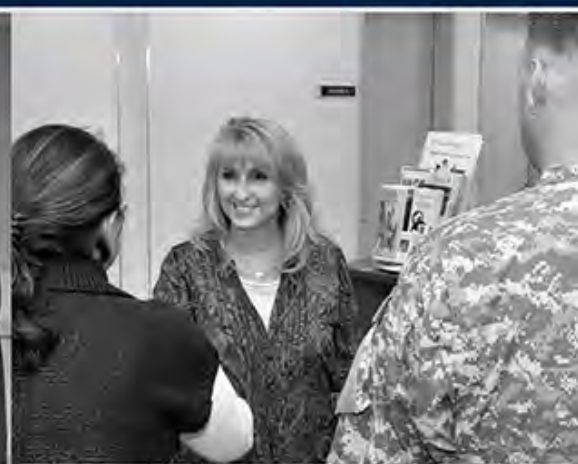




August 2014

Final Report to the Secretary of Defense

Military Health System Review



This page left intentionally blank.

TABLE OF CONTENTS

| | |
|-------------------------------------------------------------------|-----------|
| EXECUTIVE SUMMARY | 1 |
| The Military Health System..... | 1 |
| Review Methods and Scope..... | 2 |
| Key Findings..... | 3 |
| General Findings..... | 3 |
| Access to Care..... | 4 |
| Quality of Care..... | 5 |
| Patient Safety | 6 |
| Recommendations..... | 7 |
| Conclusion | 8 |
| Additional Considerations | 9 |
| | |
| 1. INTRODUCTION | 11 |
| Goals, Objectives, Methods, and Limitations of the Review | 13 |
| Goals | 14 |
| Objectives | 14 |
| Methods..... | 14 |
| Data Analysis and Limitations..... | 17 |
| Organization of the Report | 18 |
| | |
| 2. OVERVIEW OF DOD’S MILITARY HEALTH SYSTEM | 19 |
| Introduction..... | 19 |
| Beneficiary Demographics | 21 |
| Policies for Priority of Access | 22 |
| DoD Military Medical Operations..... | 22 |
| Overview of Military Health System (MHS) Governance | 24 |
| Governance Reform Related to Performance Improvement..... | 29 |
| Component Responsibilities within the Military Health System..... | 31 |
| Resource Support for Patient Quality, Access and Safety..... | 32 |
| Conclusions..... | 32 |
| | |
| 3. ACCESS TO CARE IN THE MILITARY HEALTH SYSTEM | 33 |
| Introduction..... | 33 |
| Access to Care Governance | 34 |
| Policy Review and Identification of Gaps..... | 35 |
| ASD(HA) – Overarching Guidelines..... | 35 |
| Military – Service-Level Instructions | 35 |
| TRICARE – Purchased Care Guidelines | 35 |
| External Reviews | 35 |

| | |
|-----------------------------------------------------------------------------------------------------------------|-----------|
| Education and Training..... | 36 |
| Methodology..... | 36 |
| Direct Care Component Analysis | 38 |
| Acute Care | 38 |
| Routine Care | 44 |
| Specialty Care | 47 |
| Average Days to Third Next Specialty Care Appointment | 49 |
| Emergency Department and Urgent Care Center Utilization by MTF Enrollees in the Purchased Care Network | 56 |
| Patient Satisfaction Surveys..... | 57 |
| Purchased Care | 64 |
| Network Adequacy (United States) | 64 |
| 28-Day Access to Network Care (United States) | 66 |
| Patient Satisfaction with Network Access to Care (United States) | 67 |
| Access to Network Care (Overseas) | 68 |
| Site Visit Information | 70 |
| Introduction..... | 70 |
| Regional and Headquarters Leadership Survey | 71 |
| On-site: Leadership, Staff, Patients | 71 |
| Site Visit Survey Results | 72 |
| Staff Town Halls..... | 73 |
| Beneficiary Town Halls | 73 |
| Access to Care: Overall Findings and Recommendations..... | 74 |
| Recommendations to Improve Access to Care | 75 |
| 4. QUALITY OF CARE IN THE MILITARY HEALTH SYSTEM..... | 77 |
| Introduction..... | 77 |
| Quality of Care Governance | 77 |
| Policy Review | 78 |
| Army Policy Guidance..... | 79 |
| Navy Policy Guidance | 80 |
| Defense Health Agency/National Capital Region Medical Directorate (NCR MD) Policy Guidance | 82 |
| Policy Guidance for Purchased Care | 82 |
| Review of Internal and External Studies on Quality of Care | 83 |
| Gap Analysis..... | 83 |
| Purchased Care Gap Analysis..... | 84 |
| Education and Training..... | 85 |
| Data Analysis..... | 85 |
| Accreditation and Certification..... | 87 |
| Service-Level Discussion..... | 87 |
| Facility Type, Location, and Other Discussions..... | 88 |
| HEDIS® Measures of Performance..... | 88 |

