4.   QUALITY OF CARE IN THE MILITARY HEALTH SYSTEM

Introduction

The Military Health System (MHS) has embraced the Institute of Medicine (IOM) definition of quality as "the degree to which health care services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge."[30] The IOM has set forth six aims for improving the delivery of health care: "safe, effective, patient-centered, timely, efficient and equitable."[31] All Department of Defense (DoD) policies and implementation guidance regarding health care quality are based on these IOM constructs as stated in Health Affairs (HA) Policy 02-016[32] and further elaborated in DoD Instruction and Manual 6025.13.[33] [34]

HA Policy 02-016 frames the assessment and review of the MHS quality of health care. First, is the foundation for the delivery of high-quality care in place and robust? Second, what are the measurable process and outcomes of care performance of DoD's health care system? Third, how is the health care delivery system and the quality of health care provided viewed by DoD beneficiaries, military leadership, and Congress?

It is the goal of this review to determine if the MHS meets or exceeds benchmarks for health care quality as defined by the Office of the Secretary of Defense (OSD), Service policies and guidance, and TRICARE contracts.

Quality of Care Governance

Issues related to the quality of clinical care are brought to the MHS governance through the Clinical Quality Forum (CQF), a collaborative forum with representation from the direct care and purchased care components. The CQF has the responsibility for assessing clinical quality across the MHS, based on relevant clinical indicators for health care system performance, including beneficiary and stakeholder perceptions of care, and activities focusing on quality improvement, patient safety, and risk management events. Additionally, the CQF develops, or may endorse, recommendations for clinical quality improvement for approval by Medical Operations Group (MOG), Medical Deputies Action Group (MDAG) or Senior Medical

---

[30] Institute of Medicine. (1990). *Medicare: A Strategy for Quality Assurance*. Vol. 1. Washington, D.C: National Academy Press.

[31] Institute of Medicine. (2001). *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, D.C: National Academy Press.

[32] Health Affairs. HA Policy 02-016: Military Health System Definitions of Quality in Health Care. May 2002.

[33] Department of Defense. DoD Manual 6025.13: Medical Quality Assurance (MQA) and Clinical Quality Management in the Military Health System (MHS), October 2013.

[34] Department of Defense. DoD Instruction 6025.13: Medical Quality Assurance (MQA) and Clinical Quality Management in the Military Health System (MHS), February 2011.

Management Advisory Committee (SMMAC) (see Section 2 of this report regarding MHS governance).

Following the establishment of the Defense Health Agency (DHA), the CQF began reporting its recommendations for clinical quality improvements to the MOG, which in turn engages in a process to evaluate recommendations and convey those deemed appropriate to senior military leadership.

Each of the Services implements quality improvement efforts at its respective MTFs in line with its organizational processes through Joint Operational Commands, Regional commands, or in the case of the Air Force, Field Operating Agencies.

Policy Review

Subject matter experts (SMEs) from the Departments of the Army, Navy, Air Force, and DHA conducted a review of documents addressing the quality of care in the MHS, to include: 1) legislation that sets authority for the MHS and DoD on matters of quality, 2) DoD issuances addressing quality of care within DoD or the Services, 3) DoD publications guiding the delivery of services, including memoranda, operational or implementation guidance, 4) studies examining quality of care, 5) studies or reviews pertaining to quality of care in the MHS performed by the Government Accountability Office (GAO) after 2003, and 6) studies and reviews performed by the Department of Defense Inspector General (DoD IG) after 2003. The review focused on whether policies were within the scope of quality of care and identified the policy intent and agencies responsible for implementation (see Table 4.1). These policies and practices were contrasted among Services and differences identified between overarching DoD requirements and Service policies. (For a complete list of policies reviewed for this report, see Appendix 4.1.)

Table 4.1 Numbers of Policies, Instructions, Resources and Manuals Reviewed

Level of Authority	Number Reviewed
Legislation	8
Department of Defense	18
Army	28
Navy	14
Air Force	20
National Capital Region	1

Source: 2014 MHS Review Group, July 2014

DoD Policy Guidance

DoD policy is guided by statutory and regulatory requirements:

- 10 United States Code (U.S.C.) 55 § 1102 defines medical quality assurance records, peer review, and the type and extent information is protected from disclosure outside DoD.[35]

- 32 Code of Federal Regulations (C.F.R) 199.15, "*Quality and Utilization Review Peer Review Organization Program*" establishes rules and procedures to review the quality, completeness, and adequacy of purchased care provided, as well as its necessity, appropriateness and reasonableness. Furthermore, it defines the requirements for external peer review in the purchased care component.

DoD Instruction 6025.13 and DoD Manual 6025.13, "*Medical Quality Assurance (MQA) and Clinical Quality Management in the MHS*," provide the Services with guidance on clinical quality. DoDM 6025.13 establishes medical quality assurance programs, implements policy, assigns responsibilities, and provides procedures for managing DOD Medical Quality Assurance (MQA) and clinical quality management. This manual requires the implementation of a performance measurement system for clinical quality in every MTF as a dedicated program to confirm quality-of-care outcomes and identify opportunities for improvement.

DoDI 5010.43, "*Implementation and Management of the DoD-Wide Continuous Process Improvement/Lean Six Sigma (CPI/LSS) Program*," establishes policy, assigns responsibilities and provides guidance for implementation of CPI/LSS programs. It requires that all DoD components implement CPI/LSS as an essential tool for improving their operating effectiveness, apply its methodologies and practices to ensure cost-effective management, and implement enhanced processes and technologies. Furthermore, this instruction requires that demonstrated performance improvements be documented in a transparent fashion for managerial review, assessment, and knowledge sharing.

HA Policy 10-008, *"Policy Memorandum for Military Health System Health Care Quality Assurance Data Transparency,"* requires the MHS to ensure that quality assurance information is clear, transparent, and readily available to MHS providers, as well as to its beneficiaries.

Army Policy Guidance

Army Regulation (AR) 40-68 implements DoDI 6025.13 guidance on care quality, DoDM 6025.13, DoDD 6000.14, and other DoD guidance. This consolidated regulation prescribes policies, procedures and responsibilities for the U.S. Army Medical Department (AMEDD) Clinical Quality Management Program (CQMP). The CQMP continuously and objectively

---

[35] The peer review process refers to the assessment of the quality of medical care carried out by a health care professional, including any such assessment of professional performance, any patient safety program root cause analysis or report, or any similar activity.

assesses individual and institutional performance, aiming to improve the health care provided to eligible DoD beneficiaries.

AR 40-68 includes DoD and statutory policies addressing medical services quality management requirements and organizational performance improvements. It refers to the Joint Commission (TJC) requirement for an organized, self-governing medical staff to provide direction and oversight of the quality of care, treatment, and services delivered by privileged providers. Separately, AR 5-1, *"Management of Army Business Operations,"* further establishes policy and responsibilities for management and measurement of business operations, including Medical Command (MEDCOM) quality-of-care efforts, and continuous improvement efforts.

The Army Medicine 2020 Campaign plan establishes the framework through which AMEDD will achieve a responsive and reliable health service and move toward an integrated and standardized process across the organization with clear performance metrics. The Army Information Paper *"Quality and Patient Safety Program Army Medical Department (AMEDD),"* describes the process to oversee and enforce AMEDD Quality and Patient Safety policies. The Clinical Performance Assurance Directorate (CPAD) monitors that process and reports directly to the Deputy Commanding General of Operations. The CPAD provides education, training, standardization, and leadership visibility to AMEDD's Quality, Patient Safety and Risk Management programs. The CPAD provides professional education to all levels of leadership through courses at the AMEDD Center and School. CPAD provides monthly educational Video Teleconferences (VTC) with all facility quality leads and provides newsletters, milBook, and SharePoint sites to support mentoring at the MTF level. Additionally, CPAD monitors measures of quality within MTFs, Services, and the MHS, comparing them to civilian benchmarks. CPAD further submits near real-time actionable data to the MTFs and devises specific interventions based on data collected. Lessons learned are collected through MHS-level committees and pushed to the Regional leads for dissemination to the field. The CPAD combined with the MEDCOM command inspection program and other self-inspection systems ensure the execution and implementation of policies. CPAD is the MEDCOM lead to develop initiatives, policies, and standards, in close collaboration with the MHS, DHA, Air Force, and Navy.

Navy Policy Guidance

BUMED Instruction 6010.13 provides guidance for Navy's Quality Assurance (QA) program. It applies to all health care personnel providing services in naval MTFs, outlines basic component activities and functions, and requires all medical personnel to participate in ongoing monitoring and evaluation to assess quality of care provided. Furthermore, BUMED 6010.13 requires all MTFs to implement a QA program and maintain TJC accreditation. This QA program is intended to identify patient care improvement opportunities, identify and decrease risk to patients and staff, and provide justification for resource needs. It also monitors and analyzes QA data to identify patterns or processes requiring additional scrutiny.

A separate instruction, BUMED 6000.2E, further establishes policy, publishes procedures, and assigns responsibility for the accreditation of Navy MTFs. It requires that all fixed MTFs and

freestanding ambulatory clinics achieve and maintain TJC accreditation. Possible accreditation programs include Hospital, Ambulatory Care, Behavioral Health Care, and Home Care.

The Navy Surgeon General is responsible for policy and initiatives to support higher authority mandates. Within the Bureau of Medicine and Surgery (BUMED) Clinical Operations Directorate (BUMED-M3) TJC survey reports are analyzed and actionable recommendations are made. Between triennial TJC surveys, a trained team of Navy TJC fellows completes monitoring of compliance with standards and quality goals. Interpretation, feedback, consultation on findings, and any identified performance issues are submitted to senior leaders. Validation of standards compliance is ongoing.

Air Force Policy Guidance

The Air Force Surgeon General (AF/SG)[36] assists the Secretary of the Air Force in development of policies, plans, and programs, establishing requirements, and providing resources to the Air Force Medical Service (AFMS). The AF/SG prepares policies and issues official guidance and procedures to ensure implementation of those policies. The AF/SG manages Quality and Safety programs through the Air Force Medical Operations Agency (AFMOA) and the Directorate of Healthcare Operations (HAF/SG3). Elements of quality and patient safety are integrated throughout AFMS governance and are incorporated into the AFMS Strategic Plan. Additionally, the AF/SG is responsible for Coordinating with the Assistant Secretary of Defense for Health Affairs (ASD[HA]) on Air Force health and medical matters, and for providing guidance to Major Command (MAJCOM) Surgeons.[37]

Air Force Instruction 44-119, "Medical Quality Operations," the central Air Force policy implementing DoD 6025.13, establishes policy and delegates broad oversight responsibility for the Quality/Process Improvement, Patient Safety, Risk Management, Professional Staff Management (Credentialing/Privileging) and Adverse Actions programs in the AFMS to Air Force Medical Operations Agency, Clinical Quality Management Division. This instruction outlines the roles and responsibilities of Air Force MTFs for Continuous Process Improvement (CPI) as implemented within the facilities. This policy requires all active duty fixed hospitals and freestanding ambulatory clinics to maintain accreditation by nationally recognized civilian agencies.[38] AFI 44-119 requires that MTFs maintain ongoing self-inspection activities and procedures.

---

[36] Pursuant to 10 USC §§ 8031-8038, and as documented by paragraph 4.3 of AFMD 1, Headquarters Air Force, and this Headquarters Air Force (HAF) Mission Directive. Documented by: Air Force Surgeon General. Air Force Mission Directive 1, paragraph 4.3.

[37] Air Force Surgeon General. Air Force Mission Directive 1-48. November 2011.

[38] *The Joint Commission* (TJC) serves as the civilian accrediting agency for Air Force inpatient facilities. The Accreditation Association for Ambulatory Health Care (AAAHC) serves as the civilian accrediting agency for Air Force outpatient facilities.

AFMOA executes AFMS policies and strategies by engaging MAJCOMs and MTFs, whereas MTFs are responsible for executing AFMS policies, with oversight provided by their respective MAJCOM Surgeon and AFMOA. According to AFI 90-201, the Air Force Inspection System, Unit Effectiveness Inspections, and Wing Commander Self-Inspection Programs are regularly conducted to document mission readiness and compliance with Air Force policy. Additionally, accreditation and certification assessments by independent civilian agencies, as well as regular performance management forums conducted by AFMOA are used as means of monitoring MTF compliance with AFMS policies, accreditation standards, and performance against national performance benchmarks.

Defense Health Agency/National Capital Region Medical Directorate (NCR MD) Policy Guidance

The Joint Task Force Clinical Quality Manual (JTF-CQM) 6025.01 implements DoDI 6025.13 guidance on care quality. This manual sets procedures and responsibilities for the administration of the Clinical Quality Management Program by the NCR MD and describes the relationships between NCR MD and the Military Services for quality management. Revisions to the manual are managed collaboratively by the NCR MD Quality Management Department and Quality Working Group.

The Director, NCR MD is responsible for the quality of health care delivered to all beneficiaries in the NCR MD. The Director establishes CQMP policy and serves as the governing body for the health care facilities. The NCR MD Quality Management department provides corporate guidance, monitors quality and patient safety outcomes, and collaborates with MTFs to ensure effective administration of the quality programs. Such programs include risk management, risk avoidance, safety practices, incident monitoring/management, adverse privileging/practice actions, sentinel events, and malpractice claims. MTF Directors ensure that hospitals maintain comprehensive Clinical Quality Management and Patient Safety Programs and compliance with the accrediting agency standards and reporting to NCR MD.

Policy Guidance for Purchased Care

Clinical quality management guidance for purchased care is found in the TRICARE Operations Manual (TOM) Chapter 7 (Utilization and Quality Management) and 32 CFR 199.15. DHA establishes the TRICARE policies that are followed and implemented by the purchased care contractors. The three TRICARE regional contractors (North, South, and West Regions), the six designated providers, and the TRICARE overseas contractor must develop a yearly clinical CQMP. The plan provides the framework for the contractor to objectively define and measure the quality of care received by beneficiaries, and is followed by an annual report. Furthermore, this guidance requires that contractors monitor and report National Quality Forum (NQF) Serious Reportable Events (SREs) and the Agency for Healthcare Research and Quality (AHRQ) Patient Safety Indicators.

The CQMP plan must address several key elements, including the organization's structure and staffing and qualifications for quality management staff. It must fully address the quality review process, to include how grievances and potential quality issues are investigated and resolved. Also, it must describe how quality improvement and patient safety initiatives are selected and

monitored, and the measureable objectives it will use for internal monitoring and improvement of its clinical quality program.

Annual CQMP plans and reports are monitored and reviewed by the quality management staff from the TRICARE Regional or Area Offices and DHA to ensure compliance with contract requirements, and ensure high-quality and safe care is being provided to TRICARE beneficiaries in the purchased care network.

Review of Internal and External Studies on Quality of Care

The MHS Review Group identified 51 studies and reports on MHS care quality, which included studies designed and conducted by DHA and those conducted by independent organizations. Of the studies identified, 28 were found to be pertinent and within scope of this review. A discussion of findings and summaries of reports examined can be found in Appendix 4.2. Key findings from the review of these reports include:

1. The lack of clinical quality and outcome data on care rendered in the purchased care component has been identified as a significant gap. Reporting from civilian facilities and individual providers to the Government is voluntary. The current DHA/contracting reimbursement methodology does not provide the flexibility required to incorporate quality performance reporting into reimbursement rate negotiations for contractors.
2. New MHS governance provides a better forum for collaborative work among the components on quality efforts.
3. The MHS lacks a defined process for communicating relevant study findings and recommendations and for tracking programs and outcomes across the enterprise.
4. Gaps were identified in the MHS data system's ability to support efficient, bidirectional transmission of data between inpatient and outpatient electronic records.

▶ **Recommendation for Responding to Prior Reviews of MHS Quality**

   a. **DHA should integrate requirements for purchased care clinical quality data on TRICARE beneficiaries into the TRICARE Operations Manual and future TRICARE regional contracts.**

Gap Analysis

DoDI 6025.13, *Medical Quality Assurance (MQA) and Clinical Quality Management in the Military Health System (MHS)* and its supporting manual, DoDM 6025.13, are focused on credentialing, privileging, risk management, and patient safety but lack specificity regarding quality measurement and process improvement.

1. There are gaps in the enterprise process to validate that the Services and MTFs are compliant with the implementation of policies and directives disseminated from ASD(HA). An example of this gap is the inconsistent and incomplete implementation of HA Policy 11-003, Policy for Comprehensive Pain Management. The new MHS governance system can work effectively to standardize policy implementation across

DoD; the variation in Comprehensive Pain Management has been identified by the MOG, which has consolidated the working groups focused on pain management to implement a DoD-wide policy.

2. There is disparity in how the Services monitor and document policy compliance, with no clear guidance in DoD and Service-level policies. The differences among Services (other than accreditation and certification by civilian agencies) contribute to difficulty in DHA oversight of quality in the direct care component. The Army has established a Clinical Assurance Performance Directorate that reports to the SG to ensure standardization in all MTFs. Previously, the Command chain monitored policy compliance, and this new Directorate will serve as an enforcement agency for policy. The Navy utilizes trained TJC Fellows to survey each MTF in their area of responsibility in between the TJC triennial survey (and as needed) to assess compliance with standards. In the Air Force, MTF compliance with policies is measured by military inspections (Unit Effectiveness Inspections) and by regular Performance Management Forums with AFMOA. The new Air Force Inspection System, with revised Air Force Instructions and Self-Inspection Checklists will reduce variability and clarify policy guidance, put compliance oversight in the hands of commanders, and refocus the biennial Unit Effectiveness Inspections.

3. The third significant gap relates to lack of clear policy on required education and training to optimally prepare personnel at all levels in quality management. While each Service has developed policy and/or programs related to education and training in quality, this is not directed from HA or DHA.

▶ **Recommendations to Address Gaps in Training and Compliance with Policies**
   a. **ASD (HA) and DHA should develop policy guidance in support of DoDI and DoDM 6025.13 with specific direction on quality measurement, performance improvement, and requirements for education and training.**
   b. **ASD (HA) should develop policy guidance to manage and track compliance of the Services and DHA with applicable DoD policies and directives.**

Purchased Care Gap Analysis

In American medicine, primary responsibility for quality of care rests with providers, not insurance carriers or government programs that reimburse those providers. Nonetheless, policies and procedures governing the reimbursement programs should reinforce those provider responsibilities. The lack of clinical quality and outcome data on care rendered in the purchased care component is a significant gap. Reporting from civilian facilities and individual providers to the Government is voluntary. Current best business practice occurs when payers (health insurance companies) have the flexibility to negotiate reimbursement rates that include quality data reporting. The Centers for Medicare & Medicaid Services (CMS) (Advantage Programs) and Veterans Affairs (civilian sector contracts) have introduced changes in their reimbursement rates that include clinical quality data reporting.

Education and Training

All Service components and the purchased care sector conduct a wide variety of training on quality and performance improvement. The complete assessment of education and training efforts is located in Appendix 4.3.

Not unexpectedly, variation among the Services exists in the conduct and monitoring of training. Services vary in their visibility of training completion. The Services have invested significantly in Lean/Six Sigma performance improvement training to provide the necessary skills to drive performance improvement throughout the system. The MHS Review Group concluded the following regarding training related to care quality:

1. Although there is quality training occurring in the Services, there is no clearly prescribed DoD policy specific to quality training and education.
2. There is no clearly defined quality of care career development pathway.
3. There has been a significant investment in Lean/Six Sigma performance improvement training.

