

# AMSARA

Accession Medical Standards Analysis & Research Activity



Report of 2008  
Attrition & Morbidity Data  
for 2007 Accessions



## Annual Report 2008



Published & Distributed 2nd Quarter of Fiscal Year 2009

# CONTENTS

Executive Summary .....	1
Introduction.....	4
<b>1. SPECIAL STUDIES .....</b>	<b>5</b>
A comparison of the risk of discharge from active duty service between fully qualified Army recruits and those who required an accession medical waiver.....	5
Analysis of EPTS discharges and accession medical waivers .....	11
<b>2. DESCRIPTIVE STATISTICS FOR APPLICANTS AND ACCESSIONS FOR ENLISTED SERVICE ...</b>	<b>17</b>
Active Duty Applicants at MEPS with Accession Records.....	19
Reserve Applicants at MEPS without Accession Records.....	24
Army and Air National Guard Applicants at MEPS without Accession Records.....	28
Medical Disqualifications among Applicants for First-Time Active Duty Enlisted Service .....	31
Accession Medical Waivers.....	34
Hospitalizations .....	53
Attrition .....	63
EPTS Discharges .....	70
Disability Discharges among Army and Air Force Active Duty Enlistees.....	84
<b>3. DATA SOURCES.....</b>	<b>92</b>
MEPS .....	92
Active Duty Enlistee Gain and Loss Files .....	93
Medical Waiver .....	94
Hospitalization .....	95
EPTS Discharges .....	95
Disability Discharges .....	96
Charter and Supporting Documents.....	99
Acronyms.....	104

## CONTRIBUTORS

David W. Niebuhr, MD, MPH, MS  
COL, MC, US Army  
Director, Division of Preventive Medicine

Melinda A. Cavicchia, MD, MPH  
LTC, MC, US Army  
Chief, Department of Epidemiology

Sheryl A. Bedno, MD, MPH, MS  
MAJ, MC, US Army  
Chief, AMSARA

David N. Cowan, PhD, MPH  
Program Manager

Bennett-Jason D. Datu, PhD, MPH  
Weiwei Han, MS  
Yuanzhang Li, PhD  
Jonathan A. Mayo, MPH  
Elizabeth R. Packnett, MPH  
Natalya S. Weber, MD, MPH

Edited by  
Janice K. Gary

**The views expressed are those of the authors and should not be construed to represent the positions of the Department of the Army or Department of Defense.**

# Executive Summary

The Accession Medical Standards Analysis and Research Activity (AMSARA) has completed its twelfth year of providing the Department of Defense with evidence-based evaluations of accession standards. AMSARA evaluates accession medical standards and retention programs to improve military readiness by maximizing both the accession and retention of motivated and capable recruits. This report provides findings from selected special studies and descriptive data on calendar year 2007 accessions.

Section 1, Special Studies, presents two brief overviews of selected research conducted at AMSARA. The first report compares the types of discharge among first-time active duty male enlistees in the Army who are fully qualified and those with medical waivers. Waived enlistees were shown to be at increased risk of discharges for conditions existing prior to service (EPTS), failure to meet weight/body fat standards, and being unqualified for active duty service. However, waived recruits were at lower risk of discharge for desertion, drugs, and for good of service. The second study examined EPTS discharges among a cohort of first-time active duty Army enlistees granted selected accession medical waivers. These waivers were chosen based on the prevalence of medical conditions commonly evaluated for waivers in the Army as well as those most commonly observed among EPTS discharges. EPTS discharges were not found to be associated with a history of any waiver nor a waiver for the discharge condition.

Section 2 of this report includes the descriptive statistics AMSARA compiles and publishes annually for historical and reference value. Descriptive statistics are for applicants who enlisted in 2007 and are compared to the five year aggregate data from 2002-2006. Data are collected while the recruits remain on their first year of active duty. By convention, the annual report is dated for the first complete year after enlistment (calendar year 2008). Comparisons can be made between services and on occasion between enlisted component (active, reserve, guard).

Approximately 305,000 Active, Reserve, and National Guard enlisted applicants were examined for medical fitness at Military Entrance Processing Stations (MEPS) in 2007 compared to approximately 299,000 per year average from 2002 to 2006. While the gender, race, and education of active duty enlisted, reserves, and guard applicants remained relatively consistent, it was observed that applicants in 2007 were older compared to 2002-2006, with increases seen in all age categories above 17-20. In 2007 a greater percentage of Reserve enlisted applicants scored in the lowest Armed Forces Qualification test (AFQT) percentiles for military eligibility (11-49<sup>th</sup>) as compared to the previous 5-year period, while lower percentile AFQT categories for active and national guard components were consistent with the previous 5-year period.

Approximately 11% of applicants for active duty enlisted service were initially disqualified for service due to permanently disqualifying medical conditions, and another 10% received disqualifications for conditions that could be remediated, primarily excess body weight or marijuana use. Such recruits, however, are less likely to ultimately become servicemembers, as approximately 45% (2002-2006) of applicants with temporary disqualifications and 42% (2002-2006) of applicants with permanently disqualifying conditions are subsequently gained onto active duty service, compared to 72% of fully qualified recruits who accessed. The same pattern is observed for 2007 applicants, though follow-up is not complete. The most common reasons for medical disqualifications in 2007 were exceeding weight/body fat limits and nondependent abuse of cannabis, both considered temporary disqualifications. These were followed by hearing deficiency and disorders of refraction and accommodation, both of which are permanent disqualifications.

Accession medical waivers are considered by each service for applicants with a disqualifying medical condition. Accordingly, the conditions most frequently considered for a waiver closely reflect the most common permanently disqualifying conditions. In total, almost 25,000 applications for accession medical waivers were considered in 2007. The percentage of waivers approved varies substantially by the medical condition being considered, with overall approval percentages ranging from 50 percent to over 90 percent for the most commonly applied for and most highly approved waivers. Differences in approval percentages between the services may reflect differences in the applicant pools applying to the services, different distributions of conditions being considered for waiver, or different needs of each service. The approval rates for Army and Air Force have remained relatively consistent over the past six years, while the Navy and Marines have shown an increase in waiver approval percentages from 2002 to 2007.

Hospitalization data are provided for the period 2002-2007. In 2007, there were just over 7,000 hospitalizations among active duty enlistees (all services) in the first year of service, which is only marginally lower than the previous five-year average of approximately 7,200 hospitalizations. The top reasons for hospitalization within the first year of service for all services in 2002-2007 were psychiatric conditions, pneumonia and influenza, and skin and subcutaneous infections. During the first two years of service, psychiatric conditions remained the most frequent reason for hospital admissions. However, the frequency of hospitalizations for both complications of pregnancy and injuries increased dramatically when compared to the first year of service and these categories moved into the second and third most common reasons for hospital admissions respectively. For first-time active duty enlistees who accessed in 2002-2007, Army enlistees had the highest risk of hospitalization followed by the Marines with the second high risk. Navy enlistees had the lowest risk of hospitalization. Being female, white, older in age at enlistment, and having a lower military aptitude score (AFQT) were risk factors for hospitalization.

All-cause attrition of first-time active duty recruits following 90, 180, 365, and 730 days of service is also described. At one year, the Army had the highest rate of attrition for all services considered (approximately 18%) while the Air Force had the lowest (about 12%). Being male, between the ages (at accession) of 17 and 20, with a Bachelor's degree or higher, and having scored in the highest percentile score group on the AFQT are all characteristics associated with significantly lower attrition at all points of assessment. The association of AFQT score and education level with attrition may be related to the range of career opportunities open to the various levels of academic qualification and aptitude.

Discharges of recent enlistees for medical conditions that existed prior to service are a costly problem for all branches of the military, and are considerably more common than data would indicate. Documentation of EPTS discharges is requested from each Initial Entry Training (IET) sites to USMEPCOM but this reporting is not required by service regulations. The total numbers of reported discharges have remained relatively stable over time, ranging from a high of approximately 8,000 in 2003 to a low of about 6,200 in 2006, with approximately 7,300 in 2007. Variation by training base over time has been significant.

Past AMSARA studies have shown that the great majority of EPTS discharges are for medical conditions that were not discovered or disclosed at the time of application for service, with concealment by the applicant being the most common scenario. Accordingly, the primary problem of EPTS discharges appears to be the bypassing of accession medical standards rather than the implementation of those standards. Psychiatric conditions, orthopedic conditions, and asthma are the most common causes of EPTS discharges reported to

USMEPCOM. Increased risk of EPTS discharge is observed for females, recruits older than 20 years of age at accession, whites, and for those recruits who scored in the lowest AFQT percentile score groups.

Disability discharge is very infrequent among new Army or Air Force enlistees, with less than one percent of enlistees being considered for such a discharge. However, disability discharge among these first year enlistees has increased from 2002 (0.63%) to 2006 (0.87%). The majority of disability discharges for both Army and Air Force during the first year of service were prosthetic implants and diseases of the musculoskeletal system and impairments and diseases of the spine, skull, limbs, and extremities. Data on Navy and Marine disability discharges are not currently available to AMSARA.

AMSARA is committed to further development of evidence-based medical accession standards to enable the DoD to enlist the highest quality applicants in a cost-effective manner, thereby ensuring a healthy, fit, and effective force. The following programmatic recommendations are based on 13 years of research:

1. Various databases must be improved. For example, waiver data do not provide sufficient clinical detail to allow analyses of waiver decision criteria.
2. EPTS classification and reporting from the IET sites to MEPCOM, which is still passive, should be mandated and standardized by DoD/service regulations. Analysis would be enhanced with conversion from paper to digital records.
3. AMSARA should continue prospective studies similar to the Assessment of Recruit Motivation and Strength (ARMS) (a study evaluating those who exceed Army body fat standards using a physical fitness test on accession) that challenge current accession standards. MEPS-based studies that are outcome oriented (including morbidity, occupational qualification and performance, deployability, and attrition) in the area of physical and mental fitness, including motivation to serve, should be prioritized.
4. Rather than study accession medical standards in isolation, the medical standards across the continuum of a servicemember's life-cycle should be analyzed using evidence-based principles. This would include medical standards for deployment and retention, in addition to accession medical standards.
5. AMSARA should develop expertise in cost-benefit analyses in order to better advise DoD medical standards policy makers.

# Introduction

The Medical-Personnel Executive Steering Committee (formerly the Accession Medical Standards Steering Committee) was established by the Under Secretary of Defense (Personnel and Readiness) to integrate the medical and personnel communities so they could provide policy guidance and establish standards for accession requirements. These standards would stem from evidence-based information provided by analysis and research. The committee is co-chaired by the Under Deputy Assistant Secretary of Defense (Military Personnel Policy) and the Deputy Assistant Secretary of Defense (Clinical and Program Policy) and comprises representatives from the Office of the Assistant Secretary of Defense (Force Health Protection and Readiness), Office of the Assistant Secretary of Defense (Health Affairs), Office of the Assistant Secretary of Defense (Reserve Affairs), Offices of the Service Surgeons General, Offices of the Service Deputy Chiefs of Staff for Personnel, and Health and Safety Directorate (Department of Homeland Security, U.S. Coast Guard).

The Accession Medical Standards Working Group is a subordinate working group that reviews accession medical policy issues contained in DoD Instruction 6130.4, entitled "Medical Standards for Appointment, Enlistment, or Induction in the Armed Forces." This group is composed of representatives from each of the offices listed above.

AMSARA was established in 1996 within the Division of Preventive Medicine at Walter Reed Army Institute of Research to support the efforts of the Accession Medical Standards Working Group. The mission of AMSARA is to support the development of evidence-based accession standards by guiding the improvement of medical and administrative databases, conducting epidemiologic analyses, and integrating relevant operational, clinical, and economic considerations into policy recommendations. AMSARA has the following seven key objectives:

1. Validate current and proposed standards utilizing existing databases (e.g., should asthma as a child be disqualifying?);
2. Incorporate prospective research studies to challenge selected standards (e.g., are body weight standards adequate measures of fitness?);
3. Validate assessment techniques (e.g., improve current screening tools);
4. Perform quality assurance (e.g., monitor geographic variation);
5. Optimize assessment techniques (e.g., develop attrition and morbidity prediction models);
6. Track impact of policies, procedures, and waivers;
7. Recommend changes to enhance readiness, protect health, and save money.

Military staffing to support this effort includes the Chief, AMSARA, MAJ Sheryl Bedno, the Chief, Epidemiology, LTC Melinda Cavicchia, and COL David Niebuhr, Director, Division of Preventive Medicine.

AMSARA is augmented with contract support through Allied Technology Group, Inc. Staff in 2008 included Dr. David N. Cowan, Project Manager; Dr. Yuanzhang Li, Senior Statistician; Weiwei Han and Robert Federici, Statisticians; Elizabeth Packnett and Jonathan Mayo, Analysts; Dr. Natalya Weber, Epidemiologist, Dr. Bennett Datu, Scientist; Janice Gary, Data Manager; and, Vielka Rivera, Program Administrative Assistant.

# 1. SPECIAL STUDIES

## **A comparison of the risk of discharge from active duty service between fully qualified Army recruits and those who required an accession medical waiver**

### **INTRODUCTION**

During the application process for service in the Armed Forces, potential recruits are subjected to a comprehensive physical examination at MEPS. In addition applicants are also given the opportunity to disclose medical histories that are significant for specified conditions. Individuals who disclose disqualifying conditions or those who are identified at MEPS as potentially having current disqualifying conditions such as asthma or various orthopedic conditions, must be evaluated by service specific waiver authorities for their suitability for active duty service. Studies reported previously by AMSARA [1] have shown that individuals requiring an accession medical waiver (all conditions considered without distinction) for enlistment into active duty service have a higher rate of attrition at multiple points of follow-up after accession. However, not all disqualifying conditions for which waivers are granted have an association with an increased risk of attrition [2,3,4,5,6,7]. In order to begin to better understand discharges among waived and fully qualified recruits, a study of the types of discharges occurring among the two groups was conducted. In this analysis, the type of waiver for which a recruit was considered was not taken into account.

### **METHODS**

#### ***Study sample***

The study sample described herein was derived from another study in which the effect of waiver status on deployment was explored (manuscript in preparation). This sample is a cohort of first-time active duty male Army enlistees who gained onto active duty service in CY 2001-2006. All disqualified male recruits who were evaluated for a single waiver condition, which was subsequently granted were included in the sample. However, among these waived recruits, those whose MEPS disqualification was not the same as the condition for which a waiver was approved were excluded. In order to avoid complications with co-morbidity as well uncertainty in the primary condition for which a waiver was considered, applicants evaluated for multiple conditions were not included in the study. To be considered fully qualified, male recruits were required to have no disqualifying conditions noted or self-reported at MEPS in addition to the absence of a waiver record. In total, 146,995 fully qualified and 8,395 waived first-time, active duty, male soldiers were followed for subsequent discharge from the Army. Lastly, any subjects who had missing values for age, race, gender, education, AFQT score, or Body Mass Index (BMI) were excluded as well. This last exclusion was necessary for the parent study but is not necessary for the current analysis described here.

#### ***Analysis***

Study subjects were followed for all losses from service for up to one year from accession. The reason for discharge was ascertained from the Inter-service Separation Code (ISC; see Table 1.1) reported by the Defense Manpower Data Center (DMDC). Each service maintains its own classification of losses, which are later standardized by the DMDC into an ISC, thereby



providing a common system for broadly characterizing all military discharges. ISCs are problematic for several reasons (see Data Sources section/ Gain and Loss), among which are differences in inter-service classifications of discharges and overlap between discharge categories (e.g. EPTS and Fraudulent Entry). Therefore, inter-service comparisons are not advised.

The relative risk of all discharges in each of the ISC categories was calculated for waived vs. fully qualified recruits, although only the top 20 discharge categories are presented. It was of particular interest to determine if waived recruits were at increased risk for an EPTS discharge (ISC: 1010). Loss codes specifying retirement (1050, 1051, 1052); immediate reenlistment (1100); expiration of term of service (1001); or entry into service academies (1042), warrant officer (1041), or officer commissioning programs (1040) were not treated as discharges.

**TABLE 1.1 DISCHARGE CATEGORIES DEFINED BY THE DEFENSE MANPOWER DATA CENTER INTER-SERVICE SEPARATION CODES**

<b>ISC</b>	<b>Description</b>	<b>ISC</b>	<b>Description</b>
1000	Unknown/NA	1069	Lack of dependent support
1001	Expiration of term of service	1070	Unsanitary habits
1002	Early release, insufficient retainability	1071	Civil court conviction
1003	Early release, to attend school	1072	Security
1004	Early release, police duty	1073	Court-martial
1005	Early release, in the national interest	1074	Fraudulent entry
1006	Early release, seasonal employment	1075	Absent Without Leave (AWOL) or desertion
1007	Early release, to teach	1076	Homosexuality
1008	Early release, including Reduction in Force (RIF), Voluntary Separation Incentive (VSI) and Special Separation with Benefits (SSB)	1077	Sexual perversion
1010	Condition existing prior to service	1078	Good of the service (discharge in lieu of court-martial)
1011	Disability, severance pay	1079	Juvenile offender
1012	Permanent disability retirement	1080	Misconduct reason unknown
1013	Temporary disability retirement	1081	Unfitness, reason unknown
1014	Disability, no condition existing prior to service, no severance pay	1082	Unsuitability, reason unknown
1015	Disability retirement, United States Code (USC), Title 10	1083	Pattern of minor disciplinary infractions
1016	Unqualified for active duty, other	1084	Commission of a serious offense
1017	Failure to meet weight or body fat standards	1085	Failure to meet minimum qualifications for retention
1022	Dependency or hardship	1086	Unsatisfactory performance (formerly Expeditious Discharge Program)
1030	Death, battle casualty	1087	Entry level performance and conduct (formerly Trainee Discharge Program)
1031	Death, non-battle, disease	1088	Unsatisfactory performance of Ready Reserve obligation
1032	Death, non-battle, other	1090	Secretarial authority
1033	Death, cause not specified	1091	Erroneous enlistment or induction
1040	Officer commissioning program	1092	Sole surviving family member
1041	Warrant officer program	1093	Marriage
1042	Military service academy	1094	Pregnancy
1050	Retirement, 20 to 30 years of service	1095	Minority (underage)
1051	Retirement, over 30 years of service	1096	Conscientious objector
1052	Retirement, other	1097	Parenthood
1060	Character or behavior disorder	1098	Breach of contract
1061	Motivational problems (apathy)	1099	Other
1062	Enuresis	1100	Immediate reenlistment
1063	Inaptitude	1101	Dropped from strength, desertion
1064	Alcoholism	1102	Dropped from strength, imprisonment
1065	Discreditable incidents, civilian or military	1103	Record correction
1066	Shirking	1104	Dropped from strength, Missing in Action (MIA) or Prisoner of War (POW)
1067	Drugs	1105	Dropped from strength, other
1068	Financial irresponsibility		

## RESULTS

The number of fully qualified and waived recruits receiving specified discharges from active duty service is presented in Table 1.2 in decreasing frequency (among fully qualified). Relative risks for these discharges and the associated 95% confidence intervals are also provided. Overall, those soldiers who were granted accession medical waivers were at a significantly, albeit marginally, increased risk for a discharge within the first year of active duty service. The most common discharge for both fully qualified and waived soldiers was for being unqualified for Active Duty service (other), with waived recruits being 1.6 times more likely to receive this discharge (95% CI: 1.5, 1.8). Separation for entry level performance and conduct was the second most common discharge among both waived and fully qualified soldiers. No difference in the risk for this type of discharge was found between the two groups. Separations for failure to meet weight/body fat standards were the third most common discharge among waived and fully qualified enlistees. Waived recruits were 1.2 times more likely to be discharged for this reason. Waived recruits were significantly less likely to be discharged for desertion, matters related to the good of the service, and for drug use. Waived recruits were 1.8 times more likely to receive discharges reported as conditions EPTS.

**TABLE 1.2. RELATIVE RISK OF MOST COMMON DISCHARGES (WAIVED GROUP<sup>†</sup> VS. FULLY QUALIFIED) AMONG MALE, FIRST TIME, ACTIVE DUTY, ARMY ENLISTEES**

Description	Discharges among fully qualified enlistees		Discharges among enlistees granted waivers		RR (95% CI)
	Count	Count / 100k <sup>‡</sup>	Count	Count / 100k <sup>§</sup>	
Unqualified for Active Duty - Other	6,070	4,136	565	6,730	<b>1.63 (1.50, 1.77)</b>
Entry Level Performance and Conduct	5,202	3,544	278	3,311	0.93 (0.83, 1.05)
Failure to Meet Weight/Body Fat Standards	2,039	1,389	141	1,680	<b>1.21 (1.02, 1.43)</b>
Dropped from Strength for Desertion	1,592	1,085	55	655	<b>0.60 (0.46, 0.79)</b>
Good of the Service (in lieu of Court Martial)	991	675	36	429	<b>0.64 (0.46, 0.89)</b>
Disability - Severance Pay	676	461	43	512	1.11 (0.82, 1.51)
Drugs	675	460	24	286	<b>0.62 (0.41, 0.93)</b>
Character or Behavior Disorder	590	402	34	405	1.01 (0.71, 1.42)
Expeditious Discharge/Unsatisfactory Performance	355	242	23	274	1.13 (0.74, 1.73)
Discreditable Incidents - Civilian or Military	344	234	18	214	0.91 (0.57, 1.47)
Commission of a Serious Offense	311	212	10	119	0.56 (0.30, 1.05)
Homosexuality	297	202	16	191	0.94 (0.57, 1.56)
Conditions Existing Prior to Service	278	189	29	345	<b>1.82 (1.24, 2.67)</b>
AWOL, Desertion	158	108	8	95	0.89 (0.44, 1.80)
Unknown or Invalid	153	104	11	131	1.26 (0.68, 2.32)
Erroneous Enlistment or Induction	142	97	3	36	0.37 (0.12, 1.16)
Dependency or Hardship	139	95	5	60	0.63 (0.26, 1.53)
Fraudulent Entry	112	76	2	24	0.31 (0.08, 1.26)
Death, Non-battle - Other	89	61	2	24	0.39 (0.10, 1.60)
Misconduct (reason unknown)	80	55	3	36	0.66 (0.21, 2.08)
Other	380	259	28	334	1.29 (0.91, 1.83)
<b>Total</b>	<b>20,673</b>	<b>14,085</b>	<b>1,334</b>	<b>15,890</b>	<b>1.13 (1.07, 1.19)</b>

<sup>†</sup> Waivers for multiple conditions or for conditions that were not the same as the original disqualification at MEPS were excluded.

<sup>‡</sup> Based on a total of 146,995 fully qualified active duty Army recruits.

<sup>§</sup> Based on a total of 8,395 active duty Army recruits who required an accession medical waiver.

## CONCLUSIONS

Among the first-time, active duty male Army enlistees studied here, those who required an accession medical waiver to join the service were over 1.1 times more likely to be discharged from the Army than those recruits who were fully qualified. This is not a large difference and would not appear to pose a major operational concern. To illustrate this point further, for every 1,000 waivers granted there are only 18 excess losses that are attributable to the positive waiver history. Specific reasons for discharge varied between the fully qualified and waived soldiers that were studied. In general, waived recruits were less likely to be discharged for behavioral and motivational issues (i.e. desertion, drug use, and commission of serious offences) compared to the fully qualified group, though they were more likely to receive medical discharges such as EPTS and being unqualified for active duty service. Some caution should be applied to the interpretation of these results given that many discharges will probably have reasons sufficiently complex to prevent characterization by a single code. Furthermore, for some discharges, there is the potential for overlap between different categories. For example, EPTS discharges could potentially be classified as fraudulent or erroneous enlistments.

The current analysis was based on male Army recruits only and the results are therefore not representative of the population of first-time active duty Army enlistees describe in previous AMSARA annual reports. Furthermore, the inclusion and exclusion criteria placed upon waiver history further distinguish the sample described here from the general recruit population. These criteria were necessary for the conduct of the parent waiver/deployment study; however, they are not required for this descriptive analysis. It is intended that this analysis will become a permanent feature of the AMSARA annual report. Therefore, future installments will be more representative of the recruit population and will also cover both male and female active duty enlistees who access into the Navy, Marine Corps, and Air Force.

## REFERENCES

1. Attrition rate for enlistees waived for medical disqualification conditions. 2000 AMSARA Annual Report, p. 34.
2. Niebuhr DW, Li Y, Powers TE, *et al.* Attrition of U.S. military enlistees with waivers for hearing deficiency, 1995-2004. *Mil Med.* 2007;172(1):63-9.
3. Cox KA, Clark KL, Li Y, Powers TE, Krauss MR. Prior knee injury and risk of future hospitalization and discharge from military service. *Am J Prev Med.* 2000;18(3 Suppl):112-7.
4. Survival of recruits waived for scoliosis. 2003 AMSARA Annual Report, p. 9.
5. Niebuhr DW, Jankosky C, Powers TE, Krauss MR. Attrition of military enlistees with a medical waiver for chronic headache, 1995-2000. *Mil Med.* 2006;171(12):1235-8.
6. Niebuhr DW, Powers TE, Krauss MR, *et al.* Attrition of military enlistees with a medical waiver for myopia, 1999-2001. *Mil Med.* 2006;171(11):1137-41.
7. Krauss MR, Russell RK, Powers TE, Li Y. Accession standards for attention-deficit/hyperactivity disorder: a survival analysis of military recruits, 1995-2000. *Mil Med.* 2006;171(2):99-102.
8. Survival of new military recruits requiring medical waiver for knee or shoulder instability. 2006 AMSARA Annual Report, p. 8.
9. Clark KL, Li Y, Krauss MR, *et al.* The asthma accession standard: a survival analysis of military recruits, 1995 to 1997. *Mil Med.* 2000;165(11):852-4.

