 physicians, have developed the following joint principles to describe the characteristics of the PCMH:

- Personal Primary Care Provider (PCMBN).
- Primary Care Provider Directed Medical Practice (PCM is team leader).
- Whole Person Orientation (respectful, patient centered not disease or provider centered).
- Care is Coordinated and/or Integrated (across all levels of care).
- Quality and Safety (evidenced-based, safe medical care)
- Enhanced Access (meet access standards from the patient perspective).
- Payment Reform (incentivize the development and maintenance of the medical home).

The definitions and principles for the Medical Home described above are fully applicable to the MHS but need to be further delineated within the practice culture and mission. Senior Leadership of the MHS is highly committed the PCMH initiative and detailed planning and analysis will continue in 2009.

PAY-FOR-PERFORMANCE

As a result of escalating health care costs, the MHS has shifted to a value-based performance methodology to allocate funding. Under this method, the MHS developed and implemented a programming and allocation system that prospectively allocates funds in accordance with a commonly adopted value-based performance method. This method encompasses health care benefit activities, readiness and military-unique activities. Four parts of the prospective payment system include the value of health care, capitation, mission essential non-benefit activities, and pay for quality, satisfaction, and access.

Financial rewards for quality, satisfaction, and access to care are determined by performance on a range of attributes and metrics, which include comparisons to

...

DoD and civilian averages. Specifically, payments for quality of care are based on performance of HEDIS and ORYX measures. Rewards for satisfaction are based on beneficiary satisfaction with the health plan and level of health care provided as well as doctor's communication. Finally, payments based on access to care are determined by beneficiary responses to survey questions that ask about access to needed care and availability of appointments with a primary care manager, as well as whether appointment availability is within established standards for acute, routine, and well visits. The amount of money an MTF receives is based on the actual measure and its value, as well as the size of the patient population that is covered by the MTF, respectively.

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BIOSURVEILLANCE

Presidential Decision Directive PDD-7 (1996) was implemented in response to a series of reports that warned of increasing threats to the United States from emerging infectious diseases. This directive expanded the Department of Defense's (DoD's) role to provide support through global surveillance, training, research, and response to emerging infectious disease threats. Today, DoD continues to be an effective leader in the prevention, detection, and response to potential infectious disease threats to the health of military Service members and their families throughout the world. Through DoD's broad network and capabilities, the robust biosurveillance initiative helps protect the health of the Armed Forces and is a vital partner in the global effort to identify and control emerging infectious diseases.



BIOSURVEILLANCE



**GLOBAL
EMERGING
INFECTIONS
SURVEILLANCE
AND RESPONSE
SYSTEM**

The DoD Global Emerging Infections Surveillance and Response System (DoD-GEIS) is a Tri-Service organization focused on timely recognition and control of emerging infectious disease threats through systematic surveillance for action, research, response, training, and capacity building. The program executes its mission through three primary settings: the overseas research laboratory network, the military health system (MHS), and the Combatant Commands (COCOMs). This system enables early detection of medical threats by identifying patterns of symptoms before they are even identified as a disease, and it provides real-time, evidence-based decision support for the MHS providers and partners around the world.

DoD-GEIS' vision is to successfully develop, implement, support, and evaluate an integrated global emerging infectious disease surveillance and response system that supports the Armed Forces Health Surveillance Center (AFHSC) and promotes preparedness in U.S. forces, the MHS, and the global public health community. DoD-GEIS' mission helps protect the health of the Armed Forces and global public health by centrally coordinating a global system of partners that conducts emerging infectious disease surveillance and response; training and capacity building; fosters research, innovation, and integration; and assessing the program in a timely, efficient, comprehensive, and communicative manner.

These four goals form the pillars of DoD-GEIS and create the ability to recognize and identify emerging diseases, either in training or deployed forces that pose threats to readiness.

Although DoD-GEIS monitors all militarily-relevant infectious diseases in military forces, the following remain the priority surveillance conditions:

- Respiratory infections (RI).
- Gastrointestinal infections (GI).
- Febrile and vector-borne infections (FVBI).
- Antimicrobial resistance (AR).
- Sexually transmitted infections (STI).

