OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

SEP 15 2009

The Honorable Carl Levin
Chairman, Committee on Armed Services
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

The enclosed annual report responds to the requirement in Section 723 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2000 that requires an annual report to Congress on the quality of health care furnished under the health care programs of the Department of Defense (DoD). Section 742 of NDAA for FY 2006 contains requirements for minor edits to the content of the report. Additionally, the DoD Health Care Quality Report is an avenue for continuous communication with Congress on the status of quality care in the Military Health System (MHS) as recommended by the Healthcare Quality Initiatives Review Panel.

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During the timeframe of the report, the MHS has continued to provide high quality inpatient and outpatient health services to DoD beneficiaries in the United States and overseas, while providing the most effective combat medical operations in history. Thank you for your continued support of the MHS.

Sincerely,

Ellen P. Embrey
Deputy Assistant Secretary of Defense
(Force Health Protection and Readiness)
Performing the Duties of the
Assistant Secretary of Defense
(Health Affairs)

Enclosure:
As stated

cc:
The Honorable John McCain
Ranking Member

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

SEP 15 2009

The Honorable Ike Skelton
Chairman, Committee on Armed Services
U.S. House of Representatives
Washington, DC 20515

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Deputy Assistant Secretary of Defense
(Force Health Protection and Readiness)
Performing the Duties of the
Assistant Secretary of Defense
(Health Affairs)

Enclosure:
As stated

cc:
The Honorable Howard P. "Buck" McKeon
Ranking Member

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

SEP 15 2009

The Honorable Daniel K. Inouye
Chairman, Committee on Appropriations
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

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As stated

cc:
The Honorable Thad Cochran
Ranking Member

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

SEP 15 2009

The Honorable David R. Obey
Chairman, Committee on Appropriations
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

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Performing the Duties of the
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Enclosure:
As stated

cc:
The Honorable Jerry Lewis
Ranking Member

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

SEP 15 2009

The Honorable Daniel K. Inouye
Chairman, Subcommittee on Defense
Committee on Appropriations
United States Senate
Washington, DC 20510

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Performing the Duties of the
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(Health Affairs)

Enclosure:
As stated

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The Honorable Thad Cochran
Ranking Member

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

SEP 15 2009

The Honorable John P. Murtha
Chairman, Subcommittee on Defense
Committee on Appropriations
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

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Performing the Duties of the
Assistant Secretary of Defense
(Health Affairs)

Enclosure:
As stated

cc:
The Honorable C. W. Bill Young
Ranking Member

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

SEP 15 2009

The Honorable Ben Nelson
Chairman, Subcommittee on Personnel
Committee on Armed Services
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

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Performing the Duties of the
Assistant Secretary of Defense
(Health Affairs)

Enclosure:
As stated

cc:
The Honorable Lindsey O. Graham
Ranking Member

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

SEP 15 2009

The Honorable Susan Davis
Chairwoman, Subcommittee on Military Personnel
Committee on Armed Services
U.S. House of Representatives
Washington, DC 20515

Dear Madam Chairwoman:

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Performing the Duties of the
Assistant Secretary of Defense
(Health Affairs)

Enclosure:
As stated

cc:
The Honorable Joe Wilson
Ranking Member

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

SEP 15 2009

The Honorable Joseph R. Biden
President of the Senate
Washington, DC 20510

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Dear Mr. President:

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(Health Affairs)

Enclosure:
As stated

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

SEP 15 2009

The Honorable Nancy Pelosi
Speaker of the House of Representatives
U.S. House of Representatives
Washington, DC 20515

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Dear Madam Speaker:

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Deputy Assistant Secretary of Defense
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Performing the Duties of the
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(Health Affairs)

Enclosure:
As stated

Department of Defense Health Care Quality Report to Congress

TRICARE
Tricare Management Activity

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A Message from Assistant Secretary of Defense (Health Affairs) Director of the TRICARE Management Activity

It is with great pride that I submit the FY2007 Department of Defense Report to Congress on HealthCare Quality. 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 Military Health System (MHS) activity, performance and achievements occurring between 1 October 2006 and 30 September 2007. As required by law, the report covers: measures of healthcare quality, population health, patient safety, patient satisfaction, use of evidence-based health care practice, and effectiveness of biosurveillance for emerging epidemics.

The mission of the MHS, to provide optimal Health Services in support of our nation's military mission—anytime, anywhere, provides constancy of purpose as we serve our nation's heroes and their families. Our goal is to enable the members of the Armed Forces to meet the enormous challenges of today and tomorrow by shaping an integrated and seamless military health system that delivers the highest quality medical care to all beneficiaries.

With a renewed focus on quality, senior MHS medical leadership has dedicated time and resources in 2007 to formulating the strategic direction and vital goals necessary to sustain the uniformed health system and ensure high quality healthcare is available for all those entrusted to our care. The plan to implement these goals focuses on how we define and measure mission success and how we ensure continuous performance improvement. This report provides an overview of MHS Quality Health Care including initiatives and activities that demonstrate our commitment to provide the finest care to our beneficiaries. We are committed to meeting our mission and ensuring high-quality, benchmarked healthcare with the goal of the MHS being the healthcare of choice for our military families and the workplace of choice within our communities.

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.

Ward S. Casscells, MD

DoD Healthcare Quality Program Report Requirements

The requirement for the 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
- 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).

Executive Summary: Key Findings for FY 2007

Clinical Quality Management in the Military Health System

The Military Health System (MHS) is a worldwide healthcare delivery system operated by the Department of Defense (DoD) providing high quality care for beneficiaries at home and abroad. Since its inception more than a decade ago, TRICARE continues to refine and enhance the benefit and health programs in a manner consistent with industry standard for care practices and statutes to meet the changing health care needs of beneficiaries. The MHS efforts to provide high quality healthcare and to improve performance includes these elements:

- **Commitment to Quality and Quality Patient Care**
  MHS employs the best practices in health care delivery, partnering with our beneficiaries in an integrated health delivery system. Globally accessible health and business information enables patient-centered evidence-based processes that are both effective and efficient.
- **Guiding Principles**
  The MHS is a global system delivering health services anytime, anywhere. In everything we do, we adhere to common principles for quality adopted from the Institute of Medicine (IOM) which include: safety; effectiveness; timeliness; patient centered; efficient; and equitable. These principles are essential for accomplishing our mission and achieving our vision.
- **Quality Architecture**
  The assessment of the quality of health care provided by the DoD is measured in a variety of ways including: centralized credentialing and quality assurance; subject matter expertise and support to 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 TRICARE Clinical Quality Forum; and Clinical Measures Steering Panel.
- **Systems and Processes Supporting Quality Outcomes**
  Systems and processes supporting quality outcomes include: the use of Evidence-based practice; Clinical Practice Guidelines (CPG); Clinical Quality Measures; Quality Assurance; Certifications and Accreditations; Medical Management Education and Training; The MHS Population Health Portal; and AHLTA (the military's electronic health record).

MHS Population Health and Medical Management

The aim of Population Health (PH) is to step beyond the individual-level focus of medicine by addressing a broad range of factors that impact health on a population-level, such as environment, social structure and resource distribution. The MHS PH initiatives include the demonstration projects on Healthy Choices for Life. In 2007, these Healthy Choices for Life demonstration projects continued to address tobacco with the Tobacco Cessation Project – "Tobacco Free Me", obesity with the Weight Management Program – "Healthy Eating and Active Living in TRICARE Households" (HEALTH), alcohol with the Web-based alcohol abuse prevention education pilot project – "Program for Alcohol Training, Research, and On-line Learning" (PATROL), and "That Guy".

Results from these projects were monitored in 2007 to evaluate how the key health behaviors associated with premature and preventable death are addressing the targeted population and positively influencing attitudes and behaviors related to tobacco use, obesity, and alcohol abuse.

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. 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 utilization management, with an emphasis on integrating CPGs into the MM process.

Currently, the MHS DM program addresses asthma, congestive heart failure, and diabetes. These efforts are expanding to include depression and anxiety disorders, cancer screening, and chronic obstructive pulmonary disease, and initiatives directed toward dual-eligible Medicare beneficiaries as outlined in the John Warner National Defense Authorization Act (NDAA) for Fiscal Year 2007; Section 734: Disease and Chronic Care Management. The MHS is laying the ground work for developing a Disease Management Score Card which

will be used to quantify the impact of DM on healthcare utilization and expenditures. A report on the design, development and implementation plan for disease and chronic care management is to be sent to Congress in 2008.

In support of both MM and PH, the MHS Population Health Support Portal (MHSPHP) is generating detailed "action lists" for preventive health services, and disease/condition management at the provider and clinic level for enrolled beneficiaries. This Service wide web tool also provides disease prevalence information and clinical measure scores similar to the Healthcare Effectiveness Data and Information Set **(**HEDIS**)** measures.

Clinical Quality Measurement

The DoD is committed to evidence-based practice and has incorporated evidence based clinical practices into the MHS to ensure DoD beneficiaries receive the best care based on the most current scientific evidence available. Support strategies identified to accomplish this mission include the development and communication of evidence based clinical practice information followed by ongoing measurement. The Department of Veterans Affairs and DoD have collaboratively developed and maintain 24 CPGs that serve as the foundation for evidence based practice.

DoD continues to utilize 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. Like other health systems, the DoD utilizes the Hospital Quality Alliance clinical quality measures and The Joint Commission ORYX® performance indicators to evaluate and compare clinical processes and outcomes across the MHS. In 2007, the MHS collected data on Health Plan Clinical Measures which included cervical cancer screening, breast cancer screening, colorectal cancer screening, use of appropriate medications for asthma, and diabetes care HbA1c testing. When compared to HEDIS national averages the MHS exceeds these averages except for annual diabetes HbA1c screening.

Hospital Process of Care Measures collected for 2007 included: Acute Myocardial Infarction, Heart Failure, Pneumonia, Pregnancy, and Surgical Care Improvement Project performance measures. The data provided from these measures assists the DoD in validating high quality care against national benchmarks and identifying opportunities for improvement. The performance rates for these measures were either comparable or slightly higher than the national rates.

The MHS's continued association with the National Perinatal Information Center (NPIC) which allows for the comparison of DoD childbirth data with data from multiple women and infants' hospitals nationwide. The MHS continues to surpass the national norms established through the NPIC database for perinatal process and outcome measures.

The MHS also utilizes survey tools to obtain ongoing information from beneficiaries on their satisfaction with the health care provided across the system. The Health Care Survey of DoD Beneficiaries 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 TRICARE Inpatient Satisfaction Survey focuses on inpatient experiences of adults who receive medical, surgical and obstetrics services at the direct care and purchased care systems. The TRICARE Outpatient Satisfaction Survey focuses on how patients feel about the MHS and TRICARE. The survey results for Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) reveal that MHS patient satisfaction with medication communication, responsiveness of hospital staff and discharge instruction is higher than the civilian benchmark. The civilian benchmark is higher than the MHS for nurse communication, doctor communication, and pain management. The TRICARE outpatient survey indicates that a small portion of beneficiaries, less than four percent, rate their feelings about the MHS and TRICARE as negative. The feedback from the surveys is provided to the respective direct and purchased care leaders for in-depth analysis and improvement initiatives as indicated.

Patient Safety

The DoD Patient Safety Program's vision is to lead the MHS to a culture of safety and quality 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, as well as 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. This program focuses on opportunities to facilitate and integrate teamwork principles into practice through research, education and training initiatives.

In FY 2007 Patient Safety Program's major accomplishments included:

- Released Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS™) for civilian adoption;
- Implemented Clinical Microsystem Pilots across MTFs;
- Launched distance learning basic Patient Safety Manager course;
- Convened first-ever MTF Patient Safety Manager Workshop; and
- Facilitated MTF participation in the IHI 5 Million Lives Campaign.

Patient Satisfaction

The MHS utilizes survey tools to obtain ongoing information from beneficiaries on their satisfaction with the healthcare provided across the system. The Health Care Survey of DoD Beneficiaries (HCSDB) 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 TRICARE Inpatient Satisfaction Survey (TRISS) focuses on inpatient experiences of adults who receive medical, surgical and obstetrical services at the direct care and purchased care systems. The TRISS questions align with the HCAHPS survey used by CMS, thus allowing for comparison with civilian hospitals across the nation. The TRICARE Outpatient Satisfaction Survey focuses on how patients feel about the MHS and TRICARE. Each survey provides additional insight to assist the DoD in meeting the needs of the beneficiaries.

The survey results for HCAHPS reveal that MHS patient satisfaction with medication communication, responsiveness of hospital staff and discharge instruction is higher than the civilian benchmark. The civilian benchmark is higher than the MHS for nurse communication, doctor communication, and pain management. The TRICARE outpatient survey indicates that a small portion of beneficiaries, <4%, rate their feelings about the MHS and TRICARE as negative. The feedback from the surveys is provided to the respective direct and purchased care leaders for in-depth analysis and improvement initiatives as indicated.

Recognizing Quality Excellence

The MHS supports quality improvement efforts across the system and capitalizes on the many improvements staff and leadership have brought about by implementing several recognition and sharing programs that can benefit others.

The Healthcare Innovations Program (HIP) as part of the Office of the Chief Medical Officer (OCMO) Directorate serves as a forum for innovative programs and ideas to be shared with senior leaders as potential MHS-wide solutions. The categories and respective winners of the HIP awarded at the 2008 MHS Conference were:

- **Access:** awarded to Naval Medical Center San Diego Directorate for Branch Clinics, CA for "*An Innovative Model for Telehealth Nursing Using AHLTA.*"
- **Cost:** awarded to Naval Hospital Pensacola, FL for *"Cost Effectiveness of speech recognition software in the patient care setting."*
- **Effective Patient Partnerships:** awarded to Carl R. Darnall Army Medical Center, Fort Hood, TX for "*Ambulatory Medication Reconciliation: A Prescription for Partnership.*"
- **Healthy Lifestyles:** awarded to Elmendorf Air Force Base, AK for "*Soar into Shape.*"
- **Readiness:** awarded to Hickman Air Force Base, Hawaii for "*Mission Critical Sports Medicine.*"
- **Quality:** awarded to Carl R. Darnall Army Medical Center, Fort Hood, TX for "*Flushing Barriers to Colorectal Cancer Screening*."

The OCMO at TMA also sponsors the DoD Patient Safety Awards in conjunction with the annual MHS Conference. The awards celebrate those who have shown innovation and commitment to the development of systems and processes that are tightly organized around the needs of the patient. Winners for the categories for Patient Safety were:

- **Improvements to team performance:** awarded to 59th Medical Wing — Wilford Hall Medical Center — Lackland Air Force Base, TX for "Nurse/Mental Health Technician Change of Shift Safety Checks."
- **Implementation of system changes or interventions:** awarded to 22nd Medical Group — McConnell AFB, KS for "Revision of the Medication Renewal Process." and the US Naval Hospital Sigonella — Sicily, Italy for "Clinical Microsystems."
- **Use of technology to improve patient safety:** awarded to the 49th Medical Group — Holloman Air Force Base for "Child Resistant Packaging." and Madigan Army Medical Center for "Development and Implementation of a Mobile Obstetric Emergencies Simulator."

By presenting these awards, DoD seeks to highlight and encourage efforts that create an environment where safe quality care is provided and is acknowledged as the responsibility of all members of the team.

Biosurveillance

DoD continues to be a 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 its broad network and capabilities, the DoD's robust Biosurveillance initiative contributes to force health protection and is a vital partner in the global effort to identify and control emerging infectious diseases.

The mission of the DoD Global Emerging Infections Surveillance and Response System (DoD-GEIS) is to support force health protection by countering the largest threat to the health of armed forces personnel, infectious diseases. Many of DoD-GEIS's programs support the global war on terrorism by defending against microbial threats. This system enables early detection of medical threats by identifying patterns of symptoms before they are even identified as a disease. It also provides real-time, evidence-based decision support for MHS providers and our partners around the world. Although DoD-GEIS monitors all infectious diseases in military forces, the following remain the priority surveillance conditions:

- Respiratory illnesses (especially influenza);
- Enteric (acute diarrheal) illnesses;
- Febrile illnesses (especially dengue and malaria);
- Antimicrobial resistance; and
- Sexually-transmitted infections.

The Institute of Medicine (IOM) published a report on DoD-GEIS in September of 2007 entitled "*Review of the DoD-GEIS Influenza Programs: Strengthening Global Surveillance and Response"* They recognized DoD-GEIS for meeting its mission. The report found that the DoD overseas laboratories "constitute an impressive network that has laudably utilized the supplemental funding to strengthen influenza surveillance, in addition to continuing their historically primary research activities."

The ongoing work of DoD-GEIS to combat emerging infectious diseases other than influenza and malaria also continued in FY07. DoD-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).

Additional FY07 accomplishments by DoD-GEIS in pandemic and avian influenza surveillance include:

- Establishment of enhanced influenza surveillance throughout US European Command (EUCOM), through a partnership among Landstuhl Regional Medical Center, US Army Center for Health Promotion and Preventive Medicine (USACHPPM) Europe, and Air Force Institute for Operational Health (AFIOH);
- Expansion of influenza surveillance in Africa where little information on circulating strains is available, through a partnership with US Army Medical Research Unit-Kenya (USAMRU-K) and the US Military HIV Research Program;
- Identification of changing influenza strains that spread globally by the Nepal satellite laboratory of Armed Forces Research Institute of Medical Sciences Bangkok, Thailand (AFRIMS);
- H5N1 avian influenza outbreak investigations by Naval Medical Research Unit No. 3 Cairo, Egypt (NAMRU-3) and Naval Medical Research Unit No. 2 Jakarta, Indonesia (NAMRU-2).

These activities of DoD-GEIS collectively illustrate how the department is improving emerging infectious disease preparedness, through a broad DoD program supporting public health at home and abroad.

DRAFT

Clinical Quality Management in the Military Health System

Evidence-based Practice and Measuring Results

Clinical Quality Management in the Military Health System

The Military Health System (MHS) is a worldwide healthcare delivery system operated by the DoD, offering healthcare benefits to an estimated 9.2 million beneficiaries through the TRICARE network of

- Two hundred and forty thousand private physicians and most U.S. hospitals,
- Sixty three military hospitals (47 in U.S.),
- Over 800 clinics
  - 413 Ambulatory Medical
  - 413 Ambulatory Dental Clinics
- Staffed with 133,500 MHS personnel worldwide.

The MHS is composed of two complementary parts: the direct care system provides services to patients in Military Treatment Facilities (MTFs) while the purchased care system provides care to military beneficiaries through civilian providers in private offices or non-military facilities.

Its mission is to enhance the Department's and our nation's security by providing health support for the full range of military operations and sustaining the health of all those entrusted to our care. To this end, assessing the quality of health care is vitally important

The MHS is prepared to respond anytime, anywhere with comprehensive medical capability to military operations, natural disasters, and humanitarian crises around the globe, and to ensure delivery of world-class healthcare to all DoD service members, retires, and their families.

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 compassionate about the care and well-being of Service members, retirees and their families. 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 make them a member of the team focused on improving their health. The MHS also builds partnerships with beneficiaries in an integrated health delivery system that encompasses MTFs, 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.

MHS strives daily to simultaneously accomplish five interconnected goals:

- A fit, healthy and protected force;
- Reduced death, injuries and diseases during military operations;
- Utmost satisfaction of beneficiaries;
- Creation of healthy communities; and
- Effective management of health care costs.

These groups 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, tailored to their individual health and medical needs. By providing a superb, evidence-based care in a seamless way across our health system of military providers and strategic partners, our beneficiaries will develop a strong partnership 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 MHS in helping them manage their health over the long term.

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

The assessment of the quality of health care provided by the DoD is measured in a variety of ways, with use of civilian benchmarks whenever possible. Evaluation involves 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—safety, effectiveness, timeliness, patient centered, efficient, and equitable— TRICARE and its 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 movement to develop a healthcare quality consensus measure and comparison; and
- Ensuring the MHS remains in the forefront of healthcare quality measurement by seeking current information on clinical measures that are used to improving clinical quality.

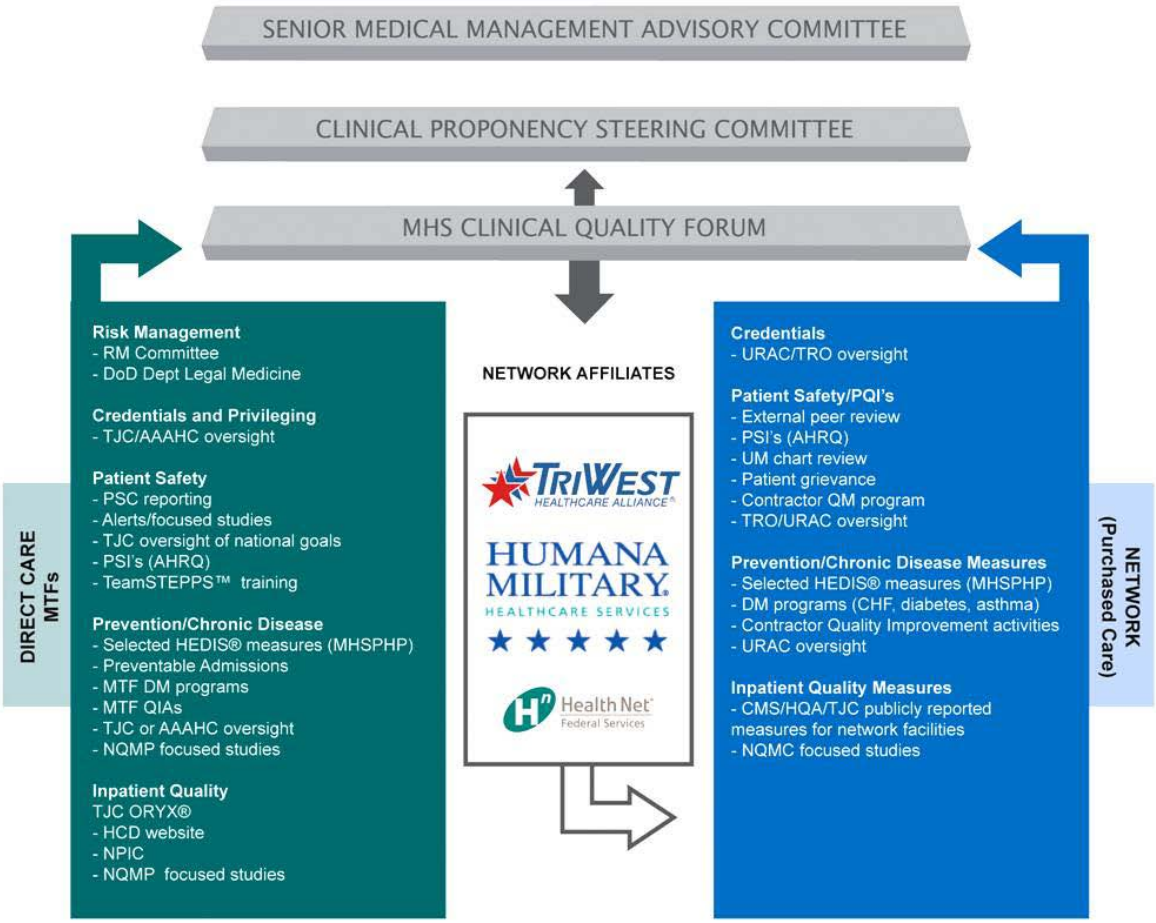
In addition, the MHS as a global health delivery system provides services anytime and anywhere. In order to achieve this mission these principles are also embedded into the MHS processes and culture.

