Tri-service Disability Evaluation Systems Database Analysis and Research

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Executive Summary

The Accession Medical Standards Analysis and Research Activity (AMSARA) has provided the Department of Defense with evidence-based evaluations of accession standards since 1996. As part of this ongoing research activity, data are collected from each service's Disability Evaluation System (DES). AMSARA's mission was expanded in FY 2009 to include audits and studies of existing disability evaluation system by the request of the Office of Assistant Secretary of Defense, Health Affairs. This report describes analyses conducted in fiscal year 2011 of existing Disability Evaluation System data collected for accessions and disability research through the end of fiscal year 2010.

Disability evaluation is administered at the service level, with each branch of service responsible for the evaluation of disability in its members. In addition, disability evaluation data were initially collected for purposes of surveillance and research related to the development of medical accession standards. Service level evaluation of disability and data collected for accession research have resulted in variability in the type of data available in existing AMSARA databases for each service.

In the period from FY 2005 to FY 2010 data were collected on over 135,000 disability evaluations on over 115,000 service members; over half of which were Army disability evaluations. Regardless of service, the vast majority of disability evaluations were completed on active duty, enlisted personnel. Most personnel who undergo disability evaluation are male, aged 20-29 at the time of disability evaluation, and white.

Musculoskeletal conditions were the most common medical condition associated with disability and accounted for nearly half of all unfitting conditions in each service. Neurological and psychiatric conditions were the next most common of unfitting conditions. The particular conditions associated with each body system category vary by service. Musculoskeletal conditions in the Army, Navy, and Marine Corps are most commonly attributable to degenerative arthritis while musculoskeletal conditions in the Air Force are most commonly attributed to intervertebral disc syndrome. Post-traumatic stress disorder was the most common condition associated with psychiatric disability in the Army, Marine Corps, and Air Force while major depressive disorder was the most common reason for psychiatric disability in the Navy. Traumatic brain injury is the most common neurological condition among Army and Marine Corps, grand mal seizures were the most common neurological condition in the Navy and migraines were most common neurological condition in the Air Force.

The majority of evaluations in the period from FY 2005 to FY 2010 were on individuals considered stable for purposes of rating, and thus these individuals were not placed on the temporary disability retirement list. Among individuals not evaluated in conjunction with temporary disability retirement, the most common final disposition was separated with severance in all services. Permanent disability retirement was the most common final disposition for those who had been on the temporary disability retirement list. From FY 2005 to FY 2010 10% was the most commonly assigned rating to disability in all services and approximately 40% of evaluations resulted in a disability rating of 30% or higher in all services except the Army where about 50% of evaluations were rated 30% or higher.

This report also describes the history of medical disqualification prior to accession, presence of pre-existing medical conditions at accession, history of accession medical waiver,

and hospitalization among individuals evaluated for disability. History of permanent or temporary medical disqualification prior to accession ranged from 5%-10% and was least common among Air Force disability evaluations and most common in Army disability evaluations. The distribution of ICD-9 diagnoses at MEPS accession examination among the disability population were similar to that of the military population as a whole with weight and body fat the most common conditions listed in MEPS accession medical examination records. Conditions listed in accession medical waiver applications among those evaluated for disability were also similar to those observed in the general applicant population. Hospitalization among service members evaluated for disability was most commonly associated with a mental health diagnosis, which is in contrast to hospitalizations among the general active duty population where injuries and fractures are the more commonly associated with hospitalization.

Based on the data presented in this report and the variability observed in service disability evaluation system data, we present the following programmatic recommendations:

1. Include Medical Evaluation Board (MEB) International Classification of Disease 9th Revision (ICD-9) diagnoses in all disability evaluation records, allowing for more in depth analyses of the specific medical conditions that result in disability evaluation, separation, and retirement.

2. Record each service member's Military Occupational Specialty (MOS) and level of education at the time of disability evaluation.

3. Include variables to indicate whether medical condition for which a service member is undergoing disability evaluation was due to trauma or injury and date of initial diagnosis, onset of symptoms, or injury.

4. Develop standards for entry of Veterans Administration System of Rating Disability (VASRD) codes in each service's DES database, to ensure standard usage of VASRD codes and associated analogous codes across services.

5. Include a variable in all databases that notes when multiple VASRD codes are used to rate a single condition.

6. Standardize the combat data fields collected across the services' DES databases.

Introduction

The Disability Evaluation System (DES) process follows guidelines laid out by the Department of Defense (DoD) and public law. Disability evaluation is administered at the service level, with each branch of service responsible for the evaluation of disability in its members. While inter-service differences exist, the disability evaluation process for all services includes two main components: an evaluation by the Medical Evaluation Board (MEB), and a determination by the Physical Evaluation Board (PEB) of a service member's ability to perform his/her military duties [1,2].

The disability evaluation process is described in Department of Defense Instruction 1332.38 and serves as the basis for each service's disability evaluation [3]. The process of disability evaluation begins when a service member is diagnosed with a condition or injury at a Military Treatment Facility (MTF). If the condition or injury is considered potentially disqualifying or significantly interferes with the service member's ability to carry out the duties of his/her office, grade, or ranking, the case is referred to the MEB. Service members who meet medical standards or deemed capable of carrying out his/her duties are returned to duty [1-2,4-6]. Those unable to perform assigned duties are forwarded to an Informal Physical Evaluation Board (IPEB) for a medical record review, and a determination regarding a service member's fitness for continued military service. Members deemed fit are returned to duty, while those who are deemed unfit are discharged or placed on limited duty. In the event a service member is dissatisfied with the determination made by the IPEB, he/she can appeal to the formal PEB (FPEB) and eventually to the final review authority (which varies by service, as detailed below) if the case is not resolved to the service member's satisfaction.

Key variables collected at each stage of disability processing are shown in (Figure 1). At the MEB, each case is diagnosed and it is determined whether the service member is able to perform assigned duties [4-6]. Cases are forwarded to the IPEB if it is determined that the member cannot perform his/her assigned duties or that the member does not meet medical retention standards. The IPEB panel must determine the member's fitness, and disability rating using the appropriate Veteran's Administration Schedule of Rating Disability (VASRD) code for the disabling condition, the appropriate disposition for the case and whether the condition is combat related [1]. If a service member does not agree with the determination of the IPEB, the decision can be appealed to the FPEB, and eventually to the final reviewing authority (Service Secretary), where the determination of the FPEB is reviewed. The FPEB is an independent board from the IPEB and the decision may be different from that of the IPEB. The final reviewing authority can either concur with the FPEB or revise the determination.

Figure 2 and Figure 3 describe the Army and Navy/Marine Corps disability evaluation processes, respectively. Those who meet medical retention standards at the MEB or are able to continue military duties are returned to duty, while cases that do not meet medical retention standards, in the Army, or are not able to perform military duties, in the Navy and Marine Corps, are forwarded to the IPEB for further review. The IPEB makes a fit/unfit determination and the service member is either returned to duty (deemed fit) or medically discharged (deemed unfit) and assigned a disposition and rating. Dispositions assigned include separated without benefit, separated with severance pay, permanent disability retirement, or temporary disability retirement. Ratings vary from 0-100% disability. Those assigned a disposition of separated without benefit are either unrated or rated 0%. Separated with severance pay carries a rating

varying from 0% to 20%; while permanent and temporary disability retirement carry ratings of 30% or higher.

The member can appeal the IPEB determinations of disposition and rating, though appeals to the FPEB may be denied if a member is deemed fit by the IPEB. Following service member appeal of the IPEB, the case is reviewed by the FPEB or reconsidered by the IPEB, again determining the fitness of the service member. An Army service member can appeal the FPEB determination to the United States Army Physical Disability Authority (USAPDA); the USAPDA is the final appeal authority before separation or retirement. A Navy or Marine Corps service member can appeal an FPEB determination to the Secretary of the Navy; the Secretary of the Navy is also a final appeal authority before separation or retirement from service. In the Navy and Marine Corps, all discharge recommendations are forwarded to the Service Headquarters where the recommendation for discharge can be accepted or denied (Figure 3). Both Services (Department of the Army and Navy) have a Board for Correction of Military Records which can be petitioned once a service member has left military service.

The Air Force disability evaluation process is described in (Figure 4). The Air Force disability evaluation process is generally similar to that of the other services; disability evaluation begins with the MEB where cases are evaluated against medical retention standards, those not meeting retention standards are referred to the IPEB (4). If a service member disagrees with the decision of the IPEB, it can be appealed to the FPEB, and eventually to the Secretary of the Air Force. However, in contrast to other services, MEB cases not forwarded to the IPEB can be appealed through the Air Force Surgeon General to determine if a case should be forwarded to the IPEB.

The objective of this report is to summarize the content of existing databases, comprised of data collected for purposes of accession research, to provide a basis for future studies of risk factors for disability processing, separation, and retirement. Though the general process for evaluating service members for disability discharge is similar across services, each service completes disability evaluation and collects and maintains disability evaluation data independent of one another. Small variations are present in the disability evaluation process across services and in the types of data collected across services. The Accession Medical Standards Analysis and Research Activity was established in 1996 for the purpose of supporting the development of evidence-based medical accession standards to mitigate morbidity and attrition among service members, and has received annual data extracts from the Army, Navy, and the Air Force since that time. These data were initially requested for the purpose of evaluating accession standards. AMSARA has been tasked by the Office of the Assistant Secretary of Defense, Health Affairs, since FY 2009, for performing an audit of tri-service disability evaluation systems using existing AMSARA databases.

FIGURE 1: KEY VARIABLES COLLECTED AT EACH STAGE OF DISABILITY EVALUATION

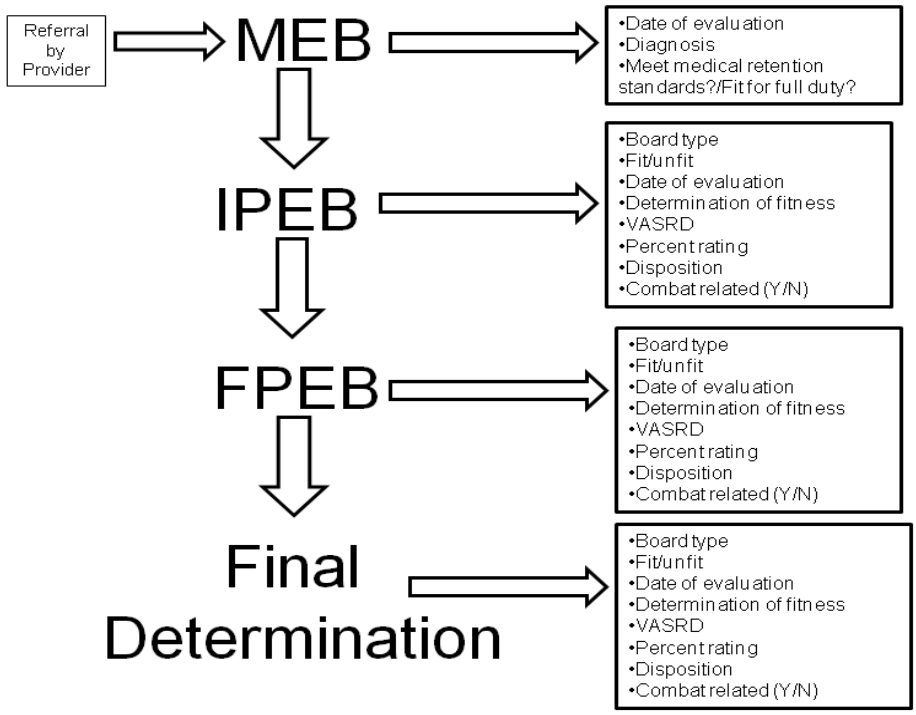
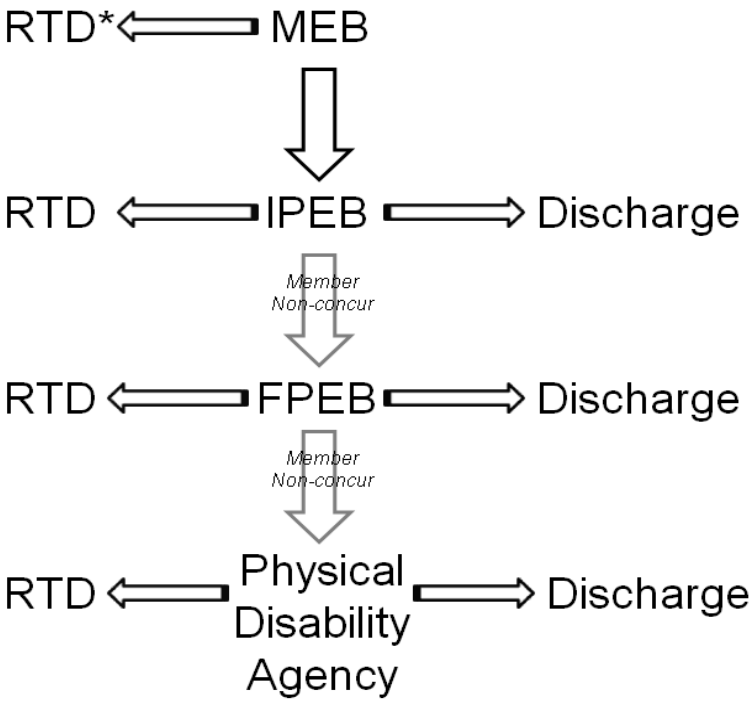
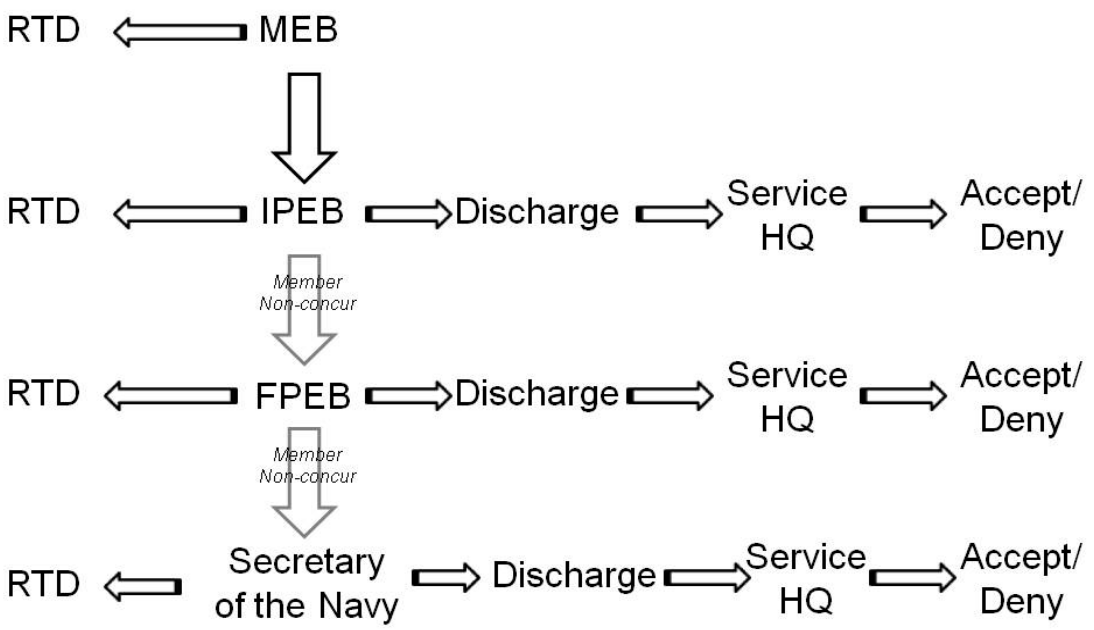


FIGURE 2: DISABILITY EVALUATION IN THE ARMY



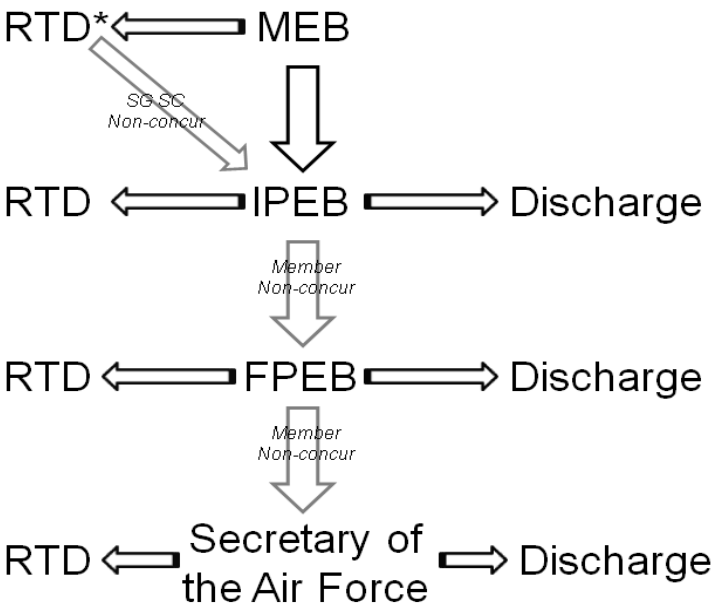
* RTD may be full or restricted duty per AR 40-501

FIGURE 3: DISABILITY EVALUATION IN THE NAVY AND MARINE CORPS*



*Secretary of the Navy Instruction 1850.4E

FIGURE 4: DISABILITY EVALUATION IN THE AIR FORCE



* RTD may be full or restricted duty per Air Force Instruction 48-123

1. METHODS

Study Population

Table 1 shows the characteristics of the DES datasets, requested by AMSARA for accession research, by service. Databases maintained by the services may contain information not sent to AMSARA. Disability evaluation data were available for all services for the period between FY 2001 and FY 2010 for enlisted and officers as well as active duty and reserve components. However, the types of records received from each service varied. All PEB evaluations for separately unfitting conditions in the Army, Navy and Marine Corps were transmitted to AMSARA for all years in which data are available. Air Force disability data only includes disability retirements and separations in years prior to FY 2010. In addition, while Army and Navy/Marine Corps send AMSARA multiple disability evaluations for individuals for all years in which data are available. However, multiple disability evaluations for the Air Force were only available for FY 2010 at the time the analyses for this report were completed. To enhance the comparability of the disability population across service and across years within the same service, only data on FY 2010 disability evaluations are presented for the Air Force.