In 2008, DoD-GEIS became a core component of the newly formed AFHSC. Now known as the GEIS Operations Division of the AFHSC, GEIS joins the Defense Medical Surveillance System and the DoD Serum Repository as part of this larger and

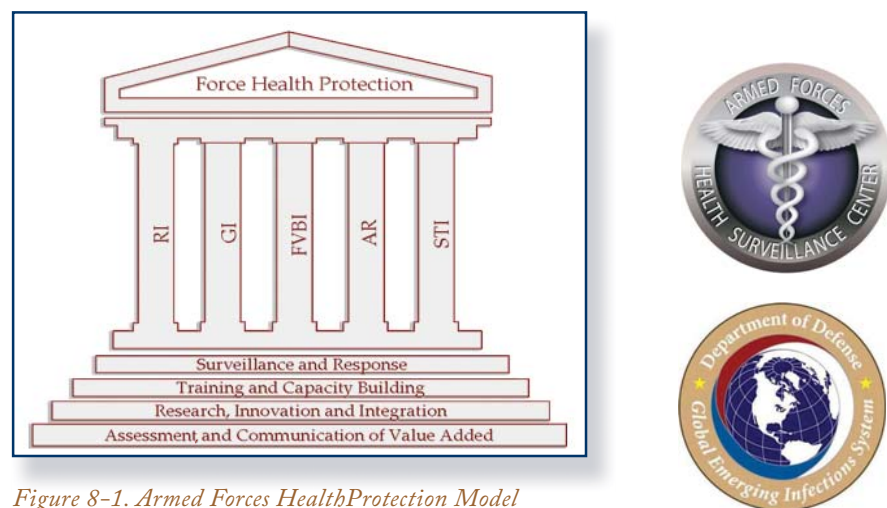


Figure 8-1. Armed Forces HealthProtection Model

more diverse and capable organization serving DoD. In addition, a new director assumed leadership of DoD-GEIS on July 14, 2008.

Within this new organizational framework, the worldwide partnership that is GEIS continued to promote and facilitate national and international preparedness for emerging infections while maintaining its focus on protecting the health of all DoD health care beneficiaries. GEIS continued to promote, expand, and execute its strategic goals of surveillance and detection, response and readiness, integration and innovation, and cooperation and capacity building.

Efforts by the DoD-GEIS partnership in respiratory infections were many during FY2008. The respiratory disease surveillance program at military training centers provided invaluable information on the extent and severity of morbidity, the specific infectious agents responsible, and influenza vaccine effectiveness. In response to the availability of a new generation of meningococcal vaccines and the changing nature of the global epidemiology of meningococcal disease, a military laboratory-based meningococcal surveillance program got underway. When fully operational, this program will monitor the incidence of meningococcal disease, evaluate and describe cases, thoroughly describe etiologic agents, identify vaccine failures, assess the global threat to military populations, and provide data to support DoD policies regarding vaccination, revaccination, and use of prophylactic drugs.

For the third year, DoD-GEIS administrated the DoD influenza surveillance program by coordinating the DoD clinical, syndromic, and laboratory-based surveillance activities for influenza and other acute respiratory infections and influenza-like illnesses, primarily among military and other DoD health care beneficiaries. The position of DoD as a major contributor of current data and information on influenza threats

was strengthened by promoting and expanding collaborations that improve military health facility and other partner laboratory capacity infrastructure. DoD-GEIS continued to support effective, central communication and coordination strategies among DoD partners, civilian agencies, and international organizations. Academic pandemic and avian influenza programs and exercises that enhanced global pandemic preparedness also were supported.

These efforts achieved and strengthened routine seasonal influenza testing capabilities, novel virus and pandemic and avian influenza surveillance, and more timely and efficient case investigations across DoD. DoD-GEIS was active in expanding the DoD influenza surveillance program to cover all five Combatant Command (COCOM) areas of responsibility. Expansions included the following:

- **PACOM:** Bangladesh, Bhutan, Cambodia, Indonesia, Nepal, Palau, Philippines, Republic of Korea, Saipan, Singapore, Thailand, and 7th Fleet.
- **SOUTHCOM:** Four Central American militaries, Panamanian ministry of health, and Colombian military.
- **CENTCOM:** Middle East, former Soviet Union republics, and Joint Task Force-Horn of Africa.
- **AFRICOM:** Cameroon, Ghana, Kenya, Nigeria, Tanzania, Uganda, and North Africa.
- **EUCOM:** Landstuhl Regional Medical Center.
- **USACHPPM:** Europe and 5th Fleet.