▶ **Recommendations Regarding Quality of Care Training**

   a. **The DHA Education and Training Directorate should conduct an in-depth review and needs assessment of quality training to adequately assess the efficacy of training.**
   b. **MHS governance should determine the requirements to guide the development and implementation of a quality expert career path.**

Data Analysis

The measures of quality care used for this analysis were selected to support alignment of the MHS with the goals and philosophies of the Institute of Medicine, the Institute for Healthcare Improvement, National Quality Forum (NQF), and the Agency for Healthcare Research and Quality (AHRQ). The criteria for selecting performance measures and respective data sources include:

- Health care quality measures were selected based on their acceptance and use by the national health care community, the domains of quality addressed (safety, timeliness, effectiveness, efficiency, equity, and patient-centered), and the availability of the defined data elements.
- Performance measures were required to have defined national benchmarks, whenever possible.
- Data sources were used if they provided quality of care information for either direct care, purchased care, or both.
- Data sources were selected to provide information on the satisfaction and perception of patients regarding MHS quality of care.

The measures of quality presented in this report include:

Accreditations and Certifications: Accreditation and certifications reflect whether MHS systems have met nationally recognized guidelines and requirements for quality, safety, and uniform processes.

Healthcare Effectiveness Data and Information Set (HEDIS®): The MHS compares its performance in selected measures against national HEDIS® benchmarks for this measure set, which is utilized by more than 90 percent of health plans in the United States.

Quality of Care in the Purchased Care Component Using Hospital Compare: Hospital Compare is a consumer-oriented website that contains information about the quality of care at more than 4,000 Medicare-certified hospitals in the United States. The MHS tracks several process-of-care measures common to the direct care and purchased care components.

ORYX National Hospital Quality Measures: ORYX is a set of measures used by TJC in its hospital accreditation process, in which all military hospitals participate.

Prevention Quality Indicators (PQI): The Prevention Quality Indicators (PQI) are measures of potentially avoidable hospitalizations for ambulatory care sensitive conditions; they are an indicator for the quality of ambulatory care provided.

Thirty-Day Readmissions: Hospital readmissions within 30 days may occur due to an unrelated diagnosis or a planned course of treatment, or may reflect incomplete care, or a complication of care during the initial admission.

National Perinatal Information Center (NPIC): The National Perinatal Information Center (NPIC) utilizes MHS direct care data to compare the quality of care provided to pregnant women and newborns against averages of metrics derived from data submitted by 86 participating hospitals. Because many perinatal metrics do not have national benchmarks, the MHS uses NPIC averages for comparison.

National Surgical Quality Improvement Program (NSQIP): NSQIP is a voluntarily reported, data-driven, case-mix adjusted, risk-adjusted, outcome-based program developed by the American College of Surgeons to measure and improve the quality of surgical care.

Inpatient Mortality Measures: The quality of inpatient care is measured using the AHRQ developed Inpatient Quality Indicator (IQI) measure set, which contains a number of condition-specific mortality measures. In addition, risk-adjusted mortality ratios were calculated for all inpatient MTFs based on a commonly accepted (Elixhauser) methodology.

Experience of Care: The experience of care measures use survey data to determine beneficiary satisfaction with MHS health care. AHRQ CAHPS and Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) comparable questions were used to allow comparison to civilian systems and benchmarks.

Accreditation and Certification

Accreditation and certification serve as a formal declaration that programs and personnel within the MHS have met standardized guidelines and requirements relative to quality, safety, and uniform quality management system processes. Further, they demonstrate the commitment of the MHS to providing the highest quality of care. For the purposes of this report, the Services provided accreditation and certification information for their MTFs in a number of categories. Categories included accreditation and certification information on health care services, such as primary care, laboratory and blood banks, radiology and nuclear medicine, medical and surgical subspecialties (oncology, hyperbaric medicine, and trauma care), and advanced medical and dental education.

MHS-Level Discussion

All MTFs that sought TJC accreditation obtained it. In 2013, of the civilian facilities that sought TJC accreditation in the United States overall, 7.3 percent of ambulatory programs, 5.1 percent of home care, and 4.8 percent of hospitals were not accredited. All standalone ambulatory health centers within the direct care component are accredited either by TJC or the Accreditation Association for Ambulatory Heath Care (AAAHC). In addition, direct care facilities participate in more than 7 laboratory and blood bank certification programs, more than 6 radiology and nuclear medicine certification programs, more than 11 subspecialty certification programs, and more than 20 advanced medical and dental education recognition programs.[39] All MTF-based laboratories are inspected by the College of American Pathologists (CAP) and 100 percent are accredited. Hospitals and laboratories in the purchased care component are contractually required to be inspected and accredited by a CMS-recognized accreditation body.

Service-Level Discussion

For the Patient Centered Medical Home (PCMH) Initiative, 76 percent of the Army facilities, 100 percent of the Navy facilities, 87 percent of the Air Force facilities, and both NCR MD facilities have received at least one National Committee for Quality Assurance (NCQA) or AAAHC recognition (data not shown). Only 10 percent of U.S. primary care practices, close to 7,000 in total, are recognized as PCMHs by NCQA. Accreditations and certifications by type and service are displayed in Appendix Table 4.4-1. Variations among the Services can be explained by differing requirements and policies. The services continue to work on obtaining national recognition to obtain PCMH practice. This continues to vary due to service specific timelines as goals for completion.

---

[39] Several facilities reported participating in certification programs but were not specific in the type of program; hence the use of the term "more than n programs."

Facility Type, Location, and Other Discussions

Results indicate that there are no substantial variations in accreditations and certifications by geographic location with OCONUS MTFs accredited by U.S. certification organizations.

Additional findings include:

1. One hundred percent of the MTFs are accredited. However, it is noted that aggregation and analysis of accreditation findings is not currently shared across the MHS. The Services currently have education and training with industry programs that allow officers to complete a fellowship with TJC. Post training utilization of these fellows varies by Service.

▶ **Recommendations Regarding Accreditation and Certification**

    a. **MHS governance should establish a mechanism to aggregate and communicate accreditation findings across the MHS**.

    b. **MHS governance should evaluate the utility of adding additional fellowship opportunities with TJC or other nationally recognized programs, and the Services should explore optimizing and standardizing Service fellow utilization by aligning training with follow-on assignment after fellowship completion.**

HEDIS® Measures of Performance

NCQA developed and maintains HEDIS®, a tool used by more than 90 percent of U.S. health plans to measure performance on important dimensions of care and service using 81 measures across 5 domains of care. HEDIS® allows consumers to compare an individual health plan's performance to other plans and to national benchmarks. HEDIS® measures are reported as the percentage of eligible patients receiving a service and then compared to the national NCQA benchmark percentiles. In this report, average national Health Maintenance Organization (HMO) performance data for 2012 are also provided for comparison purposes.[40] A comparison of HEDIS® results by MTF facility type (medical center compared to community hospital) was not performed.

The MHS compares its performance in selected measures against the national HEDIS® benchmarks (see Appendix Table 4.4-2).[41] DHA adheres to the specifications to collect and calculate performance for each measure, and is audited annually by a NCQA-certified HEDIS® auditor for compliance.

---

[40] National Committee for Quality Assurance. (2013). *Improving Quality and Patient Experience. The State of Health Care Quality.*

[41] Data obtained from the most recent year as published in: Annual Quality Compass, 2014. National Committee for Quality Assurance. Available at: http://store.ncqa.org/index.php/data-and-reports/quality-compass-2014.html. Accessed July 25, 2014.

The MHS, through the Clinical Measures Steering Panel, identifies which HEDIS® measures to review based on data availability[42] and their relevance to the health plan, the Services, and MTFs. The MHS has selected 18 HEDIS® measures to review in the direct care component, and 12 for review in the purchased care component.[43] If the MHS consistently performs above the 90th percentile on a given measure over a period of several years, routine data collection for that measure may be discontinued, and the measure replaced with a new one. Performance on this "retired" measure is examined periodically to ensure continued success.

MHS-Level Discussion: In comparing the performance of the MHS across the 18 selected HEDIS® measures with national benchmarks, only one measure—comprehensive diabetes care, Glycosylated Hemoglobin (HbA1c) <7 percent for a selected population—outperformed the NCQA 90th percentile benchmark, the stated MHS goal for all HEDIS measures. Five of the measures were between the 75th and 89th percentile of their NCQA benchmarks. Three measures were below the NCQA 25th percentile: cholesterol management for patients with cardiovascular conditions (LDL-C screening); comprehensive diabetes care (HbA1C screening); and comprehensive diabetes care (LDL cholesterol screening). While many MTFs fall below the 50th percentile for certain measures, they actually exceed the national average for performance. In addition, it is important to consider that in reviewing HEDIS® data, there may only be a few percentage points of performance that separate a facility from the next higher or lower quartile. Of note, between 2012 and 2013, the MHS demonstrated statistically significant improvements on 10 of the 18 measures, while there were statistically significant declines in performance on 6 HEDIS® measures (see Appendix Table 4.4-3).

Among the measures below the NCQA 50th percentile benchmark in 2013, several improved between 2012 and 2013: the management of antidepressant medication for the continuation phase; LDL-C control for patients with cardiovascular conditions; diabetic HbA1C screening; diabetic LDL screening; and well-child visits.

Service-Level Discussion: Navy MTFs led the MHS in the number of HEDIS® measures above the 75th percentile (12 of 18) with 72 percent of measures showing significant improvement from 2012 to 2013 (data not shown). Army MTFs closely followed with 10 of 18 above the 75th percentile, 9 of which showed significant improvement from 2012 to 2013. Among Air Force MTFs, 7 measures were above the 75th percentile, with only 27 percent of the measures improving statistically from 2012 to 2013. In the two National Capital Region MTFs, 8 measures were above the 75th percentile NCQA benchmarks (year-over-year changes in performance were not calculated because only 2013 data were available) (see Appendix Table 4.4-4). Given the distribution of the results among the Services, there may be Service-specific processes and practices that account for some of the differences in the HEDIS® rates.

---

[42] All data are currently obtained administratively through a hybrid methodology that involves chart abstraction.

[43] The six exclusions for purchased care are due to the inability to obtain laboratory values from claims data required to calculate these measures.

Location: Notable differences were found on HEDIS® measure performance among MTFs located in the continental United States (CONUS) and those outside (OCONUS). Among OCONUS MTFs, 9 of the 18 measures were above NCQA's 75th percentile, in contrast to 6 among CONUS facilities (see Appendix Table 4.4-5). It should be pointed out that overseas facilities only enroll active duty Service members and their families, which may help explain why overall performance appears to be better than in CONUS facilities. In addition, most overseas facilities are small, there is less opportunity to use other health insurance with civilian providers to obtain preventive services, and providers may have greater opportunities to ensure their patients receive preventive services in a timely manner (Appendix Table 4.4-7 and Appendix Table 4.4-8).

Purchased Care*:* The purchased care component only monitors 12 HEDIS® measures due to the unavailability of required clinical data elements. Appendix Table 4.4-6 shows purchased care HEDIS® measures as compared to NCQA national benchmarks and the HMO national average for 2012, with 7 of the 12 measures monitored falling below the NCQA 25th percentile, as well as the 2013 national HMO average. Four of the 12 monitored measures were above the 50th, but below the 75th NCQA percentile. There are mitigating factors that can account for some of the considerable lag between HEDIS® measure performance in the purchased care component compared to direct care (see Appendix 4.4: HEDIS® Methodological Considerations).

Comparison to External Health Systems: HEDIS® data for the MHS were compared to data from three external health plans for the same period (2013). In the MHS, data are collected from both direct and purchased care components for 12 measures; for 6 additional measures, data are collected from the direct care component only (chlamydia screening, cholesterol management, diabetes <=9, <7, <8, diabetes LDL Control) (Table 4.2). There are inaccuracies in the data collected from the purchased care component due in part to the inability to capture clinical data that may be lacking in the MHS Population Health Portal, and the inability to accurately exclude beneficiaries that may have other health insurance from rate calculations. Data were not available from Health System 2 for 7 measures (asthma medication and the six components of comprehensive diabetes care). Of the available data, the MHS performed above the benchmark percentile in 8 instances, at the same benchmark percentile in 11 instances, and below the benchmark percentile in 28 instances.

Table 4.2 Comparison of HEDIS® 2013 Data for MHS Against External Comparison Organizations (Health Systems 1, 2, and 3)

HEDIS® Measures	MHS 2013	HS 1 2013	HS 2 2013	HS 3 2013	MHS 2013 Percentile	HS 1 2013 Percentile	HS 2 2013 Percentile	HS 3 2013 Percentile
Antidepressant Medication Management: Acute Phase	68.51	72.73%	76.16	63.59	50th	75th	90TH	25th
Antidepressant Medication Management: Continuation Phase	46.08	54.20%	67.67	47.55	25th	75th	90TH	25th
Use of Appropriate Medications for People With Asthma: Asthma Medication Rate	94.71	94.01%	NA	94.33	75th	75th	NA	75th
Breast Cancer Screening	68.88	79.05%	79.39	70.01	25th	90th	90th	25th
Cervical Cancer Screening	76.87	86.75%	82.15	76.83	25th	90th	75th	25th
Chlamydia Screening in Women: Total Rate	59.72	71.14%	47.73	28.86	75th	90th	50th	< 25th
Cholesterol Management for Patients with Cardiovascular Conditions: LDL Control (<100 mg/dL)	59.57	76.72%	73.25	68.19	25th	90th	90th	75th
Cholesterol Management for Patients with Cardiovascular Conditions: LDL Cholesterol Screening	77.56	95.64%	93.42	86.52	< 25th	90th	75th	25th
Colorectal Cancer Screening	69.82	75.77%	75.59	70.98	75th	90th	90th	75th
Comprehensive Diabetes Care: Poor Glycemic Control (HbA1c >9 percent)—Lower rates signify better performance	78.2	78.86%	NA	77.55	50th	75th	NA	50th
Comprehensive Diabetes Care: HbA1c <7 percent for a Selected Population	53.53	41.05%	NA	45.41	90th	25th	NA	50th
Comprehensive Diabetes Care: Good Glycemic Control (HbA1c <8 percent)	70.38	66.59%	NA	64.78	75th	50th	NA	50th
Comprehensive Diabetes Care: HbA1c Screening	84.89	94.13%	NA	92.7	< 25th	75th	NA	50th
Comprehensive Diabetes Care: LDL Cholesterol Control (<100 mg/dL)	55.8	63.61%	NA	55.66	75th	90th	NA	75th
Comprehensive Diabetes Care: LDL Cholesterol Screening	80.69	92.01%	NA	81.75	< 25th	90th	NA	< 25th
Follow-Up After Hospitalization for Mental Illness: Within 30 Days Post-Discharge	74.84	84.44%	85.87	71.55	25th	75th	75th	25th
Follow-Up After Hospitalization for Mental Illness: Within 7 Days Post-Discharge	58.46	75.26%	75	48.75	25th	75th	75th	< 25th
Well-Child Visits (Ages 0–15 Months): Six or More Well-Child Visits	79.15	84.45%	96.98	79.57	25th	50th	90TH	25th

■ Indicates 90th percentile　■ Indicates 75th percentile　■ Indicates 50th percentile　■ Indicates 25th percentile　■ Indicates lower than 25th percentile

2014 MHS Review Group
Source: HEDIS - MHS Population Health Portal, June 2014

Findings related to MHS performance on HEDIS® measures include:

1. Purchased care data show that 7 of the 12 HEDIS® measures monitored fall below the NCQA 25th percentile benchmark, and 4 were in the 50th percentile. The measures identified for improvement include breast and cervical cancer screening, cholesterol screening, comprehensive diabetes care (Hb A1c screening and LDL-cholesterol screening), and mental health follow up.

2. The MHS collects data on 18 HEDIS® measures for direct care and 12 measures for purchased care. NCQA has 81 HEDIS® measures. Direct care outperformed the NCQA 90th percentile benchmark for 1 HEDIS® measure. Five of the direct care HEDIS® measures were between the 75th and 89th percentile of the NCQA benchmarks. Two measures are at the 50th percentile while 7 are between the 25th and 50th percentile. Three measures were below the NCQA 25th percentile. When comparing OCONUS to CONUS MTFs in 2013, overseas facilities performed better on nine measures and similarly on five measures.

3. Between 2012 and 2013, the MHS demonstrated statistically significant improvements on 10 of the 18 measures, while there were statistically significant declines in performance on 6 HEDIS® measures.

▶ **Recommendations Related to MHS Performance on HEDIS® Measures**

a. **DHA Health Plans should give purchased care contractors the authority to use supplemental databases to improve the capture of clinical information for purchased care enrollees.**

b. **DHA Health plans should evaluate alternative methods of incentivizing contractors and/or providers to improve the provision of clinical preventive services and HEDIS® performance. This may require statutory or regulatory changes, since new, innovative payment mechanisms may have to be developed to encourage compliance.**

c. **MHS governance should assess the value of expanding the number of HEDIS® measures monitored to evaluate care provided to enrolled beneficiaries.**

d. **MHS governance should establish policy to guide processes for verification of clinical data and capture in AHLTA (DoD's outpatient electronic health record) regarding preventive services that are obtained outside of the direct care component.**

e. **DHA should develop plans to improve Other Health Insurance documentation in DEERS for all beneficiaries to ensure those with Other Health Insurance are not included in HEDIS® calculations.**

f. **MHS governance should develop a strategy for MTFs to maximize the use of "action lists" generated by the MHS Population Health Portal to ensure beneficiaries receive clinical preventive services in a timely manner.**

Quality of Care in the Purchased Care Component

TRICARE contractors provide quality of care oversight for services provided to beneficiaries in the TRICARE network. This activity includes credentialing of network providers, validating accreditation status of participating facilities, and addressing quality of care concerns through established procedures. Hospital accreditation is a requirement (32 C.F.R.§ 199.6) to become a TRICARE-authorized provider and is also required for network credentialing. Due to disparate information systems used by network providers, accurate measurement of the quality of care provided in the purchased care component is not possible. However, information provided by network facilities on websites such as Hospital Compare serves as an excellent surrogate for the quality of care received by TRICARE beneficiaries at those facilities.

Hospital Compare is a consumer-oriented website that contains information about the quality of care at more than 4,000 Medicare-certified hospitals in the United States. Established by CMS and the Hospital Quality Alliance, the website supports the improvement of hospitals' quality of care and assists consumers in making informed decisions about their health care.[44] Hospital Compare contains information regarding the timeliness and effectiveness of care, as well as information on readmissions, complications, and deaths. The vast majority of TRICARE network hospitals participate in the Hospital Compare program.

Each of the TRICARE Regional Offices uses Hospital Compare data in its performance of quality oversight of purchased care. This information provides MTFs with baseline knowledge of the quality of care provided by network hospitals in its area of service. The MHS tracks several care measures common to the direct care and purchased care components that are highlighted on the Hospital Compare website. The measures monitored for both direct and purchased care are displayed in Table 4.3.

Table 4.3 National Hospital Quality Measures Monitored for Both Direct and Purchased Care

| Measures |
| --- |
| Acute Myocardial Infarction (AMI) |
| Heart Failure (HF) |
| Pneumonia (PN) |
| Surgical Care Improvement Project (SCIP) |
| Children's Asthma Care (CAC) |

2014 MHS Review Group
Source: DoD Joint Commission and Hospital Compare Database, June 2014

Hospitals reporting on Hospital Compare do not differentiate TRICARE beneficiaries from other patients. MHS National Hospital Quality Measures - Hospital Compare are reviewed annually by the Services and DHA staff at the Quarterly Clinical Measures Steering Panel meeting.

MHS-Level Discussion: A review of the Hospital Compare data reveals that TRICARE network hospitals are performing at or above the national benchmarks on a composite measure of Hospital Compare performance (see Figure 4.1 and Appendix Figures 4.4-1)

---

[44] Medicare Hospital Compare. Available at: www.hospitalcompare.hhs.gov. Accessed July 25, 2014.

