THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

MAR 12 2008

The Honorable Carl Levin
Chairman, Committee on Armed Services
United States Senate
Washington, DC 20510–6050

Dear Mr. Chairman:

The enclosed report responds to the requirement in Section 734 of the John Warner National Defense Authorization Act for Fiscal Year 2007, Disease and Chronic Care Management, to provide a report to Congress on a fully integrated disease and chronic care management program for the Military Health System (MHS) that provides, to the extent practicable, uniform policies and practices throughout the system. The report addresses the MHS approach to the design and development, implementation plan, anticipated clinical outcomes, savings and return on investment, and investment strategy for system-wide disease management (DM) initiatives.

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The overall goal of the MHS DM efforts is to improve the health status of our beneficiaries through the provision of proactive, individually tailored, evidence-based care to patients and their families. This report describes the MHS current DM efforts and includes information that would be used to implement additional program.

Thank you for your continued support of the Military Health System.

Sincerely,

Sir, An increasing focus for us
All Best
Ward

S. Ward Casscells, MD

Enclosure:
As stated

cc:
The Honorable John McCain
Ranking Member

THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

MAR 12 2008

The Honorable Ben Nelson
Chairman, Subcommittee on Personnel
Committee on Armed Services
United States Senate
Washington, DC 20510–6050

Dear Mr. Chairman:

The enclosed report responds to the requirement in Section 734 of the John Warner National Defense Authorization Act for Fiscal Year 2007, Disease and Chronic Care Management, to provide a report to Congress on a fully integrated disease and chronic care management program for the Military Health System (MHS) that provides, to the extent practicable, uniform policies and practices throughout the system. The report addresses the MHS approach to the design and development, implementation plan, anticipated clinical outcomes, savings and return on investment, and investment strategy for system-wide disease management (DM) initiatives.

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Sincerely,

S. Ward Casscells, MD

Enclosure:
As stated

cc:
The Honorable Lindsey Graham
Ranking Member

THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

MAR 12 2008

The Honorable Ike Skelton
Chairman, Committee on Armed Services
U.S. House of Representatives
Washington, DC 20515–6035

Dear Mr. Chairman:

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S. Ward Casscells, MD

Enclosure:
As stated

cc:
The Honorable Duncan Hunter
Ranking Member

THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

MAR 12 2008

The Honorable Susan Davis
Chairwoman, Subcommittee on Military Personnel
Committee on Armed Services
U.S. House of Representatives
Washington, DC 20515–6035

Dear Madam Chairwoman:

The enclosed report responds to the requirement in Section 734 of the John Warner National Defense Authorization Act for Fiscal Year 2007, Disease and Chronic Care Management, to provide a report to Congress on a fully integrated disease and chronic care management program for the Military Health System (MHS) that provides, to the extent practicable, uniform policies and practices throughout the system. The report addresses the MHS approach to the design and development, implementation plan, anticipated clinical outcomes, savings and return on investment, and investment strategy for system-wide disease management (DM) initiatives.

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Ward

S. Ward Casscells, MD

Enclosure:
As stated

cc:
The Honorable John M. McHugh
Ranking Member

THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

MAR 1 2 2008

The Honorable Robert C. Byrd
Chairman, Committee on Appropriations
United States Senate
Washington, DC 20510–6025

Dear Mr. Chairman:

The enclosed report responds to the requirement in Section 734 of the John Warner National Defense Authorization Act for Fiscal Year 2007, Disease and Chronic Care Management, to provide a report to Congress on a fully integrated disease and chronic care management program for the Military Health System (MHS) that provides, to the extent practicable, uniform policies and practices throughout the system. The report addresses the MHS approach to the design and development, implementation plan, anticipated clinical outcomes, savings and return on investment, and investment strategy for system-wide disease management (DM) initiatives.

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S. Ward Casscells, MD

Enclosure:
As stated

cc:
The Honorable Thad Cochran
Ranking Member

THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

MAR 12 2008

The Honorable Daniel K. Inouye
Chairman, Subcommittee on Defense
Committee on Appropriations
United States Senate
Washington, DC 20510–6028

Dear Mr. Chairman:

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Sincerely,

S. Ward Casscells, MD

Enclosure:
As stated

cc:
The Honorable Ted Stevens
Ranking Member

THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

MAR 1 2 2008

The Honorable David R. Obey
Chairman, Committee on Appropriations
U.S. House of Representatives
Washington, DC 20515-6015

Dear Mr. Chairman:

The enclosed report responds to the requirement in Section 734 of the John Warner National Defense Authorization Act for Fiscal Year 2007, Disease and Chronic Care Management, to provide a report to Congress on a fully integrated disease and chronic care management program for the Military Health System (MHS) that provides, to the extent practicable, uniform policies and practices throughout the system. The report addresses the MHS approach to the design and development, implementation plan, anticipated clinical outcomes, savings and return on investment, and investment strategy for system-wide disease management (DM) initiatives.

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S. Ward Casscells, MD

Enclosure:
As stated

cc:
The Honorable Jerry Lewis
Ranking Member

THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

MAR 12 2008

The Honorable John P. Murtha
Chairman, Subcommittee on Defense
Committee on Appropriations
U.S. House of Representatives
Washington, DC 20515–6018

Dear Mr. Chairman:

The enclosed report responds to the requirement in Section 734 of the John Warner National Defense Authorization Act for Fiscal Year 2007, Disease and Chronic Care Management, to provide a report to Congress on a fully integrated disease and chronic care management program for the Military Health System (MHS) that provides, to the extent practicable, uniform policies and practices throughout the system. The report addresses the MHS approach to the design and development, implementation plan, anticipated clinical outcomes, savings and return on investment, and investment strategy for system-wide disease management (DM) initiatives.

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Thank you for your continued support of the Military Health System.

Sincerely,

Warm Regards
Ward

S. Ward Casscells, MD

Enclosure:
As stated

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

Department of Defense

A Report to Congress
on the Design, Development, and
Implementation of the Military Health System's
Program for Disease and Chronic Care
Management

Fiscal Year 2007

==========

The requirement for this report is outlined in Congressional direction as follows:

John Warner National Defense Authorization Act for Fiscal Year 2007, Public Law 109-364, Section 734 (e): Disease and Chronic Care Management.

Not later than March 1, 2008, the Secretary of Defense shall submit to the Committees on Armed Services of the Senate and the House of Representatives a report on the design, development, and implementation of the program on disease and chronic care management required by this section. The required report shall include the following:

- A description of the design and development of the program required by Subsection (a).
- A description of the implementation plan required by Subsection (d).
- A description and assessment of improvements in health status and clinical outcomes that are anticipated as a result of implementation of the program.
- A description of the savings and return on investment associated with the program.
- A description of an investment strategy to assure the sustainment of the disease and chronic care management programs of the Department of Defense.

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Table of Contents

EXECUTIVE SUMMARY 1

Design, Development, and Implementation 1

Anticipated Outcomes and Return on Investment 2

Investment Strategy 3

Next Steps 4

INTRODUCTION 6

Background 6

DESIGN AND DEVELOPMENT 8

Purposes of the Program 9

Elements of Program Design 9
- Chronic Diseases and Conditions 9
- Program Standards 10
- Outcome Measures and Objectives 16
- Strategies for all Beneficiaries 17
- Compliance with Laws and Regulations Relating to Patient Confidentiality 18

IMPLEMENTATION PLAN 20

Disease and Chronic Care Management Opportunities 21

Funding Requirements 30

Elimination of Financial Disincentives 30

Integration of Information Systems 31

Marketing and Outreach 31

Monitoring Improvements 33
- Disease Management Evaluation 33

ANTICIPATED OUTCOMES 36

SAVINGS AND RETURN ON INVESTMENT **41**

INVESTMENT STRATEGY **44**

ACRONYMS **48**

EXECUTIVE SUMMARY

The Military Health System (MHS) has implemented a system-wide approach to disease management (DM) and will use the lessons learned to expand to additional disease and condition states as mandated by the John Warner National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2007 (Public Law 109-364)[1]. Specifically, this report outlines current DM efforts in the MHS, and includes all six of the specific diseases and conditions outlined in the NDAA: Diabetes, cancer, heart disease, asthma, chronic obstructive pulmonary disease (COPD), and depression/anxiety disorders. This report covers the proposed design and implementation plan for this expansion, as well as the anticipated outcomes and financial considerations related to all six disease and condition states.

Design, Development, and Implementation

Army, Navy, and Air Force medical departments are focusing on asthma, diabetes, and breast, cervical, and colon cancer screening. Furthermore, the TRICARE Management Activity (TMA) has established a consistent approach to the identification and evaluation of DM services in the West, South, and North regions for beneficiaries who have a diagnosis of chronic asthma, congestive heart failure (CHF), and/or diabetes. These DM programs are administered by the three regional managed care support contractors (West = TriWest Healthcare Alliance, South = Humana Military Health Services, and North = Health Net Federal Services).

The overall goal of the MHS DM efforts is to improve the health status of our beneficiaries through the provision of proactive, individually tailored, evidence-based care to patients and their families. MHS adheres to the six program components identified by the Disease Management Association of America (DMAA)[2]:

- Population identification process
- Evidence-based practice guidelines
- Collaborative practice models to include physician and support-service providers
- Patient self-management education (may include primary prevention, behavior modification programs, and compliance/surveillance)
- Process and outcomes measurement, evaluation, and management
- Routine reporting/feedback loop (may include communication with patient, physician, health plan and ancillary providers, and practice profiling)

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[1] John Warner National Defense Authorization Act Fiscal Year 2007; Public Law 109-364 Title VII: Health Care Provisions; Section 734 (e): Disease and Chronic Care Management.
[2] Disease Management Association of America retrieved July 12, 2007 from: *http://www.dmaa.org/dm_definition.asp.*

In FY 2006, TMA allotted approximately $11.6 million to the three MHS managed care support contractors (MCSCs) for the implementation of the asthma and CHF disease management programs. In FY 2007, this was increased to $12.1 million, and an additional $9 million of funding was allotted for the expansion of the program to include diabetes. Based on the current and projected prevalence of these three diseases in the MHS population, along with an anticipated patient participation level of 50 percent, approximately $22 million in current dollars will be needed for program sustainment in FY 2009. These figures do not include future costs for COPD, cancer, and depression/anxiety DM program spending. Likewise, the costs for ongoing DM programs in military treatment facilities (MTFs) are not included in these estimates.

Because an objective and consistent approach to evaluating the effectiveness of a program is imperative, an independent contractor is conducting an evaluation of the MCSCs' DM programs. The results of the centralized evaluation by TMA will provide the MHS with an objective analysis of the success of each component of the program at multiple levels of the organization (e.g., regional, Service, and MHS). In addition to measuring the processes of the program (e.g., engagement rates), clinical, utilization, humanistic and financial outcomes will also be assessed consistently across the MHS. Moreover, each of the Services monitors its DM programs, and a comprehensive review of the health status of the MHS population with identified disease states and preventive service needs (breast, cervical and colorectal cancer screening) is conducted at the Services and Health Affairs/TMA levels.

Anticipated Outcomes and Return on Investment

The MHS proactive, evidence-based approach to disease and chronic care management is expected to improve the health status of targeted beneficiaries by providing the right beneficiaries the right interventions at the right time. These goals are accomplished by reducing variation across the MHS regardless of geographic location or care setting (i.e., MTF or civilian network). In order to benchmark the performance of MHS DM programs, the Services and TMA compare clinical outcome metrics using Healthcare Effectiveness Data and Information Set (HEDIS) measures with those of other programs that report data to the National Committee for Quality Assurance (NCQA).

Quantifying the monetary implications of DM is a complex undertaking. The Congressional Budget Office (CBO) estimates that implementation of this mandate will cost approximately $250 million between 2007 and 2011. Cost savings attributable to effective DM can be achieved and measured across two dimensions:

- Reductions in the volume of preventable, high-cost care, such as inpatient admissions and emergency department use; and

- Shifts in unit costs from higher to lower cost services stemming from patient adherence to DM programs.