Through DoD-GEIS-supported programs, DoD influenza laboratory diagnostic capabilities expanded both inside and outside the continental United States in FY2008. The Armed Forces Research Institute of Medical Sciences (AFRIMS) began using its new veterinary BSL-3 laboratory extensively and tested and commissioned its human BSL-3 laboratory that will be operational in FY2009; the Walter Reed/AFRIMS Research Unit Nepal

continued to operate jointly with the Nepalese Ministry of Health in Kathmandu, Nepal; the Naval Hospital in Yokosuka, Japan, continued serving the 7th Fleet; and the Naval Health Research Center (NHRC) progressed in commissioning its new BSL-3E laboratory. In FY09 and beyond, BSL-3 laboratory capacity is planned for the U.S. Army Medical Department Activity in Yongsan, Republic of Korea, and the Landstuhl Regional Medical Center in Germany. Timely availability of reliable, state-of-the-art diagnostic laboratory capacity is essential to program success. Through DoD-GEIS headquarters, an interagency agreement was signed with the Chemical Biological Medical Systems-Joint Program Executive Office to use the CDC's influenza A/H5 as well as the pandemic influenza A/H1N1 (pH1N1) assays, recently cleared by the U.S. Food and Drug Administration (FDA), for use with the DoD Joint Biological Agent Identification and Diagnostic System (JBAIDS) laboratory testing platform. USAMRIID in collaboration with the NHRC and the US Naval Medical Research Unit No. 3 (NAMRU-3), is conducting the necessary preclinical assay platform validation studies for FDA clearance. In addition, DoD-GEIS has supported USAMRIID's development of a panel of 21 influenza strains that can be accessed to evaluate and validate new influenza diagnostic assays.

Collaborations between militaries were forged by DoD-GEIS in FY2008 to improve consistency among countries in respiratory disease trend analyses and studies about similar at-risk populations.

Collaborations between militaries were forged by DoD-GEIS in FY2008 to improve consistency among countries in respiratory disease trend analyses and

studies about similar at-risk populations. As an added benefit, these collaborations are providing unique insights into cross-country influenza strain circulation and the generation of geographically specific joint threat assessments. These activities strengthen COCOM surgeon discussions and collaborations with host country military, clinical, and public health authorities. DoD-GEIS military-military partners include the following:

- **Kenyan and Nigerian military and Tanzania People's Defense Forces:** Surveillance at military health care facilities.
- **Polish Military Institute of Hygiene and Epidemiology:** Surveillance at five basic training sites and preliminary work on future pandemic influenza preparedness and response exercises.
- **Israeli Defense Forces:** Surveillance at two military health care facilities and one basic training site.
- **Hungarian Defense Forces:** Surveillance at five military health care facilities.
- **Singaporean Armed Forces:** Surveillance at seven military health care facilities.
- **Colombian Army:** Establishment of disease surveillance system.
- **Peruvian Military:** Expansion of web- and phone-based syndromic and disease surveillance system (Alerta)

Regarding febrile illness syndromes, DoD-GEIS partners made progress toward standardizing malaria drug resistance testing across all DoD facilities and monitored for malaria in all military forces and for the reemergence of *Plasmodium vivax* malaria in Korea. National Aeronautics and Space Administration's (NASA's) predictive model for Rift Valley fever outbreaks

in and South Africa which provided reliable advance warning alerts on the pending threats to DoD regional and international partners and encouraged

preemptive, targeted action to prevent and/or mitigate human morbidity and mortality for this disease in 2008. DoD-GEIS partners are collaborating to develop a similar tool for Japanese encephalitis. These predictive models will provide DoD with data to support risk assessments and policy recommendations on vaccination programs.

A standardized antimicrobial resistance monitoring system for the global the MHS came closer to reality in FY2008. Several major military medical facilities are striving to reach consensus on the best practices for DoD-wide capability to identify important pathogens associated with wound infections. DoD-GEIS partners are developing a centralized clinical, laboratory, and pharmacy database for antimicrobial resistance monitoring.