- 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 ouputs—provide incentives to reward mission success
- Health-creating partnerships—committed to caring and long-term relationships

Quality Architecture

DoD Military Health System Clinical Quality Management (MHS-CQM) empowers MHS professionals to define and deliver the highest levels of quality health care and wellness services. It is part of an overall MHS strategy to be a world class health care system providing care for beneficiaries worldwide. Efforts include leadership in the areas of clinical quality measures, patient safety, quality assurance, and quality initiatives. The assessment of health care quality provided by the DoD is measured in a variety of ways with use of civilian benchmarks whenever possible.

The following diagram depicts the overall MHS quality structure which is composed of the Direct Care and Purchased Care (Network) and their respective areas of oversight.



Clinical Quality Office/Division

The Clinical Quality Office develops and implements clinical policy for MHS health care delivery. Personnel oversee and report on clinical quality processes for the MHS. The office oversees the clinical aspects of TRICARE health care benefit delivery, including benefit development and maintenance of benefit currency.

The staff advises senior policy makers on clinical matters and issues pertaining to development, acquisition, implementation, and operational oversight of managed care programs and contracts including:

- Centralized Credentialing and Quality Assurance System (CCQAS);
- National Quality Management Program (NQMP); and
- Alcohol and Substance Abuse Treatment Programs.

Clinical Quality also provides subject matter expertise and support to the following programs managed by other entities:

- Medical/Surgical/Mental Health Benefits Consultation providing consultation and clarification for providers in the field;
- TRICARE Quality Forum; and
- Purchased Care Clinical and Service Quality.

The National Quality Monitoring Contractor (NQMC) provides the DoD HA with an independent, impartial, evaluation of the care provided to MHS beneficiaries in the purchased care (PC) system. NQMC responsibilities include:

- Retrospective chart review for quality of care;
- External reviews for TMA appeals, hearings and claims collections division;
- Medical Necessity (Reconsideration) Appeals;
- Military Treatment Facility Standard of Care Peer Reviews;
- Mental Health Facility Certifications;

- Focused Studies; and
- Technology Assessments.

The Clinical Measures Steering Panel

The Clinical Measures Steering Panel (CMSP) is a collaborative MHS committee including Service and HA/TMA representatives with responsible for providing guidance for MHS clinical quality measure initiatives and the overall direction of the DoD TJC ORYX® activities. Clinical quality measures monitored in the MHS are based on nationally recognized measurement systems. The MHS Portal provides health plan measures that are consistent with the National Committee on Quality Assurance (NCQA), Healthcare Effectiveness Data and Information Set (HEDIS®), and includes both process and outcome measures. ORYX® focuses on integrating process and risk-adjusted outcomes performance measurement data into the accreditation process for inpatient facilities. The CMSP provides a semiannual report to the TRICARE Clinical Quality Forum.

Clinical Quality Forum

The Clinical Quality Forum provides guidance regarding performance improvement that result in the implementation of evidence-based intervention strategies to improve care. In addition, clinical quality measures are reviewed and monitored through special clinical studies, TJC facility reviews, Health Plan Performance oversight, patient satisfaction surveys, and the MHS Balanced Scorecard. These external reviews of care help to identify clinical best practices and areas for improvement. Additional information is available in the Clinical Quality Measures section of www.MHS-CQM.info

Systems and Processes Supporting Quality Outcomes

Evidence-based Medicine

According to the Centre for Evidence-Based Medicine, "Evidence-based medicine (EBM) is the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients". EBM recognizes that many aspects of medical care depend on individual factors such as quality and value of life judgments, and are only partially subject to scientific methods. EBM, however, seeks to clarify those parts 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. Specifically, evidence-based medical practice seeks to assess the quality of evidence relevant to the risks and benefits of treatments, including lack of treatment. The DoD is committed to evidence-based medicine 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. Support strategies identified to accomplish this mission include the development and communication of evidence based clinical practice guidelines followed by ongoing measurement.

Clinical Practice Guidelines

The Department of Veterans Affairs (VA) and DoD have collaboratively developed and maintain 24 clinical practice guidelines (CPGs) that serve as the foundation for interagency condition management initiatives. It is expected that continued and expanding use of CPGs, will result in improvements in care quality and cost-effectiveness across the MHS. Guidelines available for use throughout the MHS and VA include:

VA/DoD CPGs

Asthma	Medical Unexplained Symptoms
Chronic Heart Failure	Major Depressive Disorder
Chronic Obstructive Pulmonary Disease	Nuclear Biological Chemical Illness
Diabetes Mellitus	Obesity
Disease Prevention	Opioid Therapy for Chronic Pain
Dyslipidemia	Post-Deployment Health
Dysuria in Women	Post-Operative Pain
Gastro-Esophageal Reflux Disease	Post Traumatic Stress Disorder
Hypertension	Stroke Rehabilitation

Clinical Quality Measures built on evidence-based clinical practices are reviewed and monitored through several initiatives including:

- Special Studies;
- Accreditation;
- Facility Reviews;
- MHS Balanced Scorecard;
- IHI 5 Million Lives Campaign;
- National Surgical Quality Improvement Program; and
- Population Health Measures.

Using nationally comparative data allows the DoD to focus its efforts and resources on the areas with the greatest opportunities for improvement. Nationally comparative data also provides for the chance to identify, understand, and replicate best practices and high functioning healthcare micro-systems. The DoD utilizes the clinical quality measures and performance indicators to evaluate and compare clinical processes and outcomes across the MHS. The data provided from these measures assists the DoD in validating quality care against national benchmarks and identifying opportunities for improvement.

The MHS continued its' association with the National Perinatal Information Center (NPIC) which allows for DoD childbirth data to be compared with data from multiple women and infants' hospitals nationwide.

The National Committee for Quality Assurance's HEDIS metrics measure how well health plans deliver preventive care and manage acute illness or chronic diseases to avoid or minimize complications. Within the MHS, DoD uses [these HEDIS-comparable] measurements where appropriate.
A more detailed explanation of each of the performance measures is provided in the Clinical Quality Measures section of this report.

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.

Certifications and Accreditations

The MHS maintains certifications and accreditations in many areas including:

- The Joint Commission;
- Accreditation Association of Ambulatory Health Care;
- College of American Pathologists;
- American Osteopathic Association's Healthcare Facilities Accreditation Program (HFAP)
- American College of Radiology; and
- American Association of Blood Banks.

In Appendix B is a listing of the major certifications and accreditations found at MTFs according to 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 the DoD policy. The Population Health and Medical Management Division (PHMMD) is involved in training via classroom instruction, and can be accessed on-line at: http://www.dodpopulationhealth.info/public/spd.cfm?spi=welcome. This site provides information to access onsite and on-line web-based courses offered by the TMA and PHMMD. Also available are on-line educational activities based on evidence-based research studies that offer free Continuing Medical Education (CMEs) and Continuing Nursing Education (CNEs) units. These activities are available at http://www.mhs-cqm.info. Medical management education is also included in presentations at national meetings (e.g., National TRICARE Conferences) and written publications.

Technology

The DoD has embraced technology to boost the quality of military health care, improve the flow of medical information and monitor costs. The MHS continues to innovate and optimize the role of technology to meet this mission and create a "world class healthcare system" by leveraging advances in information technology to

contribute to the delivery of quality care, patient safety, improved system management and ease of patient access to healthcare.

MHS Population Health Portal

The MHS Population Health Support 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. 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 provider;
- 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

AHLTA is the military's Electronic Health Record (EHR), an enterprise-wide clinical information system. Worldwide deployment was completed in December 2006. AHLTA provides secure, 24x7, worldwide online access to the patient's medical record, a key enabler for military medical readiness. AHLTA ensures healthcare providers have ready access to medical information when and where needed to support the military's highly mobile patient population by storing data in a central location. As military members move from location to location, AHLTA is readily available to support their healthcare needs. Across the enterprise, AHLTA supports uniform, high-quality health promotion and healthcare delivery to more than 9.2 million MHS beneficiaries. AHLTA is being deployed in phases or "blocks" of increasing functionality to keep pace with evolving requirements and advances in technology.

AHLTA Block 1: Worldwide deployment was completed in December 2006. Block 1 provides the foundation of system performance through a graphical user interface for real-time ambulatory encounter documentation. It enables retrieval of a beneficiary's health record at the point of care regardless of where the care was delivered.

AHLTA is the largest system of its kind designed to use structured documentation to collect patient health care information. Patient health data is captured in discrete data fields and is defined by structured terms as opposed to free text notes. As a result, the data is computable and can be easily queried. The new clinical data warehouse (CDW) will be optimized for both pre-defined queries of interest to clinicians and analysts, and also for data mining, which aims to discover previously undiscovered relationships in the data, using clustering and pattern recognition techniques.

Data captured in the CDW from population health surveys will help highlight trends that are not readily apparent. It will also allow the identification of populations at risk because they have not accessed care or may be at risk for adverse health events. For example, a report may show that a woman accessed the system for her annual check-up but did not receive all recommended preventive measures at the point of care.

These automated reports will give the Defense Department's health care providers and managers real-time access to quality measures and allow efficient population health surveillance in direct support of Executive Order 13410: Promoting Quality and Efficient Health Care in Federal Government Administered or Sponsored Health Care Programs.

AHLTA is a system that provides:

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;
LONGITUDINAL ➤	25 months of laboratory, anatomic pathology, pharmacy and radiology data is pre-entered from MHS legacy systems;
KNOWLEDGEABLE ➤	Offers healthcare 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 healthcare providers know about disease outbreaks, allowing early intervention in targeted populations. This medical surveillance facilitates military force health protection.

http://www.ha.osd.mil/AHLTA/

MHS Population Health and Medical Management

Improving the Health of our Military Communities

Population Health

Population health 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 self, MTF, worksite and community-based wellness and prevention activities with medical interventions that are centered on primary, secondary, and tertiary prevention to reduce morbidity and premature mortality and improve health.

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. MHS population health initiatives include the demonstration projects on healthy choices for life. In 2007, the Healthy Choices for Life demonstration projects continued to addressed tobacco, obesity, and alcohol.

Tobacco, Alcohol, and Obesity Demonstration Projects - Healthy Choices for Life

Tobacco, Alcohol and Obesity Demonstration projects take aim at changing behavior under the banner of Healthy Choices for Life campaign. The Healthy Choices for Life initiatives were launched in response to the results of the DoD Health Related Behavior Survey (2002), which indicated an increase in tobacco use, alcohol abuse, and overweight/obesity, based on active duty (AD) respondents. Similarly, these health behaviors also increased among active duty family member respondents. A strategic approach focusing on these leading causes of preventable deaths in the United States was formulated with a plan to implement and address these issues. Recruitment for all projects began in May 2006. The results of these demonstration projects have implications for benefit change and cost savings for the MHS.

Every year the Defense Manpower Data Center (DMDC) conducts 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.

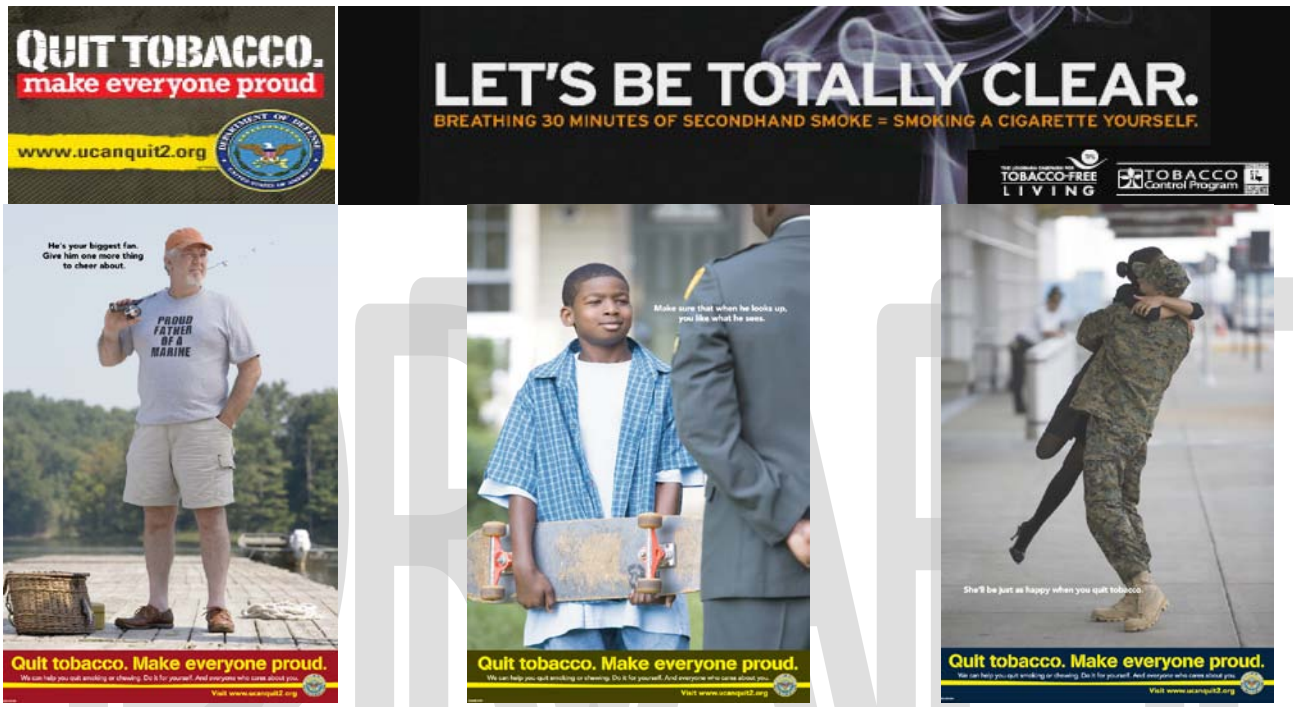
TMA's vision is to reverse recent negative health trends in active duty and other beneficiary populations. Two of the initiatives, tobacco cessation and weight management demonstration studies, provide behavioral, nutritional counseling and pharmacotherapy to assist TRICARE Prime beneficiaries decrease tobacco use and lose weight. The results of these demonstration projects have significant implications for benefit change and cost savings to the MHS. A web-based alcohol prevention pilot is the third project provided for under this initiative. In addition to these three studies, social marketing campaigns to counter tobacco use and alcohol abuse were developed. These projects are targeted toward young enlisted AD members, who are more likely to smoke and drink.

Tobacco Cessation Marketing and Education Campaign

Despite decades of efforts to reduce the use of tobacco in military populations, tobacco use remains firmly entrenched in a significant segment of the military population, with new

smokers and chewers starting every day. As measured in 2005, the prevalence of smoking among 18 to 25-year-olds on AD was 40 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 did 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 active-duty military personnel, the DoD implemented, and evaluated a national marketing and education campaign: "Quit Tobacco. Make Everyone Proud." This campaign aimed at helping our active military personnel quit tobacco and lead healthier lives. The campaign targets 18- to 24-year-old active-duty, junior, enlisted personnel, particularly those with an expressed intention to quit.



Through marketing and outreach strategies that include leadership briefings, collateral materials distribution, and web and electronic marketing, the campaign encourages its audience to visit www.ucanquit2.org, a web-based cessation support and education tool that features a personalized quit plan, facts, games, multimedia features, and private chat with trained cessation counselors

The key elements of Tobacco cessation project **–** "Tobacco Free Me" include:

- Program launched in May 2006;
- Targets TRICARE Prime beneficiaries 18-64 years of age (not eligible for Medicare) residing in non-catchment areas in Colorado, Kansas, Missouri, and Minnesota; and
- Design study elements include 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 buproprion products available through the TRICARE Mail Order Pharmacy Enrollment will continue through summer 2007.

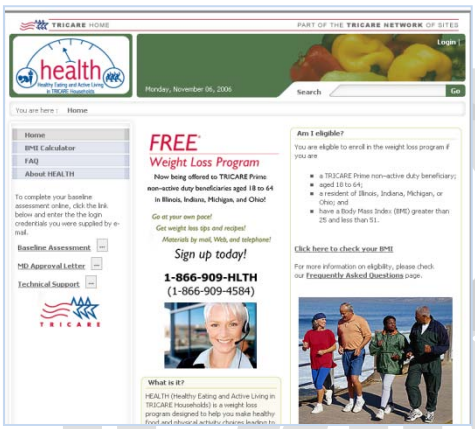
Weight Management Demonstration Project

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. showed nearly two-thirds of all MHS beneficiaries were overweight (41%) or obese (22%) as measured by their BMI. In particular, nearly two thirds of AD were classed as overweight or obese. However, only 12 percent of AD were obese. Obesity was much higher among retirees under 65 (33%).

To combat this epidemic, TRICARE launched the Healthy Eating and Active Living in TRICARE Households (HEALTH) program in July 2006. HEALTH helps participants reach their desired weight and teaches them how to live a healthier lifestyle. When members join they will:

- Receive information on healthy meal planning;
- Create a personalized exercise program; and
- Work with a phone counselor and primary care manager to determine weight loss goals and how to maintain a healthy weight.

The demonstration project tests various methods of education and prevention to inform and educate AD family members and retired beneficiaries about the negative effects of obesity. Various tools are used (e.g. calorie calculator, body mass index (BMI) calculator, calories burned calculator, physical activity logs, etc.) and have support through eHealth and/or teleHealth. The target population eligible for the demonstration project include TRICARE Prime non-AD beneficiaries who live in Indiana, Illinois, Michigan and Ohio. They must be between ages 18 to 64, with a body mass index between 25 and 51. TRICARE will use the data collected during the demonstration project to determine the feasibility and usefulness of a weight management benefit for all TRICARE beneficiaries.



The evaluation outcomes will include:

- Weight loss (short and long term)
- Cost (utilization as proxy measure)
- Difference in outcome with and without medication
- Recruitment and retention
- Participant satisfaction
- Provider satisfaction

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The key elements **of** the Weight management project – "Healthy Eating and Active Living in TRICARE Households" or HEALTH include:

- Program launched in July 2006.
- Targets overweight and obese, non-active duty TRICARE Prime beneficiaries 18-64 years of age (not eligible for Medicare) residing in Indiana, Illinois, Ohio, and Michigan.
- Design elements include access to behavioral modification tools; educational support; and pharmacotherapy weight loss drugs, to aide in weight loss efforts. Study design follows the National Heart Lung and Blood Institute recommendations that include consideration of pharmacotherapy for patients with a BMI greater than 27 with risk factors and a BMI of 30 without risk factors. As of September 30, 2006: 1,005 participants enrolled (n=3,000 in randomized control group); enrollment continued through early spring 2007.

"That Guy" Campaign– DMDC August 2007 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 regarding awareness of the campaign and attitudes toward excessive drinking into the August 2006 and August 2007 surveys. (These questions will also be included in 08 and 09 surveys.) This summary provides a top line perspective of E1 to E4 service members' awareness of "That Guy", their attitudes toward excessive drinking, and their drinking behaviors.

Baseline. That Guy-specific questions were added to the August 2006 DMDC survey prior to the launch of That Guy (December 06). Results from the 2006 survey indicate "phantom awareness" of That Guy (2% 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 2% in 2006 to 14% in 2007. 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 their 101Critical Days of Summer initiative, and HQMC Semper Fit campaign promotion.

- **Attitudes**. That Guy is beginning to have a positive and significant impact on some attitudes toward excessive drinking. Service members were asked to rate the extent to which they agree or disagree with 10 statements about drinking. Between 2006 and 2007, the proportion of service members who "strongly" agree with the statements "It's important to me that I keep my drinking under control and act responsibly," (57% in 2007 compared to 54% in 2006) and "When I drink, I appoint a designated driver," (60% in 2007 compared to 57% in 2006) increased by a statistically significant amount.

- **Behaviors**. Between 2006 and 2007, binge drinking behaviors among E1s to E4s 21 years 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 (55% in 2007 compared to 54% in 2006). The shift of a few percentage points (up or down) among the branches of service is 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 with the Army and Navy), there have not been any significant changes between 2006 and 2007 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 Web-based alcohol abuse prevention education pilot project – "Program for Alcohol Training, Research, and On-line Learning" or PATROL include:

- Program launched April 2006. Targets young active duty Service members on eight military installations representing each of the Services.
- Targets young AD Service members working at selected 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.
- Complements existing Service-level alcohol abuse and misuse prevention efforts.

Key Findings for 2007

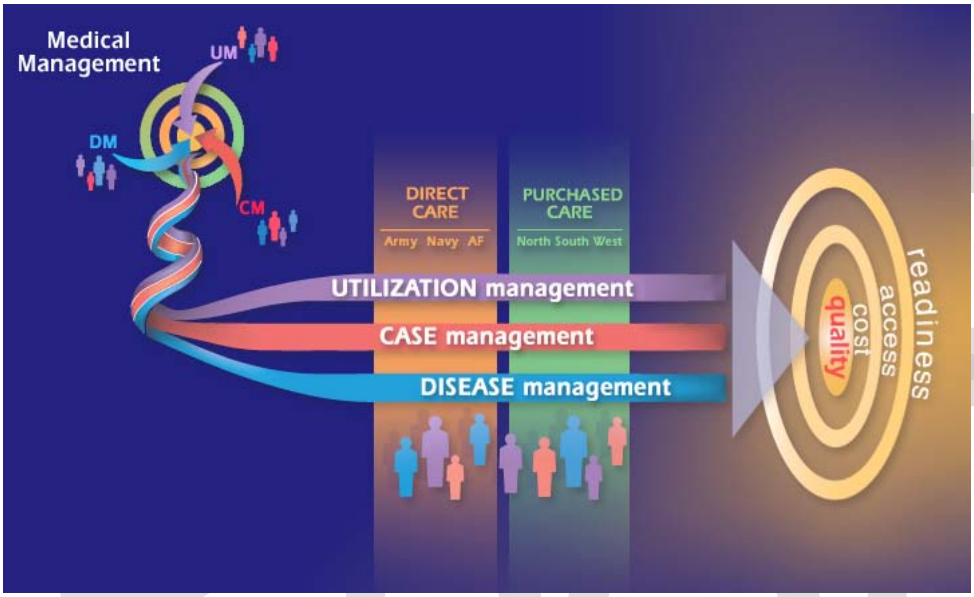
- Overall awareness of That Guy increased significantly among all branches of service between August 2006 and August 2007, rising sevenfold to 14%. (Actual awareness is 12%, which accounts for and subtracts out the phantom awareness level of 2% in 2006. Current awareness is likely higher than14% because outreach activities did not begin until December 2006 and survey results were collected in August 2007. TMA/FH has increased its outreach efforts since the August 2007 survey.)
- Awareness between August 2006 and 2007, overall awareness of That Guy among E1s to E4s increased sevenfold across all four branches of the military.
- Attitudes toward excessive drinking are beginning to shift in a positive direction, showing support of the campaign's key messages.
- Behavior has remained stabled as anticipated in this social change campaign.