# **Analysis of EPTS discharges and accession medical waivers**

## **INTRODUCTION**

The accession medical standards for asthma and Attention Deficit Disorder (ADD) and Attention Deficit Hyperactivity Disorder (ADHD) were recently relaxed in 2004. Both conditions are historically among the most common disqualifications noted at Military Entrance Processing Stations (MEPS) with asthma being associated with 8,672 disqualifications in CY 2001-2005 and ADD/ADHD being associated with 3,645 disqualifications in the same period (AMSARA Annual Report CY 2007, page 62). Both asthma and ADD/ADHD were also among the most commonly sought accession medical waivers among enlisted applicants to the Army, Navy, Marine Corps, and Air Force. Furthermore, ADD/ADHD was consistently among the most highly approved waivers across these four services (AMSARA Annual Report CY 2007, pages 62-77). Of growing concern with respect to the relaxation of the accession medical standards for asthma and ADD/ADHD is an increase in adverse outcomes related to these conditions such as increased Existing Prior to Service (EPTS) discharge rates. For example, in the period from 2001-2005, asthma was the number one cause of EPTS discharge from the Army, Navy, and Air Force, and the second highest reason for such discharges from the Marine Corps (AMSARA Annual Report CY 2007, pages 101-108). Given that early discharges have adverse effects for the military at the institutional (financial and manpower costs) and unit levels, it is of great interest to determine if individuals granted accession medical waivers for common conditions such as asthma and ADD/ADHD are predisposed to EPTS discharges for those conditions. The following analyses were prompted by an inquiry from the Medical-Personnel (MEDPERS) committee in CY 2008. The MEDPERS inquiry contained two requests. Part 1) determine the most prevalent waiver conditions in CY 2005 and identify EPTS discharges among an accession cohort granted waivers for those conditions; and Part 2) determine the most prevalent EPTS discharge conditions in CY 2006 and examine the waiver history of individuals receiving such EPTS discharges in CY 2006. The following study describes both the occurrence of EPTS discharges among first-time active duty Army enlistees granted accession medical waivers (Part 1) and the waiver history among the most common EPTS discharges (Part 2). The null hypotheses that will be tested are that there is no difference in the risk of receiving an EPTS discharge between each waiver group and the non-waived group (Part 1) and that the proportion of enlistees with a history of an accession medical waiver is the same between those soldiers who received an EPTS and those who had not (Part 2).

## **METHODS**

### ***Part 1: EPTS discharges among first-time, active duty, Army enlistees***

The waiver categories used for comparison in this study were selected based on prevalence. The top ten waiver conditions were determined from among all active duty Army enlistees who were granted an accession medical waiver in CY 2005 (irrespective of a corresponding accession record). In addition to the top ten waiver conditions, waivers for depressive disorders were also included given the high number of such EPTS discharges that are consistently observed across services in 2001-2005. In order to evaluate enlistees in each waiver category for subsequent EPTS discharge, a cohort of first-time active duty Army enlistees who accessed in CY 2005 was identified from the MEPS and Defense Manpower Data Center (DMDC) datasets. To determine the waiver status of subjects in this cohort, subjects were matched to

the Army waiver dataset by SSN. Subjects in this cohort who were denied an accession medical waiver or who were evaluated for more than one condition were excluded. A soldier was considered fully qualified if they did not receive a medical disqualification at MEPS and did not have a waiver record. Other than the exclusions listed above, the cohort otherwise included all first time, active duty Army enlistees who access in CY 2005. To determine if an enlistee received an EPTS discharge, subjects were matched to the EPTS dataset by SSN and any EPTS discharge that occurred within 9 months of service (regulation specifies 180 days) was retained for analysis. The EPTS record was then examined to determine if the condition for discharge was the same as that for which a waiver was granted. From these data, the proportion of recruits in each waiver category who received an EPTS discharge related to a waived condition was determined. In addition, the EPTS discharge rate was also calculated for each waiver category. Relative risks were calculated for each waiver group compared to fully qualified enlistees. For those waiver categories in which fewer than four EPTS discharges were observed, Fisher's exact test was used in order to determine the probability of obtaining a sample as extreme as or more than the one observed.

### ***Part 2: Waiver history among first-time, active duty, enlistees discharged for conditions EPTS***

The EPTS discharge categories chosen for this study were based on prevalence. The top ten EPTS discharge conditions were determined from among all EPTS discharges of active duty Army enlistees CY 2006 (irrespective of a corresponding accession record). ADD/ADHD and disorders of refraction and accommodation were also included among the EPTS discharge categories given the high number of such waivers that are consistently applied for across services in 2001-2005. In order to examine the waiver history of recruits in each EPTS discharge category, all EPTS discharges in 2006 for the conditions specified above that occurred among first-time, Active Duty Army enlistees were examined. EPTS data were merged to the DMDC Gain/Loss and MEPS datasets by SSN in order to determine accession status and medical qualification status at MEPS. Only recruits with an accession records were retained for analysis. To determine waiver history, study subjects were matched to the Army waiver dataset based by SSN and the most recent approved waiver was retained for analysis. The waiver record was also examined to determine if the waiver condition was the same as that for which an EPTS discharge was processed. From these data, the proportion of recruits in each EPTS discharge category who had a waiver for the EPTS condition was calculated. In addition, the proportion of all enlistees in each EPTS discharge category with any waiver was determined. This proportion was compared to the proportion of all recruits with a history of any waiver (5.9%). Statistical significance was assessed by single sample proportion tests.

## **RESULTS**

### ***Part 1: EPTS discharges among first-time, active duty, Army enlistees***

Table 1.1 specifies the waiver groups considered for analysis and in addition, provides the proportion of such waivers among all granted waiver applications initiated by active duty Army enlistees in CY 2005, irrespective of an accession record. Disorders for refraction and accommodation, hearing loss, and other disorders of bone and cartilage are among the most common accession medical waivers applied for and granted to these recruits. It should be noted that the data provided in Table 1.1 is not limited to an accession record. Therefore, proportions presented in Table 1.1 and those calculated from Table 1.2 may be different.

**TABLE 1.1 TOP ACCESSION MEDICAL WAIVERS GRANTED BY THE ARMY WAIVER AUTHORITY IN 2005 TO ENLISTED APPLICANTS**

Condition <sup>†</sup>	Dx codes (ICD-9)	%
Disorders of refraction and accommodation	367	10.3
Hearing loss	389	8.4
Other disorders of bone and cartilage	733.99	7.2
Elevated blood pressure (no hypertension)	796.2	5.3
Underweight	N/A	4.8
Eye surgery	P11.7	3.5
Symptoms involving cardiovascular system (Tachycardia)	785.0	2.7
Anxiety	300, 308, 309	2.2
Asthma	493	2.1
Internal derangement of knee	717	1.9
ADHD	314	1.8
Dermatitis and other eczema	692	1.7
Depressive disorders	296.2, 296.3, 311	1.1

<sup>†</sup> Table 1.1 is based on 7,333 waivers that were granted in 2005 irrespective of an accession record. However, an accession record was required for the counting of waivers in Table 1.2. Therefore the number of waivers for each condition may not be the same between Tables 1.1 and 1.2.

The EPTS discharge rate of waived (by waiver condition category) and non-waived recruits are presented in Table 1.2. Virtually none of the waived individuals received an EPTS discharge for the condition for which the waiver was granted. The percentage of individuals in each waiver category who received any EPTS discharge ranged from 0% (including ADHD, anxiety/dissociative/ mood disorders, and internal knee derangements) to over 6% (asthma and depressive disorders). For those recruits who did not require an accession medical waiver (fully qualified at MEPS and no waiver record), the percentage who received an EPTS discharge was 3.1%. Relative to fully qualified enlistees, the risk of any EPTS discharge was highest for enlistees granted waivers for asthma (RR = 3.15; 95% CI = 1.47, 6.76). No significant differences in the risk of EPTS discharge were noted for the other waiver categories relative to fully qualified recruits.



**TABLE 1.2 EPTS DISCHARGES BY WAIVER CATEGORY AMONG FIRST TIME, ACTIVE DUTY ARMY ENLISTEES WHO ACCESSED IN CY 2005<sup>†</sup>**

Waiver category (ICD-9)	Total	Reported EPTS discharges					
		No EPTS	Specific EPTS	Any EPTS	% any EPTS	RR	95% CI
Disorders of refraction and accommodation	292	280	2	10	3.4	1.34	(0.77, 2.34)
Hearing loss	190	181	1	8	4.2	1.54	(0.81, 2.93)
Other disorders of bone and cartilage	252	240	0	12	4.8	1.55	(0.89, 2.70)
Elevated blood pressure (no hypertension)	155	152	0	3	1.9	0.63	---
Underweight	134	131	0	3	2.2	0.73	---
Eye surgery	86	84	0	2	2.3	0.76	---
Symptoms involving cardiovascular system	37	36	0	1	2.7	0.88	---
Anxiety, somatoform, and dissociative disorders/ Acute reaction to stress, Posttraumatic Stress Disorder	29	29	0	0	0.0	---	---
Asthma*	62	56	2	4	<b>6.5</b>	<b>3.15</b>	<b>(1.47, 6.76)</b>
Internal derangement of knee	43	43	0	0	0.0	---	---
ADHD	67	67	0	0	0.0	---	---
Dermatitis and other eczema	41	40	0	1	2.4	0.79	---
Depressive disorders	29	26	1	2	6.9	3.37	---
No waiver	33,308	32,285	---	1,023	3.1	1.00	---

<sup>†</sup> Waivers applications with comorbid conditions were excluded from this analysis.

\* The 95% confidence interval for the observed relative risk of an EPTS discharge does not include 1.00. For those waiver categories with fewer than 4 observed EPTS discharges, Fisher's exact test was performed. In this case, a single asterisk denotes a p-value of < 0.05 (two-sided).

## ***Part 2: Waiver history among first-time, active duty, enlistees discharged for conditions EPTS***

Table 1.3 outlines the EPTS discharge categories considered for analysis and in addition, provides the proportion of such discharges among all EPTS discharges of active duty enlistees from the Army in CY 2006 (irrespective of an accession record). Depressive disorders, asthma, and joint pain in the lower body and extremities were by far the most common reasons for EPTS discharges among these recruits. Since the data provided in Table 1.3 are not limited to recruits with an accession record, proportions may be slightly different from proportions calculated from Table 1.4.

The proportion of enlistees who received an EPTS discharges (by condition category) who had any waiver history is provided in Table 1.4. The proportion of individuals whose waiver and discharge conditions were related is also provided. Virtually none of the EPTS discharges occurred among individuals who were granted waivers for conditions related to the discharge. The percentage of individuals in each EPTS condition category who were granted any accession medical waiver ranged from 18% (hearing loss) to 0% (anxiety disorders and myopia). It is worth noting that among the 6 recruits discharged for other and unspecified back disorders, three had waivers for deviations/curvature of the spine, and one had a waiver for a

fracture of the vertebral column (no mention of spinal cord injury). For all recruits, the percentage that is granted an accession medical waiver is 5.9%. Only one EPTS group, discharges for joint pain of the lower body/extremities, had a proportion of waived enlistees significantly greater than 5.9%.

**TABLE 1.3 TOP EPTS DISCHARGES RECORDED IN CY 2006 AMONG ACTIVE DUTY ARMY ENLISTEES<sup>†</sup>**

Condition <sup>†</sup>	Dx codes (DoDI 6130.4)	%
Depressive disorders	296.2, 296.3, 311	16.8
Asthma	493	8.0
Joint pain (lower body/extremities)	719.46, 719.47	8.0
Anxiety disorders	300.01, 309.81, 300.2, 300.23, 300.21, 300.29, 300.3, 308, 300.23	4.7
Disorders of back	724	4.3
Adjustment reaction	309	4.2
Epilepsy/seizures	345	3.6
Personality disorder	301	3.5
Other and unspecified bipolar disorders	296.8	3.5
ADD/ADHD	314	2.1
Hearing loss	389	0.8
Myopia	367.1	0.3

<sup>†</sup> Table 1.3 is based on 1,472 EPTS discharges that occurred in 2006 irrespective of an accession record. However, an accession record was required for the counting of EPTS discharges in Table 1.4. Therefore the number of EPTS discharges for each condition may not be the same between Tables 1.3 and 1.4.

**TABLE 1.4 WAIVER HISTORY BY EPTS DISCHARGE CATEGORY AMONG FIRST TIME, ACTIVE DUTY ARMY ENLISTEES WHO ACCESSED IN 2005 AND 2006**

EPTS discharge category (DoDI 6130.4)	Total in EPTS category	Waivers history			
		No waiver	Specific waiver	Any waiver	% any waiver
ADHD	23	20	0	3	13.0
Other and unspecified bipolar disorders	37	36	0	1	2.7
Personality disorders	32	31	0	1	3.1
Drug/alcohol abuse	29	28	0	1	3.4
Adjustment reaction	50	48	0	2	4.0
Epilepsy/seizures	39	36	0	3	7.7
Myopia	2	2	0	0	0.0
Hearing loss	11	9	0	2	18.2
Asthma	88	84	0	4	4.5
Joint pain (lower body/extremities)*	87	75	1	<b>11</b>	<b>12.6</b>
Other and unspecified disorders of back	56	50	0	6	10.7
Anxiety disorders	26	26	0	0	0.0
Depressive disorders	180	171	0	9	5.0

\* The proportion of enlistees with a history of any waiver is significantly different ( $p < 0.05$ , test of a single proportion) from the population proportion of 0.059).

## CONCLUSIONS

The objectives of this study were twofold. Firstly, it was of interest to determine if recruits granted waivers for the most common conditions carried a significantly greater risk of EPTS discharge compared to fully qualified recruits. Secondly, it was also of interest to determine if the proportion of recruits with a history of an accession medical waiver was greater for enlistees who were discharged for pre-existing medical conditions (EPTS) than for all enlistees. The first objective was accomplished through a prospective study in which an accession cohort comprised of waived and non-waived soldiers was followed through time for subsequent EPTS discharge. The second objective of the present study was accomplished through a retrospective study design in which all EPTS discharged first-time active duty Army recruits with a DMDC accession record were examined for a waiver history. The proportion of discharged recruits was compared to the average for all recruits (5.9%). Differences from the average were assessed for statistical significance by a single sample proportion test. From both analyses, it is clear that the risk of EPTS discharge is not significantly greater among recruits with the most common waiver conditions while at the same time, recruits discharged for the most common pre-existing conditions are not more likely to have a positive waiver history.

Asthma was the only waiver condition associated with an increased risk of EPTS discharge; however, the number of discharges among recruits granted waivers for asthma was miniscule ( $n = 4$ ) compared to the total number of EPTS discharges among all recruits in the accession cohort. With respect to waiver history among EPTS discharged recruits, it is clear that the most common EPTS discharges are not associated with a history significant for any accession medical waiver let alone a waiver for the discharge condition. EPTS discharges for hearing deficiencies, ADD/ADHD, joint pain of the lower body and extremities, and back disorders had the highest percentages of waived recruits. However, the proportion of waived recruits is only significantly higher than that of all recruits for the category of EPTS discharges for joint pain of the lower body and extremities EPTS.

The analyses presented here will be expanded in future annual reports to cover the Navy, Marine Corps, and Air Force in addition to the Army. Future reports will focus on a prospective design that follows only a single accession cohort for subsequent EPTS discharge.

## 2. DESCRIPTIVE STATISTICS FOR APPLICANTS AND ACCESSIONS FOR ENLISTED SERVICE

The characteristics of the source populations applying for enlisted service in the Active Duty, Reserve, and National Guard components of the military are described from 2002 to 2007. For Active Duty applicants, subsequent accessions and attritions are also shown. An enlistee *applicant* is the individual who presents to a Military Entrance Processing Station (MEPS) for evaluation for acceptance into military service. An enlistee *accession* is the individual who has signed his or her oath of enlistment.

Except where otherwise noted, the following conventions apply:

- All references to year refer to calendar year (CY).
- The “Accessions” shown in the following tables are from among the “Applicants” shown in the relevant preceding column. For example, columns showing calendar year 2007 accessions are summarizing accessions only among individuals who applied for service in calendar year 2007. Notation is made when complete follow-up is not available.
- Only data through calendar year 2007 are included. Therefore, numbers and percentages gained (i.e. accessions) among applicants in 2007 refer only to those gained through 2007 year. For legitimate comparison of accession among applicants in 2007 and the previous five years, we calculated a within calendar year accession rate, which takes into account only accessions that occurred in the same calendar year as the MEPS physical. Therefore, when 2007 and 2002-2006 figures are compared, the follow up time for observing accessions will be comparable.
- To derive percentages and rates, data sets were merged at the individual level by Social Security Number (SSN). For example, in determining the percentage of individuals gained in 2007 who received a discharge, only discharges with a SSN matching a 2007 accession record SSN were included.
- Non-missing totals may vary slightly among tables depending upon the variable by which percentages or rates are presented. Records with a missing variable value used to calculate a percentage or rate in a given table are not included in that table, though the record may appear in other tables.
- Under the subsections titled “Active Duty Applicants at MEPS with Accession Records” and “Medical Waivers,” education level and age were obtained at the time of MEPS application because MEPS data are the only source of these variables for applicants. For subsections titled “Hospitalizations,” “Attrition,” “EPTS Discharges,” and “Disability Discharges among Army and Air Force Active Duty Enlistees,” age, education level, and AFQT score at time of accession are used. Under the Delayed Entry Program, the application process can occur up to 2 years before the actual accession takes place.
- Temporary medical disqualifications are for conditions that can be remediated, such as being overweight or recently using marijuana. Permanent medical disqualifications are for all other disqualifying conditions described in DoD Instruction 6130.4.

- The Department of Defense Instruction (DoDI) 6130.3 was superseded by DoDI 6130.4 in CY 2005. This change is reflected in the coding of Existing Prior to Service (EPTS) discharge conditions beginning in CY 2006. The updated classification system incorporated several extensive revisions with codes corresponding to psychiatric disorders and orthopedic conditions being the most heavily impacted. Given the breadth and scope of disease reclassification, it is difficult, if not impossible, to directly compare EPTS data from 2006 to that from previous years; therefore these data are presented in separate tables.
- The disease classification coding system outlined by DoDI 6130.3 is employed by the Navy and Marine Corps waiver authorities. At this time, there is no evidence to suggest that the Marine Corps has adopted the revised coding system and it is therefore possible to compare waiver data from 2007 to the same data from previous years. However, the Navy waiver authority began using a new coding system in 2006. Therefore, waiver data from 2006 and 2007 are not comparable to data from previous years.
- Beginning in the CY 2007 Annual report, the way International Classification of Diseases, 9<sup>th</sup> revision (ICD-9) codes are summarized was revised in order to establish more uniform granularity over the range of ICD-9 codes reported for MEPS disqualification and Army and Air Force waivers. This was done by selecting a subset of codes based on expert opinion that were exceptionally broad and reporting them to four digits rather than three (summarized in Table 2.1). For example, 493 is specific to asthma whereas 733 denotes a diverse array of bone and cartilage disorders, which include osteoporosis, pathologic fractures, bone cysts, and aseptic necrosis. Please note, when a majority of codes examined out to the fourth digit do not have a fourth digit (either due to insufficient information at time of coding or to errors) it is possible to have a three-digit code appear in the top-20 medical conditions tables, even though the raw codes were examined out to the fourth digit. Such codes are treated as a distinct category and are in no case to be considered a parent term if a more specific code is present. For example, the ICD-9 groups specified by 785 and 785.0 are mutually exclusive categories and the latter is not a subset of the former.
- In the CY 2007 Annual Report, the method in which multiple MEPS applications were consolidated was modified so that applications from individuals to multiple components were retained but stored in separate datasets. Therefore, a single applicant may be represented in one, two, or all three of the component-specific MEPS application datasets. The number of applicants for each year in this annual report may be higher than that documented in the previous report and therefore Active Duty accession rates calculated in the current report will be lower than shown previously.

**TABLE 2.1 LIST OF ICD-9 CODING GROUPS SUMMARIZED TO THE FOURTH<sup>TH</sup> DIGIT STARTING IN CY 2007 ANNUAL REPORT**

ICD-9 <sup>†</sup>	Condition
272	Disorders of lipid metabolism
305	Nondependent abuse of drugs
306	Physiological malfunction arising from mental factors
307	Special symptoms or syndromes, not elsewhere classified
718	Other derangement of joint
719	Other and unspecified disorders of joint
724	Other and unspecified disorders of back
726	Peripheral enthesopathies and allied syndromes
733	Other disorders of bone and cartilage
746	Other congenital anomalies of heart
754	Certain congenital musculoskeletal deformities
756	Other congenital musculoskeletal anomalies
780	General symptoms
783	Symptoms concerning nutrition, metabolism, and development
784	Symptoms involving head and neck
785	Symptoms involving cardiovascular system
795	Other and nonspecific abnormal cytological, histological, immunological and DNA test findings
796	Other nonspecific abnormal findings
995	Certain adverse effects not elsewhere classified

<sup>†</sup> Differences in the level of coding specificity (3-digit vs. 4-digit) over time can lead to misleadingly large disparities in the incidence estimates for particular disease or condition categories when comparing current year data to the previous 5-year period. For example, if the code 272.0 is used in 2006 and 2007 where previously 272 was used, the top twenty condition categories for 2007 would appear to indicate that pure hypercholesterolemia is an emerging vs. established problem.

## Active Duty Applicants at MEPS with Accession Records

Tables 2.2 through 2.9 describe the population of applicants who received an accession medical examination and subsequent accessions for Active Duty enlisted service in the Army, Navy, Marine Corps, and Air Force. Table 2.2 shows the numbers of applicants and the percentage of subsequent accessions among applicants between the years 2002 and 2006 and in the year 2007. The percentage of accessions is presented in two ways: 1) total accessions through 2006 and 2) accession within the same calendar year as application. The presentation of the average “within calendar year” accession rate for the years 2002 through 2006 provides a fair basis for the comparison of the “within calendar year” accession rate in 2007.

**TABLE 2.2 ACCESSIONS FOR ENLISTED APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION BY SERVICE: 2002-2006 vs. 2007**

Service	2002 – 2006			2007	
	Applicants	Accession rate within calendar year	Accession rate overall	Applicants	Accession rate within calendar year
Army	453,406	36.7	57.9	78,702	49.9
Navy	268,347	32.2	68.1	52,067	35.0
Marines	214,776	36.4	70.1	48,188	43.2
Air Force	187,952	41.7	79.2	33,678	45.6
Total	1,124,481	-	-	212,635	-

The average within-calendar year accession rate for the Army was 36.7% in 2002-2006 while the within-calendar year rate for 2007 was nearly 50%. Such a large difference in this accession rate was not observed for the other services though the 2007 rates were all greater than the averages from the previous five years. The average overall accession rates for all services over the period from 2002 to 2006 did not change substantially from the same rates presented in the CY 2007 Annual Report.

Table 2.3 shows the number of applicants for enlisted service by year for 2002-2007 and the associated accession counts and rates within one year and within two years following application. Regulations state that accessions must occur within one year of application, although it is fairly common for applicants to request and to be granted a one-year extension. The calculated accession rates within one year of application in 2003 and 2004 are lower than those calculated for 2002, 2005, and 2006. A similar pattern was observed for the 2-year accession rates, suggesting that the lower 1-year rates did not result from a delay in the timing of some accessions. Due to the lack of full two-year follow-up data for 2006 applicants and one year follow-up for 2007 applicants, the corresponding accession rates were underestimated (see note below Table 2.3). These caveats aside, it appears that approximately 93% of accessions in 2002-2007 (780,626/838,597) occurred within the first year following application while only a small proportion (approximately 5%) of additional gains are realized in the second year following application.

**TABLE 2.3 ACCESSIONS WITHIN ONE AND TWO YEARS OF APPLICATION FOR ENLISTED APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2002-2007**

Year of exam	Applicants	No. within 1 year of application	% within 1 year of application	No. within 2 years of application	% within 2 years of application
2002	268,165	172,677	64.4	183,627	68.5
2003	241,325	139,583	57.8	149,213	61.8
2004	197,807	105,344	53.3	115,109	58.2
2005	199,701	124,347	62.3	133,797	67.0
2006	217,483	144,960	66.7	151,221	69.5 <sup>†</sup>
2007	212,635	93,715	44.1 <sup>†</sup>	93,715	-
Total	1,337,116	780,626	-	826,682	-

<sup>†</sup> The proportion of applicants who accessed was underestimated due to a lack of sufficient follow-up data since only accessions up through 2007 are reported in the above table.

Tables 2.4 through 2.8 show demographic characteristics (at time of application) and accession rates for the applicant pools in 2002-2006 and 2007. Most applicants in 2007 were male (82.6%), aged 17-20 years (67.7%), and white (75.7%). Over one third of applicants (34%) had not completed high school at the time of application, many of whom are thought to be in the Delayed Entry Program (DEP). This demographic profile is consistent with the demographic profile of the applicants in 2002 through 2006 with the exception of age and education. In 2002-2006, the youngest age group represented 72.5% of all applicants whereas this proportion was only 67.7% in 2007. Collectively, applicants with a high school diploma or less accounted for nearly 97% of all applicants, although the proportion of recruits with a high school diploma was higher in 2007 (69.9%) compared to the previous five years (59.3%). The demographic distributions of accessions largely reflect the applicant population with regard to gender, age,

race, and education. Graduation from high school prior to accession among applicants who were high school seniors at the time of application accounts for many of the differences noted among these proportions between applicants and accessions. Additionally, slight differences may be seen between applicants and accessions on other demographic variables, though these differences are likely attributable to random fluctuations that occur from year to year.