Figure 4.1 Purchased Care Compliance Rate, FY09 – FY12[45]
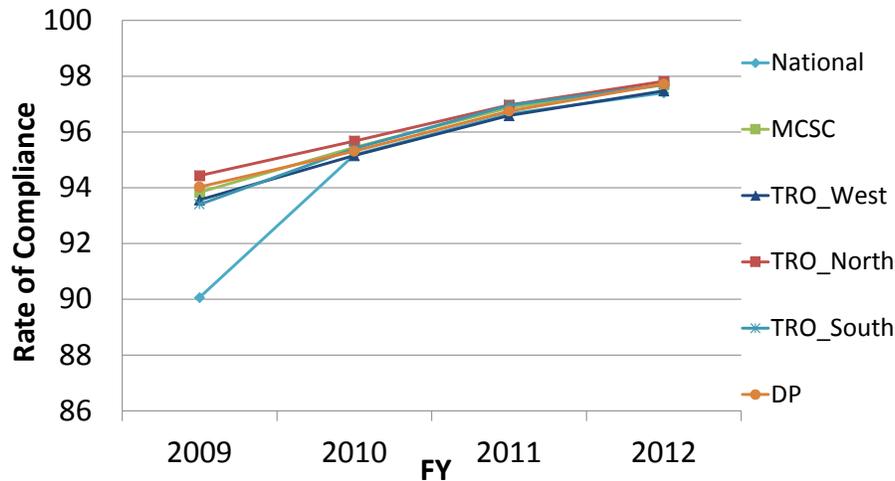
2014 MHS Review Group
Source: MHS MART (M2) Comprehensive Ambulatory/Professional Encounter Record (CAPER), July 2014

▶ **Recommendation Regarding Quality Data in the Civilian Network**

    a. **DHA should integrate requirements for purchased care clinical quality data on TRICARE beneficiaries into the TRICARE Operations Manual and future TRICARE regional contracts.**

ORYX® – National Hospital Quality Measures

The Joint Commission (TJC) is the accrediting agency for military hospitals; Table 4.4 shows the core measures of hospital quality used to meet TJC accreditation requirements.

---

[45] Note: DP indicates Designated Providers/US Family Health Plan.

Table 4.4 TJC Core Measure Sets Monitored for both Direct and Purchased Care

Acute Myocardial Infarction (AMI)	Hospital Outpatient (OP)
Heart Failure (HF)	Stroke (STK)
Pneumonia (PN)	Venous Thromboembolism (VTE)
Surgical Care Improvement Project (SCIP)	Immunization (IMM)*
Children's Asthma Care (CAC)	Substance Use (SUB)*
Perinatal Care (PC)	Tobacco Treatment (TOB)*
Hospital Based Inpatient Psychiatric Services (HBIPS)	Emergency Department (ED)*[46]

2014 MHS Review Group

Prior to January 2014, TJC required accredited hospitals to submit data on four core measure sets each quarter. Currently, TJC requires data on six measures to be submitted.[47] All accredited hospitals with one or more patients in the measure population must submit data on acute myocardial infarction (AMI), heart failure (HF), perinatal care (PC), and Surgical Care Improvement Project (SCIP) measures. Accredited hospitals with 1,100 or more annual births must also submit PC data. Facilities select one or two additional measure sets to complete the six core measure set requirement. A number of smaller military hospitals may be required to select as many as four additional measures sets to meet the requirement.

CMS National Hospital Quality measures (with similar specifications to TJC measures) are used to evaluate the process of care in TRICARE network hospitals (purchased care). DHA selected the measures of AMI, PN, SCIP, and children's asthma care (CAC) for Service review to align with data available on CMS Hospital Compare. Two additional measures were also selected for abstraction across the Services: PC was selected due to the high volume of births in military hospitals, and hospital-based inpatient psychiatric services (HBIPS) was selected because these patients represent high-risk populations.

Table 4.5 shows the composite results for 13 ORYX® measures, with direct care having a lower rate for 9 of the measures but outperforming in PC and venous thromboembolism (VTE) measures.

---

[46] Asterisk indicates measures introduced in 2012, therefore only two years of data were available for analysis.

[47] Core Measure Sets. The Joint Commission. http://www.jointcommission.org/core_measure_sets.aspx. Accessed: July 25, 2014.

Table 4.5 Composite Measures for 13 ORYX Measures

Composite Measure Set	National	Purchased Care	Direct Care
Heart attack care (AMI)	98.97%	95.30%	97.03%
Children's asthma care (CAC)	95.97%	98.80%	87.37%
Heart failure (HF)	97.49%	96.70%	94.79%
Inpatient psychiatric services (HBIPS)	91.56%	ND	87.08%
Hospital outpatient department (OP)	97.84%	ND	85.41%
Perinatal care (PC)	63.58%	ND	74.30%
Pneumonia care (PN)	97.54%	96.90%	94.30%
Surgical care (SCIP)	98.64%	98.00%	97.50%
Stroke care (STK)	96.75%	ND	96.04%
Venous thromboembolism care (VTE)	92.28%	ND	94.77%
Immunization (IMM)	91.17%	ND	74.01%
Substance use (SUB)	60.13%	ND	43.26%
Tobacco treatment (TOB)	88.17%	ND	85.52%

2014 MHS Review Group; ND indicates "No Data"
Source: DoD Joint Commission Core Measure Database, June 2014

A deeper analysis of the results shows the direct care component was significantly below the national average for the following measures over most of the 2010 to 2013 period, which contributes to low composite measures: AMI-8a (primary percutaneous coronary intervention), CAC3 (home management plan of care given to patient/caregiver), HF1 (discharge instructions), PN3b (blood cultures performed in the ED prior to initial antibiotic in hospital), SCIP2a (prophylactic antibiotic selection for surgical patients), SCIP Card-2 (surgery patients on beta-blocker therapy prior to arrival who received a beta-blocker during the perioperative period), SCIP VTE-2 (surgery patients who received appropriate venous thromboembolism prophylaxis within 24 hours prior to surgery to 24 hours after surgery), IMM 1a (pneumococcal immunization rate), and IMM 2 (influenza immunization) (see Appendix Figures 4.4-2).

Purchased care rates are for FY 2012 and include all patients serviced at the network civilian hospitals, not just patients enrolled to TRICARE.

Index scores based on TJC calculations for control limits are used to evaluate whether an MTF's process of care is stable (in statistical control) because only common cause variation exists or an MTF's process of care is unstable (out of statistical control) because special cause variation exists (see Appendix Table 4.4-9a and Appendix Table 4.4-9b for additional information).

Direct Care Performance: As a system, the direct care component is excelling in 16 measures, showing improvement or meeting target levels on 26 other individual measures, and requiring improvement on 18 measures. (See Appendix Table 4.4-9c, which presents the direct care scores for individual measures that made up each set of core measures over the period, 2010 to 2013.

For example, the direct care component obtained perfect, or significantly better, scores for all but one of the stroke measures.)

The most recent year of performance shows that 23 of the 55 hospitals included in this analysis (42 percent) are meeting or exceeding TJC requirements on all composite measures. (See Appendix Table 4.4-10 for description of measures). Eight of the 55 hospitals (15 percent) need improvement on one composite measure. The remaining 24 of 55 hospitals (43 percent) need improvement on two or more composite measures (Appendix Table 4.4-11).

Service Level, Facility Type, Location, and Other Discussions: There are 55 direct care facilities included in this analysis. The breakdown by Service, facility type, and geographic location is as follows:

- 22 Army, 18 Navy, 13 Air Force, 2 DHA
- 15 Medical Centers, 40 Hospitals
- 41 CONUS, 14 OCONUS

At a minimum, facilities must maintain a composite rate of 85 percent on accountability measures to meet TJC compliance. All facilities, (100 percent) meet this requirement. Facilities are considered *Top Performers* when they maintain a composite rate of 95 percent (see Appendix Table 4.4-12).

Comparison to External Health Systems: When direct care rates were compared to HS1, HS2, and HS3 rates for AMI, HF, PN and SCIP, the direct care component of the MHS was found to have the lowest rates on 17 of 20 measures. In most instances, direct care rates were within five percentage points of the other health organizations. Measures showing the largest differences were AMI 7a (50 percentage points below), AMI 8a (36 to 43 percentage points below), HF 1 (7 to 10 percentage points below), PN 6a (12 to 22 percentage points below), and SCIP Card 2 (8 to 10 percentage points below). HS1 is clearly a top performer, consistently maintaining a rate of 100 percent across several measures. The direct care component is outperforming HS2 and HS3 on PC and VTE measures (see Appendix Table 4.4-13).

In summary:

- During the entire reporting period, all MTFs achieved the mandatory composite performance rate of at least 85 percent on ORYX accountability measures. Two MTFs were TJC Top Performers in 2010; four in 2011 and four in 2012. Most of these were in the Core Measure areas of SCIP and VTE. The MHS is consistently falling significantly below the national average on nine measures.

▶ **Recommendations Regarding MHS Performance on National Hospital Quality Measures**

   a. **DHA Health Information Technology should prioritize electronic health record upgrades by aligning needed data elements into Essentris (the inpatient electronic**

health record). All inpatient MTFs should have the capability to remotely access health records to facilitate expeditious and timely data extraction for clinical measure calculation.

b. **MHS governance should establish goals and processes for increasing the number of MTFs achieving The Joint Commission Top Performer status annually.**

Prevention Quality Indicators (PQI)

AHRQ develops and maintains PQIs, which are measures of potentially avoidable hospitalizations for ambulatory care sensitive conditions. These are conditions for which good outpatient care can potentially prevent the need for hospitalization or for which early intervention can prevent complications or more severe disease. The PQIs are population-based measures that also account for important hospitalization-related factors. Even though these indicators are based on hospital inpatient data, they provide insight into the quality of outpatient health care services. PQIs include the indicator measures presented in Table 4.6.

Table 4.6 PQI Indicator Measures

PQI Measures
PQI 01 Diabetes Short-Term Complications Admission Rate
PQI 02 Perforated Appendix Admission Rate
PQI 03 Diabetes Long-Term Complications Admissions Rate
PQI 05 COPD or Asthma in Older Adults Admissions Rate
PQI 07 Hypertension Admission Rate
PQI 08 Congestive Heart Failure Admission Rate
PQI 09 Low Birth Weight
PQI 10 Dehydration Admission Rate
PQI 11 Bacterial Pneumonia Admission Rate
PQI 12 Urinary Infections Admission Rate
PQI 13 Angina without Procedure Admissions Rate
PQI 14 Uncontrolled Diabetes Admissions Rate
PQI 15 Asthma in Younger Adult Admission Rate
PQI 16 Lower Extremity Amputations (AMP) Among Patients with Diabetes Rate
PQI 90 Overall PQI Composite

2014 MHS Review Group
Source: Military Health System Mart (M2), July 2014

MHS and Service-Level Discussion: The PQIs are a relatively new set of measures in the direct care component. The Services have had minimal exposure to these measures and have not integrated them into ongoing quality programs. In addition, the MHS lacks a policy that governs the use of the PQI indicators. While PQI data have not been reviewed by the Services, DHA has collected and reviewed these data and preliminary conclusions have been drawn.

A review of MTF performance on the PQI measures from 2010 to 2013 demonstrates overall good performance with 89 percent of direct care PQI measures meeting or exceeding the national AHRQ benchmarks. Service-level compliance rates for specific measures are outlined in Table 4.7. (Note: Data not available for PQI 09 - Low Birth Weight.)

At the Service level for the same time period, NCR MD and Navy demonstrated 90 to 92 percent of their measures better than the AHRQ benchmarks, and the Army and Air Force achieved 87 to 89 percent of their measures better than the AHRQ benchmarks. The only measure with significantly low performance across all services was PQI 02-Perforated Appendix Admission Rate.

Table 4.7 PQI Compliance Rate by Service (2010 – 2013)

PQI Indicator	Air Force	Army	Navy	NCR
PQI 01 - Diabetes Short-Term Complications Admission Rate	92.57	87.37	91.72	91.53
PQI 02 - Perforated Appendix Admission Rate	63.86	65.61	67.72	64.10
PQI 03 - Diabetes Long-Term Complications Admission Rate	94.75	92.49	95.89	100.00
PQI 05 - COPD or Asthma in Older Adults Admission Rate	99.31	98.14	99.00	100.00
PQI 07 - Hypertension Admission Rate	77.01	78.99	87.49	74.58
PQI 08 - Congestive Heart Failure Admission Rate	95.34	94.15	95.18	100.00
PQI 10 - Dehydration Admission Rate	73.44	73.34	84.19	77.97
PQI 11 - Bacterial Pneumonia Admission rate	86.52	79.92	87.08	100.00
PQI 12 - Urinary Infections Admission Rate	81.96	77.19	85.72	86.44
PQI 13 - Angina without Procedure Admission Rate	84.34	79.45	90.37	62.71
PQI 14 - Uncontrolled Diabetes Admission Rate	93.95	93.28	96.83	93.22
PQI 15 - Asthma in Younger Adult Admission Rate	99.01	96.41	98.53	100.00
PQI 16 - Lower Extremity AMP Among Patients with Diabetes Rate	99.11	98.74	99.12	100.00
PQI 90 - Overall PQI Composite	97.22	89.23	93.60	100.00
Color legend	>90	80-89	70-79	<70

2014 MHS Review Group
Source: Military Health System Mart (M2), July 2014

Review of available data demonstrated no meaningful difference overall between CONUS and OCONUS PQI values for any of the Services.

▶ **Recommendation Regarding MHS Performance Against PQI Measures**

    a. **MHS governance should implement provider level PQI education followed by an evaluation of MTF utilization of AHRQ PQI measures and implementation of a monitoring program requiring improvement plans as indicated.**

Thirty-Day Readmissions

Hospital readmissions within 30 days may occur due to an unrelated diagnosis or a planned course of treatment. An increased focus on readmissions has occurred across the health care industry due to the perception that some are the result of poor care or a lack of coordinated care and thus may be avoidable. A MTF initiative to study and improve 30-day readmissions is an example of successful collaboration within the DoD and with external partners through the framework of Partnership for Patients (PfP).

The direct care component established a plan to implement readmissions prevention strategies in 2011. Given the lack of a nationally recognized standard methodology in the measurement of readmission, the Air Force Health Informatics Division developed a research-based methodology to assess MTF readmission rates. The methodology used observed rates (without risk-adjustment), and followed several prominent research studies, which excluded cancer patients, obstetric and perinatal patients, rehabilitation patients, as well as patient transfers.

Expanding on the efforts from PfP, DHA recently initiated a registry identifying inpatients at high risk for readmission. Within 24 hours of admission, MTF staff can view the names of patients in high readmission risk categories in the Population Health Portal. Post-discharge follow-up appointment tracking is included on the site as well as data on the facilities' top readmission diagnoses and rates.

MHS-Level Discussion: MTFs performed well over the past four years, achieving a 10-percent reduction in rate of readmissions overall (from 9.8 to 8.8 percent). However, continued improvement is required to meet the PfP goal of a 20-percent reduction in readmissions. There are no national benchmarks available with this research-based methodology; however, standardized readmission measures have since been established and are now available. DHA is transitioning to the NCQA HEDIS® all-cause readmissions measure.

Service-Level Discussion: From 2010 to 2013 results indicate that each Service showed improvement in reducing readmissions. The Army and Air Force had the greatest reduction in readmissions, but also had the highest readmission rates in 2010. The Navy improved slightly, having an initial overall readmission rate of 8.45 percent, the lowest among the Services. Though the NCR MD inpatient facilities were not completely realigned until 2012, their readmissions rate decreased by 6 percent over the same period (Table 4.8).

Table 4.8 Readmission Rates According to Services, 2010 – 2013

Branch	2010	2011	2012	2013	Percent Change (2010 to 2013)
AIR FORCE	10.77	10.22	9.30	9.40	- 12.73
ARMY	10.04	9.44	8.54	8.74	- 12.96
NAVY	8.45	8.61	8.25	8.37	- 0.92
NCR	10.56	11.81	9.58	9.85	- 6.73

2014 MHS Review Group
Source: MHS Population Health Portal, June 2014

Facility Type, Location, and Other Discussions: Both military medical centers (MEDCEN) and smaller hospitals achieved reduced readmissions from 2010 to 2013 (Table 4.9). The variance in readmission rates is not directly attributed to size as MEDCENs and hospitals are found on both ends of the spectrum (better than expected and worse than expected). (See Appendix Figure 4.4-3 for facility-specific rates).

Table 4.9 Readmission Rate According to Facility Type, 2010 – 2013

Facility Type	2010	2011	2012	2013	Percent Difference	Percent Change
MEDCEN	10.93	10.56	9.70	9.83	-1.10	-10.10
HOSPITAL	7.48	7.08	6.11	6.42	-1.06	-14.17

2014 MHS Review Group
Source: MHS Population Health Portal, June 2014

Location: Readmission rates for OCONUS facilities were similar to the overall rate of smaller hospitals, since the majority of overseas facilities are classified as small hospitals.

Comparison to External Health Systems: Hospital Compare data indicate the U.S. national unplanned readmission rate is 16 percent. Data were provided by two health systems for comparison. The readmissions methodology used by both was all cause 30-day readmission rate. As the methodologies used to calculate the data differ for the health systems, Hospital Compare, and the MTFs, the readmission rates are not comparable. However, reviewing the percent change in the readmission rates indicates the MTFs are doing well in reducing readmission rates (Table 4.10).

Table 4.10 Readmission Rate Comparison to External Health Systems, 2010 – 2013

Health Plan	2010	2011	2012	2013	Percent Change
MHS (Unadjusted)	9.80	9.40	8.60	8.80	-10.20
HS2 (Average)	10.54	10.85	11.18	11.06	1.04
HS3 (Non-Medicare)	6.73	6.33	6.31	6.22	-7.60
HS3 (Medicare)	11.52	11.91	11.80	11.61	1.00

2014 MHS Review Group
Source: MHS Population Health Portal, June 2014

In summary, all Services demonstrated reduced 30-day all-cause readmission rates as part of a coordinated, collaborative effort through the PfP initiative. However, the goal of a 20-percent reduction was not met.

▶ **Recommendations Regarding Readmission Rates**

    a. **MHS governance should establish an implementation plan for the MHS Population Health Portal readmissions site to ensure maximum utilization so as to reduce avoidable readmissions.**

  b. **The DHA Healthcare Operations Directorate should complete transition to the HEDIS® All-Cause Readmission standardized measure, which is risk-adjusted and has national benchmarks.**

National Perinatal Information Center (2010-2013)

Within the MHS, 52 MTFs provide inpatient obstetrical care and deliver approximately 50,000 infants annually. The purchased care obstetrical facilities deliver an additional 50,000 infants; however, this section describes measures related to direct care only.

The National Perinatal Information Center (NPIC) provides the MHS with quarterly direct care data, presented as comparisons to averages of civilian hospitals participating as members in the NPIC/Quality Analytic System proprietary Perinatal Center Data Base (PCDB). NPIC averages are based on 86 civilian facilities. Data points are provided for 10 descriptive measures and 10 comparative measures. The comparative measures have a comparable NPIC average and provide a reasonable and accepted assessment of quality of obstetric care (Table 4.11).