TABLE 1: CHARACTERISTICS OF DES DATABASES BY SERVICE

	Army	Navy/Marine Corps	Air Force
Years received	1990-2010	2001-2010	2010*
Type of evaluations included	All PEB	All PEB	All PEB
Ranks included	Enlisted, Officer	Enlisted, Officer	Enlisted, Officer
Components included	Active Duty, Reserve	Active Duty, Reserve	Active Duty, Reserve
Multiple evaluations per individual?	Yes	Yes	Yes

*AFPC has provided WRAIR data on disability evaluations completed between 1995 and 2010. Prior to FY 2010, data on disability evaluations were sent only for selected dispositions. Therefore, only FY 2010 data is described in this report as it is most comparable to the data provided by other services.

To create analytic files for this report, service-specific databases were restricted to unique records with a final disposition date between October 1, 2005 and September 30, 2010. All ranks and components were included in these analyses. Multiple records were available at the individual level, defined using Social Security Number (SSN), for all services. When *individuals* were the unit of analysis, the last record per SSN was retained; when *evaluations* were the unit of analysis, multiple records were used per SSN. Unique evaluations were defined by SSN and date of final disposition. Therefore, an individual may appear more than once in the source population when evaluations are the unit of analysis.

TABLE 2: KEY VARIABLES INCLUDED BY DES DATABASE

	Army	Navy/Marine Corps	Air Force (FY 2010)
Demographic Characteristics[1]			
Age/DOB	Y	Y	Y
Gender	Y	Y	Y
Race	Y	Y	Y
Education	N	N	N
Rank	Y	Y	Y
Component	Y	Y	Y
MOS	Y	FY 2010	N
MEB			
Date of MEB Evaluation	Y	Y	N
MEB diagnosis	N	Y	N
PEB			
Board type	Y	Y	Y
Date of PEB Evaluation	Y	Y	Y
VASRD	Y	Y	Y
VASRD Analog[2]	Y	Y	Y
Percent Rating	Y	Y	Y
Disposition	Y	Y	Y
Disposition Date	Y	Y	Y
COMBAT			
Combat[3]	Y	N	N
Combat Related	Y	Y	Y
Combat Zone	Y	Y	N
On duty	Y	N	Y
Armed Conflict	N	Y	Y
Instrumentality of War	N	Y	Y

[1]Demographic characteristics at time of disability evaluation.
[2]Department of Navy and Air Force databases do not identify which VASRD code is associated with a dedicated analogous code variable. All VASRD codes are included in the same field regardless of whether or not the code is considered analogous.
[3]Includes instrumentality of war, armed conflict, or other criteria.

Variables

Table 2 shows the key variables included in each DES dataset received by AMSARA. Additional variables are included in each services database, but not presented in this report. Variables in the DES databases fall into four general categories: demographic characteristics, MEB variables, PEB variables, and combat variables.

Demographic Characteristics

Demographic variables including age at disability evaluation, date of birth, gender, race, rank, and component are available in all databases. Education was not available in any DES database and (MOS) was available only for all years in Army data received by AMSARA. AMSARA has traditionally utilized demographic variables from other sources, such as Defense Manpower Data Center (DMDC) personnel records and MEPS records, in the analysis of demographic variables and these sources can be used in combination with disability databases to obtain information on certain constant demographic characteristics (i.e. date of birth, race, gender). Characteristics which can vary over time, such as education, rank, component, and MOS, are most valuable when collected at the time of disability evaluation.

MEB variables

Date of MEB evaluation is present in both Army and Navy/Marine Corps databases. However, MEB diagnosis is only available for Navy/Marine Corps disability evaluations. For Navy/Marine Corps evaluations, the MEB diagnosis is recorded as a text field rather than as a code. Recoding of this field into ICD-9 codes by a nosologist will be necessary before further analysis of this field can be conducted.

PEB variables

All AMSARA datasets contain several key variables regarding the PEB evaluation including date of PEB evaluation, VASRD and analogous codes, percent rating, disposition and disposition date. Board type, a variable identifying if the case was referred to the formal PEB or final review authority prior to final disposition, is available for datasets received from the Navy and Army. ICD-9 diagnoses are not included in AMSARA DES datasets from any service.

VASRD codes, specific for the unfitting condition, and analogous coding that also utilizes a VASRD code that best approximates the functional impairment rendered by a medical condition for which there is no specific VASRD code, are used to define unfitting medical conditions which prompted the disability evaluation. These codes are not diagnostic codes, but are derived from the MEB diagnosis, and specify criteria that are associated with disability percentages that determine disability compensation. The number of VASRD codes assigned to an individual diagnosis varies by service. In the Army and in the Air Force, each condition can have one VASRD code and one analogous code, with up to four conditions included per consideration. In the Navy and Marine Corps, the number of VASRD codes per condition is unlimited and there is no limit the number of conditions that can be assigned to an evaluation, with a maximum of 41 conditions per evaluation observed for the period 2001-2010.

There are two general disposition types for members determined unfit for duty: separation and disability retirement. Separations can be administered with or without severance pay and are further classified as separated with severance and separated without benefits. Severance pay is given when a service member's condition is found to be unfitting and assigned a disability rating between 0 and 20 percent. Separation without benefits occurs when a service member is

found unfit for duty, but the condition is determined to have occurred as a result of misconduct, negligence, or, if the member has less than eight years of service and the condition is the result of a medical condition that existed prior to service.

Disability retirements can be classified as either permanent disability retirement or temporary disability retirement. Permanent disability is assigned when the member is found unfit, and either has a length of service greater than 20 years or has a disability rating that is 30 percent or higher, and the condition is considered unlikely to improve or worsen. Temporary disability is assigned when a member is deemed unfit for continued service and either has a length of service greater than 20 years or has a disability percent rating of 30 percent or higher. However, those with temporary disabilities differ from those with permanent disabilities in that their condition, while considered disabling, is not considered stable for purposes of rating. Service members placed on the temporary disability retirement list (TDRL) are re-evaluated every 6-18 months, for up to five years following initial placement on the TDRL. Once the unfitting condition is considered stable for purposes of rating by the PEB, the case is assigned a final disposition and percent rating. Therefore, a re-evaluation may result in a service member returning to duty or converting to any other disposition, though most on the TDRL eventually convert to permanent disability retired [1].

Combat Variables

Data received by AMSARA from the Army, Navy, and Marine Corps include variables regarding combat; the values of which are described per the DoDI 1332.38 [6]. These variables are used as a part of the percent rating determination taking into account if the disability was caused by, exacerbated by, or had no relation to combat experiences.

Combat indicates the physical disability is a disease or injury incurred in the line of duty in combat with an enemy of the United States as defined by the U.S. State Department [6,7].

Combat related is the standard that covers those injuries and diseases attributable to the special dangers associated with armed conflict or the preparation or training for armed conflict. [6,7].

Line of duty indicates that the injury or disease of a member performing military duty was incurred in a duty status; if not in a duty status, whether it was aggravated by military duty; and whether incurrence or aggravation was due to the member's intentional misconduct or willful negligence [6,7].

Armed conflict is described as the physical disability being a disease or injury incurred in the line of duty as a direct result of armed conflict. There must be a definite causal relationship between the armed conflict and the resulting unfitting disability. Armed conflict includes a war, expedition, occupation of an area or territory, battle, skirmish, raid, invasion, rebellion, insurrection, guerrilla action, riot, or any other action in which Service members are engaged with a hostile or belligerent nation, faction, force, or terrorists. Armed conflict may also include such situations as related to prisoner of war or detained status [6,7].

Instrumentality of war is described as a vehicle, vessel, or device designed primarily for Military Service and intended for use in such Service at the time of the occurrence of the injury. There must be a direct causal relationship between the use of the instrumentality of war and the disability, and the disability must be incurred incident to a hazard or risk of the service [6,7].

Other Data Sources

Applications for Military Service

AMSARA receives data on all applicants who undergo an accession medical examination for active duty or reserve service at any of the 65 Military Entrance Processing Stations (MEPS) sites. These data, provided by US Military Entrance Processing Command (USMEPCOM) Headquarters (North Chicago, IL), contain several hundred demographic, medical, and administrative elements on recruit applicants for each applicable branch (regular enlisted, reserve, National Guard) of each service (Air Force, Army, Marine Corps, and Navy). These data also include records on a relatively small number of officer recruit applicants and other non-applicants receiving periodic physical examinations.

Accession Medical Waivers

AMSARA receives records on all recruits considered for an accession medical waiver, i.e. those who received a permanent medical disqualification at the MEPS and sought a waiver for that disqualification. Each service is responsible for its own waiver decisions about applicants, and information on these decisions is generated and provided to AMSARA by each service waiver authority. Specifically, AMSARA receives Air Force medical waiver data by request from US Air Force Directorate of Medical Services and Training (Lackland AFB, TX); Army medical waiver data by monthly electronic transmission from the US Army Recruiting Command (USAREC, Fort Knox, KY); Marine Corps medical waiver data on request from the US Navy Bureau of Medicine and Surgery (BUMED, Washington, DC); and Navy medical waiver data from the Office of the Commander, US Navy Recruiting Command (Millington, TN).

Accession and Discharge Records

The DMDC (Defense Manpower Data Center) provides data on individuals entering military service and on individuals discharged from military service. Data are provided to AMSARA annually for active duty accessions into service and discharges from military service.

Hospitalizations

AMSARA receives Military Health System (MHS) direct care hospitalization data annually from the US Medical Command (USMEDCOM) Patient Administration Systems and Biostatistics Activity (PASBA), Fort Sam Houston, TX. These data contain information on admissions of active duty officers and enlisted personnel, as well as medically eligible reserve component personnel, to any military hospital.

2. RESULTS

Descriptive statistics for all disability evaluations

Service-specific characteristics of DES records are shown in Table 3. For the purpose of these analyses, and throughout this report, records are defined as units of a dataset (i.e. lines of data). In the Army and Air Force, one record contains multiple conditions per individual while in the Navy and Marine Corps the number of records is representative of the number of conditions adjudicated. Evaluations represent an individual's unique encounter with the PEB, defined using SSN and date of final decision. Therefore, each individual in this report may have more than one evaluation. The Army has more records, evaluations, and individuals evaluated for disabilities than the other services. The highest number of records per evaluation is found in the Navy (3.3) and Marine Corps (3.4). Across services the average number of evaluations per individual is only slight higher in the Navy (1.3) and Marine Corps (1.3), relative to the Army (1.1) and Air Force (1.0). VASRD codes assigned per evaluation were highest in the Army (2.1). The Navy and Air Force had the fewest VASRD codes per evaluation (1.6 and 1.5 respectively); however, the Navy has the highest number of evaluations per individual (1.3) and records per evaluation (3.3).

Observed differences in the number of records, individuals, and evaluations can be partially accounted for by the differences in the types of records AMSARA received from each service. While the Army sends data on only those who were evaluated for an unfitting condition by the PEB, Navy/Marine Corps sends data on any individual evaluated by the PEB including those without any unfitting conditions. The inclusion of all PEB evaluations contributes a larger proportion of individuals without VASRD codes in the Navy/Marine Corps and thus a lower average across all records. The Air Force has only provided data on all disability evaluations in FY 2010 and multiple evaluations within FY 2010 of the same individual are rare in the Air Force, averaging 1.0 evaluations per person in FY 2010.

TABLE 3: CHARACTERISTICS OF DES EVALUATIONS: FY 2005-FY 2010

	Army	Navy	Marine Corps	Air Force (FY 10)
Total records	100,401	77,743	62,894	4,979
Total individuals	77,468	18,723	14,693	4,976
Total evaluations	88,327	23,779	18,515	4.978
Average records/evaluation	1.1	3.3	3.4	1.0
Average evaluations/individual	1.1	1.3	1.3	1.0
Non-TDRL	1.1	1.0	1.0	1.0
TDRL	1.6	1.7	1.6	1.0
Average VASRD/evaluation	2.1	1.6	1.8	1.5

Total DES evaluations are shown by service and fiscal year in Table 4. Individuals may be counted more than once in this table due to TDRL re-evaluations. Since 2005, the number of disability evaluations per year has remained relatively stable in all services. In the Army and the highest proportion of disability evaluations occurred in FY 2005 (18.4%); in the Marine Corps, the highest proportion of evaluations occurred in FY 2010 (18.5%). In both the Army and Marine Corps, there is not wide variance in the proportion of total evaluations that occurred in each fiscal year between FY 2005 and FY 2010. However, in the Navy, the number of evaluations has generally decreased between FY 2005 and FY 2010; 19.8% of Navy disability evaluations during this time period occurred in FY 2005 as compared to 12.9% that occurred in FY 2010.

TABLE 4 : TOTAL DES EVALUATIONS BY SERVICE AND FISCAL YEAR 2005-2010

	Army		Navy		Marine Corps		Air Force*	
	Count	%	Count	%	Count	%	Count	%
2005	16,255	18.4	4,704	19.8	2,806	15.2	-	-
2006	13,756	15.6	4,629	19.5	3,177	17.2	-	-
2007	13,536	15.3	4,306	18.1	2,957	16.0	-	-
2008	14,191	16.1	3,908	16.4	3,086	16.7	-	-
2009	15,814	17.9	3,171	13.3	3,071	16.6	-	-
2010	14,775	16.7	3,061	12.9	3,418	18.5	4,978	100
Total	**88,327**		**23,779**		**18,515**		**4,978**	

*AFPC has provided WRAIR data on disability evaluations completed between 1995 and 2010. Prior to FY 2010, data on disability evaluations were sent only for selected dispositions. Therefore, only FY 2010 data is described in this report as it is most comparable to the data provided by other services.

Estimates of the percent of the total military population who underwent disability evaluation from 2005 to 2010 are shown in Table 5 by service and demographic characteristics. 2010 numbers are compared to the previous five years in aggregate. The rate of referral for disability evaluation per 1,000 service members was highest in the Army during both FY 2010 and the previous five years. The lowest rate of disability evaluation was observed in the Navy during both time periods. Rates of disability evaluation among Navy service members were also consistently lower than all other services regardless of race, age, gender, rank, or component. In all services, the rate of disability evaluation was higher in females and among enlisted and active duty service members. The rates of disability evaluation by age groups varied slightly by service. However, in all services and for all time periods the highest rate of evaluation was among those aged 25-29. In the prior five years, the frequency of disability evaluation did not vary by age in the Air Force, but disability evaluations were most frequent in those over 40 in all other services. When comparing white to black, rates of disability evaluation were similar in the Army, Navy, and Marine Corps. In the Air Force, black service members had a slightly higher rate of disability (11.0) as compared to white service members (9.7).

TABLE 5: RATE OF DES EVALUATION PER 1,000 SERVICE MEMBERS BY DEMOGRAPHIC CHARACTERISTICS AND SERVICE : 2005-2009 VS. 2010[1]

	2005-2009								2010							
	Army		Navy		Marine Corps		Air Force		Army		Navy		Marine Corps		Air Force	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Gender																
Male	4,492,029	11.7	1,718,044	7.4	1,073,536	10.5	-	-	954,154	10.0	323,841	4.7	226,469	8.8	406,707	8.2
Female	825,774	15.8	319,620	12.1	68,488	18.1	-	-	175,117	11.9	64,304	8.0	15,365	14.9	100,728	16.3
Age																
<20	417,655	4.9	116,329	2.8	157,920	5.0	-	-	70,512	3.2	14,736	2.0	26,348	4.9	17,486	4.7
20-24	1,494,007	12.1	578,869	7.6	541,347	11.5	-	-	314,196	9.1	114,937	5.4	114,050	9.1	116,333	8.6
25-29	1,098,330	14.2	433,584	10.0	210,426	14.7	-	-	258,466	12.0	89,547	6.0	51,503	12.6	116,836	11.0
30-34	699,347	13.7	305,694	9.3	102,718	12.2	-	-	158,707	11.6	60,188	5.5	22,651	9.1	81,460	11.1
35-39	674,703	11.2	296,698	7.5	74,280	8.5	-	-	128,627	10.2	51,594	4.9	15,394	7.3	67,416	10.5
≥ 40	933,158	13.9	306,467	8.2	55,325	8.5	-	-	198,759	11.8	57,132	4.6	11,888	6.0	107,904	9.2
Race																
White	3,837,175	12.1	1,339,367	8.3	872,993	10.3	-	-	821,879	10.5	243,864	5.3	190,144	7.9	381,488	9.7
Black	997,543	13.6	373,729	8.4	116,004	10.0	-	-	206,910	9.8	68,515	4.8	24,147	6.7	68,396	11.0
Other	207,313	27.7	248,622	9.5	55,358	41.9	-	-	47,452	21.7	64,006	6.7	12,737	42.5	31,813	15.9
Rank																
Enlisted	4,519,276	13.6	1,699,681	9.1	1,026,497	11.8	-	-	956,100	11.4	321,178	5.9	216,644	10.0	412,285	11.0
Officer	798,567	5.4	338,011	3.6	115,527	3.5	-	-	173,175	4.3	66,967	2.3	25,190	2.4	95,150	4.7
Component																
Active Duty	2,595,746	20.6	1,686,149	9.1	948,007	11.9	-	-	561,979	18.0	323,139	6.0	202,612	10.1	329,640	13.2
Reserves	2,722,097	4.5	351,543	3.9	194,017	6.1	-	-	567,296	2.8	65,006	1.7	39,222	4.5	177,795	3.5
Total Individuals	**5,317,843**	**12.4**	**2,037,692**	**8.2**	**1,142,024**	**10.9**	**-**	**-**	**1,129,275**	**10.3**	**388,145**	**5.3**	**241,834**	**9.2**	**507,435**	**9.8**

1. Data on total service population was generated using data from Defense Manpower Data Center (DMDC) queries and represents the total number of service members with each demographic as of 30 September of the fiscal year in question.
2. AFPC has provided WRAIR data on disability evaluations completed between 1995 and 2010. Prior to FY 2010, data on disability evaluations were sent only for selected dispositions. Therefore, only FY 2010 data is described in this report as it is most comparable to the data provided by other services.