The ongoing emphasis by DoD-GEIS on determining the incidence of STIs has resulted in a >100-percent increase over 2001 in annual screenings for Chlamydia in at-risk military females. FY2008 saw the implementation of a screening program in the U.S. Army in Korea that confirmed its value by identifying a high prevalence of infected soldiers. Collaboration with the Centers for Disease Control and Prevention (CDC) is raising awareness among military organizations for the need to provide drug-resistant *Neisseria gonorrhoea* strains to CDC for use in development of nonculture tests for *N. Gonorrhoea*.

Throughout FY2008, the programs DoD-GEIS has put in place continued to generate essential data that bolstered DoD and global public health efforts. The robust training effort of DoD-GEIS continued and grew, notably in a productive new program through the University of Iowa that stretches to Mongolia. Many systems expanded, and additional programs were instituted. Key FY2008 global and select accomplishments follow.

Ten FY2008 Global Accomplishments of DoD-GEIS

1. Conducted global emerging infection surveillance and response activities and efforts with 39 partners in 111 countries.
2. Expanded the DoD global influenza surveillance program to 72 countries, 20 Navy ships, 1 foreign ship, and 6 clinics along the Mexican border (four in California, two in Mexico); increased laboratory capability system-wide; and collected and analyzed more than 21,000 respiratory samples. This represents an expansion of more than 230 percent from levels before funding for pandemic and avian influenza was available.
3. Served as primary resource for global avian influenza surveillance throughout the world. NAMRU-3 confirmed 15 (3 from Pakistan, 12 from Egypt) of the 57 global human H5 infections in FY2008 (26 percent).
4. Improved laboratory infrastructure at 52 sites in 29 countries, including 16 military and 36 civilian laboratories, with emphasis on influenza and leveraged capability for other emerging infectious disease initiatives.
5. Sponsored and/or conducted 4 training exercises with more than 2,900 representatives from 53 countries.
6. Responded to more than 20 outbreaks globally in military and civilian populations. These outbreaks included influenza, dengue, yellow fever, diarrhea (norovirus and rotavirus), leptospirosis, pneumonia, Rift Valley fever, hemorrhagic fevers, rickettsial illnesses, and poultry die-offs from suspect avian influenza.
7. Discovered emerging and reemerging pathogens:
 - New species of *Anopheles* mosquito in the Republic of Korea revealed by DNA sequencing at Walter Reed Army Institute of Research (WRAIR).
 - The Republic of Korea surveillance program also identified a new

- Hantavirus, Imjin virus, carried by the insectivore rodent *Crocidura Laciura*.
 - Isolation and description of a new virus, Chapare virus, from a fatal case of hemorrhagic fever in Bolivia published by Naval Medical Research Center Detachment (NMRCDC).
 - Reemergence of dengue serotype 4 found by NMRCDC.
 - Emerging strains of malaria potentially expressing artesunate resistance described in Cambodia, Sudan, Thailand, and Yemen.
8. Expanded coverage in Africa with projects in Cameroon, Ethiopia, Ghana, Kenya, Libya, Morocco, Nigeria, Sierra Leone, Somalia, Sudan, and Uganda.
 - Improvements in host country diagnostic testing.
 - Emerging infectious disease outbreak detection and control.
 - Surveillance for influenza, rotavirus, and hospital-based bacterial meningitis.
 9. Predicted and provided early warning of Rift Valley fever outbreaks and efficient responses in Sudan (June), South Africa (February and May), and Madagascar (February) through collaboration in ecological and climate monitoring and surveillance with NASA, United States Agency for International Development (USAID), United States Department of Agriculture (USDA), World Health Organization, Food and Agriculture Organization (FAO), host countries, and international partners.

10. Standardized laboratory characterization of *Acinetobacter* using uniform laboratory test systems and software at major U.S. military medical facilities treating Service members with infected wounds. This accomplishment paves the way for laboratory standardization of other microbes of military interest.

