Guide for DoD Researchers on Using MHS Data

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List of Acronyms

ADDP	Active Duty Dental Plan	ADSM	Active Duty Service Members
AHLTA	Armed Forces Health Longitudinal Technology Application	AHRQ	Agency for Healthcare Research and Quality
AKO	Army Knowledge Online	CAPER	Comprehensive Ambulatory Provider Encounter Record
CBSA	Core Based Statistical Areas	CCI	Chronic Condition Indicator
CCS	Clinical Classifications Software	CDC	Centers for Disease Control and Prevention
CDT	Current Dental Terminology	CFR	Code of Federal Regulations
CHCS	Composite Health Care System	CITI	Collaborative Institutional Training Initiative
CMS	Center for Medicare & Medicaid Services	CPT	Current Procedural Terminology
CTS	Contingency Tracking System	DED	Direct Care Dental Encounter Data
DEERS	Defense Enrollment Eligibility Reporting System	DHCAPE	Defense Health Cost Analysis and Program Evaluation
DHP	Defense Health Program	DKO	Defense Knowledge Online
DMDC	Defense Manpower Data Center	DMHRS	Defense Medical Human Resource System
DMIS ID	Defense Medical Information System Identifier	DoD	Department of Defense
DoDI	DoD Instruction	DP	Designated Provider
DRG	Diagnosis Related Group	DSA	Data Sharing Agreement
DSAA	Data Sharing Agreement Application	DVBIC	Defense and Veterans Brain Injury Center
EAS	Expense Assignment System	EASIV	Expense Assignment System IV

FY	Fiscal Year	HCC	Hierarchical Coexisting Conditions
HCPCS	Healthcare Common Procedure Coding System	HCPR	Health Care Provider Record
HCSR	Health Care Service Record	HHS	Department of Health and Human Services
HIPAA	Health Insurance Portability and Accountability Act	HRPO	Human Research Protection Official
HRPP	Human Research Protection Program	IAIR	Institutional Agreement for IRB Review
ICD-9-CM	International Classification of Diseases – 9 – Clinical Modification	IQIs	Inpatient Quality Indicators
IRB	Institutional Review Board	LELG	Longitudinal Eligibility
LENR	Longitudinal Enrollment	LOINC	Logical Observation Identifiers Names and Codes
M2	Management Analysis and Reporting Tool	MCFAS	Managed Care Forecasting and Analysis System
MCSCs	Managed Care Support Contractors	MDR	MHS Data Repository
MEHRCF	Medicare Eligible Retiree Health Care Fund	MEPRS	Medical Expense and Performance Reporting System
MHS	Military Health System	MMSO	Military Medical Support Office
MPI	MDR Master Person Index	MSA	Metropolitan Statistical Areas
MSMA	Multi-Service Market Area	MTF	Military Treatment Facility
NPPES	National Plan and Provider Enumeration System	OASD(HA)	Office of the Assistant Secretary of Defense for Health Affairs
PCM	Primary Care Manager	PDTS	Pharmacy Data Transaction Service
PedQIs	Pediatric Quality Indicators	PI	Principal Investigator
POM	Program Objective Memorandum	PQIs	Prevention Quality Indicators

PSIs	Patient Safety Indicators	**QI**	Quality Indicator
SADR	Standard Ambulatory Data Record	**SAS**	Serial-Attached SCSI (Small Computer System Interface)
SEEC	Standard Expense Element Code	**SIDR**	Standard Inpatient Data Record
STIPDA	State and Territorial Injury Prevention Directors Association	**TBI**	Traumatic Brain Injury
TDP	TRICARE Dental Plan	**TED**	TRICARE Encounter Data
TED-I	TRICARE Encounter Data Institutional	**TED-NI**	TRICARE Encounter Data Non-Institutional
TED-PR	TED Provider	**TFL**	TRICARE for Life
TMA	TRICARE Management Activity	**TMDS**	Theater Medical Data Store
TMOP	TRICARE's mail order program	**TRS**	TRICARE Reserve Select
UBU	Unified Biostatistical Utility	**VM**	Virtual Storage Access Memory (VSAM) to MDR

List of URLs

Business & Economic Analysis Division	http://www.tricare.mil/ocfo/bea/functional_specs.cfm
IRBNet Submission Page	https://www.us.army.mil/suite/page/596540
The MDR Data Dictionary can be found at	http://www.tricare.mil/ocfo/bea/functional_specs.cfm
MDR Functional Specification	http://www.tricare.mil/ocfo/bea/mdr.cfm
MEPRS Information Portal	http://www.meprs.info
Military Health System	http://www.health.mil/default.aspx
TMA Data Sharing Agreements	http://www.tricare.mil/tma/privacy/duas.aspx
TMA Human Research Protection Program	http://tricare.mil/tma/privacy/hrpp
TMA Privacy and Civil Liberties Office (TMA Privacy Office)	http://www.tricare.mil/tma/privacy/
TMA Privacy Board	http://www.tricare.mil/tma/privacy/privacyboard.aspx *(Coming Soon!)*
TRICARE	http://www.tricare.mil/
TRICARE Benefits Programs – Fact Sheets	http://www.tricare.mil/tricaresmart/select-Product.aspx?CID=164&RID=3
TRICARE Business and Economic Analysis Division	http://www.tricare.mil/ocfo/bea/functional_specs.cfm
TRICARE Dental Options Fact Sheet	http://www.tricare.mil/tricaresmartfiles/Prod_880/TRICARE_Dental_Options_Fact_Sheet.pdf
TRICARE Dental Program	http://tricare.mil/mybenefit/home/Dental
TRICARE Management Activities	http://www.tricare.mil/tma
TRICARE Survey Program	http://www.tricare.mil/hpae/surveys/survey.cfm
TRICARE Systems Manual	http://manuals.tricare.osd.mil/DisplayManual.aspx?SeriesId=T3TSM
TRICARE US Family Health Plan	http://www.tricare.mil/mybenefit/ProfileFilter.do?puri=%2Fhome%2Foverview%2FPlans%2FLearnAboutPlansAndCosts%2FUSFamilyHealthPlan
TRICARE Vision Benefits Fact Sheet	http://www.tricare.mil/mybenefit/Download/Forms/Vision_FS.pdf

1. Purpose and Use of this Guide

This document is a guide for Department of Defense (DoD) researchers who plan to request Military Health System (MHS) data for research purposes, in particular, for database research. This guide provides an overview of the MHS as well as guidance regarding the types of research data available within the MHS, reviews specific to the protection of human subjects, and requirements of the TRICARE Management Activity (TMA) Privacy and Civil Liberties Office (Privacy Office) for requesting MHS data. Although this document is not comprehensive, it seeks to provide useful information for DoD researchers about MHS data and required reviews.

The principal audience for this guide is investigators within the DoD; however, external investigators should find the information helpful. Investigators from outside the DoD need to be aware that there are requirements beyond those listed in this Guide, and they should seek additional guidance from the TMA Privacy Office and the TMA Human Research Protection Program (HRPP) regarding specific requirements.

The guide includes the following:
 ➢ A brief overview of the MHS and TMA;
 ➢ A description of the various types of data in the MHS that are available to investigators;
 ➢ An explanation of the requirements for accessing those data and the application process used to request a Data Sharing Agreement (DSA) in order to obtain authorization to use the data;
 ➢ An explanation of the requirement for TMA Human Research Protection Official (HRPO) approval in order to gain access to the data when a protocol involves human subjects; and,
 ➢ Various appendices that provide detailed descriptions of the main types of data available in each database owned or managed by TMA.

2. Brief Overview of the Military Health System (MHS)

What is the MHS?
Information related to the MHS can be found at the following website (http://www.health.mil/default.aspx).

The MHS is a worldwide integrated partnership of health educators, biomedical and clinical investigators, and healthcare providers that is unique among nations. Each of the components of this triad is dedicated to supporting the warfighters, individually and collectively. Advances in biomedical research within the MHS are translated to updated treatment regimens that lead to improved outcomes and a more ready force. Meanwhile, the next generation of healthcare providers, research scientists, health educators and support personnel are continually being trained at Military Treatment Facilities (MTFs) and at the Uniformed Services University of the Health Sciences in Bethesda, Maryland.

The MHS consists of the Direct Health Care System which includes the MTFs on Department of Defense (DoD) installations. It also includes the medical personnel supporting the Reserves and National Guard. Other elements are forward deployed aboard ships, at overseas installations and

in combat theaters of operation. MHS personnel are prepared to mobilize rapidly in response to manmade and natural disasters, and to provide humanitarian relief around the world.

The MHS consists of each of the components within the Office of the Assistant Secretary of Defense for Health Affairs (OASD(HA)), the medical departments of the Army, Navy, Air Force and the Joint Chiefs of Staff, the Combatant Command surgeons and the TMA, including private sector providers, hospitals and pharmacies through the purchased care program.

<u>What is TRICARE?</u>
Information about TRICARE can be found on its website (http://www.tricare.mil/). Additional information about TMA can be found on the TMA website (http://www.tricare.mil/tma).

TRICARE is comprised of two overarching programs, 1) the Direct Care System and 2) the Purchased Care System. In broad terms, the Direct Care System can be thought of as care and services provided at MTFs; whereas, the Purchased Care System includes care and services provided at civilian facilities in the community.

➢ <u>Direct Care System</u>. The Direct Care System includes roughly 60 inpatient acute care hospitals, 385 stand-alone medical clinics and 350 stand-alone dental clinics. These facilities serve over 9.5 million beneficiaries. The beneficiaries are entitled to receive care through US Code Title 10. Beneficiaries include active duty, activated guard and Reserve, retirees, survivors, some inactive guard and reserve, and their family members. Service members must generally serve 20 years to obtain retiree medical benefits. Services in the Direct Care System are free. While claims are unnecessary, encounter data is captured to indicate the types of care received, who provided the care, when the care was provided, etc.

➢ <u>Purchased Care System</u>. The Purchased Care System allows many beneficiaries to also receive care using civilian providers. This provides a mechanism for beneficiaries to receive care when a military hospital cannot provide it. A complex set of programs and policies govern the amount of payment that TRICARE contributes. Some beneficiaries have no cost shares for certain services, while others may have more substantial cost sharing arrangements. Payments are made using Health Insurance Portability and Accountability Act (HIPAA) standard claims.

Informational fact sheets on the TRICARE Benefits Programs can be found at the following website (http://www.tricare.mil/tricaresmart/select-Product.aspx?CID=164&RID=3). TRICARE offers a wide variety of programs allowing for study of cohorts with varying levels of cost sharing. Some programs provide free health care, while others have co-pays and other cost sharing arrangements. The fact sheets will provide current information on each of the programs, the beneficiary pool and the types of services covered. Additional summary information on each of these programs can be found in Appendix A of this Guide.