Characteristics of individuals who underwent disability evaluation from FY 2005 to FY 2010 are shown in Table 6, comparing FY 2010 evaluations to FY 2005 through FY 2009 in aggregate. The vast majority of disability evaluations are performed on enlisted, active duty personnel, regardless of service. Army and Air Force had higher percentages of Reserve component disability evaluations, likely due to the inclusion of National Guard service members not present in the Navy and Marine Corps reserve component. In addition, most individuals evaluated for disability were male, aged 20-29 at the time of disability evaluation, and white, in all four services.

TABLE 6: DEMOGRAPHIC CHARACTERISTICS OF INDIVIDUALS AT TIME OF FIRST DISABILITY EVALUATION: FY 2005-FY 2009 VS FY 2010

	FY 2005-FY 2009								FY 2010							
	Army		Navy		Marine Corps		Air Force		Army		Navy		Marine Corps		Air Force*	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Gender																
Male	52,722	80.1	12,784	76.7	11,220	89.9	-	-	9,572	82.1	1,537	74.9	1,985	89.5	3,332	67.0
Female	13,037	19.8	3,871	23.2	1,243	10.0	-	-	2,081	17.8	513	25.0	229	10.3	1,644	33.0
Missing	43	0.1	17	0.1	13	0.1	-	-	13	0.1	1	0.1	3	0.1	-	-
Age at disability evaluation																
<20	2,049	3.1	320	1.9	785	6.3	-	-	226	1.9	30	1.5	129	5.8	82	1.6
20-24	18,048	27.4	4,388	26.3	6,213	49.8	-	-	2,848	24.4	624	30.4	1,041	47.0	1,006	20.2
25-29	15,544	23.6	4,354	26.1	3,101	24.9	-	-	3,098	26.6	541	26.4	649	29.3	1,285	25.8
30-34	9,571	14.6	2,835	17.0	1,256	10.1	-	-	1,838	15.8	332	16.2	205	9.3	902	18.1
35-39	7,578	11.5	2,236	13.4	634	5.1	-	-	1,308	11.2	254	12.4	113	5.1	711	14.3
≥ 40	12,961	19.7	2,522	15.1	469	3.8	-	-	2,341	20.1	262	12.8	71	3.2	990	19.9
Missing	51	0.1	17	0.1	18	0.1	-	-	7	0.1	8	0.4	9	0.4	-	-
Race																
White	46,435	70.6	11,138	66.8	8,971	71.9	-	-	8,610	73.8	1,282	62.5	1,501	67.7	3,719	74.7
Black	13,611	20.7	3,144	18.9	1,160	9.3	-	-	2,025	17.4	332	16.2	161	7.3	749	15.1
Other	5,735	8.7	2,361	14.2	2,319	18.6	-	-	1,030	8.8	427	20.8	541	24.4	505	10.1
Missing	21	<0.1	29	0.2	26	0.2	-	-	1	<0.1	10	0.5	14	0.6	3	0.1
Rank																
Enlisted	61,419	93.3	15,465	92.8	12,076	96.8	-	-	10,880	93.3	1,894	92.4	2,156	97.3	4,525	90.9
Officer	4,321	6.6	1,206	7.2	400	3.2	-	-	746	6.4	157	7.7	61	2.8	451	9.1
Missing	62	0.1	1	<0.1	-	-	-	-	40	0.3	-	-	-	-	-	-
Component																
Active	53,548	81.4	15,310	91.8	11,299	90.6	-	-	10,091	86.5	1,943	94.7	2,040	92.0	4,352	87.5
Reserve	12,249	18.6	1,362	8.2	1,177	9.4	-	-	1,575	13.5	108	5.3	177	8.0	624	12.5
Missing	5	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Individuals	**65,802**		**16,672**		**12,476**		**-**		**11,666**		**2,051**		**2,217**		**4,976**	

*AFPC has provided WRAIR data on disability evaluations completed between 1995 and 2010. Prior to FY 2010, data on disability evaluations were sent only for selected dispositions. Therefore, only FY 2010 data is described in this report as it is most comparable to the data provided by other services.

Tables 7A through 7D show the leading body system categories and the leading component VASRD codes that contributed to the larger body system category from FY 2005 to FY 2010 for the Army (Table 7A), Navy (Table 7B), Marine Corps (Table 7C), and Air Force (Table 7D) excluding analogous codes. Classification of an individual's conditions into body system categories is not mutually exclusive and individuals may be included in more than one body system category in cases of multiple conditions. Within each body system, all VASRD codes were utilized to describe the precise conditions for which individuals were evaluation. Like the body system categories, VASRD codes within a body system are not mutually exclusive and an individual is represented in multiple VASRD codes if he/she has more than one code. Therefore, percentages associated with VASRD codes within each body system can be interpreted as the percent of individuals with a VASRD code among all individuals with a condition in the body system.

Musculoskeletal conditions are the most commonly evaluated condition in all services. The percentage of individuals with a musculoskeletal condition also remained relatively constant over time in all services, with the exception of the Army where an increase was observed in FY 2010 (72.0%) relative to FY 2005-FY 2009 (59.8%). Increases in the proportion of individuals with neurological conditions in the Army were also observed in FY 2010 (25.3%) relative to previous years (14.1%). In the Navy and Marine Corps service members with a neurological condition decreased slightly in FY 2010 (N: 19.1%; MC: 20.4%) as compared to previous years (N: 22.2%, MC: 24.3%). The proportion of individuals with psychiatric conditions increased in FY 2010 as compared to FY 2005-FY 2009 in all services; this increase was most notable in the Army where 46% of individuals had a psychiatric condition in FY 2010 as compared to 18.4% of individuals in the previous.

Among musculoskeletal conditions, degenerative arthritis was the most common in the Army, Navy, and Marine Corps. Decreases in the proportion of musculoskeletal conditions accounted for by degenerative arthritis were observed in the Army, Navy, and Marine Corps were observed in FY 2010 related to previous years. Intervertebral disc syndrome was the most common musculoskeletal condition among Air Force service members evaluated for musculoskeletal conditions.

In FY 2010 post-traumatic stress disorder was the most commonly diagnosed psychiatric condition among Army (68.7%), Marine Corps (37.0%) and Air Force (33.6%) service members evaluated for disability. Increases in the proportion of post-traumatic stress disorder among disability evaluations for psychiatric conditions were observed in all services relative to FY 2005-FY 2009, though the increases were most notable in the Army and Marine Corps. Among Navy evaluations for psychiatric disability, major depressive disorder was the most common diagnosis in both FY 2010 and in previous years. The observed increases in post-traumatic disorder in all services are likely associated with changes in DoD guidance on determinations of disability related to post-traumatic stress disorder and may not reflect a true increase in the proportion of disability evaluations for post-traumatic stress disorder.

Among individuals with a neurological condition, residuals of traumatic brain injury was the most common condition in Army, and Marine Corps in FY 2010. In addition, increases in the percent of neurological cases attributable to VASRD code 8045 were observed in FY 2010 in the Army relative to the period from FY 2005-FY 2009. In FY 2010 33% of Army neurological disability were due to residual effects of traumatic brain injury as compared to 24% in the preceding five years. Among Marine Corps personnel, residual effects of traumatic brain injury accounted for 20 % of neurological conditions in FY 2010, similar to previous years. Residuals of traumatic brain injury was the third leading condition in individuals evaluated for neurological disability in the Air Force in FY 2010, constituting 8% of a neurological conditions.

TABLE 7A: LEADING BODY SYSTEM CATEGORIES AND SPECIFIC VASRD CODES: ARMY, FY 2005-FY 2009 VS. FY 2010

FY 2005-FY 2009			FY 2010		
	Count	%		Count	%
Musculoskeletal	**39,330**	**59.8**	**Musculoskeletal**	**8,393**	**72.0**
5003: Arthritis, degenerative (hypertrophic or osteoarthritis)	15,193	38.6	5003: Arthritis, degenerative (hypertrophic or osteoarthritis)	2,045	24.4
5237: Lumbosacral or cervical strain	8,311	21.1	5237: Lumbosacral or cervical strain	1,841	21.9
5242: Degenerative arthritis of spine	3,607	9.2	5243: Intervertebral disc syndrome	1,114	13.3
Other VASRD codes	22,363	56.9	Other VASRD codes	6,891	82.1
Psychiatric	**12,063**	**18.4**	**Psychiatric**	**5,365**	**46.0**
9411: Post-traumatic stress disorder	6,189	51.3	9411: Post-traumatic stress disorder	3,688	68.7
9434: Major depressive disorder	1,727	14.3	9434: Major depressive disorder	600	11.2
9304: Dementia due to brain trauma	1174	9.7	9413: Anxiety disorder, not otherwise specified	342	6.4
Other VASRD codes	3,555	29.5	Other VASRD codes	883	16.5
Neurological	**9,256**	**14.1**	**Neurological**	**2,952**	**25.3**
8045: Brain disease due to trauma*	2,236	24.2	8045: Residuals of traumatic brain injury*	971	32.9
8100: Migraine	1,376	14.9	8100: Migraine	601	20.4
8520: Sciatic nerve, paralysis	919	9.9	8520: Sciatic nerve, paralysis	229	7.8
Other VASRD codes	6,573	71.0	Other VASRD codes	1,686	57.1
All Other	**11,476**	**17.5**	**All Other**	**2,455**	**21.0**
Total Individuals Evaluated	**65,802**		**Total Individuals Evaluated**	**11,664**	

*The definition associated with VASRD code 8045 change in FY 2008 from 'brain disease due to trauma' to 'residuals of traumatic brain injury'.

TABLE 7B: LEADING BODY SYSTEM CATEGORIES AND SPECIFIC VASRD CODES: NAVY, FY 2005-FY 2009 VS. FY 2010

FY 2005-FY 2009			FY 2010		
	Count	%		Count	%
Musculoskeletal	**4,985**	**39.6**	**Musculoskeletal**	**706**	**44.2**
5003: Arthritis, degenerative (hypertrophic or osteoarthritis)	1,693	34.0	5003: Arthritis, degenerative (hypertrophic or osteoarthritis)	153	21.7
5237: Lumbosacral or cervical strain	628	12.6	5237: Lumbosacral or cervical strain	137	19.4
5241: Spinal fusion	346	6.9	5241: Spinal fusion	47	6.7
Other VASRD codes	3,294	66.1	Other VASRD codes	527	74.6
Neurological	**2,800**	**22.2**	**Neurological**	**305**	**19.1**
8910: Epilepsy, grand mal	468	16.7	8910: Epilepsy, grand mal	52	17.0
8100: Migraine	237	8.5	8100: Migraine	36	11.8
8018: Multiple sclerosis	217	7.8	8018: Multiple sclerosis	28	9.2
Other VASRD codes	1,493	53.3	Other VASRD codes	131	43.0
Psychiatric	**2,638**	**21.0**	**Psychiatric**	**389**	**24.3**
9434: Major depressive disorder	452	17.1	9434: Major depressive disorder	82	21.1
9432: Bipolar disorder	436	16.5	9411: Post-traumatic stress disorder	72	18.5
9411: Post-traumatic stress disorder	307	11.6	9432: Bipolar disorder	61	15.7
Other VASRD codes	751	28.5	Other VASRD codes	114	29.3
All Other	**3,701**	**29.4**	**All Other**	**389**	**24.3**
Total Individuals Evaluated	**12,589**		**Total Individuals Evaluated**	**1,598**	

TABLE 7C: LEADING BODY SYSTEM CATEGORIES AND SPECIFIC VASRD CODES: MARINE CORPS, FY 2005-FY 2009 VS. FY 2010

FY 2005-FY 2009			FY 2010		
	Count	%		Count	%
Musculoskeletal	**5,622**	**52.7**	**Musculoskeletal**	**1,087**	**54.8**
5003: Arthritis, degenerative (hypertrophic or osteoarthritis)	2,070	36.8	5003: Arthritis, degenerative (hypertrophic or osteoarthritis)	282	25.9
5237: Lumbosacral or cervical strain	560	10.0	5237: Lumbosacral or cervical strain	139	12.8
5262: Tibula and Fibula, Impairment of	354	6.3	5024: Tenosynovitis	86	7.9
Other VASRD codes	3,653	65.0	Other VASRD codes	883	81.2
Neurological	**2,597**	**24.3**	**Neurological**	**405**	**20.4**
8045: Brain disease due to trauma*	487	18.8	8045: Residuals of traumatic brain injury*	79	19.5
8100: Migraine	260	10.0	8910: Epilepsy, grand mal	50	12.3
8520: Sciatic nerve, paralysis	134	5.2	8100: Migraine	32	7.9
Other VASRD codes	1,133	43.6	Other VASRD codes	183	45.2
Psychiatric	**2,391**	**22.4**	**Psychiatric**	**476**	**24.0**
9411: Post-traumatic stress disorder	529	22.1	9411: Post-traumatic stress disorder	176	37.0
9434: Major depressive disorder	221	9.2	9434: Major depressive disorder	54	11.3
9432: Bipolar disorder	168	7.0	9432: Bipolar disorder	39	8.2
Other VASRD codes	344	14.4	Other VASRD codes	75	15.8
All Other	**2,173**	**20.4**	**All Other**	**279**	**14.1**
Total Individuals Evaluated	**10,670**		**Total Individuals Evaluated**	**1,984**	

*The definition associated with VASRD code 8045 change in FY 2008 from 'brain disease due to trauma' to 'residuals of traumatic brain injury'.

TABLE 7D: LEADING BODY SYSTEM CATEGORIES AND SPECIFIC VASRD CODES: AIR FORCE*, FY 2010

FY 2010		
	Count	%
Musculoskeletal	**1,803**	**36.2**
5243: Intervertebral disc syndrome	416	23.1
5003: Arthritis, degenerative (hypertrophic or osteoarthritis)	291	16.1
5242: Degenerative arthritis of the spine	271	15.0
Other VASRD codes	1,138	63.1
Psychiatric	**1,359**	**27.3**
9411: Post-traumatic stress disorder	457	33.6
9434: Major depressive disorder	324	23.8
9432: Bipolar disorder	191	14.1
Other VASRD codes	434	31.9
Neurological	**925**	**18.6**
8100: Migraines	244	26.4
8910: Epilepsy, grand mal	95	10.3
8045: Residuals of traumatic brain injury	75	8.1
Other VASRD codes	636	68.8
All Other	**1,951**	**39.2**
Total Individuals Evaluated	**4,976**	

*AFPC has provided WRAIR data on disability evaluations completed between 1995 and 2010. Prior to FY 2010, data on disability evaluations were sent only for selected dispositions. Therefore, only FY 2010 data is described in this report as it is most comparable to the data provided by other services.

Tables 8A through 8D show the top ten most common VASRD codes utilized for FY 2005-FY 2009 as compared to FY 2010 for the Army (Table 8A), Navy (Table 8B), Marine Corps (Table 8C), and Air Force (Table 8D). All VASRD codes, including analogous codes, were utilized in the analyses. Therefore, these tables should not be interpreted as the most commonly considered conditions, but rather the most frequently utilized VASRD codes.

In the Army, the leading VASRD code in FY 2010 was the code for post-traumatic stress disorder (9411) which accounted for 13% of all VASRD codes utilized. The utilization of the VASRD code for PTSD in FY 2010 represented a large increase in the utilization of this code for PTSD relative to previous years when the VASRD code for PTSD ranked fifth among all VASRD codes utilized. In addition, while the VASRD code for degenerative arthritis (5003) was the leading VASRD code in FY 2005-FY 2009, accounting for 13% codes used, in FY 2010 degenerative arthritis codes accounted for 7% of all VASRD codes. Use of the VASRD code for residuals of traumatic brain injury also increased in FY 2010 (4%) relative to previous years (2%).