Table 4.11 National Perinatal Information Center – Executive Summary Measures

Descriptive Measures	Comparative Measures
Maternal	**Maternal**
1) Total number of deliveries 2) Percent of induction of labor 3) Percent of Cesarean Section 4) Percent of operative deliveries – broken down to percent of forceps and vacuum 5) Maternal readmission to other than delivery site	1) Percent of inductions less than 37 weeks of pregnancy with medical indications 2) Percent of Cesarean Section less than 37 weeks of pregnancy with medical indications 3) Patient safety indicator 18 (OB trauma with instruments) 4) Patient safety indicator 19 (OB trauma without instruments) 5) Vaginal delivery with shoulder dystocia 6) Postpartum hemorrhage 7) Maternal readmission to delivery site
Neonatal	**Neonatal**
1) Total number of neonate 2) Percent of neonates born in hospital (inborn) 3) Percent inborn less than 1500 grams 4) Percent of neonates with non-routine bed days 5) Inborn readmission to any facility	1) Inborn readmission to birth facility 2) Patient safety indicator 17 (injury to neonate) 3) Inborn mortality greater than or equal to 500 grams

2014 MHS Review Group
Source: National Perinatal Information Center, July 2014

MHS-Level Discussion

Descriptive Measures: During the past four years the number of deliveries in the direct care component has remained consistent at 50,000 annual deliveries. Army (21 facilities) delivers 52 percent of infants, Navy (17 facilities) delivers 31 percent, Air Force (12 facilities) delivers 12 percent, and the NCR MD (2 facilities) delivers 5 percent of infants (Appendix Tables 4.4-14a and Appendix Table 4.4-14b). For the past four years, the percent of Cesarean section (C-

section) deliveries in the MTFs (across all Services) has remained lower than the NPIC average (26 percent in the MTFs in 2013 as compared to 35 percent for NPIC average) and the rate of obstetrical forceps deliveries in the MTFs has been higher than the NPIC average for the past four years (Appendix Table 4.4-14c). The MHS average of forceps deliveries has been somewhat stable over the past four years (1.5 percent, 1.8 percent, 1.5 percent, and 1.5 percent) while the NPIC average has decreased each year over the past four years from a high of 1.1 percent in 2010 to a low of 0.9 percent in 2013.

While there is no optimal benchmark for operative vaginal delivery rates, the finding that MTF providers perform a higher number of forceps vaginal deliveries is in accord with the American Congress of Obstetricians and Gynecologists (ACOG) position that supports the use of forceps and vacuum deliveries when safe and indicated to help reduce rates of C-section deliveries.[48]

Comparative Measures

Percent of Inductions and C-section Deliveries Prior to 37 Weeks Gestation with a Medical Indication: Delivery of infants prior to 37 weeks of pregnancy is considered preterm delivery. The direct care component outperformed the NPIC average for each of the past four years in the appropriate delivery of preterm infants (Appendix Figures 4.4-4a and 4.4b). High rates in these two measures (over the NPIC averages) indicate that in the vast majority of cases, the direct care component performs induction of labor or C-sections in preterm mothers only when medically indicated.

Patient Safety Indicators (PSIs) 18 and 19: AHRQ defines PSIs to track potential harm events. PSI 18 and 19 are measures of injury to the mother during vaginal delivery. The direct care rate for PSI 18 (injury during delivery with instruments) has been lower than the NPIC average from 2010 to 2013, with the exception of 2012, when it was higher (Appendix Figure 4.4-5). The direct care rate for PSI 19 (injury during deliveries without instruments) was lower than the NPIC average each year from 2010 to 2013 (Appendix Figure 4.4-6). The PfP initiative to reduce harm addressed the need to decrease harm events for PSI 18 and 19, including SAFER PASSAGES, a mnemonic tool developed by the Air Force to assist delivering providers. A 22-percent reduction in the rate of PSI 18 and an 8 percent reduction in PSI 19 were observed during the implementation of this initiative (2012 to 2013) from the 2010 baseline.

Shoulder Dystocia: Shoulder dystocia is neither predictable nor preventable and risk factors (e.g., obesity and gestational diabetes) are increasing in the population as a whole. The direct care and NPIC rates of shoulder dystocia have each increased 0.25 percent from 2010 to 2013 and the direct care rate has remained above the NPIC average since 2010 (Figure 4.2).

---

[48]Safety Prevention of Primary Cesarean Delivery. American College of Obstetrics and Gynecology. Available at: http://www.acog.org/Resources-And-Publications/Obstetric-Care-Consensus-Series/Safe-Prevention-of-the-Primary-Cesarean-Delivery. Accessed: July 25, 2014.

Figure 4.2 Annual Rate of Vaginal Deliveries Coded with Shoulder Dystocia, CY10 – CY13
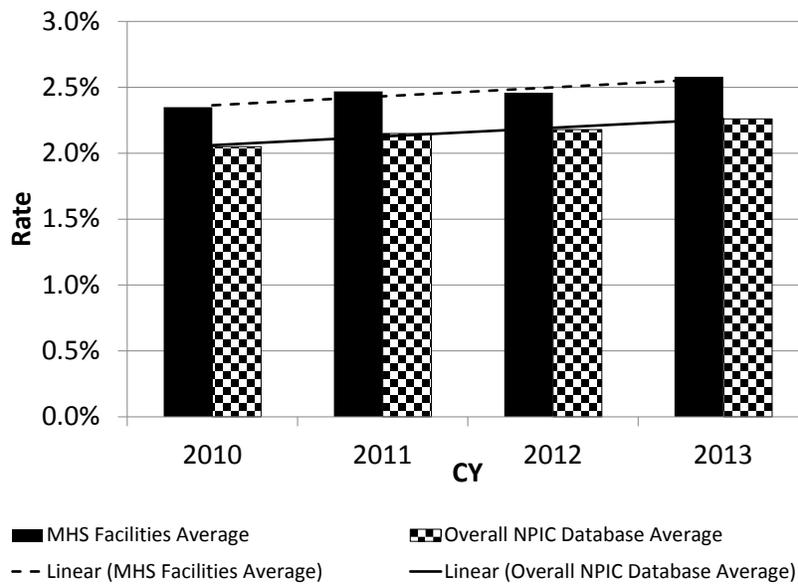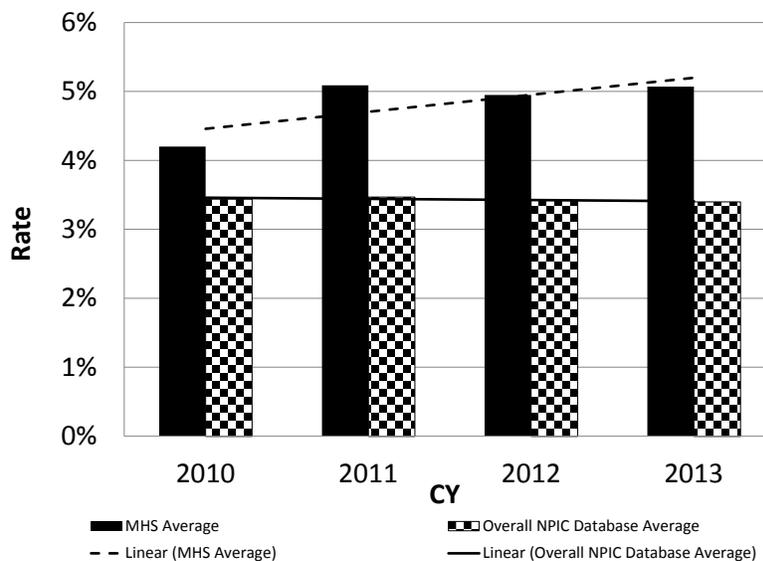

2014 MHS Review Group
Source: National Perinatal Information Center/Quality Analytic Services (NPIC/QAS), July 2014.

Postpartum Hemorrhage (PPH): The direct care component averages of PPH have increased and have remained significantly higher over the past four years as compared to the NPIC average, which has remained flat since 2010 (Figure 4.3).

Figure 4.3 Annual Postpartum Hemorrhage Rate, CY10 – CY13

2014 MHS Review Group
Source: National Perinatal Information Center/Quality Analytic Services (NPIC/QAS), July 2014.

Review of the direct care perinatal program revealed that existing education and training capabilities that address shoulder dystocia and PPH have been implemented but have not yielded the desired level of improvement. The Mobile Obstetric Emergencies Simulator (MOES) is a comprehensive in-situ obstetric emergency simulation platform. The Association of Women's Health, Obstetrics and Neonatal Nursing (AWHONN) and the American Academy of Family Physicians (AAFP) have training programs that support collaborative care and have been used as foundational training for obstetrical staff.

Postpartum and Infant Readmission to Delivery Site: These measures examine the rate of postpartum readmission to MTF within 42 days post discharge or infant readmission to the delivery site at less than 29 days of age (Appendix Figure 4.4-7 and Appendix Figure 4.4-8). The direct care average has been higher than the NPIC average for both measures in the past three years; maternal readmission was lower for the direct care component than NPIC in 2010.

AHRQ PSI 17: PSI 17 measures birth trauma, injury to infant, per 1,000 newborns, excluding certain categories of infants with specific conditions.[49] This metric is based on coding of one of six specific conditions or the category of "other specified birth injury." Direct care average annual rate of PSI 17 injury to neonates has remained higher than the NPIC average from 2010 to 2013 (Figure 4.4). A closer look at data from 2013 illustrates a consistent issue with this metric (Figure 4.5). The overall direct care rate for PSI 17 in 2013 was 0.4 percent compared to 0.2 percent for the NPIC average, but the category of "other specified birth injury" accounted for more than 65 percent of the 227 direct care PSI 17 cases. The large percentage of injury that cannot be categorized needs further review.

---

[49] PSI 17 excluded preterm infants with a birth weight less than 2,000 grams, infants with any diagnosis code of injury to brachial plexus, and infants with any diagnosis code of osteogenesis imperfecta.

Figure 4.4 Annual Rate of PSI 17 Injury to Neonate, CY10 – CY13
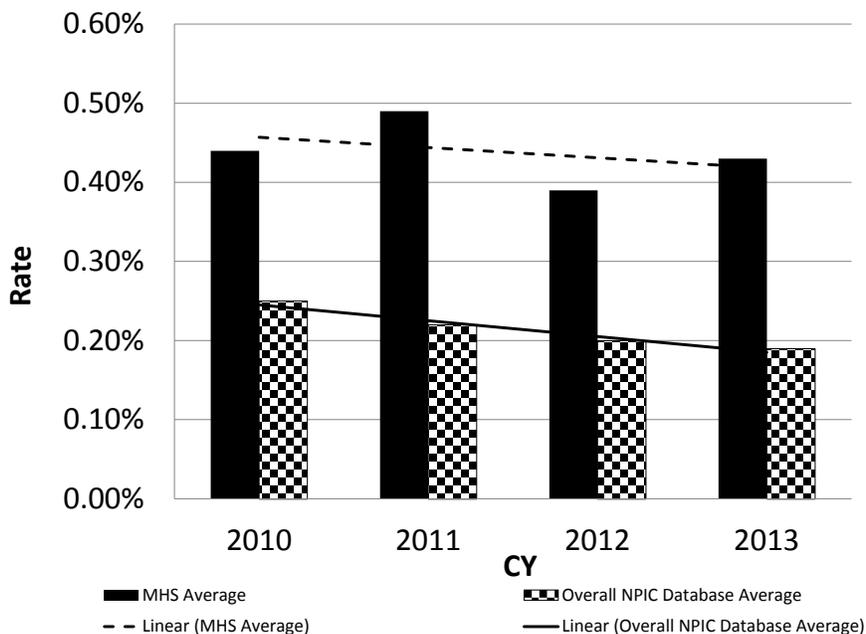
2014 MHS Review Group
Source: National Perinatal Information Center/Quality Analytic Services (NPIC/QAS), July 2014.

Figure 4.5 2013 Direct Care Breakout of Inborn Birth Trauma Occurrences by Diagnostic Code
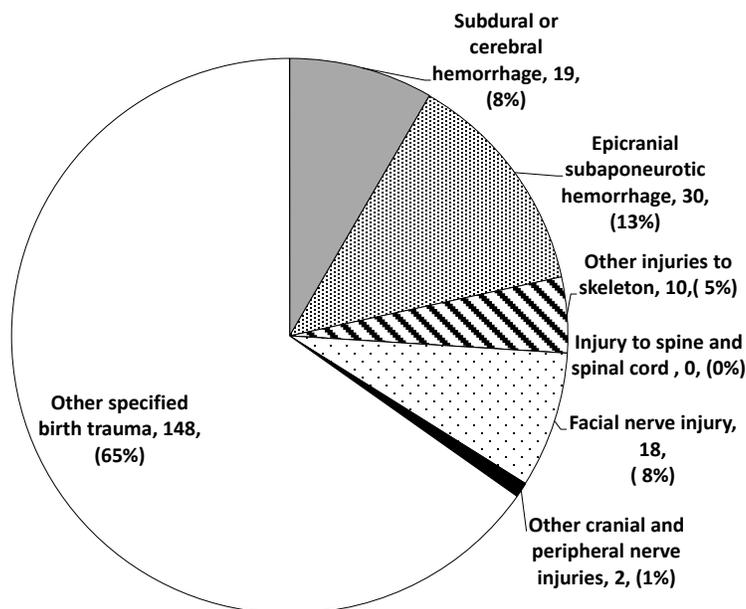
Note: Number of inborns was 49,217 in 2013: 227 is the total number of affected inborns coded within PSI-17.

2014 MHS Review Group
Source: National Perinatal Information Center/Quality Analytic Services (NPIC/QAS), July 2014

**Infant Mortality:** The infant mortality measure includes inborn, in-hospital deaths per 1,000 neonates, weighing at least 500 grams at birth and excluding newborns with specific congenital conditions. The direct care average for infant mortality has been lower than NPIC from 2010 to 2013. The NPIC average has been decreasing over the past four years (from 3.5 to 2.5 percent), while the direct care average has been relatively flat (at 1.5 percent all four years) (Figure 4.6). The lower direct care rate may reflect appropriate decision making on the part of the providers to transfer preterm and high-risk patients to more appropriate settings for delivery as indicated.

Figure 4.6 Infant Mortality Rate (per 1,000 live births) for Infants Weighing 500 Grams or Greater, CY10 – CY13
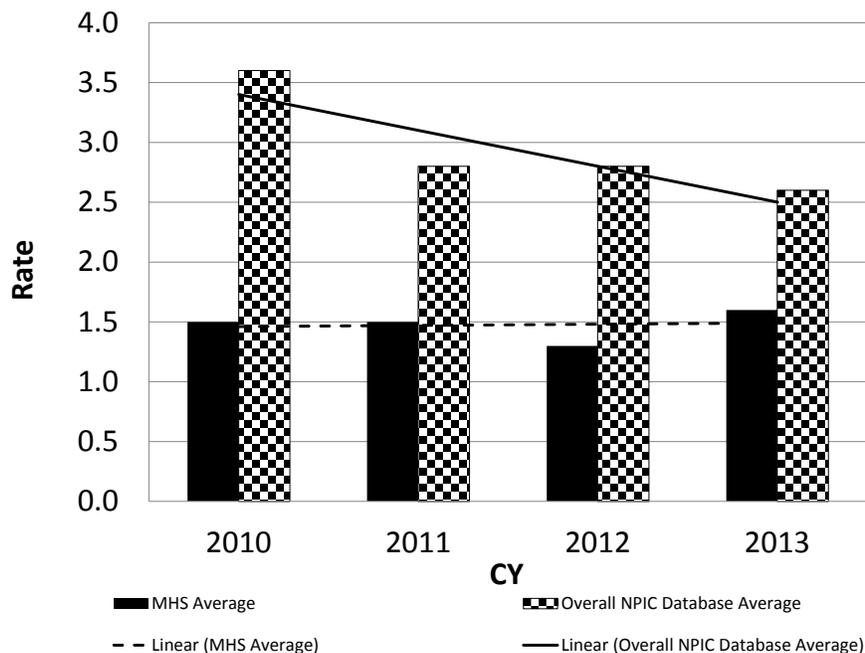
2014 MHS Review Group
Source: National Perinatal Information Center/Quality Analytic Services (NPIC/QAS), July 2014.

Service-Level Discussion: For metrics in which the direct care component has been at or better than the NPIC average (prevention of delivery of preterm infants without medical indications, PSI 18 and 19, infant mortality), Service-level data has been consistent with overall direct care data (Table 4.12).

Table 4.12 Perinatal Performance Measures Summary – 2013 Annual Rates

No.	Measure	NPIC Average	Direct Care Average	Army	Air Force	Navy	NCRMD
1	Percent of inductions prior to 37 weeks gestation with a medical indication	97.1%	99.2%	98.3%	100.0%	99.7%	100.0%
2	Percent of C-sections prior to 37 weeks gestation with a medical indication	94.8%	96.0%	92.7%	98.9%	98.4%	100.0%
3	PSI 18 - Obstetric Trauma-Vaginal delivery with instruments	0.1481	0.1449	0.1285	0.1145	0.1604	0.2703
4	PSI 19 Obstetric Trauma-Vaginal delivery without instruments	0.0207	0.0177	0.0178	0.0167	0.0165	0.0262
5	Shoulder dystocia	0.0226	0.0258	0.0277	0.0369	0.0279	0.0202
6	Postpartum hemorrhage (PPH)	0.0340	0.0507	0.0464	0.0570	0.0562	0.0461
7	Postpartum Readmission to Delivery Site	0.0098	0.0136	0.0149	0.0110	0.0125	0.0139
8	Inborn Readmission to Delivery Site	0.0113	0.0342	0.0343	0.0301	0.0387	0.0152
9	PSI 17 Birth Trauma-Injury to Neonate	0.0020	0.0043	0.0041	0.0047	0.0042	0.0072
10	Inborn Mortality Rate >= 500 Grams	0.0026	0.0016	0.0014	0.0003	0.0024	0.0012
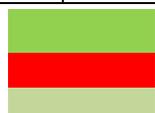
     Rates are statistically significantly better than the NPIC average

     Rates are statistically significantly worse than the NPIC average.

     Rates are observationally better than the NPIC average; but there was not enough data for calculation of confidence intervals thus statistical significance could not be determined.

Lower is better for all measures except Measures 1 and 2.
2014 MHS Review Group
Source: National Perinatal Information Center Database, July 2014

For PSI 18 and 19, the average rate for all Services has been within the confidence interval or below the NPIC average. The Air Force demonstrated the greatest decrease in rates of PSI 18 or 19 during the period of the PfP initiative when the program SAFER PASSAGES was implemented.

Service-level data for shoulder dystocia reveal that Air Force and Navy have been two standard deviations above the NPIC average from 2011 to 2013, while the Army has been within confidence intervals for the past four years (Appendix Figure 4.4-9). Consistent with direct care data, Service and NCR MD averages for PPH and for PSI 17 are significantly higher than the NPIC average from 2010 to 2013 (Appendix Figures 4.4-10 and 4.4-11). From 2011 to 2013, postpartum and neonatal readmission rates for all three Services have been above the NPIC average. In 2010, there was between-Service variability for postpartum readmission, but direct

care remained above the NPIC average. Direct care and Service neonatal readmission rates were elevated for all four years.

NCR MD data demonstrate statistically significantly higher averages than the NPIC averages in PSI 18, PPH, and PSI 17 (Table 4.12). Administrative issues with coding identified during NPIC data collection at the two NCR MD institutions raise concerns with the validity of NCR MD data.

Facility Type, Location, and Other Discussions: MTFs that were two standard deviations (clinically significant interval) above the NPIC average for rate of shoulder dystocia, PPH, and PSI 17 for two or more out of four consecutive years ("consistent outlier") were identified (Appendix Table 4.4-15). A total of 11 MTFs (4 Army, 3 Navy, 4 Air Force) were identified to be consistent negative outliers for shoulder dystocia. A total of 25 MTFs (8 Army, 8 Navy, 8 Air Force, and 1 NCR MD) were identified to be consistent negative outliers for PPH. A total of 7 MTFs (3 Army, 2 Navy, 1 Air Force, and 1 NCR MD) were found to be consistent negative outliers for PSI 17.

Comparison to Two External Health Systems: Data were available to compare the performance of the direct care component with two external health systems (HS2 and HS3) for PSI 17, 18, and 19. The direct care component is underperforming compared to the two health systems in PSI 17. As discussed above, "other specified birth injuries" makes up the majority of codes for PSI 17 cases and comparative data about the breakdown of code categories are not available from the NPIC database or the external health systems. Direct care review is needed to determine if these findings are attributable to quality-of-care issues, over-coding, or a combination of both.