| | |
|--------------------------------------------------------------------------|------------|
| Quality of Care in the Purchased Care Component | 92 |
| ORYX [®] – National Hospital Quality Measures..... | 94 |
| Prevention Quality Indicators (PQI)..... | 98 |
| Thirty-Day Readmissions | 100 |
| National Perinatal Information Center (2010-2013)..... | 102 |
| Comparative Measures..... | 103 |
| National Surgical Quality Improvement Program (NSQIP [®])..... | 110 |
| Inpatient Mortality Measures..... | 119 |
| Experience of Care Summary | 122 |
| Comparison to External Health Systems | 126 |
| Primary Care Manager Continuity..... | 129 |
| Site Visit Information | 132 |
| Policy | 133 |
| Leadership..... | 133 |
| Quality Improvement Infrastructure | 133 |
| Performance Improvement Efforts | 134 |
| Patient Focus..... | 135 |
| Staff Town Halls | 136 |
| Beneficiary Town Halls | 137 |
| Quality of Care: Overall Findings and Recommendations..... | 138 |
| 5. PATIENT SAFETY IN THE MILITARY HEALTH SYSTEM | 141 |
| Introduction..... | 141 |
| Patient Safety Governance..... | 141 |
| Measures: Using Data to Drive Change..... | 142 |
| Performance Improvement Initiatives..... | 143 |
| Policy Review | 143 |
| DoDI 6025.13 and DoDM 6025.13 | 143 |
| Review of External Reports Regarding Patient Safety | 146 |
| Education and Training: Patient Safety Program | 147 |
| Measures of Safety..... | 148 |
| Measures within Direct Care settings | 149 |
| Patient Safety Culture Survey..... | 149 |
| PSI #90 Composite for the Military Health from CY 2010-2013 | 153 |
| Healthcare-Associated Infections, CY 2010 to 2013..... | 159 |
| Sentinel Event (SE) Reporting..... | 164 |
| Root Cause Analysis..... | 168 |
| Performance Improvement Root Cause Analysis..... | 175 |
| Patient Safety Reporting System (PSRS) | 178 |
| Measures within Purchased Care Settings | 180 |
| Site Visit Information | 186 |
| Executive Leadership Session..... | 186 |
| Functional Staff Focus Group..... | 186 |
| General Staff Interviews | 187 |

| | |
|------------------------------------------------------------|------------|
| Patient Interviews..... | 187 |
| Staff Town Hall Results..... | 187 |
| Beneficiary Town Hall Results..... | 188 |
| Site Visit versus Central Data Comparative Summary..... | 188 |
| Patient Safety: Overall Findings and Recommendations | 190 |
| Overarching Recommendations to Improve Patient Safety..... | 191 |
| 6. CONCLUSIONS | 193 |
| Access to Care | 193 |
| Quality of Care..... | 194 |
| Patient Safety | 194 |
| Summary | 195 |

LIST OF TABLES

| | |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Table 1.1 MHS Review Site Visit Locations..... | 16 |
| Table 2.1 Average Weekly Statistics in the MHS | 19 |
| Table 2.2 Distribution of Beneficiaries across the Military Departments and National Capital Region Medical Directorate | 22 |
| Table 3.1 MHS vs. CA Standards Comparison | 38 |
| Table 3.2 Average Number of Days to Third Next Acute Appointment (Primary Care) by Service and Percent of 24-Hour Care Appointments..... | 43 |
| Table 3.3 Type of Patient-Initiated Clinical Message | 54 |
| Table 3.4 Registered Users Initiating a Secure Message to PCM, FY14 | 54 |
| Table 3.5 CAHPS Benchmarks..... | 68 |
| Table 4.1 Numbers of Policies, Instructions, Resources and Manuals Reviewed..... | 78 |
| Table 4.2 Comparison of HEDIS® 2013 Data for MHS Against External Comparison Organizations (Health Systems 1, 2, and 3)..... | 91 |
| Table 4.3 National Hospital Quality Measures Monitored for Both Direct and Purchased Care..... | 93 |
| Table 4.4 TJC Core Measure Sets Monitored for both Direct and Purchased Care | 95 |
| Table 4.5 Composite Measures for 13 ORYX Measures | 96 |
| Table 4.6 PQI Indicator Measures | 98 |
| Table 4.7 PQI Compliance Rate by Service (2010 – 2013)..... | 99 |
| Table 4.8 Readmission Rates According to Services, 2010 – 2013 | 100 |
| Table 4.9 Readmission Rate According to Facility Type, 2010 – 2013 | 101 |
| Table 4.10 Readmission Rate Comparison to External Health Systems, 2010 – 2013 | 101 |
| Table 4.11 National Perinatal Information Center – Executive Summary Measures..... | 102 |
| Table 4.12 Perinatal Performance Measures Summary – 2013 Annual Rates | 108 |
| Table 4.13 Mortality Measures..... | 119 |
| Table 4.14 Direct Care Component IQI Condition-specific Mortality Rates for 2010 – 2013 .. | 120 |
| Table 4.15 Facility-specific Risk-adjusted Standardized Mortality Ratios for 2013..... | 121 |
| Table 4.16 Ratings of Overseas and U.S. Facilities by OCONUS and CONUS..... | 125 |
| Table 4.17 Rating of Health Care Plan, 2011 – 2013 | 126 |
| Table 4.18 Rating of Personal Doctor, 2011 – 2013..... | 126 |
| Table 4.19 Health Care Rating, 2011 – 2013..... | 127 |
| Table 5.1 HSOPS Dimensions..... | 150 |
| Table 5.2 Direct Care Component HSOPS Results: Average Percent Positive Responses across Dimensions | 150 |
| Table 5.3 Average Percent Positive Responses Across Dimensions..... | 151 |
| Table 5.4 HSOPS Percent Positive Results for Comparing Direct Care 2011 Results to Health System 3 Survey..... | 152 |
| Table 5.5 Direct Care CAUTI by ICU Type, for Total Period, CY10 – CY13 | 161 |
| Table 5.6 Direct Care CLABSI by ICU Type, for Total Period CY10 – CY13 | 162 |
| Table 5.7 Direct Care VAP by ICU Type, for Total Period CY10 – CY13 | 162 |
| Table 5.8 DoD Direct Care and Civilian Health Care Systems HAI Rates..... | 163 |
| Table 5.9 Top 5 Sentinel Events by Year | 165 |
| Table 5.10 Top Five Sentinel Events by Service with Frequency Count, 2010 – 2013 | 166 |