3. Types of Research Data in the MHS

TMA maintains and manages comprehensive health-related data on over 9.5 million beneficiaries across numerous databases. In addition to the clinical care quality benefits of the electronic health records, the databases provide important data elements for research. This section describes some of the most commonly accessed/requested data from the databases frequently used for research protocols. Subsequent sections of this Guide provide information regarding the requirements for accessing and/or receiving data from TMA owned and managed databases.

Table 1: MHS Systems or Files Commonly Used for Research

Data System	Purpose	Structure of Data	Research data
a. MHS Data Repository (MDR)/ Management Analysis and Reporting Tool (M2)	Comprehensive data warehouse	Serial-Attached SCSI (Small Computer System Interface)(SAS)	Most commonly used system operated by TRICARE for research. Contains direct and purchased care data, MTF accounting data, beneficiary data, clinical data, staffing data, and many other data files.
b. Expense Assignment System (EAS)	Financial Accounting	Database	Expense and obligation data, full time staffing data. Summary data only.
c. Mental Health Research File	Psychological Health Research	SAS	Person-level longitudinal file developed from MDR, Theater Medical Data System, Defense Manpower Data Center (DMDC) Contingency Tracking System. Includes auxiliary data with dates of service and other key information.

a. **MDR:** The most comprehensive source of data available for researchers. This source contains records on all health care events (that are required to be reported) paid for by the MHS, regardless of setting. This system also contains robust historical beneficiary data, including coverage information, service-related information and demographics. The MDR is currently being expanded to incorporate clinical data. Thus far, vital signs, Body Mass Index, tobacco usage, inpatient and outpatient medications and chemistry lab results have been integrated into the MDR. Work is being done to also incorporate other types of lab results (microbiology and pathology) and to add radiology results as well. Clinical data is only available for Fiscal Year (FY) 2009 and forward, while the other data sources go back many more years, some as far as FY 1989. For records from FY 2000+, the MDR contains a unique person identifier allowing person-level files to be linked across data sources. MDR files are useful for cohort definition, in that all event and beneficiary data are available in one system. The MDR is generally considered the most reliable source for MHS data. Table 2 lists the MDR data files,

with hyperlinked references to appendices that contain more detailed information. A comprehensive MDR/M2 Data Dictionary can be found at the TRICARE Business and Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional-_specs.cfm).

b. **EAS**: The cost accounting and manpower reporting system for MTFs. This data system contains aggregate information about how much each MTF spends and how many full time equivalent staff are available. Most of the EAS data are also available in the MDR. EAS financial data are generally too aggregated to use for research; however, the manpower data are used frequently as they are the only source for staffing information currently available to researchers.

c. **Mental Health Research File**: A mental health research file that is designed to support questions related to mental health and substance abuse in the active duty and active duty family member population. This database was developed in order to provide the regulatory flexibility that ensures more ready and rapid access to mental health data for database research purposes. This file constitutes a limited data set, as defined within the HIPAA Privacy Rule and DoD Health Information Privacy Regulation (DoD 6025.18-R). The main mental health research file is a person-level file with indications of costs and utilization of health services and prescription drugs, along with demographic and cost data. There are also auxiliary files that go along with the mental health research file that provide additional event data details.

Application of common industry standard software to data

TRICARE can apply many industry standard software or coding sets to its data prior to release. This can often minimize the amount of data requested, since the data elements needed to apply the industry standard software may only be required for that purpose. TRICARE can apply software during the data extraction process. Some capabilities include:

a. The Center for Medicare & Medicaid Services (CMS) Hierarchical Coexisting Conditions (HCC) risk adjustment software reads in International Classification of Diseases – 9 – Clinical Modification (ICD-9-CM) diagnosis codes for an individual, and provides back a "risk score" that indicates the expected cost for the individual. The HCC risk score is often used as an adjustment variable when comparisons are made across groups who may have different disease profiles.

b. Agency for Healthcare Research and Quality (AHRQ) Quality Indicators (QIs) are measures of health care quality that make use of readily available hospital inpatient administrative data. The AHRQ QIs consist of four modules measuring various aspects of quality:

   i. Prevention Quality Indicators (PQIs): identify hospital admissions that evidence suggests could have been avoided, at least in part, through high-quality outpatient care.

   ii. Inpatient Quality Indicators (IQIs): reflect quality of care inside hospitals including inpatient mortality for medical conditions and surgical procedures.

   iii.   Patient Safety Indicators (PSIs): also reflect quality of care inside hospitals, but focus on potentially avoidable complications and iatrogenic events.

   iv.   Pediatric Quality Indicators (PedQIs): both reflect quality of care inside hospitals and identify potentially avoidable hospitalizations among children.

c. Clinical Classifications Software (CCS) for ICD-9-CM: The CCS for ICD-9-CM is a diagnosis and procedure categorization scheme that can be employed in many types of projects analyzing diagnoses and procedures data. CCS is based on the ICD-9-CM standardized coding system. The ICD-9-CM's multitude of codes - over 14,000 diagnosis codes and 3,900 procedure codes - are collapsed into a smaller number of clinically meaningful categories may be more useful for presenting descriptive statistics than are individual ICD-9-CM codes.

d. CCS for Mental Health and Substance Abuse (MHSA): Beginning in FY 2008, the CCS-MHSA tool was permanently integrated into the CCS. The CCS-MHSA is an algorithm that assigns variables that identify mental health and substance abuse-related diagnoses in any data that include ICD-9-CM diagnosis information. The CCS-MHSA categories began with the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* as the organizing framework, and as such, better reflect psychiatric nosology.

e. CCS for Services and Procedures: CCS-Services and Procedures provide a method for classifying Current Procedural Terminology (CPT) codes and Healthcare Common Procedure Coding System (HCPCS) codes into clinically meaningful procedure categories. The procedure categories are identical to the CCS, with the addition of specific categories unique to professional service codes in CPT/HCPCS.

f. AHRQ Chronic Condition Indicator (CCI): The CCI provides an easy way to categorize ICD-9-CM diagnosis codes into one of two categories: chronic or not chronic. A chronic condition is defined as a condition that lasts 12 months or longer and meets one or both of the following tests: (a) it places limitations on self-care, independent living, and social interactions; (b) it results in the need for ongoing intervention with medical products, services, and special equipment. The tool can also assign ICD-9-CM diagnosis codes into 1 of 18 body system categories so that researchers can create indicators listing which specific body systems are affected by a chronic condition.

g. AHRQ Comorbidity Software: This software assigns variables that identify comorbidities in hospital discharge records using ICD-9-CM diagnosis codes and Diagnosis Related Groups (DRGs). The comorbidity measures indicated are those reported by Elixhauser *et al*. ("Comorbidity Measures for Use with Administrative Data." *Medical Care*, 1998;36:8-27).

h. AHRQ Procedure Classes: Procedure Classes facilitate research on hospital services using administrative data by identifying whether a procedure is (a) diagnostic or therapeutic, and (b) minor or major in terms of invasiveness and/or resource use. The

Procedure Classes assign all ICD-9-CM procedure codes to one of four categories: Minor Diagnostic, Minor Therapeutic, Major Diagnostic, and Major Therapeutic.

i. Barell Injury Diagnosis System: The Barell Matrix was developed by the International Collaborative Effort on Injury Statistics and is a framework for classifying injury by body region and nature of the injury. It is routinely used by the Centers for Disease Control and Prevention (CDC) and the State and Territorial Injury Prevention Directors Association (STIPDA) as a standard method for reporting and describing injury diagnoses.

j. Barell+ System: The Barell+ System is a traumatic brain injury (TBI) classification system and was developed by the Center for Army Medical Department Strategic Studies. This expanded version was created as a result of a mapping effort between the original Barell Matrix and the DoD severity classification system used for surveillance by the Defense and Veterans Brain Injury Center (DVBIC). Starting with the Barell TBI category definitions, 19 additional TBI-related diagnosis codes from the DVBIC classification were mapped into the resulting Barell+ Matrix.

k. Civilian geographic areas:
   i. Core based statistical areas (CBSA):
      1. Delineated on the basis of a central urban area or urban cluster
      2. Collective term for Metropolitan Statistical Areas and Micropolitan Statistical Areas
   ii. Metropolitan Statistical Areas (MSA)
      1. Geographical region with a high population density at its core and economic ties in surrounding areas
      2. Part of the CBSA
   iii. Rural / Urban Indicators:
      1. Zip code based look-up
      2. Delineation based on population density
   iv. Census Regions
      1. Regional divisions used by the USs Census Bureau
      2. Four regions, subdivided into divisions
   v. Hospital Service Area: The area from which a hospital draws most of its patients
   vi. County: Zip code based look-up of counties in the US
   vii. Geographic Practice Cost Index Locality: Index based on the relative costs of practicing medicine in a specific geographic location

Table 2: Important Files in the MDR

MDR Data File	Available Timeframe	Number of Records per file	Content
Defense Enrollment Eligibility Reporting System (DEERS) (Virtual Storage Access Method to MDR) VM-6 Beneficiary File	FY03+	~12 Mil (per month)	One record per eligible beneficiary per month (some ineligible beneficiaries are also in the file.) Each file contains one month of data.
DEERS Enrollment File	FY97+	~5 Mil (per month)	One record per enrolled member per month. Includes program enrollments such as TRICARE Prime, TRICARE Plus, TRICARE Reserve Select, and others. Each file contains one month of data.
MDR DEERS Longitudinal Data	FY04+	~12 Mil	Longitudinal DEERS information prepared from the DEERS VM4/VM6 files. Each file contains one year of data.
Guard/Reserve Call Up File	FY01+	~3 Mil (All Years)	Only contains records for guard/reserve members who were called up for a contingency operation. One record per member, per call up, per status (early alert, mobilization, and transitional assistance). This file is a cumulative file.
MDR Master Person Index (MPI)	FY00+	~35 Mil (All Years)	Contains one record per eligible beneficiary along with person identifying characteristics. This file is a cumulative file.
Standard Inpatient Data Record (SIDR)	FY89+	~250 K	One record per inpatient stay at an MTF. Contains person and provider information, dates of care, diagnosis and procedure codes, demographic, and other information. Each file contains one year of data.
Comprehensive Ambulatory Provider Encounter Record (CAPER) (previously named Standard Ambulatory Data Record (SADR))	FY03+	~41 Mil	One record per kept appointment at an MTF. Contains person and provider information, encounter date, diagnosis and procedure codes, demographic and other information. Each file contains one year of data.