These cost savings will be partially offset by program administrative costs and possible increases in medication costs and preventive, diagnostic and other services directly associated with the DM programs. In fact, many DM programs have encountered challenges proving financial returns in their early years when program initiation and start-up costs, combined with increased testing and diagnostics, counterbalanced short-term medical cost savings[3]. While the literature suggests that DM programs may provide a modest monetary return on investment[4,5], a more likely and important benefit is improved quality of life for patients and their families. Different return on investment (ROI) measures will be used to estimate the financial implications of DM, including the ROI rate, the gross medical savings or "medical cost avoidance," and the net savings (which consists of gross savings minus the costs of DM).

Investment Strategy

An analysis by an external contractor of the current disease burden revealed that, among the six conditions identified by Congress, diabetes has the greatest prevalence and poses the greatest cost burden for the non-Medicare MHS beneficiary population, followed by depression/anxiety disorders, asthma, CHF, and COPD. The healthcare cost for these patients is high, as illustrated by statistics from FY 2006:

- The population prevalence of diabetes was about 5 percent of the population, depression/anxiety 3 percent, asthma and COPD 1.25 percent, and CHF 0.3 percent; and
- The total cost of care for diabetics was $1.5 billion, $1 billion for depression/anxiety, and more than $1.3 billion for asthma, CHF, and COPD combined.

This analysis supports the investment strategy of choosing diabetes, CHF, and asthma as the first disease states to implement because they provide a good mix of prevalent and high-cost conditions. Initially, beneficiaries who have higher utilization levels of healthcare services are being targeted in an effort to both improve the health of these beneficiaries and lower costs. Shifting costs from providing care in expensive

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[3] Fetterolf D, Wennberg D, Devries A. Estimating the return on investment in disease management programs using a pre-post analysis. Disease Management 2004; 7(1):5-23.
[4] Goetzel RZ, Ozminkowski RJ, Villagra VG, Duffy J. Return on investment in disease management: a review. Health Care Financ Rev 2005; 26(4):1-19.
[5] Nash DB, Clarke JL. Disease management. Issue Brief (Inst Health Care Costs Solut) 2002 July; 1(2):1-24.

emergency department and inpatient settings to outpatient venues is the cornerstone to an effective DM investment strategy.

Applying the results from the ongoing evaluation of the three MCSC DM programs currently in place for asthma, CHF, and diabetes, along with collaborations with the Services, will help the MHS to assess and refine processes before implementing the remaining disease and condition states.

Additional financial incentives may be necessary to sustain the MHS DM program, whereby efficient disease and utilization management initiatives are rewarded for their efforts. Examples include the Army's Performance-Based Adjustment Model (PBAM) and the Navy's Performance-Based Budgeting program, which provide a financial adjustment to the MTF Prospective Payment System-based reimbursement for: Outpatient productivity, compliance with length of stay standards (inpatient utilization management), and compliance with evidence-based clinical practice (clinical quality). Financial mechanisms to incentivize the purchased care system are being studied as well.

Next Steps

The ongoing centralized evaluations by TMA and the three Services are providing valuable information regarding the effectiveness and efficiency of the program. Once enough data is available, a disease management scorecard will be used to facilitate oversight and evaluation of DM services. Moreover, the scorecard will be instrumental in identifying the best practices for use throughout the MHS.

Including TRICARE Standard beneficiaries in future DM programs will require a change in legal authority[6]. The demonstration project[7] that allows TRICARE Standard beneficiaries to be included in the MCSCs current program will end March 31, 2009. The results of the current demonstration project will be used to determine the impact of disease management on these beneficiaries. Results from the current demonstration project are not yet available. Therefore, recommendations cannot be made at this time regarding the inclusion or exclusion of TRICARE Standard beneficiaries in the MHS DM programs.

Medicare is not currently mandated to provide DM, so TRICARE would be solely responsible for the cost of providing management of disease and chronic conditions to dual beneficiaries. Also, the major contracts with the current MCSCs do not require them to provide DM services to Medicare-eligible beneficiaries.

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[6] 10 U.S.C. 1079(a)(13), 10 U.S.C. 1097 – 1099, 32 CFR 199.18(b)(2), 32 CFR 199.4(g)(39)

[7] Notice of a disease management demonstration project for TRICARE Standard beneficiaries. [FR Doc. E7–4924 Filed 3–16–07; 8:45 am]

Key to the success of the MHS program for disease and chronic care management are the partnerships among TMA, the Services, and the MCSCs. TMA provides policies, instructions, and resources to measure, improve, and sustain the health status of the population at different levels throughout the MHS. Specifically, TMA is leveraging the clinical expertise and resources of the MCSCs to assist with the management of the most costly and prevalent disease states. This ensures all beneficiaries with diabetes, CHF, and asthma who are not yet eligible for Medicare receive DM services regardless of their local MTF capability. This complementary approach further supports optimization of MTF resources, beneficiary satisfaction, and the delivery of best-value healthcare to our beneficiaries.

INTRODUCTION

This report describes the Department of Defense (DoD) activities, findings, and recommendations in support of Section 734 of the John Warner National Defense Authorization Act (NDAA) for Fiscal Year 2007. Section 734 requires the Secretary of Defense to:

- Design and develop a fully integrated program on disease and chronic care management for the military health care system that provides, to the extent practicable, uniform policies and practices on disease management and chronic care management throughout that system, including both military hospitals and clinics and civilian healthcare providers within the TRICARE network by October 1, 2007.
- Develop an implementation plan for the disease and chronic care management program by February 1, 2008.
- Submit a report on the design, development, and implementation of the program on disease and chronic care management and savings associated with the program by March 1, 2008.

Background

DM activities have been ongoing within the MHS among TMA, MTFs, and the purchased care network[8]. However, prior to September 2005, the MHS did not have a single, uniform approach to DM. Variation in providing disease and condition management existed between and within the direct care system (DCS)[9], as well as the purchased care network resulting in fragmented initiatives.

In the DCS, the Army, Navy, and Air Force are addressing diabetes, asthma, and breast, cervical, and colon cancer screening under the evidence-based healthcare section of the Tri-Service Business Plan. MTFs provide DM services for these and a number of additional disease states in primary care settings, specialty clinics, and in some instances, through programs tailored to the needs of their unique beneficiary populations.

---

[8] The purchased care network is defined as civilian preferred providers (including individuals, groups, hospitals, and clinics) who have agreed to accept the DoD and Uniformed Services beneficiaries enrolled in the regional managed care program authorized by the ASD(HA). Providers in the purchased care network deliver healthcare at negotiated rates, adhere to provider agreements, and follow other requirements of the managed care program (TRICARE). Such providers are independent contractors of the Government (or other independent entities having business arrangement with the Government). (DoD Regulation 6025.13R)

[9] The direct care system is defined as health care facilities and medical support organizations owned by the DoD and managed by the Surgeons General of the Services.

In the current generation of TRICARE managed care support contracts, the three regional contractors, West = TriWest Healthcare Alliance; South = Humana Military Health Services; and North = Health Net Federal Services, were independently required to make DM services available to purchased care and direct care beneficiaries. Initially, each MCSC was allowed to determine which disease states or conditions they would address (TriWest Healthcare Alliance: Diabetes, post-myocardial infarction, depression; Humana Military Health Services: Congestive heart failure; Health Net Federal Services: Asthma, diabetes, and depression), to develop their own interventions, and to establish and report performance measures to the Government.

In September 2005, the Assistant Secretary of Defense for Health Affairs (ASD (HA)) convened an MHS DM summit to develop a system-wide action plan. The outcome of the summit was the identification of the following elements that were required in order to deliver quality DM services throughout the entire MHS:

1. Same disease states/conditions across all three managed care regions
2. Same population identification processes, including
    - Risk stratification
3. Evidence-based practice guidelines
    - Department of Veterans Affairs (VA)/DoD Clinical Practice Guidelines and other appropriate national clinical guidelines
4. Same measures of success
5. Same performance reports (types and frequency)

A number of policies, resources and tools are leveraged to develop, implement, evaluate, and improve the consistency of DM services across the MHS. Specifically, the Department of Defense Instruction on "Medical Management Programs in the Direct Care System and Remote Areas" (DoDI 6025.20), DoD Medical Management Guide (2006)[10], Population Health Improvement Plan and Guide (2001), Military Health System Population Health Portal (MHSPHP), DoD/VA clinical practice guidelines, Tri-Service Business Plan, and the MHS Strategic Plan are all employed in the design, monitoring, and evaluation of the new system-wide approach to DM.

[10] The DoD Medical Management Guide, 2006, developed collaboratively by Tri-Service representatives and TMA, describes the concept of Medical Management (MM) as an integration of DM, Case Management (CM), and Utilization Management (UM). The Guide is part of TMA's efforts to promote cost-effective, quality clinical care for beneficiaries with specific disease or conditions and provides guidance for implementing disease management and other components of MM in the MHS.

SECTION A

DESIGN AND DEVELOPMENT

DESIGN AND DEVELOPMENT

The MHS has implemented a system-wide approach to DM and will use lessons learned to expand to additional disease and condition states. Congress has mandated in the John Warner National Defense Authorization Act for Fiscal Year 2007 (Public Law 109-364)[11], that the DoD develop a plan to expand the current DM program within the MHS. This section of the report describes the design and development of the DM program.

Purposes of the Program

The purposes of the MHS disease and chronic care management program are to: (1) Facilitate the improvement of the health status of beneficiaries in the military healthcare system, (2) ensure the availability of effective healthcare services for individuals with diseases and other chronic conditions, and (3) ensure the proper allocation of healthcare resources for individuals who need care for disease or other chronic conditions[12].

Elements of Program Design

Chronic Diseases and Conditions

The John Warner National Defense Authorization Act for Fiscal Year 2007[13] directs the MHS's DM program to address, at minimum, the following diseases and chronic conditions:

- Diabetes
- Cancer
- Heart disease
- Asthma
- Chronic obstructive pulmonary disorder
- Depression and anxiety disorders

Currently, the MHS provides a consistent framework for the identification and management of diabetes, CHF, and asthma for CONUS TRICARE beneficiaries less than 65 years old enrolled in both direct (Army, Navy, and Air Force facilities) and purchased care (North, South, and West TRICARE regions).

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[11] John Warner National Defense Authorization Act Fiscal Year 2007; Public Law 109-364 Title VII: Health Care Provisions; Section 734 (e): Disease and Chronic Care Management.
[12] Ibid.
[13] Ibid.

Disease states addressed throughout the DCS include, but are not limited to, diabetes, asthma, and cancer screening (breast, cervical, and colorectal) for TRICARE Prime beneficiaries. In addition to the system-wide initiatives, some MTFs have developed additional initiatives to address the needs of their specific communities.

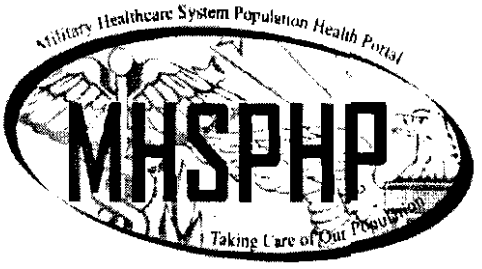
Program Standards

The DMAA[14] defines disease management as "a system of coordinated health care interventions and communications for populations with conditions in which patient self-care efforts are significant." According to the DMAA, a full-service DM program must contain the following six components:

- Population identification process;
- Evidence-based practice guidelines;
- Collaborative practice models to include physician and support-service providers;
- Patient self-management education (may include primary prevention, behavior modification programs, and compliance/surveillance);
- Process and outcomes measurement, evaluation, and management; and
- Routine reporting/feedback loop (may include communication with patient physician, health plan and ancillary providers, and practice profiling).

The MHS approach for the management of disease and chronic conditions contains all components required for a full-service DM program. The application of these six components is explained in the sections that follow.

Population identification processes



Originally developed by the Air Force, and now used by all three Services for use in the DCS, the MHSPHP[15] methodology has been adapted to identify target populations for care throughout the MHS, including those beneficiaries in the MCSC DM programs. The MHSPHP methodologies are based on HEDIS®, which is developed and maintained by the NCQA[16]. Performance measures for both the direct and purchased care systems also use national benchmarks such as the HEDIS targets. Moreover, the MHSPHP contains data from the electronic health

[14] Disease Management Association of America retrieved July 12, 2007 from: *http://www.dmaa.org/dm_definition.asp.*
[15] The MHSPHP is a Tri-Service centralized Web-based population health management system that includes TRICARE Prime and TRICARE Plus beneficiaries.
[16] National Committee for Quality Assurance retrieved December 3, 2007 from: *http://web.ncqa.org/tabid/59/Default.aspx.*

record for beneficiaries enrolled to a MTF. This enables the Services to use the MHSPHP "Action Lists" as their system-wide population health tool.