| | |
|-------------------------------------------------------------------------------------------------------------|-----|
| Table 5.11 Number of RCAs reported to PSAC, DHA, and Health Affairs by FY of Event Date | 169 |
| Table 5.12 RCAs by Event Type submitted to PSAC, FY10 – FY13 (rank ordered) | 170 |
| Table 5.13 Level of Harm Results for RCA Investigations by FY and Service, FY10 – FY13 | 173 |
| Table 5.14 Direct Care SE RCA, Level of Harm Findings, FY11 – FY13 | 174 |
| Table 5.15 System 3 SE RCA, Level of Harm Findings, FY11 – FY13 | 175 |
| Table 5.16 Service Identified Source for RCA Classification of Event Type and Total Number of PI RCAs | 176 |
| Table 5.17 Top PI RCAs for DoD Overall, Air Force, Navy, Army, and NCR MD | 177 |
| Table 5.18 PSI Rates for Purchased Care Regions Compared to AHRQ National Benchmarks, FY 10 – FY13 | 182 |

LIST OF FIGURES

| | |
|---------------------------------------------------------------------------------------------------------------------------|----|
| Figure 1.1 Veterans Health Administration | 13 |
| Figure 2.1 MHS Global Distribution of MHS Direct Care Platform..... | 24 |
| Figure 2.2 Organizational Structure of the Military Health System within the Department of Defense | 26 |
| Figure 2.3 Governance Structure of the Military Health System | 28 |
| Figure 3.1 Average Number of Days to Acute Appointment – Overall: MHS Access Standard < 1 Day | 39 |
| Figure 3.2 Average Number of Days to Acute Appointment – By Service: MHS Access Standard ≤ 1 Day | 40 |
| Figure 3.3 Average Number of Days to Acute Appointment – By Facility Type: MHS Access Standard ≤ 1 Day | 41 |
| Figure 3.4 Average Number of Days to Third Next Acute Appointment (Primary Care) – Direct Care Component Overall | 42 |
| Figure 3.5 Average Number of Days to Third Next Acute Appointment (Primary Care) – By Service..... | 43 |
| Figure 3.6 Average Number of Days to Third Next Acute Appointment (Primary Care) – By Type of MTF | 44 |
| Figure 3.7 Average Number of Days to Third Next Routine Appointment (Primary Care) Overall..... | 45 |
| Figure 3.8 Average Number of Days to Third Next Routine Appointment (Primary Care) – By Service..... | 46 |
| Figure 3.9 Average Number of Days to Third Next Routine Appointment (Primary Care) – By Type of MTF | 46 |
| Figure 3.10 Average Number of Days to Specialty Appointment – Overall: MHS Access Standard ≤ 28 Day | 47 |
| Figure 3.11 Average Number of Days to Specialty Appointment – By Service: MHS Access Standard ≤ 28 Day | 48 |
| Figure 3.12 Average Number of Days to Specialty Appointment – By Facility Type: MHS Access Standard ≤ 28 Day | 49 |
| Figure 3.13 Average Number of Days to Third Next Specialty Care Appointment – Overall..... | 50 |
| Figure 3.14 Average Number of Days to Third Next Specialty Care Appointment – By Service..... | 50 |
| Figure 3.15 Average Number of Days to Third Next Specialty Care Appointment – By Facility Type | 51 |
| Figure 3.16 TRICARE On-Line (TOL) Web-Enabled Appointments: MHS Overall..... | 52 |
| Figure 3.17 Number of MTF Enrollees Registered in Secure Messaging – By Service, August 2010 – May 2014..... | 53 |
| Figure 3.18 Nurse Advice Line (NAL) Calls Triageed 28 March to 25 July 2014..... | 55 |
| Figure 3.19 MTF Enrollee Primary Care Workload, by Venue of Care, FY11 – FY14 | 56 |
| Figure 3.20 Satisfaction with “Getting Care When Needed” (Service Surveys) Overall, FY12 Q1 – FY14 Q1..... | 57 |
| Figure 3.21 Satisfaction with “Getting Care When Needed” (Service Surveys) – By Service*, FY12 Q1 – FY14 Q1..... | 58 |

| | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Figure 3.22 TROSS – Satisfaction with Access to Care – Direct Care, FY11 Q1 – FY13 Q4 | 59 |
| Figure 3.23 TROSS – Satisfaction with Access to Care – By Service, FY11 Q1 – FY13 Q4..... | 59 |
| Figure 3.24 TROSS – Satisfaction with “Seeing Provider when Needed.” Direct Care, FY11 Q1 – FY13 Q4..... | 60 |
| Figure 3.25 TROSS – Satisfaction with “Seeing Provider when Needed,” by Service, Direct Care, FY11 Q1 – FY13 Q4..... | 60 |
| Figure 3.26 HCSDB – Satisfaction with “Getting Care Quickly”, FY10 Q1 – FY14 Q2..... | 61 |
| Figure 3.27 HCSDB – Satisfaction with “Getting Care Quickly” – by Service, FY10 Q1 – FY14 Q2..... | 62 |
| Figure 3.28 HCSDB – Satisfaction with “Getting Care When Needed”, FY10 Q1 – FY14 Q2..... | 63 |
| Figure 3.29 HCSDB – Satisfaction with “Getting Care when Needed” – by Service, FY10 Q1 – FY14 Q2..... | 63 |
| Figure 3.30 Primary Care Providers per 1,000 Enrolled Beneficiaries (Restricted to beneficiaries living in Prime Service Areas), FY11 Q1 – FY13 Q3 | 65 |
| Figure 3.31 Specialty Care Providers per 1,000 Enrolled Beneficiaries (Restricted to beneficiaries living in Prime Service Areas), FY11 Q1 – FY13 Q3 | 65 |
| Figure 3.32 Percent of Patients in a PSA Required to Drive More than 60 Minutes to see a Specialist..... | 66 |
| Figure 3.33 Percentage of Network Referrals Meeting 28 Day Access Standard, by PSA (Each point represents one PSA), FY11 Q1 – FY14 Q4 | 67 |
| Figure 3.34 U.S. Network Satisfaction: Four Satisfaction Measures, FY10 Q1 – FY14 Q1 | 68 |
| Figure 3.35 Satisfaction with International SOS Coordination of Specialty Care, FY11 Q2 – FY13 Q4..... | 69 |
| Figure 3.36 Satisfaction with Civilian Network Care, FY11 Q2 – FY13 Q4..... | 70 |
| Figure 3.37 Access: Perceptions Among Regional Headquarters, MTF Leaders, Subject Matter Experts (SMEs), Staff Members and Patients During Seven MHS Site Visits, 2014 | 73 |
| Figure 4.1 Purchased Care Compliance Rate, FY09 – FY12 | 94 |
| Figure 4.2 Annual Rate of Vaginal Deliveries Coded with Shoulder Dystocia, CY10 – CY13 | 104 |
| Figure 4.3 Annual Postpartum Hemorrhage Rate, CY10 – CY13..... | 104 |
| Figure 4.4 Annual Rate of PSI 17 Injury to Neonate, CY10 – CY13..... | 106 |
| Figure 4.5 2013 Direct Care Breakout of Inborn Birth Trauma Occurrences by Diagnostic Code | 106 |
| Figure 4.6 Infant Mortality Rate (per 1,000 live births) for Infants Weighing 500 Grams or Greater, CY10 – CY13 | 107 |
| Figure 4.7 ALL-CASE Mortality and Morbidity, MTFs, 2010 – 2013 | 112 |
| Figure 4.8 Morbidity Trends across MTFs, 2010 – 2013 | 113 |
| Figure 4.9 MTF Comparison by Type of Morbidity Outcome, 2010 – 2013 | 114 |
| Figure 4.10 Service-Level Comparison, 2010 – 2013 | 115 |
| Figure 4.11 Number of MTFs that Need Improvement, Meet Standards, or Exceed Standards in Post-surgical Morbidity by Facility Type (2010 – 2013) | 115 |
| Figure 4.12 MHS Surgical Mortality and Morbidity Rates July 2010 – June 2013 | 116 |
| Figure 4.13 MHS and HS3 Surgical Morbidity Rates, July 2012 – June 2013 | 117 |

Figure 4.14 Direct Care Partnership for Patients (PfP) Surgical Site Infection Rates, 2010 – 2013..... 118

Figure 4.15 Comparison of TRISS to Three Other Health Systems for Hospital Ratings, CY13, Monthly 127

Figure 4.16 Comparison of TRISS to Three Other Health Systems for Recommend Hospital, CY13, Monthly..... 128

Figure 4.17 MHS Primary Care Manager (PCM) Continuity..... 130

Figure 4.18 Percent of Appointments where the Patient Saw their Assigned PCM – By Service..... 130

Figure 4.19 Percent of Appointments where the Patient Saw their Assigned PCM – by Facility Type 131

Figure 4.20 Perceptions Among Regional Headquarters, MTF Leaders, Subject Matter Experts (SMEs), Staff Members and Patients During Seven MHS Site Visits, 2014..... 132

Figure 5.1 MTF Performance versus Reference Population, CY10 – CY13..... 155

Figure 5.2 MTF Performance versus National Benchmark Rate, CY10 – CY13..... 156

Figure 5.3 Boxplot of PSI #90 Composite: Direct Care Relative to Systems 1, 2, 3 158