Utilization of the VASRD code for PTSD also increased among Marine Corps disability evaluations in FY 2010 relative to previous years, though not to the extent observed in the Army. In FY 2010, approximately 9% of VASRD codes assigned to Marine Corps service members undergoing disability evaluation were for PTSD as compared to 6% of VASRD codes in the previous five years. Marine Corps VASRD codes also showed a decrease in the prevalence of the VASRD code for degenerative arthritis in FY 2010 (8%) relative to previous years (11%). The proportion of all VASRD codes that were classified using code 8045, residual effects of traumatic brain injury, increased in the Army when comparing FY 2010 percentages to those in the prior years. Residual effects of traumatic brain injury accounted for 4% of all VASRD codes in FY 2010 as compared to 2% of all VASRD codes in the period from FY 2005 to FY 2009 in the Army.

In the Army, Navy, and Marine Corps musculoskeletal analogous codes are among the most commonly utilized VASRD codes, varying from 9% to 12% of all codes used. Analogous codes are used in conjunction with another VASRD code when a VASRD code for the medical condition for which a service member is undergoing disability evaluation does not exist. Though analogous VASRD codes are not intended for stand-alone interpretation, the frequent utilization of the musculoskeletal analogous codes across services suggests that more musculoskeletal codes may be necessary in order to properly characterize musculoskeletal disability in the military.

TABLE 8A: TEN MOST COMMON VASRD CODES: ARMY, FY 2005-FY 2009 VS. FY 2010

FY 2005-FY 2009			FY 2010		
	Count	%		Count	%
5003: Arthritis, degenerative (hypertrophic or osteoarthritis)	15,193	13.2	9411: Post-traumatic stress disorder	3,688	13.3
5099: Musculoskeletal analogous code	14,776	12.8	5003: Arthritis, degenerative (hypertrophic or osteoarthritis)	2,045	7.4
5237: Lumbosacral or cervical strain	8,311	7.2	5099: Musculoskeletal analogous code	1,850	6.7
5299: Musculoskeletal analogous code	8,303	7.2	5242: Degenerative arthritis of the spine	1,841	6.6
9411: Post-traumatic stress disorder	6,189	5.4	5299: Musculoskeletal analogous code	1,120	4.0
5242: Degenerative arthritis of the spine	3,607	3.1	5243: Intervertebral disc syndrome	1,114	4.0
5243: Intervertebral disc syndrome	3,460	3.0	5237: Lumbosacral or cervical strain	1,043	3.8
6602: Asthma, bronchial	2,550	2.2	8045: Residuals of traumatic brain injury	971	3.5
8045: Brain disease due to trauma	2,236	1.9	8100: Migraine	601	2.2
5241: Spinal fusion	2,105	1.8	9434: Major depressive disorder	600	2.2
All Other	**48,710**	**42.2**	**All Other**	**12,892**	**46.4**
Total VASRD codes	**115,440**		**Total VASRD codes**	**27,765**	

TABLE 8B: TEN MOST COMMON VASRD CODES: NAVY, FY 2005-FY 2009 VS. FY 2010

FY 2005-FY 2009			FY 2010		
	Count	%		Count	%
5003: Arthritis, degenerative (hypertrophic or osteoarthritis)	1,693	8.4	5099: Musculoskeletal analogous code	190	7.6
5299: Musculoskeletal analogous code	1,404	7.0	5003: Arthritis, degenerative (hypertrophic or osteoarthritis)	152	6.1
5099: Musculoskeletal analogous code	763	3.8	5237: Lumbosacral or cervical strain	136	5.4
9434: Major depressive disorder	683	3.4	9434: Major depressive disorder	107	4.3
5237: Lumbosacral or cervical strain	628	3.1	9411: Post-traumatic stress disorder	102	4.1
7913: Diabetes mellitus	544	2.7	5299: Musculoskeletal analogous code	72	2.9
8910: Epilepsy, grand mal	497	2.5	9432: Bipolar disorder	65	2.6
9411: Post-traumatic stress disorder	480	2.4	8910: Epilepsy, grand mal	56	2.2
9432: Bipolar disorder	476	2.4	5241: Spinal fusion	47	1.9
7323: Ulcerative colitis	471	2.3	8100: Migraine	47	1.9
All Other	**12,499**	**62.1**	**All Other**	**1,536**	**61.2**
Total VASRD codes	**20,138**		**Total VASRD codes**	**2,510**	

TABLE 8C: TEN MOST COMMON VASRD CODES: MARINE CORPS, FY 2005-FY 2009 VS. FY 2010

FY 2005-FY 2009			FY 2010		
	Count	%		Count	%
5003: Arthritis, degenerative (hypertrophic or osteoarthritis)	2,068	11.0	5099: Musculoskeletal analogous code	345	10.2
5299: Musculoskeletal analogous code	1,753	9.3	9411: Post-traumatic stress disorder	291	8.6
9411: Post-traumatic stress disorder	1,169	6.2	5003: Arthritis, degenerative (hypertrophic or osteoarthritis)	282	8.3
5099: Musculoskeletal analogous code	916	4.9	5237: Lumbosacral or cervical strain	139	4.1
8045: Brain disease due to trauma	773	4.1	8045: Residuals of traumatic brain injury	122	3.6
5237: Lumbosacral or cervical strain	560	3.0	5299: Musculoskeletal analogous code	103	3.0
9304: Dementia due to brain trauma	528	2.8	5024: Tenosynovitis	86	2.5
5262: Tibula and Fibula, Impairment of	354	1.9	9434: Major depressive disorder	80	2.4
5255: Femur, impairment	353	1.9	5262: Tibula and Fibula, Impairment of	69	2.0
8910: Epilepsy, grand mal	293	1.6	5242: Degenerative arthritis of the spine	59	1.7
All Other	**10,020**	**53.3**	**All Other**	**1,874**	**55.3**
Total VASRD codes	**18,787**		**Total VASRD codes**	**3,391**	

TABLE 8D: TEN MOST COMMON VASRD CODES: AIR FORCE, FY 2010

FY 2010		
	Count	%
6602: Asthma, bronchial	494	6.7
9411: Post-traumatic stress disorder	457	6.2
5243: Intervertebral disc syndrome	416	5.7
9434: Major depressive disorder	324	4.4
5003: Osteoarthritis, degenerative (hypertrophic or osteoarthritis)	291	4.0
5242: Degenerative arthritis of the spine	271	3.7
8100: Migraines	244	3.3
9432: Bipolar disorder	191	2.6
6847: Sleep apnea syndromes	156	2.1
7323: Colitis, ulcerative	144	2.0
All Other	**4,372**	**59.4**
Total VASRD codes	**7,360**	

Table 9A shows the distribution of the last disposition by service for all disability discharge evaluations the comparing FY 2010 to FY 2005-FY 2009, excluding periodic TDRL re-evaluations in all services. When considering the last disposition for all disability evaluations, the most common dispositions in FY 2010 among the Marine Corps were separation with severance (40%) and placed on the TDRL (32%). Placement on the TDRL was the most common disposition following disability discharge evaluation in the Army (31%), Navy (29%), and the Air Force (28%). Second most common in the Army, Navy, and Air Force was separated with severance (28%, Army; 31%, Navy; 26% Air Force). Fit determinations were most common in the Navy, accounting for 23% of disability discharge dispositions in FY 2010.. Permanent disability retirement was the most common in the Army (24%) followed by the Air Force (20%).

In the period from FY 2005 to FY 2009, the Army had a smaller proportion of individuals with a last disposition of permanent disability retired (8%) relative to FY 2010 Army evaluations (24%) and to other services during the same time period. In addition, the proportion of individuals separated with severance pay is higher in the Army during the period from FY 2005-FY 2009 (49%) when compared to FY 2010 (28%). Among Navy and Marine Corps evaluations, the proportion of discharge evaluations with a last disposition of permanent disability retired (2% in both services) in FY 2005-FY 2009 was lower than the corresponding disposition in FY 2010 (~9% in both services). Finally, the proportion of fit dispositions in the Navy and Marine Corps decreased in FY 2010 relative to previous years.

TABLE 9A: LATEST DISPOSITION BY SERVICE FOR ALL INDIVIDUALS EVALUATED FOR DISABILITY DISCHARGE: FY 2005-FY 2009 VS FY 2010[1]

	FY 2005-FY 2009								FY 2010							
	Army		Navy		Marine Corps		Air Force[2]		Army		Navy		Marine Corps		Air Force	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Permanent Disability Retired	4,885	7.7	320	2.3	278	2.4	-	-	2,800	24.2	183	8.7	213	9.5	734	20.1
Separated without Benefit	2,846	4.5	658	4.7	614	5.4	-	-	97	0.8	92	4.4	77	3.4	133	3.6
Separated with Severance	31,207	49.2	3,919	27.7	4,360	38.2	-	-	3,275	28.2	649	30.7	901	40.0	938	25.7
Fit	5,033	7.9	3,951	28.0	1,705	15.0	-	-	808	7.0	487	23.0	239	10.6	831	22.8
Placed on TDRL	12,413	19.6	4,168	29.5	3,910	34.3	-	-	3,616	31.2	606	28.7	710	31.5	1,008	27.7
Administrative Termination	2,368	3.7	-	0.0	-	0.0	-	-	333	2.9	-	0.0	-	0.0	0	0.0
Other[3]	**4,736**	**7.5**	**1,107**	**7.8**	**536**	**4.7**	**-**	**-**	**667**	**5.8**	**96**	**4.5**	**111**	**4.9**	**0**	**0.0**
Total Evaluations	**63,488**		**14,123**		**11,403**		**-**	**-**	**11,596**		**2,113**		**2,251**		**3,644**	

1. Individuals with a 'Retained on the TDRL' disposition as their first disposition during the time period covered by this report are excluded from this table.
2. AFPC has provided WRAIR data on disability evaluations completed between 1995 and 2010. Prior to FY 2010, data on disability evaluations were sent only for selected dispositions. Therefore, only FY 2010 data is described in this report as it is most comparable to the data provided by other services.
3. Including, but not limited, individuals with dispositions of no action, limited duty, or administrative removal from TDRL.

Table 19B shows the distribution of latest dispositions by service for individuals who had a first disposition of 'Placed on the TDRL' from FY 2005 to FY 2010. The category 'No re-evaluation' represents service members who were placed on the TDRL, but have not yet undergone periodic TDRL re-evaluation. The majority of the individuals placed on the TDRL in FY 2010 have not undergone periodic re-evaluation. Among those placed on the TDRL from FY 2005-FY 2009, most had not undergone a re-evaluation within the study period. Permanent disability retirement was the most common outcome for individuals removed from the TDRL in all services constituting 32% of Navy dispositions, 34% of Marine Corps dispositions, and 39% of Army dispositions. The second most common outcome of TDRL re-evaluation in all services was being retained on the TDRL. A relatively small proportion of individuals placed on the TDRL received a final disposition of separated with benefit, separated with severance, or fit upon removal from the TDRL: 9% of Army, 11% of Navy, 12% of Marine Corps.

TABLE 9B: LATEST DISPOSITION BY SERVICE FOR INDIVIDUALS WHOSE FIRST DISPOSITION WAS PLACED ON TDRL: FY 2005-FY 2009 VS FY 2010

	FY 2005-FY 2009								FY 2010							
	Army		Navy		Marine Corps		Air Force[1]		Army		Navy		Marine Corps		Air Force*	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Permanent Disability Retired	4,823	38.9	1,310	31.5	1,335	34.2	-	-	0	0.0	-	0.0	7	1.0	0	0
Retained on TDRL	724	5.8	523	12.6	443	11.3	-	-	0	0.0	1	0.2	7	1.0	-	-
Separated without Benefit	4	0.0	3	0.1	1	0.0	-	-	0	0.0	-	0.0	-	0	-	-
Separated with Severance	721	5.8	345	8.3	358	9.2	-	-	0	0.0	-	0.0	-	0.0	-	-
Fit	164	1.3	106	2.5	130	3.3	-	-	1	<0.1	-	0.0	-	0	-	-
Administrative termination	33	0.3		0.0		0.0	-	-	0	0.0		0.0		0	-	-
No re-evaluation[2]	5,908	47.6	1,814	43.6	1,593	40.8	-	-	3,723	100.0	605	99.8	696	98.0	1,008	100
Other[3]	**31**	**0.2**	**64**	**1.5**	**48**	**1.2**	**-**	**-**	**0**	**0.0**	**-**	**0.0**	**-**	**0**	**-**	**-**
Total Individuals[4]	**12,408**		**4,165**		**3,908**		-	-	**3,724**		**606**		**710**		**1,008**	

1. AFPC has provided WRAIR data on disability evaluations completed between 1995 and 2010. Prior to FY 2010, data on disability evaluations were sent only for selected dispositions. Therefore, only FY 2010 data is described in this report as it is most comparable to the data provided by other services.
2. Number of individuals who were placed on the TDRL from FY 2005 to FY 2010 but have not had a re-evaluation.
3. Includes individuals with dispositions of no action, limited duty, or administrative removal from TDRL.
4. Total individuals is less than the total evaluations that resulted in placement on the TDRL, indicating that a some individuals were placed on TDRL more than once between FY 2005 and FY 2010.

Latest percent rating among evaluations for disability discharge is shown by service for the period for FY 2010 vs FY 2005-FY 2009 for all services is shown Table 10A. In FY 2010, the most frequently assigned rating was 10% in the Army (16%), Navy (26%), and Marine Corps (30%). In the Air Force, the most commonly assigned rating is 30% (17%). Navy considerations were most frequently rated at 100% when compared to other services (6.4%). Disability ratings greater than 30% in the Navy, Marine Corps, and Air Force accounted for about 40% of disability discharge evaluations while about 50% Army cases were rated higher than 30%. The most common percent ratings in FY 2010 did not differ from what was observed in previous years. However, the percentage of individuals rated greater than 30% disability was higher in FY 2010 relative the previous five years.

TABLE 10A: LATEST PERCENT RATING BY SERVICE FOR ALL INDIVIDUALS EVALUATED FOR DISABILITY DISCHARGE: FY 2005-FY 2009 VS FY 2010[1]

	FY 2005-FY 2009												FY 2010											
	Army			Navy			Marine Corps			Air Force[2]			Army			Navy			Marine Corps			Air Force		
	Count	%	CP[3]	Count	%	CP[3]	Count	%	CP[3]	Count	%	CP[3]	Count	%	CP[3]	Count	%	CP[3]	Count	%	CP[3]	Count	%	CP[3]
Unrated[2]	3,338	5.3	N/A	5,196	36.8	N/A	2,691	23.6	N/A	-	-	-	104	0.9	N/A	642	30.4	N/A	384	17.1	N/A	964	26.5	N/A
0	7,946	12.5	15.7	479	5.0	5.4	507	5.4	5.8	-	-	-	193	1.6	1.9	65	3.6	4.4	111	5.5	5.9	71	1.9	2.6
10	17,857	28.1	51.0	2,526	26.2	33.7	2,838	30.3	38.4	-	-	-	1,861	15.6	20.2	380	26.0	30.3	553	29.9	35.6	543	14.9	22.9
20	7,454	11.7	65.8	1,187	12.3	47.0	1,078	11.5	50.8	-	-	-	1,397	11.7	33.9	223	15.3	45.4	258	13.9	49.4	387	10.6	37.4
30	5,931	9.3	77.5	2,131	22.1	70.8	1,940	20.7	73.0	-	-	-	1,192	10.0	45.6	278	19.1	64.3	249	13.3	62.7	610	16.7	60.1
40	3,339	5.3	84.1	1,211	12.5	84.4	941	10.1	83.8	-	-	-	894	7.5	54.4	165	11.2	75.5	152	8.2	70.9	316	8.7	71.9
50	2,391	3.8	88.8	391	4.1	88.8	419	4.5	88.6	-	-	-	1,362	11.4	67.8	141	9.6	85.1	235	12.6	83.4	335	9.2	84.4
60	2,342	3.7	93.5	275	2.9	91.9	320	3.4	92.3	-	-	-	1,284	10.7	80.4	64	4.3	89.5	102	5.5	88.9	157	4.3	90.3
70	1206	1.9	95.9	96	1.0	92.9	225	2.4	94.9	-	-	-	901	7.5	89.2	45	3.1	92.5	95	5.2	94.0	96	2.6	93.8
80	736	1.2	97.3	57	0.6	93.6	93	1.0	96.0	-	-	-	546	4.6	94.6	14	1.0	93.5	34	1.8	95.8	37	1.0	95.2
90	356	0.6	98.0	19	0.2	93.8	54	0.6	96.6	-	-	-	212	1.8	96.7	3	0.2	93.7	12	0.7	96.5	11	0.3	95.6
100	1003	1.6	100	555	5.7	100	297	3.2	100	-	-	-	339	2.8	100	93	6.4	100	66	3.5	100	117	3.2	100
Missing[4]	9,589	15.1	N/A	-	0	N/A	-	0	N/A	-	-	-	1,681	14.0	N/A	-	0.0	N/A	-	0.0	N/A	-	0.0	N/A
Total	**63,488**			**14,123**			**11,403**			**-**			**-**			**-**			**2,251**			**3,644**		

1. Individuals with a 'Retained on the TDRL' disposition as their first disposition during the time period covered by this report are excluded from this table.
2. AFPC has provided WRAIR data on disability evaluations completed between 1995 and 2010. Prior to FY 2010, data on disability evaluations were sent only for selected dispositions. Therefore, only FY 2010 data is described in this report as it is most comparable to the data provided by other services.
3. CP=Cumulative Percent, excluding missing and unrated
4. Unrated/Missing include individuals with dispositions of Fit, SWOB, Administrative Termination, and Other; dispositions that are not associated with a percent rating by definition.