**TABLE 2.4 GENDER OF ENLISTED APPLICANTS WHO RECEIVED A MEDICAL EXAMINATION IN 2002-2006 VS 2007**

Gender	2002 – 2006				2007			
	Applicants		Accessions		Applicants		Accessions	
	Count	%	Count	%	Count	%	Count	%
Male	915,700	81.4	621,043	83.4	175,556	82.6	78,699	84.0
Female	208,774	18.6	123,839	16.6	37,072	17.4	15,015	16.0
Total <sup>†</sup>	1,124,481	-	744,882	-	212,635	-	93,715	-

<sup>†</sup> Some individuals with a missing value for gender are included in the total.

**TABLE 2.5 AGE OF ENLISTED APPLICANTS WHO RECEIVED A MEDICAL EXAMINATION IN 2002-2006 VS 2007**

Age	2002 – 2006				2007			
	Applicants		Accessions		Applicants		Accessions	
	Count	%	Count	%	Count	%	Count	%
17 – 20	815,252	72.5	562,274	75.5	143,988	67.7	62,815	67.0
21 – 25	228,667	20.3	146,324	19.6	46,869	22.0	23,744	25.3
26 – 30	54,265	4.8	27,429	3.7	12,998	6.1	4,815	5.1
> 30	26,297	2.3	8,855	1.2	8,780	4.1	2,341	2.5
Total	1,124,481	-	744,882	-	212,635	-	93,715	-

**TABLE 2.6 RACE OF ENLISTED APPLICANTS WHO RECEIVED A MEDICAL EXAMINATION IN 2002-2006 VS 2007**

Race <sup>†</sup>	2002 – 2006				2007			
	Applicants		Accessions		Applicants		Accessions	
	Count	%	Count	%	Count	%	Count	%
White	753,791	74.5	509,414	74.9	138,741	75.7	61,399	76.5
Black	158,713	15.7	103,383	15.2	27,107	14.8	11,655	14.5
Other	98,712	9.8	67,076	9.9	17,464	9.5	7,163	8.9
Missing or declined	113,265	11.2	65,009	9.6	29,323	16.0	13,498	16.8
Total	1,124,481	-	744,882	-	212,635	-	93,715	-

<sup>†</sup> Note: New categories for race were available beginning in 2003. However, greater numbers of applicants chose not to indicate their race.



**TABLE 2.7 EDUCATION LEVEL OF ENLISTED APPLICANTS WHO RECEIVED A MEDICAL EXAMINATION IN 2002-2006 vs 2007**

Education	2002 – 2006				2007			
	Applicants		Accessions		Applicants		Accessions	
	Count	%	Count	%	Count	%	Count	%
Below HS Senior <sup>†</sup>	44,481	4.0	27,292	3.7	12,393	5.8	4,911	5.3
HS Senior	365,623	32.6	250,631	33.8	59,833	28.2	20,037	21.5
HS Diploma	666,267	59.4	440,161	59.3	132,179	62.3	65,307	69.9
Some College	11,433	1.0	6,962	0.9	2,081	1.0	930	1.0
Bachelor's and above	33,180	3.0	17,460	2.4	5,523	2.6	2,200	2.4
Unknown	3,497	-	2,376	-	626	-	330	-
Total	1,124,481	-	744,882	-	212,635	-	93,715	-

<sup>†</sup> Encompasses the following: 1) those pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc; 2) those not attending high school and who are neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school and is not yet a senior.

Table 2.8 shows the Armed Forces Qualification Test (AFQT) scores by percentile for applicants and accessions, comparing the time period of 2002 through 2006 to 2007. In 2007, the distribution of AFQT scores was consistent with the distribution of AFQT scores in the previous five years. In the previous annual report it was observed that the proportion of accessions in the lowest AFQT score groups was increasing, which may have reflected an increased willingness to consider applicants from the lower aptitude categories. The similarity between current accessions and those from the previous five-year period suggests that this exception has been sustained. Note that AFQT is a nationally normalized test, so the score distribution among all applicants would not necessarily mirror the percentile ranges. Applicants scoring in the 1<sup>st</sup> through 10<sup>th</sup> percentiles are barred from the medical examination process.

**TABLE 2.8 AFQT SCORE CATEGORIES OF ENLISTED APPLICANTS WHO RECEIVED A MEDICAL EXAMINATION IN 2002-2006 vs 2007**

AFQT score	2002 – 2006				2007			
	Applicants		Accessions		Applicants		Accessions	
	Count	%	Count	%	Count	%	Count	%
93 – 99	63,428	5.7	43,404	5.8	11,241	5.4	5,296	5.7
65 – 92	392,043	35.1	270,494	36.4	72,139	34.4	33,560	35.8
50 – 64	282,233	25.3	189,948	25.5	52,712	25.1	23,422	25.0
30 – 49	311,250	27.9	202,500	27.2	64,831	30.9	27,981	29.9
11 – 29 <sup>†</sup>	64,449	5.8	36,025	4.8	8,576	4.1	3,213	3.4
< 11	2,159	0.2	1,101	0.1	376	0.2	145	0.2
Missing	8,919	-	1,410	-	2,760	-	98	-
Total	1,124,481	-	744,882	-	212,635	-	93,715	-

<sup>†</sup> Individuals scoring in the 10 percentile or lower are prohibited from applying. However, some exceptions are apparent.

The medical qualification status of applicants and accessions in 2007 as compared to applicants in the previous five years is shown in Table 2.9. The percentage of applicants and accessions within each category of medical qualification status in 2007 appears to be consistent with the overall percentages observed from 2002 to 2006. In 2007, 79.8% of applicants and 86.5% of accessions were classified as medically qualified for enlisted service.

Among applicants in 2007, 9.6% received a temporary medical disqualification, whereas only 7.3% of accessions had received the same disqualification. The 2007 within-year accession rate, defined by the ratio of accessions over applicants, was slightly lower for applicants who received permanent medical disqualifications ( $5,771 / 22,550 = 25.6\%$ ) compared to those who received temporary disqualifications ( $6,845 / 20,325 = 33.7\%$ ). Both within-year accession rates were considerably lower than for fully qualified candidates (47.8%). The lower accession rate for applicants with permanent disqualifying conditions as compared to those with temporary disqualifications appears persistent since the overall accession rate for applicants in 2002 through 2006 with permanent disqualifications (41.9%) was still lower than for temporary disqualifications (45.1%).

**TABLE 2.9 ACTIVE DUTY ENLISTED APPLICANTS WHO RECEIVED A MEDICAL EXAMINATION IN 2002-2006 AND 2007: MEDICAL DISQUALIFICATION**

Medical status	2002 – 2006				2007			
	Applicants		Accessions		Applicants		Accessions	
	Count	%	Count	%	Count	%	Count	%
Fully qualified	898,321	79.9	645,620	86.7	169,760	79.8	81,099	86.5
Permanent	84,097	7.5	35,257	4.7	22,550	10.6	5,771	6.2
Temporary	142,063	12.6	64,005	8.6	20,325	9.6	6,845	7.3
Total	1,124,481	-	744,882	-	212,635	-	93,715	-

## Reserve Applicants at MEPS without Accession Records

Tables 2.10 through 2.16 describe the features of applicants for the enlisted Reserves of the Army, Navy, Marines, and Air Force. Data on reserve applicants who underwent medical examinations at any MEPS are shown for the period from 2002 to 2006 in aggregate and separately for 2007. These results include only civilians applying for the Reserves and do not include direct accessions from Active Duty military.

The number of reserve applicants, by service, between the years of 2002 and 2007 is shown in Table 2.10. Though the number of applicants fluctuates from year to year, there is no noticeable trend in the number of applicants in the Army and Marines. Among Navy Reservists, the number of applicants increased from 3,264 in 2003 to 9,780 in 2007. Among Air Force Reservists, the number of applicants decreased from 5,019 in 2003 to 3,656 in 2007. The numbers of reservists observed in this report are higher than previously noted. This is likely due to the fact that data on reserve applicants at MEPS have only been collected since 2004 and that new records were retroactively provided to the Accession Medical Standards Analysis and Research Activity (AMSARA) in the most recent dataset.

**TABLE 2.10 RESERVE APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2002-2007: BY SERVICE**

Year of exam	Army	Navy	Marines	Air Force
2002	28,124	4,147	9,216	4,421
2003	30,484	3,264	8,696	5,019
2004	21,775	5,989	8,239	4,512
2005	23,545	8,533	7,822	3,662
2006	28,727	9,563	8,429	3,846
2007	26,602	9,780	7,173	3,656
Total	159,257	41,276	49,575	25,116

Tables 2.11 through 2.15 describe the demographics of Reserve applicants at MEPS. Most Reserve applicants in 2007 were male (76.7%), between the ages of 17 and 20 (59.2%), and white (73.8%). The demographic profile of Reserve applicants in 2007 with respect to age, sex, and race, was consistent with that observed, in aggregate, over the past five years. Of note however, is that applicants in the 17 to 20 year old group constitute a smaller proportion of Reserve applicants in 2007 compared to the previous 5-year period. This was also observed for Active Duty applicants in 2007 (Table 2.5). It should also be noted that the proportion of Reserve applicants in 2007 who were classified as having an education level “below a high school senior” (13.6%) was higher than in previous years (9.9%). However, when considering the “below high school senior” and “high school senior” categories together, the percentage of applicants who did not yet earn a high school diploma is approximately 33.6%, which is consistent with that proportion of applicants in 2002-2006 (35.5%).

**TABLE 2.11 RESERVE APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2002-2006 AND 2007:  
GENDER**

Gender	2002 - 2006 applicants		2007 applicants	
	Counts	%	Counts	%
Male	174,832	76.7	36,214	76.7
Female	53,178	23.3	10,995	23.3
Total <sup>†</sup>	228,013	-	47,211	-

<sup>†</sup> Some individuals with a missing value for gender are included in the total.

**TABLE 2.12 RESERVE APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2002-2006 AND 2007:  
AGE**

Age	2002 - 2006 applicants		2007 applicants	
	Counts	%	Counts	%
17 – 20	147,454	64.7	27,939	59.2
21 – 25	37,763	16.6	8,209	17.4
26 – 30	15,961	7.0	4,617	9.8
> 30	26,835	11.8	6,446	13.7
Total	228,013	-	47,211	-

**TABLE 2.13 RESERVE APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2002-2006 AND 2007:  
RACE**

Race <sup>†</sup>	2002 – 2006 applicants		2007 applicants	
	Counts	%	Counts	%
White	142,418	73.0	27,870	73.8
Black	34,239	17.5	6,450	17.1
Other	18,448	9.5	3,461	9.2
Missing or unknown	32,908	-	9,430	-
Total	228,013	-	47,211	-

<sup>†</sup> Note: New categories for race were available beginning in 2003. However, greater numbers of applicants chose not to indicate their race.

**TABLE 2.14 RESERVE APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2002-2006 AND 2007: EDUCATION LEVEL**

Education	2002 - 2006 applicants		2007 applicants	
	Counts	%	Counts	%
Below HS Senior <sup>†</sup>	22,590	9.9	6,393	13.6
HS Senior	58,208	25.6	9,425	20.0
HS Diploma	132,291	58.1	28,515	60.5
Some College	3,787	1.7	789	1.7
Bachelor's and above	10,756	4.7	1,977	4.2
Unknown	381	-	112	-
Total	228,013	-	47,211	-

<sup>†</sup> Encompasses the following: 1) those pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc; 2) those not attending high school and who are neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school and is not yet a senior.

Table 2.15 shows the distribution of AFQT scores among enlisted Reserve applicants at MEPS. The percentage of applicants that scored in the 11<sup>th</sup> to 49<sup>th</sup> percentiles increased from 33.2% in 2002-2006 to 38.8% in 2007. This was observed in the previous annual report and may indicate a sustained willingness to consider applicants from the lower aptitude categories.

**TABLE 2.15 RESERVE APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2002-2006 AND 2007: AFQT SCORE**

AFQT Score	2002 - 2006 applicants		2007 applicants <sup>†</sup>	
	Count	%	Count	%
93 – 99	14,625	6.7	2,222	5.0
65 – 92	78,426	35.9	13,963	31.6
50 – 64	52,279	23.9	10,743	24.3
31 – 49	59,420	27.2	15,185	34.3
11 – 29 <sup>†</sup>	12,791	5.9	1,891	4.3
< 11	1,107	0.5	244	0.6
Missing	9,365	-	2,963	-
Total	228,013	-	47,211	-

<sup>†</sup> Individuals scoring in the 10<sup>th</sup> percentile or lower are prohibited from applying. However, some exceptions are apparent.

The medical qualification status of the applicants for enlisted reserve is shown in Table 2.16. The proportions of applicants in the three qualification status categories were nearly the same in 2007 as found in aggregate for the previous five years. Nearly 80% of applicants were considered as fully medically qualified with 9.1% (2002-2006) to 13.2% (2007) receiving a permanent disqualification and 13.1% (2002-2006) to 10.2% (2007) receiving a temporary disqualification.

**TABLE 2.16 RESERVE APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2002-2006 AND 2007: MEDICAL DISQUALIFICATIONS**

Medical status	2002 - 2006 applicants		2007 applicants	
	Count	%	Count	%
Fully qualified	177,390	77.8	36,196	76.7
Permanent	20,684	9.1	6,219	13.2
Temporary	29,939	13.1	4,796	10.2
Total	228,013	-	47,211	-

## Army and Air National Guard Applicants at MEPS without Accession Records

In this section, the characteristics of applicants in the enlisted National Guard of the Army and Air Force are described. The Navy and Marines do not have a National Guard component. These tables include National Guard applicants who received a medical examination at MEPS in 2002 through 2006 (in aggregate) and 2007. Civilian applicants are the only National Guard applicants included in these tables. Direct accessions from the Active Duty military into the National Guard are not included.

The number of applicants to the Army and Air National Guard for each year between 2002 and 2007 are shown in Table 2.17. There were considerably more Army National Guard applicants in 2006 and 2007 compared to previous years. The number of Air National Guard applicants decreased temporarily in 2004 and 2005 but increased in 2006 and 2007 to counts previously observed in 2002 and 2003.

**TABLE 2.17 ARMY AND AIR NATIONAL GUARD APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2002- 2007: BY SERVICE**

Year of Exam	Army National Guard	Air National Guard
2002	40,949	5,828
2003	40,587	6,005
2004	36,212	4,634
2005	42,479	4,730
2006	60,036	6,412
2007	55,547	6,119
Total	275,810	33,728

Tables 2.18 through 2.22 describe the demographics of National Guard applicants for the year 2007 relative to the aggregate demographic characteristics of applicants between 2002 and 2006. In 2007, most applicants were male (79.5%), aged 17-20 (58.7%), and white (81.3%), whose highest attained education (at application) was a high school diploma (58.5%). In comparing National Guard applicants from 2007 with applicants from the previous five-year period, some changes in the demographic profile were apparent. For example, the proportion of 17-20 year old (58.7%) applicants in 2007 was lower than the same proportion observed in aggregate for 2002 through 2006 (64.9%). In addition to a difference in age structure, an increase in the proportion of white applicants was observed in 2007 (81.3%) compared to 2002-2006 (77.9%). Lastly, the proportion of applicants who had not yet completed high school decreased from 39.2% in 2002-2006 to 36.8% in 2007.

**TABLE 2.18 ARMY AND AIR NATIONAL GUARD APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2002-2006 AND 2007: GENDER**

Gender	2002 – 2006 applicants		2007 applicants	
	Count	%	Count	%
Male	195,123	78.7	49,025	79.5
Female	52,747	21.3	12,640	20.5
Total <sup>†</sup>	247,872	-	61,666	-

<sup>†</sup> Some individuals with a missing value for gender are included in the total.

**TABLE 2.19 ARMY AND AIR NATIONAL GUARD APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2002-2006 AND 2007: AGE**

Age	2002 – 2006 applicants		2007 applicants	
	Count	%	Count	%
17 – 20	160,882	64.9	36,194	58.7
21 – 25	41,079	16.6	12,164	19.7
26 – 30	17,675	7.1	5,783	9.4
> 30	28,236	11.4	7,525	12.2
Total	247,872	-	61,666	-

**TABLE 2.20 ARMY AND AIR NATIONAL GUARD APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2002-2006 AND 2007: RACE**

Race <sup>†</sup>	2002 – 2006 applicants		2007 applicants	
	Count	%	Count	%
White	154,679	77.9	36,147	81.3
Black	29,396	14.8	6,109	13.7
Other	14,381	7.2	2,186	4.9
Declined	49,416	-	17,224	-
Total	247,872	-	61,666	-

<sup>†</sup> New categories for race were available beginning in 2003. However, greater numbers of applicants chose not to indicate their race.

**TABLE 2.21 ARMY AND AIR NATIONAL GUARD APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2002-2006 AND 2007: EDUCATION LEVEL**

Education	2002 – 2006 applicants		2007 applicants	
	Count	%	Count	%
Below HS Senior <sup>†</sup>	40,839	16.6	11,815	19.3
HS Senior	55,627	22.6	10,722	17.5
HS Diploma	137,001	55.6	35,901	58.5
Some College	4,045	1.6	899	1.5
Bachelor's and above	9,095	3.7	2,007	3.3
Unknown	1,265	-	322	-
Total	247,872	-	61,666	-

<sup>†</sup> Encompasses the following: 1) those pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc; 2) those not attending high school and who are neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school and is not yet a senior.



Table 2.22 shows the distribution of AFQT scores among Army and Air National Guard enlistee applicants. The proportion of National Guard applicants in the lowest three AFQT score groups is essentially the same in 2007 (44%) and the previous five-year period (43%).

**TABLE 2.22 ARMY AND AIR NATIONAL GUARD APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2002-2006 AND 2007: AFQT SCORE**

AFQT Score	2002 – 2006 applicants		2007 applicants	
	Count	%	Count	%
93 – 99	11,905	5.1	2,538	4.3
65 – 92	70,216	30.0	17,004	28.7
50 – 64	50,519	21.6	13,467	22.7
30 – 49	77,643	33.2	21,779	36.8
11 – 29 <sup>†</sup>	22,595	9.7	4,214	7.1
< 11	975	0.4	206	0.3
Missing	14,019	-	2,458	-
Total	247,872	-	61,666	-

<sup>†</sup> Individuals scoring in the 10<sup>th</sup> percentile or lower are prohibited from applying, although some exceptions are apparent.

The medical qualification status of National Guard applicants is shown in Table 2.23 for the year 2007 and the years 2002 through 2006. Most applicants in 2007 were classified as medically qualified (71.3%). Of those who were disqualified based on a medical condition, there were approximately equal proportions for permanent (14.5%) and temporary (14.1%) conditions. The percentage of fully qualified applicants was not substantially different between 2007 and the previous five years.

**TABLE 2.23 ARMY AND AIR NATIONAL GUARD APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2002-2006 AND 2007: MEDICAL DISQUALIFICATIONS**

Medical status	2002 - 2006 applicants		2007 applicants	
	Count	%	Count	%
Fully qualified	179,123	72.3	43,990	71.3
Permanent	26,014	10.5	8,972	14.5
Temporary	42,735	17.2	8,704	14.1
Total	247,872	-	61,666	-

## Medical Disqualifications among Applicants for First-Time Active Duty Enlisted Service

Table 2.24 shows the medical disqualifications among applicants for Active Duty enlisted service during the period between 2002 and 2006, and separately for 2007 according to the ICD-9 code assigned to each disqualifying condition. Within this table, the number of disqualifications for a given condition is provided along with the percentage of disqualified individuals receiving this disqualification in addition to the incidence of this disqualification among all MEPS applicants. These conditions are ranked according to the number of disqualifications in 2007. Some disqualified individuals (~13% in 2002-2006) have more than one disqualifying medical condition; therefore, the number of disqualifications is greater than the number of individuals disqualified. As mentioned previously, some codes<sup>1</sup> are summarized at the 4<sup>th</sup> digit level to help maintain a comparable level of coding specificity across the ICD-9 categories<sup>2</sup>.

The most frequent disqualifying conditions, exceeding the weight/body fat limits and nondependent *Cannabis* abuse, are considered temporary disqualifications and can be remedied. Exceeding the weight/body fat limits was the most common reason for medical disqualification in 2007, accounting for 22.7% of disqualified individuals, which is nearly the same as applicants disqualified for the same condition (22.1%) in 2002 through 2006. Nondependent abuse of *Cannabis* is the second most common medical disqualification observed, with 11.2% of individuals disqualified for this reason in 2007. This percentage is down from 12.3% in 2002 through 2006. The incidence of disqualifications for obesity/overweight (exceeding weight/body fat limits) is marginally higher in 2007 (4,574 per 100,000 applicants) compared to the previous five years (4,451 per 100,000 applicants). During this same period, the incidence of disqualifications for *Cannabis* abuse among MEPS applicants decreased from 2,472 in 2002-2006 to 2,259 in 2007. Hearing deficiency (5.2%) and disorders of refraction and accommodation (5.2%) were the third and fourth most common disqualifications among Active Duty applicants in 2007. Both conditions are permanently disqualifying. Conditions classified as other and unspecified disorders of bone and cartilage represented the fifth leading cause for medical disqualification in 2007 (3.2%). The proportion of disqualifications for asthma is lower in 2007 (3.1%) than in previous years (4.3%), which is likely the result of a relaxation of the accession standards for asthma that went into effect in June 2004. Abnormal loss of weight is the 7<sup>th</sup> leading disqualification but is less common in 2007 (487 per 100,000 applicants) than in 2002-2006 (669 per 100,000 applicants). Three conditions were far more common among applicants in 2007 compared to the previous five-year period. They are elevated blood pressure without a diagnosis of hypertension (478 per 100,000 applicants in 2007 vs. 185 per 100,000 previously), unspecified disorders of lipid metabolism (212 per 100,000 in 2007 vs. 21 previously), and pure hypercholesterolemia (160 per 100,000 vs. 15 per 100,000 previously). The documentation of these conditions at MEPS appears to be a recent event. Nondependent cocaine abuse is a less common disqualification in 2007 than previously observed while the reverse is true for amphetamine abuse. It is not clear if drug testing or documentation (ICD-9 coding) practices have changed since the relative risk of a disqualification for nondependent use of any drug (3-digit ICD-9 code of 305) is not significantly different from 1.0 (data not shown).

---

<sup>1</sup> Selected ICD-9 codes are summarized in Table 2.1.

<sup>2</sup> For a variety of reasons including data extraction and entry, some codes belonging to the groups outlined in Table 2.1 may not have a fourth digit. When summarized, these three-digit codes are a distinct category from related four-digit categories. See page 18 paragraph 3.

**TABLE 2.24 MEDICAL DISQUALIFICATIONS CATEGORIES OF FIRST-TIME ACTIVE DUTY ENLISTED APPLICANTS BY ALL ICD-9 CODES: 2002 – 2007**

Group (ICD-9)	Condition <sup>†</sup>	2002 - 2006			2007		
		n	% of DQ apps <sup>‡</sup>	n / 100k apps <sup>§</sup>	n	% of DQ apps <sup>‡</sup>	n / 100k apps <sup>§</sup>
278	Obesity and other hyperalimentation	50,051	22.1	4,451	9,726	22.7	4,574
305.2	Nondependent Cannabis abuse	27,792	12.3	2,472	4,803	11.2	2,259
389	Hearing deficiency	11,668	5.2	1,038	2,227	5.2	1,047
367	Disorders of refraction and accommodation	10,226	4.5	909	2,225	5.2	1,046
733	Other and unspecified disorders of bone and cartilage	6,126	2.7	545	1,357	3.2	638
493	Asthma	9,744	4.3	867	1,338	3.1	629
783.2	Abnormal loss of weight	7,518	3.3	669	1,035	2.4	487
796.2	Elevated blood pressure reading without a diagnosis of hypertension	2,081	0.9	185	1,016	2.4	478
401	Hypertension	4,758	2.1	423	938	2.2	441
300	Anxiety, dissociative, and somatoform disorders	3,883	1.7	345	893	2.1	420
796	Other abnormal and nonspecific findings	3,466	1.5	308	737	1.7	347
314	Hyperkinetic syndrome of childhood	3,983	1.8	354	599	1.4	282
305.6	Nondependent cocaine abuse	4,612	2.0	410	590	1.4	277
692	Contact dermatitis and other eczema	1,855	0.8	165	552	1.3	260
272.9	Unspecified disorder of lipid metabolism	238	0.1	21	450	1.0	212
550	Inguinal hernia	2,223	1.0	198	405	0.9	190
305.7	Amphetamine or related acting sympathomimetic abuse	139	0.1	12	365	0.9	172
311	Depression, not elsewhere classified	1,658	0.7	147	346	0.8	163
791	Nonspecific findings on examination of urine	1,172	0.5	104	346	0.8	163
272.0	Pure hypercholesterolemia	164	0.1	15	340	0.8	160
783.1	Abnormal weight gain	1,322	0.6	118	338	0.8	159
521	Diseases of hard tissue of teeth	1,234	0.5	110	328	0.8	154
737	Deviation and curvature of spine	1,591	0.7	141	301	0.7	142
N/A	Individuals with one or more conditions that are not specified above	78,324	34.6	6,965	15,218	35.5	7,157
	Total applicants at MEPS	1,119,493			208,429		
	Total of disqualified applicants	224,345			41,251		

<sup>†</sup> Condition categories (ICD-9 groups) are not mutually exclusive. In 2002-2007, 16% of applicants had more than one diagnosis.

<sup>‡</sup> Indicates the percentage of medically disqualified MEPS applicants for the specified condition.

<sup>§</sup> Indicates the number of individuals with the specified condition for every 100,000 applicants screened at MEPS.

Table 2.25 shows the medical disqualifications among applicants for Active Duty enlisted service during the period between 2002 and 2006, and separately for 2007 according to Objective Medical Findings (OMF) codes provided by US Military Entrance Processing Command (USMEPCOM). These conditions are ranked according to the number of disqualifications in 2007. Some disqualified individuals have more than one disqualifying medical condition; therefore, the number of disqualifications is greater than the number of individuals disqualified.