While PSI 18 has decreased (improved) in the last three years, and MTFs are performing at the NPIC average, the direct care component is underperforming in comparison with HS2 and HS3 in this metric. For PSI 19, the direct care component is performing well, with rates better than the NPIC average and HS3. However, HS2 is outperforming both direct care and the NPIC average in PSI 18 and PSI 19. An important caveat is that HS2 serves a demographically different population and it is unknown to what extent that may affect these rates.

Summary of Findings:

1. The direct care component met or outperformed the NPIC average in 5 of 10 comparative measures (percent of inductions less than 37 weeks with medical indication, percent of C-section less than 37 weeks with medical indication, PSI 18, PSI 19, and infant mortality).
2. The direct care component underperformed compared to NPIC average in 5 of 10 comparative measures (shoulder dystocia, PPH, PSI 17, maternal readmission to delivery site, and inborn readmission to birth facility). There is evidence that data integrity and coding issues were potentially responsible for a component of the identified trends. A

2005 Patient Safety Study found that less than 22 percent of charts were coded accurately for infant injury.[50]

3. The Tri-Service Perinatal Advisory Group (PAG) has made significant strides in internal and external collaborations to address important quality issues in obstetric care, including PfP, MOES, and use of AWHONN and AAFP training and education programs to improve the quality of perinatal care. In some cases, these initiatives have been associated with improvement in outcomes, but improvement has not been demonstrated in all measures (shoulder dystocia, PPH, and, and PSI 17). There appears to be inconsistent implementation of available programs and tools.

▶ **Recommendations Regarding MHS Perinatal Services**

a. **MHS governance should require a review of perinatal provider documentation and coding practices at MTFs to validate data integrity.**

b. **MHS governance should ensure that standardization of accurate perinatal coding practices is implemented across direct care.**

c. **MHS governance should investigate readmissions of mothers and infants. This clinical review of diagnostic codes at readmission will identify the medical conditions that drive these rates and determine if lagging performance is a quality issue or related to military-unique issues and flexibility.**

d. **Health Affairs policy is needed to standardize annual and interval training requirements related to perinatal care.**

e. **The Perinatal Advisory Group should conduct a comprehensive review of clinical practices related to metrics where MHS is underperforming. Through a dashboard and standardized metric reporting requirements, intervention plans should be developed and actions prioritized.**

National Surgical Quality Improvement Program (NSQIP®)

Analysts reviewed NSQIP® semi-annual reports from each of the 17 participating MTFs from July 2010 through June 2013 (last full year of data). NSQIP® reports provided risk-adjusted 30-day morbidity and mortality outcomes computed for each participating hospital. The NSQIP® reported metric is an odds ratio that represents the estimated odds of a complication or event occurring in a specific hospital compared to the estimated odds of that event occurring in all participating NSQIP® hospitals. A ratio of 1.0 means the hospital was performing as expected. A ratio greater than 1.0 means the hospital was doing worse than expected and a ratio less than 1.0 means the hospital was doing better than expected. All findings noted by NSQIP® and in this report were statistically significant with a p-value of 0.05. Three full years of data were not available for all 17 hospitals as participation increased over the period and some inpatient facilities were closed. Analysts summarized the reports graphically below and identified

---

[50] Department of Defense. DoD Medical Treatment Facilities Patient Safety Indicator 17, Birth Trauma. August 2005.

statistically significant outliers. Analysts described facilities performing statistically much better than expected in any category as "exemplary," an outcome similar to other facilities included in the model as "as expected," and those performing statistically much worse than expected as "needs improvement."

Limitations are as follows:

1) Only 17 of 56 MTFs participate in NSQIP®; consequently, these findings may not be representative of all MTFs.

2) Until recently, NSQIP® has excluded low-volume facilities from participation; therefore, the NSQIP® sample is overrepresented by larger, high-volume facilities. For this reason, the NSQIP® civilian sample is unlikely to be representative of all U.S. hospitals. It is unclear if the standards presented by NSQIP® are generalizable to all U.S. hospital surgical programs or to the direct care component as a whole.

3) While civilian institutions participate in NSQIP®, there are no specific TRICARE purchased care data available in the NSQIP® data set. Thus, the NSQIP® sample represents direct care only.

MHS-Level Discussion: ALL CASE mortality, displayed in Figure 4.7, and in all subsequent tables, which summarizes all surgical care at a facility, was as expected for all 17 participating MTFs over the entire study period. A single exception occurred in the June 30, 2012 report for one facility where mortality returned to "as expected" in the next reporting period. The majority of facilities demonstrated "as expected" or "exemplary" morbidity rates during the reporting period. In the most recent reporting year (July 2012 to June 2013), eight facilities demonstrated higher-than-expected levels of morbidity and were identified as "needing improvement."

Figure 4.7 ALL-CASE Mortality and Morbidity, MTFs, 2010 – 2013

			July '10-June '11		July '11-June '12		July '12-June '13	
			Mortality	Morbidity	Mortality	Morbidity	Mortality	Morbidity
Medical Center	AIR FORCE	David Grant Med Ctr #109	-	★	-	★	-	★
		Michael O'Callaghan Federal Hospital #2057	(gray)	(gray)	-	-	-	△
	ARMY	Blanchfield Army Med Ctr #283	-	△	-	-	-	-
		Carl R Darnall Army Med Ctr #504	-	-	-	★	-	-
		Eisenhower Army Medical Center #284	-	★	-	★	★	★
		Madigan Army Med Ctr #282	-	△	-	△	-	△
		San Antonio Military Med Ctr #294	-	△	-	△	-	△
		Tripler Army Med Ctr #287	-	△	-	★	★	★
		William Beaumount Army Med. Ctr #125	-	-	-	-	-	★
		Womack Army Med Ctr #281	-	-	△	△	-	△
	NAVY	Naval Med Ctr San Diego #503	-	△	-	-	-	△
		Naval Med Ctr Portsmouth #501	-	△	-	△	-	△
	NCR	Walter Reed Nat'l Mil Med Ctr #500	-	-	-	△	-	★
Community Hospitals	ARMY	Evans Army Comm Hosp #505	-	-	-	-	-	△
	NAVY	Naval Hospital Jacksonville #502	-	★	-	-	-	-
		Naval Hospital Pensacola	(gray)	(gray)	(gray)	(gray)	-	-
	NCR	Fort Belvoir Community Hospital #2062	(gray)	(gray)	-	-	-	△

★ Exceeds Standards   - Meets Standards
△ Needs Improvement   (gray) Data Unavailable

2014 MHS Review Group
Source: American College of Surgeons National Surgical Quality Improvement Program, Semiannual Reports, July 2014

As depicted in Figure 4.8, the major contributors to this morbidity were Urinary Tract Infection, Surgical Site Infection, and Return to the Operating Room.

Figure 4.8 Morbidity Trends across MTFs, 2010 – 2013

2014 MHS Review Group
Source: American College of Surgeons National Surgical Quality Improvement Program, Semiannual Reports, July 2014

The summary of morbidity outcomes for all facilities through the entire study period is presented in Figure 4.9.

Figure 4.9 MTF Comparison by Type of Morbidity Outcome, 2010 – 2013

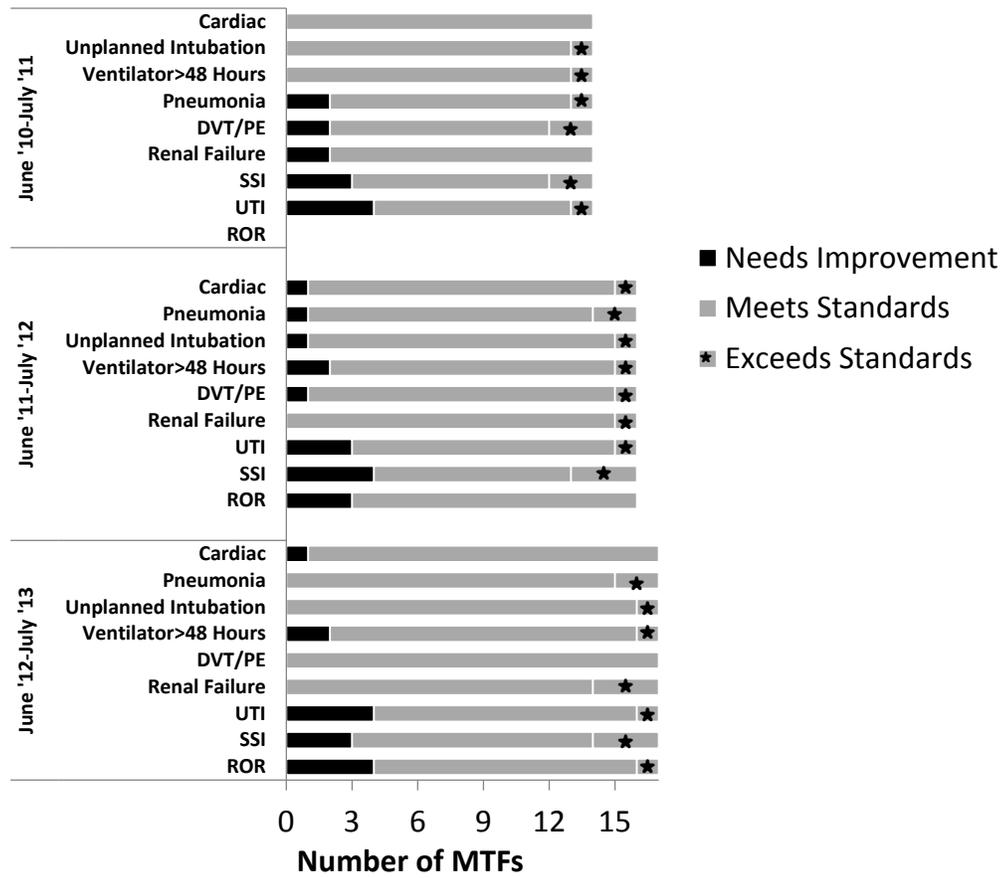|		July '10 - June '11									July '11 - June '12									July '12 - June '13								
	Facility	Cardiac	Pneumonia	Unplanned Intubation	Ventilator>48 Hours	DVT/PE	Renal Failure	UTI	SSI	ROR	Cardiac	Pneumonia	Unplanned Intubation	Ventilator>48 Hours	DVT/PE	Renal Failure	UTI	SSI	ROR	Cardiac	Pneumonia	Unplanned Intubation	Ventilator>48 Hours	DVT/PE	Renal Failure	UTI	SSI	ROR
AIR FORCE	David Grant Med Ctr #109	-	-	★	★	-	-	-	-		-	★	★	★	-	-	★	-	-	-	-	-	-	-	-	-	-	-
AIR FORCE	Michael O'Callaghan Federal Hospital #2057										-	-	-	-	-	-	-	-	△	-	-	-	-	-	-	-	-	-
ARMY	Blanchfield Army Med Ctr #283	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARMY	Carl R Darnall Army Med Ctr #504	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARMY	Eisenhower Army Medical Center #284	-	-	-	-	★	-	-	★		-	★	-	★	★	-	★	-	-	-	★	★	-	-	★	-	★	-
ARMY	Madigan Army Med Ctr #282	-	△	-	-	-	△	△	-		△	-	-	-	-	-	△	△	-	△	-	-	-	-	-	△	△	△
ARMY	San Antonio Military Med Ctr #294	-	-	-	-	-	-	△	△		-	△	-	-	-	-	△	△	-	-	-	-	-	-	-	△	-	△
ARMY	Tripler Army Med Ctr #287	-	-	-	-	-	-	△	△		-	-	-	-	-	-	-	★	-	-	★	-	★	-	★	-	-	★
ARMY	William Beaumount Army Med. Ctr #125	-	-	-	-	-	-	-	-		-	-	-	△	-	-	-	-	-	-	-	-	△	-	-	★	★	-
ARMY	Womack Army Med Ctr #281	-	-	-	-	★	-	-	-		-	-	-	△	-	-	-	-	△	-	-	-	-	-	-	-	-	-
NAVY	Naval Med Ctr Portsmouth #501	-	-	-	-	-	-	△	-		-	-	-	-	-	-	△	-	-	-	-	-	-	-	-	-	△	-
NAVY	Naval Med Ctr San Diego #503	-	△	-	-	△	-	-	△		★	-	-	-	-	-	-	-	-	-	-	-	-	△	-	-	△	-
NCR	Walter Reed Nat'l Mil Med Ctr #500	-	★	-	-	△	△	-	-		-	-	△	-	△	-	△	△	-	-	-	-	-	-	★	-	★	△
ARMY	Evans Army Comm Hosp #505	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	△	-	-
NAVY	Naval Hospital Jacksonville #502	-	-	-	-	-	-	★	★		-	-	-	-	-	-	-	★	△	-	-	-	-	-	-	-	-	△
NAVY	Naval Hospital Pensacola																			-	-	-	-	-	-	-	-	-
NCR	Fort Belvoir Community Hospital #2062										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	△	-

★ Exceeds Standards   - Meets Standards   △ Needs Improvement   (gray) Data Unavailable
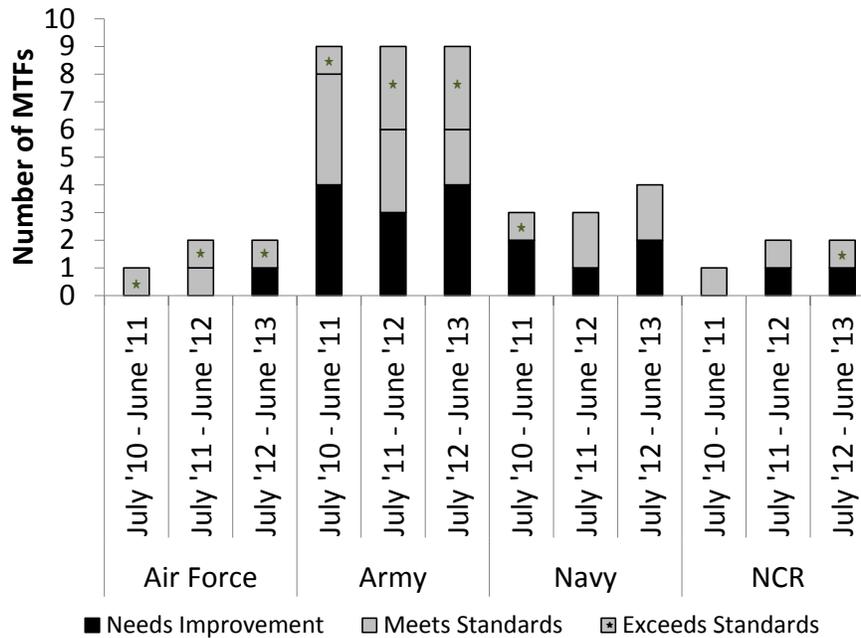
2014 MHS Review Group
Source: American College of Surgeons National Surgical Quality Improvement Program, Semiannual Reports, July 2014

Authors of this report discussed MTF performance with NSQIP® officials in an attempt to assess direct care systemwide performance against other systems. The officials reported that many large hospital systems have varying levels of performance among their facilities. It was also noted that as facilities within hospital systems begin to collaborate those variances in performance often improve.

Service-Level Discussion: The Army has nine facilities participating, the Navy four facilities, the Air Force two facilities, and the NCR two facilities (Figure 4.10).
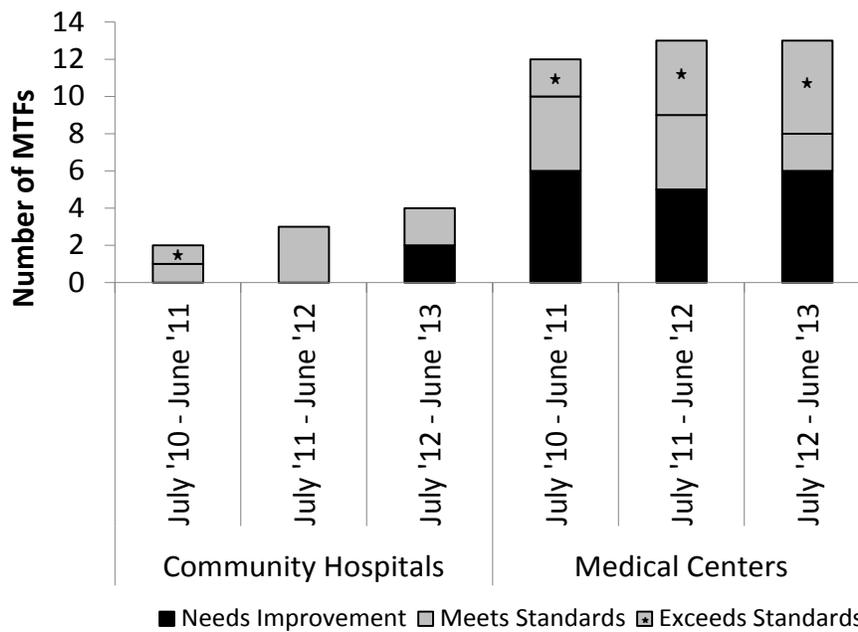
Figure 4.10 Service-Level Comparison, 2010 – 2013

■ Needs Improvement　□ Meets Standards　⊡ Exceeds Standards

2014 MHS Review Group
Source: American College of Surgeons National Surgical Quality Improvement Program, Semiannual Reports, July 2014

Figure 4.11 Number of MTFs that Need Improvement, Meet Standards, or Exceed Standards in Post-surgical Morbidity by Facility Type (2010 – 2013)

■ Needs Improvement　□ Meets Standards　⊡ Exceeds Standards

2014 MHS Review Group
Source: American College of Surgeons National Surgical Quality Improvement Program, Semiannual Reports, July 2014

Facility Type: As shown in Figure 4.11, medical centers make up 11 of the 17 participating MTFs (65 percent); thus, they have the highest number of facilities requiring improvement, but also contain the largest number of exemplary performers.

Location and Purchased Care: There are no OCONUS hospitals currently participating in NSQIP®. Furthermore, a limitation of this inquiry is that there are no specific purchased care data from NSQIP® by which to compare MTF surgical outcome data.

Comparison to External Health Systems: Comparative NSQIP® data were received from Health System 3 (HS3). The data provided were number of morbidity events per 1,000 admissions in each NSQIP® category. The data provided in the NSQIP® semi-annual report include the observed surgical event rates as well as the risk-adjusted expected rates, which are based on the patient comorbidities and the complexity of the procedure. For comparison, MTF data, both morbidity and mortality, were converted to the number of events per 1,000 admission and are displayed in Figure 4.12.

Although not risk adjusted, there is a general downward trend in this rate in all categories over the period of the study.