MDR Data File	Available Timeframe	Number of Records per file	Content
MTF Ancillary	FY05+	~43 Mil	One record per MTF outpatient laboratory test, or two records per MTF radiology exam. Contains person and provider information, test date, procedure codes, demographic and other information. Each file contains one year of data.
MTF Referral	FY05+	~38 Mil	One record per referral that resulted in a booked appointment. Contains information about patient, clinics referred from and to, dates of referral and date of first associated appointment. Each file contains one year of data.
MTF Case Management	FY09+	~43 K (All Years)	One record per patient in case management, as reported by MTFs. File is thought to be incomplete as reporting policy is new. This is a cumulative file.
MTF Appointment Data	FY01+	~43 Mil	One record per scheduled MTF appointment, whether it occurred or not. Contains person and provider information and other associated appointment data. Each file contains one year of data.
Pharmacy Data Transaction Service	FY02+	~120 Mil	One record per outpatient prescriptions from direct care or purchased care. Each file contains one year of data.
TRICARE Encounter Data (TED) Institutional (TED-I)	FY01+	~930 K	One record per institutional claim. File was previously called Health Care Service Record (HCSR)-Institutional. Contains information about patient, provider, care delivered and payment/billing data. Each file contains one year of data.
TED Non-Institutional (TED-NI)	FY01+	~200 Mil	One record per institutional claim. File was previously called HCSR-Non Institutional. Contains information about patient, provider, care delivered and payment/billing data. Each file contains one year of data.

MDR Data File	Available Timeframe	Number of Records per file	Content
TED Provider	FY06+	~8.5 Mil (All Years)	One record per provider who can bill TRICARE. Includes name, tax identification, and address information. This is a cumulative file.
Managed Care Forecasting and Analysis System	FY2009 – FY 2017		Each record represents an aggregate population projection or a baseline population used to make projections.
Medical Expense and Performance Reporting System (MEPRS)	FY99+	~250 K	Summary records of MTF expenses and manpower. Available at year, month, and MEPRS Code level. Each file contains one year of data.
MEPRS Workload	FY01+	~1.6 Mil	Summary records of MTF workload data. Available at year, month, and MEPRS Code level. Contains information about raw and weighted workload for every MEPRS code. Each file contains one year of data.
MEPRS Expense			
MEPRS Personnel	FY01+	~1.8 Mil	Summary records of MTF manpower data. Available at year, month, and MEPRS Code level. Also has information about the type of staff and non-available hours. Each file contains one year of data.
MEPRS Ancillary	FY01+	~946 K	Summary records of MTF ancillary workload data. Contains CPT-code counts at year, month, and MEPRS Code level. Each file contains one year of data.
Designated Provider Clinical Data	FY02+	~2 Mil	One record per procedure claimed for Designated Provider Enrollees.
Designated Provider Pharmacy Data	FY02+	~2 Mil	One record per medication claimed for Designated Provider Enrollees.
Master Death File	FY04+	~270 K (All Years)	One record per member known to have died. This is a cumulative file.
Casualty File	FY05+	Sensitive	One record per active duty death.
Address File	FY04+	<10 Mil (All Years)	One record per eligible or MTF-treated person, with an address.

MDR Data File	Available Timeframe	Number of Records per file	Content
Vital Signs	FY09+	~ 12 Mil	Alcohol and tobacco use, blood pressure, height/weight/body mass index, respiratory rate, tobacco usage, pulse oximetry, other key clinical data, patient identifiers and demographics.
Lab Results	FY09+	~120 Mil	Lab test and result, specimen, comments.
Radiology Results	FY09+	TBD	To be available in Fall 2012
Medications (Inpatient and Outpatient)	FY09+	~50 Mil	Includes patient identifiers and demographics.
Immunizations	FY09+	~8 Mil (All Years)	Route, dose, date next due, reaction size, reaction result, CPT, ICD, generic name, exemption, MTF Identification, patient identifiers and demographics. (Completeness not yet assessed)
Contingency Tracking System	9/2001+	~4 Mil (All Years)	Contains information about members deployed for contingency operations.
Theater Medical Data Store	9/2001+	Not yet assessed	Contains information about healthcare provided in contingency zones.
TRICARE Active Duty Dental Plan (formerly Military Medical Support Office)	FY2002+_	~ 1 Mil	Contains dental claim information for care for active duty service members in the private sector
Direct Care Dental Encounter Data	FY2009+	~10 Mill	Direct care dental encounter records. Available at procedure/person level only for Army and Air Force facilities. Navy information is not available.
TRICARE Dental Plan	FY2006+	~ 9 Mil	Contains TRICARE dental claims data for enrollees in the TRICARE Dental Plan (Active Duty Family Member plan).s
Defense Medical Human Resources File	FY2010+	2 Mil+ (All Years)	Newly available file containing duty assignment information for all persons working at MTFs.
National Plan and Provider Enumeration System	FY2011+	Not yet assessed	Newly available file containing a directory of all National Provider Identifiers in the US.

A complete data dictionary of the MDR can be found at
http://www.tricare.mil/ocfo/bea/functional_specs.cfm.

4. Human Subjects of Research and their Protection

Because of alarming cases of placing human subjects participating in research studies at unreasonable risk of harm, the Federal government created a set of standards designed to protect research subjects. DoD adopted these standard regulations (as have 16 other Federal departments and agencies) as codified in 32 Code of Federal Regulations (CFR) 219; *Protection of Human Subjects* (also known as the "Common Rule"). The Common Rule regulations are implemented in DoD through DoD Instruction (DoDI) 3216.02.

The determination of whether a study constitutes "research" involving "human subjects" is not as straightforward as one might imagine. The Common Rule includes definitions for both "research" and "human subjects," and the criteria for these definitions must be met in order for the regulations to apply.

1. *Research* is defined in the Common Rule as "a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge." Activities which meet this definition constitute research for purposes of a study, whether or not they are conducted or supported under a program which is considered research for other purposes. For example, some demonstration and service programs may include research activities. (32 CFR 219.102(d))

2. *Human Subject* is defined in the Common Rule as "a living individual about whom an investigator (whether professional or student) conducting research obtains
    (1) Data through intervention or interaction with the individual, or
    (2) Identifiable private information." (32 CFR 219.102(f))

It is important to emphasize that data related to individuals that includes Personally Identifiable Information (PII) is considered to be a "human subject" under the regulatory definition of human subject. With database research protocols, a common practice is to seek an exemption from Institutional Review Board (IRB) review in accordance with 32 CFR 219.101(b)(4). The text of that section is included below:

§101(b)(4): "Research, involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects."

The first condition under which this exemption is allowed (*i.e.*, "sources are publicly available") does not apply to TMA-managed data. However, the second condition can be met by ensuring that the data are coded in such a way that the data elements cannot be associated with the individual about whom the data applies. It is important to note that the "code" used to identify records must NOT be derived from a personal identifier such as the Social Security Number (SSN), Electronic Data Interchange Person Identifier (EDI-PN) or any combination of characteristics that can, collectively, be used to re-associate the data with an individual.

DoDI 3216.02 includes language within the "Definitions" section that informs the determination of whether a specific type of activity constitutes human subject research. The HRPP Office considers these regulatory definitions in concert with the guidance in DoDI 3216.02 to determine if protocols involve human subject research.

If a protocol is found to involve human subjects in a research activity, then the HRPP Office will proceed to a compliance review to determine if adequate and appropriate protections are built into the experimental design to protect the subjects in accordance with 32 CFR 219, DoDI 3216.02 and other applicable Federal laws, regulations, and DoD policies. Included among the protections are requirements for data security while at rest, on mobile devices and when in use. Additionally, DoD has established standards for the destruction of sensitive data. Guidance and policies on the storage and destruction of sensitive data can be found in the following resource documents:

- "Encryption of Sensitive Unclassified Data at Rest on Mobile Computing Devices and Removable Storage Media" memo dated 03 July 2007 from the Chief Information Officer for the DoD
- "Department of Defense (DoD) Guidance on Protecting Personally Identifiable Information (PII)" memo dated 18 August 2006 from the Chief Information Officer for the DoD
- "Destruction of DoD Computer Hard Drives Prior to Disposal" memo dated 08 January 2001 from the Deputy Secretary of Defense
- "Military Health System (MHS) Information Assurance (IA) Policy Guidance and MHS IA Implementation Guides" updated memo dated 23 February 2010 from the Chief Information Officer for the MHS
- "Disposition of Unclassified DoD Computer Hard Drives" memo dated 04 June 2001 from the Acting Assistant Secretary of Defense for Command, Control, Communications, and Intelligence
- "Military Health System (MHS) Information Assurance (IA) Policy Guidance and MHS IA Implementation Guides" memo dated 10 October 2008 from the Chief Information Officer for the MHS

The cornerstone of the Common Rule compliance review process is the IRB. The OASD(HA)/TMA HRPP Office does not have an IRB and relies upon the review of DoD and outside IRBs to provide primary compliance reviews of human subject research protocols. The Office provides four basic reviews and services for investigators.

1. *Human Subject and/or Research Determination*: The Office will review protocols to determine if the studies meet the regulatory definitions provided above;

2. *Exempt Determination*: The Office reviews protocols to determine if criteria for exemption from IRB review are met as codified in 32 CFR 219.101(b). "Exempt" protocols must still adhere to the ethical standards articulated in the Common Rule;

3. *HRPO Review for DoD Supported Research*: The Office will review studies that have been approved by a duly constituted IRB from an institution with a Federal-wide Assurance from Department of Health and Human Services (HHS) and an agreement with TMA attesting to its understanding of, and adherence to DoD-specific protections (this type of review was

formerly referred to as a "secondary review"). For the sake of brevity, we have included in this type of review (a) initial review of approved protocols, (b) requests to modify studies that are underway and have been previously approved and (c) requests to continue a study beyond the expiration date for the previous approval; and

4. *Guidance and Assistance*: The Office provides guidance and advice to investigators during all stages of their studies (including protocol development) in order to facilitate reviews and compliance.

Please visit the HRPP Section (http://tricare.mil/tma/privacy/hrpp) of the TMA Privacy Office website (http://www.tricare.mil/tma/privacy/) for more information on the requirements for review and services provided to investigators.

5. Requesting OASD(HA)/TMA Human Subject Research Protection Program (HRPP) Review

In order to obtain review of a protocol from the OASD(HA)/TMA HRPP Office, investigators must submit all required documentation using the online application IRBNet. Investigators should be prepared to submit the documents listed below. Instructions, guidance, required forms, templates, and additional information to assist with submitting protocols for review can be found at the HRPP Section (http://tricare.mil/tma/privacy/hrpp) of the TMA Privacy Office website (http://www.tricare.mil/tma/privacy/). You must have an Army Knowledge Online (AKO) or Defense Knowledge Online (DKO) account in order to access the IRBNet Submission Page (https://www.us.army.mil/suite/page/596540). Information and guidance on establishing an account is also available at our website (http://tricare.mil/tma/privacy/hrpp/).