Other Accomplishments for 2007

- Offline advertising in pilot markets (December 06 to March 07);
- MySpace page launch and online advertising (March 07);
- Air Force Air Mobility Command's 101 Critical Days of Summer (June to August 07);
- Other outreach activities, including community advertising at Camp Pendleton in December 07 (August 07 to present); and
- That Guy to expand worldwide in 08 - implementation plan created.

Medical Management

The MHS has developed an integrated Medical Management (MM) model that promotes utilization, case, and disease management programs. MM is a key process used to improve the clinical quality and business efficiency of healthcare services in the MHS. It includes evidence-based, outcome-oriented utilization management, with a greater emphasis on integrating clinical practice guidelines (CPGs) into the MM process.



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 policy establishes the requirements while the companion publication, the *TRICARE Management Activity (TMA) Medical Management Guide*, contains implementation direction. The document 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.

Utilization Management

Utilization Management (UM) as defined by the Utilization Review Accreditation Commission (URAC) is "the evaluation of the medical necessity, appropriateness and efficiency of the use of healthcare services, procedures and facilities under the provisions of the applicable health benefits plan." Utilization management describes proactive procedures, discharge planning, concurrent planning, precertification, and clinical case appeals. It also covers proactive processes, such as concurrent clinical reviews and peer reviews, as well as appeals introduced by the provider, payer, or patient. It is in essence an organization-wide, interdisciplinary approach to balancing quality, risk, and cost in the provision of patient care. In the MHS, commercially licensed standards and clinical criteria sets are used.

Case Management

Case Management (CM) is defined by the Department of Defense Instruction (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' healthcare 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 healthcare services. TMA continues working toward the acquisition of an enterprise-wide automated CM tool to assist with the documentation and tracing of the patient's individualized care plan and to support interdisciplinary health team communication of case managed beneficiaries across care settings.

Disease Management

Disease management (DM) as defined in the DoD Medical Management Guide 2006 states it 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 process 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. The DM focus on chronic conditions is to control and slow or arrest its progression rather than cure the disease. Improving the quality of life and activities for daily living are first and foremost in this approach to healthcare.

The MHS DM program directly supports the MHS strategic goal of effective patient partnerships by working to improve the health of our beneficiaries by providing proactive, patient-centered, evidence-based care using clinical practice guidelines.

The overall goals of DM initiatives are to:

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

The MHS implemented a ground breaking DM initiative in September of 2006 with a consistent approach to DM with a focus on the same disease states. TRICARE's approach to disease management is two-fold: (1) keep the well healthy with a focus on healthy lifestyles, disease prevention and health promotion and (2) maintain an active disease management program for high-risk beneficiaries with specific chronic disease conditions. This revised uniform approach to DM, provides the Managed Care Support Contractors (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, and diabetes. These efforts will be expanded to include three additional chronic diseases (Depression and Anxiety Disorders, Cancer Screening, and Chronic Obstructive Pulmonary Disease), as well as initiatives directed toward dual-eligible Medicare beneficiaries as outlined in 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) Case management 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 is developing a Disease Management Score Card which will be used

to quantify the impact of DM on:

- Healthcare 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 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 is due to the 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 MCSC DM initiatives including having uniform processes in place such as patient identification, risk stratification, and evaluation.

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MHS Clinical Quality Measures

Providing Evidence-based Healthcare and Measuring Results

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MHS -Clinical Quality Management

Healthcare executives, providers, patients, and employers, including the Federal Government recognized the need to measure the quality of care delivered by healthcare organizations throughout the United States. Escalating health care costs have accentuated the need to develop clinical measurements and collect and evaluate data on the performance of healthcare organizations to ensure that consumers are receiving care that is efficient and effective. Healthcare quality and cost continues to be of concern to the MHS, as well as to civilian health care organizations and Congressional leaders. Fortunately, the highest quality care grounded in scientific evidence is often the most effective care. A number of health care organizations have been established and have collaborated to develop clinical measurements to support industry-wide comparisons of care. The following is a list of major organizations that have contributed to the development of national clinical quality standards arranged chronologically by the year established:

- Institute of Medicine 1970
- Agency for Healthcare Research and Quality (AHRQ) 1989
- National Quality Measures Clearinghouse 1989
- National Committee for Quality Assurance (NCQA) (1989)
- Healthcare Effectiveness Data and Information Set (HEDIS) 1990
- Institute for Healthcare Improvement (IHI) 1991
- National Quality Forum (NQF) – 1999 (Comprised of over 300 consumer, insurance, and healthcare agencies)

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MHS staff members have actively participated in the development, review, and acceptance of quality measures established by the National Quality Forum and the Agency for Healthcare Research and Quality.

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. The Clinical Quality Forum and the MHS 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 for MHS clinical quality measures initiatives and the overall direction of the DoD Joint Commission ORYX® activities.

Accreditation

The MHS utilizes external healthcare accrediting organizations to assess and validate the quality of care provided in the direct care and purchased care systems. MHS hospitals and freestanding ambulatory care clinics are required to continuously meet accreditation standards addressing clinical and organizational activities.

The Joint Commission

The mission of The Joint Commission (TJC) 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. The Joint Commission accreditation process consists of three

major components: annual self-assessment, quarterly performance measures, and a triennial on-site 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.

MTFs are surveyed at least every three years by a team of healthcare professionals with significant experience in the survey process and patient care settings under survey. The surveys are performed with a week's notice to ensure the organizational assessment is conducted under normal operating conditions. The Joint Commission continues to refine the survey process and has identified 14 priority areas to guide the survey activities. The surveyors focus on the actual care provided to patients rather than just the documented policies and procedures. Based on the services provided at a facility, patients are identified and a review of care is performed by tracing all of the care provided to the patient from admission to discharge. Action plans are developed, implemented, and monitored for any opportunities for improvement identified by the surveyors.

The Accreditation Association of Ambulatory Health Care, Inc.

The Accreditation Association of Ambulatory Health Care, Inc. (AAAHC) develops standards to advance and promote patient safety, quality and value for ambulatory health care through peer-based accreditation processes, education, and research. After a trial accreditation surveys were conducted by both the AAAHC and The Joint Commission. After reviewing the trial survey results, the Air Force determined the Accreditation Association was a more appropriate accrediting body for its ambulatory clinic. On April 1, 2006, the Air Force substituted The Joint Commission accreditation agency with the AAAHC, to maintain accreditation requirements. The change was made with the approval of the Assistant Secretary of Defense for Health Affairs. The Air Force will continue to maintain accreditation for its hospitals through TJC.

Quality Measures

ORYX® Quality Measures

The Joint Commission integrated performance measures into the accreditation process with the implementation of the standardized ORYX® Quality Measures in July 2001 after soliciting input from a wide variety of stakeholders. The input of these stake holders, together with recommendations from state hospital associations led to the identification of core measurement areas.

National Consensus Measures

The measurement of the quality of healthcare provided throughout the United States continues to challenge healthcare policy makers, providers, and consumers. The goal of the Hospital Quality Alliance (HQA) is to identify standardized hospital quality measures for use by all stakeholders in the healthcare system to improve the quality of care provided and enhance the ability of consumers to make informed healthcare choices. The Joint Commission, Centers for Medicare and Medicaid Services (CMS), and National Quality Forum are working collaboratively as a part of the Alliance, to identify a consistent robust set of standardized and easy-to-understand hospital quality measures based on the most current clinical evidence available. Data are available on the Health and Human Services Hospital Compare website at www.hospitalcompare.hhs.gov/

MHS utilizes the National Consensus Measures for analyzing the quality of care provided in the direct care and purchased care systems. Data from the ten 2007 National Consensus Measures were available for comparison of hospitals in the DoD network. The hospitals providing care to MHS beneficiaries through the purchased care and direct care systems performed consistently with or above the national benchmarks. These data are shared with quality leaders across the MHS through the Clinical Quality Forum.

Health Plan Clinical Quality Measures

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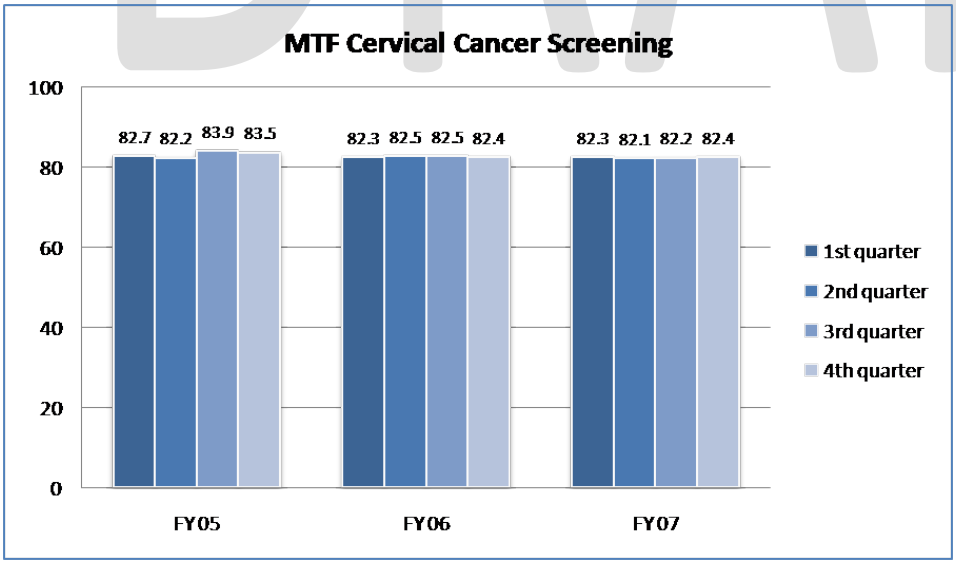
The National Committee for Quality Assurance (NCQA) developed the Healthcare Effectiveness Data and Information Set (HEDIS®) to provide reliable, comparative health plan data about clinical quality. The MHS Population Health Portal uses methodologies similar to HEDIS® to monitor the performance of the system's preventive care (e.g., breast cancer screening, cervical cancer screening), or chronic disease management (e.g., asthma, diabetes) to avoid or minimize complications. Current MHS clinical performance measures based on HEDIS® methodologies include:

- 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).

The data for these clinical performance metrics were gathered from an MHS electronic central database which includes inpatient, outpatient, and pharmacy information. Reports on the clinical performance measures are provided to MTF and MHS leadership to assess the performance of healthcare 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.

Cervical Cancer Screening at MTFs is above the national average rate of 81.7 and just under the HEDIS® 75th percentile. The Breast Cancer screening rate is also above the national average of 69.1 and above the HEDIS 75th percentile. Colorectal Cancer screening in the MHS exceeds the national average of 55.6 and HEDIS® 75th percentile. Appropriate Use of Asthma Medications is above the national average of 92.3 and exceeds the HEDIS® 90th percentile. Annual Diabetes HbA1c screening is an area for improvement as the MTFs are below the national average of 88.1.



2007 HEDIS ® Benchmark

90th Percentile: 87.9

75th Percentile: 84.9

50th Percentile: 82.2

National Average 81.7

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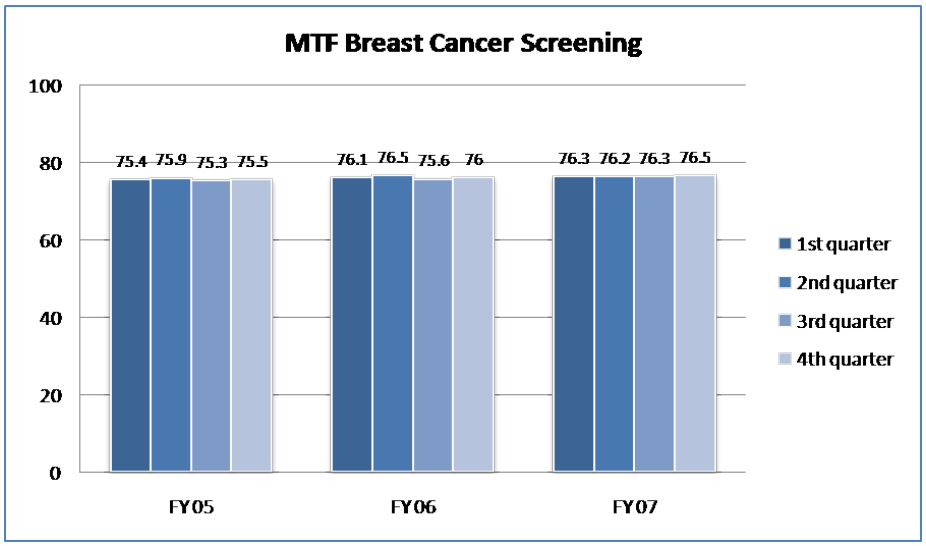


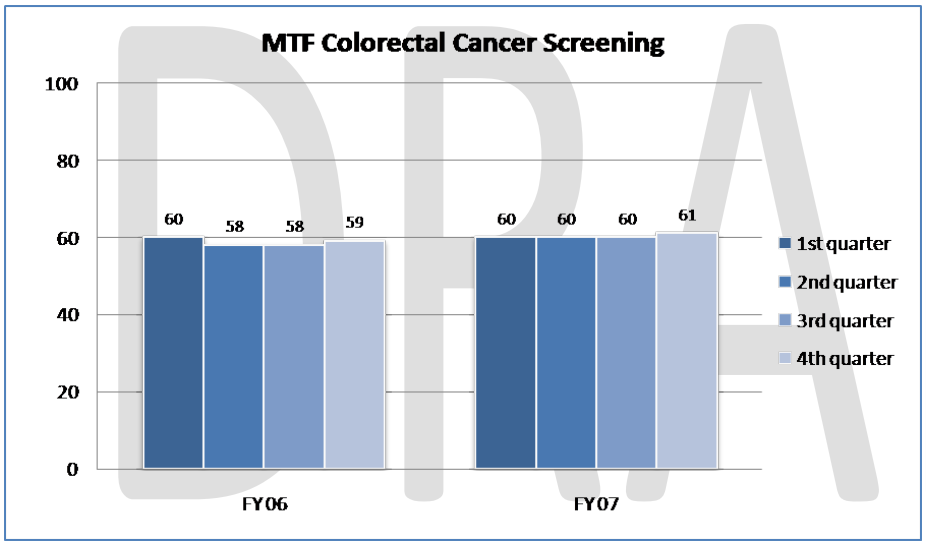
2007 HEDIS ® Benchmark

90th Percentile: 80.2

75th Percentile: 75.9

50th Percentile: 72.0

National Average 69.1



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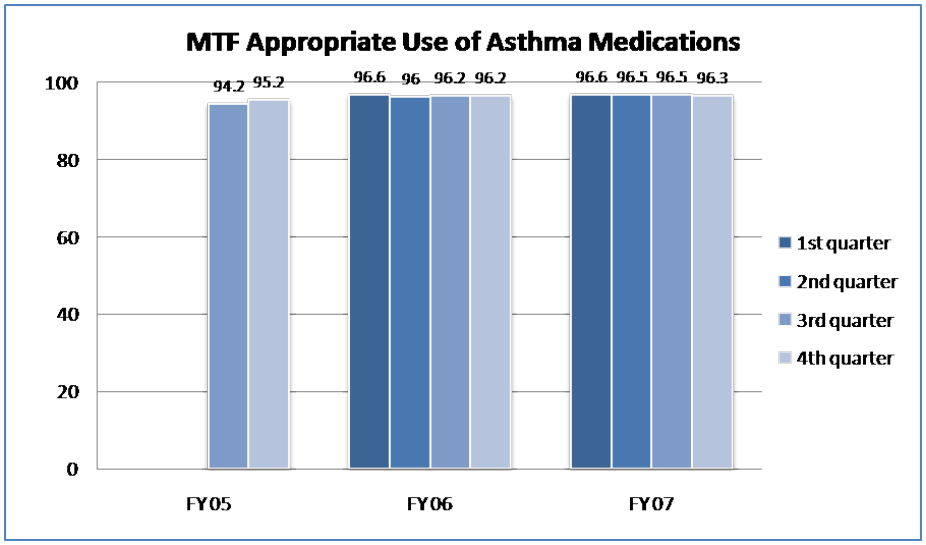
2007 HEDIS ® Benchmark

90th Percentile: 63.5

75th Percentile: 58.9

50th Percentile: 52.4

National Average 55.6



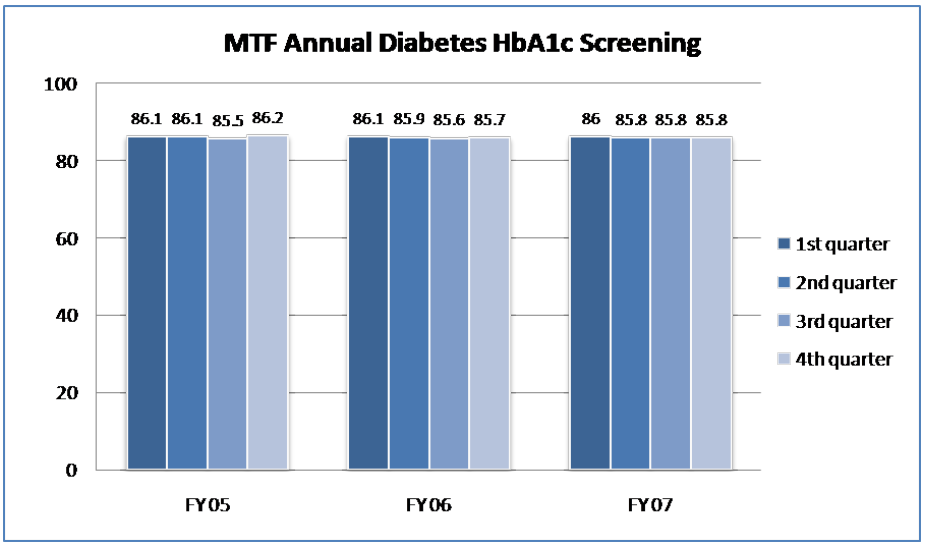
2007 HEDIS ® Benchmark

90th Percentile: 94.1

75th Percentile: 92.3

50th Percentile: 90.7

National Average 92.3



2007 HEDIS ® Benchmark

90th Percentile: 92.7

75th Percentile: 90.6

50th Percentile: 87.5

National Average 88.1

Hospital Process of Care Measures

Hospital process of care measures show how often hospitals give recommended treatments known to get the best results for patients with certain medical conditions or surgical procedures. Information about these treatments are taken from the patients' records and converted into a percentage. This is one way to compare the quality of care that hospitals give.

The measures are based on scientific evidence about treatments that are known to get the best results. Health care experts and researchers are constantly evaluating the evidence to make sure guidelines and measures are kept up-to-date. Sometimes, guidelines and measures are revised to reflect new evidence. The HQA expects to increase the number of measures and the types of conditions and treatments that hospitals will report over time.

The hospital process of care measures include:

- Acute Myocardial Infarction (AMI)
- Heart Failure (HF)
- Pneumonia (PN)
- Pregnancy (PR)
- Surgical Infection Prevention (SIP)*
- Surgical Care Improvement Project (SCIP)

On January 1, 2003, accredited hospitals providing care to patient populations with conditions under the ORYX® core measures were required to report results of three of the five core measure sets. In 2006, the number of ORXY® performance measures the MHS reported to TJC increased to twenty-three.

Each MTF selects core measure or non-core measure sets that it will use. Data on these measures are abstracted from the facility's clinical records and submitted quarterly to the DoD approved ORYX ® vendor, which then forwards the data for all MTFs to TJC. The Joint Commission posts ORYX® data for accredited organizations along with national averages for each core measure on the TJC Quality Check® website. The DoD analyzes these 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. In addition, the National Perinatal Information Center Comparative Data for 2007 is also included as this population represents a sizeable portion of the MHS beneficiaries.

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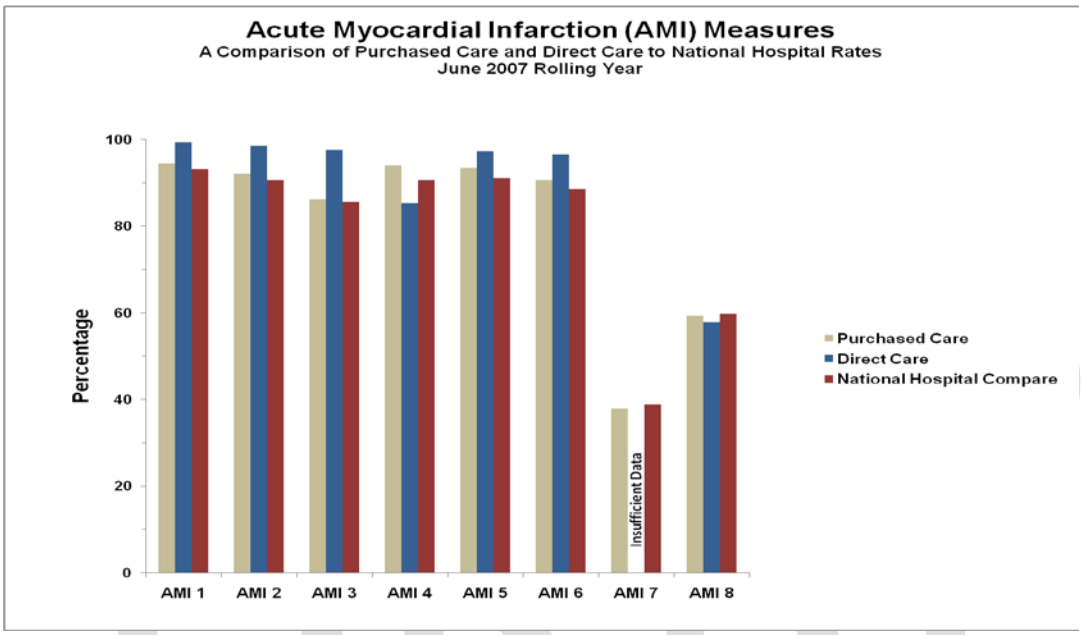
Acute Myocardial Infarction (AMI)

The MHS collected data on eight TJC Acute Myocardial Infarction (AMI) core measures. The following chart shows DoD's performance rates were either comparable or slightly higher than the national rates for five of the eight Acute Myocardial Infarction core measures. One measure (AMI-7) had insufficient data due to low population.