Figure 4.12 MHS Surgical Mortality and Morbidity Rates July 2010 – June 2013
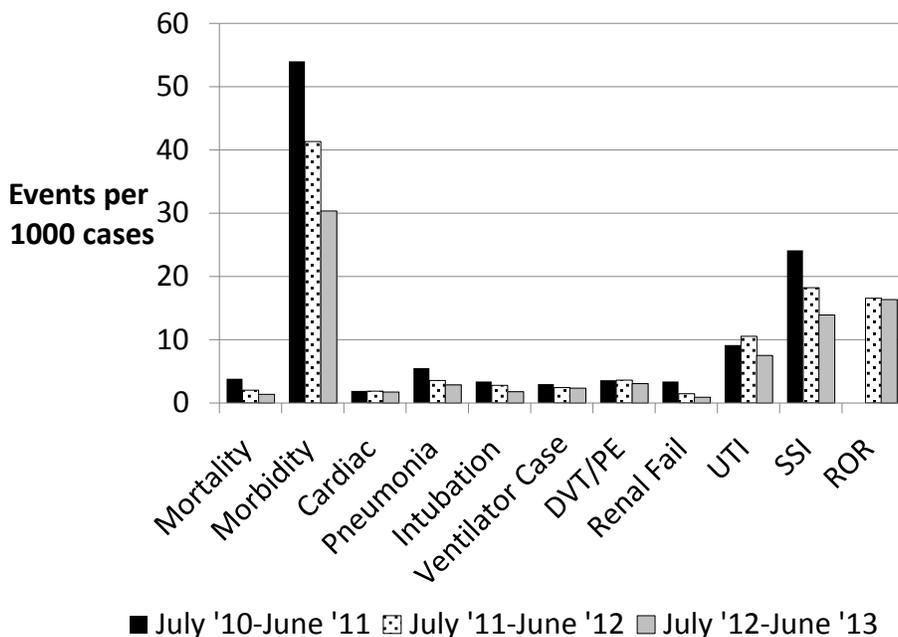
2014 MHS Review Group
Source: American College of Surgeons National Surgical Quality Improvement Program, Semiannual Reports, July 2014

116

**Figure 4.13 MHS and HS3 Surgical Morbidity Rates, July 2012 – June 2013**
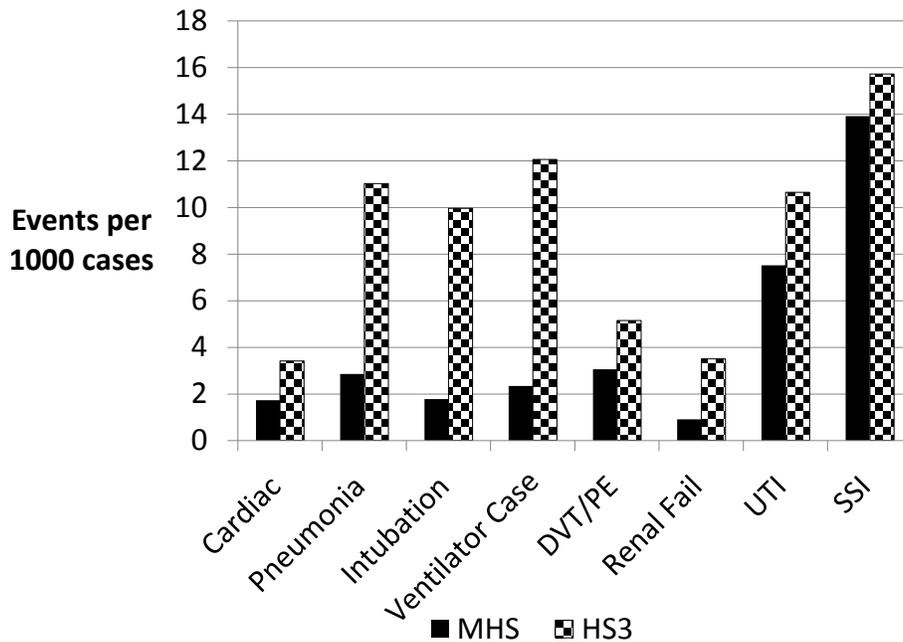
2014 MHS Review Group
Source: American College of Surgeons National Surgical Quality Improvement Program, Semiannual Reports, July 2014

When comparing surgical outcomes, using risk-adjusted rates is the preferred method. The MTF data are compared to HS3 in Figure 4.13. The comparability for this data is limited as it is not risk adjusted; thus, it does not take into account pre-existing patient conditions that could affect the surgical outcome. Results indicate that HS3 has higher numbers of surgical morbidity events across the spectrum as compared with direct care MTFs.

Direct care data obtained from participation in PfP showed a 36.5 percent reduction (Figure 4.14) which is similar to the 42 percent reduction seen in NSQIP® direct care rate seen in Figure 4.12.

Figure 4.14 Direct Care Partnership for Patients (PfP) Surgical Site Infection Rates, 2010 – 2013
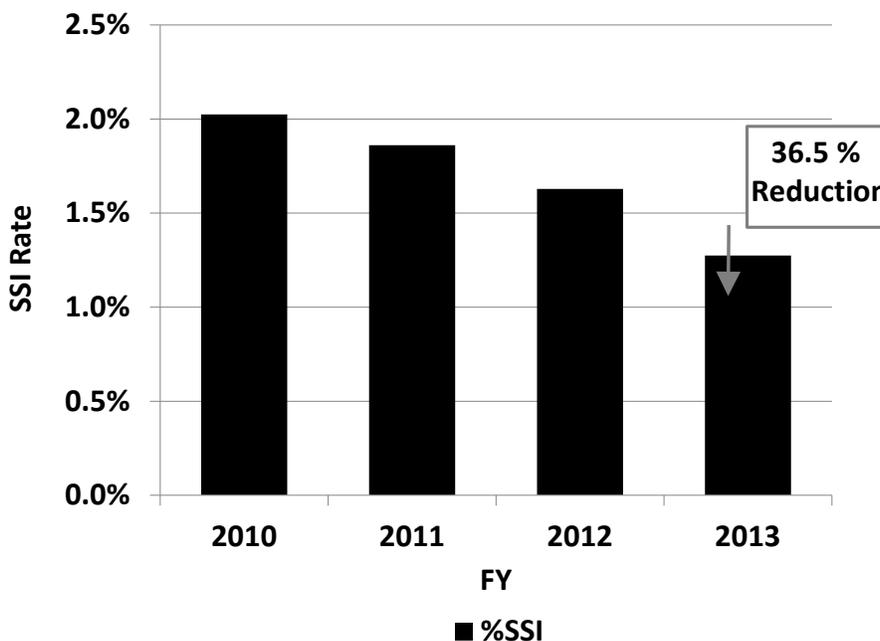
2014 MHS Review Group
Source: Direct care Partnership for Patients, July 2014

Summary of Findings:

1. There is evidence in direct care of a long-term commitment to collect surgical outcome data and improve performance of facilities: 30 percent of eligible direct care MTFs participate in NSQIP® compared to 10 percent of U.S. civilian hospitals.
2. Three MTFs in the most recent data period are performing at the top tier nationally.
3. Surgical morbidity is statistically significantly higher than expected in eight MTFs and was sustained over the reporting period in several of these facilities.
4. Morbidity involving Urinary Tract Infection, Surgical Site Infection, Return to the Operating Room, and Pneumonia has been most problematic for facilities.
5. Surgical mortality in the most recent data period is as expected in all 17 facilities.

▶ **Recommendations Regarding Surgical Quality Improvement**

a. **MHS governance should explore expanding NSQIP® participation to all remaining direct care inpatient facilities performing surgery. In addition, it should ensure all ambulatory surgery platforms participate in a similar surgical quality improvement program.**
b. **The DHA Healthcare Operations Directorate should partner with the American College of Surgeons NSQIP staff to improve MTF collaboration and sharing of best practices of top performing facilities, thereby decreasing overall direct care surgical morbidity and improving clinical outcomes.**

c. **MHS governance should task the NSQIP® working group to assess surgical morbidity shortfalls to the Medical Operations Group for Tri-Service/DHA engagement, collaborative support, and facility action.**

Inpatient Mortality Measures

While inpatient mortality has traditionally not been viewed as an accurate reflection of care quality, a consensus among leading civilian organizations is that the judicious use of risk-adjusted mortality measures can serve a valuable role in identifying trends warranting further investigation. Risk-adjusted, disease-specific and condition/procedure-specific mortality rates are more accurate and useful in quality management.

AHRQ developed condition-specific mortality measures using administrative records as part of its Inpatient Quality Indicator (IQI) measure set. The IQI measure set contains a number of condition-specific mortality measures including deaths from Pneumonia, Acute Myocardial Infarction (AMI), Stroke, and Congestive Heart Failure. Data are risk-adjusted to account for the different risk of death among patient populations and can be used to identify higher-than-expected condition-specific mortality rates at a given facility compared to other facilities. AHRQ provides benchmark values for its IQI measures and DHA uses these benchmark values for comparison. Similar to other risk-adjusted mortality models, the information is used as a trigger for additional facility-level investigation.

IQI mortality measures (Pneumonia, Congestive Heart Failure, AMI, and Stroke) have been reviewed by the Clinical Measures Steering Panel but have received limited Service-level action. Crude and risk-adjusted mortality measures have only recently been developed at the DHA level and have not been used for quality management at the Service or MTF level at this time. No measures of mortality for facilities in the purchased care system are reviewed, though facility-level data are available online from TJC and Hospital Compare websites. Specific mortality measures discussed in this review are displayed in Table 4.13**.**

<div align="center">

Table 4.13 Mortality Measures

Mortality Measures
Acute Myocardial Infarction (AMI) Mortality Rate (IQI #14)
Congestive Heart Failure Mortality Rate (IQI #15)
Acute Stroke Mortality Rate (IQI #16)
Pneumonia Mortality Rate (IQI #20)
Risk Adjusted Mortality Measure by MTF

Source: 2014 MHS Review Group, July 2014

</div>

MHS-Level Discussion

IQI Condition Specific Mortality Measures*:* Numerators for IQI data are small, such that single deaths can lead to substantial changes in MTF-level performance from quarter to quarter. For this reason, MTFs with less than 20 cases of Stroke, Pneumonia, AMI, or Congestive Heart

Failure per year were excluded from this analysis. Thus, this analysis is largely weighted to medical centers for the IQI AMI, Stroke, and Congestive Heart Failure mortality measures but includes hospitals (in addition to medical centers) for the IQI Pneumonia mortality measure.

Table 4.14 illustrates the direct care-level mortality rates from 2010 to 2013 for the IQI AMI, Congestive Heart Failure, Stroke, and Pneumonia measures. Numerical values are listed as percentages in the table below, along with the IQI average mortality rate in the second column. Over the last four years the direct care component has met or exceeded the IQI average for these measures 72 percent of the time. IQI 16 – Congestive Heart Failure mortality showed the worst performance of all measures with only 62 percent of quarters being within the expected range, although all quarters were within 1 to 2 percent of the benchmark value. Values for the other measures were 75 percent (Stroke and AMI) and 82 percent (Pneumonia) of quarters within the expected range.

Table 4.14 Direct Care Component IQI Condition-specific Mortality Rates for 2010 – 2013

IQI Measure	Bench-mark	2010 Q1	2010 Q2	2010 Q3	2010 Q4	2011 Q1	2011 Q2	2011 Q3	2011 Q4	2012 Q1	2012 Q2	2012 Q3	2012 Q4	2013 Q1	2013 Q2	2013 Q3	2013 Q4
CHF	3.2	3.13	2.55	1.87	2.47	3.49	3.28	3.01	4.37	2.08	3.40	3.20	4.01	2.81	1.93	3.32	3.51
Stroke	9.0	10.22	8.53	8.93	7.45	7.75	5.83	7.19	6.72	8.17	5.97	10.52	7.87	10.09	5.06	11.33	6.69
Pneum	3.9	3.36	2.92	1.93	4.15	2.47	3.05	1.72	3.83	2.97	3.00	1.45	4.67	4.16	3.57	2.38	2.75
AMI	6.0	5.62	4.39	4.43	5.63	6.46	6.11	4.36	6.53	4.18	3.19	0.63	4.63	8.34	4.73	2.65	3.46

Below expected mortality
Above expected mortality, warrants investigation.
*facility with < 10 deaths
2014 MHS Review Group
Source: MHS Population Health Portal, June 2014

Service-Level Discussion

Service-specific quarterly performance has been within the expected range for 69 percent (Army) and 72 percent (Navy/Air Force) of this timeframe. Analysis of CONUS and OCONUS sites was not completed due to insufficient OCONUS data for comparison.

Assessment of Direct Care Risk Adjusted Mortality: The direct care component has not routinely used mortality rates for quality monitoring purposes. For the purposes of this review, a study was undertaken to develop risk-adjusted mortality ratios based on a commonly accepted (Elixhauser) methodology. Using regression analysis, a statistical model was developed that calculated expected deaths based on the case-mix of an MTF's population for a cohort of large hospitals. This initial study only looked at the year 2013, comparing the predicted number of deaths for an MTF against the observed number of deaths to define a Standardized Mortality Ratio (SMR). A SMR above 1.0 indicated a higher number of deaths than predicted. An SMR below 1.0 indicated fewer deaths at the facility than predicted. To ensure these results were statistically significant, confidence intervals were calculated such that areas of concern would demonstrate an SMR lower confidence limit above 1.0. This model is new and has not been

presented at the Service or MTF levels; thus there has been no opportunity for MTFs to validate these results using accepted methods.

The results of this initial look at risk adjusted mortality in the direct care component for 2013 showed 16 MTFs with better-than-expected risk adjusted mortality rates, 7 with rates that are within the expected range and 4 MTFs with worse-than-expected mortality rates (Table 4.15). These results for worse-than-expected mortality rates include facilities that were also identified with worse-than-expected IQI mortality rates. All other facilities looked at with this initial model are within the expected range for mortality.

Table 4.15 Facility-specific Risk-adjusted Standardized Mortality Ratios for 2013

Standardized Mortality Ratio (SMR) Assessment	MTF	Discharges
Better than Expected SMR	EVANS ACH-FT. CARSON	1910
	NH JACKSONVILLE	1623
	DARNALL AMC-FT. HOOD	2730
	633rd MDG LANGLEY-EUSTIS	913
	88th MDG-WRIGHT-PATTERSON	2738
	96th MDG-EGLIN	2137
	MARTIN ACH-FT. BENNING	2045
	99th MDG-O'CALLAGHAN HOSP	2631
	FT BELVOIR COMMUNITY HOSP	3221
	BLANCHFIELD ACH-FT. CAMPBELL	1273
	NH PENSACOLA	1490
	WOMACK AMC-FT. BRAGG	4529
	WALTER REED NATL MIL MED CTR	8045
	SAN ANTONIO MMC	18132
	NMC SAN DIEGO	9646
SMR Within Expected Range	673rd MED GRP-ELMENDORF	1802
	EISENHOWER AMC-FT. GORDON	3937
	NH OKINAWA	846
	FT. LEONARD WOOD HOSP	1437
	MADIGAN AMC-FT. LEWIS	8201
	NMC PORTSMOUTH	8651
	WILLIAM BEAUMONT AMC	5859
Worse than Expected SMR	TRIPLER AMC-FT SHAFTER	6992
	NH GUAM-AGANA	1081
	60th MED GRP-TRAVIS	4125
	81st MED GRP-KEESLER	2342

2014 MHS Review Group
Source: Military Health System Mart (M2), July 2014

Risk Adjusted Mortality: Two external systems provided risk-adjusted mortality data calculated using proprietary risk-adjustment formulas. Due to differences in the models used by

direct care component and these external systems, valid comparisons were not possible. These differences made it impossible to render a valid conclusion regarding differences in the risk adjusted mortality rates between systems.

Summary of Findings:

1. The direct care component lags behind civilian benchmark organizations in the use of mortality measures as indicators of potential quality of care problems.
2. Over the last four years the direct care component has met or exceeded the IQI average for these measures 72 percent of the time.
3. The results of this risk adjusted mortality model for calendar year 2013 demonstrated 16 MTFs with better-than-expected risk adjusted mortality rates, 7 with rates that are within the expected range, and 4 with worse-than-expected mortality rates.

▶ **Recommendations Regarding Mortality Measurements**

a. **MHS governance should integrate measures of mortality into its quality monitoring and performance improvement programs.**
b. **MHS governance should require Service facilities with higher-than-expected mortality on an IQI measure for more than one quarter to perform an investigation and implement improvement activities as indicated.**
c. **MHS governance should evaluate the use of the risk-adjusted standardized mortality ratio (SMR) model in direct care. Facilities with higher-than-expected mortality should validate the risk-adjusted SMR model data and perform a root cause analysis as indicated.**

Experience of Care Summary

Results of customer surveys have become increasingly important in measuring MHS performance and in directing action to improve beneficiary experience and quality of services provided. Surveys are modeled to identify key drivers of satisfaction in the MHS. This summary is based on analysis of data from several DoD and Service-specific surveys regarding beneficiary experience with MHS health care. The questions chosen for comparison from DoD surveys were selected to be comparable to the HCAHPS and CAHPS civilian benchmarks.

HCSDB is sent quarterly to an annual sample of approximately 200,000 eligible beneficiaries. It is emailed to active duty personnel and mailed to other MHS beneficiaries with responses by mail or Internet. HSCDB survey data describe the ratings of the patient's perception of their health plan, their health care, their personal physician, and their specialty care. All benchmarks for HCSDB are based on the CAHPS 50th percentile. Sampled beneficiaries may or may not have used or tried to use healthcare at the time of the survey. Response rates among the surveys, and among subpopulations within surveys, vary significantly.

The TRICARE Outpatient Satisfaction Survey (TROSS) measures outpatient ratings of satisfaction with the provider and with health care. TROSS is sent to MHS beneficiaries

following outpatient encounters. Approximately 575,000 beneficiaries are surveyed annually. All benchmarks for TROSS are based on the CAHPS 75th percentile.

TRICARE Inpatient Satisfaction Survey (TRISS) measures inpatient discharge patient ratings of the hospital overall and whether the patient would recommend the hospital.

MHS-Level Discussion

According to results from the HCSDB survey, MHS beneficiaries:

- Are more satisfied with their health plan as compared to the civilian benchmark.
- Rate their overall satisfaction with their health plan at 66 percent in FY 2013, exceeding the civilian benchmark of 57 percent.
- Prime enrollees rate their overall health plan at or above the CAHPS level at 90 percent of the MTFs. More than half of the MTFs rate at or above the 75th percentile.
- Are less satisfied with their health care overall as compared to the civilian benchmark
- Rate their health care at 8, 9, or 10 on a 0–10 scale (64 percent), below the civilian benchmark of 72 percent.
- Showed increased ratings for health care from FY 2011 to FY 2013, according to HCSDB direct care ratings.
- Rate their personal doctor and specialty care below the CAHPS benchmarks.
- Rate their purchased health care at scores that meet or exceed the CAHPS benchmarks.

According to TROSS results:

- TROSS scores regarding "satisfaction with the provider" ranked in the middle (50th percentile) for most facilities when compared to CAHPS.
- TROSS scores regarding "overall satisfaction with care" during this time period increased from 81 percent in FY 2012 to 84 percent in FY 2013.
- TROSS scores for "overall satisfaction" with purchased care remained stable between 88 percent and 89 percent.

According to TRISS results:

- TRISS ratings for the direct care hospital experience show an increase from 63 percent in FY 2011 to 67 percent FY 2013; remaining below the civilian benchmark of 70 percent.
- TRISS hospital ratings for the Air Force (73 percent) and NCR MD (74 percent) facilities were above the benchmark.
- TRISS scores indicating whether a patient would recommend direct care hospitals improved from 68 percent in FY 2012 to 71 percent in FY 2013, reaching the benchmark in FY 2013 (71 percent).
- In FY 2013, the TRISS ratings for "recommend hospital" for the Air Force (76 percent), Navy (71 percent), and NCR (81 percent) were all at or above the civilian benchmark; while ratings for the Army (68 percent) were below. (The percentiles reported here for

> TRISS are not patient mix adjusted; however, they are weighted to remove non-response bias and an algorithm is applied to adjust sample weights according to the MHS region population distribution).

- Beneficiaries who received care within the purchased care component for surgical and obstetric care rated their hospital higher than did those in the direct care component.
- MHS beneficiaries receiving surgical care in the direct care component rated their hospital inpatient experience higher than the civilian benchmark. This remained true in FY 2013 for beneficiaries discharged from either a MTF or a civilian hospital.
- Beneficiaries receiving in-patient obstetric care rated the DoD hospital lower than the purchased care hospitals.

Excluding obstetric data, the overall direct care in-patient scores exceeded the civilian benchmark.

Service-Level Discussion

Service-specific surveys should not be used to compare the different Services health care systems. The questions and areas of focus are not comparable.

The Army Provider Level Satisfaction Survey (APLSS), with email and postal mail with web response capability, obtains data from approximately 350,000 beneficiaries a year. The survey randomly selects patients who may respond to 24 questions by mail or email. The questions are designed to gather patient feedback on access to care, cleanliness of the facility, and courtesy of the staff. Ratings fluctuated but remained at 93 to 94 percent for overall ratings from FY 2011 to FY 2014 QTR 3. In APLSS, specialty care outperforms primary care by four percentage points. There is no direct civilian benchmark directly related to the APLSS questions.