As was observed in the more specific categorization presented in Table 2.24, body build and drug use are the leading categories for disqualification; these are generally considered temporarily disqualifying conditions that can be remediated by the applicant without need for an accession waiver.

**TABLE 2.25 MEDICAL DISQUALIFICATIONS OF FIRST-TIME ACTIVE DUTY ENLISTED APPLICANTS BY ALL LISTED USMEPCOM FAILURE CODES: 2002 – 2007**

Group (OMF)	Condition <sup>†</sup>	2002 - 2006			2007		
		n	% of DQ apps <sup>‡</sup>	n / 100k apps <sup>§</sup>	n	% of DQ apps <sup>‡</sup>	n / 100k apps <sup>§</sup>
54	Weight, body build	58,826	26.0	5,231	11,148	26.0	5,243
50	Drugs	32,188	14.2	2,862	5,740	13.4	2,699
40	Psychiatric	15,743	7.0	1,400	3,333	7.8	1,567
34	Lower extremities (except feet)	14,434	6.4	1,284	2,543	5.9	1,196
55	Body fat percentage	3,182	1.4	283	2,523	5.9	1,187
71	Audiometer (hearing)	12,087	5.3	1,075	2,266	5.3	1,066
38	Skin, lymphatic, allergies	9,802	4.3	872	2,158	5.0	1,015
28	Lungs and chest (includes breasts)	12,736	5.6	1,133	2,016	4.7	948
62	Refraction	9,268	4.1	824	2,001	4.7	941
33	Upper extremities	10,426	4.6	927	1,972	4.6	927
58	Blood pressure	7,069	3.1	629	1,704	4.0	801
31	Abdomen and viscera (include hernia)	6,016	2.7	535	1,276	3.0	600
32	External genitalia (genitourinary)	5,340	2.4	475	1,152	2.7	542
23	Eyes - general (visual acuity and refraction under items 61-63)	4,024	1.8	358	1,015	2.4	477
35	Feet	6,049	2.7	538	950	2.2	447
52	Other tests	1,136	0.5	101	920	2.1	433
27	Heart (thrust, size, rhythm, sounds)	3,350	1.5	298	906	2.1	426
36	Spine, other musculoskeletal	4,198	1.9	373	849	2.0	399
39	Neurologic	3,638	1.6	324	791	1.8	372
46	Positive urine test for pregnancy	3,089	1.4	275	614	1.4	289
N/A	Individuals with one or more conditions that are not specified above	25,325	11.2	2,252	5,614	13.1	2,640
	Total applicants at MEPS	1,124,481			212,635		
	Total of disqualified applicants	226,160			42,875		

<sup>†</sup> Condition categories (ICD-9 groups) are not mutually exclusive. In 2002-2007, 16% of applicants had more than one diagnosis.

<sup>‡</sup> Indicates the percentage of medically disqualified MEPS applicants for the specified condition category.

<sup>§</sup> Indicates the number of individuals with the specified condition for every 100,000 applicants screened at MEPS.

## Accession Medical Waivers

Applicants who receive a permanent medical disqualification at the MEPS may be granted an accession medical waiver for the disqualifying condition(s) from a service-specific waiver authority. This section summarizes the numbers of waiver considerations from 2002 to 2007. Part I examines all waiver consideration records regardless of whether or not there is a corresponding Defense Manpower Data Center (DMDC) accession record. This section thus addresses the spectrum of waiver applications seen by the waiver authorities. Part II examines only those waiver records for which there is a matching accessions record in the DMDC data. This section describes the medically disqualifying conditions among enlistees who were accessed after receiving an accession medical waiver.

Individuals frequently have multiple records of waiver consideration by the same service waiver authority, likely reflecting resubmissions, perhaps with additional information. Only the earliest record for each individual for a particular service was considered in the following analyses. Therefore, the numbers of considerations do not reflect the overall workload of waiver authorities. Note that a waiver application that is denied by one waiver authority might be submitted to another. In such a case, the individual would be counted twice in the tables.

### ***Part I: Medical waivers irrespective of an accession record***

Accession medical waiver considerations for Active Duty enlisted applicants in 2002-2007 are summarized for the Army, Navy, Marines, and Air Force. All waiver considerations are included regardless of whether AMSARA has a corresponding MEPS record or whether the individual subsequently became an accession. Note that only waiver applications are summarized, and those applicants who are granted waivers may not necessarily become accessions. Table 2.26 shows the raw count of waiver considerations and approval percentages by branch of service and year of waiver decision. Approval percentages represent the portion of the total waivers considered, listed in the tables as “Count” that were approved. Note that a waiver can be denied by one service’s waiver authority but granted by another, so the potential for counting individuals twice cannot be excluded. A change in coding prevents the direct comparison of Navy waiver data from 2006 and later to previous years. Aggregate data for the period of 2002-2005 is presented for the Navy while 2006 and 2007 are tabulated separately.

**TABLE 2.26 WAIVER CONSIDERATIONS FOR ACTIVE DUTY APPLICANTS BY YEAR AND SERVICE**

Year	Army		Navy		Marines		Air Force	
	Count	% Approved	Count	% Approved	Count	% Approved	Count	% Approved
2002	14,924	61.6	5,402	45.3	3,123	45.8	3,068	51.6
2003	14,308	61.5	5,736	56.0	3,522	59.1	3,637	49.8
2004	12,940	57.9	5,141	60.8	3,414	67.8	1,919	62.5
2005	13,222	55.5	6,297	66.6	4,067	66.4	1,921	49.3
2006	13,294	53.1	6,089	72.2	4,250	63.1	2,379	50.9
2007 <sup>†</sup>	11,204	60.4	5,657	70.2	4,826	45.0	2,075	55.2
Total	79,892	-	34,322	-	23,202	-	14,999	-

<sup>†</sup> Counts and rates for 2007 may increase once data from 2008 are collected.

There are no apparent trends in the numbers of waiver applications considered by the Army, Navy, and Air Force waiver authorities in 2002 through 2007. Applications considered by the Marines was lowest in 2002 (3,123) but reached counts of 4,250 in 2006 and 4,826 in 2007. With few exceptions, the within-service approval rates for the Army and Air Force have been consistent through the years examined. However, an increase in the waiver approval rate is apparent in the Navy from 2002 to 2006 and Marine Corps from 2002 through 2004. Prior to 2003, the approval rate for each of these services was below 50%. Current approval rates are 70.2% for the Navy and 45.0% for the Marine Corps. However, these rates may change once data from 2008 have been received.

Tables 2.27 through 2.30 show the medical conditions for which waivers were considered and granted ranked by waivers most commonly applied for in 2007, for each branch of service. Individuals may be considered for multiple conditions; therefore the total number of conditions exceeds the number of individuals evaluated. Waiver considerations from the years 2002 to 2006 are shown in aggregate to facilitate the comparison of waivers in 2007 to previous years. Medical condition categories for the Army and Air Force were created using the first three or four<sup>3</sup> digits of the ICD-9 code(s) assigned to each waiver record. Navy (2005 and prior) and Marine Corps waiver authorities employ a limited subset of the ICD-9 classification scheme, which is defined in DoDI 6130.3. In 2006 and later, code usage by the Navy waiver authority indicates the use of a hybrid system between DoDI 6130.3 and DoDI 6130.4.

Enlisted medical accession waiver considerations and approvals for the Army are shown in Table 2.27. Hearing deficiency was the most common medical disqualification for which waivers were sought in 2007, accounting for 10.4% of individuals seeking a waiver. As in previous years, the second most common accession medical waivers sought were for disorders of refraction and accommodation, representing 7.1% of waiver applicants. While applications for hearing deficiency and disorders of refraction and accommodation are still the leading two waivers sought by Army applicants, these conditions represent a slightly smaller proportion of total waiver applicants than in the previous five-year period. In 2007, 4.6% of applicants were considered for waivers for other and unspecified disorders of bone and cartilage, which is lower than the same proportion calculated for 2002-2006 (5.0%). Waivers for elevated blood pressure readings (without a diagnosis of hypertension) were sought by 4.4% of all waiver applicants in 2007 compared to 2.9% in 2002-2006. Consistent with previous observations suggesting that disqualifications for asthma at MEPS are decreasing, only 4.0% of waiver applicants sought a waiver for this condition in 2007 as compared to 6.8% in the preceding five year period, in which it was the third most common waiver applied for. This observation may be the result of relaxed accession standards for asthma in June 2004.

---

<sup>3</sup> Codes summarized using the first four digits are presented in Table 2.1. All other codes that are not listed in Table 2.1 are summarized using the first three digits.

**TABLE 2.27 TOP CONDITIONS FOR ENLISTED ACCESSION WAIVERS CONSIDERED IN 2002 – 2006 VS 2007: ARMY**

ICD-9	Condition <sup>†</sup>	2002 - 2006				2007			
		Applied		Approved		Applied		Approved	
		Count	% of all apps <sup>‡</sup>	Count	% of apprvd apps <sup>§</sup>	Count	% of all apps <sup>‡</sup>	Count	% of apprvd apps <sup>§</sup>
389	Hearing deficiency	7,454	10.9	3,796	9.5	1,169	10.4	450	6.6
367	Disorders of refraction and accommodation	5,942	8.7	4,153	10.4	799	7.1	624	9.2
733	Other and unspecified disorders of bone and cartilage	3,424	5.0	2,841	7.1	517	4.6	438	6.5
796.2	Elevated blood pressure reading without a diagnosis of hypertension	1,995	2.9	1,974	4.9	495	4.4	492	7.3
493	Asthma	4,702	6.8	2,506	6.3	450	4.0	173	2.6
300	Anxiety, dissociative, and somatoform disorders	1,889	2.7	626	1.6	387	3.5	166	2.5
272.9	Unspecified disorder of lipid metabolism	91	0.1	85	0.2	256	2.3	248	3.7
272	Disorders of lipid metabolism	140	0.2	112	0.3	192	1.7	173	2.6
P11.7	Other reconstructive and refractive surgery on cornea	626	0.9	549	1.4	153	1.4	141	2.1
521	Diseases of hard tissue of teeth	506	0.7	147	0.4	147	1.3	126	1.9
305	Nondependent drug abuse, unspecified	580	0.8	216	0.5	145	1.3	61	0.9
301	Personality disorders	514	0.7	139	0.3	139	1.2	54	0.8
719.4	Joint pain	956	1.4	331	0.8	137	1.2	66	1.0
314	Hyperkinetic syndrome of childhood	1,505	2.2	1,145	2.9	133	1.2	82	1.2
692	Contact dermatitis and other eczema	715	1.0	534	1.3	124	1.1	97	1.4
722	Intervertebral disk disorder	568	0.8	120	0.3	120	1.1	21	0.3
P11.6	Corneal transplant	440	0.6	404	1.0	115	1.0	110	1.6
311	Depression, not elsewhere classified	878	1.3	351	0.9	110	1.0	58	0.9
737	Deviation and curvature of spine	779	1.1	341	0.9	102	0.9	51	0.8
401	Hypertension	954	1.4	318	0.8	100	0.9	20	0.3
995	Certain adverse effect not elsewhere classified	408	0.6	299	0.7	97	0.9	76	1.1
717	Internal derangement of knee	1,553	2.3	876	2.2	96	0.9	55	0.8
N/A	Individuals with one or more conditions that are not specified above	35,697	52.0	20351	51.0	5260	46.9	3024	44.7
	Total waivers considered	68,692				11,205			
	Total decisions rendered <sup>††</sup>	68,692				11,205			
	Total of approved waivers	39,894				6,772			

<sup>†</sup> Condition categories (ICD-9 groups) are not mutually exclusive.

<sup>‡</sup> Indicates the percentage of waiver applicants for the specified condition category.

<sup>§</sup> Indicates the percentage of approved waiver applicants for the specified condition category.

<sup>††</sup> Waiver applications for which a decision (granted vs. denied) is not known are not included in this total.

Enlisted medical accession waiver considerations and approvals for the Navy are shown in Tables 2.28A and 2.28B. Conditions in 2002-2005 are coded according to the DoDI 6130.3 whereas a hybrid of the DoDI 6130.3 and DoDI 6130.4 appears to be in use after 2005. Therefore, data for 2002-2005 are presented in aggregate while data for 2006 and 2007 are tabulated separately. In 2002-2005, 12.2% of all individuals considered for an accession medical waiver were evaluated for some form of hearing deficiency. The second and third most common waiver conditions were myopia and asthma, with 9.4% and 8.4% of individuals being considered for these disqualifications, respectively. Waivers for the surgical repair of fractures were the fourth most common condition evaluated by the Navy waiver authority, with 6.6% of applicants seeking such a waiver. All remaining reported conditions each represented less than 5% of the total waiver applicant pool. In 2007, the most common waivers were for myopia (9.1%), retained orthopedic hardware (8.5%), asthma (7.1%), hearing deficiency (7.0%), and elevated blood pressure readings without a diagnosis of hypertension (4.6%). These findings are consistent with data from 2002-2005. In 2006, less than half of all waiver records for the Navy provided a diagnosis code, resulting in a distribution of waiver categories that is different from 2007. However, if the denominator is restricted to only those records with a diagnosis code, the distribution of waiver categories among applicants for 2006 is consistent with 2007 with only a few exceptions.



**TABLE 2.28A TOP CONDITIONS FOR ENLISTED ACCESSION WAIVERS CONSIDERED IN 2002 – 2005: NAVY**

DoDI	Condition <sup>†</sup>	2002 – 2005			
		Applied		Approved	
		Count	% of apps <sup>‡</sup>	Count	% of apprvd apps <sup>§</sup>
389	Hearing deficiency	2,751	12.2	1,353	10.4
367.1	Myopia	2,115	9.4	1,329	10.2
493	Asthma	1,891	8.4	954	7.4
733.99	Open reduction internal fixation/retained hardware	1,489	6.6	1,165	9.0
796	Nonspecific abnormal findings	866	3.8	540	4.2
401	Hypertension	828	3.7	662	5.1
314	ADD/ADHD	768	3.4	445	3.4
995.0	Other anaphylactic shock	668	3.0	416	3.2
785	Palpitations/tachycardia	454	2.0	384	3.0
754.6	Pes planus, congenital	408	1.8	315	2.4
300	Neurotic, mood, somatoform, dissociative, or factitious disorder	348	1.5	132	1.0
737	Deviation or curvature of spine	345	1.5	138	1.1
795	Abnormal histological and immunological findings, including abnormal Papanicolaou smear	341	1.5	261	2.0
P11.7	Refractive surgery	315	1.4	266	2.0
717.83	Old disruption of the anterior cruciate ligament (ACL)	305	1.4	220	1.7
692	Eczema	277	1.2	182	1.4
746	Congenital anomalies of heart and great vessels	268	1.2	139	1.1
367.2	Astigmatism	224	1.0	166	1.3
784	Headaches	221	1.0	107	0.8
726.1	Shoulder limitation of motion	214	0.9	138	1.1
N/A	Individuals with one or more conditions that are not specified above	8,419	37.3	4,364	33.6
	Total waivers considered	22,576			
	Total decisions rendered <sup>††</sup>	21,004			
	Total of approved waivers	12,978			

<sup>†</sup> Condition categories (DoDI 6130.3 groups) are not mutually exclusive.

<sup>‡</sup> Indicates the percentage of waiver applicants for the specified condition category.

<sup>§</sup> Indicates the percentage of approved waiver applicants for the specified condition category.

<sup>††</sup> Waiver applications for which a decision (granted vs. denied) is not known are not included in this total.

**TABLE 2.28B TOP CONDITIONS FOR ENLISTED ACCESSION WAIVERS CONSIDERED IN 2006 AND 2007: NAVY**

Condition <sup>†</sup>	2006 <sup>‡</sup>					2007			
	Applied			Approved		Applied		Approved	
	Count	% of all apps <sup>§</sup>		Count	% of apprvd apps <sup>††</sup>	Count	% of all apps <sup>§</sup>	Count	% of apprvd apps <sup>††</sup>
All apps		With code only							
Myopia	274	4.5	9.9	204	4.6	514	9.1	355	8.9
Orthopedic hardware	265	4.4	9.5	238	5.4	480	8.5	402	10.1
Asthma	189	3.1	6.8	131	3.0	402	7.1	285	7.2
Hearing threshold level exceeds limit	202	3.3	7.3	118	2.7	396	7.0	181	4.6
Elevated blood pressure reading without a diagnosis of hypertension	133	2.2	4.8	122	2.8	260	4.6	231	5.8
Depression	84	1.4	3.0	65	1.5	158	2.8	113	2.8
Keratorefractive surgery	127	2.1	4.6	111	2.5	151	2.7	138	3.5
Adverse food reactions, not elsewhere classified	45	0.7	1.6	40	0.9	144	2.5	128	3.2
Tachycardia, persistent	42	0.7	1.5	42	1.0	126	2.2	113	2.8
Attention deficit disorder with hyperactivity	37	0.6	1.3	30	0.7	124	2.2	83	2.1
Eczema	39	0.6	1.4	24	0.5	121	2.1	80	2.0
Deviation or curvature of spine	53	0.9	1.9	33	0.8	113	2.0	58	1.5
Any condition that will significantly interfere with the successful performance of duty or training	40	0.7	1.4	31	0.7	93	1.6	64	1.6
Attention deficit disorder without hyperactivity	29	0.5	1.0	26	0.6	76	1.3	59	1.5
Shoulder instability	29	0.5	1.0	23	0.5	68	1.2	57	1.4
Proteinuria	34	0.6	1.2	21	0.5	63	1.1	36	0.9
Papanicolaou smear	43	0.7	1.5	31	0.7	62	1.1	49	1.2
Injury of bone or joint (lower extremity) with or without fracture or dislocation	4	0.1	0.1	2	0.0	61	1.1	44	1.1
Allergic Manifestations	39	0.6	1.4	30	0.7	60	1.1	55	1.4
Individuals with one or more conditions that are not specified above	1,482	24.3	53.3	1,064	24.2	2,712	47.9	1,795	45.2
Total waivers considered	6,089 (2,780 provide a diagnosis code)					5,657			
Total decisions rendered <sup>††</sup>	5,346					5,019			
Total of approved waivers	4,398					3,971			

<sup>†</sup> Condition categories (Navy waiver codes) are not mutually exclusive.

<sup>‡</sup> Less than half of 2006 records provided a diagnosis code. The proportions of all applicants seeking waivers for the conditions specified above were calculated for all individuals ("All apps") as well as for only those individuals with a diagnosis code ("With code only").

<sup>§</sup> Indicates the percentage of waiver applicants for the specified condition category.

<sup>††</sup> Indicates the percentage of approved waiver applicants for the specified condition category.

<sup>‡‡</sup> Waiver applications for which a decision (granted vs. denied) is not known are not included in this total.

Table 2.29 shows the leading conditions for which waivers were considered by the Marine Corps waiver authority. The most common condition for which accession medical waivers were sought by enlisted Marine applicants in 2007 was for nonspecific abnormal findings (10.8% of waiver applicants), hearing deficiency (10.1%), open reduction and/or internal fixation of fractures (9.0%), followed by myopia (8.4%), asthma (7.3%), and neurotic, mood, somatoform, dissociative, and factitious disorders (5.2%). Although asthma was the second most common waiver applied for in 2002-2006 (9.9% of waiver applicants) waivers for asthma were only sought by 7.3% of waiver applicants in 2007 (fifth most common waiver). This observation is likely due to relaxed accession standards for this condition that took place in June 2004.

**TABLE 2.29 TOP CONDITIONS FOR ENLISTED ACCESSION WAIVERS CONSIDERED IN 2002 – 2006 VS 2007:  
MARINES**

DoDI	Condition <sup>†</sup>	2002 - 2006				2007			
		Applied		Approved		Applied		Approved	
		Count	% of all apps <sup>‡</sup>	Count	% of apprvd apps <sup>§</sup>	Count	% of all apps <sup>‡</sup>	Count	% of apprvd apps <sup>§</sup>
796	Nonspecific abnormal findings	1,577	8.6	994	8.9	520	10.8	208	9.6
389	Hearing deficiency	1,677	9.1	614	5.5	485	10.1	152	7.0
733.99	Open reduction internal fixation/retained hardware	1,749	9.5	1,429	12.7	433	9.0	261	12.0
367.1	Myopia	1,437	7.8	919	8.2	404	8.4	162	7.5
493	Asthma	1,827	9.9	1,076	9.6	350	7.3	124	5.7
300	Neurotic, mood, somatoform, dissociative, or factitious disorder	785	4.3	469	4.2	251	5.2	84	3.9
401	Hypertension	986	5.4	774	6.9	222	4.6	164	7.6
995.0	Other anaphylactic shock	463	2.5	313	2.8	167	3.5	123	5.7
314	ADD/ADHD	990	5.4	734	6.5	137	2.8	58	2.7
313	Disturbance of emotions specific to childhood and adolescence	136	0.7	66	0.6	120	2.5	44	2.0
P11.7	Refractive surgery	391	2.1	320	2.9	118	2.4	83	3.8
305	Nondependent drug abuse	227	1.2	134	1.2	110	2.3	49	2.3
791	Proteinuria	205	1.1	101	0.9	94	1.9	20	0.9
692	Eczema	261	1.4	140	1.2	87	1.8	39	1.8
718.1	Shoulder instability	354	1.9	114	1.0	80	1.7	8	0.4
P81	Surgical correction of any knee ligaments	288	1.6	211	1.9	74	1.5	30	1.4
717.83	Old disruption of the anterior cruciate ligament (ACL)	260	1.4	195	1.7	72	1.5	26	1.2
367.2	Astigmatism	289	1.6	212	1.9	68	1.4	34	1.6
785	Palpitations/tachycardia	306	1.7	256	2.3	65	1.3	44	2.0
724	Unspecified disorders of back	178	1.0	89	0.8	64	1.3	18	0.8
N/A	Individuals with one or more conditions that are not specified above	6,692	36.4	3,585	32.0	1,931	40.0	672	31.0
	Total waivers considered	18,376				4,823			
	Total decisions rendered <sup>††</sup>	16,666				3,154			
	Total of approved waivers	11,209				2,171			

<sup>†</sup> Condition categories (DoDI 6130.3 groups) are not mutually exclusive.

<sup>‡</sup> Indicates the percentage of waiver applicants for the specified condition category.

<sup>§</sup> Indicates the percentage of approved waiver applicants for the specified condition category.

<sup>††</sup> Waiver applications for which a decision (granted vs. denied) is not known are not included in this total.

Table 2.30 shows the most common conditions for which waivers were considered by the Air Force waiver authority. In addition to 2007 data, data from the years 2002 to 2006 are shown in aggregate for comparison. Disorders of refraction and accommodation were by far the most common waiver sought by Active Duty Air Force enlistees in 2007 (13.3% of all waiver applicants) and as well as in 2002-2006 (10.2%). Surgical repair of fractures (6.7%), asthma (6.6%), hearing deficiency (6.2%), episodic mood disorders (5.1%), and hyperkinetic syndromes of childhood (5.1%) are the second, third, fourth, and fifth (tied) most common waivers applied for in 2007. The percentage of applicants evaluated for waivers for episodic mood disorders in 2002-2006 (2.8%) was less than that for 2006 (5.1%). The number of applications for waivers for conditions involving a lack of expected normal physiological development is much lower in 2007 (58 applicants) than in the average over the previous five years (112). Such a steep decline or steep increase (open reduction of fracture with internal fixation) is not likely to be explained primarily by a true change in the prevalence of such conditions among the population of waiver applicants (Air Force) over time.

**TABLE 2.30 TOP CONDITIONS FOR ENLISTED ACCESSION WAIVERS CONSIDERED IN 2002 – 2006 VS 2007:**

**AIR FORCE**

ICD-9	Condition <sup>†</sup>	2002 - 2006				2007			
		Applied		Approved		Applied		Approved	
		Count	% of all apps <sup>‡</sup>	Count	% of apprvd apps <sup>§</sup>	Count	% of all apps <sup>‡</sup>	Count	% of apprvd apps <sup>§</sup>
367	Disorders of refraction and accommodation	1,321	10.2	744	11.0	277	13.3	169	14.7
P79.3	Open reduction of fracture with internal fixation	374	2.9	291	4.3	139	6.7	127	11.1
493	Asthma	962	7.4	332	4.9	137	6.6	39	3.4
389	Hearing deficiency	550	4.3	64	0.9	129	6.2	1	0.1
296	Episodic mood disorders	367	2.8	187	2.8	106	5.1	65	5.7
314	Hyperkinetic syndrome of childhood	618	4.8	427	6.3	106	5.1	74	6.5
785.0	Tachycardia, unspecified	75	0.6	61	0.9	60	2.9	54	4.7
783.4	Lack of expected physiological development	561	4.3	466	6.9	58	2.8	47	4.1
692	Contact dermatitis and other eczema	244	1.9	38	0.6	56	2.7	13	1.1
368	Visual disturbances	232	1.8	138	2.0	54	2.6	46	4.0
593	Other diseases of kidney and ureter	89	0.7	38	0.6	40	1.9	11	1.0
300	Anxiety, dissociative, and somatoform disorders	142	1.1	68	1.0	38	1.8	18	1.6
893	Open wound of toes	150	1.2	90	1.3	38	1.8	23	2.0
718.3	Recurrent dislocation of joint	187	1.4	130	1.9	37	1.8	27	2.4
P81.4	Other repair of joint of lower extremity	191	1.5	136	2.0	36	1.7	27	2.4
622	Noninflammatory disorders of cervix	211	1.6	139	2.1	34	1.6	22	1.9
733	Other and unspecified disorders of bone and cartilage	80	0.6	48	0.7	32	1.5	30	2.6
754.2	Certain congenital musculoskeletal deformities of spine	200	1.5	46	0.7	32	1.5	4	0.3
309	Adjustment reaction	153	1.2	93	1.4	30	1.4	19	1.7
718.8	Joint derangement	145	1.1	84	1.2	29	1.4	24	2.1
N/A	Individuals with one or more conditions that are not specified above	4,731	36.6	2,244	33.2	896	43.2	433	37.8
	Total waivers considered	12,924				2,075			
	Total decisions rendered <sup>††</sup>	97,464				2,075			
	Total of approved waivers	6,753				1,146			

<sup>†</sup> Condition categories (ICD-9 groups) are not mutually exclusive.