Figure 5.4 Interval Plot of PSI #90 Composite by System and Time Period 158

Figure 5.5 Number of SEs across Direct Care, Health System 2, and System 3, FY11 – FY13 167

Figure 5.6 SE Rates per 1,000 Discharges, Direct Care and Health System 2, FY11 – FY13... 167

Figure 5.7 Air Force Top 4 Event Types for RCA Reports Submitted, FY10 – FY13 171

Figure 5.8 Army Top 4 Event Types for RCA Reports Submitted, FY10 – FY13 172

Figure 5.9 Navy Top 4 Event Types for RCA Reports Submitted, FY10 – FY13 172

Figure 5.10 PI Service RCAs by Year and Service 176

Figure 5.11 Total PSR Events by Month, FY12 – FY13 178

Figure 5.12 Events by Harm by Month, FY12 – FY13 179

Figure 5.13 Total Number of Quality Issues (QIs) for AHRQ PSIs, HACs, SREs Identified in FY10 – FY13 for Purchased Care..... 183

Figure 5.14 Total Number of Quality Issues (QIs) for AHRQ PSIs, HACs, SREs Identified in FY10 – FY13, by Region for Purchased Care 184

Figure 5.15 Total Number of National Quality Forum Serious Reportable Events in FY10 – FY13, by Region for Purchased Care 185

Figure 5.16 Safety: Perceptions Among Regional Headquarters, MTF Leaders, Subject Matter Experts (SMEs), Staff Members, and Patients During Seven MHS Site Visits, 2014 189

This page left intentionally blank.

EXECUTIVE SUMMARY

On May 28, 2014, the Secretary of Defense ordered a comprehensive review of the Military Health System (MHS). The review was directed to assess whether: 1) access to medical care in the MHS meets defined access standards; 2) the quality of health care in the MHS meets or exceeds defined benchmarks; and 3) the MHS has created a culture of safety with effective processes for ensuring safe and reliable care of beneficiaries. This is the first time the MHS has taken an enterprise view of such scope in these areas.

Based on information analyzed during the review, the MHS provides good quality care that is safe and timely, and is comparable to that found in the civilian sector. However, the MHS demonstrates wide performance variability with some areas better than civilian counterparts and other areas below national benchmarks.

Together, the review's results and the professional inputs from six external experts indicate clear opportunities to improve health care delivery. By implementing effective strategies used by other high-performing organizations, the MHS can create an optimal health care environment that focuses on continuous quality improvement where every patient receives safe, high-quality care at all times.

The major recommendations in this report are directed at system enhancements to address areas of concern and to drive change that will foster creation of a high reliability health system. High reliability organizations, in general, are those where harm prevention and quality improvement are second nature to all in the organization. Such organizations recognize the risk of over simplification in complex systems: thus, implementation of the proposed recommendations should not be expected to result in immediate change. MHS governance can support performance improvement with better analytics, greater clarity in policy, and aligned training and education programs. However, improving outcomes is about decreasing performance variance at the individual facility level, which requires consistent leadership vigilance, with the goal of making the MHS a top-tier health care system.

The Military Health System

The MHS is a global, comprehensive, integrated system that includes combat medical services, health readiness futures, a health care delivery system, public health activities, medical education and training, and medical research and development. The fundamental mission of the MHS, providing medical support to military operations, is different from that of any other health system in the United States. The operational aspects of the MHS are divided among the three

“The report provided no evidence of substantive deficiencies in the safety, quality, and access to care at MHS that would warrant broad and urgent changes.”

Peter Pronovost, M.D., Ph.D.,
FCCM
Johns Hopkins Medicine Senior
Vice President for Patient Safety
and Quality
Director of the Armstrong Institute
for Patient Safety and Quality

Military Departments (Army; Navy, to include Marine Corps; and Air Force), with each Service and the Defense Health Agency controlling and operating their own medical centers, hospitals, and clinics worldwide.

As one of the largest health care providers in the United States, the MHS combines resources from both direct and purchased care components, facilitating ready access to health care for 9.6 million beneficiaries, including Service members, retirees, and their eligible family members. In Fiscal Year 2013, the direct care component of military treatment facilities (MTFs) consisted of 56 hospitals, 361 ambulatory care clinics, and 249 dental clinics, operating worldwide and employing 60,389 civilians and 86,051 military personnel. The purchased care component, which is used when care cannot be provided within the military system, includes civilian network hospitals and providers operated through TRICARE regional contracts.

Like every large health care system, the MHS is constantly responding and adapting to changing demographics, shifting policies, evolving standards for access and quality, advances in science and medicine, complex payment and cost considerations, rapidly evolving communications and information technology capabilities, and fluid patient expectations. In addition, the MHS recently reformed its governance structure in October 2013. All health care systems, including the MHS, are expected to engage in systematic performance reviews designed to assess new developments and to measurably improve the delivery of health care services and the health status of the population served. These factors combined warranted an assessment of the general state of care in the MHS in order to determine where improvement is possible.