In general, investigators should have each of the following documents available to submit *via* IRBNet depending upon the type of review requested (refer to guidance at the OASD(HA)/TMA HRPP website for specific requirements).
  ➢ Contact information for the Principal Investigator (PI) *AND* Government Project Manager
  ➢ Description of the PI's affiliations and qualifications (either a *Curriculum Vitae* or a biosketch)
  ➢ Proof of HRPP Training within the past three years for all researchers and the Government Project Manager (Collaborative Institutional Training Initiative (CITI) Social and Behavioral Research Investigators Module or equivalent [if non-DoD equivalent is used, then each investigator must successfully complete the CITI Training Module titled: Non-DoD Researcher Training Requirements]). *NOTE: We do NOT accept the Refresher Training*
  ➢ Signed "Researcher Responsibilities Form" from each investigator/researcher and the Government Project Manager
  ➢ The protocol that, if submitted for HRPO Review, has been reviewed and approved by a duly constituted IRB
  ➢ Copy of the IRB approval letter(s) for the study (initial review, modifications, continuing review, *etc.*)
  ➢ If the study did not qualify as "Exempt," then a copy of the OASD(HA)/TMA Institutional Agreement for IRB Review (IAIR) signed by the signature authority at the primary IRB, or the

DoD Addendum to the HHS Federal-wide Assurance Data Sharing Agreement Application (DSAA)

> <u>NOTE</u>: The HRPP Office will allow investigators requesting TMA data to use the DSAA as the data management section of their protocol. Doing so may save investigators time and avoid duplication of effort. (DSAAs are explained in Section 6 below).

<u>Scientific Review</u>: Any non-exempt human subject research requires scientific review. OASD(HA)/TMA studies involving surveys, interviews, focus groups, or similar information collection requests require review and approval by the Defense Health Cost Analysis and Program Evaluation's (DHCAPE's) TRICARE Survey Program and may require licensing and/or approval from the Washington Headquarters Services and/or the Office of Management and Budget. Information regarding the TRICARE Survey Program is available at http://www.tricare.mil/hpae/surveys/survey.cfm. DHCAPE's TRICARE Survey Program review shall satisfy the scientific review requirement for HRPP purposes for such studies when applicable.

The OASD(HA)/TMA HRPP Office seeks to complete reviews in a timely manner. Once a <u>complete ("perfected") package</u> is received for review, the Office aims to conclude the reviews within the following target timeframes. Complex studies that require additional back-and-forth between the PI and the reviewer or additional documentation will take longer to review than a relatively simple study. These timeframes, therefore, are targets that are met >85% of the time.

Table 3: Target Review Completion Timeframes for OASD(HA)/TMA HRPP Reviews:

Review Type	Target Timeframe (business days)
"Human Subject" and "Research" Determination	5
Exempt Determination	5-7
HRPO's Review	7-10
Modification Request	3-5
Continuing Review	3-5

6. Requesting TMA Owned or Managed Data -- The Data Sharing Agreement (DSA) Process

Before TMA managed data can be accessed or obtained for research purposes, the OASD(HA)/TMA HRPP Office must document its approval of the research protocol. However, investigators need not wait until after the OASD(HA)/TMA HRPP Office concludes its review to submit a request to access and/or obtain the data needed for the research project to the TMA Privacy Office. In order to request data for a particular project, you must submit a DSAA as instructed on the DSA Section (http://www.tricare.mil/tma/privacy/duas.aspx) of the TMA Privacy Office website (http://www.tricare.mil/tma/privacy/).

NOTE: As stated in Section 5 above, the OASD(HA)/TMA HRPP Office will accept a completed DSAA in place of the "data management" section of your protocol. This will save investigators time and avoid duplication of effort.

The TMA Privacy Office conducts compliance reviews of requests for data managed by TMA. The DSAA is designed to assist in reviewing data requests for compliance with regulatory requirements, including the DoD Health Information Privacy Regulation (DoD 6025.18-R), which implements the HIPAA Privacy Rule, the DoD Health Information Security Regulation (DoD 8580.02-R), which implements the HIPAA Security Rule, and the DoD Privacy Program (DoD 5400.11-R), which implements the Privacy Act of 1974, as amended. **Data access and extractions are handled through separate offices within the MHS, but prior approval of the data request is required by the TMA Privacy Office.**

Instructions, guidance, required templates, and additional information about the TMA Privacy Office's DSA Program is provided on the TMA Privacy Office website (http://www.tricare.mil/tma/privacy/). In the case of research-related data requests, the DSAA asks for the identity and contact information for the PI in the research study. Where a research project requests protected health information greater than a limited data set, as defined within the HIPAA Privacy Rule and DoD 6025.18-R, the TMA Privacy Board will contact the PI in order to obtain appropriate documentation to complete its compliance review with the HIPAA Privacy Rule and DoD 6025.18-R. Information about the TMA Privacy Board, as well as its reviews and templates, are available on the TMA Privacy Board Section (http://www.tricare.mil/tma/privacy/privacyboard.aspx - *coming soon!*) of the of the TMA Privacy Office website (http://www.tricare.mil/tma/privacy/). The TMA Privacy Board Section will also include flow charts that illustrate narrative information provided with respect to Prerequisites to Requesting Data for Research Purposes and TMA Privacy Board Review Process for Research Related Data Requests. Different types of compliance reviews pertinent the data request can run concurrently, such as HRPP reviews, TMA Privacy Board reviews (if required), System Security Verification reviews (if required); however, a DSAA cannot be considered for approval until all other related compliance reviews are completed and approved.

The TMA Privacy Office seeks to complete reviews in a timely manner. Once we have received a complete ("perfected") package for review, we aim to conclude the reviews within the following target timeframes. More complex data requests that require additional back-and-forth or additional documentation will take longer to review. These timeframes, therefore, are targets that are met >92% of the time.

Table 4: Target Review Completion Timeframes for DSA Reviews

Review Type	Target Timeframe (business days)
DSAA Review	10
TMA Privacy Board, if required	5
System Security Verification Review, if required	4

Appendices

Appendix A: Summary of TRICARE Benefits Programs

Prime. TRICARE Prime is one of the world's largest health maintenance organizations, with nearly 5 million members. Members are not automatically enrolled in Prime; they must elect to enroll in the program.   Prime is free for active duty, activated guard/reserve and their family members. Others must pay a somewhat small (less than $500) annual enrollment premium. Members in TRICARE Prime receive preferred access to care in the direct care system, reduced cost sharing and other benefits. Prime enrollees must also obtain referrals from their primary care manager (PCM) prior to accessing certain types of care. Most members have PCMs who work at military hospitals, but some have civilian PCMs. Prime is not available for all MHS eligible beneficiaries; the largest group of patients who cannot enroll in Prime are the aged Medicare eligible beneficiaries. Prime enrollees generally do not carry other health insurance, allowing for a more complete view of health history for these patients.

TRICARE Standard/Extra. Standard is traditional indemnity insurance. No enrollment is required. Cost shares are higher than for those in Prime. TRICARE Extra differs from Standard in that members can choose a TRICARE network provider, which will result in reduced costs for both TRICARE and the beneficiary.   Many beneficiaries who use Standard/Extra have other health insurance.

TRICARE for Life (TFL): TFL is a program for beneficiaries who are eligible for MHS benefits, as well as Medicare benefits. No enrollment is required with the MHS, but members must purchase Medicare Part B coverage to obtain TFL. TFL serves as a second payor to Medicare, essentially resulting in free care for all TFL beneficiaries, except for pharmacy co-payments.

TRICARE Plus: TRICARE Plus is a direct care program only. This program has no impact on payment of purchased care claims. TRICARE Plus enables beneficiaries to receive preferred access to primary care at military hospitals. The program is free and enrollment is required. Military hospitals set the capacity for TRICARE Plus, and it is not offered in all locations. There are 160,000 enrollees in TRICARE Plus, approximately 85% of whom are seniors.

TRICARE Reserve Select (TRS): TRS allows inactive guard/reserve and their family members to purchase TRICARE coverage. The coverage is similar to that of an active duty family member, except that TRS enrollees cannot also enroll in TRICARE Prime. The TRS program is new, and has undergone many changes since its introduction in 2005, making it difficult to study.

Designated Provider: The designated provider program is an enrollment program where beneficiaries give up all rights to use the MHS for their period of enrollment, in exchange for the MHS paying a capitation rate to cover all care provided through a single civilian organization. There are six designated provider locations, only two of which are near military hospitals (Seattle area and National Capital area).   There are roughly 100,000 designated provider enrollees.

<u>Pharmacy Benefits</u>: The MHS offers three points of service for prescription drugs. Beneficiaries can get prescriptions filled in military hospitals where it is free. Beneficiaries can also use retail pharmacy and mail order pharmacy as well, however there is cost sharing for non-active duty.

<u>TRICARE Vision</u>: The coverage and services provided to beneficiaries varies according to beneficiary type, program option and age. For detailed descriptions of benefits, refer to the TRICARE Vision Benefits Fact Sheet online at (http://www.tricare.mil/mybenefit/Download/Forms/Vision_FS.pdf).

In general, vision care for Active Duty Service Members (ADSM) includes routine eye examinations as needed in order to maintain fitness for duty. Family members of ADSM (over age six) and TRS Members are entitled to one routine eye exam per calendar year. Other beneficiary groups are entitled to varying levels of coverage. Additional details regarding these benefits can be found in the fact sheet.

<u>TRICARE Dental</u>: There are three dental plans for beneficiaries of TRICARE: 1) the TRICARE Dental Program, 2) the TRICARE Retiree Dental Program and 3) the TRICARE Active Duty Dental Program. See Fact sheets (http://www.tricare.mil/tricaresmartfiles/Prod_880/TRICARE_Dental_Options_Fact_Sheet.pdf) detailing each of these programs.

Appendix B: MHS Specific Terminology

1. Defense Health Program (DHP): Established in US Code Title 10, the DHP is the name of the DoD account that is appropriated to carry out the functions of the Secretary of Defense with respect to medical and health care programs of the DoD. The DHP is administered by Health Affairs and covers many items, including providing much of the funding used to operate peacetime military hospitals, major construction projects, and other related items.

2. MTF: A MTF is a fixed medical facility whose operations and maintenance funding is provided by the DHP. This generally means peacetime medical facilities. An example of an MTF is Walter Reed Army Medical Center. There are also military-operated facilities that provide care to beneficiaries that are not funded by the DHP, such as the Combat Support Hospital in Baghdad. Rather, these types of facilities receive their funding through the military services themselves.

3. Parent MTF: A parent MTF is one that is responsible for other nearby MTFs of the same service. An example of a parent MTF is Fort Hood's Darnall Army Community Hospital. The commander at Darnall is not only responsible for the hospital, but also for clinics that are located on Fort Hood that provide care for service members and their families. It is important when requesting data for an MTF to specify whether the data request is for the parent, or for the individual facility.