Currently, TMA identifies beneficiaries who are diagnosed with diabetes, CHF, or chronic asthma using selection criteria derived from the MHSPHP. Once identified, the population is risk-stratified. Risk stratification involves sorting those beneficiaries identified as having diabetes, CHF, or chronic asthma into groups using health care service utilization (e.g., number of visits to the emergency department, hospitalizations, prescriptions filled) data. In the TMA model, these levels range from 1 to 4, with 1 being low risk and 4 being high risk[17]. The MCSCs then develop targeted strategies for beneficiaries defined as being level 3 or 4.

The common patient identification and risk stratification methodologies described above may cause some overlap of the patient population targeted for the DM program among the direct and purchased care systems. TMA encourages increased communication between the MCSCs and individual MTFs to limit duplication of effort to the extent possible, and to ensure alignment of specific DM recommendations through the use of nationally recognized clinical practice guidelines.

Evidence-based practice guidelines

Using a collaborative approach, the DoD and VA develop and maintain clinical practice guidelines (CPGs) that serve as the foundation for interagency population health prevention and disease and condition management initiatives. With expanded use of CPGs, improvements in the quality, utilization, and value of healthcare resources are anticipated[18]. The VA and DoD employ a criterion-based, cyclical process to develop and revise the clinical practice guidelines utilized by both organizations' healthcare practitioners.

Guidelines available for use throughout the MHS and VA include:

- Asthma
- Chronic Heart Failure
- Hypertension
- Ischemic Heart Disease
- Dyslipidemia
- Medically Unexplained
- Uncomplicated Pregnancy
- Opioid Therapy for Chronic Pain
- Post-Operative Pain
- Obesity
- Chronic Obstructive Pulmonary Disease

[17] Research shows that the opportunity to improve health and reduce cost is primarily related to reducing hospitalizations. Secondary to that is reduction in ER visits (Linden, 2006). Hospitalization is both an indicator of advanced disease and lessened quality of life, and is far and away the largest cost factor associated with treating chronic disease. Thus, analysis of utilization is a good approach for identifying DM and chronic care management opportunities.

[18] The Joint Commission, *Comprehensive Accreditation Manual for Hospitals: The Official Handbook*, 2007, Rationale for Standard LD.5.10.

Symptoms: Chronic Pain and Fatigue
- Post-Deployment Health Evaluation and Management
- Diabetes Mellitus
- Pre-End Stage Renal Disease
- Dysuria
- Major Depressive Disorder
- Post Traumatic Stress Disorder
- Psychoses
- Substance Use Disorder
- Low Back Pain
- Stroke Rehabilitation
- Biological, Chemical, and Radiation Induced Illnesses, Blast and Explosions
- Gastroesophageal Reflux Disease
- Management of Tobacco Use
- Health Promotion and Disease Prevention
  - Breast Cancer Screening
  - Cervical Cancer Screening
  - Colorectal Cancer Screening
  - Prostate Cancer Screening
  - Abdominal Aortic Aneurysm Screening
  - Osteoporosis Screening
  - Adult Immunizations

The Army serves as the DoD lead for the CPG initiative and maintains a Web site to ensure easy access to CPG information and tool kits for DoD practitioners and facility staff. The Web site address is: *www.qmo.amedd.army.mil.*

Collaborative practice models

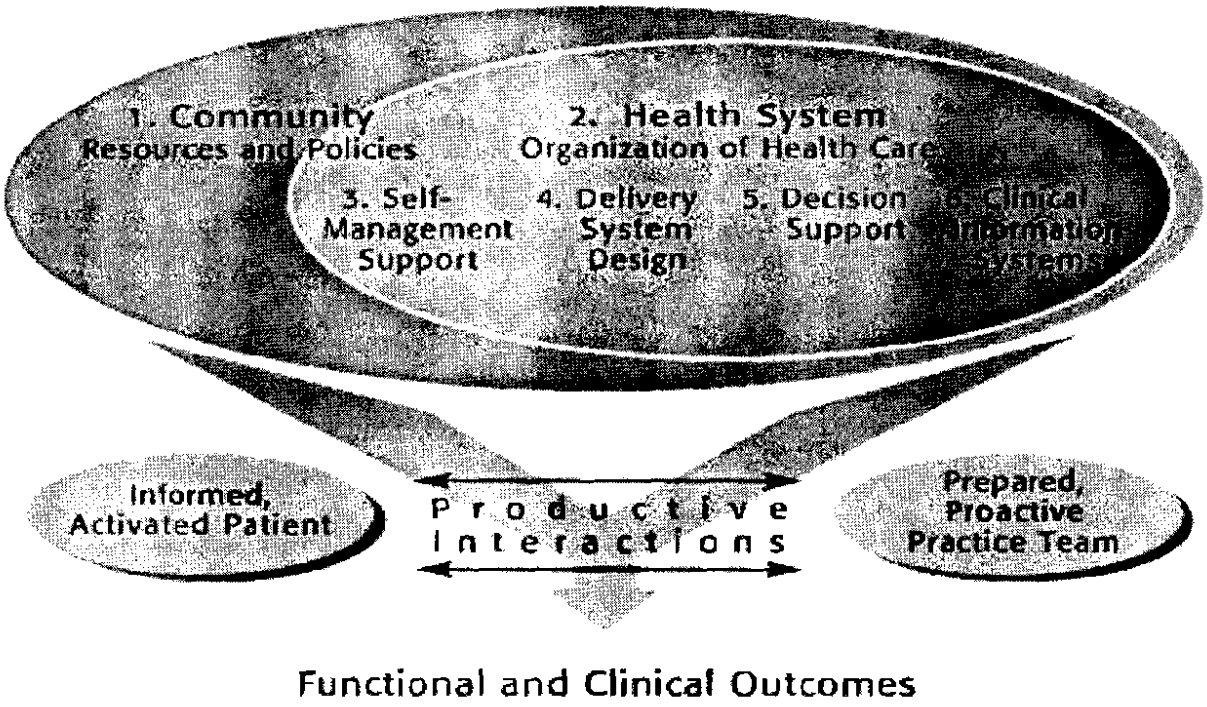
Disease management moves away from a system in which physicians deliver care in isolation, toward a collaborative model approach where all team members, including the patient and their family, work together using evidence-based, best-practice approaches. Coordination between levels of care, sites of care, and between care providers, is critical to the success of disease and chronic condition management efforts. To bring these components together, a well-designed program requires input and commitment from each member.

The Chronic Care Model[19] (CCM) is a well-known framework that has been chosen by the MHS to guide the provision of population-based disease and condition management programs. The CCM identifies the unique components required to manage effectively chronic illnesses, and includes the following characteristics:

1. Community: Collaboration with governmental and professional organizations who share the goal of enhancing chronic care management.
2. Healthcare system: A culture organized to provide safe, quality care to those with chronic illnesses.

[19] The CCM was developed by Ed Wagner, MD, MPH, and Director of the MacColl Institute for Healthcare Innovation, Group Health Cooperative of Puget Sound and colleagues of the Improving Chronic Illness Care program with support from The Robert Wood Johnson Foundation.

3. Self management: Empowerment of patients with the knowledge, skills, and competency to participate in active management of their own healthcare needs.
4. Delivery system design: Identification of providers' roles and access to clinical data to ensure quality, culturally sensitive management and follow-up of care.
5. Decision support: Use of evidence-based guidelines as a foundation for clinical management decisions.
6. Clinical information system: A tracking system that supports care coordination and that monitors care of individuals and populations.



Used with permission from the American College of Physicians. Figure 1 from Wagner EH. Chronic Disease Management: What Will It Take to Improve Care for Chronic Illness? Effective Clinical Practice 1998;1-2-4.

Patient self-management education

The goal of patient education is to empower the chronically ill person to improve their health. Improved health status is achieved using a collaborative, multidisciplinary process. Significant effort on the part of the patient is required; therefore, support and skills training are delivered to beneficiaries in a variety of ways throughout the MHS. For example, the use of trained DM clinicians who assist beneficiaries with the management of their disease or chronic condition is a hallmark of patient self-

management education provided through the MCSC[20]. Typically, the DM clinician will conduct an initial health survey, or baseline assessment, to gather the following types of information from a beneficiary and/or their family:

- General health and wellness knowledge;
- Understanding of current disease processes;
- Previous disease management education interactions;
- Readiness for change identification using standard models (e.g., Stages of Change Model[21]);
- Identification of co-morbidities;
- Behavioral health screening for anxiety and depression;
- Quality of life using standard surveys (e.g., CDC Health Related Quality of Life questionnaire [HRQOL-4][22]); and
- Current support options and available community resources.

The DM clinician then uses the information gathered to develop a customized education plan based on the individual's needs and readiness to change, including specific self-management goals. Examples of common educational topics and interventions, including referrals as needed, include, but are not limited to:

- General education;
  - Disease processes
  - Proactive interactions with healthcare providers
  - Medication review
  - Importance of keeping appointments
  - TRICARE benefits
- Teaching self-management skills; and
  - Lab results monitoring
  - Early warning signs for specific conditions (e.g., weight checks)
  - Exercise routine
  - Dietary management
  - Tobacco cessation
  - General health and prevention, including screening tests
- Review and modification of current goals.

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[20] Bodenheimer et al. (2002) found three barriers to patient self-management education: Lack of trained personnel to provide self-management courses, historical prevalence of provider-centered care whereby the patient depends on the physician to control chronic diseases, and failure of healthcare payers to reimburse for self-management education.

[21] Prochaska JO, DiClemente CC, Norcross JC. In search of how people change. Am Psychol 1992;47:1102-4, and Miller WR, Rollnick S. Motivational interviewing: preparing people to change addictive behavior. New York: Guilford, 1991:191-202.

[22] The Centers for Disease Control (CDC) standard 4-item set of Healthy Days core questions for the measurement of quality of life http://www.cdc.gov/hrqol/hrqol14_measure.htm.

A variety of evidenced-based classes, groups, and educational materials are also available to assist the beneficiaries with self-management. Patient education tools include print and Web-based materials, electronic media (e.g., videos), telephone consultations, and personal interaction. For consistency across the MHS, educational materials and resources that correspond to the clinical practice guidelines are available for MTFs to order at: *www.qmo.amedd.army.mil.* The MCSCs also have access to the CPGs so that consistent frameworks are being used to deliver, monitor, and evaluate DM programs across the MHS.

Process and outcomes measurement, evaluation and management

The MHS measures, evaluates and manages DM services using national performance process and outcomes measures such as HEDIS. Each of the Services monitors its DM programs using Service-level dashboards, and TMA is conducting a comprehensive review of the MCSC DM programs across all three regions. The results of these evaluations will provide the MHS with an objective analysis of the success of each component of the program at multiple levels of the organization (e.g., regional, Service and MHS). In addition to measuring the processes of the MCSC programs (e.g., engagement rates), TMA is also assessing clinical, utilization, humanistic and financial outcomes consistently across the three regions. Details on the evaluation are included in the *Monitoring Improvement* section that follows. Moreover, TMA, in collaboration with the Services, and the TRICARE Regional Offices, conducts a comprehensive review of the health status of the MHS population with identified disease states and preventive service needs (e.g., breast, cervical, and colorectal cancer screening) via the MHS Clinical Quality Forum (MCQF).

Routine reporting / feedback loop

The MCQF is a collaborative committee comprised of representatives from TMA, each of the Services, and the TRICARE Regional Offices. The forum is chartered by TMA, and its primary responsibilities are to continually monitor key performance indicators and evaluate the quality of healthcare provided to DoD beneficiaries. Healthcare quality is assessed based upon relevant clinical performance improvement indicators (e.g., HEDIS, Joint Commission ORYX) of healthcare system performance and beneficiary and stakeholder perceptions of the quality of health care. The forum provides ongoing updates and recommendations to senior leadership. Feedback is then provided to each of the member's sponsoring organizations (e.g., the Services send information to the MTFs, the TRICARE Regional Offices (TROs) provide feedback to the MCSCs). Feedback about enterprise DM programs is also given and received on a regular basis at roundtable meetings with the MCSCs and medical directors meetings hosted by TMA. At the next level, individual feedback is obtained and given to the provider and the beneficiary via telephone interactions, electronic and postal mail, as well as targeted satisfaction surveys.