<sup>‡</sup> Indicates the percentage of waiver applicants for the specified condition category.

<sup>§</sup> Indicates the percentage of approved waiver applicants for the specified condition category.

<sup>††</sup> Waiver applications for which a decision (granted vs. denied) is not known are not included in this total.

Tables 2.31 through 2.34 show the top<sup>4</sup> waiver consideration conditions ranked by waiver approval percentage in aggregate for 2002-2007<sup>5</sup>.

Among Active Duty Army applicants (Table 2.31), nearly all waivers for elevated blood pressure (no diagnosis of hypertension), unspecified lipid disorders, and corneal transplants were granted in both 2007 and the previous five-year period. The proportion of approved waiver applications for congenital anomalies of genital organs was 93.9% in 2007 compared to 63.0% in 2002-2006. It is worth noting that the frequency of several categories of waiver conditions, namely other mycoses, dermatitis due to substances taken internally, lack of expected physiological development, and fractures of the ankle, were considerably lower in 2007 than in previous years.

None of the most common and highly approved waivers considered by the Navy waiver authority from 2002 to 2005 had approval rates of 90% or above (Table 2.32A). The most commonly approved waivers were for palpitations and tachycardia (89.3%), refractive surgeries (89.3%), and abnormal histological and immunological findings (87.9%). For 2006 and 2007, the waiver approval rates were generally higher based on the increased proportion of waiver applications that were approved for the top twenty most approved conditions (Table 2.32B). Nearly all waivers for keratorefractive surgery and hyperlipidemia were approved in 2007. Also in 2007, the third through seventh most commonly approved waivers were for diskectomy excision of intervertebral disc (96.1%), adverse food reactions (95.5%), elevated blood pressure readings without a diagnosis of hypertension (93.5%), persistent tachycardia (93.4%), and retained orthopedic hardware (93.3%). Approval rates for these conditions in 2006 were consistent with observations for 2007.

Within the Marine Corps, several conditions for which a medical accession waiver was sought in 2007 had approval rates in excess of 90% (Table 2.33). The highest were for dysplastic Nevi syndrome (100%, n = 9), bronchitis (100%, n = 12), congenital pes planus (100%, n = 24), refractive surgery (95.4%, n = 118), and palpitations/tachycardia (93.6%, n = 65). The three most highly approved waiver condition categories in 2007 were for conditions that few applicants sought a waiver for (i.e.  $\leq 24$  applicants each). Ignoring the categories with few subjects, the fourth and fifth top categories in 2007 were the first and second highest ones in 2002-2006. Also those two categories were followed by Open reduction internal fixation/retained hardware in both periods. Hence the approve rates by medical categories were similar in 2002-2006 and 2007.

There were only four conditions among Air Force enlistees will approval rates of 90% or higher in 2007 (Table 2.34). These waiver applications were for other reconstructive and refractive corneal surgeries (100%, n = 6), unspecified disorders of bone and cartilage (93.8%), surgical repair of fractures (91.4%), and tachycardia (90.0%). The changes in approve rates from 2002-2006 were minor if the categories with few counts are excluded. The categories with highest approve rates in 2002-2006 were Hydrocele (95.6%) and Lack of expected physiological development (88.1%). In 2007, these rates declined to 78.6% and 81% respectively.

---

<sup>4</sup> The top 50 waiver condition categories for each service (summed over 2002-2007) were ordered by decreasing number of applications. From this list, the top 20 conditions for each service were ordered by decreasing approval rate (overall approval for 2002 – 2007) and are presented in tables 2.31-2.34. Each table provides the number of waivers applied for and the approval rate in aggregate for 2002-2007 ("Total" column), in aggregate for 2002-2006, and separately for 2007.

<sup>5</sup> For the Navy, aggregate data for 2002-2005 are presented separately from 2006 and 2007.

**TABLE 2.31 CONDITION-SPECIFIC CATEGORIES FOR THOSE ACCESSION MEDICAL WAIVERS WITH THE HIGHEST PROPORTION OF APPROVED APPLICATIONS AMONG ACTIVE DUTY ARMY ENLISTEES: 2002 – 2006 vs 2007**

ICD-9	Condition <sup>†</sup>	Total		2002 - 2006		2007	
		Count	% granted	Count	% granted	Count	% granted
796.2	Elevated blood pressure reading without a diagnosis of hypertension	2,490	99.0	1,995	98.9	495	99.4
272.9	Unspecified disorder of lipid metabolism	347	96.0	91	93.4	256	96.9
P11.6	Corneal transplant	555	92.6	440	91.8	115	95.6
117	Other mycoses	643	89.4	637	89.9	6	33.3
P11.7	Other reconstructive and refractive surgery on cornea	779	88.6	626	87.7	153	92.2
785	Symptoms involving cardiovascular system	804	85.9	721	85.2	83	92.8
693	Dermatitis due to substances taken internally	497	84.3	489	84.5	8	75.0
733	Other and unspecified disorders of bone and cartilage	3,941	83.2	3,424	83.0	517	84.7
996.4	Mechanical complication of orthopedic device, implant, or graft	367	82.8	308	82.8	59	83.0
795 <sup>‡</sup>	Other nonspecific abnormal cytological, histological, immunological, and DNA test findings	409	81.2	349	79.4	60	91.7
UDRWT	Underweight	1,720	80.6	1,662	81.4	58	56.9
622	Noninflammatory disorders of cervix	368	80.2	336	80.3	32	78.1
783.4	Lack of expected physiological development	560	77.3	537	77.5	23	73.9
692	Contact dermatitis and other eczema	839	75.2	715	74.7	124	78.2
314	Hyperkinetic syndrome of childhood	1,638	74.9	1,505	76.1	133	61.6
995 <sup>§</sup>	Certain adverse effect not elsewhere classified	505	74.3	408	73.3	97	78.3
824	Fracture of ankle	348	73.0	340	73.5	8	50.0
831	Dislocation of shoulder	697	70.9	615	70.2	82	75.6
367	Disorders of refraction and accommodation	6,741	70.9	5,942	69.9	799	78.1
752	Congenital anomalies of genital organs	472	67.4	406	63.0	66	93.9

<sup>†</sup> Condition categories (ICD-9 groups) are not mutually exclusive.

<sup>‡</sup> Codes in this category typically include nonspecific reaction to the tuberculin skin test (without active TB) and abnormal results from a Papanicolaou smear.

<sup>§</sup> Codes in this category typically include unspecified allergies and anaphylactic shock.



**TABLE 2.32A CONDITION-SPECIFIC CATEGORIES FOR THOSE ACCESSION MEDICAL WAIVERS WITH THE HIGHEST PROPORTION OF APPROVED APPLICATIONS AMONG ACTIVE DUTY NAVY ENLISTEES: 2002 – 2005**

DoDI	Condition <sup>†</sup>	2002 – 2005	
		Count	% granted
785	Palpitations/tachycardia	454	89.3
P11.7	Refractive surgery	315	89.3
795	Abnormal histological and immunological findings, including abnormal Papanicolaou smear	341	87.9
718.1	Shoulder instability	101	85.5
401	Hypertension	828	84.9
733.99	Open reduction internal fixation/retained hardware	1,489	84.8
603.9	Hydrocele, current	121	81.0
754.6	Pes planus, congenital	408	80.8
831	Shoulder dislocation, unreduced	172	80.6
717.83	Old disruption of the anterior cruciate ligament (ACL)	305	80.0
367.2	Astigmatism	224	76.8
367	Vision loss	134	75.4
P81	Surgical correction of any knee ligaments	91	73.9
726.1	Shoulder limitation of motion	214	71.1
726.3	Elbow limitation of motion	110	70.3
692	Eczema	277	69.5
796	Nonspecific abnormal findings	866	67.8
735	Acquired deformities of toes	104	66.7
706	Diseases of sebaceous glands (including severe acne)	85	65.8
995.0	Other anaphylactic shock	668	65.4

<sup>†</sup> Condition categories (DoDI 6130.3 groups) are not mutually exclusive.

**TABLE 2.32B CONDITION-SPECIFIC CATEGORIES FOR THOSE ACCESSION MEDICAL WAIVERS WITH THE HIGHEST PROPORTION OF APPROVED APPLICATIONS AMONG ACTIVE DUTY NAVY ENLISTEES IN 2006 AND 2007**

Condition <sup>†</sup>	Total		2006 <sup>‡</sup>		2007	
	Count	% granted	Count	% granted	Count	% granted
Keratorefractive surgery	278	96.1	127	94.1	151	97.9
Hyperlipidemia	52	95.9	39	94.4	13	100.0
Tachycardia, persistent	168	95.1	42	100.0	126	93.4
Adverse food reactions, not elsewhere classified	189	94.9	45	93.0	144	95.5
Discectomy excision of intervertebral disc	43	94.9	16	92.3	27	96.1
Elevated blood pressure reading without diagnosis of hypertension	393	94.4	133	96.1	260	93.5
Orthopedic hardware	745	94.3	265	96.0	480	93.3
Surgical correction of any knee ligament	44	92.9	19	100.0	25	88.0
Hydrocele, unspecified	55	92.6	19	94.7	36	91.4
Chronic retropetellar knee pain syndrome	57	91.7	28	90.5	29	92.6
Shoulder dislocation (unreduced)	73	91.0	25	95.6	48	88.6
Shoulder instability	97	89.9	29	92.0	68	89.1
Injury of bone or joint (upper extremity) with or without fracture or dislocation	65	89.8	9	100.0	56	88.2
Allergic Manifestations	99	89.5	39	83.3	60	93.2
Anterior cruciate ligament injury	87	88.0	32	90.0	55	86.7
Papanicolaou smear	105	87.9	43	86.1	62	89.1
Attention deficit disorder without hyperactivity	105	87.6	29	96.3	76	84.3
Adjustment disorder, depressive	61	86.8	23	95.2	38	81.3
Mitral valve insufficiency/regurgitation	43	86.1	14	90.9	29	84.0
Heart murmur NOS	40	84.2	8	75.0	32	86.7

<sup>†</sup> Condition categories (DoDI 6130.3 groups) are not mutually exclusive.

<sup>‡</sup> Less than half of 2006 records provided a diagnosis code. However, since approval rates are calculated using only records with non-missing codes, the approval rates should not be affected (assuming that missing diagnosis codes are a random phenomenon).

**TABLE 2.33 CONDITION-SPECIFIC CATEGORIES FOR THOSE ACCESSION MEDICAL WAIVERS WITH THE HIGHEST PROPORTION OF APPROVED APPLICATIONS AMONG ACTIVE DUTY MARINE CORPS ENLISTEES: 2002 – 2006 VS 2007**

DoDI	Condition <sup>†</sup>	Total		2002 - 2006		2007	
		Count	% Granted	Count	% Granted	Count	% Granted
785	Palpitations/tachycardia	371	92.9	306	92.8	65	93.6
P11.7	Refractive surgery	509	92.4	391	91.7	118	95.4
733.99	Open reduction internal fixation/retained hardware	2,182	89.7	1,749	89.7	433	89.7
401	Hypertension	1,208	85.6	986	84.8	222	89.6
905.2	Upper extremity deformities, injury, and disease	141	85.1	133	86.0	8	60.0
448.1	Dysplastic Nevi Syndrome	86	85.0	62	80.6	24	100.0
795	Abnormal histological and immunological findings, including abnormal Papanicolaou smear	87	82.7	71	81.5	16	90.0
314	ADD/ADHD	1,127	80.3	990	81.9	137	64.4
367.2	Astigmatism	357	79.9	289	80.3	68	77.3
717.83	Old disruption of the anterior cruciate ligament (ACL)	332	78.4	260	82.6	72	56.5
854	Head injuries	175	77.8	132	76.4	43	84.0
P81	Surgical correction of any knee ligaments	362	77.2	288	81.5	74	56.6
995.0	Other anaphylactic shock	630	76.2	463	73.1	167	85.4
603.9	Hydrocele, current	88	76.0	73	76.9	15	70.0
726.3	Elbow limitation of motion	107	75.0	89	74.4	18	83.3
726.4	Limitation of motion in wrist, fingers, and thumb	139	73.7	112	74.0	27	72.2
490.0	Bronchitis	76	73.3	64	69.2	12	100.0
754.6	Pes planus, congenital	140	71.6	131	70.1	9	100.0
905.4	Lower extremity deformities, injury, and disease	352	70.3	294	70.8	58	66.7
367.1	Myopia	1,841	69.9	1,437	69.2	404	74.3

<sup>†</sup> Condition categories (DoDI 6130.3 groups) are not mutually exclusive.

**TABLE 2.34 CONDITION-SPECIFIC CATEGORIES FOR THOSE ACCESSION MEDICAL WAIVERS WITH THE HIGHEST PROPORTION OF APPROVED APPLICATIONS AMONG ACTIVE DUTY AIR FORCE ENLISTEES: 2002 – 2006 vs 2007**

ICD-9	Condition <sup>†</sup>	Total		2002 - 2006		2007	
		Count	% Granted	Count	% Granted	Count	% Granted
603	Hydrocele	60	91.7	46	95.6	14	78.6
783.4	Lack of expected physiological development	619	87.4	561	88.1	58	81.0
785.0	Tachycardia, unspecified	135	85.2	75	81.3	60	90.0
P79.3	Open reduction of fracture with internal fixation	513	85.0	374	82.4	139	91.4
785.2	Undiagnosed cardiac murmurs	85	78.6	68	82.1	17	64.7
P81.4	Other repair of joint of lower extremity	227	76.9	191	77.3	36	75.0
733	Other and unspecified disorders of bone and cartilage	112	74.3	80	65.8	32	93.8
718.3	Recurrent dislocation of joint	224	73.0	187	73.0	37	73.0
734	Flat foot	206	72.6	185	71.7	21	80.9
314	Hyperkinetic syndrome of childhood	724	72.2	618	72.6	106	69.8
368	Visual disturbances	286	69.4	232	65.4	54	85.2
622	Noninflammatory disorders of cervix	245	68.2	211	68.8	34	64.7
427	Cardiac dysrhythmias	59	66.0	53	68.1	6	50.0
309	Adjustment reaction	183	65.1	153	65.5	30	63.3
718.8	Joint derangement	174	64.7	145	60.9	29	82.8
732	Osteochondropathies	165	62.3	138	58.3	27	81.5
P11.7	Other reconstructive and refractive surgery on cornea	79	61.5	73	57.6	6	100.0
719.4	Joint pain	163	60.8	151	62.4	12	41.7
893	Open wound of toes	188	60.8	150	60.8	38	60.5
367	Disorders of refraction and accommodation	1,598	59.2	1,321	58.8	277	61.0

<sup>†</sup> Condition categories (ICD-9 groups) are not mutually exclusive.

## ***Part II: Medical waivers with an accession record***

Table 2.35 shows the numbers of applicants for enlisted service who have a MEPS physical examination record and who were granted an accession medical waiver during each year from 2002 to 2007 for all service branches combined. Also shown are the numbers and percentages of these individuals who were subsequently gained onto Active Duty service within one and two years of application at MEPS. The number of approved waivers recorded in 2007 (14,674) was the higher than all previous years except 2003. The proportion of individuals granted waivers who subsequently become accessions within one year of their MEPS physical has fluctuated over the period from 2002-2007 but generally remained at 50% and above.

**TABLE 2.35 ACTIVE DUTY ACCESSIONS WITHIN ONE AND TWO YEARS OF PHYSICAL EXAMINATION FOR ENLISTED APPLICANTS WHO RECEIVED A WAIVER IN 2002 – 2007<sup>†</sup>: BY YEAR**

Year of waiver consideration	Applicants with waivers granted	Applicants who accessed within 1 year of application		Applicants who accessed within 2 years of application	
		Count	%	Count	%
2002	13,032	7,385	56.7	8,624	66.2
2003	14,684	7,216	49.1	8,557	58.3
2004	13,012	5,929	45.6	7,024	54.0
2005	13,978	7,392	52.9	8,335	59.6
2006	14,404	8,123	56.4	8,841	61.4 <sup>‡</sup>
2007	14,674	7,085	48.3 <sup>‡</sup>	7,581	-

<sup>†</sup> Considers accessions among only those applicants with both a MEPS physical examination record and an approved waiver.

<sup>‡</sup> The accession rate was underestimated due to a lack of sufficient follow up time.

Tables 2.36 through 2.40 describe the characteristics of applicants who were granted waivers from all branches of service. Individuals with a corresponding MEPS application record as well as subsequent accessions are shown for 2002-2006 and separately for 2007.

Total numbers of records vary slightly depending upon the completeness of data on the demographic factor being considered. For example, an individual with missing data on gender, but not race, will be included in the description of race of applicants but not in the description of gender.

The gender distribution of enlisted applicants who received a waiver is shown in Table 2.36 for all waivers and for those with subsequent accession records. In 2007 the distribution of gender among all waivers and accessions was similar to that observed in 2002-2006. In both time periods, males accounted for a larger percentage of accessions (84.7% in 2007) than they did among approved waiver applicants (83.9% in 2007).

**TABLE 2.36 GENDER DISTRIBUTION OF ALL ACTIVE DUTY ENLISTED APPLICANTS WHO RECEIVED AN ACCESSION MEDICAL WAIVER COMPARED TO ONLY THOSE WAIVED PERSONNEL WHO BEGAN ACTIVE DUTY SERVICE: 2002-2006 vs. 2007**

Gender	2002 - 2006				2007			
	All waivers		Accessed only		All waivers		Accessed only	
	Count	%	Count	%	Count	%	Count	%
Male	56,767	82.1	37,765	84.0	12,318	83.9	6,925	84.7
Female	12,343	17.9	7,173	16.0	2,356	16.1	1,253	15.3
Total	69,110	-	44,938	-	14,674	-	8,178	-

Table 2.37 shows the age distribution of enlisted applicants who received a waiver in 2002-2006 and in 2007. The majority of waiver recipients in 2007 were between the ages of 17 and 20 years, regardless of whether they accessed or not. However, the percentage of waiver recipients between the ages of 17 and 20 was smaller in 2007 (59.6%) than in 2002-2006 (66.3%).

**TABLE 2.37 AGE DISTRIBUTION OF ALL ACTIVE DUTY ENLISTED APPLICANTS WHO RECEIVED AN ACCESSION MEDICAL WAIVER COMPARED TO ONLY THOSE WAIVED PERSONNEL WHO BEGAN ACTIVE DUTY SERVICE: 2002-2006 vs. 2007**

Age	2002 - 2006				2007			
	All waivers		Accessed only		All waivers		Accessed only	
	Count	%	Count	%	Count	%	Count	%
17 – 20	45,835	66.3	32,319	71.9	8,740	59.6	5,254	64.2
21 – 25	14,480	21.0	9,451	21.0	3,122	21.3	1,976	24.2
26 – 30	4,603	6.7	2,271	5.1	1,123	7.7	511	6.2
> 30	4,192	6.1	897	2.0	1,689	11.5	437	5.3
Total	69,110	-	44,938	-	14,674	-	8,178	-

Table 2.38 shows the race of enlisted applicants who received a medical waiver in 2007 and in 2002-2006. The demographic profile of applicants and accessions, with respect to race, was similar between 2007 and in previous years.

**TABLE 2.38 DISTRIBUTION OF RACE AMONG ALL ACTIVE DUTY ENLISTED APPLICANTS WHO RECEIVED AN ACCESSION MEDICAL WAIVER COMPARED TO ONLY THOSE WAIVED PERSONNEL WHO BEGAN ACTIVE DUTY SERVICE: 2002-2006 vs. 2007**

Race <sup>†</sup>	2002 - 2006				2007			
	All waivers		Accessed only		All waivers		Accessed only	
	Count	%	Count	%	Count	%	Count	%
White	47,968	77.0	31,983	77.0	9,704	77.6	5,557	78.2
Black	8,445	13.6	5,603	13.5	1,590	12.7	910	12.8
Other	5,872	9.4	3,936	9.5	1,205	9.6	642	9.0
Missing or declined	6,825	-	3,416	-	2,175	-	1,069	-
Total	69,110	-	44,938	-	14,674	-	8,178	-

<sup>†</sup> Note: New categories for race were available beginning in 2003. However, greater numbers of applicants chose not to indicate their race.

Table 2.39 shows the education level of applicants granted an accession medical waiver at the time of application in 2007 and in 2002-2006. Applicants who subsequently accessed are shown separately from applicants granted a waiver. The distribution of education level among applicants granted a waiver in 2007 is similar to that in 2002-2006. Note that the great majority of applicants granted a waiver who have not completed high school are high school seniors and will graduate prior to enlistment.

**TABLE 2.39 DISTRIBUTION OF EDUCATION (HIGHEST LEVEL ATTAINED AT ACCESSION) AMONG ALL ACTIVE DUTY ENLISTED APPLICANTS WHO RECEIVED AN ACCESSION MEDICAL WAIVER COMPARED TO ONLY THOSE WAIVED PERSONNEL WHO BEGAN ACTIVE DUTY SERVICE: 2002-2006 VS. 2007**

Education level	2002 - 2006				2007			
	All waivers		Accessed only		All waivers		Accessed only	
	Count	%	Count	%	Count	%	Count	%
Below HS senior <sup>†</sup>	3,266	4.7	1,892	4.2	730	5.0	443	5.4
HS senior	20,209	29.3	14,432	32.2	3,765	25.7	2,082	25.5
HS diploma	40,885	59.3	26,439	59.0	9,329	63.7	5,243	64.3
Some college	958	1.4	469	1.0	202	1.4	100	1.2
Bachelor's and higher	3,639	5.3	1,591	3.5	616	4.2	288	3.5
Missing	153	-	115	-	32	-	22	-
Total	69,110	-	44,938	-	14,674	-	8,178	-

<sup>†</sup> Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior.

Table 2.40 shows the distribution of AFQT percentile scores among enlisted applicants who received a waiver in 2002-2006 and in 2007. The distribution of AFQT scores does not appear to be different in 2007 compared to the previous five years. In the CY 2007 Annual Report, it was observed that there were higher percentages of waiver applicants who scored in the lowest percentile groups relative to 2001-2005. A similar distribution was seen among waiver applicants that subsequently accessed.

**TABLE 2.40 DISTRIBUTION OF AFQT SCORE GROUPS AMONG ALL ACTIVE DUTY ENLISTED APPLICANTS WHO RECEIVED AN ACCESSION MEDICAL WAIVER COMPARED TO ONLY THOSE WAIVED PERSONNEL WHO BEGAN ACTIVE DUTY SERVICE: 2002-2006 VS. 2007**

AFQT score	2002 - 2006				2007			
	All waivers		Accessed only		All waivers		Accessed only	
	Count	%	Count	%	Count	%	Count	%
93 – 99	5,416	8.0	3,274	7.3	1,025	7.3	579	7.1
65 – 92	25,567	37.7	16,843	37.5	5,020	35.9	2,913	35.8
50 – 64	16,656	24.6	11,253	25.1	3,479	24.9	2,004	24.6
30 – 49	17,232	25.4	11,683	26.0	3,947	28.2	2,326	28.6
11 – 29	2,754	4.1	1,820	4.1	468	3.3	310	3.8
Missing	1,485	-	65	-	735	-	46	-
Total	69,110	-	44,938	-	14,674	-	8,178	-

## Hospitalizations

This section summarizes inpatient hospitalization records of service members admitted to any military facility. Part I summarizes all such records, regardless of whether AMSARA has an accession record corresponding to the hospitalized individual. These results accordingly address the burden of disease across the military services. Part II summarizes inpatient records only among Active Duty enlistees who began service during 2002-2007 and for whom AMSARA has a corresponding accession record. This section accordingly examines hospitalization among Active Duty enlistees early in service.

### ***Part I: Hospitalizations irrespective of an accession record***

Hospitalization records of service members admitted to any military treatment facility are summarized regardless of whether AMSARA has an accession record corresponding to the hospitalized individual. Except where indicated, the tables include all hospitalizations, regardless of length of service before hospitalization. For those tables that present results according to length of service before hospitalization, the length of service was taken from a field within each hospitalization record.

Table 2.41 shows the overall hospitalization counts and percentages during the first and second years of service as well as counts of hospitalization at all lengths of service. Results are shown for Active Duty enlistees separately for 2007 and the previous five-year period. For the Army, the proportion of all hospitalizations occurring in the first and second years of service does not appear to be substantially different from one another in 2007 or previous years. The proportion of hospitalizations occurring in the first year of service for Active Duty Navy enlistees is slightly lower than the corresponding proportion for the second year of service while the opposite was observed for the Marine Corps and Air Force enlistees (2007 and previous). In 2007, hospitalizations occurring within the first two years of service accounted for 17.2% of all hospitalizations in the Navy compared to approximately 33% for the Marine Corps.

**TABLE 2.41 HOSPITALIZATIONS IN 2002 – 2007 BY SERVICE AND YEARS OF SERVICE: ACTIVE DUTY**

Service	Years of service	2002-2006		2007	
		Count	% of service total	Count	% of service total
Army	0 – 1	19,218	14.0	4,249	13.6
	1 – 2	18,777	13.7	4,529	14.5
	All	137,147	-	31,204	-
Navy	0 – 1	4,768	7.9	520	5.0
	1 – 2	7,129	11.8	1,261	12.2
	All	60,527	-	10,324	-
Marines	0 – 1	6,852	19.6	1,321	18.2
	1 – 2	5,159	14.7	1,065	14.6
	All	34,997	-	7,275	-
Air Force	0 – 1	5,265	12.7	995	13.5
	1 – 2	4,296	10.3	674	9.1
	All	41,584	-	7,392	-



Table 2.42 shows hospitalizations among the Reserves. In comparing the proportions of hospitalizations that occurred in the first and second years of service, the following generalizations can be made. For the Army, the proportion of hospitalizations occurring in the first year of service was nearly triple that for hospitalizations occurring in the second year of service. For the Air Force, double the number of hospitalizations occurred in the first year of service than in the second. For the Navy, the reverse was observed. The proportion of hospitalizations occurring among sailors in their first-year of service was approximately half that of hospitalizations occurring in the second year of service. The proportion of hospitalizations in the first and second years of service was nearly the same for Active Duty Marine Corps enlistees.