Ten FY2008 Select Accomplishments of DoD-GEIS

1. Lassa fever diagnostic laboratory capacity was established for Sierra Leone by USAMRIID, providing earlier diagnosis and more effective care of cases and reducing risk to U.S. forces in the area. This activity was a significant FY2008 achievement for health diplomacy.
2. A study of archived data from the Australian Army in 1918–1919 conducted by the Australian Army Malaria Institute provided evidence of a protective effect of an early wave of influenza infections that may have critical implications for U.S. pandemic preparedness decisions on prepandemic vaccine development and stockpiling.
3. Artemisinin resistance in *Plasmodium falciparum* was identified along the Thai/Cambodian border by AFRIMS and in Southern Cambodia by and South Africa. This finding raises concern over the antimalarial that is predominately used in the area and emphasizes the existing requirement to develop future control options critical for local public health and troops operating in the area.
4. Timely and actionable information was provided for inclusion of strains in the annual seasonal as well as pandemic H1N1 (pH1N1) vaccines. The H1N1 Brisbane-like virus seed strain for the 2008–2009 and 2009–2010 live attenuated influenza vaccine was collected by USAFSAM from four dependent brothers at Ellsworth AFB in July 2007 and was shared with CDC. In addition, identification of the first two cases of pH1N1 in the

DoD-GEIS standardized laboratory characterization of *Acinetobacter* using uniform laboratory test systems and software at major U.S. military medical facilities treating Service Members with infected wounds.

- US in southern California led to eventual contribution to the CDC/WHO of the parent seed strain (A/California/7/2009 (H1N1)v-like) used for pandemic vaccine development.
5. NHRC's surveillance of febrile respiratory illness at recruit training centers continued the valuable near-real-time influenza vaccine effectiveness studies and collection of information for the adenovirus vaccination initiative. The resurgence of adenovirus types 3, 7, 14, and 21 was followed among recruit populations.
 6. Major steps were taken to obtain FDA clearance for inclusion of the CDC's influenza A (H5) and A(pH1N1) diagnostics in the JBAIDS platform to greatly increase available influenza diagnostic capabilities for deployed forces.
 7. Diarrheal pathogen surveillance continued in five sites in Thailand and three sites in Nepal. Because the prevalence of *Campylobacter* was found to be low in Nepal, the use of less expensive quinolones was continued.
 8. Important malaria disease variables that facilitate ongoing monitoring

were identified and characterized, and the development and targeting of interventions in South Korea have been described in detail. WRAIR used these descriptions to develop MosquitoMap, a web resource to display mosquito occurrences, and designed a Mal-area calculator for estimating future disease risk in South Korea.

9. AFRIMS demonstrated that specimens of chikungunya from a southern Thailand outbreak were caused by a different viral subtype than those that caused outbreaks in the western Indian Ocean islands in 2008.
10. A model sexually transmitted disease surveillance and follow up treatment protocol was established for arriving soldiers in South Korea. Communication and collaboration with CDC were enhanced, and a modified CDC instrument for surveying sexually transmitted disease laboratory capabilities was used to assess laboratory tests at Army facilities worldwide. All services exhibited significant increases in annual Chlamydia screening rates for at-risk military females.



EARLY WARNING SYSTEMS

GEIS and its partners have developed several automated syndromic surveillance systems. Two examples are the Early Warning Outbreak Recognition System (EWORS) and the Electronic Surveillance System for Early Notification of Community-based Epidemics (ESSENCE).

EWORS

EWORS is an innovative syndromic surveillance system for early detection of disease outbreaks that was developed and successfully implemented in Indonesia with partial GEIS funding and in collaboration with CDC. EWORS, subsequently, expanded to

Cambodia, Lao PDR, and Peru. EWORS collects real-time data on

disease outbreaks submitted by hospital and health facilities in those countries. Statistical, technological, and training enhancements are being explored that may apply to other EWORS locations and early warning surveillance systems in resource-poor settings.

In collaboration with GEIS, NAMRU-2 fully implemented EWORS in Laos. In Indonesia, this system was successfully transitioned to the ministry of health and continues to provide valuable information as a tool to respond to disease outbreaks. In Laos, the system is located at hospitals throughout the country with information being directed to the Center for Laboratory and Epidemiology, where it is analyzed and disseminated to the participating

hospitals. Early results indicate this system successfully correlated the results of diagnostic testing during recent influenza-like illness outbreaks in Indonesia.

ESSENCE

DoD developed an improved version of ESSENCE Medical Surveillance. ESSENCE, a web-based syndromic surveillance application, examines DoD health care data for rapid or unusual increases in the frequency of certain syndromes. An increase in frequency may be a sign of diseases occurring during possible outbreaks of communicable illnesses or from the possible use of biological warfare agents.