Outcome Measures and Objectives

The evaluation of disease and chronic care management in the MHS is guided by MHS-wide strategic objectives: *(http://www.ha.osd.mil/strat_plan/MHS_Strategic_Plan_07Apr.pdf).* The MHS strategic objectives relevant to the management of disease and chronic conditions are:

- Beneficiaries partner with us to improve health outcomes.
- Our healthcare processes are patient-centered, safe, effective and efficient.
- Evidence-based healthcare is used to improve quality, safety and appropriate utilization of services.

Each of the Services and TMA evaluates and monitors its progress in meeting DM objectives and goals using available national benchmarks. Moreover, an external contractor is conducting a formal evaluation of the MCSC DM programs[23]. This evaluation incorporates key principles that are industry standards of DM program evaluation according to DMAA. The evaluation involves calculating risk-adjusted measures for:

- Clinical outcomes (e.g., receipt of A1c test for diabetics, average day supply of Angiotensin-Converting Enzyme (ACE) inhibitors for CHF, and appropriate use of long-term control medication for asthma);
- Utilization outcomes (e.g., visits to the emergency department, hospital admissions);
- Humanistic outcomes (e.g., quality of life questionnaires, patient satisfaction); and
- Financial outcomes (e.g., return of investment, cost of care).

TMA will periodically review the evaluation measures and recommend revisions based upon updated clinical practice guidelines and innovations in the standard of care.

Once enough data are available, a DM scorecard will be used that includes the measures listed above. The DM scorecard will facilitate the oversight and evaluation of the disease management services being provided. Moreover, the scorecard will be instrumental in identifying best practices for use throughout the MHS, thereby helping the MHS as it strives to manage chronic conditions for the right beneficiaries at the right time, and with the right intervention(s).

[23] Refer to the section titled "Monitoring Improvements" for a further discussion of the evaluation.

Strategies for all Beneficiaries

Although there are many similarities between TRICARE Standard and TRICARE Prime as to the preventive healthcare services that may be provided in the current benefit, there are services *that are expressly excluded* under TRICARE Standard *that may be offered under* TRICARE Prime (see table below). These currently excluded services for TRICARE Standard beneficiaries are the essence of a DM program.

Current Legal Authorities Addressing Disease Management Services
10 U.S.C. 1079(a)(13) - TRICARE may cost-share only services or supplies that are medically or psychologically necessary to prevent, diagnose, or treat a mental or physical illness, injury, or bodily malfunction as assessed or diagnosed by an authorized provider.
10 U.S.C. 1074(d) - Members and former members of the Uniformed Services are entitled to preventive healthcare services, including cervical cancer screening, breast cancer screening, and screening for colon and prostate cancer. (These same services are available to them and all dependents in MTFs under **10 U.S.C. 1077(a)(14)**, and to all covered beneficiaries under TRICARE under **10 U.S.C. 1079(a)(2)**).
10 U.S.C. 1079(a)(2)(B) - Other health promotion and disease prevention visits for those over 6 years of age are authorized under TRICARE Standard *only* when done in connection with immunizations or with diagnostic or preventive cancer screening tests.
10 U.S.C. 1097 – 1099 - The TRICARE Prime program is authorized to provide services not covered by TRICARE Standard, and the Secretary shall prescribe regulations to carry out this authority.
32 CFR 199.18(b)(2) - The following services are available under TRICARE Prime that are not authorized under TRICARE Standard: (1) "Periodic health promotion and disease prevention exams; (2) Appropriate education and counseling services. The exact services offered shall be established under uniform standards established by the Assistant Secretary of Defense (Health Affairs). (3) In addition to preventive care services provided pursuant to paragraph (b)(2) of this section, other benefit enhancements may be added and other benefit restrictions may be waived or relaxed in connection with health care services provided to include the Uniform HMO Benefit. Any such other enhancements or changes must be approved by the Assistant Secretary of

Defense (Health Affairs) based on uniform standards."
32 CFR 199.4(g)(39) - Under TRICARE Standard, education and counseling services are expressly excluded.

Because of these current exclusions, TMA is conducting a demonstration project[24] to offer TRICARE Standard beneficiaries the same benefits that TRICARE Prime beneficiaries receive under the DM program. The formal external evaluation of the Standard beneficiaries in the demonstration project will enable the MHS to determine whether recommendations should be made to change the current legal statutes.

Currently, beneficiaries over the age of 65 years old may receive disease and chronic care management services in the DCS as part of the healthcare services they receive at the MTF. However, there is no provision for the provision of services to dual-eligible beneficiaries in the existing MCSC DM program; therefore, collaboration with Medicare is ongoing to determine the best mechanism to manage our dual-eligible beneficiaries. For example, TMA is coordinating benefits with Medicare to make it easier for beneficiaries with end-stage renal disease to participate in three Medicare demonstrations (*http://www.tricare.mil/pressroom/news.aspx?fid=278*). In an effort that began in April 2007, Medicare is offering patients with end-stage renal disease the opportunity to enroll in three demonstrations in multiple counties in Alabama, Arizona, California, Connecticut, Georgia, Massachusetts, Pennsylvania, Tennessee and Texas. TRICARE is acting as second payer for TRICARE-covered services for beneficiaries participating in these demonstrations.

Compliance with Laws and Regulations Relating to Patient Confidentiality

TMA is deeply committed to protecting beneficiaries' privacy. The mission of the TMA Privacy Office is to ensure that patient information privacy is sufficiently protected at every level. The Health Insurance Portability and Accountability Act (HIPAA)[25] Compliance Division has processes in place to implement and monitor compliance and coordinate the resolution of privacy-related security issues throughout the MHS. The Data Use Agreement (DUA) Division controls and monitors the release of patient-sensitive information to internal and external requestors through the enforcement of DUAs. Additionally, information contained within computer applications such as the MHSPHP must be protected and handled in accordance with the HIPAA provisions. All personnel who view, retrieve, input, modify, or transfer information within the MHSPHP

[24] Notice of a disease management demonstration project for TRICARE Standard beneficiaries. [FR Doc. E7–4924 Filed 3–16–07; 8:45 am].
[25] Health Insurance Portability and Accountability Act of 1996 retrieved November 29, 2007 from: *http://aspe.hhs.gov/admnsimp/pl104191.htm.*

should receive HIPAA training at the Awareness and Privacy levels at a minimum.

TMA protects information in accordance with the Privacy Act of 1974[26], the HIPAA Privacy Rule[27], and the HIPAA Security Rule[28]. The Privacy Act restricts disclosure of personal information and requires Federal agencies to comply with Federal laws on collecting, maintaining, using, and disseminating information from personal records. The HIPAA Privacy Rule institutes business processes to protect the use and disclosure of protected health information (PHI), defined as individually identifiable health information including demographics, in paper, electronic, or oral form. The HIPAA Security Rule provides protection for all individually identifiable health information that is maintained, transmitted, or received in electronic form.

The Office of the Chief Medical Officer (OCMO) sends DM patient information to the MCSCs in accordance with TRICARE policy on HIPAA guidelines regarding transmission of PHI. OCMO also maintains PHI security and audit logs of these data transfers as required.

[26] The Privacy Act of 1974 retrieved November 29, 2007 from: *http://www.usdoj.gov/oip/privstat.htm.*
[27] The HIPAA Privacy Rule: Standards for Privacy of Individually Identifiable Health Information, December 28, 2000, 65 FR 82462, as amended August 14, 2002, 67 FR 53182.
[28] The HIPAA Security Rule: Health Insurance Reform: Security Standards, February 20, 2003, 68 FR 8334.

SECTION B

IMPLEMENTATION PLAN

IMPLEMENTATION PLAN

As of June 1, 2007, TMA has established a consistent approach to the identification and evaluation of DM services for TRICARE beneficiaries less than 65 years old, who had a diagnosis of chronic asthma and CHF (September 2006), and/or diabetes (June 2007), to include both TRICARE Prime and non-Prime beneficiaries who reside in the West, South and North regions. Lessons learned from the current DM efforts will be carried forward as the MHS expands to include the additional diseases and condition states as listed in Section 734 (COPD, depression and anxiety disorders, and cancer). The results of the ongoing evaluation will help determine the effectiveness of the program in facilitating improvement in health status, ensuring availability of effective healthcare services for individuals with these chronic conditions, and facilitating the proper allocation of healthcare resources. This section details the steps involved in developing the DM program implementation plan for targeted beneficiaries with the identified conditions and disease states.

Disease and Chronic Care Management Opportunities

Current prevalence trend data and cost data for all MHS beneficiaries with chronic diseases (direct care and purchased care) are vital in developing an effective implementation plan for the disease and chronic care management program. An external contractor, using the MHS centralized administrative data repository, quantified the burden of the following diseases and conditions throughout the MHS by developing FY 2004, 2005, and 2006 treated prevalence rates and cost estimates, in addition to a forecasted disease burden, for:

- Diabetes;
- CHF;
- Asthma;
- COPD/emphysema; and
- Depression/anxiety.

TMA uses these treated prevalence rates and costs to identify which beneficiaries to target for focused DM interventions. The prevalence and cost of chronic diseases presented by disease and by region are indicators of the health status of TRICARE beneficiaries and their demand for services, and therefore provide an informative picture of DM opportunities throughout the MHS.

Treated Prevalence Rates per 100 MHS Beneficiaries in FY 2004, FY 2005, FY 2006

	Diabetes		CHF		Asthma		COPD/Emphysema		Depression/Anxiety	
	N	Prevalence Rate (%)	N	Prevalence Rate (%)	N	Prevalence Rate (%)	N	Prevalence Rate (%)	N	Prevalence Rate (%)
2004	177,776	4.44	12,920	0.32	53,704	1.03	47,530	1.19	153,329	2.95
2005	191,227	4.8	13,040	0.33	59,757	1.16	49,836	1.25	146,143	2.83
2006	205,103	5.1	13,175	0.33	66,481	1.28	51,126	1.27	148,771	2.86

Note: N represents the number of cases that have the disease as derived from health care utilization information. The denominators for the prevalence rates represent the number of beneficiaries with and without disease meeting the identification criterion. For diabetes, CHF, and COPD/ Emphysema the prevalence rates are for beneficiaries age 18-64 years identified with the disease. For Asthma and Depression/ Anxiety the prevalence rates represent beneficiaries age 5-64 years identified with the disease.
Source: MHS Data Repository (MDR), FY 2003 through FY 2006.

Diabetes

Of all the conditions examined, diabetes had the highest treated prevalence rate in FY 2006 and is also projected to be the most prevalent between FY 2007 and FY 2009. In FY 2006, approximately 5 percent of the population was identified with diabetes, and this percentage is expected to grow to 6 percent by FY 2009. Beneficiaries between the ages of 45 and 64 years have the greatest burden of diabetes, with a treated prevalence rate of about 10 percent. Regionally, the South is experiencing higher prevalence rates of diabetes than any other TRICARE region.

In FY 2006, diabetes accounted for $1.5 billion in total costs, or $7,368 per beneficiary with the disease. The per-person total cost of care for diabetes was comparable across all regions. Costs specific to diabetes, as defined using the principal diagnosis on each medical encounter or claim, and attributing that claim to that disease, amounted to $189 million in FY 2006, or less than $1,000 average annual cost per beneficiary.

However, there are significant co-morbid conditions associated with diabetes, along with the other disease states discussed, and the impact of controlling these other factors (e.g., hypertension, hyperlipidemia, overweight, and obesity) on both health, including quality of life, as well as cost, is difficult to overstate.