The Navy postal and mail response based Patient Satisfaction Survey (PSS) obtains data from approximately 134,000 beneficiaries annually. Patient satisfaction results are compared to feedback given by the general civilian population regarding their health care providers within their private insurance plan. During this time frame, Navy MTFs consistently scored above 90 percent for overall satisfaction with care.

The Air Force telephone-based Service Delivery Assessment (SDA) obtains data from approximately 200,000 beneficiaries a year. The survey is designed to gather patient feedback in multiple areas of concern. SDA quarterly data from FY 2011 Q3 through FY 2014 Q2 indicate that ratings for primary care were higher than specialty care. During that timeframe, ratings fluctuated but remained over 94 percent. There is no civilian benchmark to compare to this measure.

Facility Type and Location Discussions

TROSS data indicate no large difference in experience of care based on facility type; MEDCENs, Community Hospital and Health Clinic) for TROSS. HCSDB ratings for personal doctor and health care measures demonstrated small differences. The HCSDB rating of personal doctor in the MEDCENs was 74 percent, compared to 69 percent for clinics. HCSDB rating of

heath care for medical centers was 59 percent; compared to 56 percent for clinics. APLSS, PSS, and SDA scores indicate that within each survey the types of facility score statistically similar within a range of two percentage points.

Location: Scores from HCSDB, TROSS, and TRISS indicate that there are minimal differences in the experience of care between CONUS and OCONUS facilities as seen in Table 4.16. It is assumed that the differences in the TRISS measure "recommend OCONUS hospital" reflect a comparison of the DoD facility with the local national facility. The TRISS CONUS Hospital "willingness to recommend" measure matches the civilian benchmark. Service-specific surveys, APLSS, PSS, and SDA show satisfaction ratings for OCONUS and CONUS to be statistically similar in all areas.

Table 4.16 Ratings of Overseas and U.S. Facilities by OCONUS and CONUS

Measure	OCONUS	CONUS
HCSDB Ratings of Health Care for Overseas and U.S. facilities	54 %	58 %
HCSDB Ratings of Personal Doctor at overseas and U.S. facilities	69 %	71 %
TROSS Satisfaction with Care ratings for Overseas and U.S. facilities	85 %	83 %
TRISS Hospital Ratings for Overseas and U.S. facilities	66 %	66 %
TRISS Ratings for recommend hospital for overseas and U.S. facilities	82 %	71 %

2014 MHS Review Group
Source: Health Care Survey of DoD Beneficiaries (HCSDB), TRICARE Outpatient Satisfaction Survey (TROSS), TRICARE Inpatient Satisfaction Survey (TRISS), July 2014

Comparison to External Health Systems

Rating of Health Care Plan: HCSDB TRICARE Prime Enrolled Beneficiaries (MTF and Civilian Combined) and the three comparison system are statistically equivalent. During Fiscal Years 2010, 2011, and 2012 all four systems, MHS and three external systems (66 to 67 percent), are significantly higher than CAHPS Benchmark of 57 percent. Statistical significance testing was not completed to assess difference in responses (Table 4.17).

Table 4.17 Rating of Health Care Plan, 2011 – 2013

System	2011	2012	2013
Health System 1	64%	64%	67%
Health System 2	70%	68%	67%
Health System 3	63%	63%	66%
HCSDB TRICARE Prime Enrolled Only (MTF and Civilian Combined)	65%	65%	66%
CAHPS Benchmark (adjusted to MHS population)	57%	56%	57%

2014 MHS Review Group
Source: Consumer Assessment of Healthcare Providers and Systems (CAHPS), Health Care Survey of DoD Beneficiaries (HCSDB), July 2014

Rating of Personal Doctor: HCSDB TRICARE Prime Enrolled Beneficiaries (MTF and Civilian Combined) rated their personal doctor lower than did patients in Health System 2, Health System 3, and the CAHPS benchmarks. Statistical significance testing was not completed to assess differences (Table 4.18).

Table 4.18 Rating of Personal Doctor, 2011 – 2013

System	2011	2012	2013
Health System 1	-	-	-
Health System 2	86%	85%	85%
Health System 3	86%	87%	81%
HCSDB TRICARE Prime Enrolled Only (MTF and Civilian Combined)	71%	72%	73%
CAHPS Benchmark (adjusted to MHS population)	80%	79%	80%

2014 MHS Review Group
Source: Consumer Assessment of Healthcare Providers and Systems (CAHPS), Health Care Survey of DoD Beneficiaries (HCSDB), July 2014

Health Care Rating: HCSDB TRICARE Prime Enrollees rated their health care similarly to enrollees in Health System 1. HCSDB TRICARE Prime Enrollees rated their health care lower than did patients in Health System 2, Health System 3, and CAHPS benchmarks. Statistical significance testing was not completed to assess differences (Table 4.19).

Table 4.19 Health Care Rating, 2011 – 2013

System	2011	2012	2013
Health System 1	58%	59%	62%
Health System 2	81%	79%	79%
Health System 3	77%	77%	79%
HCSDB TRICARE Prime Enrolled Only (MTF and Civilian Combined)	59%	61%	62%
CAHPS Benchmark (adjusted to MHS population)	72%	72%	72%

2014 MHS Review Group
Source: Consumer Assessment of Healthcare Providers and Systems (CAHPS), Health Care Survey of DoD Beneficiaries (HCSDB), July 2014

Rating Hospital In-patient Care: TRICARE Prime Enrolled Beneficiaries TRISS Ratings of Hospital were consistently lower than were ratings by patients in the three comparison Health Systems. MHS was below the benchmark. The three comparison systems were above the CAHPS benchmark. Testing of statistical significance of difference was not conducted (Figure 4.15).

Figure 4.15 Comparison of TRISS to Three Other Health Systems for Hospital Ratings, CY13, Monthly
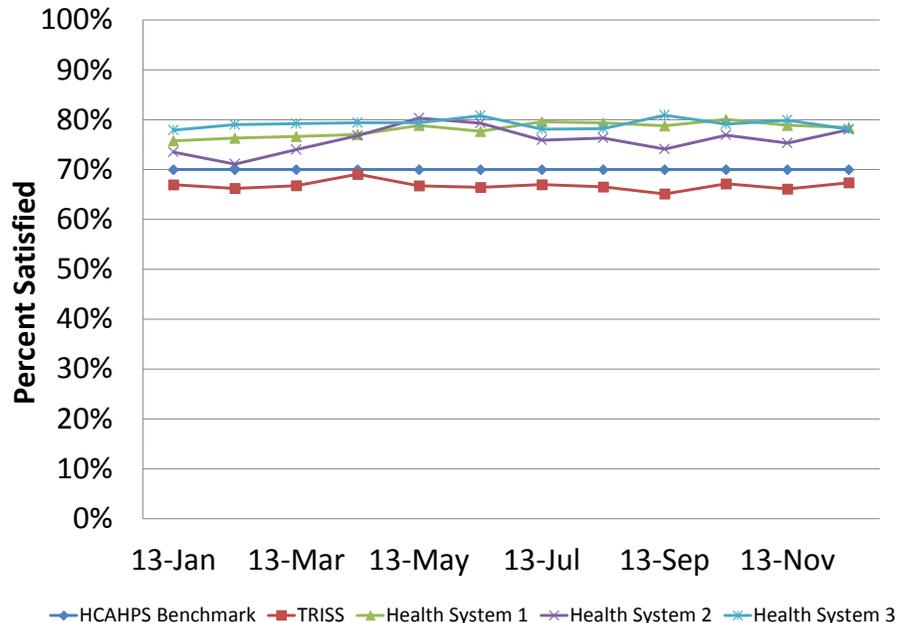
2014 MHS Review Group
Source: TRICARE Inpatient Satisfaction Survey, July 2014

Rating In-patient Hospital: TRICARE Prime Enrolled Beneficiaries 2013 TRISS Ratings of Recommend Hospital were consistently lower than were ratings by patients of Health System 1

and Health System 3 and slightly lower than Health System 2 (Figure 4.16). Testing of statistical significance of difference was not conducted.

Figure 4.16 Comparison of TRISS to Three Other Health Systems for Recommend Hospital, CY13, Monthly
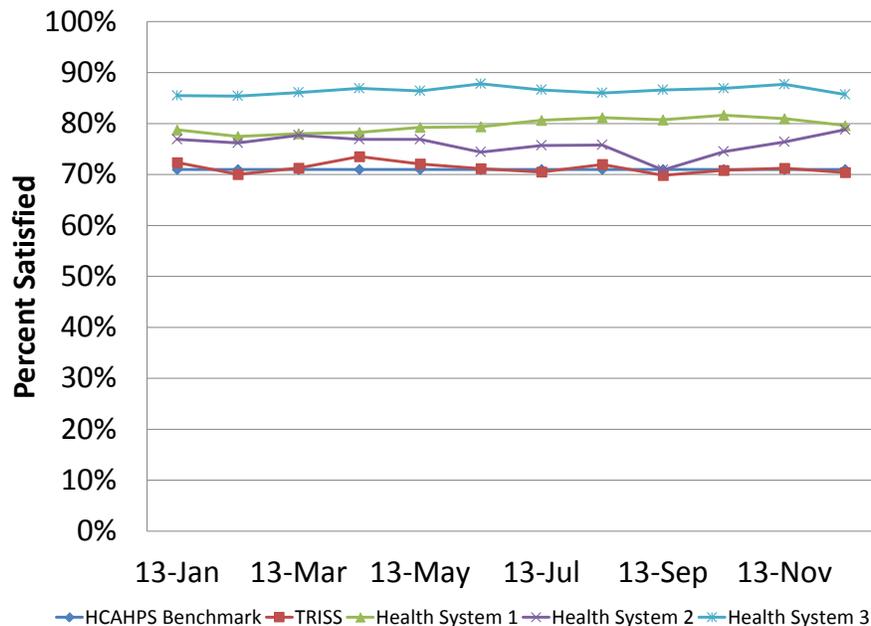
2014 MHS Review Group
Source: TRICARE Inpatient Satisfaction Survey, July 2014

Summary of Findings:

1. According to the HCSDB survey, MHS beneficiaries rate their health plans higher than the civilian benchmark, but lower for overall health care.
2. Overall satisfaction with inpatient surgical care exceeded the civilian benchmark.
3. Overall satisfaction with obstetrics falls below the civilian benchmark, singularly lowering the overall inpatient scores below the civilian benchmark.
4. There is room for DoD improvement regarding the experience of care with primary care. PCMH-accredited sites have higher levels of satisfaction than non-accredited PCMH.
5. Data indicate that MTF enrollees are less likely than comparable civilian populations to see the same provider and get an appointment when they feel one is needed.

▶ **Recommendations Regarding Patient Satisfaction**

a. **MHS governance should continue to study determinants of patient satisfaction and develop strategies to meet or exceed civilian benchmarks in satisfaction with primary care and obstetrics for every MTF.**
b. **MHS governance should continue to guide MTFs in implementation of strategies to optimize PCMH operations and use of secure messaging, Nurse Advice Line (NAL), and other customer service tools.**

128

> c.   **Services and DHA should continue to evaluate determinants of satisfaction with primary care and ensure ongoing maturation of PCMH in all MTFs.**

Primary Care Manager Continuity

The MHS implemented the Primary Care Medical Home (PCMH) model of care in order to improve health care quality, medical readiness, access to care, and patient satisfaction, and to lower per capita cost growth. PCMH is an established model for primary care, designed in part to improve continuity of care and to enhance the effectiveness of patient-provider communication. Patient centeredness refers to an ongoing, active partnership with a primary care physician who leads a team of professionals dedicated to providing proactive, preventive, and chronic care management through all stages of life. One of the core principles of the PCMH model is that patients have a consistent relationship with a primary care manager (PCM), which continues to be the driving force behind the MHS's transformation from a system for health care to one supporting health. The continuous relationship between a patient and his/her provider has improved patient engagement and resulted in a reduction in unnecessary treatment and emergency room utilization.

The direct care component relies on NCQA to evaluate whether hospitals and clinics are providing medical homes. NCQA evaluations focus on every aspect of PCMH delivery to include: access and the delivery of enhanced access; quality of care to include the use of evidence-based guidelines and comprehensive care; and safety to include medication reconciliation and continuous improvements in all aspects of care. In these evaluations the direct care component stands alone: 301 military clinics have achieved NCQA recognition, and the direct care component boasts the highest average survey scores of all health care organizations undergoing evaluation. By the end of 2014, all primary care practices will have sought recognition by NCQA with PCM continuity serving as one of its primary standards.

The measurement of PCM continuity provides feedback to enhance the quality of care; consistent appointments with a PCM facilitate patient wellness and disease prevention when compared to discontinuous, acute, episodic care. The measure is the rate of all appointments in primary care (e.g., acute, routine, wellness) that are with the MTF enrollee's assigned PCM. Data for this measure are continuously available from the Service to individual PCM levels through TRICARE Operations Center (TOC) reports drawing data from the Composite Health Care System (CHCS).

Overall, PCM continuity in the direct care component increased 9.9 percent from a FY 2012 average of 55.4 percent to a FY 2014 (July) average of 60.9 percent: baseline PCM continuity was 41 percent in June 2010. Increasing the level of PCM continuity was a major quality initiative for the three Services and NCR MD in support of PCMH implementation. Moreover, improved availability of a continuous relationship with a PCM was one of the top four items requested by patients. The initial performance target for PCM continuity was 60 percent. In light of the improved overall performance of the system, the target was increased to 65 percent for FY 2014 (see Figure 4.17).

Figure 4.17 MHS Primary Care Manager (PCM) Continuity
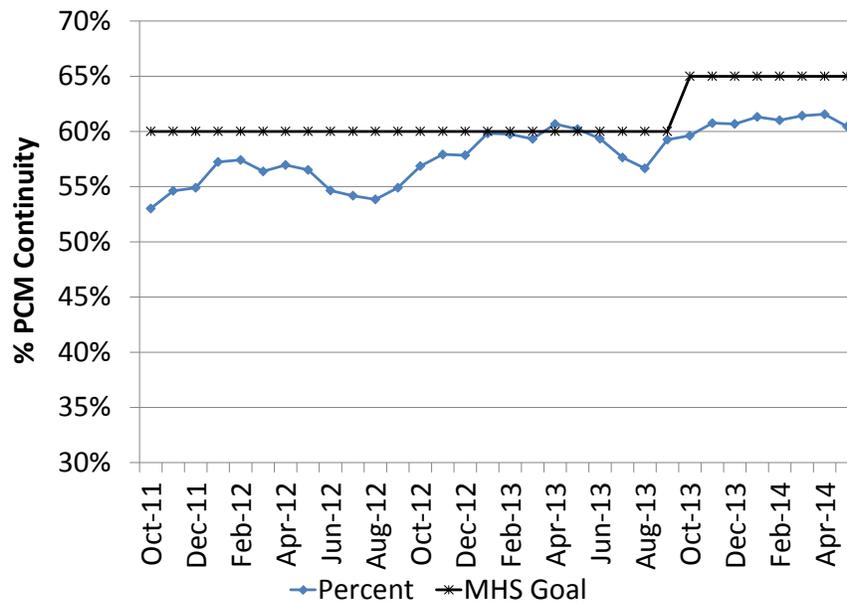
2014 MHS Review Group
Source: TRICARE Inpatient Satisfaction Survey, July 2014

Each Service and the NCR MD increased PCM continuity during this period with Navy achieving the highest average in FY 2014 and the greatest rate of change from FY 2012. Though improving, NCR MD lags behind the Services in PCM continuity (Figure 4.18).

Figure 4.18 Percent of Appointments where the Patient Saw their Assigned PCM – By Service

2014 MHS Review Group
Source: TRICARE Operations Center, July 2014

130
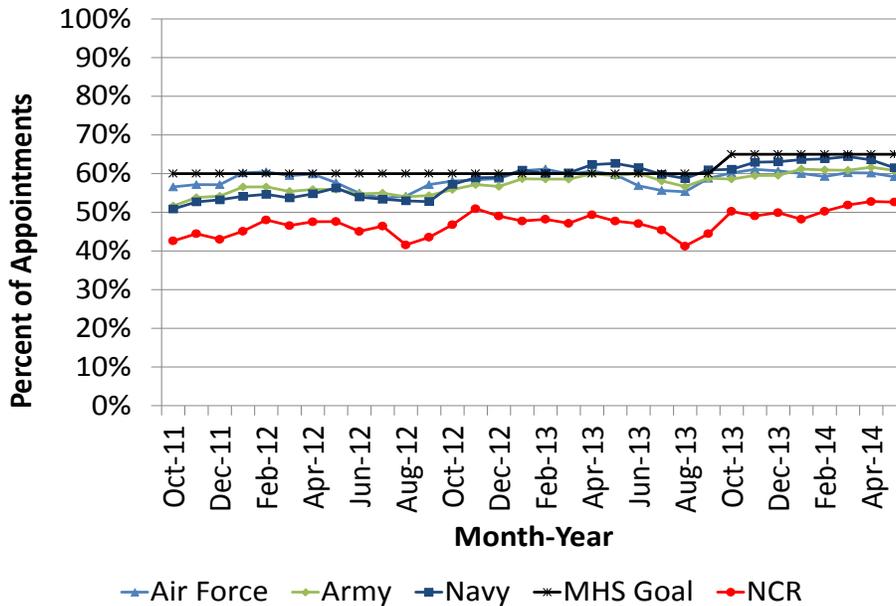
MTF PCM continuity has increased; however, clinic and hospital continuity is higher than medical center continuity (Figure 4.19). Continuity tends to be lower at medical centers with residency programs and other direct care options such as Emergency Departments and Urgent Care Centers. MTF range of performance varies from 90.1 percent to 21.6 percent with a mean of 60.9 percent indicating the need for improvement in PCM continuity at the facility level. Continuity reflects the percentage of time a patient is seen by their assigned PCM when accessing primary care within their MTF. Every effort is made to ensure each patient's PCM remains the same while the patient is enrolled to the MTF; however, PCM reassignment may be necessary due to the unique consequences of military service such as Permanent Change of Stations (PCSs), deployments, retirements, and separations. PCMH is a team-based approach to primary care and if PCM reassignments do occur, the MTF makes every effort to keep the patient with the same team that has been providing their care.

Figure 4.19 Percent of Appointments where the Patient Saw their Assigned PCM – by Facility Type
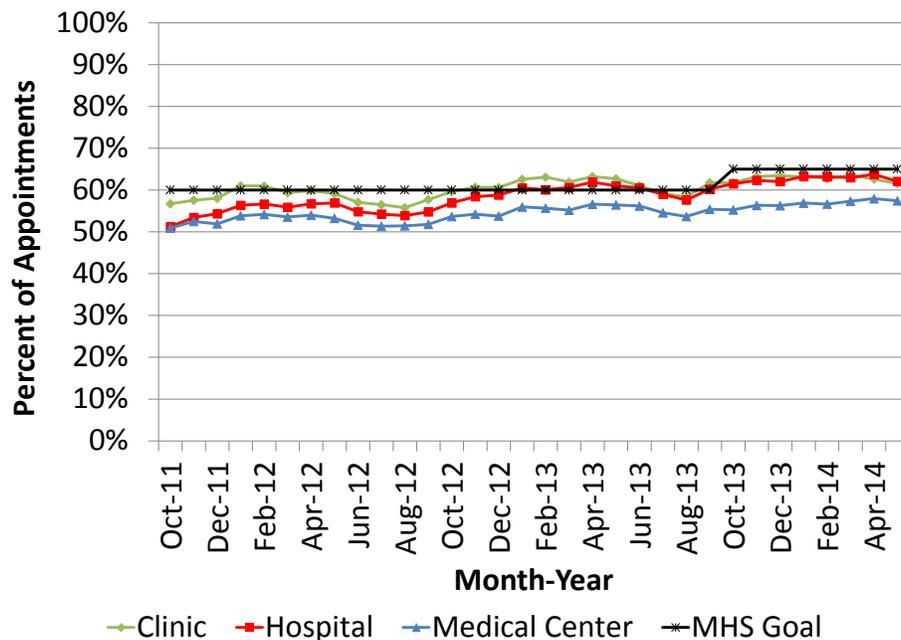
2014 MHS Review Group
Source: TRICARE Operations Center, July 2014

Overall performance on PCM continuity for CONUS and OCONUS facilities is consistent.