Latest percent rating among individuals placed on the TDRL is shown by service for FY 2010 vs FY 2005-FY 2009 for all services is shown Table 10B. In FY 2010, the most frequently assigned rating at TDRL re-evaluation was 30% in the Navy (34%), Marine Corps (24%), and Air Force (32%). In the Army the most frequently assigned ratings at TDRL re-evaluation are 50% and 60% (26% each). Navy evaluations were most frequently rated at 100% when compared to other services (9.3%). All individuals placed on the TDRL in FY 2010 had ratings of 30% or higher which is expected at time of placement on the TDRL. Individuals placed on the TDRL in the period from FY 2005 to FY 2009 had more variation in the percent ratings assigned, in the Navy and Marine Corps. However, the majority of individuals (i.e. > 90%) placed on the TDRL during this time were rated higher than 30% at the time of last evaluation. In the Army nearly all individuals placed on the TDRL between FY 2005 and FY 2009 had a rating of 30% or higher.

TABLE 10B: LATEST PERCENT RATING BY SERVICE FOR ALL INDIVIDUALS WHOSE FIRST DISPOSITION WAS PLACED ON TDRL: FY 2005-FY 2009 VS FY 2010

	FY 2005-FY 2009												FY 2010											
	Army			Navy			Marine Corps			Air Force[1]			Army			Navy			Marine Corps			Air Force		
	Count	%	CP[2]	Count	%	CP	Count	%	CP	Count	%	CP	Count	%	CP	Count	%	CP	Count	%	CP	Count	%	CP
Unrated[2]	-	0	N/A	17	0.4	N/A	136	3.5	N/A	-	-	-	-	0	N/A	-	0	N/A	N/A	0	N/A	-	0	N/A
0	-	0	0	18	0.4	0.4	21	0.4	0.6	-	-	-	-	0	0	-	0	0	-	0	0	-	0	0
10	3	<0.1	0	119	2.9	3.3	241	3.7	6.9	-	-	-	-	0	0	-	0	0	-	0	0	-	0	0
20	6	<0.1	0.1	86	2.1	5.4	101	1.4	9.6	-	-	-	-	0	0	-	0	0	-	0	0	-	0	0
30	4,518	36.4	36.5	1,828	43.9	49.5	1,496	43.4	49.3	-	-	-	260	7.0	7.0	204	33.9	33.7	173	24.1	24.4	322	31.9	31.9
40	2,232	18.0	54.5	1,002	24.1	73.7	762	20.8	69.5	-	-	-	181	4.9	11.8	135	22.1	55.9	111	15.2	40.0	134	13.3	45.2
50	1,883	15.2	69.7	353	8.5	82.2	406	10.3	80.2	-	-	-	985	26.5	38.3	111	18.2	74.3	199	28.3	68.0	265	26.3	71.5
60	1,843	14.9	84.5	259	6.2	88.5	274	7.6	87.5	-	-	-	967	26.0	64.3	49	8.2	82.3	76	10.8	78.7	95	9.4	81.0
70	904	7.3	91.8	87	2.1	90.6	196	5.2	92.7	-	-	-	710	19.1	83.3	39	6.4	88.8	81	11.8	90.1	82	8.1	89.1
80	456	3.7	95.5	41	1.0	91.6	74	1.9	94.7	-	-	-	411	11.0	94.4	11	1.8	90.6	24	3.1	93.5	27	2.7	91.8
90	151	1.2	96.7	14	0.3	91.9	44	1.1	95.8	-	-	-	98	2.6	97.0	1	0.2	90.8	4	0.6	94.1	10	1.0	92.8
100	409	3.3	100	336	8.1	100	157	4.3	100	-	-	-	112	3.0	100	56	9.3	100	42	5.9	100	73	7.2	100
Missing[3]	3	<0.1	N/A	-	0	N/A	-	0	N/A	-	-	-	-	0	N/A	-	0	N/A	-	0	N/A	-	0	N/A
Total	**12,408**			**4,160**			**3,908**			**-**			**3,724**			**606**			**710**			**3,403**		

1. AFPC has provided WRAIR data on disability evaluations completed between 1995 and 2010. Prior to FY 2010, data on disability evaluations were sent only for selected dispositions. Therefore, only FY 2010 data is described in this report as it is most comparable to the data provided by other services.
2. CP=Cumulative Percent, excluding missing and unrated
3. Unrated/Missing include individuals with dispositions of Fit, SWOB, Administrative Termination, and Other; dispositions that are not associated with a percent rating by definition.

History of medical disqualification, pre-existing conditions, accession medical waiver, and hospitalization among service members evaluated for disability

Table 11 shows the number and percentages of individuals in the DES records with records in other datasets collected by AMSARA. Applicant and waiver data are for enlisted active duty and reserve service members; hospitalization data were only available for active duty and eligible reserves at the time these analyses were completed. Accession and discharge data were available for all ranks and components. Regardless of service, the majority of those who were evaluated for disability had a loss record. Applicant records were available for the majority in all services except the Navy, where only 43% of enlisted individuals evaluated for disability had applicant records. Accession records are available for the majority of individuals evaluated for disability. However, the percentage of individuals with an accession record is lower in the Army and Air Force than in the Navy and Marine Corps. Missing applicant data may represent applications prior to 2001, the first year complete data are available. Similarly, in the case of accession data, missing data may represent accessions prior to 2000.

The highest percentage of individuals evaluated for disabilities with waiver records from any waiver authority were found in the Army (7%). Most accession medical waiver records for individuals evaluated for disability were approved regardless of service. Hospitalization at an MTF was most common in Navy service members evaluated for disability with 45% of active duty service members evaluated for disability experiencing hospitalization prior to receiving a final disposition. Army had the lowest rate of hospitalization at an MTF prior to receiving a final disposition.

TABLE 11: INDIVIDUALS EVALUATED FOR DISABILITY WITH RECORDS IN OTHER AMSARA DATA SOURCES: FY 2005-FY 2010

	Army		Navy		Marine Corps		Air Force	
	Count	%	Count	%	Count	%	Count	%
Applicant record[1] (2001-2010)	43,221	59.8	7,412	42.7	9,925	69.7	2,284	50.5
Accession medical waiver record[1] (1995-2010)	4,864	6.7	904	5.2	827	5.8	116	2.6
Approved	4,243	5.9	808	4.6	731	5.1	102	2.3
Denied	582	0.8	68	0.4	61	0.4	11	0.2
Pending	39	0.05	28	0.2	35	0.2	3	0.07
Accession record (2000-2010)	46,635	60.2	14,464	77.3	12,652	86.1	2,905	58.4
Hospitalization record[2] (1995-2010)	22,903	36.0	7,788	45.1	5,837	43.8	1,418	32.6
Discharge record (2000-2010)	68,473	88.4	16,965	90.6	13,284	90.4	3,431	69.0
Total Individuals	77,468		18,723		14,693		4,976	
Total Enlisted	72,299		17,359		14,231		4,525	
Total Active Duty	63,638		17,253		13,339		4,352	

1. Applicant and waiver datasets include only enlisted service members.
2. Hospitalization dataset (i.e. SIDR) includes active duty service members and qualified reserves.

Medical disqualification and pre-existing conditions among enlisted service members evaluated for disability

AMSARA enlisted applicant records include data on medical examinations conducted at a Military Entrance Processing Station (MEPS) from 2001 to present. MEPS medical examinations dated after the MEB date, or in the case of the Air Force, the earliest IPEB received dated, were excluded from the analyses. In cases where service members evaluated for disability had more than one MEPS medical examination record, only the most recent record preceding the disability evaluation was used.

Table 12 shows the history of medical examination and application for military service among service members evaluated for disability by year of disability evaluation and service. There is a general trend in all services of increasing proportions of applicant records with increasing year of disability, a trend which is expected given the time frame for which application records are available. Overall, the Marine Corps had the highest percentage of individuals evaluated for disability who also had a MEPS medical examination record for each year of disability evaluation. The percentage of application records that were available for individuals evaluated for disability in the Navy were consistently lower than all other services regardless of year of disability evaluation.

TABLE 12 : RECORD OF MEDICAL EXAMINATION AT MEPS AMONG ENLISTED SERVICE MEMBERS EVALUATED FOR DISABILITY BY YEAR OF DISABILITY EVALUATION: FY 2005-FY 2010

	Army			Navy			Marine Corps			Air Force[1]		
	App[2]	Total[3]	%	App[2]	Total[3]	%	App[2]	Total[3]	%	App[2]	Total[3]	%
2005	6,092	14,748	41.3	1,123	4,278	26.3	1,307	2,637	49.6	-	-	-
2006	5,675	11,726	48.4	1,328	3,872	34.3	1,725	2,846	60.6	-	-	-
2007	6,504	10,806	60.2	1,280	2,837	45.1	1,627	2,279	71.4	-	-	-
2008	7,785	11,190	69.6	1,272	2,395	53.1	1,686	2,180	77.3	-	-	-
2009	9,150	12,632	72.4	1,148	1,962	58.5	1,772	2,057	86.1	-	-	-
2010	8,015	10,875	73.7	1,261	1,892	66.6	1,808	2,151	84.1	2,284	4,525	50.5
Total	43,221	71,977	60.0	7,412	17,236	43.0	9,925	14,150	70.1	2,284	4,525	50.5

1. AFPC has provided WRAIR data on disability evaluations completed between 1995 and 2010. Prior to FY 2010, data on disability evaluations were sent only for selected dispositions. Therefore, only FY 2010 data is described in this report as it is most comparable to the data provided by other services.
2. App=Applicants with MEPS medical examination record.
3.Total enlisted individuals evaluated for a disability.

Medical qualification status at time of application for service for enlisted service members who underwent disability evaluation are shown in Tables 13A-13D comparing service members evaluated for disability in FY 2010 to those evaluated for disability in the previous five years. The rates of accession medical disqualification, whether temporary or permanent, were highest in the Army both in FY 2010 and in the previous five years. Approximately 10% of Army service members evaluated for disability had a history of permanent accession medical disqualification and 10% had a history of temporary disqualification. Lowest rates of history of accession medical disqualification were found in Air Force FY 2010 disability evaluations; 5% of Air Force

evaluations had a history of permanent accession medical disqualification and 5% had a history of temporary accession medical disqualifications. Permanent and temporary accession medical disqualification rates in the Marine Corps and Navy were similar, ranging from 7-8% in both FY 2010 and in the previous five years.

TABLE 13A: MEDICAL QUALIFICATION STATUS AMONG ENLISTED INDIVIDUALS WHO WERE EVALUATED FOR DISABILITY WITH MEPS EXAMINATION RECORD: ARMY, FY 2005-FY 2009 VS. FY 2010

	FY 2005-FY 2009		FY 2010	
	Count	%	Count	%
Fully Qualified	28,256	80.3	6,334	79.0
Permanently Disqualified	3,283	9.3	830	10.4
Temporarily Disqualified*	3,667	10.4	851	10.6
Total DES Cases with Medical Exam Record	35,206		8,015	

*The majority of temporary disqualifications are due to failure to meet weight for height and body fat standards.

TABLE 13B: MEDICAL QUALIFICATION STATUS AMONG ENLISTED INDIVIDUALS WHO WERE EVALUATED FOR DISABILITY WITH MEPS EXAMINATION RECORD: NAVY, FY 2005-FY 2009 VS. FY 2010

	FY 2005-FY 2009		FY 2010	
	Count	%	Count	%
Fully Qualified	5,157	83.8	1,052	83.4
Permanently Disqualified	491	8.0	110	8.7
Temporarily Disqualified*	503	8.2	99	7.9
Total DES Cases with Medical Exam Record	6,151		1,261	

*The majority of temporary disqualifications are due to failure to meet weight for height and body fat standards.

TABLE 13C: MEDICAL QUALIFICATION STATUS AMONG ENLISTED INDIVIDUALS WHO WERE EVALUATED FOR DISABILITY WITH MEPS EXAMINATION RECORD: MARINE CORPS, FY 2005-FY 2009 VS. FY 2010

	FY 2005-FY 2009		FY 2010	
	Count	%	Count	%
Fully Qualified	6,837	84.2	1,538	85.1
Permanently Disqualified	632	7.8	122	6.7
Temporarily Disqualified*	648	8.0	148	8.2
Total DES Cases with Medical Exam Record	8,117		1,808	

*The majority of temporary disqualifications are due to failure to meet weight for height and body fat standards.

TABLE 13D: MEDICAL QUALIFICATION STATUS AMONG ENLISTED INDIVIDUALS WHO WERE EVALUATED FOR DISABILITY WITH MEPS EXAMINATION RECORD: AIR FORCE, FY 2005-FY 2009 VS. FY 2010

	FY 2005-FY 2009*		FY 2010	
	Count	%	Count	%
Fully Qualified	-	-	2,048	89.7
Permanently Disqualified	-	-	121	5.3
Temporarily Disqualified**	-	-	115	5.0
Total DES Cases with Medical Exam Record	-		2,284	

*AFPC has provided WRAIR data on disability evaluations completed between 1995 and 2010. Prior to FY 2010, data on disability evaluations were sent only for selected dispositions. Therefore, only FY 2010 data is described in this report as it is most comparable to the data provided by other services.
**The majority of temporary disqualifications are due to failure to meet weight for height and body fat standards.

The leading ICD-9 diagnoses codes present in MEPS examination records of enlisted service members by year of disability evaluation are shown in Table 14A-Table 14D for the Army (Table 14A), Navy (Table 14B), Marine Corps (Table 14C), and Air Force (Table 14D). ICD-9 codes present in records of MEPS examination represent the presence of pre-existing conditions in applicants regardless of whether these pre-existing conditions are considered disqualifying. All ICD-9 diagnoses present in the most recent medical examination record that preceded disability evaluation were used in the generation of Table 14A- Table 14D.

In all services and for all time periods, the conditions noted in the applicant files of service members who underwent disability are consistent with highly prevalent conditions (AMSARA AR 2010). In all services, overweight, obesity, and other hyperalimentation was the most common condition noted at MEPS examination. *Cannibis* abuse, was the second leading ICD-9 in the Army and Marine Corps for both time periods and for the Navy for the period from FY 2005 to FY 2009 but was not present among the leading ICD-9 diagnoses codes present in MEPS medical examination records for Air Force members evaluated for disability. Abnormal loss of weight or underweight, hearing loss, and disorders of refraction and accommodation were also among the leading ICD-9 codes in all services.

TABLE 14A: TEN MOST COMMON ICD-9 DIAGNOSIS CODES APPEARING IN MEPS MEDICAL EXAMINATION RECORDS OF SERVICE MEMBERS EVALUATED FOR DISABILITY: ARMY, FY 2005-FY 2009 VS. FY 2010

FY 2005-FY 2009				FY 2010			
ICD-9 Diagnosis Code	Count	% of Cond[1]	% of App[2]	ICD-9 Diagnosis Code	Count	% of Cond[1]	% of App[2]
278: Overweight, Obesity and other hyperalimentation	2,055	33.6	5.8	278: Overweight, Obesity and other hyperalimentation	542	36.0	6.8
389: Hearing Loss	407	6.7	1.2	305.2: *Cannabis* abuse	100	6.6	1.2
305.2: *Cannabis* abuse	389	6.4	1.1	389: Hearing Loss	86	5.7	1.1
367: Disorders of refraction and accommodation	243	4.0	0.7	367: Disorders of refraction and accommodation	63	4.2	0.8
783.2: Abnormal loss of weight and underweight	225	3.7	0.6	783.2: Abnormal loss of weight and underweight	49	3.3	0.6
733.9: Other and unspecified disorders of bone and cartilage	205	3.4	0.6	401: Essential hypertension	38	2.5	0.5
493: Asthma	187	3.1	0.5	733.9: Other and unspecified disorders of bone and cartilage	35	2.3	0.4
401: Essential hypertension	164	2.7	0.5	493: Asthma	34	2.3	0.4
796: Nonspecific abnormal findings (other)	116	1.9	0.3	272.9: Unspecified disorder of lipoid metabolism	30	2.0	0.4
719.4: Pain in joint	81	1.3	0.2	796: Nonspecific abnormal findings (other)	29	1.9	0.4
Total Applicants with Medical Conditions	6,119			**Total Applicants with Medical Conditions**	1,505		
Total DES Cases with Medical Exam Record	35,205			**Total DES Cases with Medical Exam Record**	8,015		

1. Percent of applicants with each medical condition among all applicants with medical conditions.
2. Percent of applicants with each medical condition among all DES cases with a medical exam record.