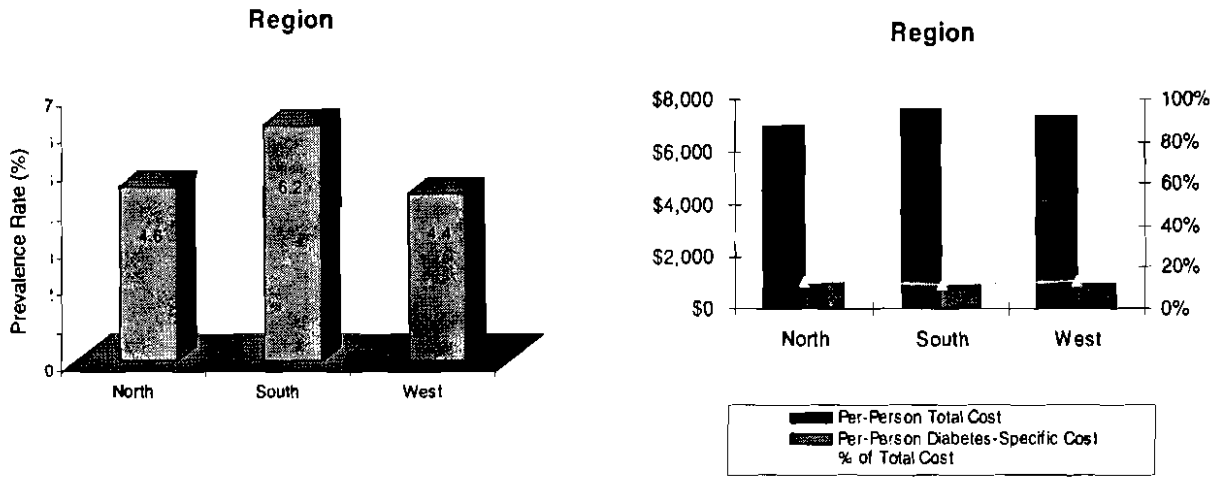
Diabetes Treated Prevalence, Total Cost of Care, and Diabetes-Specific Cost of Care for MHS Beneficiaries Ages 18 to 65 Years for FY 2006

N	Prevalence Rate (%)	Total Cost of Care	Diabetes-Specific Cost of Care*	Diabetes-Specific Costs as a % of Total Costs
205,103	5.10	$1,511,207,263	$189,912,867	12.6

Note: N represents the number of cases identified with diabetes.

* Defined as using diabetes as the principal diagnosis on each medical encounter or claim.
Source: TRICARE enrollment, encounter, and claims data, FY 2006 - FY 2007.

Diabetes Treated Prevalence Rates per 100 MHS Beneficiaries and Cost of Care by Region for FY 2006



Note: The denominators for the prevalence rates represent the number of MHS beneficiaries ages 18-64 years with and without disease meeting the stratification criterion.
Note: Costs specific to disease are identified by using the principal diagnosis on each medical encounter or claim and attributing that claim to that disease.
Source: TRICARE enrollment, encounter, and claims data, FY 2006 - FY 2007.

CHF

CHF was prevalent in less than 1 percent of the population and the rate of treated prevalence is not projected to increase for any demographic group between FY 2007 and FY 2009. Roughly, an additional 1,000 beneficiaries will be diagnosed with CHF by FY 2009.

Although the least prevalent disease, the economic burden of CHF is considerable. In FY 2006, total cost of care per beneficiary with CHF was about $23,422.36, triple the total cost per beneficiary for diabetes. However, costs specific to a principal diagnosis of CHF, about $1,526.54 per beneficiary, are comparable to the cost of diabetes.

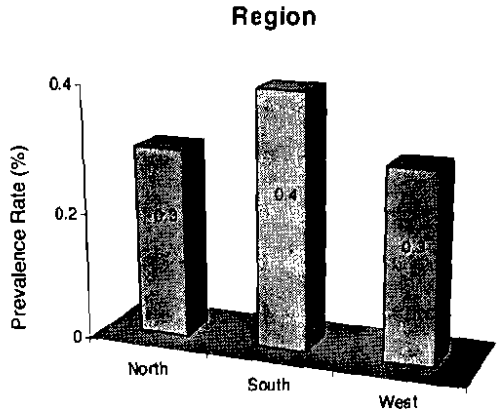
CHF Treated Prevalence, Total Cost of Care, and CHF-Specific Cost of Care for MHS Beneficiaries Ages 18 to 65 Years for FY 2006

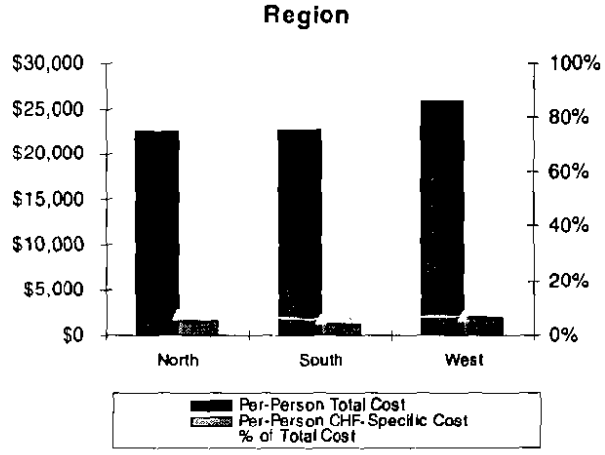
N	Prevalence Rate (%)	Total Cost of Care	CHF-Specific Cost of Care*	CHF-Specific Costs as a % of Total Costs
13,175	0.33	$308,589,646	$20,112,100	6.5

Note: N represents the number of cases that have CHF.
* Defined as using CHF as the principal diagnosis on each medical encounter or claim.
Source: TRICARE enrollment, encounter, and claims data, FY 2006–FY 2007.

In FY 2006, CHF was most prevalent in retirees and their family members who are enrolled in Network Prime and Non-Prime. Regionally, CHF is slightly more prevalent in the South.

CHF Treated Prevalence Rates per 100 MHS Beneficiaries and Cost of Care by Region for FY 2006





Note: The denominators for the prevalence rates represent the number of MHS beneficiaries ages 18-64 years with and without disease meeting the stratification criterion.
Note: Costs specific to disease are identified by using the principal diagnosis on each medical encounter or claim and attributing that claim to that disease.
Source: TRICARE enrollment, encounter, and claims data, FY 2006 - FY 2007.

Asthma

Asthma was prevalent in 1.3 percent of the population in FY 2006 and is projected to be prevalent in 1.5 percent of the population by FY 2009. The average total cost of

care was $392 million or about $5,897 per beneficiary. However, asthma had the highest percent of disease specific costs (i.e., a principal diagnosis of asthma) to total disease costs. This difference may be attributable to a lower burden of comorbidities associated with asthma, in addition to the cost of medications, including appropriate use of controller medications.

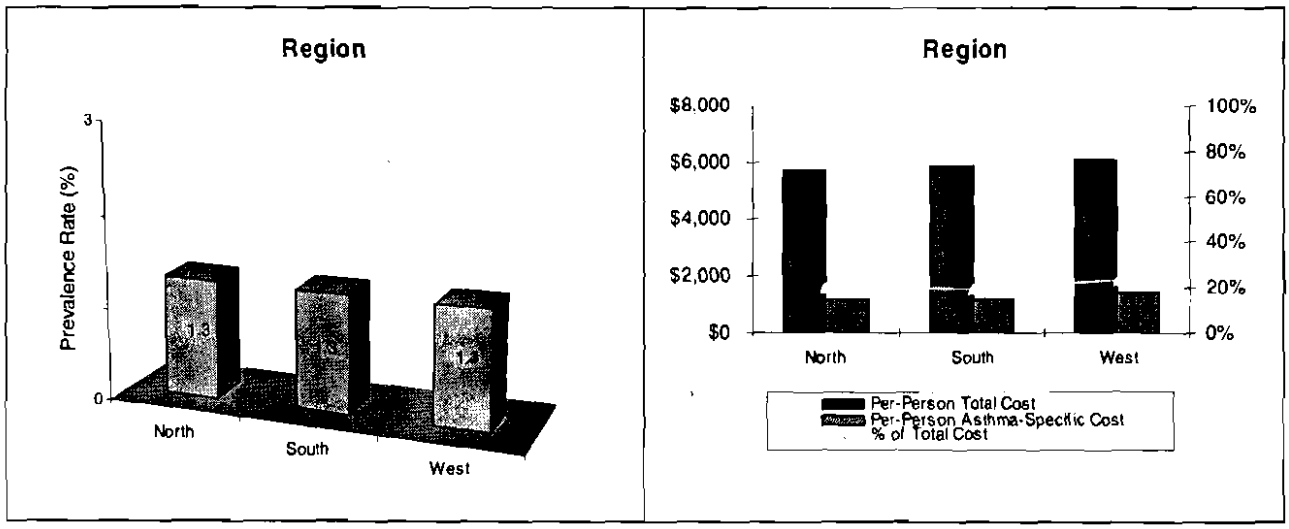
Asthma Treated Prevalence, Total Cost of Care, and Asthma-Specific Cost of Care for MHS Beneficiaries Ages 5 to 65 Years for FY 2006

N	Prevalence Rate (%)	Total Cost of Care	Asthma-Specific Cost of Care*	Asthma-Specific Costs as a % of Total Costs
66,481	1.28	$392,048,318	$82,904,962	21.1

Note: N represents the number of cases that have asthma.
* Defined as using asthma as the principal diagnosis on each medical encounter or claim.
Source: TRICARE enrollment, encounter, and claims data, FY 2006 - FY 2007.

Asthma was slightly more prevalent in Non-Prime enrollees in FY 2006 than in PRIME enrollees (1.4 percent versus 1.1 percent). Both enrollee groups are expected to grow by only 0.2 percent in FY 2009. Male PRIME enrollees between the ages of 5 and 17 have the highest asthma rates, 2.7 percent in FY 2006 and a projected 3.0 percent rate by FY 2009. In contrast, male Standard/Extra enrollee prevalence rates are projected to increase from 1.2 percent to 1.7 percent by FY 2009.

Asthma Treated Prevalence Rates per 100 MHS Beneficiaries and Cost of Care by Region for FY 2006



Note: The denominators for the prevalence rates represent the number of MHS beneficiaries ages 5-64 years with and without disease meeting the stratification criterion.
Note: Costs specific to disease are identified by using the principal diagnosis on each medical encounter or claim and attributing that claim to that disease.
Source: TRICARE enrollment, encounter, and claims data, FY 2006 - FY 2007.

COPD/Emphysema

The overall treated prevalence rate of COPD/emphysema was 1.3 percent in FY 2006 and is not projected to increase significantly by FY 2009. Our projection model suggests that an additional 3,000 beneficiaries will have a COPD/emphysema diagnosis in FY 2009 compared with FY 2006. As in the case of diabetes and depression/anxiety, the proportion of total cost of care related specifically to these clinical conditions was quite small. Only 3 percent of the cost of care for beneficiaries with COPD had a principal diagnosis of that disease.

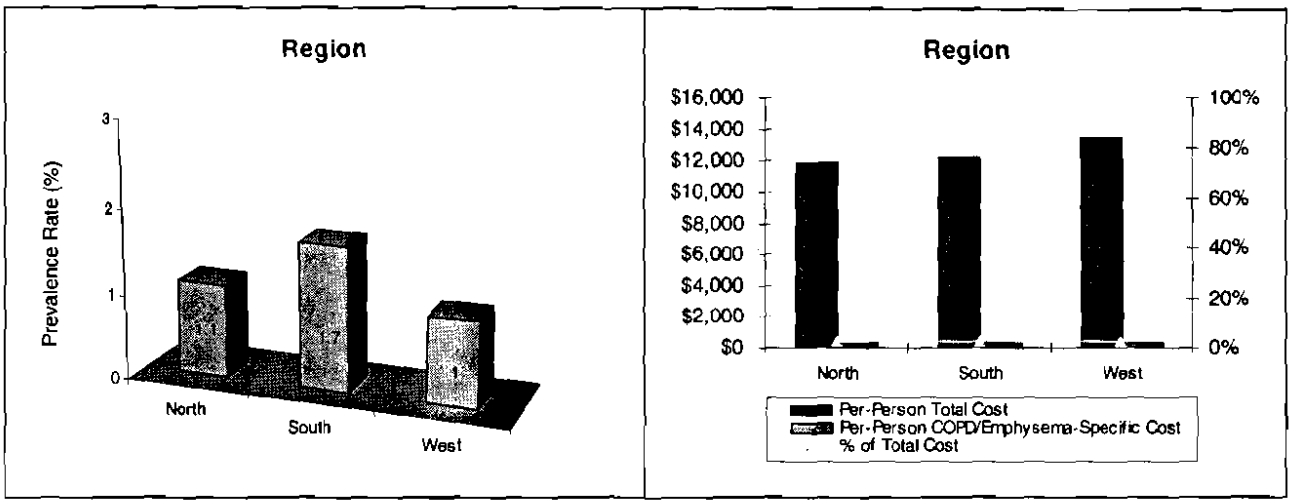
Standard/Extra enrollees are projected to have almost twice the rate of COPD than PRIME enrollees by FY 2009, 2 percent versus 1.3 percent.