**TABLE 2.42 HOSPITALIZATIONS IN 2002 – 2007 BY SERVICE AND YEARS OF SERVICE: RESERVES**

Service	Years of service	2002-2006		2007	
		Count	% of service total	Count	% of service total
Army	0 – 1	1,117	14.6	287	19.6
	1 – 2	416	5.4	95	6.5
	All	7,672	-	1,467	-
Navy	0 – 1	22	2.4	6	2.3
	1 – 2	47	5.0	10	3.8
	All	936	-	260	-
Marines	0 – 1	65	7.1	8	5.2
	1 – 2	63	6.9	10	6.5
	All	917	-	155	-
Air Force	0 – 1	87	10.4	8	5.4
	1 – 2	49	5.9	4	2.7
	All	833	-	147	-

Table 2.43 shows hospitalizations for the National Guard. Most hospitalizations in 2002-2007 occurred among service members with more than two years of service. Hospitalizations among first-year soldiers represented 16.4% (2002-2006) and 18.4% (2007) of all hospitalizations among the Army National Guard. In 2007, the proportion of all hospitalizations in the Air National Guard that occurred among first and second-year soldiers was lower than in the previous five-year period.

**TABLE 2.43 HOSPITALIZATIONS IN 2002 – 2007 BY SERVICE AND YEARS OF SERVICE: NATIONAL GUARD**

Service	Years of service	2002-2006		2007	
		Count	% of service total	Count	% of service total
Army	0 – 1	1,817	16.4	483	18.4
	1 – 2	671	6.1	177	6.7
	All	11,085	-	2,631	-
Air Force	0 – 1	98	12.4	5	2.9
	1 – 2	39	4.9	5	2.9
	All	793	-	170	-

Hospitalizations for Active Duty enlisted service members by condition and service are shown in Table 2.44 for the years 2002 to 2006 in aggregate and separately for 2007. For each service, complications of pregnancy were the most common conditions for which hospitalizations occurred in 2002-2006 and in 2007, though the percentage of hospitalizations attributable to this condition varied from 12.9% (Marines) to 34.0% (Navy) across services and years examined. Among enlisted Army members, complications of pregnancy (14.2%), injuries (10.8%), fractures (9.0%), neurotic and personality disorders (8.7%), and nonspecific symptoms (5.3%) were the most common inpatient hospitalizations occurring in 2007 and are similar to the percentages for each condition observed in the years from 2002 to 2006. Among enlisted Navy members in 2007, complications of pregnancy (34.0%) were followed by neurotic and personality disorders (6.2%), and nonspecific symptoms (4.2%). Complications of pregnancy (13.0%), injuries (9.4%), neurotic and personality disorders (9.0%), and fractures (8.7%) were the most common hospitalizations among Marines in 2007. Complications of pregnancy (32.1%), neurotic and personality disorders (5.8%), and nonspecific symptoms (5.2%) were the most common hospitalizations among enlisted Air Force members in 2007.

**TABLE 2.44 DISTRIBUTION OF PRIMARY CAUSE CATEGORIES FOR HOSPITALIZATIONS AMONG ACTIVE DUTY ENLISTEES IN 2002 – 2006 VS. 2007: BY SERVICE**

Category	Army		Navy		Marines		Air Force	
	2002-2006	2007	2002-2006	2007	2002-2006	2007	2002-2006	2007
Complications of pregnancy	16.7	14.2	32.5	34.0	12.9	13.0	30.9	32.1
Injuries	9.1	10.8	3.5	2.9	10.7	9.4	3.0	2.7
Neurotic and personality disorders	8.1	8.7	6.7	6.2	8.3	9.0	7.5	5.8
Fracture	6.9	9.0	4.1	3.3	9.4	8.7	2.9	3.0
Nonspecific symptoms	5.6	5.3	5.4	4.2	3.7	3.1	6.6	5.2
Arthropathies and related symptoms	3.9	3.3	2.9	2.2	4.2	4.9	2.4	1.9
Other Psychoses	3.1	3.7	3.0	3.9	3.3	3.8	2.7	2.3
Infections of skin and subcutaneous tissue	2.8	3.1	2.5	2.5	5.6	5.5	1.8	2.4
Other diseases of respiratory system	2.5	2.2	1.8	1.7	2.4	2.4	2.5	2.6
Pneumonia and influenza	2.0	2.1	0.8	0.6	4.2	2.9	1.1	1.5
Appendicitis	2.0	2.1	2.9	3.1	3.1	3.8	3.0	3.1
Diseases of the oral cavity	2.0	1.3	1.1	0.9	1.2	1.1	2.6	2.7
Alcohol and drug dependence	1.5	1.5	2.0	2.0	1.8	2.1	1.0	1.0
Hernia of abdominal cavity	1.5	1.3	0.5	0.5	1.0	1.3	0.5	0.7
Noninfectious enteritis and colitis	1.0	0.8	0.8	0.9	0.8	0.8	1.0	0.9
Poisoning and toxic effects	1.0	1.5	0.8	0.8	1.5	1.3	0.5	0.5
Acute respiratory infections	0.9	0.8	0.3	0.2	0.7	0.5	0.4	0.3
Other diseases due to viruses	0.7	0.4	0.3	0.3	0.4	0.3	0.3	0.3
Chronic obstructive pulmonary disease <sup>†</sup>	0.5	0.3	0.3	0.2	0.3	0.5	0.3	0.2
Other bacterial diseases	0.2	0.2	0.1	0.2	0.3	0.1	0.2	0.2
Viral diseases accompanied by exanthem	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Others	27.8	27.1	27.6	29.3	24.1	25.3	28.8	30.4
Total hospitalizations	153,275	34,793	67,580	11,652	36,970	7,676	49,270	8,888

<sup>†</sup> Predominantly asthma hospitalizations.

Table 2.45 shows the hospitalization percentage by component of service in aggregate for 2002-2006 and separately for 2007. The Navy and Marine Corps do not have a National Guard component. In 2007, complications of pregnancy (20.3%) were the most common reason for hospitalizations among Active Duty members followed by injuries (8.0%), neurotic and personality disorders (7.9%) and fractures (7.1%). Among Reservists, the most common causes of inpatient hospitalizations in 2007 were nonspecific symptoms (10.5%), injuries (6.9%), neurotic and personality disorders (6.4%), complications of pregnancy (5.8%), and fractures (5.4%). For the National Guard the most common hospitalizations were for injuries (10.5%), nonspecific symptoms (9.8%), neurotic and personality disorders (8.3%), and fractures (7.8%). In general, the contribution of each category to the sum of all hospitalizations within a service was remarkably similar between 2007 and 2002-2006.

**TABLE 2.45 DISTRIBUTION OF PRIMARY CAUSE CATEGORIES FOR HOSPITALIZATIONS AMONG ENLISTEES IN 2002 – 2006 VS. 2007: BY COMPONENT**

Category	Active Duty		Reserves		National Guard	
	2002-2006	2007	2002-2006	2007	2002-2006	2007
Complications of pregnancy	22.0	20.3	5.7	5.8	2.3	3.1
Neurotic and personality disorders	7.7	7.9	6.3	6.4	6.6	8.3
Injuries	7.1	8.0	9.1	6.9	11.0	10.5
Fracture	5.9	7.1	6.6	5.4	8.0	7.8
Nonspecific symptoms	5.5	4.9	9.5	10.5	9.4	9.8
Arthropathies and related symptoms	3.5	3.1	3.3	3.9	2.9	2.5
Other Psychoses	3.0	3.5	3.0	2.6	3.1	3.0
Infections of skin and subcutaneous tissue	2.9	3.2	3.1	3.0	3.8	3.8
Appendicitis	2.5	2.7	2.1	1.7	1.9	2.4
Other diseases of respiratory system	2.3	2.2	3.3	3.3	3.8	4.3
Pneumonia and influenza	1.9	1.9	1.9	2.2	3.0	3.1
Diseases of the oral cavity	1.8	1.4	1.3	1.0	1.1	0.9
Alcohol and drug dependence	1.6	1.6	1.0	1.4	1.2	1.4
Hernia of abdominal cavity	1.1	1.1	1.9	2.7	2.3	2.8
Noninfectious enteritis and colitis	1.0	0.8	1.3	1.2	1.3	0.6
Poisoning and toxic effects	0.9	1.2	0.6	0.7	0.6	0.9
Acute respiratory infections	0.6	0.6	0.9	1.3	1.2	1.3
Other diseases due to viruses	0.5	0.4	0.6	0.6	1.0	0.8
Chronic obstructive pulmonary disease <sup>†</sup>	0.4	0.3	0.6	0.3	0.6	0.5
Other bacterial diseases	0.2	0.2	0.2	0.3	0.3	0.4
Viral diseases accompanied by exanthem	0.1	0.1	0.1	0.2	0.1	0.2
Others	27.5	27.7	37.6	38.4	34.3	31.6
Total hospitalizations	307,095	63,009	12,610	2,513	12,773	3,029

<sup>†</sup> Predominantly asthma hospitalizations.

## Part II: Hospitalizations with an accession record, Active Duty enlistees only

Hospitalization records of Active Duty enlistees who began service during 2002-2007 and for whom AMSARA has a corresponding accession record are summarized. Relative risks are used to compare the likelihood of hospitalization across demographic groups. The baseline group chosen for each comparison depends on the factor being considered. For factors with some inherent order (e.g., age group, which ranges from younger to older) it is the first or last group in that order, as appropriate. Otherwise, the baseline group is generally the largest group.

Table 2.46 shows hospitalizations and persons hospitalized among soldiers accessed during each year from 2002 to 2007. Hospitalizations are separated into two groups: one that includes hospitalizations that occurred in the same year as accession and one that includes hospitalizations that occurred within one year of Active Duty service. The former provides a basis for appropriate comparison for those gained in 2007, because hospitalization data were available only through 2007 in this report, allowing less than a full year of follow-up for this group. Because multiple hospitalizations can occur per person, results are shown both in terms of hospitalizations (“Count”) and people hospitalized (“People”). The proportion of people hospitalized (% of People) within the first year of service is relatively stable from 2002-2006.

**TABLE 2.46 ACTIVE DUTY HOSPITALIZATIONS IN 2002 – 2007: BY YEAR**

Year	Total accessed	Within same gain year			Within one year of service		
		Admissions	People	% of people	Admissions	People	% of people
2002	177,907	4,849	4,356	2.4	7,990	6,925	3.9
2003	164,821	4,572	4,127	2.5	7,269	6,328	3.8
2004	139,618	3,367	3,070	2.2	5,482	4,851	3.5
2005	130,600	2,992	2,689	2.1	5,684	4,900	3.8
2006	160,082	4,207	3,765	2.4	7,380	6,358	4.0
2007	159,229	4,134	3,716	2.3	4,134	3,716	2.3 <sup>†</sup>
Total	932,257	24,121	21,723	-	37,939	33,078	-

<sup>†</sup> The proportion 2007 soldiers who were hospitalized within the first year of service is underestimated due to insufficient follow-up.

Table 2.47 shows that the risk of hospital admission within one year of accession for enlisted personnel varies by service. Army enlistees had the highest risk of hospitalization in the year following accession. This risk was significantly greater than Navy, Marine, and Air Force enlistees. Marine Corps enlistees had the second highest risk of hospitalization, which was also significantly greater than Navy and Air Force enlistees. Navy enlistees had the lowest risk of hospitalization admission.

**TABLE 2.47 HOSPITAL ADMISSIONS WITHIN ONE YEAR OF ACCESSION FOR ACTIVE DUTY ENLISTED PERSONNEL ACCESSED IN 2002 – 2007: BY SERVICE**

Service	Total accessed	Admissions	Individuals hospitalized			
			Count	%	Relative risk	95% CI
Army	334,870	19,982	17,168	5.13	1.00	-
Navy	223,336	4,771	4,261	1.91	0.37	(0.36,0.38)
Marines	191,403	8,083	7,093	3.71	0.72	(0.70,0.74)
Air Force	182,648	5,103	4,556	2.49	0.49	(0.47,0.50)

Tables 2.48 through 2.52 summarize the demographic characteristics of enlistees hospitalized within one year of accession. The risk of hospitalization was significantly higher for women relative to men (Table 2.48). Table 2.49 shows that the risk of hospitalization increases significantly with advancing age relative to the youngest age group (a significant trend) and that the risk of each age group is significantly higher than the next lower age group. The highest relative risk was observed for the oldest age group (over 30). Whites had a significantly higher risk of hospitalization within a year of accession relative to blacks and individuals of any other race (Table 2.50). Those who declined to report race had the highest hospitalization risk. Table 2.51 shows the hospitalization risk by the level of education at accession in 2002-2007. The risk of hospitalization in the first year of accession was lower for individuals in the “Below HS graduate” category compared to those who graduated high school. Enlistees who had completed some college at the time of accession had a higher risk of hospital admission, relative to high school graduates. No significant difference in the risk of hospitalization in the first year of service was found for those enlistees with a Bachelor’s degree or higher relative to high school graduates.

**TABLE 2.48 HOSPITAL ADMISSIONS WITHIN ONE YEAR OF ACCESSION FOR ACTIVE DUTY ENLISTED PERSONNEL ACCESSED IN 2002 – 2007: BY GENDER**

Gender	Total accessions	Admissions	Individuals hospitalized			
			Count	%	Relative risk	95% CI
Male	778,028	29,612	25,877	3.33	1.00	-
Female	154,225	8,327	7,201	4.67	1.40	(1.37,1.44)

**TABLE 2.49 HOSPITAL ADMISSIONS WITHIN ONE YEAR OF ACCESSION FOR ACTIVE DUTY ENLISTED PERSONNEL ACCESSED IN 2002 – 2007: BY AGE**

Age group	Total accessions	Admissions	Individuals hospitalized			
			Count	%	Relative risk	95% CI
17 – 20	650,876	25,280	22,127	3.40	1.00	-
21 – 25	224,920	9,474	8,232	3.66	1.08	(1.05,1.10)
26 – 30	42,862	2,268	1,937	4.52	1.33	(1.27,1.39)
> 30	13,599	917	782	5.75	1.69	(1.58,1.81)

**TABLE 2.50 HOSPITAL ADMISSIONS WITHIN ONE YEAR OF ACCESSION FOR ACTIVE DUTY ENLISTED PERSONNEL ACCESSED IN 2002 – 2007: BY RACE**

Race <sup>†</sup>	Total accessions	Admissions	Individuals hospitalized			
			Count	%	Relative risk	95% CI
White	643,564	26,269	22,967	3.57	1.00	-
Black	128,848	4,824	4,211	3.27	0.92	(0.89,0.95)
Other	82,867	2,751	2,400	2.90	0.81	(0.78,0.85)
Declined	76,978	4,095	3,500	4.55	1.27	(1.23,1.32)

<sup>†</sup> Note: New categories for race were available beginning in 2003. However, greater numbers of applicants chose not to indicate their race.

**TABLE 2.51 HOSPITAL ADMISSIONS WITHIN ONE YEAR OF ACCESSION FOR ACTIVE DUTY ENLISTED PERSONNEL ACCESSED IN 2002 – 2007: BY EDUCATION LEVEL**

Education level	Total accessions	Admissions	Individuals hospitalized			
			Count	%	Relative risk	95% CI
Below HS graduate <sup>†</sup>	5,698	189	169	2.97	0.85	(0.73,0.98)
HS diploma	842,429	33,821	29,513	3.50	1.00	-
Some college	27,040	1,508	1,273	4.71	1.34	(1.27,1.42)
Bachelor's or higher	21,464	877	781	3.64	1.04	(0.97,1.11)
Missing	35,626	1,544	1,342	3.77	1.08	(1.02,1.13)

<sup>†</sup> Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior.

Tables 2.52 shows hospital admissions within one year of accession for Active Duty enlisted personnel by AFQT score. As shown in the table, the risk of hospitalization is lowest among individuals scoring in the highest percentile group (93-99). Relative to the highest percentile group, the risk of hospitalization of each of the other percentile score groups is significantly higher, with the greatest relative risk for hospitalization seen in the lowest percentile group (11-29). The proportion of enlistees hospitalized tended to increase with decreasing AFQT percentile score group.

**TABLE 2.52 HOSPITAL ADMISSIONS WITHIN ONE YEAR OF ACCESSION FOR ACTIVE DUTY ENLISTED PERSONNEL ACCESSED IN 2002 – 2007: BY AFQT SCORE**

AFQT score	Total accessions	Admissions	Individuals hospitalized			
			Count	%	Relative risk	95% CI
93 – 99	53,409	1,848	1618	3.03	1.00	-
65 – 92	337,578	13,208	11570	3.43	1.13	(1.07, 1.19)
50 – 64	239,306	10,021	8745	3.65	1.21	(1.14, 1.27)
30 – 49	255,938	10,782	9362	3.66	1.21	(1.15, 1.27)
11 – 29 <sup>†</sup>	41,998	2,043	1747	4.16	1.37	(1.28, 1.47)
Missing	4,028	37	36	0.89	-	-

<sup>†</sup> Individuals scoring in the 10<sup>th</sup> percentile or lower are prohibited from applying, although some exceptions have been noted.

Tables 2.53 shows the most common categories of medical conditions resulting in hospitalization and the numbers of admissions and individuals admitted for these conditions. The category of neurotic and personality disorders is clearly the most frequent medical condition leading to hospitalization, particularly for hospitalization during the first year of service. Pneumonia and influenza are the second leading cause for hospitalizations in the first year of service followed by infections of the skin and subcutaneous tissue, fractures, other psychoses, nonspecific symptoms, and injuries. When considering all hospitalizations within the first two years of service, hospitalizations for neurotic and personality disorders are by far the most common. Complications of pregnancy are the second leading cause of hospitalizations within the first two years of service.

When comparing the numbers of hospitalizations within each medical category between the different follow-up periods (i.e. one and two<sup>6</sup> years following accession), it is clear that several conditions resulting in hospital admissions tend to occur most frequently in the first year of Active Duty enlisted service. In particular, hospitalizations for pneumonia and influenza, acute respiratory infections, and other communicable diseases all occur with much higher frequency in the first year of service. Hospitalizations for neurotic and personality disorders also appear more common in the first year of service, though the difference is less dramatic than for communicable diseases. The reduced number of hospitalizations for neurotic and personality disorders in the second year of service may reflect the fact that most enlistees experience a serious episode related to mental illness early in training are discharged soon after (2000 AMSARA Annual Report, p.23-33). Further, given the observed hospitalizations, most serious mental illnesses appear to manifest within one year of service. The lower number of hospitalizations for pneumonia and influenza may be related to a reduction in group-living situations after basic training. Contrary to the pattern of occurrence shared by hospitalizations for neurotic and personality disorders, pneumonia and influenza, admissions for complications of pregnancy increased dramatically in the second year of service, not surprising given that pregnancy is a temporary medical disqualification at MEPS and a cause for discharge during Basic Combat Training (BCT). The risk of fractures appears similar in both the first and second years of service given that the number of hospitalizations for fractures is similar in both years of follow-up. However, the risk for injuries appears to increase after the first year of service given that the number of hospitalizations for injuries is nearly doubled in the second year of follow-up. Examination of ICD-9 codes within the injuries category (data not shown) revealed that hospitalizations for burns, open wounds, and traumatic amputations are generally more frequent in the second year of service while sprains, strains, and dislocations occur with similar frequency in both years of follow-up. These observations may reflect an increased risk for combat related injuries after the first year of service. It should be noted that the number of soldiers at risk for hospitalizations is smaller in the second year of service due largely to attrition.

---

<sup>6</sup> Counts of hospitalizations within two years of service are an underestimate due to incomplete follow-up time for enlistees who accessed in 2006 and 2007.



**TABLE 2.53 HOSPITAL ADMISSIONS AND PERSONS HOSPITALIZED WITHIN ONE AND TWO YEARS OF SERVICE FOR ACTIVE DUTY ENLISTED PERSONNEL ACCESSED IN 2002-2007: BY MEDICAL CATEGORY**

Medical category	Within one year of accession <sup>†</sup>		Within two years of accession <sup>†</sup>	
	Hospital admissions	Persons hospitalized	Hospital admissions	Persons hospitalized
Neurotic and personality disorders	7,864	6,801	11,115	9,111
Pneumonia and influenza	3,489	3,302	3,666	3,436
Infections of skin and subcutaneous tissue	2,890	2,713	3,776	3,460
Fracture	2,198	1,889	4,756	3,513
Other Psychoses	2,044	1,636	3,267	2,364
Nonspecific symptoms	1,854	1,583	2,689	2,205
Injuries	1,774	1,462	5,049	3,571
Other diseases of respiratory system	971	854	1,600	1,338
Acute respiratory infections	929	881	1,044	982
Appendicitis	862	839	1,543	1,465
Complications of pregnancy	778	655	8,996	7,694
Alcohol and drug dependence	744	611	1,443	1,166
Poisoning and toxic effects	743	651	1,245	1,028
Hernia of abdominal cavity	609	576	845	777
Other diseases due to viruses	553	511	657	602
Diseases of the oral cavity	471	438	752	676
Arthropathies and related symptoms	449	378	1,202	992
Noninfectious enteritis and colitis	361	309	548	449
Chronic obstructive pulmonary disease <sup>‡</sup>	263	227	326	280
Other bacterial diseases	263	243	302	270
Viral diseases accompanied by exanthem	83	80	105	98
Others	7,747	6,439	12,857	9,819
<b>Total</b>	<b>37,939</b>	<b>33,078</b>	<b>67,783</b>	<b>55,296</b>

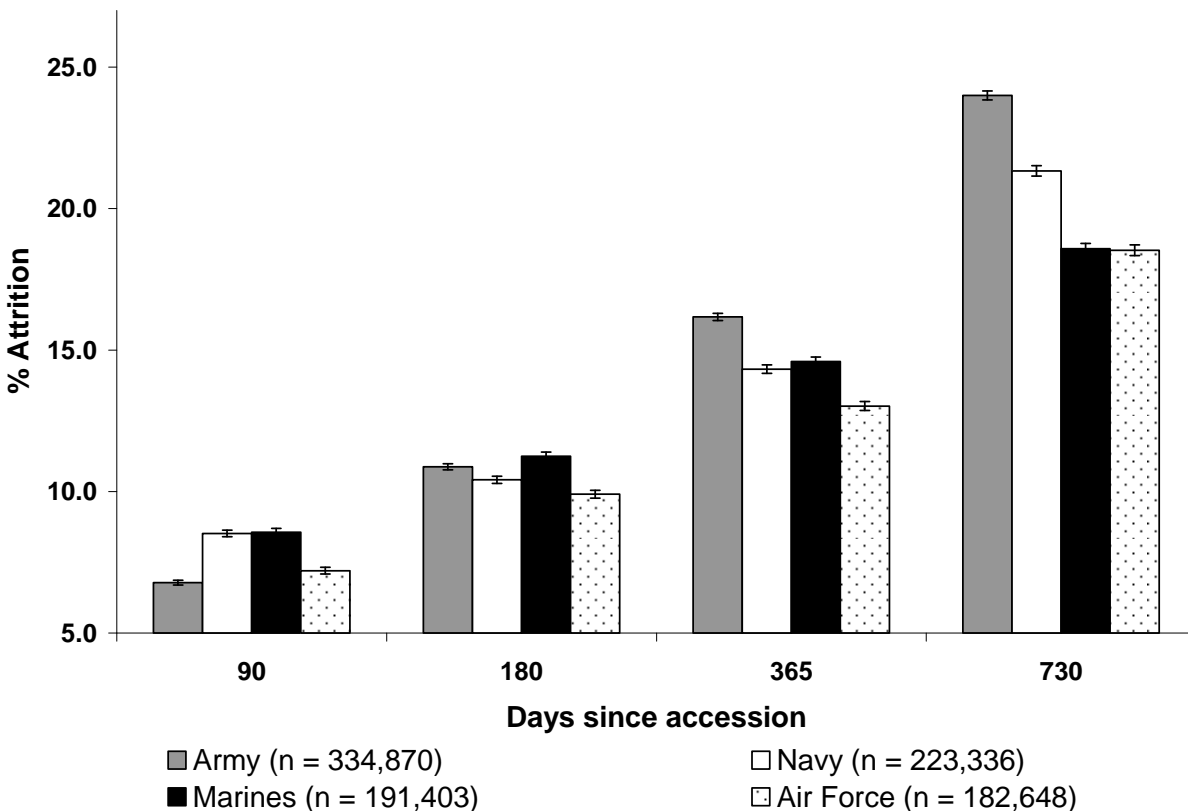
<sup>†</sup> The numbers of hospitalizations and persons hospitalized within one year of accession are slightly underestimated because of insufficient follow-up for soldiers who were gained in 2007. The above figures for hospital admissions and people hospitalized within two years of accession are also underestimates given that there is insufficient follow-up time for soldiers who gained in both 2006 and 2007.

<sup>‡</sup> Predominantly hospitalizations for asthma.