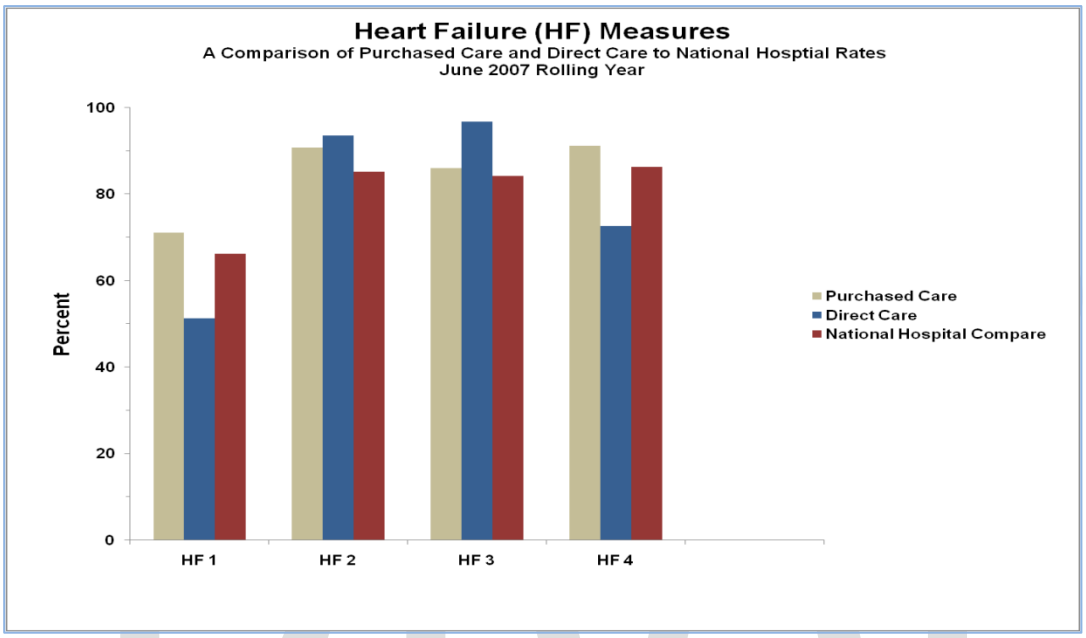
	Purchased Care	Direct Care	National Hospital Compare
AMI 1	94.49	99.32	93.08
AMI 2	92.01	98.44	90.48
AMI 3	86.13	97.50	85.53
AMI 4	93.94	85.17	90.57
AMI 5	93.25	97.23	90.96
AMI 6	90.58	96.58	88.48
AMI 7	37.78	0.00	38.83
AMI 8	59.31	57.69	59.65

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 6 AMI patients given beta blocker within 24 hours after hospitalization.
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 in patients with ST-segment elevation or left bundle branch block (LBBB).

Heart Failure (HF)

The MHS collected data on four TJC Heart Failure core measures. The chart below shows DoD's performance was significantly below the national rates for Heart Failure measures HF-1. For the HF-2, HF-3 and HF-4 measures, DoD's performance rate was higher than the Hospital Compare rate.



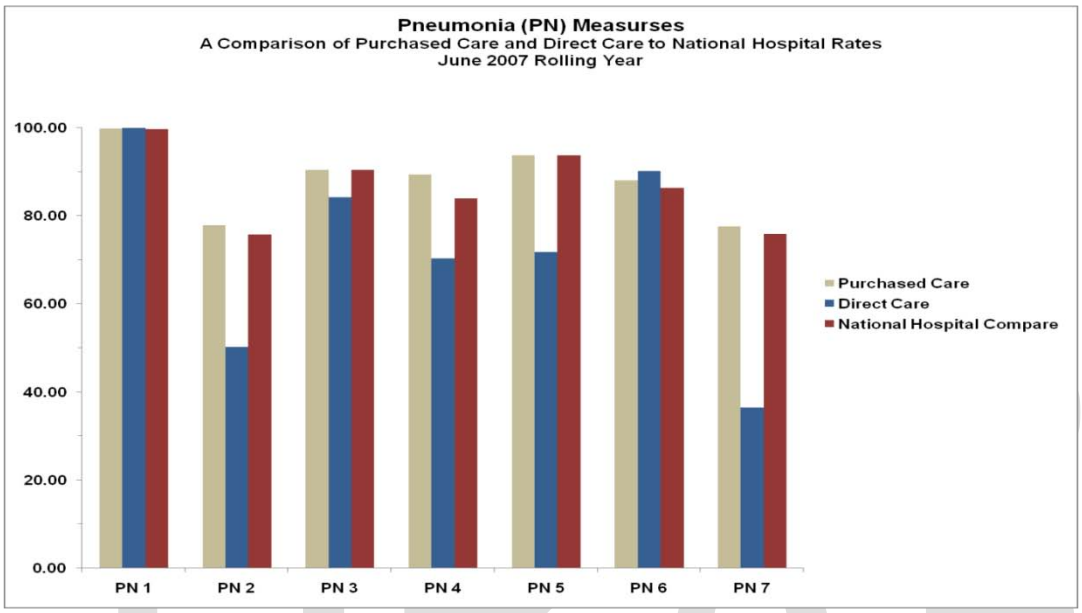
	Purchased Care	Direct Care	National Hospital Compare
HF 1	71.09	51.25	66.14
HF 2	90.77	93.53	85.24
HF 3	85.97	96.82	84.22
HF 4	91.26	72.66	86.35

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.

Pneumonia (PN)

The MHS collected data on seven Joint Commission Pneumonia core measures. This chart shows DoD's performance rate for the PN-1 was above the national rates. DoD's performance rate fell below the national rates for PN-3, and PN-4, and an average of 35 percent lower than the national average for measures PN-2 and PN-7, identifying areas for continued improvement.



	Purchased Care	Direct Care	National Hospital Compare
PN 1	99.73	99.88	99.54
PN 2	77.87	50.17	75.71
PN 3	90.31	84.15	90.39
PN 4	89.26	70.34	83.91
PN 5	93.71	71.68	93.63
PN 6	87.92	90.14	86.25
PN 7	77.55	36.50	75.79

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 ED 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 4 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.

DRAFT

Pregnancy

The category of evidence-based measures assesses the overall quality of care provided to pregnant patients. 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.

Currently, there are two outcome measures that are risk adjusted: Pregnancy (PR) Inpatient Neonatal Mortality and PR Third or Fourth Degree Laceration. 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 has performed better than anticipated based on the illness of the patients being treated. MTF pregnancy core measures were close to or slightly above the Expected risk predicted rate based on the illness of the patients being treated.

ORYX Pregnancy Core Measure Sets 2007

Outcome Measure	Risk Predicted Rate	Observed Rate at Military Treatment Facilities
Neonatal Mortality*	.00290	.00299
3rd and 4th Degree lacerations**	.0356	.0343
Vaginal birth after cesarean section VBAC***	.1560	.1282

Definitions of PR Core Measures

Neonatal Mortality*: The inpatient neonatal mortality* measure reports how often infants died after 28 days of birth. This measure is adjusted to reflect the fact that some babies are sicker than others at or shortly after birth.

3rd and 4th Degree lacerations:** The vaginal tears during delivery** measure reports how often patients have significant tears between the vagina and anus while having a baby. These types of tears can lead to other medical complications.

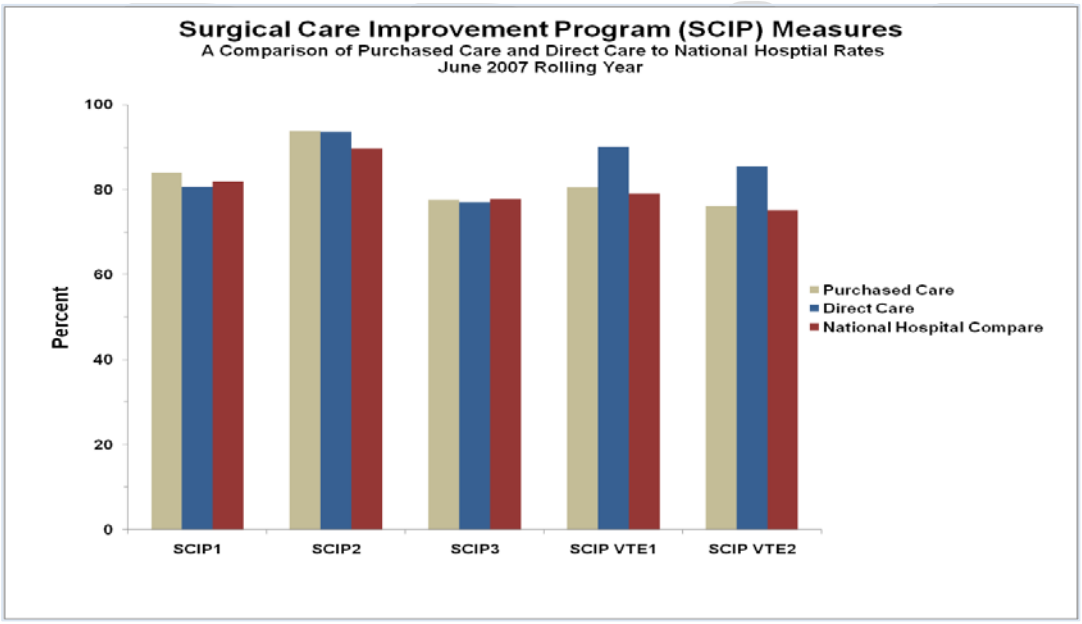
Vaginal birth after caesarean section VBAC*:** The vaginal birth after caesarean section (VBAC***) measure is used to assess prenatal patient evaluation, management, and treatment selection concerning vaginal deliveries in patients who have a history of previous caesarean section. A trial of labor may 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 vaginal birth after cesarean section (VBAC) along with other performance measures such as primary cesarean 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 though they collect data on this measure.

Surgical Care Improvement Project

The Surgical Care Improvement Project (SCIP) is a national partnership of quality organizations committed to improving the safety of surgical care through reduction of postoperative complications. Initiated in 2003 by CMS and the Centers for Disease Control and Prevention (CDC), the SCIP partnership is coordinated through a Steering Committee of 10 national organizations, including TJC.

As part of the effort to assure alignment of common measures, CMS and the TJC implemented the SCIP infection module in 2006. In 2007, the MHS collected data on 24 SCIP measures relative to the selection, receipt, and discontinuance of prophylactic antibiotics for surgical patients. These 24 measures are grouped into three categories based on when antibiotics were selected, received, and or discontinued.

Five of the 24 SCIP measures are ORYX® core measures that are reported to TJC and considered in the accreditation process. The table below shows the MHS met or exceeded the National Hospital Compare rates for SCIP-2 and SCIP-VTE1 and SCIP-VTE2 and is only slightly below the rate for the SCIP-1 and SCIP-3.



	Purchased Care	Direct Care	National Hospital Compare
SCIP - 1	83.99	80.61	81.93
SCIP - 2	93.74	93.62	89.70
SCIP - 3	77.52	76.95	77.63
SCIP - VTE1	80.54	90.16	79.09
SCIP - VTE2	76.14	85.45	75.14

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.

National Perinatal Information Center

Young families represent a significant portion of the Military Health System's beneficiary population. Childbirth remains the leading reason for hospitalization in the MHS with over 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 thirty-four MTFs delivering 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 below. Note that in six of the eight measures the MTFs has favorable rates for this data (a low rate is favorable). In the two measures that are higher, they are within fractions of one percent.

National Perinatal Information Center Comparative Data
Calendar Year 2007

Outcome Measure	Military Treatment Facilities	Perinatal Center Database
Cesarean birth rates	25.8%	33.8%
Major complication rates	5.74%	7.49%
Extreme complication rates	0.13%	0.26%
Operative delivery rate*	7.68%	7.52%
Induction rate	19.02%	18.75%
Major complications for the neonates	5.02%	6.34%
Extreme complications for the neonates	0.47%	1.72%
Mortality rate for special care neonates	1.72%	2.68%

* Includes non-breech vaginal instrument delivery cases such as forceps or vacuum extraction deliveries

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.

Special Studies

The National Quality Management Program (NQMP) is part of an overall TMA strategy to be a provider of world-class health care. NQMP collects, manages and reports DoD's performance measures and accreditation requirements, including Joint Commission ORYX® and 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 healthcare providers use these independent, impartial analyses of 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. On-line 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. These on-line educational activities are available to policy makers and healthcare 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(R) and the Special Studies) for performance improvement initiatives.

NQMP 2007 Special Studies

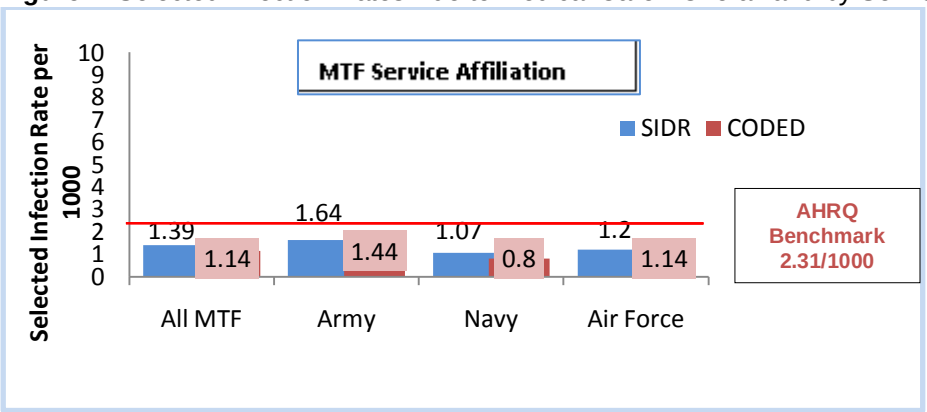
The following FY 2007 studies were conducted as part of the overall initiative of NQMP External Review of Care Scientific Advisory Panel (SAP).

A Comparison of Administrative and Medical Records Data on the Identification of Hospital Acquired Infections

During 2007, a study was conducted to examine hospital acquired infections (HAIs) in DoD MTFs. The study used HAI measures developed by the Agency for Healthcare Research and Quality (AHRQ) along with a consortium of national healthcare organizations. These measures were part of the Patient Safety Indicators (PSIs) endorsed by AHRQ to monitor hospital safety and quality in our nation's hospitals. The purpose of the study was to determine if the standard method for measuring HAIs, as developed by AHRQ, could be applied to DoD healthcare data. Using AHRQ-PSI measures create an advantage as this method is well established and provides a national benchmark for comparison purposes.

The study, approved by the SAP, focused on two PSIs endorsed by AHRQ: **"**Selected Infections Due to Medical Care**"** (PSI- 7) and **"**Postoperative Sepsis**"** (PSI- 13). The study was conducted in two phases using hospital discharge records from July 1, 2005 through June 30, 2006. The study results differed for the two HAI measures. For PSI-7, 115,453 discharges met study inclusion criteria. Diagnosis codes indicating an infection were present in 160 hospital discharges, for an infection rate of 1.39 infections per 1000 hospitalizations (1.39/1,000). Recomputed infection rates after record recoding were similar. Both the SIDR data and the recoded records infection rates were lower than the AHRQ benchmark of 2.31/1,000 (Figure 1). The record coding for diagnoses of infection agreed 80% of the time between the administrative data and the recoded records.

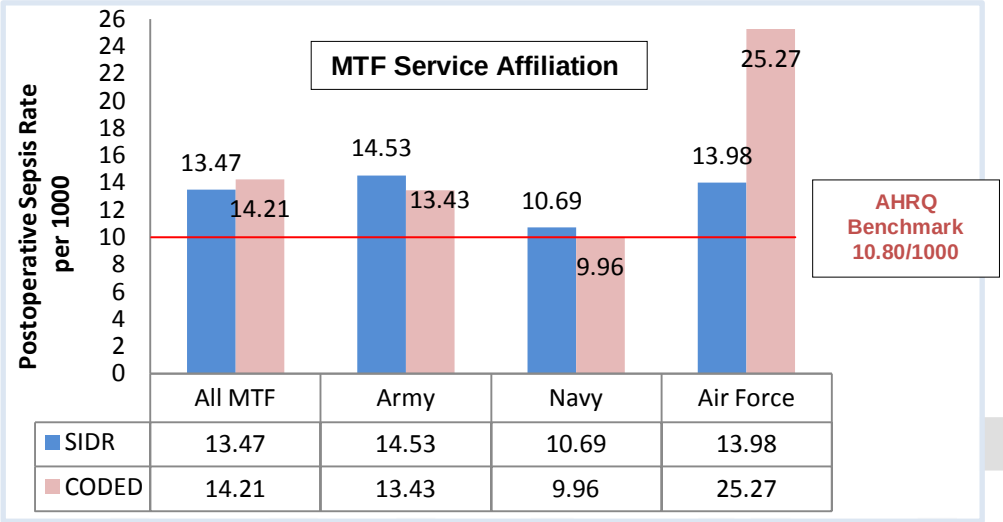
Figure 1. Selected Infection Rates Due to Medical Care - Overall and by Service



For PSI-13, 10,247 discharges met study inclusion criteria. Diagnosis codes indicated an infection was present in 138 hospital discharges, for an infection rate of 13.47/1000. The AHRQ benchmark of

10.8/1,000 was lower than the DoD rates (Figure 2). This rate should be viewed with caution, as over 70% of records reviewed were excluded due to not being elective admissions. Although elective admission information appears in civilian hospital administrative data, it is not present in DoD hospital administrative data.

Figure 2. Postoperative Sepsis Rates - Overall and by Service



	All MTF	Army	Navy	Air Force
SIDR	13.47	14.53	10.69	13.98
CODED	14.21	13.43	9.96	25.27

Conclusions and Recommendations: For PSI-7, miscoded records created an infection rate higher than actual, but substantially lower than the AHRQ benchmark. The miscoded record rate was higher than the benchmark for coding accuracy used by the Centers for Medicare and Medicaid Services. Training for inpatient medical record coders to improve PSI-7 coding accuracy would allow this measure to be used with confidence. For PSI-13, infection rates were higher than the AHRQ benchmark. However, this result may be misleading as a large majority of records had to be excluded. Because elective admission information is not available in the DoD administrative data, PSI-13 should not be monitored using AHRQ software at this time. PSI-13 needs further study before it can be used to monitor postoperative sepsis.

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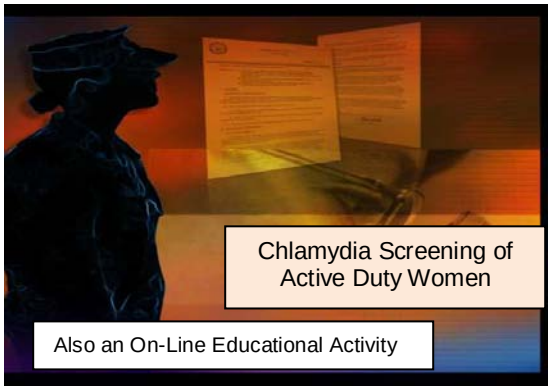
Evaluation of Chlamydia Trachomatis Screening for Active Duty Women

Chlamydia trachomatis infections are common among sexually active adolescents and young adults less than 25 years of age. In 2006, the prevalence rate of chlamydia within the general population among this age group was greater than 2,797 cases per 100,000 women (CDC, 2006). Among female active duty Service members (ADSMs), in 2004, the Reportable Medical Events System, managed by the Defense Medical Surveillance System, reported Chlamydia as one of the three leading reportable medical events with a rate of 14.17 per 1,000 under the age of 25. A 2003 study by Gaylos suggested that high chlamydia rates among new recruits supports the testing of female ADSMs age 25 years or younger, with the 17 to 25 age group at greater risk of contracting the disease. In response to continuing concerns expressed by the Defense Health Board a study was conducted to assess the efficacy and cost-effectiveness of chlamydia screening in young active duty women. The study had two major components: an assessment of compliance with Service policies for screening active duty females, including the U.S. Preventive Services Task Force recommendation for screening women for Chlamydia; and examination of health outcomes of active duty women based on screening patterns. The final study population included 17,931 female recruits,

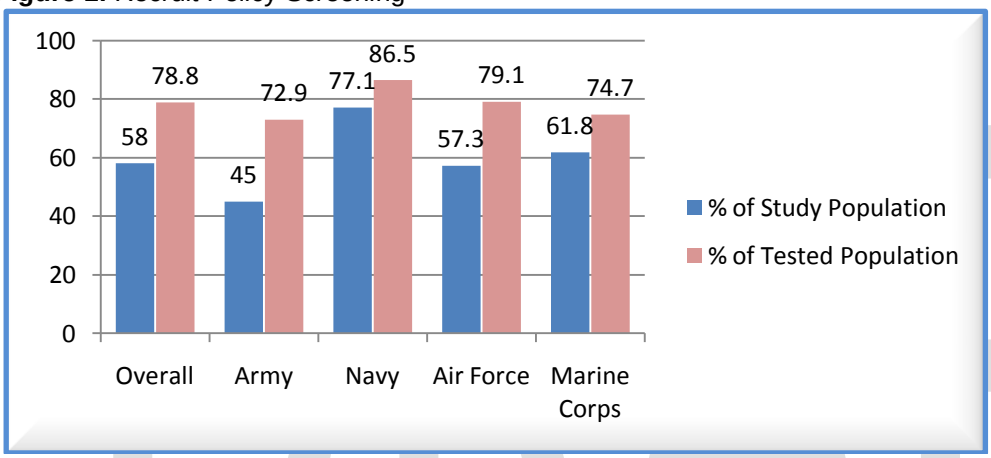


ages 17 through 25, who entered active duty service within one year prior to the study period and remained in the Service for the duration of the 2.5 year study period which began on 1 October 2005 and ended 30 April 2007.

Overall Testing: 74% of female ADSMs (n = 13,195) were tested at some point within the study period: By Service, the Army screened 62% of its ADSMs, the Navy 89%, the Air Force 73%, and the Marine Corps 83%. (Service policies for Chlamydia screening include the initial screening of recruits referred to as "recruit-policy" screening; and screening each year thereafter as part of an annual health evaluation, referred to as "annual" screening.) During the study period, 58% of the study population was recruit-policy screened or tested within Service-based guidelines, and 67% received annual screening.