TABLE 14B: TEN MOST COMMON ICD-9 DIAGNOSIS CODES APPEARING IN MEPS MEDICAL EXAMINATION RECORDS OF SERVICE MEMBERS EVALUATED FOR DISABILITY: NAVY, FY 2005-FY 2009 VS. FY 2010

FY 2005-FY 2009				FY 2010			
ICD-9 Diagnosis Code	Count	% of Cond[1]	% of App[2]	ICD-9 Diagnosis Code	Count	% of Cond[1]	% of App[2]
278: Overweight, Obesity and other hyperalimentation	270	31.0	1.8	278: Overweight, Obesity and other hyperalimentation	51	26.3	2.7
305.2: *Cannabis* abuse	56	6.4	0.4	783.2: Abnormal loss of weight and underweight	10	5.2	0.5
493: Asthma	39	4.5	0.3	493: Asthma	7	3.6	0.4
367: Disorders of refraction and accommodation	37	4.2	0.2	305.2: *Cannabis* abuse	6	3.1	0.3
733.9: Other and unspecified disorders of bone and cartilage	31	3.6	0.2	733.9: Other and unspecified disorders of bone and cartilage	6	3.1	0.3
401: Essential hypertension	26	3.0	0.2	367: Disorders of refraction and accommodation	5	2.6	0.3
389: Hearing Loss	24	2.8	0.2	389: Hearing Loss	4	2.1	0.2
783.2: Abnormal loss of weight and undeweight	21	2.4	0.1	401: Essential hypertension	4	2.1	0.2
717: Internal derangement of knee	20	2.3	0.1	732: Osteochondropathies	4	2.1	0.2
314: Hyperkinetic syndrome of childhood	14	1.6	0.1	796.2: Elevated blood pressure reading without diagnosis of hypertension	4	2.1	0.2
Total Applicants with Medical Conditions	871			**Total Applicants with Medical Conditions**	194		
Total DES Cases with Medical Exam Record	15,344			**Total DES Cases with Medical Exam Record**	1,892		

1. Percent of applicants with each medical condition among all applicants with medical conditions.
2. Percent of applicants with each medical condition among all DES cases with a medical exam record.

TABLE 14C: TEN MOST COMMON ICD-9 DIAGNOSIS CODES APPEARING IN MEPS MEDICAL EXAMINATION RECORDS OF SERVICE MEMBERS EVALUATED FOR DISABILITY: MARINE CORPS, FY 2005-FY 2009 VS. FY 2010

FY 2005-FY 2009				FY 2010			
ICD-9 Diagnosis Code	Count	% of Cond[1]	% of App[2]	ICD-9 Diagnosis Code	Count	% of Cond[1]	% of App[2]
278: Overweight, Obesity and other hyperalimentation	324	27.6	2.7	278: Overweight, Obesity and other hyperalimentation	60	27.4	3.4
305.2: *Cannabis* abuse	111	9.5	0.9	305.2: *Cannabis* abuse	30	13.7	1.7
783.2: Abnormal loss of weight and underweight	88	7.5	0.7	783.2: Abnormal loss of weight and underweight	15	6.8	0.8
493: Asthma	58	4.9	0.5	314: Hyperkinetic syndrome of childhood	11	5.0	0.6
733.9: Other and unspecified disorders of bone and cartilage	52	4.4	0.4	493: Asthma	9	4.1	0.5
367: Disorders of refraction and accommodation	51	4.3	0.4	367: Disorders of refraction and accommodation	9	4.1	0.5
389: Hearing Loss	32	2.7	0.3	733.9: Other and unspecified disorders of bone and cartilage	7	3.2	0.4
401: Essential hypertension	27	2.3	0.2	719.4: Pain in joint	6	2.7	0.3
314: Hyperkinetic syndrome of childhood	22	1.9	0.2	796: Nonspecific abnormal findings (other)	4	1.8	0.2
717: Internal derangement of knee	19	1.6	0.2	854: Intracranial injury of other and unspecified nature	3	1.4	0.2
Total Applicants with Medical Conditions	1,174			**Total Applicants with Medical Conditions**	219		
Total DES Cases with Medical Exam Record	11,999			**Total DES Cases with Medical Exam Record**	1,783		

1. Percent of applicants with each medical condition among all applicants with medical conditions.
2. Percent of applicants with each medical condition among all DES cases with a medical exam record.

TABLE 14D: TEN MOST COMMON ICD-9 DIAGNOSIS CODES APPEARING IN MEPS MEDICAL EXAMINATION RECORDS OF SERVICE MEMBERS EVALUATED FOR DISABILITY: AIR FORCE, FY 2010

FY 2010			
ICD-9 Diagnosis Code	Count	% of Cond[1]	% of App[2]
278: Overweight, Obesity and other hyperalimentation	53	25.0	2.3
367: Disorders of refraction and accommodation	17	8.0	0.7
783.2: Abnormal loss of weight and underweight	12	5.7	0.5
493: Asthma	9	4.2	0.4
389: Hearing loss	6	2.8	0.3
733.9: Other and unspecified disorders of bone and cartilage	6	2.8	0.3
311: Depressive disorder, not elsewhere classified	5	2.4	0.2
314: Hyperkinetic syndrome of childhood	5	2.4	0.2
831: Dislocation of shoulder	5	2.4	0.2
300: Anxiety, dissociative and somatoform disorders	4	1.9	0.2
Total Applicants with Medical Conditions	212		
Total DES Cases with Medical Exam Record	2,284		

1. Percent of applicants with each medical condition among all applicants with medical conditions.
2. Percent of applicants with each medical condition among all DES cases with a medical exam record.

Leading objective medical findings (OMF) codes that appeared in MEPS records of enlisted service members evaluated for disability are shown by service and year of disability evaluation in Tables 15A-15D comparing FY 2010 disability evaluations to FY 2005-FY 2009 evaluations. OMF codes present in records of MEPS examination represent the presence of pre-existing conditions in applicants regardless of whether these pre-existing conditions are considered disqualifying. All OMF present in the most recent medical examination record that preceded disability evaluation were used in the generation of Table 15A- Table 15D. The most common OMF codes present at time of MEPS medical examination were those for weight and body build across all services and years. Lower extremity conditions, positive *Cannabis* tests, and psychiatric conditions were also among the most common conditions across all services and years. When compared to the general applicant population, lower extremity conditions have higher rates among service members evaluated for disability across all services

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TABLE 15A: TEN MOST COMMON OMF CODES APPEARING IN MEPS MEDICAL EXAMINATION RECORDS OF SERVICE MEMBERS EVALUATED FOR DISABILITY: ARMY, FY 2005-FY 2009 VS. FY 2010

FY 2005-FY 2009				FY 2010			
OMF[1] Code	Count	% of Cond[2]	% of App[3]	OMF[1] Code	Count	% of Cond[2]	% of App[3]
54: Weight, body build	2,196	31.6	6.3	54: Weight, body build	591	35.2	7.4
34: Lower extremities (except feet)	526	7.6	1.5	55: Body fat percentage	148	8.8	1.8
71: Hearing	479	6.9	1.4	34: Lower extremities (except feet)	114	6.8	1.4
33: Upper extremities	383	5.5	1.1	40: Psychiatric	96	5.7	1.2
50M: *Cannabis* test positive	378	5.4	1.1	50M: *Cannabis* test positive	96	5.7	1.2
28: Lungs and chest (includes breast)	324	4.7	0.9	71: Hearing	96	5.7	1.2
40: Psychiatric	314	4.5	0.9	33: Upper extremities	79	4.7	1.0
52: Other tests	278	4.0	0.8	52: Other tests	78	4.6	1.0
38: Skin, lymphatic, allergies	273	3.9	0.8	58: Blood pressure	69	4.1	0.9
55: Body fat percentage	245	3.5	0.7	28: Lungs and chest (includes breast)	65	3.9	0.8
Total Applicants with OMF Codes	6,945			**Total Applicants with OMF Codes**	1,680		
Total DES with Applications	35,205			**Total DES with Applications**	8,015		

1. OMF=Objective Medical Finding
2. Percent of applicants with each medical condition among all applicants with medical conditions.
3. Percent of applicants with each medical condition among all DES cases with a medical exam record.

TABLE 15B: TEN MOST COMMON OMF CODES APPEARING IN MEPS MEDICAL EXAMINATION RECORDS OF SERVICE MEMBERS EVALUATED FOR DISABILITY: NAVY, FY 2005-FY 2009 VS. FY 2010

FY 2005-FY 2009				FY 2010			
OMF[1] Code	Count	% of Cond[2]	% of App[3]	OMF[1] Code	Count	% of Cond[2]	% of App[3]
54: Weight, body build	269	27.1	1.8	54: Weight, body build	59	28.4	3.1
34: Lower extremities (except feet)	89	9.0	0.6	34: Lower extremities (except feet)	20	9.6	1.1
52: Other tests	63	6.3	0.4	33: Upper extremities	16	7.7	0.8
33: Upper extremities	57	5.7	0.4	38: Skin, lymphatic, allergies	15	7.2	0.8
50M: *Cannabis* test positive	55	5.5	0.4	28: Lungs and chest (includes breast)	13	6.3	0.7
28: Lungs and chest (includes breast)	53	5.3	0.3	40: Psychiatric	10	4.8	0.5
38: Skin, lymphatic, allergies	41	4.1	0.3	58: Blood pressure	9	4.3	0.5
40: Psychiatric	40	4.0	0.3	35: Feet	8	3.8	0.4
35: Feet	37	3.7	0.2	31: Abdomen and viscera (include hernia)	6	2.9	0.3
58: Blood pressure	34	3.4	0.2	36: Spine, other musculoskeletal	6	2.9	0.3
Total Applicants with OMF Codes	994			**Total Applicants with OMF Codes**	208		
Total DES with Applications	15,344			**Total DES with Applications**	1,892		

1. OMF=Objective Medical Finding
2. Percent of applicants with each medical condition among all applicants with medical conditions.
3. Percent of applicants with each medical condition among all DES cases with a medical exam record.

TABLE 15C: TEN MOST COMMON OMF CODES APPEARING IN MEPS MEDICAL EXAMINATION RECORDS OF SERVICE MEMBERS EVALUATED FOR DISABILITY: MARINE CORPS, FY 2005-FY 2009 VS. FY 2010

FY 2005-FY 2009				FY 2010			
OMF[1] Code	Count	% of Cond[2]	% of App[3]	OMF[1] Code	Count	% of Cond[2]	% of App[3]
54: Weight, body build	394	30.8	3.3	54: Weight, body build	88	32.7	4.1
34: Lower extremities (except feet)	114	8.9	1.0	34: Lower extremities (except feet)	33	12.3	1.5
50M: *Cannabis* test positive	110	8.6	0.9	50M: *Cannabis* test positive	33	12.3	1.5
28: Lungs and chest (includes breast)	82	6.4	0.7	40: Psychiatric	23	8.6	1.1
33: Upper extremities	82	6.4	0.7	33: Upper extremities	20	7.4	0.9
40: Psychiatric	76	5.9	0.6	28: Lungs and chest (includes breast)	18	6.7	0.8
35: Feet	49	3.8	0.4	38: Skin, lymphatic, allergies	8	3.0	0.4
38: Skin, lymphatic, allergies	49	3.8	0.4	62: Refraction	8	3.0	0.4
62: Refraction	44	3.4	0.4	31: Abdomen and viscera (include hernia)	7	2.6	0.3
31: Abdomen and viscera (include hernia)	39	3.0	0.3	36: Spine, other musculoskeletal	6	2.2	0.3
Total Applicants with OMF Codes	1,281			**Total Applicants with OMF Codes**	269		
Total DES with Applications	11,999			**Total DES with Applications**	2,151		

1. OMF=Objective Medical Findings
2. Percent of applicants with each medical condition among all applicants with medical conditions.
3. Percent of applicants with each medical condition among all DES cases with a medical exam record.

TABLE 15D: TEN MOST COMMON OMF CODES APPEARING IN MEPS MEDICAL EXAMINATION RECORDS OF SERVICE MEMBERS EVALUATED FOR DISABILITY: AIR FORCE, FY 2010

FY 2010			
OMF[1] Code	Count	% of Cond[2]	% of App[3]
54: Weight, body build	60	25.4	2.6
33: Upper extremities	18	7.6	0.8
40: Psychiatric	17	7.2	0.7
34: Lower extremities (except feet)	16	6.8	0.7
52: Other tests	14	5.9	0.6
62: Refraction	14	5.9	0.6
28: Lungs and chest (includes breast)	12	5.1	0.5
35: Feet	12	5.1	0.5
38: Skin, lymphatic, allergies	10	4.2	0.4
32: Genitourinary	8	3.4	0.4
Total Applicants with OMF Codes	236		
Total DES with Applications	2,284		

1. OMF=Objective Medical Finding
2. Percent of applicants with each medical condition among all applicants with medical conditions.
3. Percent of applicants with each medical condition among all DES cases with a medical exam record.

History of accession medical waiver among enlisted service members evaluated for disability

AMSARA enlisted waiver records include data on medical waivers considered by each service's waiver authority from 1995 to present. Only waiver applications that occurred prior to the date of medical evaluation board were included in these analyses. In cases where more than one waiver record was available for an individual only the most recent waiver record was included. If the waiver record selected for an individual contained more than one diagnosis code, only the first diagnosis code was utilized.

Table 16 shows the history of medical waiver application among enlisted service members evaluated for disability by year of disability evaluation and service. There is a general trend in all services of increasing proportions of medical waiver applicant records with increasing year of disability, a trend which is expected given the time frame for which waiver application records are available. The overall prevalence of an accession medical waiver waiver application is similar in Army, Navy, and Marine Corps (~6%) service members who are evaluated for disability. Applications for waiver in the Air Force were much less prevalent than other services and occurred at less than half the rate in Air Force service members evaluated for disability.

TABLE 16 : HISTORY OF ACCESSION MEDICAL WAIVER APPLICATIONS AMONG ENLISTED SERVICE MEMBERS EVALUATED FOR DISABILITY BY YEAR OF DISABILITY EVALUATION: FY 2005-FY 2010

	Army			Navy			MarineCorps			Air Force		
	Waiver App	Total[1]	%[2]	Waiver App	Total[1]	%[2]	Waiver App	Total[1]	%[2]	Waiver App	Total[1]	%[2]
2005	798	14,913	5.4	167	4,292	3.9	131	2,604	5.0	-	-	-
2006	684	11,805	5.8	170	3,871	4.4	138	2,807	4.9	-	-	-
2007	719	10,849	6.6	164	2,829	5.7	147	2,257	6.5	-	-	-
2008	794	11,207	7.1	137	2,396	5.7	141	2,172	6.5	-	-	-
2009	978	12,645	7.7	138	1,966	7.0	150	2,056	7.3	-	-	-
2010	891	10,880	8.2	128	1,894	6.8	120	2,154	5.6	116	4,525	2.6
Total	4,864	72,299	6.7	904	17,248	5.2	827	14,050	5.9	116	4,525	2.6

1.Total enlisted individuals evaluated for disability

2.Percent of enlisted disability cases with a history of accession medical wavier application

The leading diagnoses codes listed in medical accession waiver application records of enlisted service members are shown in Tables 14A-Table 14D for the Army (Table 14A), Navy (Table 14B), Marine Corps (Table 14C), and Air Force (Table 14D). Results are shown by year of disability evaluation comparing FY 2010 disability evaluations to those occurring in the previous five years. In cases of multiple diagnoses codes listed within one waiver application, only the first diagnosis code was used.

Among Army service members evaluated for disability who applied for a waiver the predominant conditions in both FY 2010 and the preceding five years were hearing loss and disorders of refraction and accommodation. However, the proportion of waiver applications for each of these conditions decreased in FY 2010 relative to FY 2005-FY 2009. In Navy service members evaluated for disability, hearing loss, vision loss, and asthma were the most common conditions for which individuals evaluated for disability between FY 2005 and FY 2009 and FY 2010 sought pre-accession medical waivers. Presence of orthopedic surgical implants, nonspecific abnormal findings and asthma were the leading reasons Marine Corps personnel evaluated for disability between FY 2005 and FY 2009 sought pre-accession medical waivers. Relatively small numbers of waiver applicants among Navy and Marine Corps disability evaluations in FY 2010 preclude interpretation of the proportional distribution of conditions among waiver applicants. Among Air Force personnel evaluated for disability in FY 2010 the leading conditions for which pre-accession medical waivers were sought included disorders of refraction and accommodation, episodic mood disorders, and ADHD.