4. Defense Medical Information System Identifier (DMIS ID): A DMIS ID code is a four-character data element use to identify MTFs. The DMIS ID is used for other purposes as well. This is an important coding schema and is the most reliable way to identify a treatment or enrollment location.

5. Geography Constructs: There are MHS specific geographic constructs, to enable easy analysis of care in areas of importance to the MHS. These data elements are available on most MHS data files. Important terms are:
   a. Catchment Area: Represents a 40-mile circle around an inpatient MTF. Catchment area data elements are coded with the DMIS ID of the inpatient MTF. For example, if a user of data wrote a report requesting data for the catchment area of "0110" (Fort Hood), the data would be limited to all zip codes within 40 miles of the Fort Hood hospital.
   b. PRISM Area: Same as catchment area, except the radius is 20 miles and the concept exists for both inpatient and ambulatory treatment facilities.
   c. MTF Service Area: Same as catchment area, except the concept exists for both inpatient and ambulatory treatment facilities.
   d. Multi-Service Market Area (MSMA): A multi-service market area is a geographic area where there is more than one MTF operated by different military services. There are 10 MSMAs, such as the National Capital Area and San Antonio, TX.
   e. Beneficiary Region: There are five TRICARE regions: TRICARE South, TRICARE North, TRICARE West, TRICARE Pacific, and TRICARE Europe. These regions are important to

the Prime, Extra, and Standard programs, in that there are large fiscal intermediary and managed care support contractors in place associated with each region. These contracts are very broad in scope, and provide a full range of services including the development of networks, case management, utilization management, assistance with MTF initiatives, claims processing, and many other important functions required for managed care and health insurance in general. There are also TRICARE Regional Offices.

6.   MEPRS Codes: MEPRS codes are used to indicate accounting entities within an MTF.
   a. These codes are present in many data records produced by MTFs.
      i. Accounting data: Obligations and expenditures
      ii. Staffing data: Number of full time equivalent staff by type of staff
      iii. Encounter data: Clinic where healthcare is rendered
      iv. Inpatient data: Hospital unit rendering care. Can be more than one code present on a record
      v. Pharmacy, Laboratory and Radiology data: Clinic ordering the ancillary service
   b. The values for this coding schema are important for many studies in that they can be used to identify care provided in an intensive care unit, care in an emergency room, care in mental health clinics, and many other important areas.
   c. A reference to the MEPRS website is provided in an appendix to this document.

7.   MHS Specific Coding Rules.
   a. MTFs follow coding guidance issued by a tri-Service committee called the Unified Biostatistical Utility (UBU). The UBU published coding guidance on the TRICARE website. The link is provided in an appendix to this document.
   b. TRICARE claims are coded using Medicare's Correct Coding Initiative, generally.

Website references are provided in an appendix.

Appendix C: MHS Data Repository (MDR/M2) Files

MDR DEERS VM-6 Beneficiary Level File (and DEERS Point in Time Extract File)

Overview: Each observation in the record represents monthly status for eligible (and some ineligible) beneficiaries.   The data in the MDR DEERS VM-6 file is similar to that in the MDR DEERS VM-4 file and the MDR DEERS Point in Time Extract. The main difference in these files is that different versions of input data are given different file names.   There are, however, subtle differences in the records that are sent for ineligible beneficiaries. These files are often referred to as the "Beneficiary Files". This family of data files is available from FY03 through the present. DMDC forwards the eligibility data to the MDR once per month where the extract is processed and the final data set is stored.

Organization: The MDR DEERS Beneficiary file is stored in monthly files in text format.

Contents: The MDR DEERS Beneficiary file contains information about each beneficiary, what type of eligibility the beneficiary has, what plan the beneficiary has enrolled in (if any), service related characteristics and beneficiary demographics. The file also contains information about other health insurance coverage, Medicare eligibility, and some additional beneficiary-specific data.

User/Uses: The MDR DEERS Beneficiary file is commonly used to define cohorts for research studies. This file is considered the official source for information about beneficiaries of the MHS.

References: The following link provides useful information about the MDR DEERS Beneficiary data.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR DEERS Enrollment File

Overview: Each observation in the MDR DEERS Enrollment file represents monthly status for all persons enrolled in TRICARE plans, and all active duty personnel. The MDR DEERS Enrollment file is available for FY97 through the present. The MDR DEERS Enrollment file is currently created from the MDR DEERS Beneficiary files. Historically, this file was created from a stand-alone data feed. In FY2000, however, DMDC began combining the contents of the enrollment file into the beneficiary file. The DEERS Enrollment file in the MDR is also referred to as the DEERS Relationship file.

Organization: The MDR DEERS Enrollment file is stored in monthly files in SAS format.

Contents: The MDR DEERS Enrollment file contains monthly information at beneficiary level about enrollments. The enrollment program is identified, as well as the start date and beneficiary demographics. Information is available for TRICARE Prime, TRICARE Plus, TRS, TRICARE Overseas Prime, TRICARE Global Remote, and the Designated Provider Program.

User/Uses: The MDR DEERS Enrollment data are the primary source for determining whether a beneficiary is enrolled in a TRICARE Plan. Many research studies focus on particular programs, especially TRICARE Prime.

References: The following link provides useful information about the MDR DEERS Enrollment file.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR DEERS Longitudinal File

Overview: Each observation in the MDR Longitudinal Eligibility (LELG), Longitudinal VM4/VM6 (LVM4/LVM6) and Longitudinal Enrollment (LENR) files are derived from the DEERS Beneficiary and Enrollment files. The data are not different than what is contained in the respective source files, it is simply organized differently. In each file, a record represents a beneficiary in a year. In the longitudinal enrollment file, only those enrolled to TRICARE programs are included; the other two files contain all eligible beneficiaries. The LENR files are available from FY98 to FY04, when it was replaced by the LELG file. The longitudinal VM4 and VM6 files are available from FY04+. Data from these files is used to standardize demographic, enrollment and service related attributes in many other MDR data files.

Organization: The MDR DEERS LENR and LELG files are stored in annual files in SAS format. The Longitudinal VM4/VM6 files are stored in text format.

Contents: The MDR DEERS LELG and LENR files are fiscal year files with monthly variables to indicate beneficiary status. The LVM4/LVM6 is format is more complicated, with repeating loops containing beneficiary status information with start and stop dates. To use the LVM4/LVM6 files, array programming is commonly required.

User/Uses: The MDR DEERS Longitudinal file is generally used when many months of eligibility or enrollment data are required. Some researchers find the files helpful due to the size of the beneficiary and enrollment files. However, they are generally more difficult to use than the source files themselves.

References: The following link provides useful information about the MDR DEERS Longitudinal data.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR Guard/Reserve Call Up File

Overview: Each observation in the MDR Guard/Reserve Call Up file represents a guard or reserve member who was called up for a contingency operation since 9/11/2001, in a particular status. The DMDC forwards the data to the MDR once per month where the extract is processed and the final data set is stored. The information from this file is also linked to other files in the MDR, so that information about status for guard/reserve can be obtained elsewhere as well.

Organization: The MDR Guard/Reserve Call Up file is stored in one cumulative file in SAS format.

Contents: The MDR Guard/Reserve Call Up file contains information about each member who was mobilized. The associated operation is available, start and stop dates, and status: early alert period, mobilization period, and transitional assistance period.

User/Uses: The MDR Guard/Reserve Call Up file is generally useful for studies related to the impacts of guard and reserve on MTFs. These members are not generally eligible for services unless called-up, and so isolating these members is sometimes important for predictive modeling.

References: The following link provides useful information about the MDR Guard/Reserve Call Up file.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR MPI File

Overview: Each observation in the MDR MPI file represents a beneficiary registered in DEERS. The data in this file is derived from the DEERS Beneficiary files.

Organization: The MDR MPI file is stored in one cumulative file in text format.

Contents: The MDR MPI file contains person identifying information for each beneficiary of TRICARE. This file includes the name, DEERS Person Identifier, sponsor social security number, gender, date of birth, and relationship to sponsor. There are sometimes multiple records per person in the file, if the beneficiary has more than one reason for entitlement.

User/Uses: The MDR MPI file is generally useful for filling in missing person identifying information when needed. The MPI file has always been run on all MDR files to ensure consistent person-identification, however, it can be useful when external data are used for research.

References: The following link provides useful information about the MDR MPI data.

The Business & Economic Analysis Division's website
(http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR SIDR File

Overview: Each observation in the MDR SIDR file represents an inpatient stay at a military treatment facility. The MDR SIDR file is available for FY89 through the present. The MDR SIDR file represents information sent from the Composite Health Care System (CHCS). CHCS forwards the data to the MDR once per month where the extract is processed and the final data set is stored.

Organization: The MDR SIDR file is stored in fiscal year files in SAS format.

Contents: The MDR SIDR file contains information about the patient, the treating facility, the provider(s), diagnosis and procedure codes, diagnosis related group and major diagnostic category, admission and discharge dates, information about the departments rendering care, the estimated cost of the care, relative weighted products, and other key beneficiary and administrative data elements.

User/Uses: The MDR SIDR file serves as the primary source for information about MTF inpatient care.   This is the only centrally available detailed source to utilize.

References: The following link provides useful information about the MDR SIDR data.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR CAPER File

Overview: Each observation in the MDR CAPER file represents an ambulatory encounter at an MTF. This file also contains some limited inpatient rounds data. The MDR CAPER file is available for FY03 through the present. CAPER data represent information sent from CHCS; CHCS forwards the data to the MDR daily, and the MDR processes the data weekly. The MDR CAPER file was previously called the SADR, which is available back to 1997.

Organization: The MDR CAPER file is stored in fiscal year files in SAS format.

Contents: The MDR CAPER file contains information about the patient, the treating facility, the provider(s), diagnosis and procedure codes at the encounter, major diagnostic category, encounter dates, information about the departments rendering care, estimated costs of care, relative value units, and other key beneficiary and administrative data elements.

User/Uses: The MDR CAPER file serves as the primary source for information about MTF ambulatory care. This is the only centrally available detailed source to utilize.

References: The following link provides useful information about the MDR CAPER and SADR data.

The Business & Economic Analysis Division's website
(http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR MTF Ancillary Completed Orders File

Overview: Each observation in the MDR MTF Ancillary file represents a completed outpatient laboratory or radiology event conducted in a laboratory or radiology department[1]. There is generally one record per lab procedure, and two records per radiology procedure. The MTF Ancillary file is available for FY05 through the present. The MTF Ancillary file is sent from CHCS to the MDR each month, where the extract is processed and the final data set is stored.

Organization: The MDR MTF Ancillary file is stored in fiscal year files in SAS format.

Contents: The MDR MTF Ancillary file contains information about the patient, the treating facility, the ordering provider and clinic, the date the test was conducted, the estimated cost of the care and other key beneficiary and administrative data elements. The ancillary records can be linked to the SADR to obtain information about ancillary services associated with MTF outpatient care. This data file does not contain information about the results of the tests.