Review Methods and Scope

The intent of the MHS review was to establish a baseline measure of MHS performance and to determine if that performance is comparable to top performing health care systems. The Deputy Secretary of Defense chartered a Department of Defense (DoD) working group, with substantial input from individual experts outside of DoD, to conduct this review (members are listed in Appendix 8). This review was also tasked with identifying gaps that prevent the MHS from being considered a leading health care system, and with offering recommendations to facilitate progress.

“The thoroughness of the approach to the Report was apparent in its inclusion of multiple data sources, stakeholders, and analysis methods.”

Katherine L. Kahn, M.D.
Senior Scientist, RAND
Professor of Medicine
David Geffen School of
Medicine
University of California, Los
Angeles

Over a two-month period, subject matter experts collected and analyzed a variety of current metrics, compared them to existing national standards, and validated them by visiting selected military hospitals and clinics. The working group reviewed previous reports on the performance of the MHS with regard to access, quality, and safety and documented compliance with those recommendations. In addition, it reviewed all relevant policies—both

Service specific and issued by the Office of the Secretary of Defense. Three external health care systems provided their data to the MHS for the expressed purpose of comparison. During town hall gatherings of patients and staff at seven MTFs, the working group obtained impressions of how well the system provides timely access to health care, and the quality and safety of the care delivered. The collected information, methodology, and subsequent recommendations were reviewed by external experts to ensure that the review was comprehensive, the data honestly represented, and the conclusions, based on data analyses, were valid¹.

“... , it is not possible to produce clinical quality or patient safety measures that can accurately rank care.”

Brent C. James, M.D., M.Stat.
Chief Quality Officer and
Executive Director Intermountain
Institute for Health Care Delivery
Research

All external reviewers acknowledged the challenge of comparing performance across health systems and noted that many of the challenges facing the MHS are similar to inherent challenges throughout U.S. health care.

Due to the restricted time for the review, not all areas of interest were investigated; many of these are noted in the report and by the external experts. For example, determining access for individuals with specific clinical conditions would provide additional information, but could not be completed in the time available. Other areas of special interest identified in the review are documented in the report and will need further evaluation.

Key Findings

The full analysis and findings of the review are found in the report and appendices. The findings fall into two categories, as summarized below: general findings that apply across the areas of access, quality, and safety, and findings specific to each area of concern.

General Findings

The new MHS governance structure has resulted in significant gains in terms of collaboration and alignment among the Services and the Defense Health Agency (pages 24-31). However, no single set of metrics is used across the enterprise to monitor performance in the areas of access, quality, and safety, nor are there performance reviews of the system as a whole in these areas. Moreover, the purchased care component is not aligned with the direct care component in terms of data collected or metrics used, making it difficult to draw comparisons between the two components.

¹ For this review, external reviewers participated as individual experts in their personal capacities, and not as the employees or representatives of their affiliated institutions.

The review identified a major gap in the ability of the MHS to analyze systemwide health care information. Although the MHS has a wealth of data, the ability to analyze those data and use the results to guide decision making in quality and patient safety is nascent. Differences in interpretation of policy result in data incompatibility, which adds to the challenge. Without a common set of metrics, it is difficult to present systemwide data in a coherent fashion. Transparency goes hand in hand with a culture of safety, with a lack of transparency being the result of multiple factors. Finally, lack of a mechanism to recognize patient input at the enterprise level makes it difficult to act on feedback as to what the patient would find beneficial.

Although leadership and the local subject matter experts in the MTFs have a working knowledge of desired behaviors to promote a culture of safety, the same cannot be said uniformly about frontline clinical personnel.

Access to Care

On average, access to care meets the identified standards; however, performance varies across the system and purchased care data are incomplete. For example, in the direct care component, the average number of days for TRICARE

Prime patients to obtain an appointment to a specialty care provider is 12.4 days (range 6 to 22 days), well under the identified standard of 28 days (pages 47-49). Access to an appointment for patients who need immediate, but not emergency care, averages less than the 24-hours standard for most of the direct care health facilities, but 11 do not meet the established access standard. Comparable purchased care data are not available, primarily due to alternative access measures defined by contract specifications, leaving a sizable blind spot for understanding access in the purchased care component.

“Research indicates that using high tech technology and ‘secure messaging’ can improve access and quality of care, reduce medical cost, and improve patient satisfaction.”

Qi Zhou, M.D.
Executive Director
Performance Measurement Program
Strategy
& Quality Programs Oversight
Blue Cross Blue Shield of
Massachusetts

One important finding was the notable difference between data that reflect compliance with access standards and the reported satisfaction of patients with their ability to receive timely care in MTFs (pages 57-63). This issue will require additional study in order to understand the cause of this discrepancy.

A review of current policies showed that there is no MHS measure for evaluating office waiting times, an existing standard (pages 35-36). This deficiency was also noted for purchased care.

In addition to face-to-face encounters, the direct care component has other methods for accessing care, including secure messaging, web-enabled appointment booking, and the Nurse Advice Line (pages 52-55). These newer approaches will require ongoing monitoring to ensure that they are functioning as designed.

Quality of Care

Overall, the review of quality measures showed mixed results. Although there are areas in which the MHS excels, there is considerable variation across the system, both for specific clinical measures and for individual MTFs. Additionally, there is a general deficiency of data concerning clinical quality and outcome measures for care provided in the purchased care component.