COPD/Emphysema Treated Prevalence, Total Cost of Care, and COPD/Emphysema-Specific Cost of Care for MHS Beneficiaries < Age 65 for FY 2006

N	Prevalence Rate (%)	Total Cost of Care	COPD/Emphysema-Specific Cost of Care*	COPD/Emphysema-Specific Costs as a % of Total Costs
51,126	1.27	$634,575,300	$16,627,428	2.6 %

Note: N represents the number of cases that have COPD/Emphysema.
* Defined as using COPD/emphysema as the principal diagnosis on each medical encounter or claim.
Source: TRICARE enrollment, encounter, and claims data, FY 2006 - FY 2007.

COPD/Emphysema Treated Prevalence Rates per 100 MHS Beneficiaries and Cost of Care by Region for FY 2006



Note: The denominators for the prevalence rates represent the number of MHS beneficiaries ages 18-64 years with and without disease meeting the stratification criterion.

Note: Costs specific to disease are identified by using the principal diagnosis on each medical encounter or claim and attributing that claim to that disease.

Source: TRICARE enrollment, encounter, and claims data, FY 2006 - FY 2007.

Depression and Anxiety Disorders

Depression and anxiety disorders present the second greatest disease burden (following diabetes) to the MHS. In FY 2006, depression and anxiety disorders were identified in about 3 percent of the MHS population examined and cost the MHS more than $1 billion. The average total cost of care and average disease-specific cost of care were similar to costs of care for MHS beneficiaries with diabetes. However, the proportion of total cost of care specific to depression/anxiety was less than 10 percent versus 12.6 percent for diabetes.

Treated prevalence rates of depression and anxiety disorders are projected to be essentially stable between FY 2006 and FY 2009. For all years, PRIME enrollees are projected to have more than twice the prevalence rate of depression/anxiety of Non-Prime enrollees (3.5 percent versus 1.5 percent). Within PRIME enrollees, women between the ages of 18 and 64 have the highest prevalence rate of depression/anxiety, around 6.5 percent for all years, and men between the ages of 5 and 17 have the lowest prevalence rates, around 1 percent. Similar gender trends are noted for Non-Prime enrollees, only with half the prevalence rates.

Depression/Anxiety Treated Prevalence, Total Cost of Care, and Depression/Anxiety-Specific Cost of Care for MHS Beneficiaries < Age 65 for FY 2006

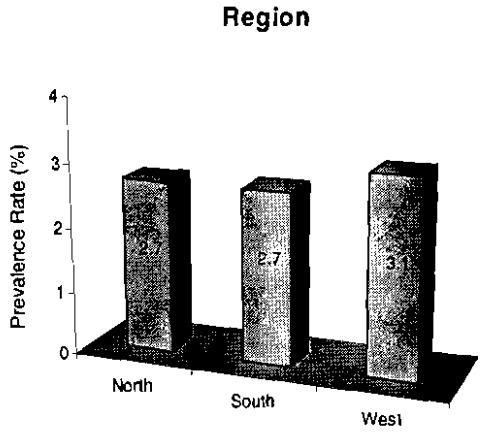
N	Prevalence Rate (%)	Total Cost of Care	Depression/Anxiety-Specific Cost of Care*	Depression/Anxiety-Specific Costs as a % of Total Costs
148,771	2.86	$1,058,464,062	$100,166,060	9.5%

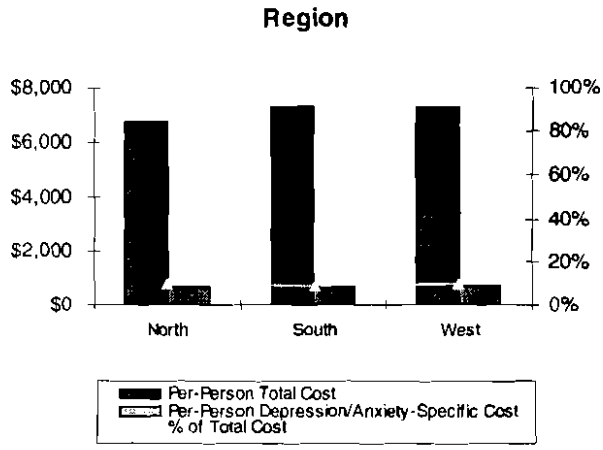
Note: N represents the number of cases identified with major depression or an anxiety disorder.

* Defined as using depression/anxiety as the principal diagnosis on each medical encounter or claim.

Source: TRICARE enrollment, encounter, and claims data, FY 2006 – FY 2007.

Depression/Anxiety Disorder Treated Prevalence Rates per 100 MHS Beneficiaries and Cost of Care by Region for FY 2006





Note: The denominators for the prevalence rates represent the number of MHS beneficiaries ages 5-64 years with and without disease meeting the stratification criterion.

Note: Costs specific to disease are identified by using the principal diagnosis on each medical encounter or claim and attributing that claim to that disease.

Source: TRICARE enrollment, encounter, and claims data, FY 2006 - FY 2007.

Active Duty Service Members

The medical needs of Active Duty Service Members present another opportunity for the MHS DM program to improve cost savings. In terms of increasing average overall costs between FY 2004 and FY 2006, Active Duty beneficiaries represent an increasing burden on the MHS. For all of the above diseases except diabetes, the overall

costs for treating this group of beneficiaries increased by more than 30 percent during this time, which is much higher than the increases seen for other beneficiary groups.

Disease Comorbidities

Significant comorbidity accompanies all of these diseases, as evidenced by the gap between average total cost of care and disease-specific cost of care in the preceding tables. To the extent that DM programs are targeting only the primary clinical condition, such as diabetes or asthma, rather than addressing other cost drivers, appreciable cost savings are not likely. Therefore, the MHS DM program is addressing comorbidities in order to improve the health status of our beneficiaries and reduce costs.

Cancer Screening

The MHS includes evidence-based prevention strategies such as breast, cervical and colorectal cancer screening as a cornerstone of providing proactive population-based healthcare to beneficiaries. Known collectively as clinical preventive services (CPS), the goal of such screenings is to catch disease in its earliest stages, including pre-cancerous states. In 2002, only 52 percent of insured adults in the U.S. received recommended CPS for their age and sex[29].

The DMAA includes the provision of CPS in the patient self-management and education component of effective DM programs. As with the previous disease states discussed, these initiatives are in alignment with NCQA effectiveness-of-care priorities. HEDIS benchmarks for percentages of persons screening per national recommendations (e.g., U.S. Preventive Services Task Force (USPSTF))[30] are used by the Services to monitor and evaluate progress toward the established targets. Each of the regions also monitors the provision of CPS using HEDIS benchmarks. TMA measures compliance with HEDIS benchmarks for all three of these CPS across both the direct and purchased care systems.

Age and gender guide recommendations for which beneficiaries should receive breast, cervical, and colorectal cancer screening tests. Therefore, based on the current beneficiary population demographics, approximately 3,787,043 TRICARE Prime and Standard beneficiaries are candidates for these screening tests.

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[29] "The Role of Clinical Preventive Services in Disease Prevention and Early Detection" retrieved December 4, 2007 from: *http://www.businessgrouphealth.org/prevention/purchasers/.*

[30] Agency for Healthcare Research and Quality, "Guide to Clinical Preventive Services – Cancer," retrieved December 4, 2007 from: *http://www.ahrq.gov/clinic/cps3dix.htm#cancer.*

Funding Requirements

The CBO estimates[31] that implementing NDAA FY07, Section 734, would increase net costs by $10 million in 2007 and about $250 million over 2007-2011. Net costs of these programs could be either greater or lower than those amounts, depending on how many beneficiaries are identified and then engaged in formal DM programs, as well as how successful interventions are in reducing long-term costs of the targeted diseases.

In FY 2006, TMA allotted approximately $11.6 million to the three MCSCs for the implementation of the asthma and CHF MHS DM programs. In FY 2007, this amount was increased to $12.1 million, and an additional $9 million of funding was allotted for the expansion of the program to include diabetes. Based on the current and projected prevalence of these three diseases in the MHS population, along with an anticipated patient participation rate of 50 percent, approximately $22 million in current dollars will be needed for program sustainment in FY 2009. These figures do not include spending in MTFs for ongoing DM programs.

Elimination of Financial Disincentives

In a fee-for-service model, financial disincentives associated with effective DM programs are lower reimbursements over time that would have been realized for treating more costly complications of prematurely advanced disease states (e.g., interventional procedures and hospitalizations for poorly controlled diabetes). Additionally, program costs for DM are generally not reimbursable since they include program administration (e.g., educational materials) and labor costs for professionals (e.g., nurses), who cannot independently receive reimbursement for their services. Therefore, "non-billable" administrative costs, including nonreimbursable labor, must be considered when conducting cost-effectiveness analyses of DM programs.

Keeping the above concerns in mind, TMA is currently using a carve-in model for DM. This approach contractually requires the MCSCs to provide DM along with other medical management services such as case management. This allows the MCSCs to provide integrated, full-spectrum medical management services to beneficiaries. TMA uses a per-member/per-year (PMPY) funding model on a separate contract line item (CLIN) for DM services delivered by the MCSC. Based on financial and other outcomes measures from the DM evaluation, TMA may adjust the PMPY funding amount provided. This approach to financing serves to significantly mitigate financial disincentives for the MCSCs related to their DM programs. Moreover, the MCSCs can

[31] Congressional Budget Office Cost Estimate for S.2766 National Defense Authorization Act for Fiscal Year 2007, June 9, 2006.

use DM strategies to reduce total target healthcare costs and thereby receive a performance award.

Recently implemented performance-based financial strategies by the Services that balance clinical quality along with productivity and access outcomes is an important strategy that will work to counteract disincentives in the DCS.

Integration of Information Systems

TMA collects and makes available to the MCSC and MTFs enrollment and utilization encounter and claims files for TRICARE beneficiaries. The Military Health System Data Repository (MDR) is the main source of data for the DM program. The MDR captures and validates data from more than 260 DoD health data network systems worldwide. This robust repository offers more than five billion records on-line with 10+ years of data. The MDR is the MHS single point for data integration, data quality edits, on-line and near-line data storage, and DoD healthcare data transfers. Selected data from the MDR is sent to the M2 data mart that includes demographic data from the Defense Enrollment Eligibility Reporting System (DEERS), data from the robust Pharmacy Data Transaction Service (PDTS) that includes pharmaceutical information regardless of dispensing location, along with claims data about diagnoses, procedures, and lab tests, and cost data.

For DM purposes, the above-mentioned data systems enable the direct and purchased care systems to have access to the same information to carry out the integrated functions of patient identification/risk stratification and program evaluation. However, as described previously, the MHSPHP is the population health tool used by the DCS to manage individual patients. Information in AHLTA, the electronic health record used in MTFs, and lab results are not available for care provided in the civilian purchased care setting.

Marketing and Outreach

The MHS program for the management of disease and chronic conditions is structured to be proactive with aggressive marketing and outreach to targeted beneficiaries. Currently, all beneficiaries identified by TMA for asthma, CHF, and diabetes are considered eligible for DM services provided by the MCSC. Beneficiaries who do not wish to participate may opt out. Additionally, MTFs provide active outreach for those beneficiaries managed in the DCS, based on available resources, including those newly diagnosed.

Since active provider participation is key to program success, individual providers receive notification and information about their patient's participation in the program

upon consent from the patient. This information may include patient-reported compliance with treatment guidelines, identified individual patient issues, concerns, and needs. Providers will also receive a variety of DM information and resources to support their patient education and management efforts (e.g., CPGs, patient materials, Web links, and continuing medical education). These information tools serve to support patient and provider communication.

Ongoing communication with the beneficiary and provider occur through a variety of ways, including telephone interactions, Internet e-mail, educational mailings, and Web portals. The MCSC's DM staff calls the beneficiaries to explain the benefits of the program and to encourage active participation. The MCSCs have specially trained DM clinicians (e.g., motivational interviewing, adult learning techniques, and goal-setting) who develop an individualized educational program based on information collected during the initial health survey. Beneficiaries who cannot be reached by phone receive letters encouraging active participation and information specific to the self-care of their disease.