User/Uses: The MDR MTF Ancillary data are useful for determining which patients received which outpatient ancillary services. This file is commonly used for quality studies, to determine whether patients who require certain tests receive them (i.e. diabetics and HbA1C tests).

References: The following link provides useful information about the MDR MTF Ancillary file.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

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[1] Some laboratory and radiology data will also appear in the CAPER, when conducted in an outpatient clinic instead of a laboratory or radiology department.

MDR MTF Referral File

Overview: Each observation in the MDR MTF Referral file represents an MTF-issued referral that resulted in a booked appointment[2]. The MDR MTF Referral file is available for FY05 through the present.   MTF Referral data represents information sent from CHCS weekly to the MDR where the extract is processed and the final data set is stored.

Organization: The MDR MTF Referral file is stored in one cumulative file in SAS format.

Contents: The MDR MTF Referral file contains information about the patient, the referring provider and clinic, the referral date, the clinic that the patient is being referred to, the number of authorized visits, the start and stop date for the referral, and information about the first appointment booked for the referral. Records in the referral data can be linked to the encounter records (CAPERs) where the referrals were used.

User/Uses: The MDR MTF Referral data are useful for determining how long it takes for a patient to get an appointment after a referral is made and for determining referral patterns at the MTF.

References: The following link provides useful information about the MDR MTF Referral file.

The Business & Economic Analysis Division's website
(http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

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[2] Referrals can also be issued by TRICARE's Managed Care Support Contractors; however this information is unavailable. Also, referrals that did not result in booked appointments are not available.

MDR MTF Case Management File

Overview: Each observation in the case management dataset represents a case management episode at an MTF[3]. The reporting of case management data is a new requirement for MTFs, and many have yet to implement the reporting process properly. Thus, these data are considered incomplete. The MDR MTF Case Management data are derived from information in the CAPER. The MDR MTF Case Management data are updated weekly, in association with the CAPER.

Organization: The MDR MTF Case Management file is stored in one cumulative file in SAS format.

Contents: The MDR MTF Case Management file contains information about the patient, the MTF, the case manager, a case management acuity level and a start and stop date for that episode (based on person, acuity and case manager).   Case Management information (Acuity and Case Manager ID and MTF) has been linked to all other tables so that researchers and other users can easily obtain health records for the cohort of patients who are being case managed.

User/Uses: The MDR MTF Case Management data are useful for identifying vulnerable populations for study. Many of the patients in the case management file are wounded warriors.

References: The following link provides useful information about the MDR MTF Case Management data.

The Business & Economic Analysis Division's website
(http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

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[3] Patients are also case managed by the managed care support contractors. This information is not available.

MDR MTF Appointment File

Overview: Each observation in the MDR MTF Appointment file reflects a kept appointment at an MTF. The MDR MTF Appointment file is available for FY01 forward.   The appointment data represents information sent from CHCS to the MDR. Historically, CHCS has sent monthly appointment extracts, but beginning in FY10, data are updated weekly. The MDR MTF Appointment data are also merged with the CAPER data in the MDR to determine which appointments have been kept, but an encounter (CAPER) is not recorded. This is done as a part of MDR processing of the CAPER file, such that the CAPER file actually includes kept appointment records that have yet to be coded. These records are flagged and are called "Inferred CAPERs".

Organization: The MDR MTF Appointment file is stored in fiscal year files in SAS format.

Contents: The MDR MTF Appointment file contains information about the patient, the appointed provider and clinic, the appointment date, the appointment type, and many other administrative and beneficiary data elements.

User/Uses: The MDR MTF Appointment file contains much of the same information as the CAPER data, except that appointment records do not include elements that would not be known to the appointment system (such as information about items done at the actual appointment; i.e. procedure code). Appointment records are useful for determining completeness of CAPER data. They are also often used to determine the length of time between when an appointment is made, and when the patient is seen.

References: The following link provides useful information about the MDR MTF Appointment data.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR Pharmacy Data Transaction Service (PDTS) File

Overview: Each observation in the MDR PDTS file represents an outpatient prescription filled for an MHS beneficiary. Prescriptions are included in this file when filled at MTFs through TRICARE's mail order program (TMOP) or through a retail pharmacy in the US. There are also some VA prescriptions included. Missing from this file are (1) prescriptions filled at civilian pharmacies outside the US, and (2) inpatient pharmacy prescriptions. The MDR PDTS file is available for FY02 through the present. MDR PDTS data represent information sent from the PDTS Data Warehouse to the MDR. MDR PDTS data are sent and processed weekly. MDR PDTS data are also available in a point and click stand-alone system.

Organization: The MDR PDTS file is stored in fiscal year files in text format.

Contents: The MDR PDTS file contains information about the patient, the pharmacy that filled the prescription, the national drug code, therapeutic class and generic class of the drug, the prescription date, the estimated cost of the drug, the days of supply and other key beneficiary and drug data.   If a prescription was ordered at an MTF, the data can be linked to the CAPER to obtain information about the visit where the drug was ordered.

User/Uses: The MDR PDTS file is the primary source used to study drug utilization by MHS beneficiaries.

References: The following link provides useful information about the MDR PDTS file.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR TED-I File

Overview: Each observation in the MDR TED-I file is a record of a hospital or institution's claim for services provided in the private sector. The claims include inpatient care and institution-based home health care. MDR TED-I data are available for FY01 through present. Prior to the TED, a file called the HCSR Institutional was utilized. (These records are available for FY94 through FY00). Claims are initially submitted by the Managed Care Support Contractors (MCSCs) and paid by TRICARE's fiscal intermediary contractors. Once the claims are paid, the MCSC transmits the TED (or historically HCSR) record to TRICARE's TED system. A monthly extract is sent from the TED system to the MDR where it is processed and the final data sets are stored in the MDR.   The TED-I and TED-NI data together make up the purchased care medical data in the MDR.

Organization: The MDR TED-I file is separated by fiscal year and are stored in two data sets per fiscal year: header and revenue. Each header record may have one or more revenue records associated with it. The "TED Number" field on the data should be used to join the two tables. Claims that have been denied or cancelled are separated and stored in a cancellation data set in the same format that they were received from the source. The files are stored in SAS format.

Contents: The MDR TED-I file contains data extracted from the TED system as well as variables that are added by the MDR data processors to the data to enhance the utility of the data sets. The data describe the care the patient received, information about the patient, payment information for the claim, as well as other claims-related data.

User/Uses: The MDR TED-I file is the primary source for research involving inpatient hospital purchased care.

References: The following links provide useful information about the MDR TED-I data.

MDR Functional Specification
(http://www.tricare.mil/ocfo/bea/mdr.cfm)

The MDR Data Dictionary can be found at:
(http://www.tricare.mil/ocfo/bea/functional_specs.cfm)

TRICARE Systems Manual
(http://manuals.tricare.osd.mil/DisplayManual.aspx?SeriesId=T3TSM)

MDR TED-NI File

Overview: Each observation in the MDR TED-NI file is recorded for a TRICARE medical claim for all types of care/services except for inpatient facility claims (and a small amount of institutional based home health). This means that the TED-NI file includes billings for items such as doctor visits, pharmacy, ambulance services, supplies, and others. MDR TED-NI data are available for FY01 through present. Prior to the TED, a file called the Health Care Service Record (HCSR Non-Institutional) was utilized. (These records are available for FY94 through FY00). Claims are initially submitted by the MCSCs and paid by TRICARE's fiscal intermediary contractors. Once the claims are paid, the MCSC transmits the TED (or historically HCSR) record to TRICARE's TED system. A monthly extract is sent from the TED system to the MDR where it is processed and the final data sets are stored in the MDR. The TED-I and TED-NI data together make up the purchased care medical data in the MDR.

Organization: The MDR TED-NI file is extremely large. The files are separated by fiscal year and are stored in two data sets per fiscal year: DHP and Medicare Eligible Retiree Health Care Fund (MEHRCF). The DHP file contains records for active duty, active duty family and retirees and their family members who are not eligible for Medicare because of age. The MEHRCF file contains care for Medicare eligible individuals. (There is duplication across these two files. Users must be careful to eliminate duplication when needing system-wide data). Claims that have been denied or cancelled are separated out and stored in a cancellation data set in the same format that they were received from the source. The files are stored in SAS format.

Contents: The MDR TED-NI file contains data extracted from the TED system as well as variables that are added by the MDR data processors to the data to enhance the utility of the data sets. The data describe the care the patient received, information about the patient him or herself, payment information for the claim, as well as other claims-related fields.

User/Uses: The MDR TED-NI file is the primary source for research involved purchased care.

References: The following links provide useful information about the MDR TED-NI file.

MDR Functional Specification
(http://www.tricare.mil/ocfo/bea/mdr.cfm)

The MDR Data Dictionary can be found at:
(http://www.tricare.mil/ocfo/bea/functional_specs.cfm)

TRICARE Systems Manual
(http://manuals.tricare.osd.mil/DisplayManual.aspx?SeriesId=T3TSM)

TED – Provider Data (TED-PR) File

Overview: Each observation in the MDR TED-PR file is a record of a business that can bill TRICARE[4]. These providers include doctors, hospitals, pharmacies, medical supply companies and any other entities that can provide medical services to TRICARE beneficiaries. There is no unique identifier for a provider in this file; in fact, many providers are duplicated. Furthermore, some of the providers in the file are no longer accepting TRICARE patients. The MDR TED-PR file is a comprehensive file covering all years of HCSR/TED data. These provider records are submitted by the MCSCs the first time a claim shows up for a given provider. The TED-PR extract is sent from the TED system to the MDR where it is processed and stored. The MDR TED-PR file can be linked to TED-I and TED-NI.

Organization: The MDR TED-PR file is stored in one cumulative file in SAS format.

Contents: The MDR TED-PR file contains the provider's tax ID, the specialty or type of institution, the name and address of the provider, and whether or not the provider is affiliated with the TRICARE network or not. TED-PRs were historically received in a Health Care Provider Record (HCPR) format.

User/Uses: The MDR TED-PR file is used to determine the identity and location of providers in the purchased care data.

References: The following links provide useful information about the MDR TED-PR data.

MDR Functional Specification
(http://www.tricare.mil/ocfo/bea/mdr.cfm)

The MDR Data Dictionary can be found at:
(http://www.tricare.mil/ocfo/bea/functional_specs.cfm)

TRICARE Systems Manual
(http://manuals.tricare.osd.mil/DisplayManual.aspx?SeriesId=T3TSM)

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[4] There is no file containing information about direct care providers.

MDR Managed Care Forecasting and Analysis System (MCFAS) File

Overview: Each observation in the MDR MCFAS file is a summary record of projected populations by year. MCFAS population projections are available for the base year of 2009 through the projected years of 2017.