Begun in 1999 to collect health data in the Washington, DC, area, ESSENCE now monitors much of the MHS, which includes more than 400 facilities around the world. Local, regional, and national military officials use ESSENCE to screen for possible disease outbreaks among Service members, retirees, and family members.

The system links medical data with geographic information systems, allowing DoD public health investigators to track the spread of

symptoms by drilling down to a specific location, such as a ZIP code. Analysis of the data can help medical personnel move quickly and early to treat affected individuals before an illness becomes an epidemic or pandemic—and before it becomes potentially life-threatening.

In the event of a possible outbreak, DoD officials are alerted and kept informed about the results of investigations. As needed, DoD public health officials then notify their counterparts at the Department of Homeland Security and CDC.

ESSENCE uses sophisticated computer algorithms to calculate expected rates of infectious disease syndromes in the DoD population. ESSENCE also uses standardized disease codes, or International Classification of Diseases (ICD-9), to organize patients' diagnoses into the syndromes of most interest. ESSENCE provides the MHS with the information needed to facilitate informed decision-making and enable timely response, including the allocation of any needed medical assistance, resources, and supplies to control disease outbreaks and render timely medical care to those already affected.

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APPENDICES



APPENDICES



**APPENDIX A:
ACRONYMS**

AAAHC	Accreditation Association of Ambulatory Health Care
ACC	American College of Cardiology
ACEI	Angiotensin Converting Enzyme Inhibitor
ACTD	Advanced Concept Technology Demonstration
AD	Active Duty
AF	Atrial Fibrillation
AFHSC	Armed Forces Health Surveillance Center
AFIOH	Air Force Institute for Operational Health
AFRIMS	Armed Forces Research Institute of Medical Sciences (Bangkok, Thailand)
AHA	American Heart Association
AHLTA-T	AHLTA-Theater
AHRQ	Agency for Healthcare Research and Quality
AMI	Acute Myocardial Infarction
AOA	American Osteopathic Association
ARB	Angiotensin Receptor Blocker
ASC	Andersen Simulation Center
ATTC	Army Trauma Training Center
BCF	Basic Core Formulary
BMD	Behavioral Medicine Division
BSC	Balanced Score Card
CAHPS	Consumer Assessment of Health Plans Survey
CDC	Centers for Disease Control and Prevention
CDR	Clinical Data Repository
CDW	Clinical Data Warehouse
CERPS	Center for Education and Research in Patient Safety
CHF	Congestive Heart Failure
CM	Case Management
CME	Continuing Medical Education
CMS	Centers for Medicare and Medicaid Services
CMSP	Clinical Measures Steering Panel
CNE	Continuing Nursing Education
CONUS	Continental United States
COPD	Chronic Obstructive Pulmonary Disease
CPG	Clinical Practice Guideline
CPSC	Clinical Proponency Steering Committee
CQF	Clinical Quality Forum
CQMP	Clinical Quality Management Program
C-STARS	Center for Sustainment of Trauma and Readiness Skills
DC	Direct Care
DCS	Direct Care System
DHIMS	Defense Health Information Management System
DM	Disease Management
DMAA	Disease Management Association of America
DMDC	Defense Manpower Data Center
DoD	Department of Defense
DP	Designated Provider
EBM	Evidence-Based Medicine
EHR	Electronic Health Record
ER	Emergency Room
ESSENCE	Electronic Surveillance System for the Early Notification of Community-Based Epidemics
EUCOM	European Command
EWORS	Early Warning Outbreak Recognition System
FMEA	Failure Mode and Effects Analysis