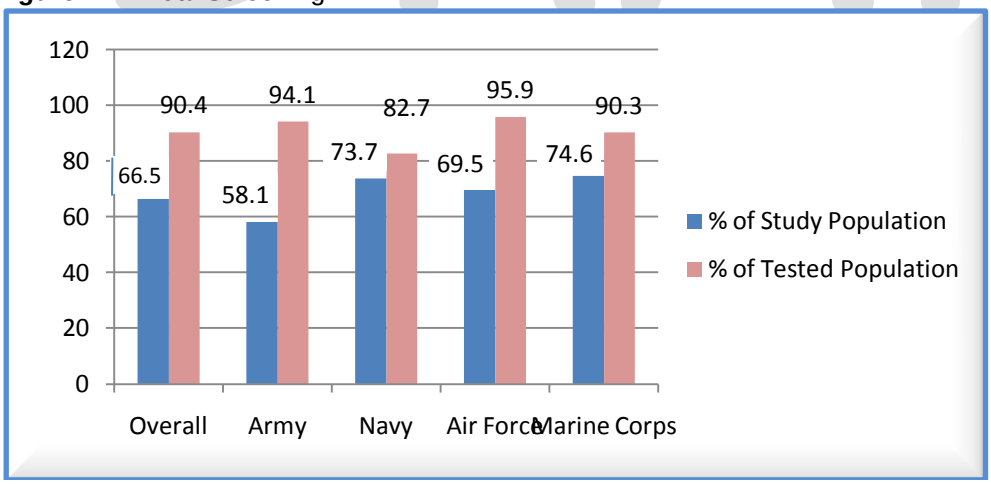
Recruit-Policy Screening (See Figure 1): Mandated initial screening of recruits either early in their recruit training or within their first year of service.

Figure 1: Recruit Policy Screening



Annual Screening (See Figure 2): Service screening policy requiring each female ADSM to be tested yearly as part of an annual health evaluation.

Figure 2: Annual Screening



Conclusions: The Study reviewed the prevalence of three adverse conditions commonly associated with chlamydia infections – Pelvic Inflammatory Disease (PID), ectopic pregnancy, and infertility. Overall, 832 cases of PID, ectopic pregnancy, and/or infertility were noted among the 17,931 ADSMs

in the study population. The frequency of adverse outcomes ranged from 7% (Marine Corps ADSMs) to 2% (Air Force ADSMs).

Chronic Heart Failure Performance Measures in the Military Health System

This study examined baseline MHS chronic heart failure data (CHF) for key components (10 measures) of care that should be provided to all patients with CHF, in the absence of contraindications or intolerance. The Institute for Healthcare Improvement (IHI) in its 2006 "Protecting 5 Million Lives From Harm" campaign followed and reported on seven of these ten measures including: (1) left ventricular systolic (LVS) function assessment, (2) angiotension converting enzyme inhibitor (ACEI) or angiotensin receptor blocker (ARB) at discharge for CHF patients with systolic dysfunction (left ventricular ejection fraction < 40%), (3) anticoagulation at discharge for CHF patients with chronic or recurrent atrial fibrillation, (4) smoking cessation advice and counseling, (5) discharge instructions addressing activity level, diet, discharge medications, follow up appointment, weight monitoring, and what to do if symptoms worsen, (6) influenza immunization (seasonal), and (7) pneumococcal immunization. The remaining three measures included: 30 day readmission rates; use of beta blocker medications for CHF patients; and 90 day visit to emergency department or admission rate for HF after emergency department discharge for HF. The study used administrative and paper medical record abstraction.

Results: Results of the study found the Direct Care System (DCS) study population was predominately male (64%), 65 years or older (75%), Caucasian (64%), and married (66%). Based on age, the DoD HF patients were comparable to the U.S. Medicare population. Individuals experienced cardiac related comorbidities similar to those reported in the literature. Forty-six percent of hospitalizations occurred at an Army facility. Results for the seven IHI measures varied across the DCS and Services. At the DCS level, compliance with the IHI measures was consistent with or above national averages for the evaluation of LVS function, administration of ACEI/ARB at discharge, and for administration of anticoagulants at discharge. The first two of these measures are routinely collected by MTFs as part of their hospital accreditation requirements.

At the Service level, the Navy and Air Force performed very well for prescribing ACEI/ARBs at discharge (100%). The Air Force also performed very well (100%) for offering smoking cessation to HF patients who smoked. DCS performance overall was lower than national rates for pneumonia and influenza immunizations; however, the Army's performance rate on the pneumococcal vaccination measure was above the national rate. Compliance was less than optimal across all reviews for the discharge instructions measure. Additional analysis of the six subcomponents of this measure indicated a lack of compliance in advising patients to monitor their weight as the primary reason for the poor performance score. Results also varied across the three additional measures. At 30%, the beta blocker prescription rate for HF patients was well below the American College of Cardiology/American Heart Association (ACC/AHA) recommended level of 100%; however, among discharges given a beta blocker prescription, 71% received one of the three ACC approved beta blockers.

The 30 day readmission rate of 10% was better than rates reported in the literature. Results of the final measure, 90 day return visit to emergency department or admission for heart failure after emergency department (ED) discharge for heart failure, found that 71 ED visits among the 421 individuals in the study population met inclusion criteria. Twenty five of these visits resulted in an admission to the hospital during the ED visit; 41 (89%) of the remaining 46 visits were followed by a subsequent ED visit or hospitalization within 90 days. These results must be viewed with caution as there were coding concerns with 59% of the 41 readmission events.

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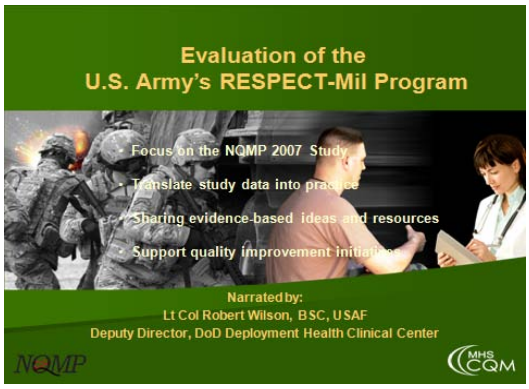
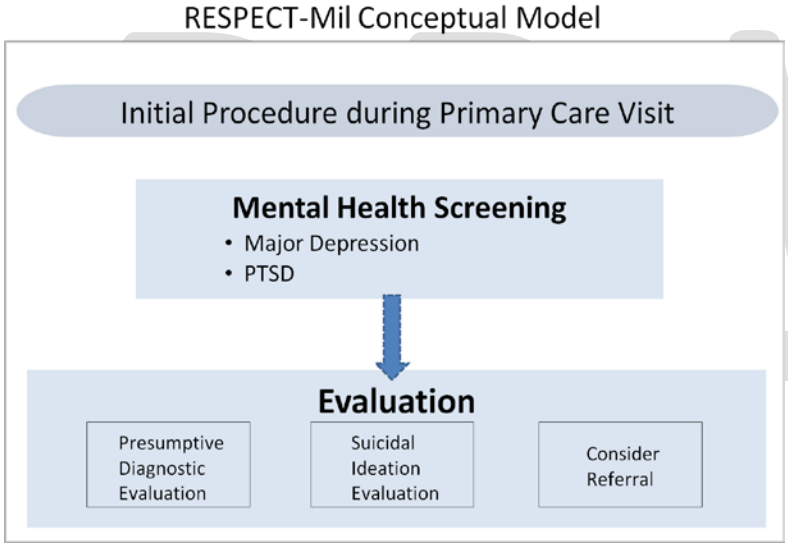
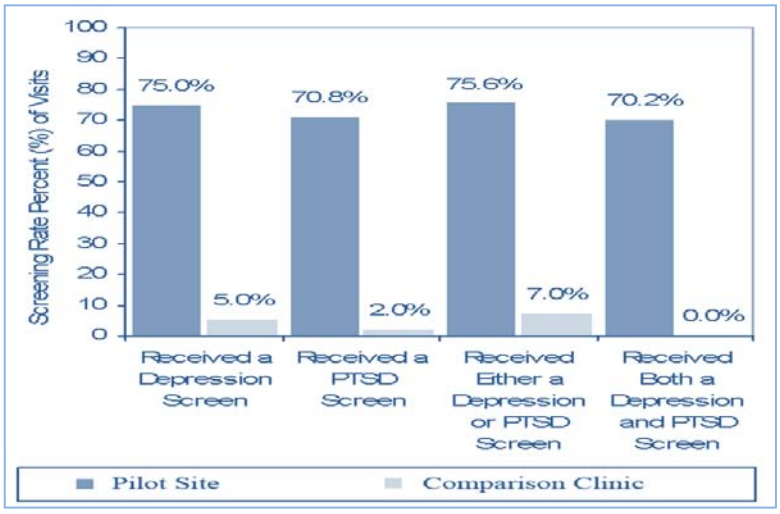
Evaluation of the RESPECT-Mil Program



Reengineering Systems of Primary Care Treatment in the Military (RESPECT-Mil) is a program of the Army designed to improve the detection and treatment of depression, post-traumatic stress disorder (PTSD), and suicidal ideation at the primary care level. Initial procedures inherent in RESPECT-Mil are intended to assist primary care providers in making rapid preliminary assessments for depression, PTSD, and suicidal ideation, as well as initiating referral and management plans for service members' likely needing treatment. On 01 February 2007, a pilot RESPECT-Mil program was implemented at a primary care site in Fort Bragg, North Carolina which experienced relatively heavy visitation by service members. The specific objective of the current evaluation was to examine compliance with initial screening and evaluation procedures at this RESPECT-Mil primary care pilot site.



Data on screening and referral/management plans were collected from a variety of data sources among service members processing through the pilot site during a three-month period of study between 01 February and 30 April 2007. These sources included tracking forms designed specifically for RESPECT-Mil documentation, medical records (both paper and on-line), and administrative health care claims data.



During the study period, approximately 76% of primary care visits to the pilot site complied with RESPECT-Mil guidance by being accompanied by initial screening for either depression or PTSD. For comparison, a 7% screening rate was observed at a control primary care site in Fort Bragg that had not implemented RESPECT-Mil. Approximately 17% of screened pilot site visits were accompanied with a positive screen for either depression or PTSD. Complying with RESPECT-Mil guidance, 75% of screen-positive visits were accompanied by further presumptive diagnostic screening, including suicidal ideation evaluation. Further complying with Government Office of Accounting (GOA) guidance

and revealing transparency in the management process, approximately 91% of initial screen-positive visits were accompanied by either a referral, explanation for lack of referral, and/or a treatment plan.

Results: The findings from this pilot evaluation suggest that RESPECT-Mil can be an effective tool in promoting mental health screening and evaluation. The RESPECT-Mil model is planned to be expanded to other MTFs and other members of the military community, including retirees and the families of service members.

A Study of Organizational Structure and Function on Clinic Performance

The MHS-NQMP sponsored a FY 2007 study of characteristics of MHS Clinical Microsystems (CMS). Clinical microsystems are "…small groups of people who work together on a regular basis to provide care to discrete subpopulations of patients…" that combine to produce quality, safety, and cost outcomes (Nelson, et al., 2002; p. 474). Assessment of important characteristics of CMSs can provide diagnostic information to yield the greatest efficacy in performance improvement efforts. A study conducted in FY 2006 identified and/or developed survey items to measure CMS characteristics.

These survey items formed the primary objectives of the FY 2007 study including:

1. Estimate the accuracy of survey measures of CMS characteristics; and
2. Examine the relationship between measures of CMS characteristics and select performance measures in targeted MHS clinics.

Results: A case study was conducted to learn more about the relevance of clinical microsystems in the MHS. Findings from the case study reinforced the importance and relevance of clinical microsystems theory and its measurement in the MHS. This project also introduced a military-specific dimension to the theory that references the deployment and rotation of active duty clinic personnel.

Associations reported in the survey between the scores for characteristics and performance suggested that increases in organizational support, patient focus, staff focus, interdependence (cohesion) of the care team, and decreases in information technology and performance patterns are associated with higher performance (see Table 1 below). Also, the frequency of themes mentioned during interviews, such as the importance of leadership, technology, and wc
association with clinic performance.

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Patient Safety

Department of Defense
Patient Safety Program

Building a Culture of Safe Patient Care

The Patient Safety Program Office in the TRICARE Management Activity, Office of the Chief Medical Officer, provides oversight on all DoD system-wide patient safety related policy development, program design, and initiative implementation.

The DoD Patient Safety Program (PSP) is leading the MHS to a culture of safety by providing oversight and coordination of enterprise-wide programs to enable patient safety and quality improvement. The mission of DOD's Patient Safety Program is to: "Provide products, services, and training to help ensure the safe delivery of healthcare to MHS beneficiaries." The PSP applies the following Guiding Principles:

- A systems approach across the Services
- Innovation and creativity
- Fostering a culture of trust and transparency
- Communication, coordination, and teamwork
- Embracing national initiatives deemed beneficial to the MHS

The Patient Safety Program's core infrastructure includes:

- DoD Patient Safety Program Office: Ensures continuity and consistency in the implementation of the DoD Patient Safety Program across the MHS through Tri-Service collaboration.
- DoD Patient Safety Center (PSC): Collects and analyses near-miss and adverse event data from within the MHS and provides enterprise-wide recommendations to improve patient safety.
- Healthcare Team Coordination Program (HCTCP): Promotes the integration of teamwork principles into practice through optimal use of training, education, research, and collaborative efforts.
- Center for Education and Research in Patient Safety (CERPS): Facilitates patient safety education, training, best practices, as well as research on the effectiveness of program outcomes.

FY 2007 Major Accomplishments

- Released Team Strategies and Tools to Enhance Performance and Patient Safety, (TeamSTEPPS™) for civilian adoption.
- Implemented Clinical Microsystem Pilots across the MHS.
- Launched distance learning for basic Patient Safety Manager course.
- Convened first-ever MTF Patient Safety Manager Workshop.
- Facilitated MTF participation in the IHI 5 Million Lives Campaign.

Patient Safety Program

The Institute for Healthcare Improvement's 5 Million Lives Campaign

The DoD Patient Safety Program worked to create the opportunity for MTFs to participate in the Institute for Healthcare Improvement's (IHI) 5 Million Lives campaign. The relationship with IHI will pave the way for DoD to share quality improvement information with non-DoD, external organizations.

Following IHI's success with their 100,000 Lives Campaign, IHI tackled an even bolder objective: to protect patients from five million incidents of medical harm over a two year period from

December 2006 through December 2008 utilizing the following specific interventions:

- Deployment of Rapid Response Teams
- Delivery of Reliable, Evidence-Based Care for Acute Myocardial Infarction
- Prevention of Adverse Drug Events (ADEs)
- Prevention of Central Line Infections
- Prevention of Surgical Site Infections
- Prevention of Ventilator-Associated Pneumonia
- Prevention of Harm from High-Alert Medications
- Reduction in Surgical Complications
- Prevention of Pressure Ulcers
- Reduction of Methicillin-Resistant *Staphylococcus aureus* (MRSA) infections
- Delivery of Reliable, Evidence-Based Care for Congestive Heart Failure
- Getting Boards on Board

DoD Patient Safety Manager Program Workshop

Over fifty patient safety managers (PSMs) across the three Services attended the first-ever DoD Patient Safety Program Workshop. The goal of the workshop was to provide an opportunity for PSMs, PSP leadership, and Service representatives to raise issues related to the DoD PSP, share best practices, and discuss common concerns. The workshop balanced large group open discussions with small group interactive exercises. For the first time, PSMs across the Services came together to share information; PSMs expressed great value and enthusiasm to engage in similar information sharing forums facilitated by the DoD PSP.

Patient Safety Reporting System

The Patient Safety Reporting (PSR) system is a Tri-Service management system that will automate patient safety event reporting and help identify areas for patient safety improvement in the MHS. PSR will enable the MHS to track and trend healthcare events for de-identified data aggregation and MHS reporting standardization. In 2007, a Tri-Service workgroup was chaired by the PSP Director and vetted requirements for a PSR system. Constructing a PSR framework to identify infrastructure needs and limitations is targeted for FY 08.

2007 DoD Patient Safety Awards

DoD Health Affairs created the Patient Safety Awards to recognize successful patient safety efforts, particularly those advancing the development of a safety culture, and inspiring organizations to increase their patient safety efforts. The 2007 awards recognized initiatives in three categories:

- Improvements in team performance
- System changes or interventions to improve patient safety and/or meeting national patient safety standards
- Use of technology to advance patient safety

The initiatives selected are data-driven, practical, creative, and present the potential to be replicated across the MHS. The recipients of the awards are recognized at the annual State of the MHS Conference. See the 2007 Patient Safety award winners in the Recognizing Quality Excellence section of this report found on page 61.

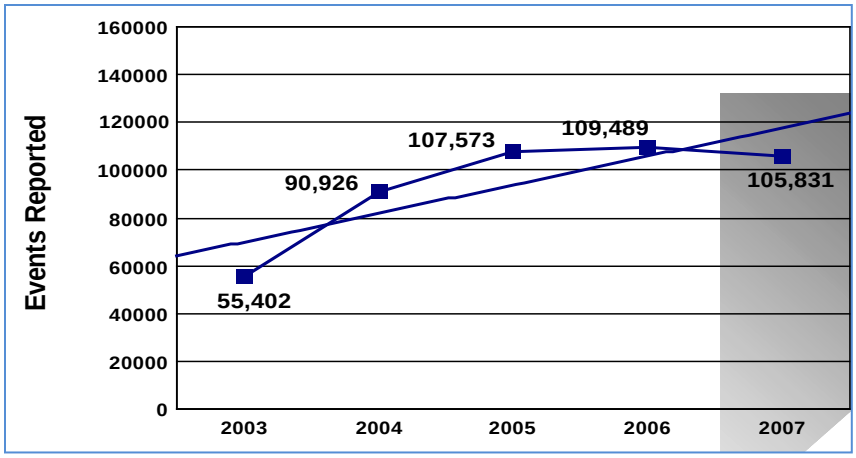
DoD Patient Safety Center

The DoD Patient Safety Center (PSC) serves as the repository for all DoD patient safety data and manages the Patient Safety Registry, which is comprised of data from four sources:

- **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's 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 healthcare processes designed to identify and remedy any process defects.

The PSC relies heavily on the voluntary submission of MTF data for reporting and analytic purposes. DoD patient safety reports, submitted by MTFs to PSC, plateaued in FY 2006 and declined slightly (3%) in FY 2007 (Figure 1).

Figure 1: DoD Reported Patient Safety Events - FY 2003-2007



Of note, near misses (defined as events that failed to reach the patient) hit historic highs, both in total number and as a percentage of overall event reports (Table 1). Near misses provide critical opportunities for facilities to find and fix potential problems before they cause harm. Even more noteworthy, events resulting in patient harm, having peaked in FY 2005, declined in FY 2006 and again in FY 2007 (Table 1). Reduction in preventable harm to patients is a key objective for the DoD Patient Safety Program.

Table 1: Total Event Reports Stratified by Harm **-** FY 2003 – 2007

Harm Stratification	2003		2004		2005		2006		2007		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Events did not reach patient (Near miss)	28974	52.0%	53963	59.0%	68880	64.0%	72804	67.0%	73271	69.0%	297892	63.0%
Events reached patient, no harm	24036	44.0%	33401	37.0%	34818	32.0%	33191	30.0%	29171	28.0%	154617	33.0%
Events reached patient, harm	2392	4.0%	3561	4.0%	3875	4.0%	3494	3.0%	3389	3.0%	16711	4.0%
Total	55402	100%	90925	100%	107573	100%	109489	100%	105831	100%	469220	100%

A review of harm events by type, both medication (Figure 2) and non-medication events (Figure 3) revealed declines in both incidence and as a percent of event reports overall. In the case of medication events this has been a consistent pattern over the last three years and is the result of numerous quality initiatives at the facility, Service, and DoD levels.

Figure 2: Medication Events with Harm as a percent of all Medication Event Reports FY 2003 – 2007

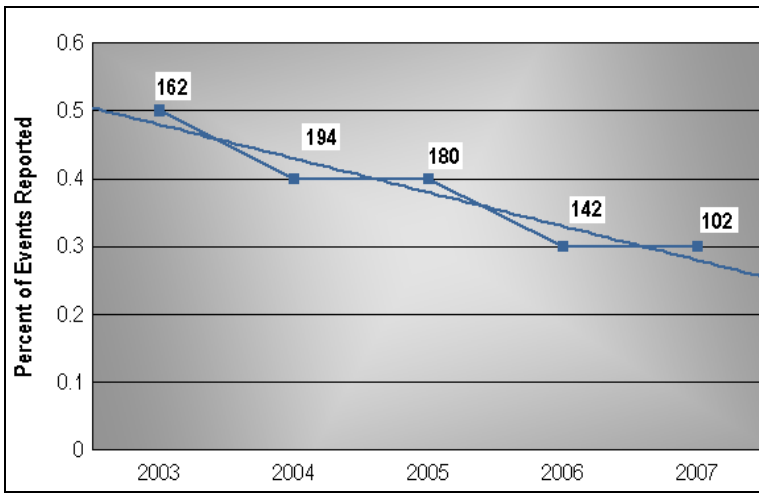
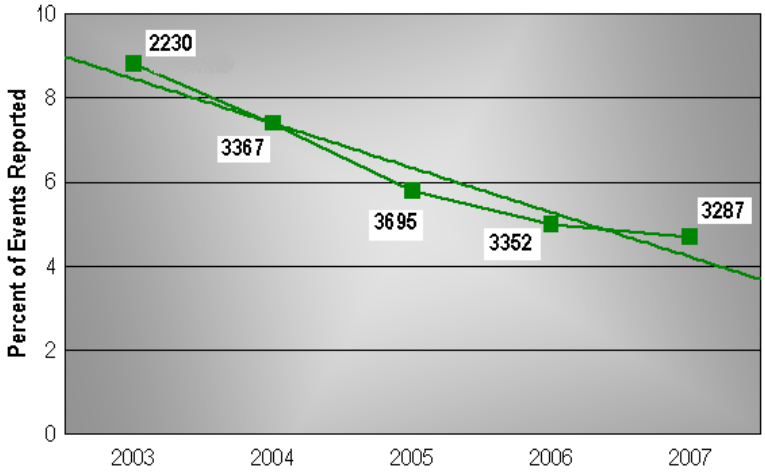


Figure 3: Non-medication Events with Harm as a percent of all Non-medication Event Reports FY 2003 – 2007



Publications & Presentations

The PSC staff provides a wide variety of publications and, as needed, focused responses to inquiries targeted to the needs of senior MHS leadership, the Services, and the field. In FY 2007, PSC's DoD Patient Safety Program publications included:

- Annual and quarterly summaries;
- Quarterly newsletters;
- Safety alerts and advisories targeting specific risks; and
- Focused reviews examining issues identified through MTFs' RCAs and current medical literature.