In addition to the individualized educational program, TMA has Web-based educational resources such as a condition explorer, games for children, a health library, prevention health information, and an Rx checker that are available to all beneficiaries. They can be found at *http://www.tricare.mil/*. The MCSCs also provide Internet-based health and wellness resources. These resources provide beneficiaries with up-to-date information based on their region of enrollment and can be accessed at:

Humana Military Healthcare Services: *http://www.humana-military.com/south/bene/healthandwellness.htm*

TriWest Healthcare Alliance: *https://www.triwest.com/triwest/default.html*

Health Net Federal Services: *https://www.hnfs.net/bene/healthyliving/?tsc=f*

Information and tools for MTFs are available from the Army's Quality Management Office: *https://www.qmo.amedd.army.mil/pguide.htm*

Moreover, the MCSCs and MTFs encourage beneficiaries to obtain information from other Government sources, such as the National Institutes of Health, and national organizations, such as the American Lung Association.

Monitoring Improvements

The measurement, evaluation, and management of processes and outcomes for the disease and chronic care management program are directly aligned with the MHS strategic plan:

> Sustain the military health benefit through cost-effective, patient-centered care and effective long-term patient partnerships.

Furthermore, the MHS DM efforts directly support the strategic goal:

> Evidence-based healthcare is used to improve quality, safety, and appropriate utilization of services.

Each of the Services in the direct care system uses strategic plans, balanced scorecards, and executive management systems to incorporate the MHS level plan as well as Service-specific initiatives. Each MTF operationalizes its DM programs at the local level in the evidence-based healthcare critical initiative in the tri-service business plan. Specifically, each MTF submits action plans to address asthma, diabetes, and screening for breast, cervical, and colorectal cancer. The MCSC DM programs are monitored across all three regions using a formal program evaluation model by an external evaluator. This evaluation includes targeted beneficiaries who are receiving care in civilian settings (including Standard) and MTFs.

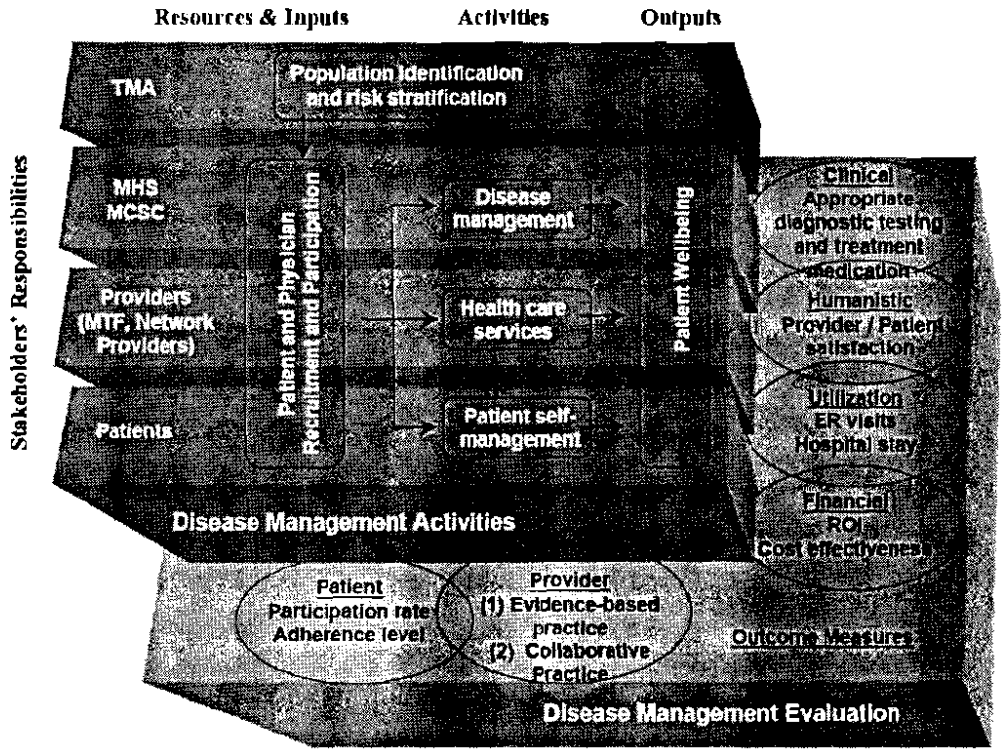
The Chronic Care Model, as previously discussed, serves as the organizing framework for both the provision and evaluation of DM programs across the entire system, including an emphasis on developing and sustaining patient self-management skills and advocating the use of VA/DoD clinical practice guidelines. TMA measures the outcomes from implementing DM initiatives on the MHS balanced scorecard.

Disease Management Evaluation

Currently, an independent external evaluator is conducting a centralized, systematic assessment of the MCSC current DM programs for asthma, CHF, and diabetes at multiple levels (e.g., regional, Service, and MHS). The evaluation reports findings related to the effectiveness and efficiency of processes and their impact on clinical, utilization, financial, quality of life and satisfaction outcomes.

The logic model below is being used to evaluate the MCSC DM programs.

Logic Model for the Evaluation of Disease Management



The logic model depicts the major stakeholders and activities involved in the management of disease, as well as the outcome measures that will be tracked as part of the evaluation. The four major stakeholders are TMA, the three regional MCSCs, healthcare providers, and patients and their families. There are four related categories of outcome measures (clinical, humanistic, utilization, and financial) being used to monitor and evaluate the MCSC DM programs. In addition to tracking the above measures, the evaluation will track certain indicators of the effectiveness of program processes (e.g., patient level of participation and satisfaction). Purposes of evaluating processes include identifying ways to improve the provision of services by identifying strengths and weaknesses of the MCSC programs, as well as identifying best practices. Application of the DMAA's six components of a full-service disease management program as described earlier in this report will also be used as program standards.

Information for the evaluation of current and new disease and condition states in the MCSC's DM program is obtained from the following sources:

1) An ongoing review of the literature will identify CPGs against which to evaluate services provided, benchmarks, and information to estimate potential savings. This review will continue throughout the evaluation period to identify changes in CPGs, to obtain the latest available information on disease management and

evaluation best practices, and to obtain the latest performance benchmarks (e.g., HEDIS).

2) TMA administrative files are analyzed on an ongoing basis to obtain information on healthcare utilization patterns and medical costs, and to identify the characteristics of the at-risk population and determine the sampling frame for surveys and medical record reviews.

3) MCSC administrative files that contain information on patient assessments at baseline and periodic follow-ups collected by a DM clinician through telephone interactions with enrollees are also sent to the external evaluator.

4) Medical record reviews will be used to extract data on interventions received and clinical outcomes that are not available electronically (e.g., foot examinations for diabetic patients, and blood pressure readings).

5) Surveys of beneficiaries will be used to collect satisfaction and outcome data not available elsewhere.

To quantify the impact of the DM program, the evaluator will need to compare both the health and financial outcomes for the targeted patient population with estimates of what their outcomes would have been in the absence of DM services. In this case, the outcomes must be inferred from the control (comparison) group: Either the same individuals' experience when the DM program was unavailable or the experience of similar beneficiaries who are not provided with the program. To the extent that both the comparison group and the study (DM-eligible) group have similar characteristics (e.g., demographics, health status, life styles and availability of new medications, procedures, and processes to treat the disease), comparison of outcome measures between the two helps to isolate the impact of the program on outcomes controlling for other factors that might also affect patient outcomes. To guarantee a valid comparison, it is crucial to establish a comparison group that is truly similar to the targeted population. To this end, multiple comparison group approaches and statistical analyses will be used for evaluation. Each approach has its own strengths and weaknesses, and a combination of approaches will be used to improve the overall validity of the evaluation.

Likewise, each of the Services monitors its DM initiatives at the MTF, intermediate, and Service levels using the tri-service business plans as the organizing framework. Furthermore, TMA conducts a comprehensive review of the health status of the MHS population (both direct and purchased care) with identified disease states and progress toward meeting clinical preventive service goals via the MCQF previously described.

SECTION C

ANTICIPATED OUTCOMES

ANTICIPATED OUTCOMES

The MHS's proactive, evidence-based approach to disease and chronic care management is expected to improve the health status of targeted beneficiaries by providing the right beneficiaries the right interventions at the right time. These goals are accomplished by reducing variation across the MHS regardless of geographic location or care setting (i.e., MTF or civilian network). While the literature suggests that DM programs may provide a modest monetary return on investment[32,33], a more likely and important benefit is improved quality of life for patients and their families.

In order to benchmark performance of the MHS DM program, the evaluator will compare clinical outcome metrics with those of other programs that report data to NCQA. These comparisons are based upon the Commercial Healthcare Effectiveness Data and Information Set (HEDIS®) 2006 Means, Percentiles, and Ratios, which provides information on the scores of NCQA accredited plans (or plans seeking NCQA accreditation) for each specific HEDIS measure. When HEDIS measures do not exist for a targeted outcome, other national benchmarks will be used (e.g., National Heart, Lung, and Blood Institute). Targeted quarterly reports and a comprehensive annual report are produced by the external evaluator. Findings are shared within HA/TMA, including the TROs, and with the Services and MCSCs so that lessons learned and best practices can be promulgated throughout the system.

Asthma

The asthma HEDIS metric specifies the percentage of asthma beneficiaries with medication for long-term asthma control. Each MCSC and the Services are performing at a level of plans that exceed the 75th percentile. We anticipate that these numbers will improve even more over time for those beneficiaries participating in the DM program. Another measure for asthma recommended by the National Heart, Lung, and Blood Institute (NHLBI) is the percentage of beneficiaries, ages 5 or over, who have received a spirometry test in the past 24 months.

Congestive Heart Failure

Clinical studies have demonstrated the effectiveness (e.g., preventing acute hospitalizations) of DM interventions (e.g., daily weight monitoring by patients) for persons with CHF[34]. Moreover, certain classes of medications have demonstrated

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[32] Goetzel RZ, Ozminkowski RJ, Villagra VG, Duffy J. Return on investment in disease management: a review. Health Care Financ Rev 2005; 26(4):1-19.
[33] Nash DB, Clarke JL. Disease management. Issue Brief (Inst Health Care Costs Solut) 2002 July; 1(2):1-24.
[34] Kottmair S, Frye C, Ziegenhagen DJ. Germany's disease management program: improving outcomes in congestive heart failure. Health Care Financ Rev 2005; 27(1):79-87.

positive outcomes in clinical studies. However, there are no current HEDIS targets or benchmarks available for CHF interventions. Currently, TMA uses a proposed NCQA (HEDIS) metric and a set of heart failure metrics from the *Standard Outcome Metrics and Evaluation Methodology for Disease Management Programs* that were developed collaboratively by Johns Hopkins University and American Healthways. Both entities support measuring the use of beta-blockers and angiotensin-converting enzyme (ACE) inihibitors medications in CHF patients. National benchmarks will be incorporated when they become available.

The measures for diabetes, COPD, depression and anxiety disorders, and cancer screening are listed below. They will be based on HEDIS methodologies, and will be evaluated as these diseases are introduced to the program and sufficient data become available.