GAO	Government Accountability Office
GEIS	Global Emerging Infections Surveillance and Response System
GERD	Gastro-Esophageal Reflux Disease
HA	Health Affairs
HAI	Healthcare Associated Infection <i>and</i> Hospital Acquired Infection
HCAHPS	Hospital Consumer Assessment of Healthcare Providers and Systems
HCD	Health Care Data, Inc.
HCSDB	Health Care Survey of DoD Beneficiaries
HCTCP	Health Care Team Coordination Program
HEDIS	Healthcare Effectiveness Data and Information Set
HF	Heart Failure
HFAP	Healthcare Facilities Accreditation Program
HIP	Healthcare Innovations Program
HQA	Hospital Quality Alliance
HQMC	Headquarters Marine Corps
ICD-9-CM	International Classification of Diseases, 9th Edition, Clinical Modification
IHI	Institute for Healthcare Improvement
IOM	Institute of Medicine
JMeWS	Joint Medical Workstation
JMO-T ACTD	Joint Medical Operations-Telemedicine Advanced Concept Demonstration Program
JTF	Joint Task Force
LOS	Length of Stay
LVEF	Left Ventricular Ejection Fraction
LVS	Left Ventricular Systolic
LVSD	Left Ventricular Systolic Dysfunction
MC	Managed Care
MCSCs	Managed Care Support Contracts
MDR	Military Health System Data Repository
MEDCOM	Medical Command
MHS	Military Health System
MHSPHP	Military Health System Population Health Portal
MM	Medical Management
MSAT	Medical Situational Awareness in the Theater
MTF	Medical Treatment Facility
NAD	Non-Active Duty
NAMRU-2	Naval Medical Research Unit No. 2 (Indonesia)
NAMRU-3	Naval Medical Research Unit No. 3 (Egypt)
NCAMSC	National Capital Area Medical Simulation Center
NCQA	National Committee on Quality Assurance
NDAA	National Defense Authorization Act
NF	Non-Formulary
NHRC	Naval Health Research Center
NHRCD	Naval Health Research Center Detachment
NHSN	National Healthcare Safety Network
NNDC	National Naval Dental Center
NPIC	National Perinatal Information Center
NQF	National Quality Forum
NQMC	National Quality Monitoring Contractor
NQMP	National Quality Management Program
NRT	Nicotine Replacement Therapy
OASD	Office of the Secretary of Defense

OCMO	Office of the Chief Medical Officer
OCONUS	Outside the Contiguous United States
PACOM	U.S. Pacific Command
PC	Purchased Care
PCI	Percutaneous Coronary Intervention
PHMMD	Population Health and Medical Management Division
PN	Pneumonia
PR	Pregnancy
PSC	Patient Safety Center
PSI	Patient Safety Indicator
PSP	Patient Safety Program
PSR	Patient Safety Reporting
QI	Quality Indicators
RCA	Root Cause Analysis
SADR	Standard Ambulatory Data Record
SAP	Scientific Advisory Panel
SCIP	Surgical Care Improvement Project
SIDR	Standard Inpatient Data Record
SMMAC	Senior Military Medicine Advisory Council
SRE	Serious Reportable Events
TATRC	Telemedicine & Advanced Technology Research Center
TBI	Traumatic Brain Injury
TeamSTEPPS	Team Strategies and Tools to Enhance Performance and Patient Safety
TJC	The Joint Commission
TMA	TRICARE Management Activity
TRC	Team Resource Centers
TRISS	TRICARE Inpatient Satisfaction Survey
TRO	TRICARE Regional Office
TROSS	TRICARE Outpatient Satisfaction Survey
UF	Uniform Formulary
UM	Utilization Management
URAC	Formerly Utilization Review Accreditation Commission (now acronym is the name of the organization)
USACHPPM	United States Army Center for Health Promotion and Preventive Medicine
USAMRU-K	United States Army Medical Research Unit–Kenya
USUHS	Uniformed Services University of the Health Sciences
VA	Veterans Administration
VBAC	Vaginal Birth After Caesarean Section

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APPENDIX B: CERTIFICATIONS AND ACCREDITATIONS

The Accreditation Association of Ambulatory Health Care, Inc.

The Accreditation Association of Ambulatory Health Care, Inc. (AAAHC) is a private, non-profit organization that accredits organizations in a wide variety of ambulatory health care settings. The Air Force uses AAAHC for its ambulatory clinics as a more appropriate accrediting body than TJC. The Air Force continues to maintain accreditation for its hospitals through TJC.

Cancer Program

Our cancer program is certified by a survey every 3 years by the American College of Surgeons Commission on Cancer.

Cardiology

The Accreditation Council for Graduate Medical Education (ACGME) is responsible for the accreditation of post-MD medical training programs in cardiovascular disease within the United States. Accreditation is accomplished through a peer review process and is based on established standards and guidelines.