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TABLE 17A: TEN MOST COMMON ICD-9 DIAGNOSIS CODES FOR ACCESSION MEDICAL WAIVERS CONSIDERED AMONG ENLISTED INDIVIDUALS EVALUATED FOR DISABILITY: ARMY, FY 2005-FY 2009 VS. FY 2010

FY 2005-FY 2009			FY 2010		
ICD-9 Diagnosis Code	Count	%	ICD-9 Diagnosis Code	Count	%
389: Hearing loss	464	11.7	389: Hearing loss	80	9.0
367:Disorders of refraction and accommodation	294	7.4	367:Disorders of refraction and accommodation	61	6.8
493: Asthma	261	6.6	796.2: Elevated blood pressure reading without diagnosis of hypertension	45	5.1
733.9: Other and unspecified disorders of bone and cartilage	198	5.0	493: Asthma	38	4.3
717: Internal derangement of knee	140	3.5	733.9: Other and unspecified disorders of bone and cartilage	35	3.9
796.2: Elevated blood pressure reading without diagnosis of hypertension	123	3.1	272: Disorders of lipoid metabolism	24	2.7
314: Hyperkinetic syndrome of childhood	80	2.0	314: Hyperkinetic syndrome of childhood	22	2.5
300: Anxiety, dissociative and somatoform disorders	78	2.0	521: Diseases of hard tissues of teeth	21	2.4
785: Symptoms involving cardiovascular system	76	1.9	717: Internal derangement of knee	20	2.2
401: Essential hypertension	71	1.8	300: Anxiety, dissociative and somatoform disorders	19	2.1
All Other Waiver Codes	2,188	55.1	**All Other Waiver Codes**	526	59.0
Total Waiver Applications	**3,973**		**Total Waiver Applications**	891	

TABLE 17B: TEN MOST COMMON DODI DIAGNOSIS CODES FOR ACCESSION MEDICAL WAIVERS CONSIDERED AMONG ENLISTED INDIVIDUALS EVALUATED FOR DISABILITY: NAVY, FY 2005-FY 2009 VS. FY 2010

FY 2005-FY 2009			FY 2010		
DoDI Diagnosis Code	Count	%	DoDI Diagnosis Code	Count	%
389: Hearing loss	61	7.1	493: Asthma	11	7.9
367: Vision loss	56	6.5	733.99: Open reduction internal fixation	10	7.2
493: Asthma	53	6.2	367: Vision loss	8	5.8
733.99: Open reduction internal fixation	53	6.2	717: Internal derangement of knee	8	5.8
401: Essential hypertension	41	4.7	796.2: Elevated blood pressure reading without diagnosis of hypertension	6	4.3
P81: Surgical correction of any knee ligaments	36	4.2	389: Hearing loss	5	3.6
717: Internal derangement of knee	35	4.1	754.6: Pes planus, congenital	5	3.6
754.6: Pes planus, congenital	34	4.0	300: Anxiety, dissociative and somatoform disorders	4	2.9
796: Other nonspecific abnormal findings	31	3.6	P81: Surgical correction of any knee ligaments	4	2.9
905: Late effects of musculoskeletal and connective tissue injuries	21	2.5	718.1: Loose body in joint	3	2.2
All Other Waiver Codes	434	50.8	**All Other Waiver Codes**	74	53.6
Total Waiver Applications	855		**Total Waiver Applications**	138	

TABLE 17C: TEN MOST COMMON DODI DIAGNOSIS CODES FOR ACCESSION MEDICAL WAIVERS CONSIDERED AMONG ENLISTED INDIVIDUALS EVALUATED FOR DISABILITY: MARINE CORPS FY 2005-FY 2009 VS. FY 2010

FY 2005-FY 2009			FY 2010		
DoDI Diagnosis Code	Count	%	DoDI Diagnosis Code	Count	%
733.99: Open reduction internal fixation.	89	12.6	314: Hyperkinetic syndrome of childhood	15	12.5
796: Other nonspecific abnormal findings	82	11.6	733.99: Open reduction internal fixation.	15	12.5
493: Asthma	73	10.3	796: Other nonspecific abnormal findings	15	12.5
367: Disorders of refractions and accommodation	51	7.2	493: Asthma	10	8.3
717: Internal derangement of knee	43	6.1	367: Disorders of refraction and accommodation	8	6.7
401: Essential hypertension	41	5.8	P11: Operations on the cornea	8	6.7
300: Anxiety, dissociative and somatoform disorders	39	5.5	401: Essential hypertension	7	5.8
389: Hearing loss	39	5.5	389: Hearing loss	5	4.2
314: Hyperkinetic syndrome of childhood	37	5.2	717: Internal derangement of knee	5	4.2
P81: Surgical correction of any knee ligaments	31	4.4	300: Anxiety, dissociative and somatoform disorders	4	3.3
All Other Waiver Codes	182	25.7	**All Other Waiver Codes**	28	23.3
Total Waiver Applications	707		**Total Waiver Applications**	120	

TABLE 17D: TEN MOST COMMON ICD-9 DIAGNOSIS CODES FOR ACCESSION MEDICAL WAIVERS CONSIDERED AMONG ENLISTED INDIVIDUALS EVALUATED FOR DISABILITY: AIR FORCE FY 2010

FY 2010		
ICD-9 Diagnosis Code	Count	%
367: Disorders of refractions and accommodation	12	10.3
296: Episodic mood disorders	9	7.8
314: Hyperkinetic syndrome of childhood	8	6.9
783.4: Lack of expected normal physiological development in childhood	5	4.3
P81: Repair and plastic operations on joint structures	5	4.3
493: Asthma	4	3.4
718.3: Recurrent dislocation of joint	4	3.4
P79: Reduction of fracture and dislocation	4	3.4
622: Noninflammatory disorders of the cervix	3	2.6
732: Osteochondropathies	3	2.6
All Other Waiver Codes	59	50.9
Total Waiver Applications	116	

History of hospitalization among active duty service members evaluated for disability

Hospitalization records received by AMSARA include data on direct care inpatient visits among active duty service members from 1995 to present. Only hospitalizations that occurred prior to the date of medical evaluation board, or in the case of Air Force disability evaluations, prior to the date the IPEB receipt date, were included in these analyses. In cases where more than one hospitalization record was available for an individual only the most recent hospitalization record which preceded the final disposition was included. Where more than one diagnosis code was available, only the first diagnosis was utilized.

Table 12 shows the history of hospitalization among service members evaluated for disability by year of disability evaluation and service. There is a general trend in all services of declining proportions of history of hospitalization with in more recent years of disability evaluation. Overall, the Marine Corps and Navy had the highest percentage of individuals evaluated for disability who also had a history of hospitalization for each year of disability evaluation.

TABLE 18 : HISTORY OF HOSPITALIZATION BY YEAR OF DISABILITY EVALUATION: FY 2005-FY 2010

	Army			Navy			Marines Corps			Air Force		
	Hosp	Total*	%	Hosp	Total*	%	Hosp	Total*	%	Hosp	Total*	%
2005	4,675	12,607	37.1	2,127	4,163	51.1	1,176	2,501	47.0	-	-	-
2006	3,766	10,039	37.5	1,834	3,793	48.4	1,277	2,673	47.8	-	-	-
2007	3,283	9,440	34.8	1,269	2,854	44.5	971	2,103	46.2	-	-	-
2008	3,523	10,133	34.8	967	2,371	40.8	885	2,018	43.9	-	-	-
2009	4,112	11,328	36.3	776	1,946	39.9	736	1,898	38.8	-	-	-
2010	3,544	10,091	35.1	815	1,933	42.2	792	2,023	39.1	1,418	4,347	32.6
Total	22,903	63,638		7,788	17,060		5,837	13,216		1,418	4,347	

* Total disability evaluations

The most common primary diagnoses at hospitalization for service members evaluated for disability are shown in Tables 19A-19D for the Army (Table 19A), Navy (Table 19B), Marine Corps (Table 19C), and Air Force (Table 19D). Psychiatric disorders were the leading reason for hospitalization in all services among individuals evaluated for disability in FY 2010 constituting 25% of hospitalizations in the Army, 30% of Navy hospitalizations, 20% of Marine Corps hospitalizations and 15% of Air Force hospitalizations. In all services and for all time periods episodic mood disorders were the most common reason for hospitalization. The proportion of episodic mood disorders among all hospitalizations varied from service to service with the lowest proportion found among Army disability evaluations from FY 2000 to 2009 and the highest proportion of episodic mood disorder hospitalizations found among FY 2010 Navy disability evaluations. Adjustment disorders were also among the most common reasons for hospitalizations for all services and time periods and were the second leading cause of hospitalization in the Army (FY 2005-FY2009, FY 2010), Navy (FY 2010), and Marine Corps (FY 2005-FY2009, FY 2010).

TABLE 19A: TEN MOST COMMON ICD-9 PRIMARY DIAGNOSIS CODES FOR HOSPITALIZATIONS AMONG DISABILITY EVALUATIONS FROM FY 2005-FY 2010: ARMY, FY 2005-FY 2009 VS. FY 2010

FY 2005-FY 2009			FY 2010		
ICD-9 Diagnosis Code	Count	%	ICD-9 Diagnosis Code	Count	%
296: Episodic mood disorders	1,518	7.8	296: Episodic mood disorders	419	11.8
309: Adjustment disorders	1,280	6.6	309: Adjustment disorders	379	10.7
722: Intervertebral disc disorders	1,090	5.6	722: Intervertebral disc disorders	231	6.5
717: Internal derangement of knee	653	3.4	786: Symptoms involving respiratory system and other chest symptoms	139	3.9
786: Symptoms involving respiratory system and other chest symptoms	575	3.0	717: Internal derangement of knee	112	3.2
998: Other complications of procedures, NEC	551	2.8	998: Other complications of procedures, NEC	110	3.1
V58: Encounter for other and unspecified procedures and aftercare	501	2.6	682: Other cellulitis and abscess	104	2.9
682: Other cellulitis and abscess	463	2.4	300: Anxiety, dissociative and somatoform disorders	92	2.6
823: Fracture of tibia and fibula	435	2.2	664: Trauma to perineum and vulva during delivery	77	2.2
664: Trauma to perineum and vulva during delivery	424	2.2	V58: Encounter for other and unspecified procedures and aftercare	77	2.2
All Other Diagnosis Codes	11,869	61.3	**All Other Diagnosis Codes**	1,804	50.9
Total DES Hospitalized	19,359		**Total DES Hospitalized**	3,544	

TABLE 19B: TEN MOST COMMON ICD-9 PRIMARY DIAGNOSIS CODES FOR HOSPITALIZATIONS AMONG DISABILITY EVALUATIONS FROM FY 2005-FY 2010: NAVY, FY 2005-FY 2009 VS. FY 2010

FY 2005-FY 2009			FY 2010		
ICD-9 Diagnosis Code	Count	%	ICD-9 Diagnosis Code	Count	%
296: Episodic mood disorders	696	12.5	296: Episodic mood disorders	87	15.0
722: Intervertebral disc disorders	363	6.5	309: Adjustment disorders	37	6.4
664: Trauma to perineum and vulva during delivery	300	5.4	664: Trauma to perineum and vulva during delivery	30	5.2
295: Schizophrenic disorders	237	4.3	295: Schizophrenic disorders	29	5.0
309: Adjustment disorders	236	4.2	722: Intervertebral disc disorders	28	4.8
250: Diabetes mellitus	227	4.1	540: Acute appendicitis	21	3.6
717: Internal derangement of knee	176	3.2	786: Symptoms involving respiratory system and other chest symptoms	21	3.6
998: Other complications of procedures, NEC	173	3.1	998: Other complications of procedures, NEC	20	3.5
786: Symptoms involving respiratory system and other chest symptoms	162	2.9	300: Anxiety, dissociative and somatoform disorders	18	3.1
780.3: Convulsions	162	2.9	789:Other symptoms involving abdomen and pelvis	18	3.1
All Other Diagnosis Codes	2,836	50.9	**All Other Diagnosis Codes**	270	46.6
Total DES Hospitalized	5,568		**Total DES Hospitalized**	579	

TABLE 19C: TEN MOST COMMON ICD-9 PRIMARY DIAGNOSIS CODES FOR HOSPITALIZATIONS AMONG DISABILITY EVALUATIONS FROM FY 2005-FY 2010: MARINE CORPS, FY 2005-FY 2009 VS. FY 2010

FY 2005-FY 2009			FY 2010		
ICD-9 Diagnosis Code	Count	%	ICD-9 Diagnosis Code	Count	%
296: Episodic mood disorders	378	8.3	296: Episodic mood disorders	60	9.3
309: Adjustment disorders	264	5.8	309: Adjustment disorders	59	9.2
823: Fracture of tibia and fibula	222	4.9	717: Internal derangement of knee	32	5.0
717: Internal derangement of knee	168	3.7	V58: : Encounter for other and unspecified procedures and aftercare	28	4.3
722: Intervertebral disc disorders	166	3.7	998: Other complications of procedures	25	3.9
295: Schizophrenic disorders	165	3.6	682: Other cellulitis and abscess	24	3.7
998: Other complications of procedures	164	3.6	996: Complications peculiar to certain specified procedures	22	3.4
824: Fracture of ankle	148	3.3	295: Schizophrenic disorders	20	3.1
682: Other cellulitis and abscess	135	3.0	722: Intervertebral disc disorders	17	2.6
996: Complications peculiar to certain specified procedures	134	3.0	738: Other acquired deformity (musculoskeletal)	17	2.6
All Other Diagnosis Codes	2,591	57.1	**All Other Diagnosis Codes**	340	52.8
Total DES Hospitalized	4,535		**Total DES Hospitalized**	644	

TABLE 19D: TEN MOST COMMON ICD-9 PRIMARY DIAGNOSIS CODES FOR HOSPITALIZATIONS AMONG DISABILITY EVALUATIONS FROM FY 2005-FY 2010: AIR FORCE, FY 2010

FY 2010		
ICD-9 Diagnosis Code	Count	%
296: Episodic mood disorders	152	10.7
664: Trauma to perineum and vulva during delivery	107	7.5
309: Adjustment disorders	62	4.4
722: Intervertebral disc disorders	57	4
786: Symptoms involving respiratory system and other chest symptoms	48	3.4
661: Abnormality of forces of labor	45	3.2
540: Acute appendicitis	41	2.9
642: Hypertension complicating pregnancy, childbirth, and the puerperium	41	2.9
524: Dentofacial anomalies, including malocclusion	39	2.8
All Other Diagnosis Codes	788	
Total DES Hospitalized	1,418	

3. Service Disability Evaluation Database Limitations

- Data utilized in the generation of this report were initially collected for purposes of supporting the Accession Medical Standards Working Group (AMSWG) in the development of evidence-based medical accession standards to reduce morbidity and attrition due to pre-existing conditions. Data use agreements reflected data elements and study populations to support this research and required revision to support DES database analysis. Therefore, not all data elements were available for the full study period for all services.

- Variables representing education at the time of disability processing are not available in either existing AMSARA data or service disability data sent to AMSARA. MOS at disability evaluation is complete for Army for the study period. The Department of the Navy collects information regarding MOS, but these variables were not included in the initial data extracts that were sent to AMSARA. Both MOS and education have been associated with disability in civilian and military literature and are essential to understanding the precise risk factors associated with disability evaluation, separation, and retirement in the military.

- MEB ICD-9 diagnosis codes of the medical condition that precipitated the disability evaluation are not included in any of the service disability datasets received by AMSARA. VASRD codes give some indication of the unfitting conditions referred to the PEB, but do not contain the level of detail available when diagnoses are coded using ICD-9 codes. In particular, it cannot be reliably determined from VASRD codes alone whether the condition for which a service member is being evaluated was due to trauma or injury or whether the condition was acute or chronic.

- While the majority of disability evaluations had an accession record in the AMSARA databases, some who undergo disability evaluation do not have an accession record in AMSARA databases. Therefore, this may limit the ability to study the relationship between characteristics of service members at accession and disability evaluation, separation, and retirement in detail.

- Changes in instruction in FY 2009 as a result of National Defense Authorization Act FY 2008 with respect to post-traumatic stress disorder and traumatic brain injury disability evaluations present significant challenges to future research. The observed increase in both conditions with the changes in instruction suggests that VASRD codes alone will likely underestimate the incidence and prevalence of these conditions prior to FY 2009. Without reliable case identification strategies, it will be difficult to accurately determine the risk factors associated with post-traumatic stress disorder and traumatic brain injury.

- None of the VASRD codes associated with medical conditions for which service members are evaluated for disability is identified as primary in the databases. Therefore, it cannot be determined which condition was the primary condition which precipitated disability evaluation and the impact and prevalence of some conditions in the population may be incorrectly characterized.

4. Data Quality and Standardization Recommendations

1. Accurate indicators of the medical conditions that result in disability rating are not available, precluding surveillance of or evaluation of conditions which lead to disability. Though VASRD codes are available, they are not diagnosis codes. To allow for more accurate surveillance of the burden of disability in the military, each service's DES database should include one or more MEB diagnoses in the electronic disability record, in the form of text and ICD-9 codes.

2. Demographic characteristics of service members are recorded at various points throughout a service member's career. For demographic factors that are constant over time, such as race and date of birth, the values at the time of disability evaluation can be inferred from other data sources. For demographic factors that can change over time, such as occupation and education, inference of values from accession data sources may not provide the most accurate measurement. To ensure MOS and education are accurate at the time of disability evaluation, each service's DES database should record these variables at the time of disability evaluation. This will allow for the evaluation of the role of MOS and education on disability evaluation, separation, and retirement, including changes in these characteristics throughout length of service.

3. Date of the underlying injury or onset of the condition is an important variable to consider when utilizing disability evaluation system data, allowing for the measurement of time elapsed from onset to MEB to PEB to discharge. Though healthcare utilization patterns can be determined from hospitalization and ambulatory data, the precise date of the event, onset of symptoms, or initial diagnosis is difficult to infer from the data available. Each service should include additional variables within to indicate date of onset or injury and whether medical condition for which a service member is undergoing disability evaluation was due to trauma or injury and whether condition is either acute or chronic.

4. Analogous codes are frequently used in coordination with VASRD codes and it is often not clear in all DES databases when multiple codes are used for one medical condition. Therefore, each service should include a variable in all databases that indicates when multiple VASRD codes are used for one diagnosis.

5. All services collect information regarding whether an unfitting condition is determined to be combat-related. However, the level and type of information varies across services. Standardization of the combat data fields collected across the services would allow for comparison of rates of combat related disability across services.

6. Variation between services in the way VASRD and analogous codes are stored in the databases makes merging the three electronic disability files into one database impossible without making unsupported assumptions about how each service enters disability data. Development of standards for the entry of VASRD codes into each service's DES database will allow for enhanced comparability of VASRD codes and the associated analogous codes across services.