## Attrition

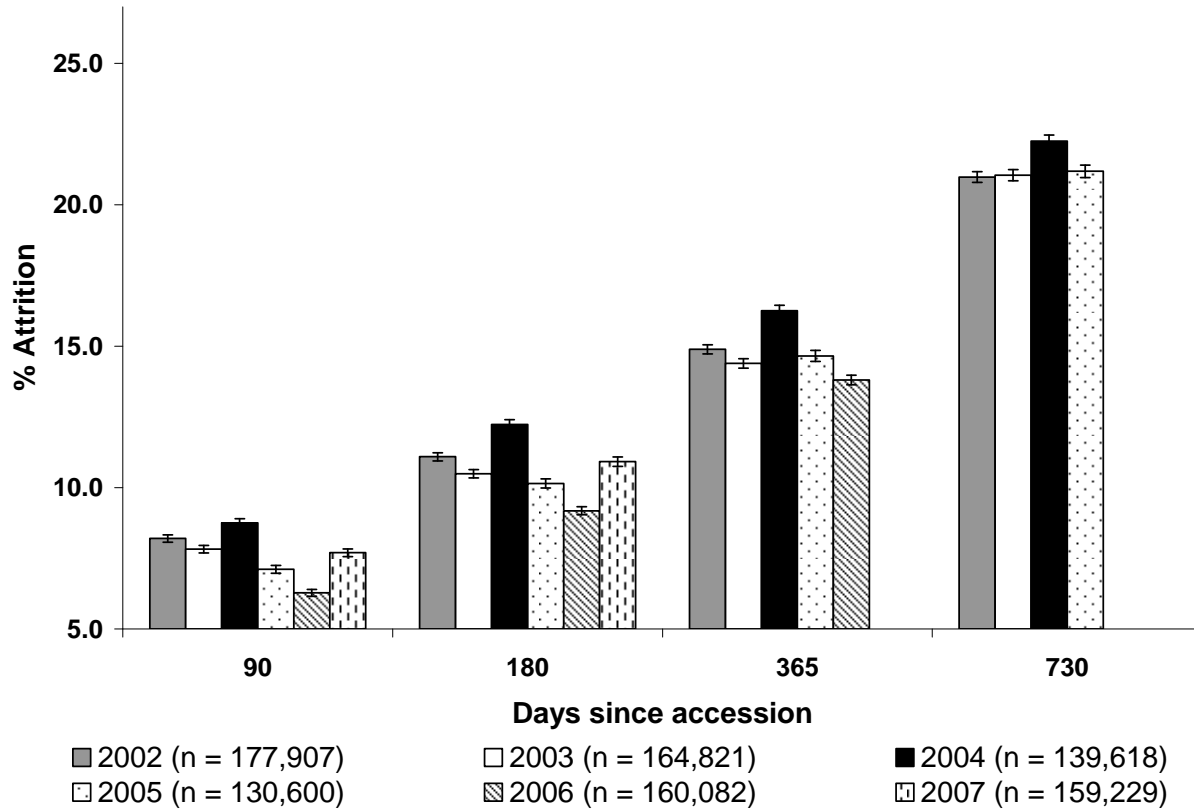
Attrition is one of many outcomes of key interest to AMSARA. This section provides a basic description of all-cause attrition among first-time Active Duty soldiers accessed into the Army, Navy, Marines, and Air Force in 2002 through 2007. Figures 2.1 through 2.7 display the cumulative likelihood of attrition within this group at 90, 180, 365, and 730 days following accession onto Active Duty service with respect to service, year of accession, and various demographic factors. Age, education level, and AFQT score at accession (not application) were considered in this analysis. Attrition at each time point was derived from life table calculations, which adjusted the likelihood of attrition to account for censored observations. Censoring may result from a lack of full follow-up or from certain DMDC transactions that result in a loss date but that should not be considered as true losses. These pseudo losses include 1) admission to officer commissioning programs; 2) warrant officer programs; 3) entry into service academies; 4) expiration of term of service; 5) retirement; and 6) immediate reenlistment. Loss records generated for these six events were not counted among the attritions reported in the following figures. Totals may vary from figure to figure due to missing variable values.

Figure 2.1 shows the proportion of Active Duty accessions gained in 2002-2007 who were lost to attrition at specified times of follow-up after their date of accession. Except for the first 90 days of service, the proportion of accessions that subsequently attrited was consistently lower at all points of follow-up for the Air Force compared to all other services. After two years of service, the proportion of attritions was highest for the Army (24.0%) followed by the Navy (21.3%). The Air Force and Marines had comparable percentages of accessions lost to attrition (~18.5%).



**FIGURE 2.1** Attrition among first-time, Active Duty soldiers in CY 2002 – CY 2007 at 90, 180, 365, and 730 days following accession. Separate plots are shown for the Army (grey), Navy (white), Marines (black), and Air Force (stippled).

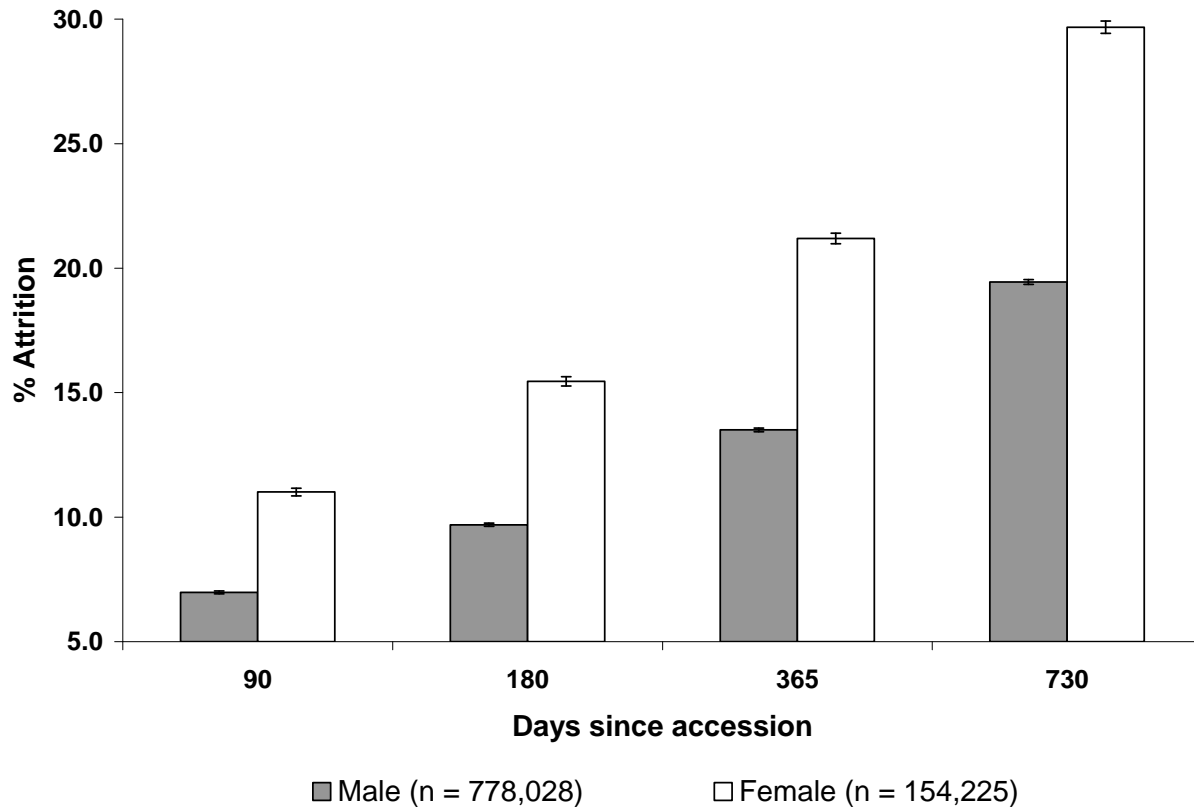
Figure 2.2 describes the attrition profile for Active Duty enlistees who accessed into the Army, Navy, Marine Corps, and Air Force by accession year. There do not appear to be any obvious trends in the proportion of accessions lost at 90 days of follow-up or greater over the years considered. Regardless of accession year, approximately 21% to 22% of enlistees were lost to attrition after two years of service<sup>7</sup>.



**FIGURE 2.2** Attrition among first-time, Active Duty soldiers in CY 2002 – CY 2007 at 90, 180, 365, and 730 days following accession. Separate plots are shown for each year of accession. Attrition for soldiers gaining in 2006 was calculated at 90 and 180 days, only. Grey, white, black, stippled, cross hatched, and stitched bars respectively represent soldiers accessed in 2002, 2003, 2004, 2005, 2006, and 2007.

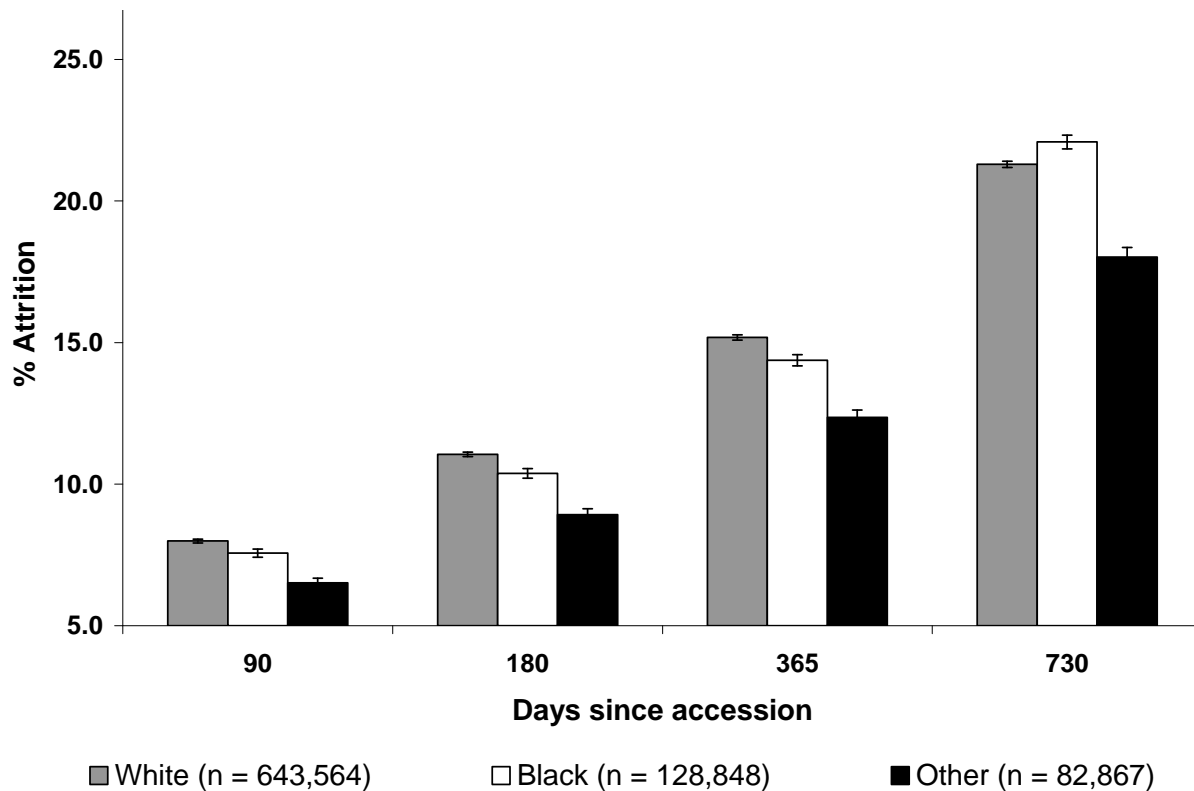
<sup>7</sup> Attrition among 2007 accessions was examined only at 90 and 180 days following the start of Active Duty service.

Figures 2.3 through 2.7 describe the attrition profile for Active Duty enlistees who accessed into the Army, Navy, Marine Corps, and Air Force by gender, race, age at accession, education at accession, and AFQT score at accession. As seen in Figure 2.3, the proportion of accessions lost is consistently higher at all points of follow-up for females relative to males, even at the earliest point of assessment (90 days) where 11.0% of women were already lost to attrition as compared to only 7.0% of men. At the end of two years of service, cumulative attrition was 29.7% for females and 19.4% for males.



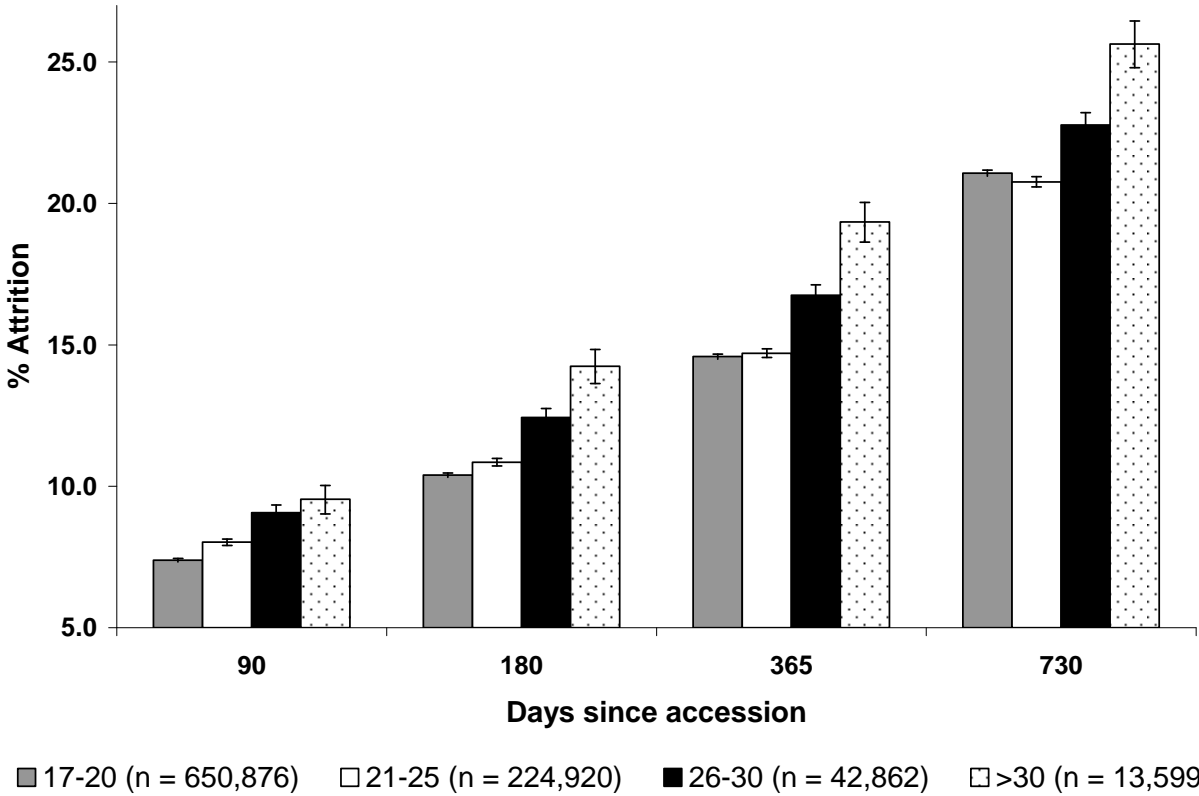
**FIGURE 2.3** Attrition among first-time, Active Duty soldiers in CY 2002 – CY 2007 at 90, 180, 365, and 730 days following accession. Separate plots are shown for men (grey) and women (white).

Attrition was not substantially different across the categories of race (when it was specified), although individuals who identified themselves as members of any race other than black or white tended to have lower attrition at all points of follow-up (Figure 2.4). Whites consistently had the highest proportion of losses among accessions at 90 days (8.0%) through 1 year (15.2%). At the end of the second year, the proportion of black soldiers who attrited (22.1%) was marginally higher than for whites (21.3%).



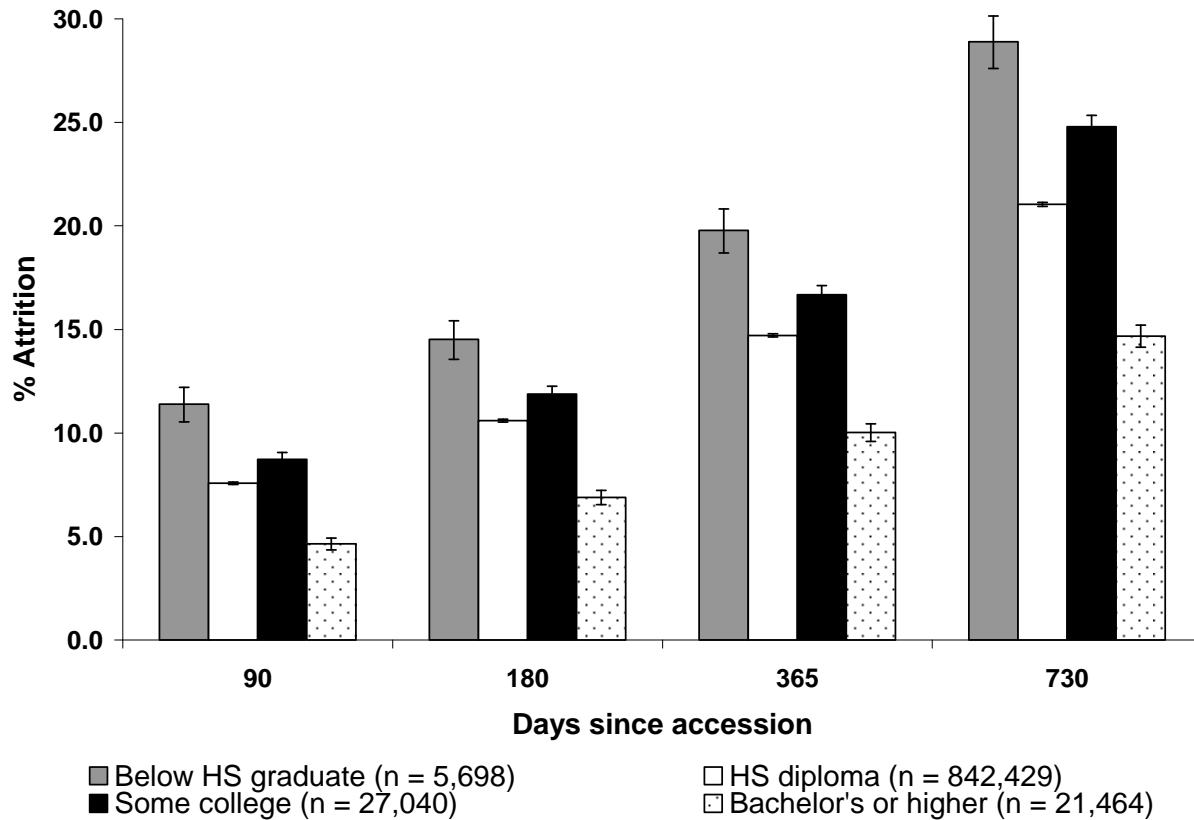
**FIGURE 2.4** Attrition among first-time, Active Duty soldiers in CY 2002 – CY 2007 at 90, 180, 365, and 730 days following accession. Separate plots are shown for enlistees who identified themselves as white (grey), black (white), or as a member of any other race (black). Note: New categories for race were available beginning in 2003. However, greater numbers of applicants chose not to indicate their race.

Cumulative attrition was highest for the oldest age group at each time point over the two-year period (Figure 2.5). From the oldest age group to the youngest, observed attrition was progressively lower. Among 17 to 20-year olds, attrition was 7.4% at 90 days and 21.1% after 2 years. For accessions over 30 years of age, attrition was 9.5% at 90 days and 25.6% at 730 days.



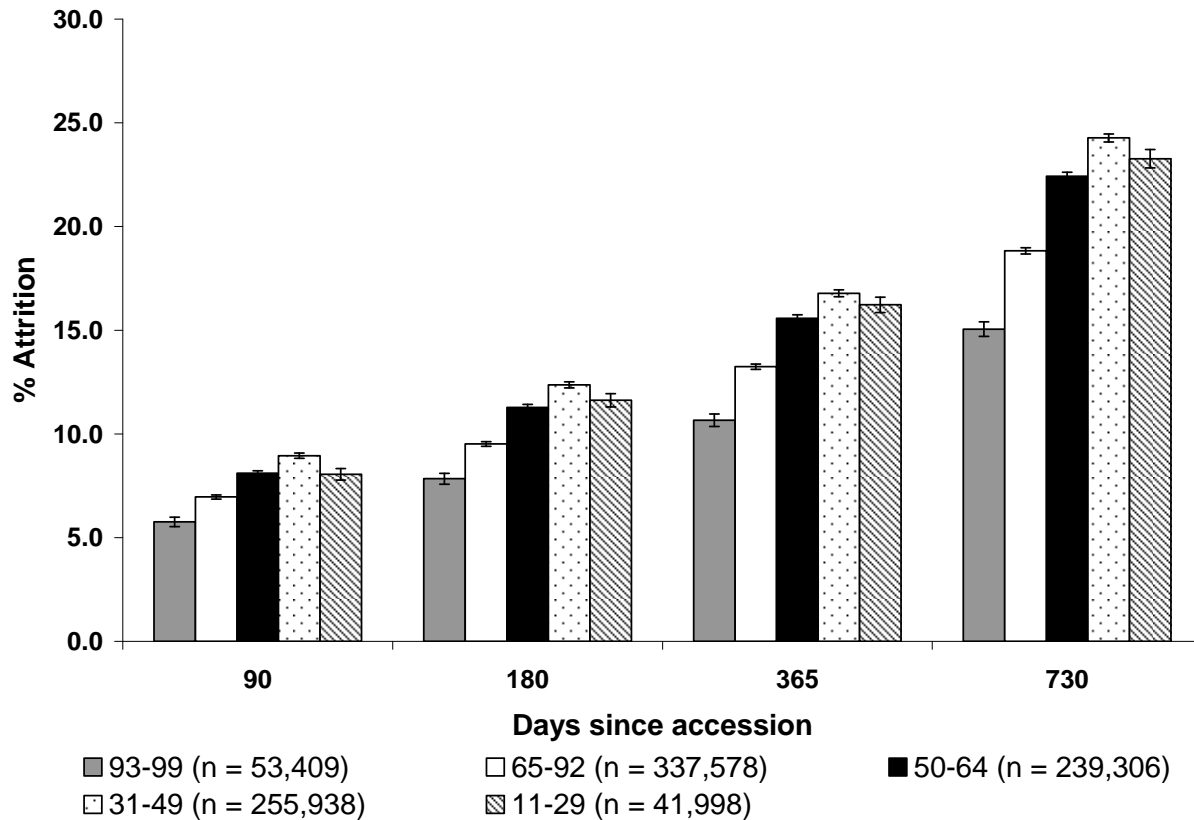
**FIGURE 2.5** Attrition among first-time, Active Duty soldiers in CY 2002 – CY 2007 at 90, 180, 365, and 730 days following accession. Separate plots are shown for 17-20 year olds (grey) 21-25 year olds (white), 26-30 year olds (black), and accessions over 30 years of age (stippled).

When attrition was examined by education level (Figure 2.6) it was found that enlistees with less than a high school education at gain had the highest level of attrition at all time points. Soldiers with a Bachelor's degree or higher at gain had the lowest cumulative attrition at all time points. Attrition at 90-days post accession was 11.4% for the lowest education group and 4.6% for soldiers with a Bachelor's degree or higher. After two years of follow-up, the proportion lost among those who had accessed with a Bachelor's degree or higher was only 14.7% compared to 28.9% for soldiers who had not graduated high school by the time of accession.



**FIGURE 2.6** Attrition among first-time, Active Duty soldiers in CY 2002 – CY 2007 at 90, 180, 365, and 730 days following accession. Separate plots are shown for specified categories of education level attained at time of accession. Grey, white, black, and stippled bars respectively represent soldiers with less than a high school education, a high school diploma, some college, or a Bachelor's degree and higher. Those with less than a high school education (grey) encompass the following three cases: 1) one who is pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior.

Figure 2.7 presents data on the attrition profile of soldiers by AFQT percentile score group. The proportion lost at all points of follow-up was lowest for the highest percentile score group (93-99) and generally increased for progressively lower scoring categories. This was true for each point of follow-up. The increase in the proportion of attritions was highest among the lowest scoring group and lower for the higher scoring groups.



**FIGURE 2.7** Attrition among first-time, Active Duty soldiers in CY 2002 – CY 2007 at 90, 180, 365, and 730 days following accession. Separate plots are shown for specified groups based on AFQT score at time of accession. Grey, white, black, stippled, and cross-hatched bars respectively represent accessions in the 93-99, 65-92, 50-64, 31-49, and 11-29 percentile score groups. Note that individuals scoring below the 10<sup>th</sup> percentile are barred from application.



## EPTS Discharges

Discharges for medical conditions Existing Prior To Service (EPTS) are of vital interest to AMSARA. A discharge can be classified as EPTS if the condition was verified to have existed before the recruit began service and if the complications leading to discharge arose no more than 180 days after the recruit began duty. EPTS data reporting has varied by site and over time – see Data Sources section for details (Page 96, Table 3.1).

Part I summarizes the EPTS records provided to AMSARA, regardless of whether a corresponding accession record is available. EPTS records for Active Duty, Reserves, and Nation Guard members are included. Part II only summarizes records for which a corresponding accession record is available; only Active Duty discharges are included.

### ***Part I: EPTS discharges irrespective of accession record***

Included among the EPTS records provided to AMSARA are records for soldiers in Initial Entry Training (IET) for the Reserves and National Guard; AMSARA does not currently hold complete accessions data on these components. In addition, some Active Duty enlistee EPTS records do not have a matching accession record. Accordingly, the tables in Part I show the numbers of EPTS discharge records provided by the IET sites, regardless of whether a corresponding accession record is available to AMSARA.