There are multiple sources used to prepare MCFAS population projections. The base population comes from the DEERS VM-6 file, with adjustments made for populations that are not generally included in the Program Objective Memorandum (POM) budgets for the MHS. Service-supplied unit end strengths are then used to project active duty population.   Active duty family member populations are projected based on the ratio in each unit of active duty to active duty family members. The retiree/other populations are projected based on information provided by the DoD Actuary Office. MCFAS data is available in the MCFAS system itself, and extracts are sent to the MDR. These extracts are processed and the final data sets are stored in the MDR. MCFAS data will no longer be updated as of FY11.

Organization: The MDR MCFAS file is stored in one data file in the MDR, with a fiscal year variable to represent the projection year. Both year-end and mid-year populations are available. The files are stored in SAS format.

Contents: The MDR MCFAS file contains information from the MCFAS system, as well as information that is appended during the preparation of the final MCFAS files for the MDR. Information is available by beneficiary category, zip code, service branch, and other demographic and service related characteristics. Please refer to the references section for relevant links.

User/Uses: The MDR MCFAS file is useful for examining changes in population that the DoD expects to occur. MDR MCFAS file is often used in the projections of future costs and utilization of health services.

References: The following link provides useful information about the MDR MCFAS data.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR MEPRS File

Overview: Each observation in the MDR MEPRS file is a summary record of monthly financial accounting, workload and manpower data for each MTF. MDR MEPRS data are available from FY99 to the present. The MDR MEPRS file represents a combination of more detailed data sets that contain expense, personnel, and workload data. MEPRS data are sent to the MDR from the EAS monthly. EAS data are also available in the Expense Assignment System IV (EASIV) Repository.

Organization: The MDR MEPRS file is stored in fiscal year files in SAS format.

Contents: The MDR MEPRS file contains cost, workload and staffing data for each MTF in each month, year and MEPRS Code. A MEPRS code generally identifies a place of care, but can also be used to identify an accounting entity (i.e. depreciation) or other cost center (such as housekeeping).

User/Uses: The MDR MEPRS data are helpful for understanding costliness at MTFs. Also, MEPRS is the only source with information about hours worked.

References: The following links provide useful information about the MDR MEPRS data.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MEPRS Information Portal (http://www.meprs.info)

MDR MEPRS Workload File

Overview: Each observation in the MDR MEPRS Workload file is a summary record of certain types of workload at each MTF by year and month. The MDR MEPRS Workload file is available for FY01 through the present. MEPRS Workload data represents information sent from the CHCS to the EAS. EAS data are also available in a stand-alone system called the EAS Repository. EAS forwards the data to the MDR once per month where the extract is processed and the final data set is stored.

Organization: The MDR MEPRS Workload file is stored in fiscal year files in SAS format.

Contents: The MDR MEPRS Workload file contains information about workload performed at MTFs. The data are available by year, month, MTF, MEPRS code, and beneficiary category. Two types of workload are available for each record; a raw workload amount and a weighted workload amount. There is nothing in the data file to indicate the type of workload reported; however, the MEPRS Manual can be used to identify the workload type for each MEPRS code. Please refer to the references section for relevant links.

User/Uses: The MDR MEPRS Workload data are useful for quick summaries and workload performed at MTFs.

References: The following links provide useful information about the MDR MEPRS Workload file.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MEPRS Information Portal (http://www.meprs.info)

MDR MEPRS Expense File

Overview: Each observation in the MDR MEPRS Expense file is a summary record of expenses at each MTF. The MDR MEPRS Expense file is available for FY01 through the present. MEPRS Expense data represents information sent from EAS. EAS data are also available in a stand-alone system called the EAS Repository.   EAS forwards the data to the MDR once per month where the extract is processed and the final data set is stored.

Organization: The MDR MEPRS Expense file is stored in fiscal year files in SAS format.

Contents: The MDR MEPRS Expense file contains information about the MTF reporting the expense, the year, the month, the MEPRS Code, and several different variables that describes types of expenses, including the program element code (PEC) and the Standard Expense Element Code (SEEC).

User/Uses: The MDR MEPRS Expense data are useful for detailed studies about expenses at MTFs.

References: The following links provide useful information about the MDR MEPRS Expense data.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MEPRS Information Portal (http://www.meprs.info)

MDR MEPRS Personnel File

Overview: Each observation in the MDR MEPRS Personnel file is a summary record of full-time equivalent data at each MTF by year and month. The MDR MEPRS Personnel file is available for FY01 through the present. MDR MEPRS Personnel data are not at person level. MDR MEPRS personnel data represent information sent to EAS from the service specific personnel system, historically, and Defense Medical Human Resource System (DMHRS) currently. EAS data are also available in a stand-alone system called the EAS Repository.   EAS forwards the data to the MDR once per month where the extract is processed and the final data set is stored.

Organization: The MDR MEPRS Personnel file is stored in fiscal year files in SAS format.

Contents: The MDR MEPRS Personnel file contains information by year, month, MTF and MEPRS Code. Data elements describing the occupation and skill type of the personnel are also available. Available and non-available time is also reported.

User/Uses: The MDR MEPRS personnel file is useful for examining staffing levels at MTFs; however, much of the same data can be obtained from the MEPRS Table itself.

References: The following links provide useful information about the MDR MEPRS Personnel data.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MEPRS Information Portal (http://www.meprs.info)

MDR MEPRS Ancillary Workload File

Overview: Each observation in the MDR MEPRS Ancillary Workload file is a summary record of ancillary workload at each MTF by year and month. The MDR MEPRS Ancillary Workload file is available for FY01 through the present. The MDR MEPRS Ancillary file is not available at event level. MDR MEPRS Ancillary data represents information sent from CHCS to EAS. EAS data are also available in a stand-alone system called the EAS Repository. EAS forwards the data to the MDR once per month where the extract is processed and the final data set is stored.

Organization: The MDR MEPRS Ancillary Workload file is stored in fiscal year files in SAS format.

Contents: The MDR MEPRS Ancillary Workload file contains counts of CPT codes and modifiers for ancillary MEPRS codes by year, month, MTF and MEPRS Code.

User/Uses: The MDR MEPRS Ancillary Workload file was historically the only location to obtain CPT level data about all ancillary care at MTFs. The detailed event level MDR Ancillary records only contain records of events associated with outpatient care. However, since the implementation of the clinical data in MDR, this is no longer the case.

References: The following links provide useful information about the MDR MEPRS Ancillary data.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MEPRS Information Portal (http://www.meprs.info)

MDR Designated Provider (DP) Clinical File

Overview: Each observation in the MDR DP Clinical file is a claim that was received by the DP Contractor for care provided under the DP Program. The DP program is a capitated program; thus, the claims do not represent what TRICARE pays for the program, but rather, what the plans themselves are paying. The MDR DP Clinical file is available from FY02 forward. DP data represents monthly information sent from the DP contractor to the MDR, where the extract is processed and the final data set is stored.

Organization: The MDR DP Clinical file is stored in fiscal year files in SAS format.

Contents: The DP Clinical file contains information about the patient, provider, care delivered and payment/billing data.

User/Uses: The DP Clinical file is used for research about the DP program. Beneficiaries who enroll in a DP program are locked out of direct care and purchased care; therefore, during active enrollment periods, medical care for these beneficiaries will show up only in these files.

References: The following links provide useful information about the DP Clinical data.

The Business & Economic Analysis Division's website
(http://www.tricare.mil/ocfo/bea/functional_specs.cfm)
provides specifications and data dictionaries.

TRICARE US Family Health Plan
(http://www.tricare.mil/mybenefit/ProfileFilter.do?puri=%2Fhome%2Foverview%2FPlans%2FLearnAboutPlansAndCosts%2FUSFamilyHealthPlan)

MDR DP Pharmacy File

Overview: Each observation in the MDR DP Pharmacy file is a claim that was received by the DP Contractor for care provided under the DP Program. The DP program is a capitated program – the claims do not represent what TRICARE pays for the program, but rather, what the plans themselves are paying. The MDR DP Pharmacy file is available from FY02 forward. MDR DP Pharmacy data represents monthly information sent from the DP contractor to the MDR, where the extract is processed and the final data set is stored.

Organization: The MDR DP Pharmacy file is stored in fiscal year files in SAS format.

Contents: The MDR DP Pharmacy file contains information about the patient, provider, drugs received and payment/billing data.

User/Uses: The MDR DP Pharmacy data are used for research about the DP program. Beneficiaries who enroll in a DP program are locked out of direct care and purchased care, therefore during active enrollment periods, medical care for these beneficiaries will show up only in these files.

References: The following links provide useful information about the MDR DP Pharmacy data.

The Business & Economic Analysis Division's website
(http://www.tricare.mil/ocfo/bea/functional_specs.cfm)
provides specifications and data dictionaries.

TRICARE US Family Health Plan
(http://www.tricare.mil/mybenefit/ProfileFilter.do?puri=%2Fhome%2Foverview%2FPlans%2FLearnAboutPlansAndCosts%2FUSFamilyHealthPlan)

MDR Master Death File

Overview: Each observation in the MDR Master Death file represents a beneficiary who has died while eligible. The Master Death Data Set is available for FY04 through the present. Records in the MDR Master Death file represents information compiled from the MDR Casualty File, and all clinical data sources. The MDR Master Death file is updated on a monthly basis.

Organization: The MDR Master Death file is stored in a cumulative file in SAS format.

Contents: The MDR Master Death file contains information about the beneficiary, the date of death, and the source of death data.

User/Uses: The MDR Master Death data are useful for enhancing DEERS death information. DEERS will generally have delayed reporting of deaths.   This information is used to ensure surveys are not sent to decedents, and is also useful for looking at death as an outcome variable.

References: The following link provides useful information about the MDR Master Death data.

The Business & Economic Analysis Division's website
(http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR Casualty File (Restricted)

Overview: Each observation represents an active duty death, as reported by the military services. The MDR Casualty file is available for FY04 through the present. MDR Casualty data are sent from casualty affairs to the MDR on a monthly basis. The MDR processes the data and stored the final data set.   Access to the MDR Casualty file is restricted. Researchers who wish to access this data must fill out a special form requesting the access.

Organization: The MDR Casualty file is stored in one cumulative file in SAS format.

Contents: The MDR Casualty file contains information about the person who died, the date of death, and the cause of death.

User/Uses: The MDR Casualty file is useful for studies where the cause of death is needed.

References: The following link provides useful information about the MDR Casualty data.

The Business & Economic Analysis Division's website
(http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR Address File (Restricted)

Overview: Each observation represents an eligible beneficiary or an ineligible who was treated at an MTF with an address. The MDR Address file is available from FY05 through the present. The MDR Address file is derived from the DEERS Beneficiary Data and the CHCS Appointment data. The MDR Address file is processed once per month. Researchers who wish to access these data must fill out a special form requesting the access.