Clinical Investigation Department

1. Association for the Assessment and Accreditation for Laboratory Animal Care (AAALAC).
2. The U.S. Department of Health and Human Services (HHS) Office of Laboratory Animal Welfare (OLAW), which issues assurance to use laboratory animals.
3. The HHS Office of Human Research Protection, which issues federal-wide assurance to have human subjects research.
4. The Department of the Navy Human Research Protection Program, which issues DoD assurance for human subjects protection.
5. Additionally, personnel engaged in human research receive certificates of training from the Collaborative Institutional Training Initiative (CITI).

Dental

1. The Advanced Education in General Dentistry (AEGD) program is accredited by the American Dental Association's (ADA's) Council on Dental Accreditation (CODA) every 7 years. The AEGD program passed its most recent accreditation in March 2006 and is due again in 2013.
2. The Oral and Maxillofacial Surgery (OMFS) and General Practice Residencies (GPR) also are accredited by CODA. Both are certificate programs. The OMFS program will have reaccreditation site visit in March 2008, and the GPR program is due in 2011. OMFS accreditation is good for 5 years and GPR for 7 years.
3. The U.S. Navy Dental Corps is designated as a recognized continuing education (CE) provider by the Continuing Education Recognition Program (CERP) conducted under auspices of the American Dental Association. The U.S. Navy Dental Corps also is designated as a nationally approved sponsor by the Academy of General Dentistry (AGD). All formal CE programs sponsored by the Navy Dental Corps are accepted by AGD for Fellowship, Mastership, and Membership Maintenance Credit. A list of CE training courses is submitted to the National Naval Dental Center (NNDC), Bethesda, biannually. NNDC submits a report to ADA and AGD, recertifying the Dental Corps as a CERP provider.

Diabetes Care

The American Diabetes Association—Certificate of Recognition is from 7 January 2006 to 7 January 2009. The association recognizes our diabetes self-management education program as meeting the national standards for diabetes self-management education. It has specific requirements that require documents be kept on file and are subject to inspection by the American Diabetes Association.

Graduate Medical Education (ACGME)

Facilities with Graduate Education Programs are fully accredited.

The Joint Commission (TJC) evaluates and accredits more than 16,000 health care organizations and programs in the U.S. including MTF hospitals. The process focuses on systems critical to the safety and the quality of care, treatment, and services and comprises three major components: annual self-assessment, quarterly performance measures, and a triennial onsite survey. The annual self-assessments require organizations to determine their compliance with each of the standards.

Laboratory (which includes the Blood Bank/Blood Donor Center) **is inspected and accredited by the following organizations:**

1. College of American Pathologists (CAP): Every 2 years.
2. American Association of Blood Banks (AABB): Every 2 years.
3. Food and Drug Administration (FDA): 1–2 years. All inspections are unannounced and last 2–5 days.
4. A current Clinical Laboratory Improvement Program (CLIP) certificate is maintained. The CLIP certificate is issued by a military organization, Center for Clinical Laboratory Medicine (CCLM), every 2 years and is equivalent to a civilian Clinical Laboratory Improvement Amendments (CLIA) certificate.

Mental Health/Substance Abuse Treatment Program

1. Residency Review Committee (RRC) certification for residency.
2. Accredited by the American Psychological Association as a Clinical Psychology Internship Training Site.

3. American Psychological Association for Clinical Psychology Internship: 7-year accreditation, 2007.
4. Accreditation Council for Graduate Medical Education: 5-year accreditation 2004–2009.
5. Electroconvulsive therapy (ECT) certification (individual).
6. Suboxone certification allows for dispensing of Suboxone for the treatment of opioid dependence (individual).
7. Lanterman-Petris-Short (LPS) designated facility. Allows patients to be admitted involuntarily to the facility (individual: all residents complete training).

Navy Environmental and Preventive Medicine Unit

1. Laboratory is inspected and accredited by COLA.
2. Maintains a certificate of registration with the Centers for Disease Control and Prevention (CDC) Select Agent Program and the Animal and Plant Health Inspection Service (APHIS) Agriculture Select Agent Program to possess, use, and transfer select agents and toxins.

Pharmacy

The Pharmacy Residency Program has a certificate of accreditation for the residency program in Pharmacy Practice by the American Society of Health-System Pharmacists.

Radiology

1. Radiation Therapy Division certified in radiation oncology by the American College of Radiology since 1997.
2. Mammography is accredited by the American College of Radiology (ACR) and certified as a mammography facility by the Food and Drug Administration (FDA).