The PSC shared increasing information, particularly associated with Alerts and Advisories, and pursued more extensive patient safety program data as part of the VA-DoD Joint Strategic Plan.

PATIENT SAFETY PROGRAM NEWSLETTER

TeamSTEPPS PART OF DoD TRAINING FOR IMPROVED PATIENT SAFETY

Center for Education and Research in Patient Safety

The 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:

- Faciliating 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; and
- Evaluating outcome measures for patient safety educational programs and interventions.

Patient Safety Training Program

CERPS offers various educational opportunities on patient safety and numerous tools that support patient safety efforts. Both in-residence and on-site programs are offered to meet the individual and facility learning needs in the MHS. Continuing health education credits are available to a wide range of professional groups through the USUHS.

All new patient safety managers are required to complete the web-based Introduction to Patient Safety Course before they attend the in-residence program to obtain an overview and build the skills necessary for successfully fulfilling their role. MTFs interested in having a large number of individuals participate in patient safety training can arrange for on-site training, which provides the opportunity for a wider audience to become familiar with the concepts and tools that support patient safety.

In FY 2007, the standardized curriculum was expanded through the addition of a web-based Introduction to Patient Safety Course, Regional Conferences, and the revision of the Basic Patient Safety Managers Course. The curriculum components are:

- **Overview** – Addresses the impact of errors on healthcare operations, barriers to change, epidemiology and cost of error, culture, human factors, and system-based solutions for patient safety.
- **Introduction to Patient Safety** – Developed as an on-line pre-requisite for the Basic Patient Safety Managers Course and enhanced to provide CHE credits to providers (physicians, nurses, medical executives, pharmacists). The course is open to all individuals within the MHS.

- **Patient Safety Managers Course** – Basic introduction to all new DoD Patient Safety Managers. Provides intensive training on the utilization of patient safety data collection tools, TapRoot®, incident analysis and reporting requirements to the DoD PSC.
- **Incident Analysis Training** – Introduction and advanced training in the use of the TapRoot® and MEDMARX® technical applications and software used by the DoD PSP to perform root cause (RCA), and failure mode and effect analyses (FMEA).
- **Regional Multi-Service/Facility Conferences** – Developed to cover specific areas of interest including: National Patient Safety Goals, critical information flow, medication management, incident reporting, and the microsystem structure applied in a clinical environment. These courses are offered at both CONUS and OCONUS sites based upon Service or MTF requests.
- In 2007, CERPS offered the following Patient Safety courses which drew attendees from across the MHS.

Patient Safety Training	
Training Program	Number of Attendees
Overview (Includes participants from the Regional Conferences)	1,344
Regional Conferences	233
Web-based Introduction to Patient Safety Course	176
Basic Patient Safety Managers Workshop	71
TapRoot®	154
TapRoot® Software	76
MEDMARX®	20

CERPS and Patient Safety Program Web-Sites

Expanding the availability of patient safety information to all participants in the MHS is essential to ensure the continued development of a strong culture of patient safety. In August of 2006, with the support of the Uniformed Services University, CERPS assumed the responsibility of housing and coordinating the development of the DoD Patient Safety Program (PSP) Web-site. A full-time webmaster works in collaboration with the three components of the Patient Safety Program including the Healthcare Team Coordination Program (HCTCP), the Patient Safety Center (PSC), and the Center for Education and Research in Patient Safety (CERPS). Released in April 2007, the site had over 20,000 visits as of August 2007.

The web-site was designed to support the overall mission of the DoD Patient Safety Program and also supports the individual and collective missions of the program's three components as well as the Army, Navy, and Air Force.

http://dodpatientsafety.usuhs.mil/

The web-site includes material on a variety of patient safety topics such as:

- Safe practices;
- Error reporting systems;
- Team training;
- Human factors and system re-design;
- Healthcare personnel training;
- Course offerings; and
- Patient safety performance measures.

Expansion of the site's capabilities to include additional resources, access to distance learning programs, and higher levels of secure access are included in an approved concept of operation (CONOPS) that serves as the guidance for the future development of the site.

Microsystems in the Clinical Environment

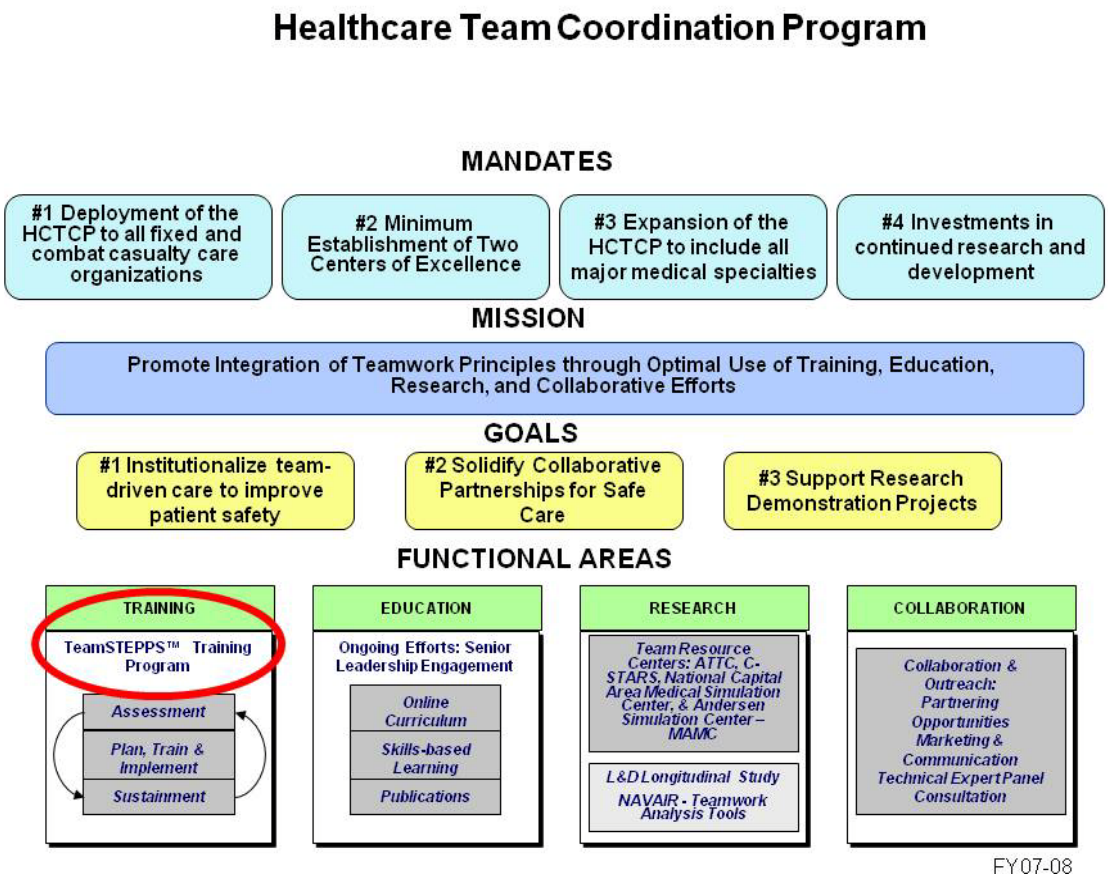
The clinical microsystems methodology for improvement was initially introduced into the CERPS curriculum in FY 2006. In FY 2007, the basis of Microsystems thinking was included in the Patient Safety Overview and Regional Conferences. It was also added to the content of the Basic Patient Safety Manager's Course and in specific lectures to undergraduate medical students at the USUHS. This methodology is designed to engage frontline staff in the process of improving care.

CERPS developed a formal microsystem educational intervention for clinical environments consisting of: extensive briefing of the MTF command leadership; detailed pre-work to be completed prior to the arrival of CERPS faculty (including selection of a specific clinical area and the development of a lead clinical team); a three day on-site training that guides the lead clinical team through structured exercises designed to improve the use of processes, personnel, and resources currently available within the MTF; and an 18 month follow-up agreement and regularly scheduled VTCs and/or telephone conference calls structured to provide ongoing guidance and support. The initial sites chosen to pilot this in-depth intervention were identified in collaboration with the Air Force, Army, and Navy. Three sites, that included five lead clinical teams, commenced activity in FY 2007; a fourth site, with two lead clinical teams was identified to begin the program in FY 2008.

The Healthcare Team Coordination Program

Created under the 2001 National Defense Authorization Act (NDAA), the Healthcare Team Coordination Program (HCTCP) focuses on the implementation of medical team training initiatives within DoD to reduce the potential of harm to patients while delivering care. HCTCP engages in four core processes to meet its mission They include:

- Training;
- Education;
- Research; and
- Collaboration.



Training

The cornerstone of HCTCP is TeamSTEPPS™, Team Strategies and Tools to Enhance Performance and Patient Safety, an initiative designed to improve communication and medical teamwork practices within the MTFs. TeamSTEPPS is an evidence-based curriculum that incorporates more than 20 years of research based on team performance in aviation and other high-risk industries. This medical teamwork initiative provides specific tools and strategies for integrating teamwork principles, such as communication, into clinical practice. It is a customizable resource that can transform culture in military and civilian healthcare organizations.

The goal of TeamSTEPPS is to produce highly effective medical teams that optimize the utilization of information, people, and resources to achieve the best clinical outcomes for patients. Industry experts in Crew Resource Management (CRM) and High-Reliability Organizations (HROs) promote teamwork principles through the use of specific tools and strategies, like TeamSTEPPS, to improve safety and transform organizational culture.

HCTCP's approach to changing the culture is to *Spread, Impact*, and *Sustain* TeamSTEPPS teamwork tools and strategies through training expansion, program evaluation and continuous curriculum enhancement through updated content and new learning channels.

During FY 2007, HCTCP spread TeamSTEPPS by expanding training to operational units and reserve units, incorporating TeamSTEPPS tools and strategies into simulation exercises.

Training 2005 – 2007

- Trained at 68 MTFs
- Created 1492 trainer/coaches
- Over 22,000 CEU/CME granted
- Saved $1.4M in training/travel costs

Education

HCTCP built on its existing Learning Action Network (LAN) to improve TeamSTEPPS sustainment efforts in MTFs in order to assure progress these facilities have already made and continue to build upon it.

Over the course of FY 2007, HCTCP supported 3 LAN sessions, with an estimated 180 attendees, focusing on engaging physicians and staff for successful implementation. The MTF feedback gathered from the FY 2007 LAN survey indicated that 90% of participants agreed that "the session(s) fostered general understanding of important information or issues." HCTCP announced the FY 2008 strategy to host LAN sessions bi-monthly on participants suggested topics.

Research

Supplementing training activities, HCTCP spearheads and facilitates a number of research activities including:

- **Team Resource Centers**
  HCTCP identified Team Resource Centers (TRCs) to serve as Centers of Excellence (COEs) for the development, validation, proliferation, and sustainment of medical team training to support fixed MTFs and combat casualty care organizations.

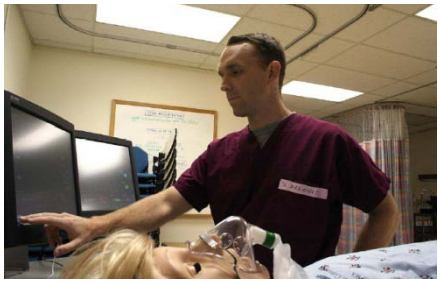
- **Center for Sustainment of Trauma and Readiness Skills (C-STARS)** Baltimore, MD; customized TeamSTEPPS for resident training at R. Adams Cowley Shock Trauma Center and procured equipment necessary to complete a simulation center. C-STARS conduct Phase 1: Evaluation of Team Dynamics During Trauma Resuscitations and began phase 2: Assessing the Impact of Patient Safety Training Care.

- **Army Trauma Training Center (ATTC)** Miami, FL; The mission of ATTC is to train Forward and Combat Support Hospital Surgical Teams for clinical deployment. ATTC made available a distance learning module to reserve units and conducts scenario-based trauma event simulation exercises for Forward Surgical Teams (FSTs) with embedded team skills.

- **National Capital Area Medical Simulation Center (NCAMSC)** Bethesda, MD; NCAMSC incorporated patient safety scenarios into Surgical Simulation Laboratory

curriculum and deployed to all 13 GME sites. The curriculum assessment phase is now underway and will continue into FY 2008. NCAMSC is also prototyping a Wide Area Virtual Environment (WAVE) virtual reality area to conduct combat teamwork scenarios.

- **Andersen Simulation Center at Madigan Army Medical Center (ASC)** Tacoma, WA; More than 17,500 soldiers, physicians, nurses, and other healthcare providers were trained in FY 2007. In collaboration with HCTCP, a mobile obstetrics emergency simulator was deployed to all GME training sites in September 2007.



- **Research Projects**
  In addition to collaborating with TRCs, HCTCP also sponsors research studies to further understand the impact of team training on clinical processes and outcomes. HCTCP is currently working with the National Perinatal Information Center (NPIC) and the RAND Corporation on two such studies. HCTCP plans to utilize the results from these studies to enhance the HCTCP curriculum and its training plans.

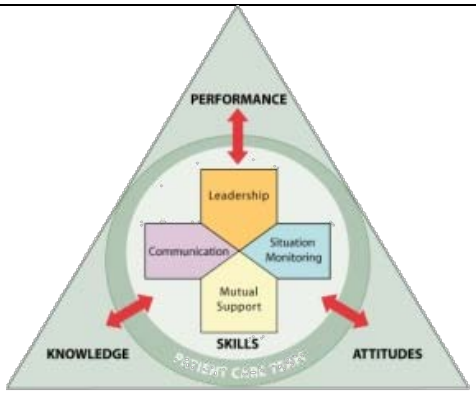
  The RAND corporation continues research work on:
  - The L&D Longitudinal Study, which is evaluating teamwork implementation. Thus far they have found hospitals varied widely in their specific approaches to improving teamwork practices. They have indentified factors needed for successful improvement and analyzed data collected to assess teamwork effects.
  - The Teamwork Outcome Measures Study documented the state of knowledge about teamwork outcome measures through an extensive literature review. The final report will be published in FY 2008.

Collaboration

Collaboration is critical to the overall broadening of TeamSTEPPS beyond the DoD. Through an interagency partnership, HHS Agency for Healthcare Research and Quality (AHRQ) and the DoD initiated the National TeamSTEPPS Implementation Project which was designed to build a national infrastructure to support master trainers. The lessons learned within the DoD PSP will be leveraged into the civilian healthcare community through the AHRQ National Implementation Project, which began in September 2007.

AWARD-WINNING TeamSTEPPS

For their work on the TeamSTEPPS project, the Program Director for the Healthcare Team Coordination Program and her colleagues represented by Agency for Healthcare Research and Quality, American Institutes for Research, University of Central Florida, and University of Miami received the distinguished **2007 M Scott Myers Award For Applied Research in the Workplace from The Society for Industrial and Organizational Psychology**



DoD Patient Safety Program -- FACTS AT A GLANCE

- 24 peer-review publications (collectively)
- Curriculum was integrated into simulation exercises, several graduate courses at USU

- Handoff Toolkit was produced as a collaborative project with Association of Perioperative Registered Nurses (AORN) to prevent medical errors during handoffs of critical information
- DoD, AHRQ and Centers for Medicare and Medicaid Services (CMS) partnered to include TeamSTEPPS in the 9th Scope of Work.
- TeamSTEPPS National Implementation project, in collaboration with AHRQ, coordinated by the American Institutes for Research, names four sites to conduct TeamSTEPPS master training to include:
    - Duke Medical System
    - University of Minnesota/Fairview Health Systems
    - Carilion Clinic
    - Creighton University Medical Center.

The Patient Safety Program is focusing on these major goals for FY 2008.

Patient Safety Program FY 2008 Major Goals

- **PSR: Select and procure a commercial off-the-shelf Patient Safety Reporting System**. The PSR system is a Tri-Service management system that automates patient safety event reporting and helps identify areas for patient safety improvement in the MHS. PSR enables the MHS to capture, track, and trend healthcare events to aggregate de-identified information for reporting and to standardize reporting across the enterprise. PSR provides a systematic methodology to reduce the frequency and severity of medical events by incorporating comprehensive analysis tools to identify enterprise-wide safety improvement strategies.

- **NHSN: Implement the Centers for Disease Control and Prevention's (CDC) National Healthcare Safety Network (NHSN) NHSN** is CDC's web-based national healthcare associated infection (HAI) surveillance system. As a component of DoD's infection control and prevention program NHSN improve HAI surveillance visibility at the MHS and Service levels.

- **Patient Safety Culture Survey: Administer the Agency for Healthcare Research and Quality (AHRQ) Patient Safety Culture Survey and analyze and disseminate the results throughout the MHS.** The Patient Safety Culture Survey is a voluntary web based survey that assesses staff attitudes and beliefs about patient safety and medial error reporting in their facility and the status of the Patient Safety Culture in the MHS.

- **Communications Campaign: Launch a campaign to improve communications across the MHS.** The campaign themes will be identified using focus groups to include key stakeholders, and then kicked off through a phased approach.

- **Technical Expert Panel**: **Convene a technical expert panel of national and international patient safety thought leaders** from DoD, other federal government agencies, academic/research, and the civilian sector to further the DoD and national patient safety agenda.

Patient Satisfaction

Listening to the Patient's Perception of Care to Guide Quality Improvement

Health Care Survey of DoD Beneficiaries

The Health Care Survey of DoD Beneficiaries (HCSDB) is an annual worldwide survey of MHS beneficiaries conducted by the Office of the Assistant Secretary of Defense, TMA. The survey provides DoD with ongoing information from MHS beneficiaries on their satisfaction with their health care.

The HCSDB includes two distinct surveys, the Adult and the Child HCSDB. Both surveys provide information on a wide range of health care issues such as the beneficiaries' ease of access to health care and preventive care services. In addition, the surveys provide information on beneficiaries' satisfaction with their doctors, overall health care, health plan and healthcare staffs' communication and customer service efforts.

HCSDB questions on satisfaction with and access to health care have been modeled on the HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems) survey, which is also known as the CAHPS® Hospital Survey, or Hospital CAHPS. HCAHPS has a core set of questions that can be combined with a broader, customized set of hospital-specific items. HCAHPS survey items complement the data hospitals currently collect to support improvements in internal customer services and quality related activities.

Measures describing performance in ambulatory settings describe both timeliness and access to care. These measures include waits in the doctor's office and waits for obtaining appointments. Rates are the proportions that usually or always get to see the doctor within 15 minutes of arrival, and the proportion that can usually or always get an appointment when their need is not urgent. The results are adjusted for age and health status. They indicate that slightly over half of both MTF users and users of civilian network report that they can usually or always see a doctor with a wait of 15 minutes or less. The results also indicate that beneficiaries are less satisfied with access to appointments at MTFs than at civilian network facilities.

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 their organization to enhance performance. The civilian facility data are also presented to the TRICARE Regional Offices for dissemination.

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 (TRISS)

The TRICARE Inpatient Satisfaction Survey (TRISS) reports on inpatient experiences of adults who receive medical, surgical, and obstetric services from MHS's 63 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, 2007, and September 30, 2007.

The MHS survey results were compared to the results from the 2007 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

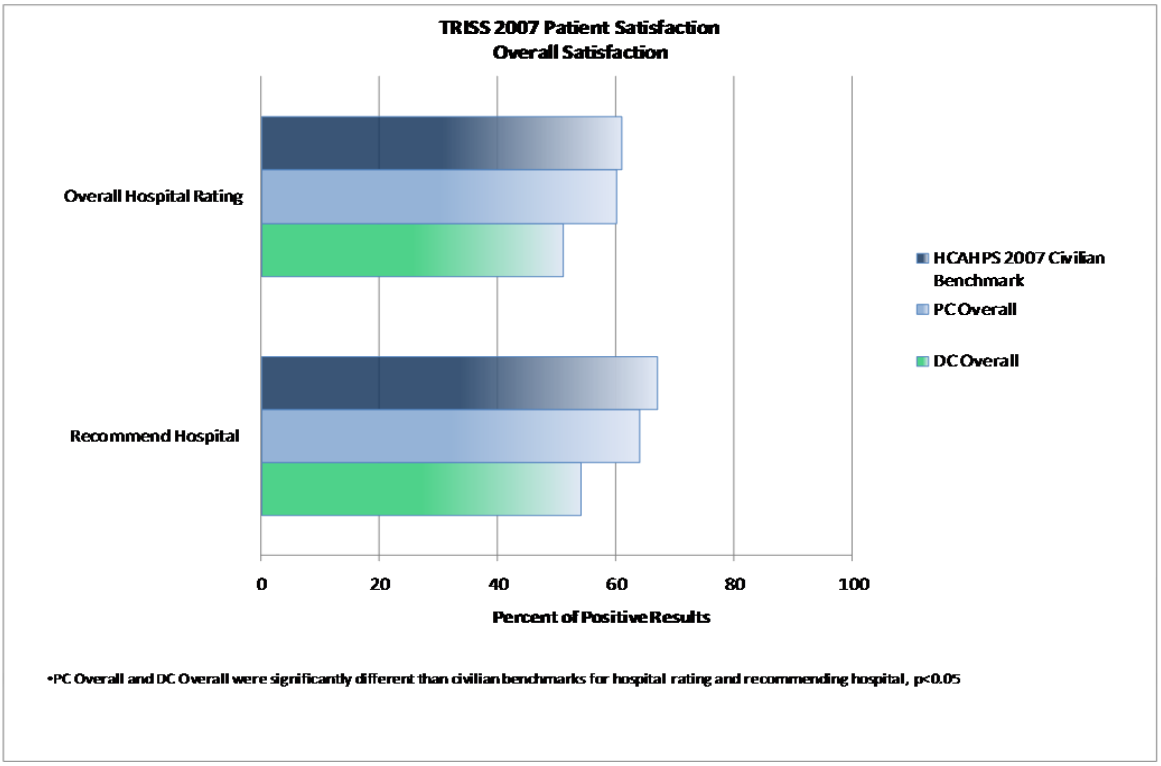
formats used to collect and report meaningful and reliable inpatient satisfaction information. HCAHPS results are used as a national benchmark for civilian hospitals.
The HCAHPS benchmark represents the results of three product lines (medical, surgical, and obstetrics) combined. Statistical comparisons between the MHS results and the HCAHPS benchmarks were made for combined product lines (e.g. DC vs. HCAHPS or a Service vs. HCAHPS). Specific product lines (e.g. medical, surgical, and obstetrics) were not compared to the HCAHPS benchmark.