In summary, PCM continuity averages 61 percent; there is low variance across the direct care component with a median of 62 percent and an interquartile range of 56 percent to 69 percent. There are five positive outliers beyond two standard deviations from the mean and four negative outliers.

▶ **Recommendation Regarding Primary Care Manager Continuity**

    a. **The PCMH Advisory Board should assess processes that affect PCM continuity at high-performing PCMH sites and promulgate best practices across the MHS to support improvement initiatives.**

Site Visit Information

Seven MTF site visits were conducted to assess the onsite execution and implementation of DoD, Service, and NCR MD policies. Each site visit focused on key areas related to quality: policy and governance, leadership, quality improvement infrastructure, performance improvement efforts, and patient focus. Upon completion of each site visit, the team evaluated MTF performance against a 12-question checklist using a Likert scale that ranged from score 1 (Not correlated) to score 5 (Exceeds). Observations from the site visits are outlined below (Figure 4.20).

Figure 4.20 Perceptions Among Regional Headquarters, MTF Leaders, Subject Matter Experts (SMEs), Staff Members and Patients During Seven MHS Site Visits, 2014
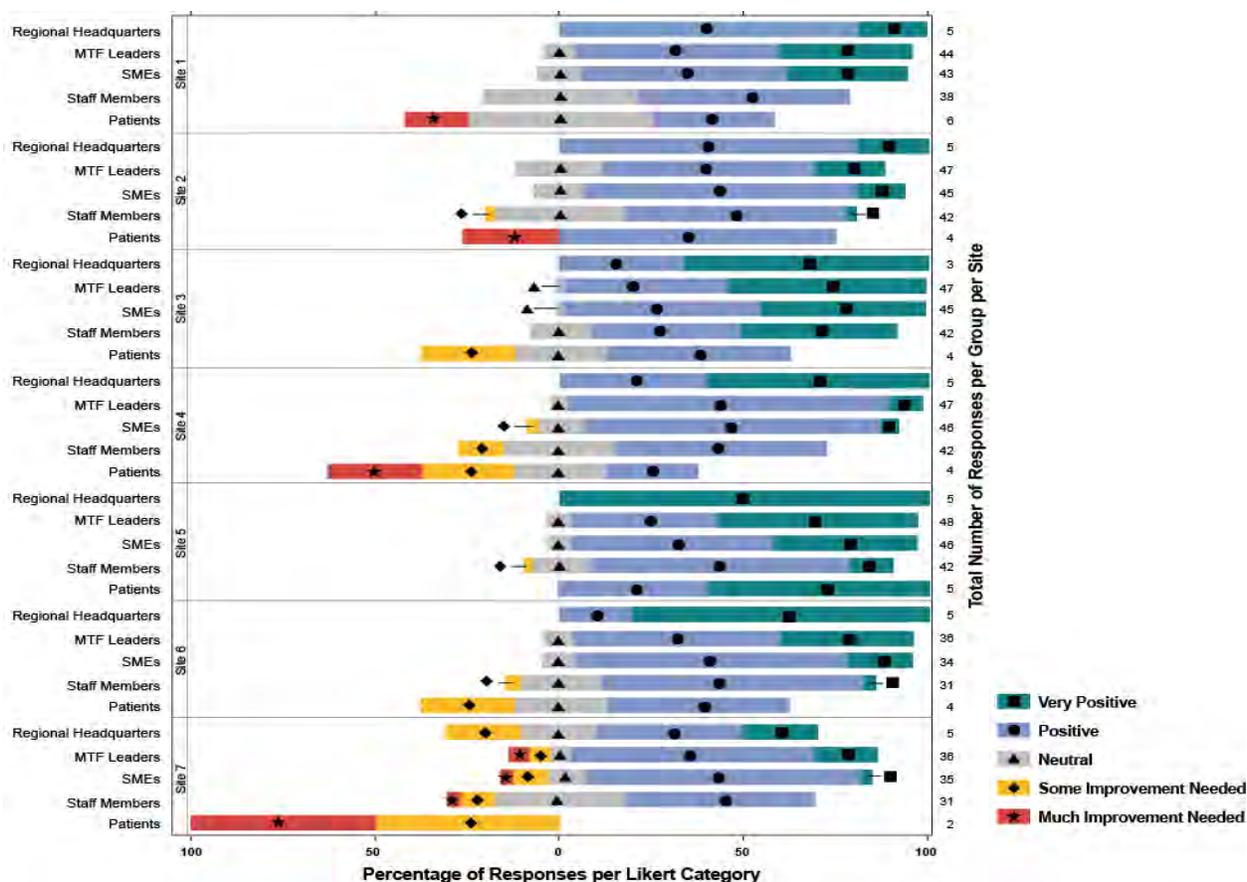
2014 MHS Review Group
Source: MHS Site Visit Survey, June - July 2014

Policy

Current DoD policy regarding quality of care emphasizes organizational commitment to performance improvement and communicates MHS goals and objectives related to quality, efficient, and safe patient care across the organization. However, during discussions with leadership, quality managers and staff it was apparent that quality practices vary among MTFs, with disparity in the execution and compliance of Service policies noted. Additionally, despite established policy, there was no consistent approach to the identification and management of quality issues in the purchased care component. In some MTFs the business office served as the point of contact for all purchased care issues, while at others the quality office served that role. Most MTFs forwarded all purchased care issues to the regional or overseas contractor representative, whereas one MTF forwarded all purchased care issues to the TRICARE Regional Office. The written guidance regarding the identification and management of quality and patient safety issues in the purchased care component was inconsistent.

Leadership

Awareness of quality initiatives and organizational performance was clearly evident at the executive and quality management levels, but not as evident at the staff and patient levels. MTFs strive to meet established national outcome benchmarks through process improvement initiatives. However, there is notable variability of MTF involvement in quality efforts. Performance initiatives were identified by leaders but staff was often unaware of its role in improvement efforts.

MTFs with a multidisciplinary approach that involved provider and nursing representatives performed exceptionally well in their quality and data sharing efforts. At 5 of 7 sites it was noted that quality and performance improvement efforts were not efficiently shared across the MTF, which affects overall quality efforts.

Executive leaders at all MTFs were very familiar with HEDIS®, ORYX®, Experience of Care and PCM continuity data, but did not have as much familiarity with NSQIP® and NPIC data. None of the MTFs were aware of PQI/IQI data. All MTFs were addressing National/DoD required benchmarks and performance measures where they were underperforming through measure champions, aggressive provider and clinic management staff involvement, and patient education/awareness initiatives.

Quality Improvement Infrastructure

The quality improvement infrastructure was measured in relation to the following three key components: Resources and Staffing, Training, and Information Technology

Resources and Staffing: Vacant positions and civilian hiring action delays were reported by leadership and staff at multiple MTFs. Staffing shortages include civilian and military personnel at all levels within the MTFs. Some MTFs reported decreasing services or shifting workload to purchased care. At one MTF, radiology staff shortages resulted in shifting workload to the network, despite the fact that MRI and ultrasound equipment were available. Staff at a number

of MTFs reported working on quality initiatives and filling quality positions as an additional duty without training. Multiple MTF leaders and staff interviewed expressed concerns with the length of time it takes to hire personnel and complete in-processing requirements in a timely manner. Staff turnover was also identified by staff and patients as an impediment to consistent quality care. It was reported that MTF-wide analytic proficiency and expertise was deficient. Additionally, case manager personnel and services were located under different directorates. Case manager caseloads did not comply with current policies. For example, one MTF case manager had a caseload of 45 Wounded, Ill and Injured (WII) Service members, which is greater than the current MHS Medical Management policy of no more than 17 WII Service members per case manager.

Training: There is no DoD policy requirement for quality training for leaders, quality management personnel, or general staff. Quality staff is not required by position description to be certified in quality management. Most quality staff interviewed received no formal quality training. Recent budget constraints and changes to the DoD conference attendance policy have limited training opportunities. Quality staff reported not having the training or expertise to analyze and synthesize data to improve performance. Staff is attempting to adhere to local MTF policies; however there is a noticeable discrepancy in the full understanding and utilization of quality outcome measures and data, and staff role in implementing quality initiatives.

Information Technology: The current information technology (IT) infrastructure and rigid network requirements resonate across all MTFs as problematic. MTFs expressed concerns with their inability to implement applications.[51] Also, it was noted that there are delays for new staff members to gain access to the network and IT applications. Two MTFs commented on technical support challenges with AHLTA, Essentris, or CHCS, and concerns that this could affect patient care and safety (e.g., access to medical record). The process to obtain a Department of Defense Information Assurance Certification and Accreditation Process (DIACAP) approval for installation of new software is time consuming and cumbersome. One MTF experienced interface connectivity issues between laboratory analyzers and CHCS, lasting seven months and resulting in manual data entry, increasing risk for error. Three of seven MTFs were able to access civilian electronic health records (EHR) for enrolled beneficiaries, which enhances continuity and quality of care. Three MTF Emergency Departments are still using paper records.

Performance Improvement Efforts

Quality and Process Improvement (PI) initiatives are occurring throughout the MTFs. Each Service used specific PI methodologies (AF-AFSO21, Army-PDSA and Navy-PDCA). However, staff empowerment and commitment varied.

- In several facilities it was not clear to what extent quality information and guidance was shared throughout the chain of command;

---

[51] For example, peer reviews, morbidity and mortality review, radiology programs, and updating IV pump libraries.

- Sustainment plans were not always built into PI projects;
- At a number of MTFs, leadership approved all PI projects, compared to other MTFs where it is more departmental-driven.
- At most MTFs it did not appear that PI decisions involved staff at the lower level.

Performance initiatives are top-down driven; however, frontline staff is not always aware of its role in process improvement efforts or in the new processes resulting from the efforts. The most widely used improvement process was the Rapid Cycle Improvement through the use of successive Plan-Do-Check-Act (PDCA) type cycles. Other models used for continuous process improvement included Lean, Six Sigma, and Business Process Re-engineering. Management of quality measures varies among MTFs based on staffing, resources, data lag, and level of understanding and expertise. There is a lack of consistency in implementation and utilization of Clinical Practice Guidelines (CPG). Some of the DoD/VA CPGs are imbedded in AHLTA workflow forms at MTFs, but staff is not fully aware of this capability. Leadership rounds were being conducted at all of the MTFs visited; however, there is confusion as to the function of such rounds, particularly when it pertains to quality and accreditation issues. MTFs did not have processes or policies in place for ensuring that patients receive notification of abnormal results in a timely and standardized manner, unless they were critical.

Patient Focus

Patients overall were pleased with the care they received. Patient awareness and involvement in processes related to quality was generally limited to their participation in surveys.[52] Transparency of quality measures is limited. There was little to no patient involvement in the MTFs' quality-related committees. During patient interviews, a number of patients reported not receiving laboratory and radiology results. None of the seven sites visited provided an instruction or guidance for patient notification of normal or abnormal results. All MTFs had policies in place that addressed critical value reporting.

Findings from Site Visits

1. Significant variability of MTF quality efforts was noted. MTF leaders strive to meet established national outcome benchmarks through process improvement initiatives.
2. Despite requirements to improve transparency in current policy, efforts to improve transparency of quality measures at the patient level was limited and varied by MTF.
3. Current DoD policy does not require quality training for leaders, quality management personnel, or general staff. Most quality staff interviewed reported receiving no formal quality training.
4. Despite established policy, there was no consistent approach to the identification and management of quality issues in the purchased care component. Inconsistencies were

---

[52] For example, ICE, APLSS, TRISS/TROSS, Service Delivery Assessment (SDA).

noted in written guidance regarding the identification and management of quality and patient safety issues in purchased care.

5. IT infrastructure, rigid network requirements, and technical support with clinical data systems were reported as problematic. Additionally, the process to obtain a Department of Defense Information Assurance Certification and Accreditation Process approval for installation of new software is time consuming and cumbersome.

6. Leadership and staff at multiple MTFs reported vacant positions and civilian hiring action delays. Staff and patients identified staff turnover as an impediment to consistent quality care.

7. There are inconsistencies in implementation and utilization of CPGs. Some DoD/VA CPGs are imbedded in AHLTA workflow forms at MTFs, but staff is not fully aware of this capability.

8. Three of seven MTFs have access to civilian/network EHRs for enrolled beneficiaries.

9. Processes for notification of normal and abnormal laboratory and radiology results varied by MTF.

▶ **Recommendations to Improve Quality from Site Visits**

a. DHA should establish clear and consistent guidelines for the CONUS TRICARE Regions and the OCONUS Area Offices on reporting and processing quality and patient safety issues identified in the purchased care component.

b. MHS governance should work with the Services to increase the use of Clinical Practice Guidelines in the direct care component.

c. MHS governance should evaluate the feasibility of DoD and TRICARE regional contractor collaborations/MOUs with local purchased care organizations to support electronic health record accessibility.

d. MHS governance should develop processes to ensure standardized notification requirements for laboratory and radiology services.

Staff Town Halls

Staff town halls were conducted to assess staff knowledge and experience with quality of care policies and procedures. Each town hall afforded flexibility to explore issues based on the feedback and direction the participants desired to express, making each one unique based on local conditions. The theme across all sites was the varying level of successes and challenges in meeting quality standards.

The staff demonstrated good understanding of quality issues within their areas and is doing everything within their control to take care of the beneficiary. One challenge to meeting demand was staffing shortages and variations in schedule management between clinics, which led to increased workload, and lower patient care quality and overall continuity of care. As a means to alleviate this, staff was willing to stay late to treat patients. They would take additional appointments when necessary to ensure patients were seen and not automatically sent to the Emergency Department. While this contributed to provider fatigue, it showed that they valued quality care within the MTFs.

The lack of continuity among providers due to workforce rotation detracts from the ability to deliver quality care. Frequent leadership turnover resulted in constant changes to policies and procedures, and affected the patient's perception of the quality of care they were receiving. Workforce rotation also resulted in an ineffective transition between incoming and outgoing providers, causing the continuity of patient care to suffer. Staff also voiced concerns about the requirement to see a certain number of patients, which took precedence over delivering quality care to patients. There was an expectation to meet a specific patient quota, which caused staff to regularly work overtime to see patients and get paperwork done. Staff also commented on communication issues. For instance, staff indicated that there are silos that prevent good, timely communication across MTF departments. Staff suggested that meetings could serve as a forum to exchange innovative ideas and to inform all staff about key MTF initiatives, such as efforts to recapture. There are also concerns that patient information is not documented in such a way that their information could be communicated from provider-to-provider when health records are not readily available. Staff also expressed anxieties regarding inconsistent processes across the MTFs. For example, one staff member stated that the lack of standardization and hardwired processes has been a recurring concern that has not been adequately addressed.

Overall, a majority of MTF staff felt that the overall culture of quality within the MHS is satisfactory but there is still room for improvement. TeamSTEPPS has been implemented across the MTFs as a means to bridge the gap in communication and eliminate any barriers to quality patient care. Generally, staff appeared to be passionate in their roles and strive daily to deliver quality care throughout the MHS.

Beneficiary Town Halls

Beneficiary town hall meetings were conducted to get a sense of the patient viewpoint in accessing MHS quality of care at the MTF and purchased care systems. Each meeting afforded participants the opportunity to voice concerns or successes, making each one unique based on the local conditions.

Throughout each site visit town hall meeting, the responses ranged from 'very satisfied' to 'very dissatisfied', with a higher proportion of 'dissatisfied' responses. In some instances, beneficiaries spoke highly of the care they received but found it challenging to consistently schedule appointments with the same provider. Several patients expressed frustration that their PCM constantly changed, sometimes with no notification, and there were challenges seeing their PCM consistently within TRICARE standards. Beneficiaries were, however, very satisfied with RelayHealth when their doctor was an active user.

At one location, there was a perception that the quality of care at the MTF was superior to the care received in the network. However, some felt the care to be lacking at the MTF and deferred to the network claiming shorter wait times and better provider attentiveness to patient concerns. Some beneficiaries found that EHRs were not accessible from direct care providers to purchase care providers, which negatively affected their ability to receive quality care. Several beneficiaries felt that thorough screenings were lacking due to the providers' tight time deadlines and the strict patient quota. Patients also felt their screenings were rushed and the overall quality

was deficient. Further, when participants were asked how they voiced quality concerns, several stated that they use customer feedback tools that were in place, such as the Interactive Customer Evaluation System, or communicate their concerns directly to MTF patient advocates. In many cases, beneficiaries indicated they were aware of and used the different mechanisms available, but found that once their concerns and issues were reported, they were not addressed. Participants also cited that patient advocates are outranked by the person whom she or he might receive a complaint about, and this intimidation factor often leads to an ineffective system, since they are reluctant to share the information up the chain. Overall, however, the participating beneficiaries expressed satisfaction with their care once in the system.

During interviews and town hall forums, beneficiaries expressed overall satisfaction with the quality of care they received, but voiced concerns that gaining access to care could be difficult. Town hall participants conveyed that they were unable to schedule appointments with their PCM or the same provider. They also stated that when they did obtain an appointment with members of their PCMH team, often the providers were unfamiliar with their medical history so they felt that they had to keep repeating their stories. Many of the concerns raised during the interviews and town halls were validated during the site visit walking rounds.

Quality of Care: Overall Findings and Recommendations

Based on the analysis of available MHS quality data, there are several high-level findings and recommendations regarding the quality of care, as summarized here.

1. It is clear that the MHS is dedicated to quality health care and performance improvement. In several areas, the MHS outperforms or is equal to national benchmarks. Other areas were identified for focused improvement in performance and to reduce variation in performance. It will be necessary to refocus the organization's quality culture for more rapid and continued improvement in quality of care. The MHS Review Group recommends that MHS governance research and implement health care industry best practices of a high reliability organization to revitalize and sustain necessary cultural changes throughout the MHS.

2. While comparison to national benchmarks is helpful, because of the variances inherent among health care systems, direct comparison between the MHS and civilian health systems proved challenging, with limitations in the comparative portion of the analysis. The MHS Review Group recommends that the MHS continue building relationships with civilian health systems to participate in collaboration and data sharing in order to facilitate more complete comparisons.

3. Under-developed MHS-level enterprise processes currently limit data standardization, collection, and analysis to drive system wide improvement (e.g., governance, standard business and clinical processes, shared services). Variation exists in the use of existing data to identify and prioritize objectives. The MHS Review Group recommends that the MHS develop and implement a performance management system that links to MHS and Service strategies with MHS dashboards and common systemwide performance measures

to support visibility of those measures across the enterprise. The MHS should also create and use a MHS data analytics capability to provide analysis and actionable information to the Services and DHA.

4. DOD quality policy (DODI/DODM 6025.13) lacks specificity with regard to quality measurement and performance improvement. The MHS should update or supplement DoDI and DoDM 6025.13 with specific guidance on quality measurement, performance improvement, and requirements necessary for assessing and improving quality education and training.

5. While there is a significant amount of quality training occurring in the Services, there is no clearly prescribed quality-specific training and education by MHS policy. The DHA Education and Training Directorate should conduct an in-depth review and needs assessment of quality training to assess the efficacy of training being accomplished.

6. There are gaps in the enterprise processes to validate Service compliance with policies and directives disseminated from ASD(HA). The MHS Review team recommends ASD (HA) develop and implement a process to manage and track compliance of Services and DHA with applicable DoD policies and directives.

This page left intentionally blank.