7. High utilization of analogous codes and lack of formal MEB medical diagnosis in the electronic file preclude the evaluation of the association of certain types of disability with specific medical conditions. In the absence of formal medical diagnoses that describe the

disabling condition, expanding the VASRD codes, particularly musculoskeletal codes, may reduce the utilization of analogous codes and provide more complete information on the condition that precipitated the disability evaluation to inform interventions to decrease disability.

5. Future Research

1. Evaluate the impact of accession and service related risk factors on PTSD disability and comorbidity in terms of time to disposition, rating, and final disposition.

2. Examine accession risk factors for disability in the Air Force.

3. Utilize data from pre-accession medical examinations as predictors of disability, including but not limited to, disability related to post-traumatic stress disorder, traumatic brain injury, hearing loss, and musculoskeletal conditions.

4. Examine the impact of accession and service-related risk factors and comorbidity on TBI in terms of time to disposition, rating, and final disposition.

5. Evaluate the impact of National Defense Authorization Act 2008 on coding associated with traumatic brain injury by examining the disability outcome among individuals diagnosed with a traumatic brain injury while in service.

6. Publications and Presentations

Risk Factors for Disability Retirement among Healthy Adults Joining the US Army

COL David Niebuhr, MC, USA; Rebekah Krampf, MPH; Jonathan Mayo, MPH; Caitlin Blandford, MPH; Lynn Levin, PhD, MPH; David Cowan, PhD, MPH.

Military Medicine, 176, 2:170, 2011

Purpose: From 2001-2006 the Army deployed over 717,000 personnel to Iraq and Afghanistan, with over 15,000 troops wounded. Little is known about the impact of military and demographic factors, particularly deployment, occupation, and pre-existing medical status, on disability retirement.

Methods: A nested case-control study of first time, active duty Army personnel entering from 1997-2004. Cases, individuals granted a medical disability retirement from 1997-2006, were identified by the Army Physical Disability Agency (PDA). Five controls were matched by year of entrance to each case.

Results: Several factors were associated with increased risk of disability retirement, including sex, age, BMI, and military occupation; deployment was associated with a lower risk. Accession medical disqualification was not associated with risk of disability retirement.

Conclusions: The decreased risk associated with deployment probably reflects a “healthy warrior effect”, while the increased risk for combat arms may reflect combat exposures among deployed and more rigorous training among non-deployed.

Preliminary Analysis of US Army Physical Disability Agency Data

Caitlin Blandford, MPH; Elizabeth Packnett, MPH; David Cowan, PhD, MPH; COL David Niebuhr, MC, USA.

Presented to 13th Annual Force Health Protection Conference, Phoenix, AZ, August 2010.

Purpose: Army PDA data is used to evaluate in disability discharges trends among soldiers. We reviewed PDA data to better understand the disability discharge process.

Methods: We reviewed data from 2002-2008 (by year of Medical Examination Board first review date), of first time active duty enlisted.

Results: We reviewed 77,156 records. Psychiatric disorders increased over time from 9% in 2002 to 19% in 2008. Musculoskeletal disorders, including trauma, were the most common category making up about 50% of primary VASRD codes regardless of year. Most individuals received a disability rating of ≤10%, but there was an increase in 20 -60% over time. Nearly 60% of individuals received severance pay upon discharge. The number of temporary disability retirements increased, and there was a decrease in separated without benefits.

Conclusions: Changes in disability patterns likely reflect increases in combat operations over the study period. AMSARA will continue to evaluate PDA data to describe these trends.

Risk Factors for Medical Disability Retirement in US Enlisted Marines, 2001-2009

CDR Cynthia Sikorski, MC, USN; CAPT Maura Emerson, MC, USN; COL David Niebuhr, MC, USA; David Cowan, PhD, MPH.

Presented to the Annual Meeting of the American College of Preventive Medicine, San Antonio, TX, February 2011.

Presented to the Armed Forces Public Health Conference, Hampton, VA, March 2011.

Purpose: Our objective was to assess factors associated with medical disability retirement in the U.S. Marine Corps.

Methods: Case-control study enrolling 11,557 medical disability retirement cases of U.S. enlisted Marines referred to the Physical Evaluation Board 2001-2009 and 42,216 controls, matched to cases in a 4:1 ratio on year of accession into the service were analyzed utilizing bivariate and multivariate logistic regression analysis which adjusted for age, sex, race, deployment history, and medical waiver status at accession.

Results: Increased age at accession (age>30 years) was associated with higher odds of medical retirement disability (OR adjusted= 2.4, 95% CI 1.7-3.2). Obesity at accession (BMI>30) (OR adjusted = 1.4, 95% CI 1.2-1.5) was associated with higher odds of disability retirement. Women (OR adjusted = 1.3, 95% CI 1.2-1.3) have higher odds of disability than men. "Healthy Warrior Effect" was observed in that those who deployed (OR adjusted=0.48, 95% CI 0.46-0.50) had decreased odds of medical disability retirement than those who did not deploy. Medical waivers at accession (OR adjusted=1.12, 95% CI 1.010-1.23) increase the odds of medical disability retirement.

Conclusions: Increased age and increased BMI at accession are associated with higher odds of medical retirement disability. The "Healthy Warrior Effect" was noted in that those who deployed had lower odds of medical disability retirement. Women have higher odds of medical disability retirement than men. Medical waivers at accession increase odds of medical disability retirement.

Challenges in Characterizing the Epidemiology of Disability amidst Changing Department of Defense Policy: An Exploratory Analysis of Traumatic Brain Injury-related Disability Retirement among Army and Marine Personnel

Caitlin Blandford, MPH; Elizabeth Packnett, MPH; Amanda Piccirillo, MPH; CPT(P) Marlene Gubata, MC, USA; David N. Cowan, PhD, MPH; COL David W. Niebuhr, MC, USA.

Presented to the Armed Forces Public Health Conference, Hampton, VA, March 2011.

Presented to the Federal Interagency Conference on Traumatic Brain Injury, Washington, DC, June 2011.

Background: Traumatic brain injury (TBI) is a major cause of disability among Soldiers and Marines. Little is known about the contribution of TBI to disability retirement (DR) . DoD-mandated changes in coding TBI in 2008 to improve compensation also improved the identification of TBI-related DR. Although a code for TBI existed before 2008, it was not routinely used as it carried a low DR rating. Thus, it is not possible to accurately estimate the incidence of TBI prior to 2008.

Methods: All Army and Marine personnel evaluated for TBI-related DR with an initial evaluation within FY2005-2010 were included. Records with a Veteran's Administration Schedule of Ratings (VASRD) code of 8045 were used to define TBI cases. Only records with an unfitting condition (category 1 disability evaluation) were included.

Results: A total of 2,680 Soldiers and 791 Marines were evaluated for a TBI-related disability during the study period. Coincident with 2008 changes in coding guidelines, rates of TBI DRs increased from 3.1 (per 10,000) to 7.8 among Soldiers, and 5.8 to 8.3 among Marines. Most TBI evaluations (both Army and Marine Corps) were disability retired with a rating of 30% or higher. Most Soldiers and Marines had more than one VASRD with the most common being post-traumatic stress disorder and dementia due to head trauma.

Conclusions: TBI is a common and complex condition among troops. The high disability percent rating indicates a high degree of severity of TBI among this population. Changes in TBI coding in 2008 suggest many or most cases of disability due to TBI prior to 2008 cannot be identified without additional detailed understanding and evaluation of the codes previously assigned to Soldiers and Marines. We will present a proposal to develop methods to identify probable TBI cases evaluated before 2008.

Comorbid Conditions among Army And Marine Corps Personnel Undergoing Disability Evaluation For Traumatic Brain Injury During 2005-2010

Caitlin Blandford, MPH; Elizabeth Packnett, MPH; Amanda Piccirillo, MPH; David Cowan, PhD, MPH, CPT(P) Marlene Gubata, MC, USA; COL David Niebuhr, MC, USA.

Presented to the Armed Forces Public Health Conference, Hampton, VA, March 2011.

Presented to the Federal Interagency Conference on Traumatic Brain Injury, Washington, DC, June 2011

Background: Traumatic brain injury (TBI) is a major cause of disability among Soldiers and Marines. Comorbidity has been shown to prolong, complicate, or obstruct recovery from TBI. Little has been reported about the contribution of TBI to the risk of disability retirement (DR), or factors associated with TBI-related comorbidity on DR.

Methods: All Army and Marine personnel evaluated for TBI-related DR (Veteran's Administration Schedule of Ratings (VASRD) code of 8045) with an initial disability evaluation within FY2005-2010 were included. Only records with an unfitting condition (category 1 disability evaluation) were included. All comorbid VASRD codes were included in this analysis.

Results: A total of 3,471 individuals were evaluated for a TBI-related disability during the study period, with 2,680 Soldiers and 791 Marines. Rates of TBI DRs have increased since 2005 and were highest among 25-29 year olds in the Army and among 20-24 year olds in the Marine Corps. The top ten most common comorbid conditions were similar when comparing Soldiers and Marines, with post-traumatic stress disorder, dementia due to head trauma, and migraines being seen most often in both services. Musculoskeletal conditions were more commonly seen in Soldiers with TBI evaluations compared to Marines. The Marine Corps had more psychiatric conditions than the Army. Marines had more conditions per individual than Soldiers, and the Marines used nonspecific analogous codes more often than the Army.

Conclusions: Those undergoing disability evaluation for TBI present with many other conditions which could indicate severity of the TBIs experienced by US service members. Understanding the comorbidity of TBI aides in targeting medical utilization for more thorough treatment and for a better understanding the sequelae of TBI in this population.

Challenges in Estimating the Incidence of Army and Marine Corps Personnel Undergoing Disability Evaluation for Post-Traumatic Stress Disorder (PTSD): 2005-2010

Elizabeth Packnett, MPH; Caitlin Blandford, MPH; MAJ Marlene Gubata, MC. USA; David Cowan, PhD, MPH; COL David Niebuhr, MC, USA.

Presented to the Armed Forces Public Health Conference, Hampton, VA, March 2011.

Background: Little has been reported about the contribution of PTSD to disability evaluation or accession and service-related risk factors associated with PTSD-related disability. Congressionally-mandated changes to PTSD case definition in 2008 present challenges to understanding the epidemiology of PTSD-related disability.

Methods: Army (n=7,043) and Marine Corps (n=1,434) cases evaluated for PTSD disability for the first time between FY2005 and FY2010 were included in the study.

Results: Rates of PTSD disability have increased in both services from about 5 cases per 10,000 in FY2005 to 18.1 in the Army and 11.6 in the Marines, in FY2010.

Conclusions: The existing data do not allow for consistent estimates of the incidence of PTSD-related disability over time, which is necessary for understanding risk factors and assessing treatment options for cases. We propose a study using clinical data to identify pre-2008 cases not captured with the current coding scheme.

Variations in Time on the Temporary Disability Retirement List and Changes in Disability Rating by Service

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Presented to the Armed Forces Public Health Conference, Hampton, VA, March 2011.

Background: Service members undergoing disability evaluation can remain on the TDRL for five years with periodic re-evaluation. Examining TDRL duration and disability rating changes for specific conditions may lead to shorter and more cost-effective disability evaluations.

Methods: All Army (n=9,693) and Navy/Marine Corp (NMC, n=5,160) personnel placed on TDRL from FY2001-2010 with a final disposition were included.

Results: Duration on TDRL was longer for Army (median=40.2 months) than NMC (median=23.9 months). More Army cases were finalized at first re-evaluation (74.4%) compared to NMC (55.2%). No change in disability rating was made in 61.6% of NMC cases compared to 45.0% of Army cases.

Conclusions: The majority of those on TDRL experience no disability rating change upon subsequent re-evaluation. It may be possible to identify those medical conditions which are least likely to change over time and truncate the TDRL re-evaluation process for those conditions.

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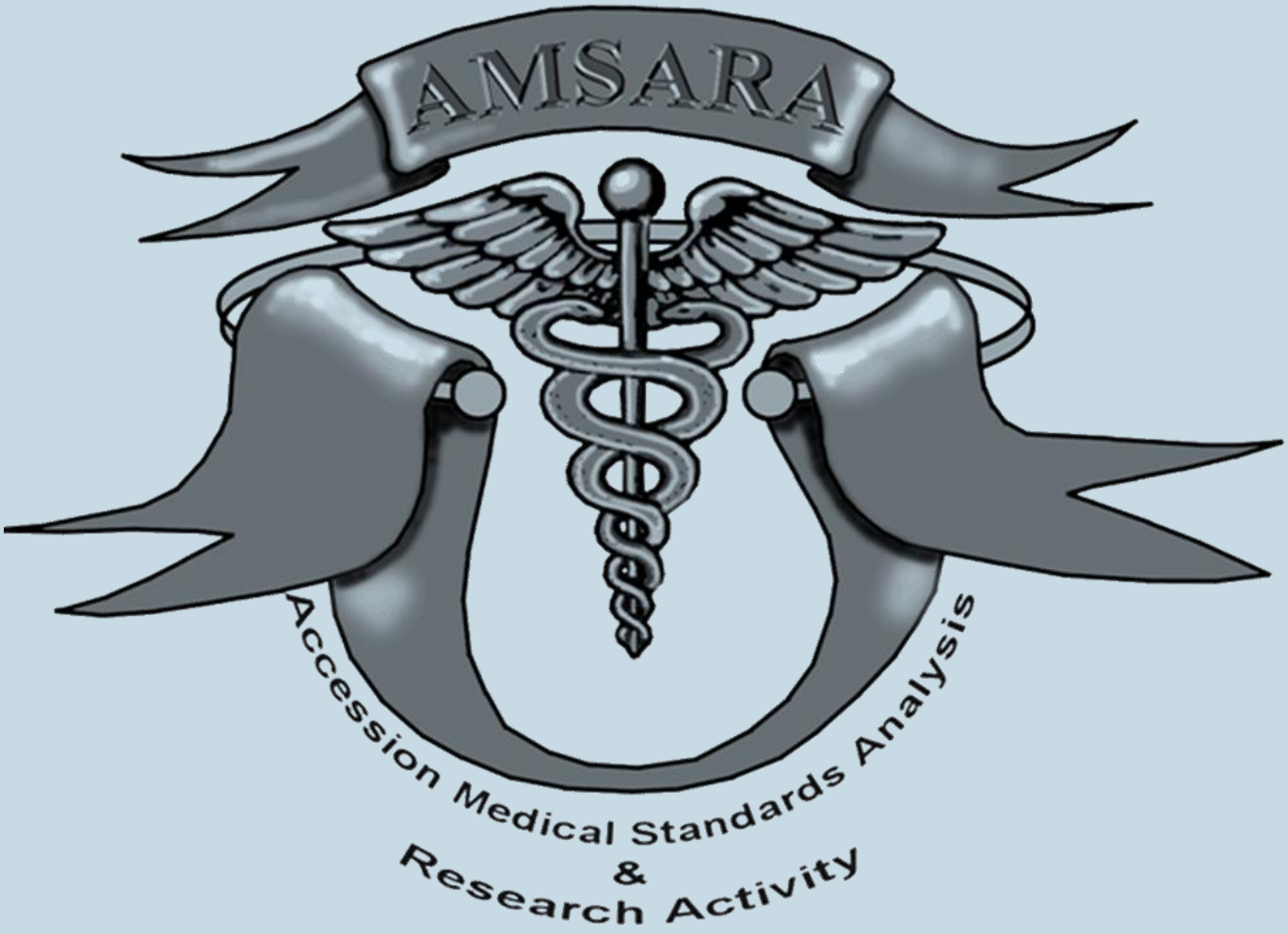
Acronyms

AFPC	Air Force Personnel Center
AMSARA	Accession Medical Standards Analysis and Research Activity
AMSWG	Accession Medical Standards Working Group
BMI	Body Mass Index
BUMED	United States Navy Bureau of Medicine and Surgery
DES	Disability Evaluation System
DMDC	Defense Manpower Data Center
DoD	Department of Defense
DUA	Data Use Agreement
FPEB	Formal Physical Evaluation Board
FRA	Final Review Authority
FY	Fiscal Year
ICD-9	*International Classification of Diseases and Conditions, 9th revision*
IPEB	Informal Physical Evaluation Board
MEB	Medical Evaluation Board
MEPS	Military Entrance Processing Stations
MHS	Military Healthcare System
MOS	Military Occupational Specialty
MTF	Military Treatment Facility
OMF	Objective Medical Finding
PASBA	Patient Administration Systems and Biostatistics Activity
PDA	Physical Disability Agency
PDRL	Permanent Disability Retirement List
PEB	Physical Evaluation Board
PTSD	Post traumatic stress disorder
RTD	Returned to duty
SC	Service Component
SECNAVCORB	Secretary of the Navy Council of Review Boards
SG	Surgeon General
SSN	Social Security Number
SWOB	Separated without Benefit
TBI	Traumatic Brain Injury
TDRL	Temporary Disability Retirement List
USAPDA	United States Army Physical Disability Agency
USAREC	US Army Recruiting Command
USAMEDCOM	US Army Medical Command
USMEPCOM	US Military Entrance Processing Command
USNRC	United States Navy Recruiting Command
VASRD	Veterans Administration Schedule for Rating Disability



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