Overall Satisfaction

The TRICARE Inpatient Satisfaction Survey (TRISS) results were based upon statistical comparisons between the MHS results and the HCAHPS benchmark for combined product lines (e.g. DC vs. HCAHPS or a Service vs. HCAHPS). A total of 44,657 TRICARE patients were surveyed. Of that number, 30,249 received care from an MTF and 14,408 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-four percent of MHS beneficiaries rated their overall hospital experience with a 9 or 10 compared to HCAHPS respondents, of which 61% rated their overall experience with a 9 or 10. Fifty-seven percent of MHS beneficiaries indicated that they would definitely recommend their hospital to family and friends, compared to 67% of HCAHPS respondents who indicated that they would definitely recommend their hospital to family and friends.



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:

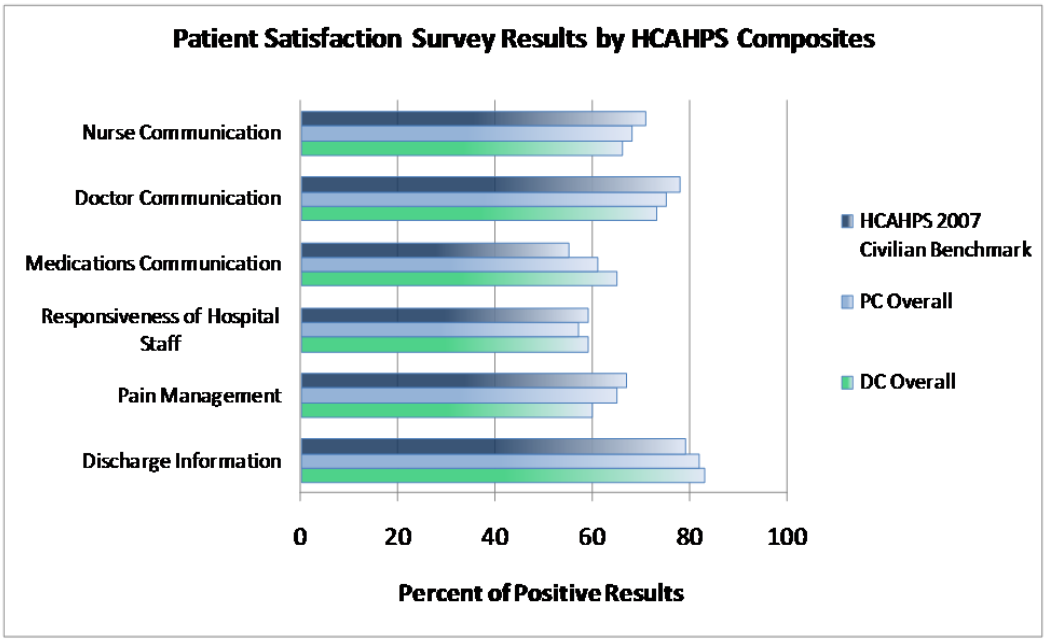
Composites of Patient-Centered Care

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

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

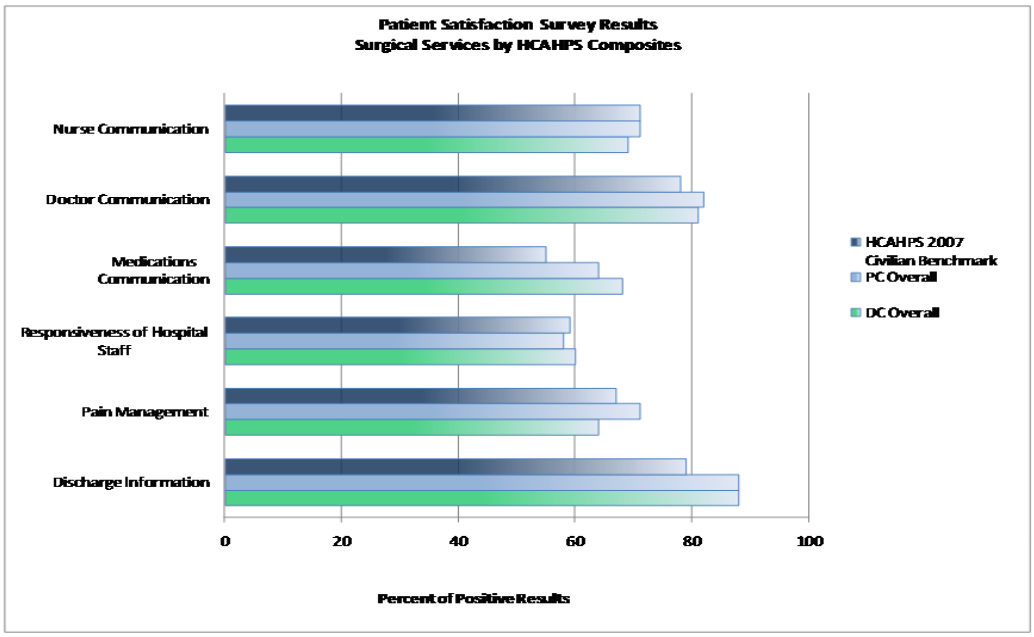
The following chart provides a comparison between patient satisfaction survey results with the HCAHPS benchmarks by specific composites. The HCAHPS benchmark represents the results of all three product lines (medical, surgical, and obstetrics) combined. Statistical comparisons between the MHS and the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

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 three of the six composites.



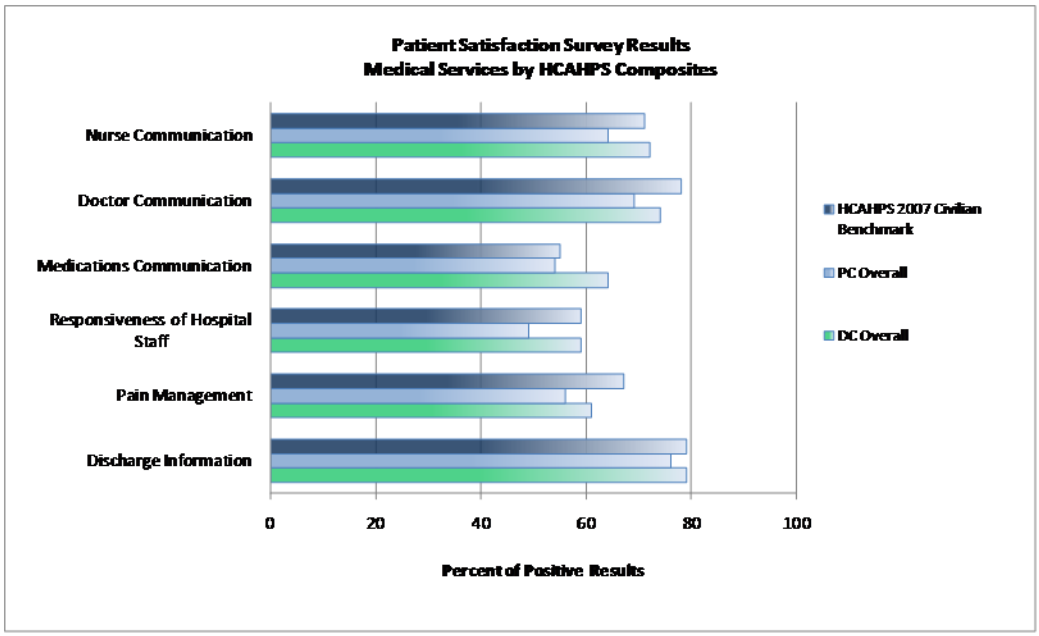
Satisfaction with Surgical Services

This chart exhibits ratings for Nurse and Doctor Communications and Discharge Information for DC and PC were comparable. Direct care had higher ratings than purchased care for Medications Communication and Responsiveness of Hospital Staff. Purchased care hospitals had higher rating than the direct care for Pain Management.



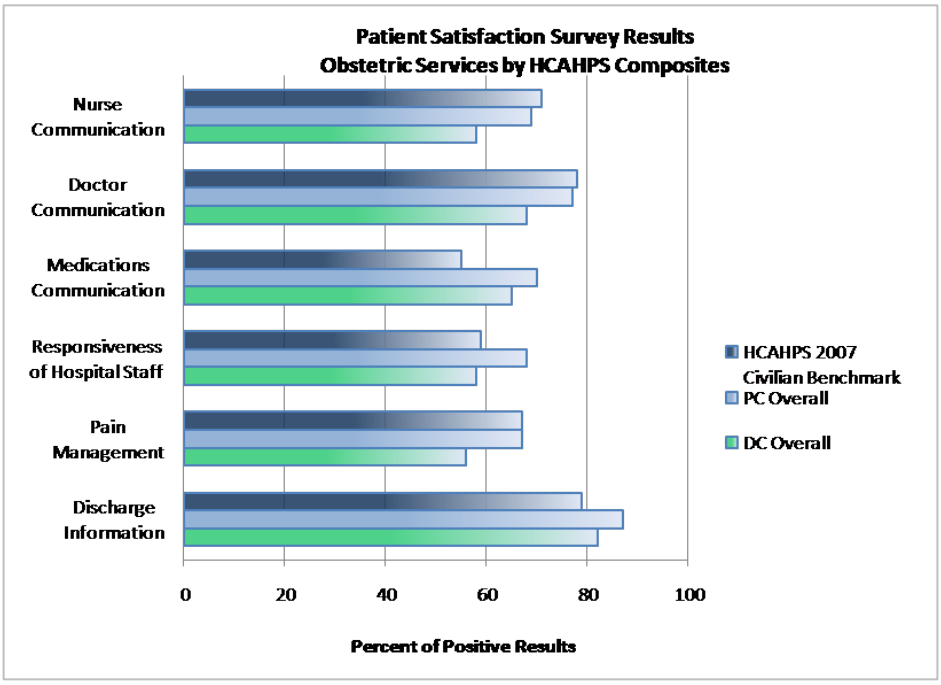
Satisfaction with Medical Services

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



Satisfaction with Obstetrical 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.



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 2007. Of all survey respondents in 2007, a total of 51,700 TRICARE patients responded in reference to a direct care outpatient medical encounter and 114,708 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-three percent of MHS beneficiaries who had a direct care outpatient visit during 2007 rated satisfaction with their health care with an 8, 9, or 10 compared to 74% of purchased care respondents. Likewise,

approximately 61% of direct care respondents rated satisfaction with their health plan with an 8, 9, or 10 compared to 73% of purchased care respondents during 2007.

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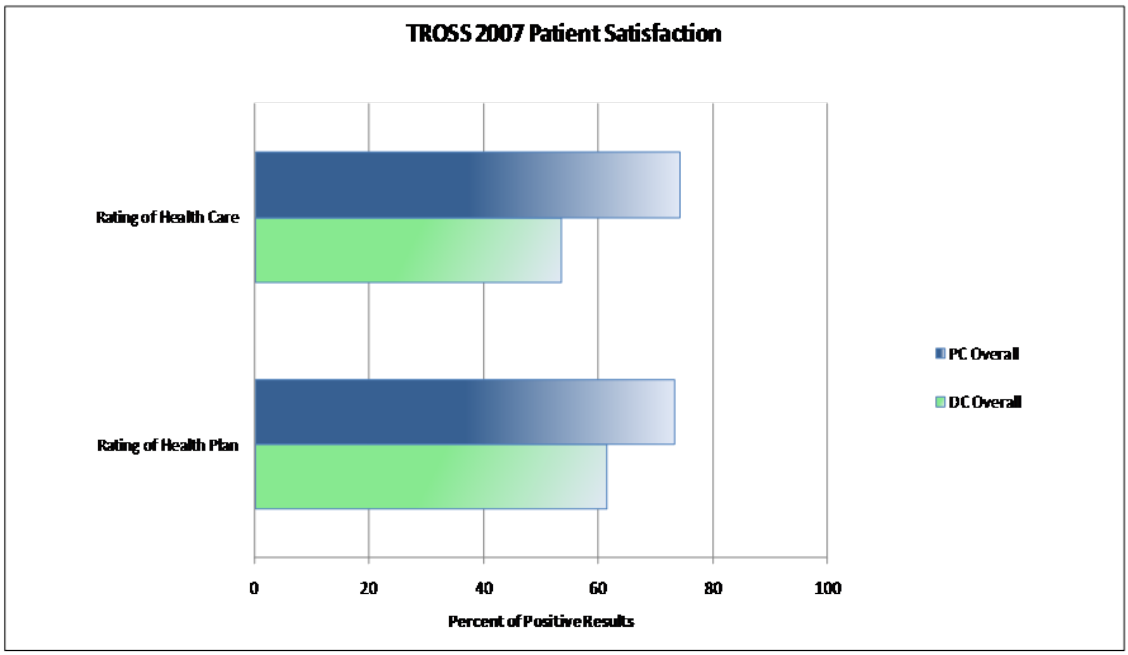

HCSDB surveys for the past three years are posted on this site http://www.tricare.osd.mil/survey/hcsurvey.

Recognizing Quality Excellence

Sharing Quality Achievements Across the MHS

Recognizing Quality Excellence

The MHS supports quality improvement efforts across the Services and capitalizes on the many improvements staff and leadership have brought about by implementing several recognition and sharing programs that can benefit others.

Healthcare Innovations Program (HIP) Awards

MHS has implemented many innovative programs to improve the access, cost, and quality of healthcare while enhancing the medical readiness of our Armed Forces. Often however, one facility does not know what another has accomplished, nor have the time to research it. The Healthcare Innovations Program (HIP), as part of OCMO, serves as a forum for innovative programs and ideas to be shared with senior leaders as potential MHS-wide solutions.

In 2007, the Healthcare Innovations Program sponsored an awards program to solicit the submission of abstracts from MHS staff describing and demonstrating innovative programs in one of the following six categories:

- **Access:** "Developing a methodology that matches the Right Patient to the Right Provider at the Right Place and at the Right Time."
- **Cost:** "Accomplishing the mission in a cost effective manner that is visible and fully accountable."
- **Effective Patient Partnerships:**"Promoting an active voice from the patient's perspective in hospital/clinic policies and philosophy of care."
- **Healthy Lifestyles:** "Promoting healthy lifestyles through wellness activities/programs."
- **Readiness:** "Focusing on activities to enhance readiness of military forces and the medical assets that support them."
- **Quality:** "Ensuring benchmark standards for health and healthcare are met while obtaining maximum effectiveness from the resources provided/available."

All abstracts submitted were reviewed by a multidisciplinary evaluation panel of TMA physicians, nurses, and administrators. The winner of each category was then invited to present their innovation and participate in a panel discussion during the 2007 State of the MHS Conference. A synopsis of the award winning programs in each of the six categories is highlighted below.

Recipients of the 2007 HIP Awards

ACCESS

Naval Medical Center San Diego Directorate for Branch Clinics

An Innovative Model for Telehealth Nursing Using AHLTA: The purpose of this project was to develop a standardized telehealth nursing practice and evaluate the use of AHLTA compared with commercial products in implementing a cost effective and standardized telehealth process for the Directorate for Branch Clinics (DBC) at Naval Medical Center San Diego. The projected outcomes were to significantly contribute to thoroughness of documentation, promote continuity of quality care, cost effectiveness, and capture of nursing workload. The American Academy of Ambulatory Care Nursing (AAACN) standards were used to develop the innovative model of service excellence for telehealth nursing. Some of the project results included: Capturing 8,969 t-cons in AHLTA with implementation of new process (April-September 2007); Developing 35 standardized and custom templates, using standard patient concern terminology, t-cons were prioritized; nurse telehealth processes were standardized; RN workload was captured and measured; and coding was standardized. Conclusions from the project determined that AHLTA was the preferred method of documenting nurse telehealth procedures (over commercial products) and in capturing RN workload. The AHLTA note became a permanent document in the patient record which effectively provides for patient safety, continuity of care, patient education, and collaboration with the patient's PCM.

COST

Naval Hospital Pensacola

Cost Effectiveness of speech recognition software in the patient care setting: Over the past 5 years there have been various changes in outpatient military physician documentation. New technologies focus on the use of the electronic medical record as the primary outpatient documentation method. The difficulties adjusting to these systems and the time constraints that productivity standards impose has resulted in significant time delays with closure of encounters in the electronic medical record, and an increase in the utilization of alternative methods for documentation (e.g., medical transcription and additional costs related to resources needed to support transcription). Naval Hospital Pensacola piloted the use of speech recognition software in both outpatient surgical and primary care settings to simplify the process and decrease costs. Implementation of the "Dragon Naturally" speaking software led to significant decreases in transcription usage, total time to encounter closure, and total costs associated with medical documentation at Naval Hospital Pensacola.

EFFECTIVE PATIENT PARTNERSHIPS

Carl R. Darnall Army Medical Center (CRDAMC)

Ambulatory Medication Reconciliation: A Prescription for Partnership: CRDAMC's success in meeting the rigorous requirements for medication reconciliation outlined in National Patient Safety Goal VIII received the HIP Award for the Effective Patient Partnerships. In 2003, TJC initiated the National Patient Safety Goals. In 2005, TJC added an 8th goal to the list, requiring hospitals to begin accurately and completely reconciling medications across the continuum of care, with full implementation beginning on January 1, 2006. To meet this goal, a team at CRDAMC developed and executed the concept of a provider-monitored, patient-owned written medication list to ensure comprehensive communication of therapies to all members of the care team across the myriad of environments of a complex healthcare organization. In the first three months, the percentage of patients carrying a personal medication list at the main pharmacy increased from 22% to over 50%. Not only was this process satisfactory for The Joint Commission surveyors in May 2007, but the signature wallet medication card has been recognized as an Army "Best Practice," with 300,000 wallet cards distributed to beneficiaries of all three Services.

HEALTHY LIFESTYLES

Elmendorf Air Force Base

Soar into Shape: The purpose of the project was to develop an eight week wellness program for beneficiaries and several other members of the Elmendorf Air Force Base community who experienced negative physical and environmental factors associated with South Central Alaska including reduced sunlight and cabin fever. The outcomes included decreased BMI in the population, increased knowledge on nutrition and fitness that promoted preventive health practices, improved health outcomes and behavior change to support wellness. An overall 90% satisfaction rating of the program by participants reflected the enthusiastic and team oriented staff who led the initiative. Conclusions from the program identified the need to extend the Soar into Shape program, provide additional incentives via financial donations and continue to provide a variety of activities to motivate participants to stay well.

READINESS

Hickman Air Force Base, Hawaii

Mission Critical Sports Medicine: The purpose of the project was to create an educated, prevention, and performance-based community of war-fighters with a care continuum model that returns airmen to duty more rapidly without reoccurrence of injury. The project used a physical, nutritional, and sports medicine team approach that provided a seamless transition from injury to full recovery; and a preventative care model to reduce injuries in the future. The initiative also resulted in the co-location of Physical Therapy and Health and Wellness Center teams to create the first-ever, Fit to Fight Performance Center to support the continuum of care model developed out of this initiative which is built around the Resilient Warrior concept keeping airmen fit to fight. Some

of the program results included: fitness/sports related injury treatment dropped from 25% to 8% within nearly one year of implementation; a 39% knowledge increase and intent to change; and the creation of an exercise physiology clinic to provide a referral resource for PCMs with patients who self-report initial onset of potential fitness training injuries or those requesting assistance in performance enhancement. Conclusions from the program identified the need to continue the care model and possibly replicate the program in the other Service branches.

QUALITY

Carl R. Darnall Army Medical Center (CRDAMC)

Flushing Barriers to Colorectal Cancer Screening: A successful quality improvement initiative that resulted in a nine percent increase in colorectal cancer screening among beneficiaries, 50 years of age and older. In 2006, the colorectal screening rate at the CRDAMC was 48.2% for the approximately 4,000 who met the age requirement. This percentage rate was 15.3% below the HEDIS® target benchmark of 63.5%. To improve the screening rate, the MTFs Population Health Steering Committee appointed a "tiger team." After a review of the available screening methods, a team of experts selected the annual fecal occult blood testing (FOBT) as the best use of limited resources with an acceptable risk for the majority of patients. The team identified barriers that prevented patients from receiving fecal occult blood testing, and to overcome the barriers, the team implemented a three-pronged approach: 1) enhance community awareness at the Retiree Health Fair, and through local newspaper articles and handouts in clinics; 2) use a physician champion to educate providers on how to stratify patients based on risk factors and to search the FOBT orders as a reminder to patients to complete the test; and 3) asked clinic screening staff to provide patients 50 years of age and older with information about colorectal cancer screening.

Utilizing Portal Action lists, the Utilization Management (UM) clerical staff entered FOBT orders for each identified patient. These orders were electronically signed by a physician-extender who was a privileged clinical pharmacist. The Deputy Commander for Clinical Services then approved and signed patient notification letters with instructions. The UM staff mailed the letters to 4,000 plus beneficiaries instructing patients to collect the FOBT kit at the lab and complete the test. Each patient received written notification of their test results and instructions for further evaluation if necessary. The test results were forwarded to each patient's Primary Care Provider (PCP) for review and each PCP was responsible for arranging additional diagnostic testing for individuals with a positive FOBT.

DoD Patient Safety Awards

The OCMO at TMA sponsors the DoD Patient Safety Awards in conjunction with the annual MHS Conference, which provides a forum to share the tools and information used in achieving best practices that directly support the MHS Strategic Plan. The awards celebrate innovation and commitment to the development of systems and processes that are tightly organized around the needs of the patient. Categories for consideration included:

- Improvements to team performance;
- Use of technology to improve patient safety; and
- Implementation of system changes or interventions to improve patient safety and/or meet national patient safety standards.

By presenting these awards, DoD seeks to highlight and encourage efforts that create an environment where safe quality care is provided and is acknowledged as the responsibility of all members of the team.

Recipients of the 2007 Patient Safety Awards

IMPROVEMENTS TO TEAM PERFORMANCE

59th Medical Wing — Wilford Hall Medical Center — Lackland Air Force Base, TX

Nurse/Mental Health Technician Change of Shift Safety Checks: Responding to the reality that suicide is the second most frequently reported sentinel event nationwide, the mental health unit team at Wilford Hall Medical Center implemented a simple but effective schedule of "safety checks" to reduce the likelihood of patient self-harm or suicide. The team developed a structured safety check process designed to prevent patient self-harm or suicide by ensuring that harmful objects are identified and removed. Over the initial six month period of data collection, there was a 75% reduction in the number of hazards found. Providers at the Wilford Hall mental health unit have created a safer environment for their at-risk patients, and by utilizing a team approach they have assumed joint responsibility for the safety of their patients.
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IMPLEMENTATION OF SYSTEM CHANGES OR INTERVENTIONS

22nd Medical Group — McConnell AFB, KS

Revision of the Medication Renewal Process: The 22nd Medical Group designed an alternative process for responding to medication renewal calls which improved both efficiency and the quality of follow-up care for patients. Nurses were spending too much duty time dealing with requests for medication renewal, and a team was formed to find a better way to field these calls. Their answer was consolidation of calls to a dedicated renewal line, open twenty-four hours a day, seven days a week. Technicians were selected and trained to retrieve the messages. Relying on standardization and communication, the process proved to be a success — nurses were freed up for other duties, and the technician-generated telephone consults have provided adequate information for appropriate provider responses. An unintended positive outcome was also noted since inception of the alternative retrieval process — monitoring of patient follow-up has improved. This system change, using a team approach to identifying and implementing improvement, has impacted patient safety indirectly — nurses are off the telephone and back to patient-centered duties — and directly — with patients receiving enhanced follow-up management.