All direct care component hospitals and clinics are accredited or certified by external agencies (pages 87-88). This provides a certain level of quality and safety assurance for patients and allows systems to objectively identify areas for performance improvement. In addition to seeking and obtaining accreditation and certification as an indicator of quality, the MHS has identified several nationally recognized health care quality performance measures and, unlike the private sector, mandates reporting on these measures by every direct care health facility, where appropriate.

HEDIS® measures (which assess outpatient preventive services and health outcomes) showed high variability across the MHS (pages 88-92). The HEDIS® measures chosen by the MHS for monitoring quality are selected to drive improved outcomes in specific areas. Once the MHS meets and sustains the desired target, the measure is “retired,” the result being that current measures will skew toward underperformance.

Of the 18 HEDIS® measures monitored by the MHS, three were below the 25th percentile, and seven were between the 25th and 50th percentile. In 2013, 10 of the 18 measures showed statistically significant improvement, while 6 of the 18 measures showed statistically significant decline. Only 12 HEDIS® measures are monitored for the purchased care component; 11 of these are less than the NCQA 75th percentile benchmark.

“Overall, MHS performance mirrors what we see in the private sector, a good deal of mediocrity, pockets of excellence, and some serious gaps.”

Janet M. Corrigan, Ph.D.
Distinguished Fellow
The Dartmouth Institute for
Health Policy and Clinical
Practice

Hospital quality performance as measured by The Joint Commission’s ORYX data demonstrates a similar spectrum of results (pages 94-98). The MHS direct care component meets or exceeds target levels for a majority of measures, but needs improvement in a significant number of areas. In comparison, the purchased care component collects data for only 5 out of the 13 measures reported by the direct care component. This highlights the difficulty of making reliable comparisons of performance between direct care and purchased care, and among hospital systems in general.

National Perinatal Information Center (NPIC) data show that the direct care component has statistically lower rates of infant mortality and maternal trauma than the NPIC averages (NPIC’s benchmark is comprised of 86 high-volume obstetric care hospitals) (pages 102-110). However,

on other measures (to include postpartum hemorrhage and undefined neonatal trauma), the MHS is performing statistically worse than the NPIC averages. In addition to the potential quality of care issues deserving further examination, administrative coding issues may confound the understanding of observed outcomes. Further review of individual clinical areas and specific facilities is required to determine the cause or causes of variance.

The National Surgical Quality Improvement Program (NSQIP), sponsored by the American College of Surgeons, collects voluntarily submitted risk-adjusted data from approximately 400 hospitals and compares the data against performance metrics for surgical morbidity and mortality. Of the 56 inpatient DoD MTFs, 17 facilities who met the volume criteria voluntarily participate in NSQIP. The MHS does not currently require participation in this program.

Surgical mortality (death rate) is within the expected range at all 17 DoD MTFs that participate in NSQIP (pages 110-119). Surgical morbidity (surgical complication rate) was statistically higher than expected in 8 of 17 participating MTFs in 2013 and there was persistent poor performance in three MTFs. Three of 17 MTFs in the most recent reporting period are performing at the top tier nationally. Of note, only 10 percent of U.S. hospitals participate in the NSQIP and this may represent a unique subset of health care systems that are leading the way in high-quality surgical care.

“Until rank and file internalize their roles in promoting safety and preventing harm, performance will be mediocre. Leadership must declare and then demonstrate their commitment to a culture that encourages reporting, is not punitive, and is dedicated to improvement.”

Pamela F. Cipriano, Ph.D.,
R.N., NEA-BC, FAAN
President
American Nurses Association

Patient Safety

The MHS culture of safety is comparable to that found in the civilian sector based on averages from nationally standardized surveys of employee perceptions and patient response rates (pages 149-153). The MHS had lower averages in 5 of the 12 domains in the national Hospital Survey on Patient Safety Culture; staffing, teamwork within units, and organizational learning were of greatest concern.

The execution and content of root cause analysis (RCA) to understand the possible causes of adverse health events related to care (sentinel events) remains highly variable across the Services (168-175). In addition, there has been a failure to routinely follow up on reported RCAs to ensure that systemic issues identified were corrected.

The MHS has improved on measures for many hospital-acquired conditions through the national Partnership for Patients program (pages 160-164). Select safety measures, however, remain higher than average among MTFs compared to other health care systems (for example, central

line-associated bloodstream infection rates should have low rates with a goal of zero incidents). There is also no comprehensive plan to standardize requirements for monitoring device-related infections, such as those related to a catheter.

Fewer than 30 percent of staff actively reports patient safety events as identified by results from the 2011 Hospital Survey on Patient Safety Culture (pages 178-180). The Patient Safety Reporting System used to report patient safety events is not designed to record harm rates. Overall, the reviewers could not validate that current processes provide an accurate indication of the MHS' level rate of harm.

Recommendations

The following six major recommendations are based on review findings, supported by data, and validated by external review. In the body of the main report, additional recommendations within the Access, Quality, and Safety sections define specific action steps for performance improvement.

I. Take immediate action to improve underperformance

Recommendation: The MHS should identify the cause of variance for MTFs that are outliers for one or more measures and, when due to poor performance, develop corrective action plans to bring those MTFs within compliance.