Organization: The MDR Address file is stored in one file in SAS format.

Contents: The MDR Address file contains necessary information to contact beneficiaries, including name and address. Two different sources of data are available, along with a last update date.

User/Uses: The MDR Address data are useful for when beneficiaries need to be contacted, such as for survey work.

References: The following link provides useful information about the MDR Address data.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR Vitals File

Overview: Each observation in the MDR Vitals file represents a measurement of vital statistics recorded during an ambulatory encounter at an MTF, when Armed Forces Health Longitudinal Technology Application (AHLTA) is used for data capture. The MDR Vitals file is made available for FY09 through the present.

Organization: The MDR Vitals file is stored in cumulative files in SAS format.

Contents: The MDR Vitals file contains information about the patient, the treating facility, the provider(s), encounter dates, information about the departments rendering care, alcohol and tobacco use, blood pressure, height, weight, respiratory rate and oxygen saturation, heart rate and rhythm, pain level at time of visit, and other key beneficiary and administrative data elements.

User/Uses: The MDR Vitals data are newly available and are useful for adding rich clinical detail about the patient's status at the time of the encounter. This is the only centrally available detailed source to utilize for this purpose. The MDR Vitals data can be linked to the appointment and CAPER records representing where the vitals were taken.

References: The following link provides useful information about the MDR Vitals data.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR MTF Laboratory Results Files

Overview: There are currently two different files with MTF lab results in the MDR. Soon there will be three. In the chemistry file, each record represents a laboratory chemistry result for a test conducted by an MTF and includes inpatient and outpatient orders. Labs ordered in an outpatient setting can be linked to the appointment or CAPER that represents the event where the lab was ordered. A pathology file is also available, where each record represents a pathology report. Microbiology data should become available sometime in the Fall or Winter of 2012. Data are available for FY09 and later.

Organization: The MDR MTF Laboratory Results files are stored in cumulative files in SAS format.

Contents: The laboratory chemistry files contain person identifiers, demographics and enrollment, order and certification dates, LOINCs, lab test name, numeric result, text result, priority, and specimen. The pathology files contain person identifiers, demographics and enrollment, order dates, result dates, result text, test name, pathologic and final diagnosis. Both lab files are linkable to the appointments where they were ordered.

User/Uses: These files are used to study clinical lab results for tests conducted at MTFs. These files are tremendously helpful for Comparative Effectiveness Research and other types of studies where clinical validation is important.

References: The following link provides useful information about the MDR MTF Lab Results data.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR Radiology Results File

Overview: The MDR Radiology Results file will be released in the fall of 2012. This file will contain radiology results for examinations conducted at MTFs. Each record represents the result of one radiology order, including a 4000 character provider note describing the findings, and an abnormal flag. Data are available for FY2009 and later.

Organization: The final organization is yet to be determined. Data will either be stored cumulatively in one file, or in files separated by fiscal year.

Contents: The MDR Radiology Results file contains person identifiers, demographics and enrollment, order and certification dates, radiology test identification, radiology text result, abnormal flag. It is expected that the radiology results file will be linkable to the CAPER where the exam was ordered, when the care is outpatient. For inpatient care, a heuristic link will be provided, rather than a direct system link.

User/users: This is the only file centrally available with radiology result information.

References: The following link provides useful information about the MDR Radiology Results data.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR Medications File

Overview: Each observation in the MDR Medications file represents a single prescription ordered for the patient at an MTF. This data set includes both inpatient and outpatient data. Records are available from FY09 and later.

Organization: The MDR Medications file is stored in cumulative files in SAS format.

Contents: The MDR Medications file contains information about the patient, the treating facility, the provider(s), encounter dates, information about the departments rendering care, other key beneficiary and administrative data elements, and states the following regarding the medication: medication name, whether it has multiple components, the start and end dates of the prescription order, amount dispensed, date dispensed, group ID (indicates if med order was part of a collection of other orders), repeating interval information, interval time, route of medication, number of refills, order status, order type (e.g. admission/discharge/transfer, ambulatory procedure request, IV drip, etc.), priority, units and remaining refills.

User/Uses: The MDR Medications data are newly available. Previously, the only centrally available pharmacy data was limited to outpatient care.   This data provides the only complete source of MTF medication history, in that PDTS is missing inpatient fills.

References: The following link provides useful information about the MDR Medications data.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR Immunizations File

Overview: Each observation in the MDR Immunizations file represents a single capture of immunization history captured during an ambulatory encounter at an MTF, when AHLTA is used for capture. The MDR Immunizations file is available for FY09 through the present. (Please note that only cursory initial assessments of data completeness and quality have been made.)

Organization: The MDR Immunizations file is stored in cumulative files in SAS format.

Contents: The MDR Immunizations file contains information about the patient, the treating facility, the provider(s), immunization dates, information about the departments recording the immunization history, other key beneficiary and administrative data elements, and the following information about the immunization: route, dose, date next due, reaction size, reaction result, generic name, exemption, CPT code, ICD-9-CM code, manufacturer code, vaccine lot number and generic name of vaccine.

User/Uses: The MDR Immunizations data are newly available and are useful for obtaining a patient's immunization history. This is the only centrally available detailed source with this information.

References: The following link provides useful information about the MDR Immunization data.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR Contingency Tracking System (CTS) File (Restricted)

Overview: Each observation in the MDR CTS file represents a service member deployed for more than 30 days for a contingency operation.   The source of the data is the Defense Manpower Data Center. Records are updated monthly and include all deployments since 9/11/2001. Researchers who wish to access these data must fill out a special form requesting the access

Organization: The MDR CTS file is a cumulative file, stored in SAS format.

Contents: Person Identifier, Deployment Start Date, Deployment Stop Date and Service Branch.

Users/Uses: This is the file used to determine who has been deployed for a contingency operation. This is the key file used in research on Wounded Warriors.

References: The following link provides useful information about the MDR CTS file.

The Business & Economic Analysis Division's website
(http://www.tricare.mil/ocfo/bea/functional_specs.cfm)
provides specifications and data dictionaries.

MDR Theater Medical Data Store (TMDS) File

Overview: Each observation in the MDR TMDS file represents care delivered in a contingency area. The care represented is captured using theater based systems and forwarded to the Armed Forces Health Surveillance Center. From there, the MDR TMDS data will be sent to the MDR. It has yet to be determined how much historical data will be available. MDR TMDS data will be available in the Fall or Winter of 2012.

Organization: MDR TMDS data will initially only be available in raw feed format. Users will need to learn to work adeptly with the data to apply updated records to ensure data are accurately reported.

Contents: Person identifiers, diagnosis and procedure codes, national drug codes and dates of care.

Users/Uses: This file will be particularly useful in completing the military health history of service members who have been deployed.

References: The following link provides useful information about the MDR TMDS data.

The Business & Economic Analysis Division's website
(http://www.tricare.mil/ocfo/bea/functional_specs.cfm)
provides specifications and data dictionaries.

MDR Active Duty Dental Plan (ADDP) and Military Medical Support Office (MMSO) Claims Files

Overview: Each observation in the MDR ADDP file is a record of a claim for dental services provided to active duty service members in the private sector. Prior to ADDP, these data were stored in the MDR Military Medical Support Office (MMSO) file. The MDR ADDP file is available for FY09 through the present, while MDR MMSO file is available for FY02 through FY10. MDR ADDP data are forwarded once per month from the ADDP contractor to the MDR where the extract is processed and the final data set is stored.

Organization: The MDR ADDP file is stored in one cumulative file in SAS format.

Contents: The MDR ADDP file contains information about the patient, provider, Current Dental Terminology (CDT) codes performed, the tooth or quadrant, and other dental specific data. Billing/payment data and CDT weighted values are also available. This file also contains an assessment of dental readiness and a flag indicating whether the care is associated with the oral health initiative.

User/Uses: The MDR ADDP file (and previously MMSO file) is the only source available with detailed purchased care dental data for active duty service members. This file is useful for studies about dental purchased care and also contains dental readiness information.

References: The following link provides useful information about the MDR ADDP data.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR Direct Care Dental Encounter Data (DED) File

Overview: The MDR Direct Care DED file contains procedure level data about dental care delivered in military dental treatment facilities operated by the Army and the Air Force. Navy data is not available.   MDR Care DED records are provided from the Army's Corporate Dental Application. Navy is not using this system currently, but when they begin to use CDA, Navy data will also be available.

Organization: The MDR Direct Care DED file is stored in a SAS dataset.

Contents: The MDR Direct Care DED file contains person identifiers, treatment location, CDT codes, enrollment, beneficiary category, dental readiness status, and other key data.

Users/Uses: The MDR Direct Care DED file is used for understanding care provided in dental treatment facilities in the Air Force and Army.

References: The following link provides useful information about the MDR Direct Care DED data.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR TRICARE Dental Plan (TDP) File

Overview: The MDR TDP file contains dental claims information for beneficiaries (Active Duty Family Members) enrolled in the TDP. TDP records are provided monthly by the TDP contractor. These claims are processed and stored in the MDR. MDR TDP data are available from FY10 and later.

Organization: The MDR TDP file is stored in fiscal year SAS datasets.

Contents: Each record represents a billed and accepted procedure code. Records include person identifiers, provider identifiers, CDT codes, payment and billing information, enrollment, beneficiary category and other detailed data.

Users/Uses: This is the only source for active duty family member dental care.

References: The following link provides useful information about the MDR TDP data.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR DMHRS File

Overview: The MDR DMHRS file is new and used by MTF staff to record labor hours worked at MTFs.   Each record represents staff assignment information for a particular time period. MTFs began reporting DMHRS data in FY2010.

Organization: There is a cumulative MDR DMHRS file stored in SAS format.

Contents: Person Identifiers, National Provider ID, MTF of Assignment, Service Branch, MEPRS Code of assignment, start and stop dates

Users/Uses: The MDR DMHRS data can be used to understand staffing patterns in the MHS.

References: The following link provides useful information about the MDR DMHRS data.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.

MDR National Plan and Provider Enumeration System (NPPES) File

Overview: The MDR NPPES file can be thought of as the master fie with all national provider IDs assigned by Health and Human Services. The MDR NPPES data are downloaded each month from the CMS website and stored in a SAS dataset.

Organization: The MDR NPPES file is stored as an all-time cumulative SAS dataset.

Contents: National Provider Identifier, Address, Phone Number and Specialty

Users/Uses: The MDR NPPES file is used to look up provider information in direct and purchased care files.

References: The following link provides useful information about the MDR NPPES data.

The Business & Economic Analysis Division's website (http://www.tricare.mil/ocfo/bea/functional_specs.cfm) provides specifications and data dictionaries.