US Naval Hospital Sigonella — Sicily, Italy

Clinical Microsystems: US Naval Hospital Sigonella served as a pilot site for implementation of a Clinical Microsystems framework, under the supervision of the Center for Education and Research in Patient Safety (CERPS). The labor and delivery process was chosen as the focus of Clinical Microsystems application. The team at Sigonella

studied the labor and delivery clinical work environment and identified seven problematic processes. Utilizing the Clinical Microsystems framework, with the goal of ensuring that each patient interface was the most effective and productive possible, the team reflected on the people, patients, processes and patterns associated with each problem. They tailored specific solutions to the identified seven problematic processes which resulted in improvements in all the areas. Providers at Sigonella cited additional rewards from their Microsystems experience. Working together as a team to improve their care delivery process created a new sense of shared responsibility, deepened morale, and renewed staff dedication to their mission of patient-centered care.

USE OF TECHNOLOGY

49th Medical Group — Holloman Air Force Base, NM

Child Resistant Packaging: The 49th Medical Group (MDG) Pharmacy at Holloman AFB addressed a potential patient safety problem. A mother reported her two-year old was able to open a medication bottle they dispensed (without harm, in this case). The Pharmacy staff initiated a review of their medication bottles to ensure compliance with standards for child-resistant packaging. Working with a pediatrician, the Pharmacy designed two studies to test their medication bottles. In both studies, staff measured the time it took children to open the 49th MDG bottles as opposed to time needed to open a bottle from an outside vendor. Results from both studies demonstrated the medicine bottles used at the 49th MDG did not meet the standards for child-resistant packaging promulgated by the Consumer Product Safety Commission. Based on these results, the Pharmacy discontinued use of their bottles and switched to the vendor's bottles, taking responsibility for the safety of patients throughout the system. The 49th MDG Pharmacy shared this information through Air Force patient safety channels and as a product alert. Their vigilance and practical use of technology served to ensure a safer environment for patients beyond their own population.

Madigan Army Medical Center — Tacoma, WA

Development and Implementation of a Mobile Obstetric Emergencies Simulator:
A recent report estimated nearly 40% of maternal deaths in the U.S. could be avoided with better obstetric care during emergencies. Responding to this need, the Andersen Simulation Center at Madigan Army Medical Center developed the Mobile Obstetrics Emergencies Simulator. Personnel train on the simulator to experience those emergencies identified in the literature as the cause of the majority of poor outcomes – shoulder dystocia, breech vaginal delivery, and postpartum hemorrhage. The simulator includes a full size birthing mannequin, a mobile cart showing vital signs, and a digital video system that allows for post-emergency review. Unique in its goal to combine simulation and TeamSTEPPS training, the simulator integrates high fidelity simulation training and a no-fault electronic debriefing system to evaluate and instruct both the technical aspects of patient care and TeamSTEPPS training during emergencies. Portable and inexpensive, the Mobile Obstetrics Emergencies Simulator has been replicated and shared with eight other DoD facilities across the Services, in addition to Madigan AMC.

The simulator provided a comprehensive response to a critical training need. Madigan's use of technology and teamwork to train providers to respond more effectively in emergent situations where competence and experience improves outcomes also improved patient safety across the MHS.

Biosurveillance

Partnering in the Fight Against Emerging Infections

Biosurveillance

In response to a series of reports that warned of increasing threats to the United States from emerging infectious diseases, Presidential Decision Directive PDD-7 (1996) expanded 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 contributes to force health protection and is a vital partner in the global effort to identify and control emerging infectious diseases.

DoD-Global Emerging Infections Surveillance and Response System (DoD-GEIS)

In 1997, the Assistant Secretary of Defense (ASD) for Health Affairs (HA) and the three Surgeons Generals approved the formation of the DoD Global Emerging Infections Surveillance and Response System (DoD-GEIS), a Tri-Service organization formed to implement the PDD-7 through an international, coordinated, joint service program.

DOD-GEIS is focused on timely recognition and control of Emerging Infectious Disease (EID) 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, and other US Government and non-military organizations.

The mission of the DoD-GEIS is to support force health protection by countering the largest threat to the health of Armed Forces personnel, infectious diseases. Many of DoD-GEIS's programs support the military operations and readiness by defending against microbial threats. 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 MHS providers and partners around the world.

The strategic focus of the DoD-GEIS is based on the following four goals of:

- Surveillance and detection (both domestic and foreign);
- Response and readiness;
- Integration and innovation; and
- Cooperation and capacity building.

These foundation objectives 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 infectious diseases in military forces, the following remain the priority surveillance pillars:

- Respiratory illnesses (especially influenza);
- Enteric (Acute Diarrheal) illnesses;

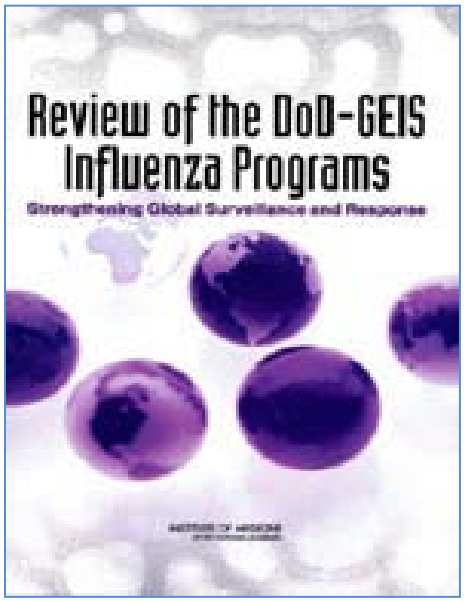
- Febrile illnesses (especially dengue and malaria);
- Antimicrobial resistance; and
- Sexually-transmitted infections.

With FY06 supplemental funding and continued support in FY07, DoD-GEIS implemented long-term initiatives to centralize coordination and expand influenza and respiratory disease surveillance, laboratory support, and communication. DoD-GEIS and its partners enhanced influenza laboratory capacity, increased sentinel sites and the number and coverage of countries in which surveillance is conducted (with emphasis on Africa and areas of the world where WHO and national surveillance was limited or nonexistent), expanded laboratory diagnostic capability and biosafety level-3 (BSL-3) laboratory capacity, and established centralized communications through Headquarters.

These initiatives characterize the DoD-GEIS activities that support force health protection, the combatant commands, and the global medical community. DoD-GEIS continues to identify and address critical gaps in emerging infectious disease preparedness and to develop, with partners, solutions to address those vulnerabilities.

The Institute of Medicine (IOM) published *"Review of the DoD-GEIS Influenza Programs: Strengthening Global Surveillance and Response"* (September 2007-Figure 1). In its review of DoD-GEIS's strategic plan and its implementation in pandemic influenza surveillance and preparedness, IOM gave high marks to DoD-GEIS in accomplishing their mission. The report's key directives for DoD-GEIS included:

- Effectively expand global influenza surveillance program in FY06-FY07;
- Continue funding in FY08 and out years to ensure continuity of efforts;
- Obtain DoD tri-service executive agency status for DoD-GEIS to manage and coordinate activities; and
- Expand mission statement of OCONUS laboratories to include public health surveillance and response to complement research mission.



The report found that the DoD overseas laboratories "constitute an impressive network that has laudably utilized the supplemental funding to strengthen influenza surveillance, in addition to continuing their historically primary research activities." The report also stated that "At DoD-GEIS headquarters as well as at the domestic and overseas laboratories, DoD-GEIS personnel absorbed the large increase in funding into programs aimed to successfully build DoD and host-country laboratory and human resource capacity, to globally expand information about avian influenza and acute respiratory diseases, to benefit the

health of U.S. military personnel, and to strengthen U.S. relations within the global community."
Additional FY07 accomplishments by DoD-GEIS in pandemic and avian influenza surveillance include the following:

Establishment of enhanced influenza surveillance throughout European Command (EUCOM) through a partnership between Landstuhl Regional Medical Center, US Army Center for Health promotion and Preventive Medicine (USACHPPM) Europe, and Air Force Institute for Operational Health (AFIOH);

Expansion of influenza surveillance in Africa, where little information on circulating strains is available, through a partnership with US Army Medical Research Unit-Kenya (USAMRU-K) and the US Military HIV Research Program;

Identification of changing influenza strains that spread globally by the Nepal satellite laboratory of Armed Forces Research Institute of Medical Science *(*AFRIMS);and

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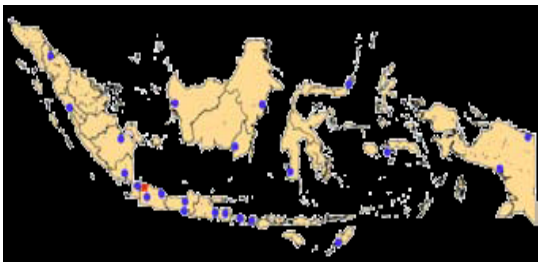

H5N1 avian influenza outbreak investigations by Naval Medical Research Unit-3 (NAMRU-3) Egypt and Naval Medical Research Unit-2 (NAMRU-2) Indonesia.

Emerging Threats

To address the current threat of pandemic and avian influenza, DoD-GEIS has enhanced DoD and global capacity to capture and characterize viral strains for vaccine development, risk assessment, and response. In two years, DoD-GEIS has more than doubled its global influenza surveillance network from 30 countries in FY05 to more than 75 countries in FY07. This network encompasses more than 275 sites at which specimens are collected from DoD beneficiaries or foreign host country patients. DoD-GEIS supported establishment of BSL-3 facilities for respiratory virus characterization at the Landstuhl Regional Medical Center, Germany, AFRIMS Thailand, Naval Health Research Center (NHRC) San Diego, Naval Health Research Center Detachment (NMRCD) Peru, and 18th Medical Command (MEDCOM) Korea; initiated a diagnostic evaluation and development program with the US Army Medical Research Institute for Infectious Diseases (USAMRIID; and enhanced capabilities at other DoD laboratories for influenza. These efforts have been coordinated with the CDC, WHO, and agencies of many nations. Much of this work was identified as tasks in the president's National Strategy for Pandemic Influenza (2005) and the subsequent Implementation Plan (2006).

Responses to Epidemic Threats

DoD-GEIS Headquarters coordinates a partnership with the Walter Reed Biosystematics Unit (WRBU), 18th MEDCOM (Korea), and NASA to develop, validate, and operationalize models to predict risk of vector-borne diseases using satellite observations. As part of WRBU's GEIS-funded program to develop an on-line, global malaria vector map and modeling tool, WRBU is developing fine-scale malaria prediction models for Korea. In FY07, WRBU staff joined 18th MEDCOM in malaria vector collection missions to assess preliminary model predictions. The team used satellite imagery provided by NASA to target their collections. As WRBU, 18th MEDCOM, and NASA refine the malaria prediction model for Korea, they will adapt their integrated field-based and modeling approaches to other disease threats and other regions.

To improve rapid detection and response for malaria epidemics, DoD-GEIS supported the Walter Reed Army Institute of Research (WRAIR) Division of Experimental Therapeutics and USAMRU-K in establishing an international malaria diagnostics center of excellence in Kisumu, Kenya, in 2005. Since its inception, the center has trained more than 250 personnel from 10 African countries. The WRAIR Division of Experimental Therapeutics also achieved significant progress synchronizing surveillance for antimalarial drug resistance across the DoD-GEIS overseas laboratory network. This progress will make malaria surveillance data more useful, particularly for deploying US forces, international travelers, and global health programs.

The ongoing work of DoD-GEIS to combat emerging infectious diseases other than influenza and malaria also continued in FY07. In September 2006, DoD-GEIS and NASA, used satellite data to forecast epidemics, and was able to predict a Rift Valley fever outbreak in East Africa approximately 2 months before cases were seen. This forecast allowed USAMRU-K to deploy an entomology team to collect mosquitoes that tested positive for Rift

Valley fever virus in the exact areas that later were affected by the epidemic. Early warning of the outbreak was given to Kenya, DoD, and international public health professionals. This warning occurred at the same time that indigenous military forces were required in nearby Somalia where Rift Valley fever infection was also likely and where little disease surveillance information was available. As the outbreak progressed, the likely areas of spread were accurately assessed by ongoing use of the NASA model. This DoD-GEIS outbreak prediction and response underscore the value of the long-term investment in the sustained collaboration among DoD-GEIS, NASA, and USAMRU-K.

Consultation on Emerging Infectious Disease Surveillance in Military

Consultation and personnel assistance were provided by Headquarters to the MHS and other partners for vaccine development and implementation plans, testing of vaccines, and programs for surveillance and control of emerging infectious agents. Headquarters was also responsible for 1) screening programs for infectious agents in uniformed members and other populations, such as blood donors and deployed troops, 2) public health laboratory functions in the MHS, and 3) development of infectious disease models and remote sensing systems to predict outbreaks and assess the impact of outbreak interventions.

These and the many other activities of DoD-GEIS collectively illustrate how the department is improving emerging infectious disease preparedness, consistent with the vision and mission of Presidential Decision Directive NSTC-7, through a broad DoD program supporting public health at home and abroad.

Early Warning Systems

DoD-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

The Early Warning Outbreak Recognition System, 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 the 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 then disseminated back to the participating hospitals. Early results indicate that this system successfully correlated with the results of diagnostic testing during recent influenza-like illness outbreaks in Indonesia

ESSENCE

The 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 Military Health System, which includes over 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, drilling down to a specific military unit or ZIP code. Analysis of the data can help medical personnel move quickly and early to treat affected individuals before an illness becomes an epidemic - 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 the CDC.

ESSENCE uses sophisticated computer methods 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.

Joint Medical Workstation (JMeWS)

The Joint Medical Workstation (JMeWS) was developed as part of the Joint Medical Operations-Telemedicine Advanced Concept Demonstration Program (JMO-T ACTD). In January 2003 it was pulled out of the JMO-T ACTD and rapidly deployed on the Secret Internet Protocol Network (SIPRNet) as a stand-alone capability in response to a need for commanders to have online, near-real-time medical situational awareness for forward-deployed forces during Operation Iraqi Freedom (OIF). Like AHLTA-T and TMDS, JMeWs is an integral part of the DHIMS capability.

Today, JMeWS provides medical situational awareness, medical surveillance and force health decision support. It also reports on medical trends and analyzes the overall status of theater health. JMeWS provides the ability to drill down to specific medical units and individual encounters. It also shares medical intelligence with Global Combat Support System and Global Command and Control System, serving as the medical component to the Combatant and Joint Task Force Commander's common operating picture.
JMeWS has undergone several updates since its 2003 launch. Recent upgrades involved hardware and software upgrades, which bring improvements in reliability and server response time for large queries and the map feature.

The Medical Situation Awareness in the Theater (MSAT)

The Medical Situational Awareness in the Theater (MSAT) is an Advanced Concept Technology Demonstration (ACTD) under the oversight of the Office of the Secretary of Defense (OASD). MSAT is sponsored by the Commander, US Pacific Command (PACOM), and is being developed under the management of Defense Health Information Management System (DHIMS). The MSAT concept is to fuse current and emerging technologies and apply computerized decision support systems to transform data from stovepipe systems into timely, actionable information and knowledge for Combatant Commanders and Joint Task Force (JTF) Surgeons. MSAT will leverage Service Oriented Architecture and Net-Centric Enterprise

Services, combining medical, patient tracking, mapping, logistics, personnel, weather, and intelligence information to support decision making for current and planned operations. The MSAT standards-based information sharing approach will enable rapid connection to current and emerging information sets, reducing integration costs while adding increased value over time.

In FY 2007, MSAT Spiral 1 accomplishments included:

- Development Kickoff Meeting sponsored by PACOM
- Technical architecture development
- Initial users and developers functional requirements working group meeting at PACOM
- Initial medical situational awareness scenarios development and data sources determination
- Geographic Information System (GIS) component demonstration

DoD-GEIS Partners

DoD-GEIS Headquarters coordinates the biosurveillance activities of more than 275 sites in 75 countries around the world through an extensive network of partnerships within DoD and with other U.S. and foreign agencies. DoD-GEIS works with all its partners throughout the military health system, at the DoD overseas laboratories, and in the nonmilitary organizations for ongoing efforts to combat emerging infections around the world.

DoD-GEIS Partners

- 18th Medical Command
- Air Force Institute for Operational Health
- Armed Forces Institute of Pathology
- Armed Forces Research Institute of Medical Sciences *(Bangkok, Thailand)*
- Brooke Army Medical Center
- Center for Disaster and Humanitarian Assistance Medicine
- Johns Hopkins University Applied Physics Laboratory
- National Aeronautics and Space Administration
- National Naval Medical Center
- Naval Health Research Center
- Naval Medical Research Center
- Naval Medical Research Center Detachment *(Lima, Peru)*
- Naval Medical Research Unit No. 2 *(Jakarta, Indonesia)*

- Naval Medical Research Unit No. 3 *(Cairo, Egypt)*
- Navy Environmental Health Center
- Office of the Assistant Secretary of Defense for Health Affairs
- Pacific Air Forces
- Uniformed Services University of the Health Sciences
- United States Army Center for Health Promotion and Preventive Medicine
- United States Army Medical Research Institute of Infectious Diseases
- United States Army Medical Research Unit-Kenya *(Nairobi, Kenya)*
- United States Northern Command
- Walter Reed Army Institute of Research

The information provided on DoD-GEIS was obtained from the 2007 annual report.
The entire report is available at www.geis.fhp.osd.mil.

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
AFIOH	Air Force Institute for Operational Health
AFRIMS	Armed Forces Research Institute of Medical Sciences (Bangkok, Thailand)
AHA	American Heart Association
AHRQ	Agency for Healthcare Research and Quality
AMI	Acute Myocardial Infarction
ARB	Angiotensin Receptor Blocker
ASC	Andersen Simulation Center
ATTC	Army Trauma Training Center
BSC	Balanced Score Card
CDC	Centers for Disease Control and Prevention
CDW	Clinical Data Warehouse
CERPS	Center for Education and Research in Patient Safety
CM	Case Management
CME	Continuing Medical Education
CMS	Centers for Medicare and Medicaid Services
CNE	Continuing Nursing Education
CMS	Centers for Medicare and Medicaid Services
CMSP	Clinical Measures Steering Panel
CPG	Clinical Practice Guideline
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
DoD	Department of Defense

EHR	Electronic Health Record
ER	Emergency Room
ESSENCE	Electronic Surveillance System for the Early Notification of Community-Based Epidemics
EUCOM	European Command
GAO	Government Accountability Office
GEIS	Global Emerging Infections Surveillance and Response System
HAI	Hospital Acquired Infection
HCAHPS	Hospital Consumer Assessment of Healthcare Providers and Systems
HCD	Health Care Data, Inc.
HCTCP	Healthcare Team Coordination Program
HCSDB	Health Care Survey of DoD Beneficiaries
HEDIS	Health Employer Data Information System
HF	Heart Failure
HIP	Healthcare Innovations Program
HQA	Hospital Quality Alliance
ICD-9-CM	International Classification of Diseases, 9th Edition, Clinical Modification
IHI	Institute for Healthcare Improvement
JMeWS	Joint Medical Workstation
JMO-T ACTD	Joint Medical Operations-Telemedicine Advanced Concept Demonstration Program
JTF	Joint Task Force
LOS	Length of Stay
LVS	Left Ventricular Systolic
LVEF	Left Ventricular Ejection Fraction
LVSD	Left Ventricular Systolic Dysfunction
MDR	Military Health System Data Repository
MEDCOM	Medical Command
MHS	Military Health System
MHSPHP	Military Health System Population Health Support Portal
MM	Medical Management
MSAT	Medical Situational Awareness in the Theater

MTF	Medical Treatment Facility
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
NHRC	Naval Health Research Center
NHRCD	Naval Health Research Center Detachment
NNDC	National Naval Dental Center
NPIC	National Perinatal Information Center
NQMP	National Quality Management Program
OASD	Office of the Secretary of Defense
PACOM	US Pacific Command
PC	Purchased Care
PCS	Patient Safety Center
PHMMD	Population Health and Medical Management Division
PN	Pneumonia
PR	Pregnancy
PSI	Patient Safety Indicator
SADR	Standard Ambulatory Data Record
SAP	Scientific Advisory Panel
SCIP	Surgical Care Improvement Project
SIDR	Standard Inpatient Data Record
TeamSTEPPS	Team Strategies and Tools to Enhance Performance and Patient Safety
TJC	The Joint Commission
TMA	TRICARE Management Activity
TRISS	TRICARE Inpatient Satisfaction Survey
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

Appendix B. Certifications and Accreditations

Cancer Program
Our cancer program is certified by a survey every three 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 upon established standards and guidelines.

Clinical Investigation Department is accredited/certified by:
1. Association for the Assessment and Accreditation for Laboratory Animal Care (AAALAC)
2. HHS Office of Laboratory Animal Welfare (OLAW issues our assurance to use laboratory animals)
3. Health and Human Services Office of Human Research Protection (they issue our federal wide assurance to have human subjects research)
4. DoN Human Research Protection Program (they issue 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 is accredited/certified by
1. The Advanced Education in General Dentistry (AEGD) program is accredited by the American Dental Association'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 (GPR) Residencies are also accredited by CODA. Both are certificate programs. The OMFS program will have their 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 CE provider by the Continuing Education Recognition Program (CERP) conducted under the auspices of the American Dental Association. The U.S. Navy Dental Corps is also designated as a nationally approved sponsor by the Academy of General Dentistry. All formal continuing education 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 National Naval Dental Center, Bethesda bi-annually. NNDC submits a report to the ADA and AGD, recertifying the Dental Corps as a CERP provider.

Diabetes Care
The American Diabetes Association – Certificate of Recognition, period of 7Jan06 to 7Jan09. It recognizes our diabetes self-management education program as meeting the national standards for diabetes self-management

education. It has specific requirements that we must document and keep on file and are subject to inspection by ADA.

Graduate Medical Education (ACGME)
Facilities with Graduate Education Programs are fully accredited.

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 CLIA certificate.

Mental Health/Substance Abuse Treatment Program
1. 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 Internship7 year accreditation 2007
4. Accreditation Council for Graduate Medical Education 5 year accreditation 2004 -2009
5. 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. Maintain a Certificate of Registration with the CDC Select Agent Program and The APHIS Agriculture Select Agent Program to posses, use, and transfer select agents and toxins.

Pharmacy
1. 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 FDA.