II. Establish clear enterprise performance goals with standardized metrics and hold the system accountable for improvement

Recommendation: The MHS should develop a performance management system adopting a core set of metrics regarding access, quality, and patient safety; further develop MHS dashboards with systemwide performance measures; and conduct regular, formal performance reviews of the entire MHS, with the Defense Health Agency monitoring performance and supporting MHS governance bodies in those reviews.

III. Make good decisions by relying on accurate data

Recommendation: The MHS should develop an enterprise-wide quality and patient safety data analytics infrastructure, to include health information technology systems, data management tools, and appropriately trained personnel. There should be clear collaboration between the Defense Health Agency's analytic capabilities, which monitor the MHS overall, and the Service-level analytic assets.

“The foundation for achieving top performance is already in place and is being enhanced with new approaches that will provide for system wide goals, measures, and review of performance.”

Pamela F. Cipriano, Ph.D., R.N.,
NEA-BC, FAAN
President
American Nurses Association

IV. Show information to everyone – patients, providers, and policy makers

Recommendation: The MHS should emphasize transparency of information, including both the direct and purchased care components, with visibility internally, externally, and to DoD beneficiaries. Greater alignment of measures for the purchased care component with those of the direct care component should be incorporated in TRICARE regional contracts.

V. Drive the necessary change with MHS governance

Recommendation: Through MHS governance, policy guidance can be developed to provide the Services with common executable goals. While respecting the Services' individual cultures, this effort would advance an understanding of the culture of safety and patient-centered care across the MHS.

“Overall, the results are mixed. MHS meets or exceeds many internal and external standards and benchmarks in the areas of access, quality, and safety, but there is variability within MHS and some performance gaps.”

Janet M. Corrigan, Ph.D.
Distinguished Fellow
The Dartmouth Institute for Health
Policy and Clinical Practice

VI. Leverage common standards and processes to facilitate improvement

Recommendation: The MHS should continue to develop common standards and processes designed to improve outcomes across the enterprise in the areas of access, quality, and patient safety where this will improve quality, or deliver the same level of quality at decreased cost (i.e., better value).

Conclusion

The findings and recommendations in this report provide an approach for improving the performance of the MHS. Appendix 6.1 includes an action list and timelines for execution. Recommended actions are divided into those that can be acted on immediately, those that require the development of more integrated action plans, and those that require further study to permit comprehensive analysis and consideration of the information.

In addition, within three months of the completion of this report, the MHS will review the possible reasons why specific facilities are significantly underperforming on one or more measures. When variance is due to poor performance, a corrective action plan will be developed and submitted, taking into consideration the unique aspects of those facilities.

The foundation for improving performance in the MHS rests on combining the concepts of an integrated health care system with those of high reliability organizations. The MHS must continue to mature as an integrated health system, improving alignment among the Services and between the direct care and purchased care components, and placing particular emphasis on improving transparency related to access, quality of care, and patient safety. The principles of a

high reliability organization are operationalized through leadership engagement, a culture of quality and safety, robust process improvement through regular performance reviews, adoption of industry best practices, and minimization of undesirable variation across the system. These efforts should be linked to Service strategies, which may require revision of current policies. The high-level recommendations offered in this report, if implemented, will constitute major steps along the path to a high reliability organization.

Additional Considerations

For readers without a background in health care and statistics, there are caveats that should be considered when interpreting the data presented in this report. First, the review is an “as is” assessment based on available data whenever possible. Furthermore, in some cases the data were collected or aggregated differently than had previously been done at the facility or Service level. As is the case when looking at systems as large as the MHS, there are potential issues with conflicting data points, data integrity, and incomplete data.

An example of conflicting data points is in the area of access, where current access measures suggest that the direct care component compares very favorably to civilian care and yet the patient satisfaction data indicate that patients are more satisfied with access in the purchased care component. It takes time and effort to ensure data validity and accuracy in a system as large as the MHS, and further assessment is required. The same can be said of those areas where the data are incomplete. This was a particular challenge in attempting to assess the purchased care component. The ability of the MHS to evaluate the quality of care is dependent on the data provided by civilian providers. This is a major finding of the report and is addressed in the recommendations.

Finally, caution is advisable when using the data to assess where the MHS stands compared to U.S. health care in general, or against specific systems. There is no standardized data set used to evaluate health systems. The report demonstrates this fact in its attempt to compare the MHS with three premier U.S. health systems. Of the access, quality, and patient safety measures used in this review, no single measure was directly comparable across all four systems. As a result, the review used national benchmarks, where available, and other standards when a national benchmark could not be found. It is illustrative to note that most reporting of data regarding health care quality and patient safety is voluntary in the civilian sector. By participating in these initiatives, those hospitals and health systems have demonstrated a commitment to excellence that is above the norm.

For all of the above reasons, this report should be considered a step in the journey for the MHS, rather than an endpoint. Although the recommendations provide a clear path forward, further questions raised in this effort will be answered by more in-depth analysis in multiple areas. As has been emphasized throughout this summary, health systems are complex, and it would be unreasonable to expect that all of the answers to the questions raised as a result of this review would be found in 90 days.

This page left intentionally blank.