Targeted Disease	Outcome Metric	Metric Description
Asthma	Use of Appropriate Medications for People with Asthma (HEDIS 2007)	Percentage of asthma patients with medication for long-term control
	Spirometry performed at least every 1-2 years (NHLBI, August 2007)	Percentage of asthma patients with at least one spirometry test in past 12-24 months
Congestive Heart Failure	ACE Inhibitor Use (Standard Outcome Metrics & Evaluation Methodology for DM Programs Johns Hopkins & American Healthways, 2002)	Percentage of CHF patients taking ACE inhibitors
	Beta-Blocker Use (Standard Outcome Metrics & Evaluation Methodology for DM Programs Johns Hopkins & American Healthways, 2002; proposed HEDIS)	Percentage of CHF patients taking beta-blockers
Diabetes (planned)	HbA1c tests, based on claims data (HEDIS 2007)	Percentage of patients who had at least one A1C test in the past measurement year

	Annual dilated retinal exam (HEDIS 2007)	Percentage of patients who had at least one dilated retinal exam in the past measurement year
	Foot exam (HEDIS 2007)	Percentage of patients who had at least one foot examination in the past measurement year
	ACE inhibitors/angiotensin receptor blockers (ARBs) (HEDIS 2007)	Percentage of members with microalbuminuria or clinical albuminuria taking ACE inhibitors or ARB
Chronic Obstructive Pulmonary Disease (COPD) (planned)	Use of Spirometry Testing in the Assessment and Diagnosis of COPD (HEDIS 2007)	Percentage of newly diagnosed or newly acute COPD patients with spirometry test in past 12 months
Depression and Anxiety Disorders (planned)	Antidepressant Medication Management (HEDIS 2007)	Percentage of patients with a new diagnosis of depression with appropriate antidepressant medication management and follow-up during 12 month acute treatment phase and those who remain on medication for at least 180 days
	Follow-up After Hospitalization for Mental Illness (HEDIS 2007)	Percentage of depression patients with appropriate follow-up 7 and 30 days after hospitalization for mental health disorder
Cancer (planned)	Colorectal Cancer (CRC) Screening (HEDIS 2007)	Percentage of adults 50 years of age and older who have been screened by one or more of the following methods: Fecal occult blood test (FOBT) annually; flexible sigmoidoscopy every 5 years; double-contrast barium enema (DCBE) every 5 years; and/or colonoscopy every 10 years
	Breast Cancer Screening (HEDIS 2007)	Percentage of average risk women ages 40 and older who have been screened with mammography every 1-2 years, with or without clinical breast exam
	Cervical Cancer Screening (HEDIS 2007)	Percentage of women 21-64 years of age who have been screened by Pap smear every 1-2 years
HEDIS - Healthcare Effectiveness Data and Information Set NHLBI - National Heart, Lung, and		ARB - Angiotensin receptor blockers COPD - Chronic obstructive pulmonary disease FOBT - Fecal occult blood test

Blood Institute	DCBE - Double-contrast barium enema
DM - Disease management	
ACE - Angiotensin-converting enzyme	

SECTION D

SAVINGS AND RETURN ON INVESTMENT

SAVINGS AND RETURN ON INVESTMENT

As part of the evaluation of the MCSCs' DM programs, the external evaluator will initially analyze the changes in medical costs and ROI for the management of asthma and CHF using the historical comparison group approach described earlier in the *Monitoring Improvements* section of the Implementation Plan, with preliminary results available in March 2008. This approach will then be applied to calculate ROI for diabetes and other disease and condition states as they are added to the program. It is important to note that numerous studies conducted on the benefits of DM suggest that it provides only a modest monetary return on investment[35,36]. As stated earlier, the literature also suggests that the impact of DM on healthcare utilization and costs often takes up to 18 months to begin to materialize, therefore it is too early to expect an impact on most healthcare utilization and cost measures of the MCSC current programs.

As noted by Villagra (2005) and summarized by the DMAA[37], "...the advancement of DM programs has outpaced systematic evaluation of their net value in improving health outcomes and mitigating health care costs." As such, no standard methodology yet exists to measure the exact cost savings of a DM program. However, the ongoing formal evaluation of the MCSC DM programs will allow TMA to conduct business case analyses that can be used to assess the efficiency and effectiveness of MHS resources that have been allocated for DM.

Quantifying the monetary implications of DM is a complex undertaking. The CBO estimates that implementation of NDAA FY07 Section 734 will cost approximately $250 million between 2007 and 2011. Cost savings attributable to effective DM can be achieved and measured across two dimensions:

- Reductions in the volume of preventable, high-cost care, such as inpatient admissions and emergency department use; and
- Shifts in unit costs from higher to lower cost services stemming from patient adherence to their management plan.

These forms of cost savings will be partially offset by program administrative costs and possible increases in preventive, diagnostic and other services directly associated with DM interventions. In fact, many DM programs have encountered challenges proving financial returns in their early years when program initiation and start-

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[35] Geotzel RZ, Ozminkowski RJ, Villagra VG, Duffy J. Return on investment in disease management: a review. Health Care Financ Rev 2005; 26(4):1-19.
[36] Nash DB, Clarke JL. Disease management. Issue Brief (Inst Health Care Costs Solut) 2002 July; 1(2):1-24.
[37] Disease Management Association of America retrieved 12 July 2007 from: *http://www.dmaa.org/dm_definition.asp.*

up costs combined with increased testing and diagnostics counterbalanced short-term medical cost savings[38].

TMA has analyzed historical healthcare utilization and cost patterns to quantify the magnitude of the cost of asthma and CHF to TRICARE, as well as to identify patterns in the delivery of care. For asthma, the largest component of medical costs is pharmaceuticals. Emergency and inpatient care, combined, account for approximately 11 percent of disease-related costs, highlighting the limits of reducing medical expenditures by preventing emergency visits and hospital admissions for asthma. However, for CHF beneficiaries, reducing unnecessary hospital admissions through the provision of proactive outpatient evidence-based DM services can produce large cost savings. Four out of every five dollars for CHF-related care for these DM candidates was for inpatient or emergency care, with almost all of this cost ($54 million) accounted for by inpatient care.

The evaluator will use different ROI measures to estimate the financial implications of DM, including the ROI rate, the gross medical savings or "medical cost avoidance," and the net savings (gross savings minus the costs of DM services). The term medical cost avoidance refers to the savings resulting from prevented high-cost health services such as emergency department visits and inpatient hospital admissions. Prevented healthcare utilization is estimated rather than observed, and a major methodological challenge is quantifying the impact of DM on healthcare service utilization. In addition to healthcare costs, DM may have an impact on the productivity of DoD personnel, including a potential reduction in absenteeism due to health problems of the DoD member and/or his or her family members.

[38] Fetterolf, D, Wennberg, D, Devries, A. Estimating the Return on Investment in Disease Management Programs Using a Pre-Post Analysis. Disease Management 2004; 7 (1): 5-22. Mary Ann Liebert, Inc.

SECTION E

INVESTMENT STRATEGY

INVESTMENT STRATEGY

As with any effective investment strategy, the MHS must take into consideration the goals and time horizon of its disease and chronic care management program in order to assure its sustainment and growth. Adequate funding must be available to ensure the availability of DM services in order for the program to achieve its goal of improving the health status of its beneficiaries. Determining the appropriate allocation of scarce healthcare resources for DM initiatives is a significant challenge for all healthcare plans and providers, thus requiring ongoing monitoring and evaluation. The MHS may reinvest any realized cost savings back into the DM program.

As previously described, an analysis by an external contractor of the current disease burden revealed that, among the six conditions listed in NDAA FY07, Section 734, diabetes has the greatest prevalence and poses the greatest cost burden for the non-Medicare MHS beneficiary population, followed by depression/anxiety disorders, asthma, CHF, and COPD. The FY 2006 healthcare costs for these patients as previously presented include:

- The population prevalence of diabetes was about 5 percent of the population, depression/anxiety 3 percent, asthma and COPD 1.25 percent, and CHF 0.3 percent; and
- The total cost of care for diabetics was $1.5 billion, for depression/anxiety $1 billion, and more than $1.3 billion for asthma, CHF, and COPD, combined.

This analysis supports the investment strategy of choosing diabetes, asthma, and CHF as the first disease states to implement because they provide a good mix of prevalent and high-cost conditions. Initially, beneficiaries who have higher utilization levels of healthcare services are being targeted in an effort to both improve the health of these beneficiaries and lower costs. Shifting costs from providing care in expensive emergency department and inpatient settings to outpatient venues, including remote monitoring by DM clinicians, is the cornerstone to an effective DM investment strategy. Applying the results from the ongoing evaluation of DM for asthma, CHF, and diabetes will help the MHS to assess and refine processes before introducing additional disease and/or condition states.

Additional financial incentives may be necessary to sustain the MHS DM program, whereby efficient disease and utilization management initiatives are rewarded for their efforts. Examples include the Army's PBAM and the Navy's Performance-Based Budgeting program, which provide a financial adjustment to the MTF Prospective Payment System-based reimbursement for: Outpatient productivity; compliance with length of stay standards (inpatient utilization management); and compliance with evidence-based clinical practice (clinical quality). Financial mechanisms to incentivize the purchased care system are being studied as well.

Key to the success of the MHS's program for disease and chronic care management are the partnerships among TMA, the DCS, and the MCSCs. TMA provides policies, instructions, and resources to measure, improve, and sustain the health status of the population at different levels throughout the MHS. The Services have embraced DM as demonstrated by their leadership in the development, implementation, and sustainment of groundbreaking tools and resources (e.g., CPG tool kits, MHSPHP), and via the evidence-based healthcare critical initiative in each MTF's tri-service Business Plan. Furthermore, TMA is leveraging the clinical expertise and resources of the MCSCs to assist with the management of the most costly and prevalent disease states. This ensures all beneficiaries with asthma, CHF, and diabetes who are not yet eligible for Medicare receive DM services regardless of their local MTF capability. This complementary approach further supports optimization of MTF resources, beneficiary satisfaction, and the delivery of best value healthcare to our beneficiaries.

NEXT STEPS

The ongoing centralized evaluations by TMA and the three Services are providing valuable information regarding the effectiveness and efficiency of the program. Once enough data are available, a DM scorecard will be used to facilitate oversight and evaluation of DM services. Moreover, the scorecard will be instrumental in identifying best practices for use throughout the MHS.

Including TRICARE Standard beneficiaries in future DM programs will require a change in legal authority[39]. The demonstration project[40] that allows TRICARE Standard beneficiaries to be included in the MCSCs current program will end March 31, 2009. The results of the current demonstration project will be used to determine the impact of disease management on these beneficiaries. Results from the current demonstration project are not yet available. Therefore, recommendations cannot be made at this time regarding the inclusion or exclusion of TRICARE Standard beneficiaries in the MHS' DM programs.

Medicare is not currently mandated to provide DM, so TRICARE would be solely responsible for the cost of providing management of disease and chronic conditions to dual beneficiaries. Also, the major contracts with the current MCSCs do not require them to provide DM services to Medicare-eligible beneficiaries.

Key to the success of the MHS program for disease and chronic care management are the partnerships among TMA, the Services, and the MCSCs. TMA provides policies, instructions, and resources to measure, improve, and sustain the health status of the population at different levels throughout the MHS. Specifically, TMA is leveraging the clinical expertise and resources of the MCSCs to assist with the management of the most costly and prevalent disease states. This ensures all beneficiaries with diabetes, CHF, and asthma who are not yet eligible for Medicare receive DM services regardless of their local MTF capability. This complementary approach further supports optimization of MTF resources, beneficiary satisfaction, and the delivery of best value healthcare to our beneficiaries.

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[39] 10 U.S.C. 1079(a)(13), 10 U.S.C. 1097 – 1099, 32 CFR 199.18(b)(2), 32 CFR 199.4(g)(39)

[40] Notice of a disease management demonstration project for TRICARE Standard beneficiaries. [FR Doc. E7–4924 Filed 3–16–07; 8:45 am]

ACRONYMS

ACE - Angiotensin-converting enzyme

ARB - Angiotensin receptor blockers

CBO - Congressional Budget Office

CCM - Chronic care model

CONUS - Continental United States

CHF - Congestive heart failure

CLIN - Contract line item

CM - Case management

COPD - Chronic obstructive pulmonary disease

CPG - Clinical practice guideline

CPS - Clinical preventive services

DCS - Direct care system

DM - Disease management

DMAA - Disease Management Association of America

DoD - Department of Defense

DUA - Data use agreement

FY - Fiscal year

HEDIS® - Healthcare Effectiveness Data and Information Set

HIPAA - Health Insurance Portability and Accountability Act

IGCE - Independent government cost estimate

IPT - Integrated project team

MCSC - Managed care support contractor

MCQF - Military Health System Clinical Quality Forum

MDR - Military Data Repository

MHS - Military Health System

MHSPHP - Military Health System Population Health Portal

MM - Medical management

MTF - Military treatment facility

NCQA - National Committee for Quality Assurance

NHLBI - National Heart, Lung, and Blood Institute

PCS - Purchased care system

PHI - Protected health information

PMPY - Per member per year

ROI - Return on investment

TMA - TRICARE Management Activity

UM - Utilization management

VA - United States Department of Veterans Affairs