The number of EPTS discharge records by service branch, component, and year of discharge are shown for the period between 2002 and 2007 in Table 2.55. Numbers for each service and component often differ considerably from year to year. For example, the average number of records received for Active Duty Army soldiers in 2006 and 2007 is nearly half the average number received in 2002-2004. Fluctuations in the numbers of reported EPTS discharges are also apparent for Active Duty Navy (CY 2004) and Air Force. For example, Air Force reported EPTS discharges ranged from 566 in CY 2005 to 1,250 in CY 2007. The downturn in reported Navy EPTS discharges in CY 2004 resulted from a turnover of personnel responsible for reporting such discharges. Prior to 2005, the numbers of reported EPTS discharges for Active Duty Army were relatively stable, although this apparent stability may be complicated by substantial fluctuations in the reporting of EPTS discharges by each site (see “Data Sources” for details, Page 96, Table 3.1). Lastly, the number of reported EPTS discharges among the National Guard and Reserve components was quite low and it is not known if this is a reflection of actual events or the result of underreporting for these components.

**TABLE 2.55 EPTS DISCHARGES IN 2002 – 2007 BY SERVICE, COMPONENT, AND YEAR**

Service	Component	2002	2003	2004	2005	2006	2007	Total
Army	Active Duty	3,311	3,515	3,189	2,398	1,476	1,539	15,428
	National Guard	507	565	688	641	450	534	3,385
	Reserves	225	355	478	340	286	317	2,001
Navy	Active Duty	1,820	1,322	1,002	1,233	1,311	1,987	8,675
	Reserves	2	5	1	18	62	227	315
Marines	Active Duty	1,126	1,379	1,543	1,334	1,426	1,208	8,016
	Reserves	77	193	218	136	204	162	990
Air Force	Active Duty	753	705	681	566	950	1,250	4,905
	National Guard	3	4	2	2	4	7	22
	Reserves	26	55	55	44	70	83	333
Total		7,850	8,098	7,857	6,712	6,239	7,314	44,070

Table 2.56 shows EPTS discharges between 2002 and 2007 for each branch of service by medical categories defined by USMEPCOM. The results are sorted according to the numbers of discharges from the Army, the largest service and the one with the most reported EPTS discharges. Psychiatric discharges were the most common cause of EPTS discharges in the Army, Navy, and Marines, accounting for 19.8%, 30.1%, and 40.7% of EPTS discharges, respectively. Such EPTS charges accounted for less than 1% of all EPTS discharges from the Air Force. For this service, asthma was the leading cause of EPTS discharge (30.3%). Asthma was also a large contributor of EPTS discharges across the other three services, as were orthopedic conditions. As a group, orthopedic conditions, including knee, back, feet, general, and other, account for 40.8% of discharges from the Army. Orthopedic conditions were also leading causes of EPTS discharges in the Navy (32.3%), Marines (25.3%), and Air Force (42.8%). The difference in category frequencies may be due in part to differences in how each service categorizes and reports EPTS discharges, particularly discharges for psychiatric conditions (Army and Air Force). Accordingly, differences across services may reflect procedural differences more than true EPTS rates, and any comparisons across services should be made cautiously.

**TABLE 2.56 EPTS DISCHARGES IN 2002 – 2007 BY CATEGORY**

Condition	Army		Navy		Marines		Air Force	
	Count	%	Count	%	Count	%	Count	%
Psychiatric - other	4,118	19.8	2,703	30.1	3,662	40.7	49	0.9
Asthma	3,388	16.3	910	10.1	1,188	13.2	1,594	30.3
Ortho - other	2,654	12.8	904	10.1	647	7.2	493	9.4
Ortho - knee	1,959	9.4	684	7.6	461	5.1	613	11.7
Ortho - back	1,856	8.9	598	6.7	391	4.3	393	7.5
Other - general	1,081	5.2	426	4.7	671	7.5	283	5.4
Ortho - feet	944	4.5	288	3.2	111	1.2	463	8.8
Genitourinary system	896	4.3	395	4.4	321	3.6	157	3.0
Neurology - other	709	3.4	292	3.2	438	4.9	415	7.9
Abdomen and viscera	508	2.4	203	2.3	214	2.4	150	2.9
Cardiovascular - other	455	2.2	126	1.4	111	1.2	128	2.4
Seizure disorder	422	2.0	110	1.2	104	1.2	66	1.3
Eyes - other	359	1.7	430	4.8	160	1.8	118	2.2
Cardiovascular - hypertension	306	1.5	64	0.7	65	0.7	18	0.3
Chest & lung - other	306	1.5	146	1.6	137	1.5	74	1.4
Skin & lymphatics	222	1.1	141	1.6	117	1.3	105	2.0
Ears - hearing	109	0.5	117	1.3	103	1.1	11	0.2
Eyes - refraction	50	0.2	39	0.4	18	0.2	24	0.5
Ears - other	41	0.2	66	0.7	45	0.5	2	0.0
Schizophrenia	40	0.2	6	0.1	14	0.2	-	0.0
Missing	391	1.9	342	3.8	28	0.3	104	2.0
Total	20,814	-	8,990	-	9,006	-	5,260	-

The medical causes of EPTS discharges for each service are more thoroughly examined by medical conditions that are disqualifying for enlisted service, as listed in the DoDI 6130.3 and DoDI 6130.4. Prior to 2006, EPTS discharge conditions were coded according to the DoDI 6130.3. However, beginning in 2006 the discharge conditions were coded using DoDI 6130.4. Codes corresponding to psychiatric disorders and orthopedic conditions underwent a substantial revision. Given the breadth and scope of disease reclassification, it is difficult if not impossible to directly compare EPTS data from 2006 or 2007 to that from previous years. Therefore, these data are presented in separate tables and are not intended for direct comparison. Tables 2.57 through 2.60 summarize the primary medical conditions leading to EPTS discharge by service for 2002-2007. Part A of each table presents data from 2002-2005 (DoDI 6130.3) while Part B summarizes data for 2006 and 2007 (DoDI 6130.4) separately. Data from 2002-2005 are sorted by the total number of discharges in that time period (total column not shown). Data for 2006 and 2007 are sorted by total counts for 2006 and 2007.

Table 2.57A shows the top 20 conditions leading to EPTS discharge from the Army among Active Duty personnel in 2002-2005. Asthma was the leading EPTS condition over the time period examined but the number of individual discharges for this condition dropped considerably in 2005. Over the entire period considered, neurotic disorders, disease and pain of the lower and upper extremities, and back disorders were the most common conditions resulting in an EPTS discharge.

**TABLE 2.57A TOP 20<sup>†</sup> PRIMARY EPTS DISCHARGE CONDITIONS FOR ACTIVE DUTY ENLISTEES IN 2002 – 2005: ARMY**

DoDI (6130.3)	Primary EPTS Condition	2002		2003		2004		2005	
		n	%	n	%	n	%	n	%
493	Asthma	680	20.5	686	19.5	651	20.4	402	16.8
300	Neurotic, mood, somatoform, dissociative, or factitious disorder	327	9.9	402	11.4	373	11.7	437	18.2
719.4	Disease or chronic pain of lower extremities	278	8.4	335	9.5	310	9.7	203	8.5
724	Unspecified disorder of back	209	6.3	263	7.5	194	6.1	146	6.1
905.2	Upper extremity deformities, injury, and disease	160	4.8	182	5.2	166	5.2	132	5.5
718.1	Shoulder instability	88	2.7	91	2.6	58	1.8	36	1.5
784	Headaches	80	2.4	58	1.7	65	2.0	62	2.6
754.6	Pes planus, congenital	74	2.2	49	1.4	61	1.9	29	1.2
345	Convulsive disorders	62	1.9	52	1.5	43	1.3	54	2.3
401	Hypertension	24	0.7	71	2.0	65	2.0	35	1.5
717.7	Chondromalacia and Patellofemoral Pain syndrome	64	1.9	60	1.7	46	1.4	19	0.8
717.9	Unspecified internal derangement of knee	47	1.4	55	1.6	42	1.3	22	0.9
314	ADD/ADHD	31	0.9	46	1.3	36	1.1	35	1.5
V22	Pregnancy	34	1.0	16	0.5	42	1.3	38	1.6
732.4	Osteochondritis of the tibial tuberosity	38	1.1	46	1.3	31	1.0	11	0.5
313	Disturbance of emotions specific to childhood and adolescence	36	1.1	18	0.5	28	0.9	36	1.5
737	Deviation or curvature of spine current	39	1.2	38	1.1	26	0.8	13	0.5
746	Congenital anomalies of heart and great vessels	40	1.2	29	0.8	30	0.9	17	0.7
905.4	Lower extremity deformities, injury, and disease	40	1.2	31	0.9	26	0.8	12	0.5
295	Schizophrenic disorders	23	0.7	33	0.9	12	0.4	23	1.0
N/A	All other EPTS discharge categories	937	28.3	954	27.1	884	27.7	636	26.5
	Total for all EPTS discharge categories	3,311	-	3515	-	3,189	-	2,398	-

<sup>†</sup> Conditions in this table were ordered by the sum of counts in 2002-2005, except for the category other EPTS discharges.

Table 2.57B shows the top 20 conditions leading to EPTS discharge from the Army for Active Duty enlistees in 2006 and 2007. The expansion of the codes used to classify several psychiatric and orthopedic conditions resulted in an apparent underrepresentation of such conditions in 2006 and 2007 relative to previous years in which the DoDI 6130.3 governed the diagnostic coding of medical conditions. However, when the expanded categories are collapsed, the resulting totals appear consistent with the previous classification scheme. While several of the coding revisions possess a one to one correspondence between new and old codes, many of the revisions require additional information that is not readily available to translate between the two versions of the DoDI 6130.

In 2007, depressive disorders; asthma; lower leg pain, deformities, and disease; and disorders of the back were the leading causes of EPTS discharges. The number of EPTS discharges for asthma decreased again in 2007. In 2005, the number of discharges was down to 402 from 680 in CY 2002. In 2007, the number of EPTS discharges for asthma was only 98.

**TABLE 2.57B TOP 20<sup>†</sup> PRIMARY EPTS DISCHARGE CONDITIONS FOR ACTIVE DUTY ENLISTEES IN 2006 AND 2007: ARMY**

DoDI (6130.4)	Primary EPTS condition	2006		2007	
		n	%	n	%
311	Depressive disorder, not otherwise specified	166	11.2	151	9.8
493	Asthma	115	7.8	98	6.4
719.46	Lower leg pain, deformities, or disease <sup>‡</sup>	46	3.1	91	5.9
724	Back pain and limitation of motion	46	3.1	67	4.4
719.47	Ankle or foot pain, deformities or disease	47	3.2	44	2.9
345	Convulsive disorders	50	3.4	39	2.5
V22	Pregnancy	55	3.7	26	1.7
296.8	Bipolar disorder	51	3.5	29	1.9
309	Adjustment disorders	49	3.3	28	1.8
296.3	Major Depressive Disorder, recurrent	43	2.9	26	1.7
296.9	Mood disorder	17	1.2	40	2.6
300.01	Anxiety	20	1.4	35	2.3
722	Intervertebral disk degeneration, nucleus puposus herniation, and spondylopathies	21	1.4	34	2.2
719.41	Shoulder pain, disease, injury current	25	1.7	28	1.8
718.81	Shoulder instability	15	1.0	28	1.8
734	Pes planus, acquired	22	1.5	17	1.1
737	Deviation or curvature of spine	20	1.4	17	1.1
719.45	Hip or thigh pain, deformities, or disease	19	1.3	16	1.0
346	Headaches Migraines	17	1.2	14	0.9
298	Psychosis other and unspecified	16	1.1	11	0.7
N/A	All other EPTS discharge categories	616	41.7	700	45.5
Total	Total for all EPTS discharge categories	1,476	-	1,539	-

<sup>†</sup> Conditions in this table were ordered by the sum of counts in 2006 and 2007, except for the category other EPTS discharges.

<sup>‡</sup> Includes shin splints.

Table 2.58A shows the top 20 conditions leading to EPTS discharge from the Navy for Active Duty enlistees in 2002-2005. Asthma was the leading EPTS condition in 2003-2005 whereas personality disorders were the leading EPTS discharge in 2002. Unlike in the Army, EPTS discharges for asthma did not appear to decrease from 2002-2005. Neurotic disorders and personality disorders were the second and third leading causes of EPTS discharges in the Navy, although the numbers of discharges in each category have decreased substantially in more recent years. Diseases and pain of the lower extremities is also a common condition leading to EPTS, however the number of discharges for these disorders fluctuated over time. Sizeable decreases in the frequency of EPTS discharges for disturbances of emotions specific to childhood and adolescence, ADD/ADHD, conduct disorders, and drug and alcohol dependence are apparent from 2002-2005. Such variation might partly reflect a difference in the applicant pool or random variations, but inconsistent reporting of EPTS discharges by USMEPCOM makes such determination difficult.

**TABLE 2.58A TOP 20<sup>†</sup> PRIMARY EPTS DISCHARGE CONDITIONS FOR ACTIVE DUTY ENLISTEES IN 2002 – 2005: NAVY**

DoDI (6130.3)	Primary EPTS Condition	2002		2003		2004		2005	
		n	%	n	%	n	%	n	%
493	Asthma	147	8.1	167	12.6	141	14.1	154	12.5
300	Neurotic, mood, somatoform, dissociative, or factitious disorder	214	11.8	145	11.0	38	3.8	73	5.9
301	Personality disorders	268	14.7	91	6.9	30	3.0	46	3.7
719.4	Disease or chronic pain of lower extremities	43	2.4	78	5.9	56	5.6	134	10.9
313	Disturbance of emotions specific to childhood and adolescence	152	8.4	63	4.8	25	2.5	25	2.0
314	ADD/ADHD	67	3.7	58	4.4	16	1.6	23	1.9
724	Unspecified disorder of back	28	1.5	44	3.3	34	3.4	42	3.4
737	Deviation or curvature of spine	24	1.3	31	2.3	52	5.2	34	2.8
784	Headaches	28	1.5	24	1.8	17	1.7	29	2.4
V22	Pregnancy	38	2.1	17	1.3	18	1.8	24	1.9
371.6	Keratoconus of any degree	9	0.5	27	2.0	35	3.5	23	1.9
389	Hearing deficiency	25	1.4	22	1.7	22	2.2	25	2.0
905.2	Upper extremity deformities, injury, and disease	20	1.1	16	1.2	25	2.5	31	2.5
345	Convulsive disorders	18	1.0	21	1.6	19	1.9	20	1.6
312	Conduct disorders	42	2.3	15	1.1	3	0.3	6	0.5
303	Alcohol dependence syndrome	38	2.1	16	1.2	5	0.5	5	0.4
401	Hypertension	21	1.2	16	1.2	18	1.8	8	0.6
304	Drug dependence	43	2.4	9	0.7	5	0.5	4	0.3
754.6	Pes planus, congenital	26	1.4	24	1.8	7	0.7	2	0.2
780.2	Syncope	22	1.2	13	1.0	9	0.9	15	1.2
N/A	All other EPTS discharge categories	547	30.1	425	32.1	427	42.6	510	41.4
Total	Total of all EPTS discharge categories	1,820	-	1,322	-	1,002	-	1,233	-

<sup>†</sup> Conditions in this table were ordered by the sum of counts in 2002-2005, except for the category other EPTS discharges.

Table 2.58B shows the top 20 conditions leading to EPTS discharge from the Navy among Active Duty personnel in 2006 and 2007. Personality disorders surpassed asthma as the leading cause of EPTS in 2007. The number of discharges for personality disorders is nearly tripled since 2006. Asthma; lower leg pain, deformities, and disease; depressive disorders; and adjustment disorders were also top causes for EPTS discharge in 2007. As was seen for personality disorders, the frequency of depressive and adjustment disorders increased dramatically from 2006 to 2007.

**TABLE 2.58B TOP 20<sup>†</sup> PRIMARY EPTS DISCHARGE CONDITIONS FOR ACTIVE DUTY ENLISTEES IN 2006 AND 2007: NAVY**

DoDI (6130.4)	Primary EPTS condition	2006		2007	
		n	%	n	%
493	Asthma	181	13.8	130	6.5
719.46	Lower leg pain, deformities, or disease <sup>‡</sup>	131	10.0	130	6.5
301	Personality disorder	48	3.7	150	7.5
724	Back pain and limitation of motion	66	5.0	88	4.4
311	Depressive disorder, not otherwise specified	21	1.6	120	6.0
309	Adjustment disorders	18	1.4	107	5.4
314	ADD/ADHD	20	1.5	75	3.8
309.81	Posttraumatic Stress Disorder	24	1.8	69	3.5
719.47	Ankle or foot pain, deformities or disease	32	2.4	55	2.8
717.7	Chondromalacia and Patellofemoral Pain syndrome	24	1.8	40	2.0
371.6	Keratoconus of any degree	20	1.5	41	2.1
300.01	Anxiety	10	0.8	50	2.5
737	Deviation or curvature of spine	29	2.2	31	1.6
V22	Pregnancy	33	2.5	23	1.2
718.81	Shoulder instability	21	1.6	22	1.1
296.3	Major Depressive Disorder, recurrent	22	1.7	18	0.9
296.9	Mood disorder	9	0.7	30	1.5
346	Headaches Migraines	20	1.5	19	1.0
345	Convulsive disorders	14	1.1	19	1.0
786.5	Chest pain	24	1.8	9	0.5
N/A	All other EPTS discharge categories	544	41.5	761	38.3
Total	Total for all EPTS discharge categories	1,311	-	1,987	-

<sup>†</sup> Conditions in this table were ordered by the sum of counts in 2006 and 2007, except for the category other EPTS discharges.

<sup>‡</sup> Includes shin splints.

Table 2.59A shows the top 20 conditions leading to EPTS discharge of Active Duty Marine Corps enlistees during 2002 to 2005. Neurotic disorders and asthma were by far the largest contributors to EPTS discharges in Marines. These conditions were followed by personality disorders, and suicide attempt/ideation. Discharges attributable to orthopedic conditions were less common in the Marine Corps relative to the other services.

**TABLE 2.59A TOP 20<sup>†</sup> PRIMARY EPTS DISCHARGE CONDITIONS FOR ACTIVE DUTY ENLISTEES IN 2002 – 2005: MARINES**

DoDI (6130.3)	Primary EPTS Condition	2002		2003		2004		2005	
		n	%	n	%	n	%	n	%
300	Neurotic, mood, somatoform, dissociative, or factitious disorder	196	17.4	249	18.1	274	17.8	296	22.2
493	Asthma	170	15.1	172	12.5	215	13.9	153	11.5
301	Personality disorders	32	2.8	72	5.2	120	7.8	92	6.9
300.9	Suicidal behavior, gesture or attempt	69	6.1	48	3.5	85	5.5	68	5.1
719.4	Disease or chronic pain of lower extremities	24	2.1	51	3.7	48	3.1	57	4.3
784	Headaches	55	4.9	44	3.2	43	2.8	28	2.1
724	Unspecified disorder of back	28	2.5	48	3.5	55	3.6	29	2.2
314	ADD/ADHD	32	2.8	43	3.1	51	3.3	29	2.2
313	Disturbance of emotions specific to childhood and adolescence	7	0.6	39	2.8	45	2.9	17	1.3
905.2	Upper extremity deformities, injury, and disease	14	1.2	34	2.5	30	1.9	25	1.9
995	Allergic manifestations	21	1.9	19	1.4	17	1.1	27	2.0
389	Hearing deficiency	17	1.5	26	1.9	21	1.4	12	0.9
718.1	Shoulder instability	7	0.6	24	1.7	15	1.0	25	1.9
831	Shoulder dislocation	18	1.6	20	1.5	18	1.2	13	1.0
345	Convulsive disorders	20	1.8	24	1.7	14	0.9	9	0.7
315	Academic skills or perceptual defects	7	0.6	13	0.9	19	1.2	17	1.3
305	Nondependent drug abuse	3	0.3	12	0.9	23	1.5	16	1.2
307.6	Enuresis	11	1.0	16	1.2	12	0.8	15	1.1
401	Hypertension	22	2.0	7	0.5	9	0.6	8	0.6
717.9	Unspecified internal derangement of knee	10	0.9	13	0.9	13	0.8	10	0.7
N/A	All other EPTS discharge categories	363	32.2	405	29.4	416	27.0	388	29.1
Total	Total of all EPTS discharge categories	1,126	-	1,379	-	1,543	-	1,334	-

<sup>†</sup> Conditions in this table were ordered by the sum of counts in 2002-2005, except for the category other EPTS discharges.



Table 2.59B shows the top 20 conditions leading to EPTS discharge from the Marine Corps among Active Duty enlistees in 2006 and 2007. Depressive disorders, asthma, suicidal gestures, and personality disorders continued to be the top four reasons for EPTS discharge among Marines.

**TABLE 2.59B TOP 20<sup>†</sup> PRIMARY EPTS DISCHARGE CONDITIONS FOR ACTIVE DUTY ENLISTEES IN 2006 AND 2007: MARINES**

DoDI (6130.4)	Primary EPTS condition	2006		2007	
		n	%	n	%
311	Depressive disorder, not otherwise specified	178	12.5	176	14.6
493	Asthma	164	11.5	186	15.4
300.9	Suicidal behavior, gesture or attempt	67	4.7	79	6.5
301	Personality disorder	98	6.9	31	2.6
300.01	Anxiety	41	2.9	47	3.9
314	ADD/ADHD	39	2.7	47	3.9
989.5	Allergic manifestations	34	2.4	43	3.6
296.8	Bipolar disorder	35	2.5	41	3.4
724	Back pain and limitation of motion	26	1.8	30	2.5
719.46	Lower leg pain, deformities, and disease <sup>‡</sup>	39	2.7	14	1.2
309	Adjustment disorders	23	1.6	22	1.8
718.81	Shoulder instability	20	1.4	17	1.4
296.2	Major Depressive Disorder, single episode	29	2.0	5	0.4
784.0	Headaches, recurrent	16	1.1	18	1.5
346	Headaches Migraines	16	1.1	10	0.8
345	Convulsive disorders	12	0.8	11	0.9
719.41	Shoulder pain	10	0.7	12	1.0
780.2	Syncope	14	1.0	8	0.7
786.5	Chest pain	16	1.1	6	0.5
521	Insufficient natural healthy teeth	5	0.4	16	1.3
N/A	All other EPTS discharge categories	544	38.1	389	32.2
Total	Total for all EPTS discharge categories	1,426	-	1,208	-

<sup>†</sup> Conditions in this table were ordered by the sum of counts in 2006 and 2007, except for the category other EPTS discharges.

<sup>‡</sup> Includes shin splints.

Table 2.60A shows the top 20 conditions leading to EPTS discharge of Active Duty enlistees from the Air Force during the period from 2002 to 2005. Asthma was the leading cause of EPTS discharges among Air Force members over the 4-year period examined. Unspecified disorders of the back, pain and disease of the lower extremities, pes planus, and headaches, were the second, third, fourth, and fifth leading causes for EPTS discharge in the Air Force. Although headaches and diseases or chronic pain of lower extremities were among the top causes for EPTS discharge for 2002-2005 in aggregate, there were no such discharges reported in 2005.

**TABLE 2.60A TOP 20<sup>†</sup> PRIMARY EPTS DISCHARGE CONDITIONS FOR ACTIVE DUTY ENLISTEES IN 2002 – 2005: AIR FORCE**

DoDI (6130.3)	Primary EPTS Condition	2002		2003		2004		2005	
		n	%	n	%	n	%	n	%
493	Asthma	272	36.1	255	36.2	264	38.8	249	26.2
719.4	Disease or chronic pain of lower extremities	64	8.5	36	5.1	41	6.0	0	0.0
724	Unspecified disorder of back	49	6.5	34	4.8	36	5.3	65	6.8
784	Headaches	28	3.7	28	4.0	31	4.6	0	0.0
754.6	Pes planus, congenital	39	5.2	25	3.5	12	1.8	16	1.7
905.2	Upper extremity deformities, injury, and disease	15	2.0	18	2.6	17	2.5	3	0.3
717.7	Chondromalacia and Patellofemoral Pain syndrome	32	4.2	4	0.6	10	1.5	10	1.1
905.4	Lower extremity deformities, injury, and disease	9	1.2	11	1.6	14	2.1	0	0.0
345	Convulsive disorders	6	0.8	10	1.4	12	1.8	14	1.5
685	Pilonidal cyst	2	0.3	11	1.6	10	1.5	7	0.7
717.9	Unspecified internal derangement of knee	8	1.1	17	2.4	7	1.0	0	0.0
746	Congenital anomalies of heart and great vessels	6	0.8	11	1.6	7	1.0	12	1.3
732.4	Osteochondritis of the tibial tuberosity	8	1.1	7	1.0	8	1.2	11	1.2
780.2	Syncope	7	0.9	4	0.6	5	0.7	14	1.5
427	Supraventricular tachycardia	2	0.3	5	0.7	10	1.5	4	0.4
550	Hernia, including inguinal	6	0.8	5	0.7	6	0.9	4	0.4
P81	Surgical Correction of any knee ligaments	1	0.1	8	1.1	6	0.9	0	0.0
728.7	Plantar Fasciitis current	4	0.5	4	0.6	2	0.3	0	0.0
795	Abnormal Papanicolaou smear	2	0.3	10	1.4	6	0.9	0	0.0
371.6	Keratoconus of any degree	8	1.1	7	1.0	2	0.3	0	0.0
N/A	All other EPTS discharge categories	185	24.6	195	27.7	175	25.7	541	56.9
Total	Total of all EPTS discharge categories	753	-	705	-	681	-	950	-

<sup>†</sup> Conditions in this table were ordered by the sum of counts in 2002-2005, except for the category other EPTS discharges.

Table 2.60B shows the top 20 conditions leading to EPTS discharge of Active Duty enlistees from the Air Force in 2006 and 2007. The primary causes for EPTS discharge in 2007 were asthma; Chondromalacia and Patellofemoral Pain Syndrome; headaches; lower leg pain, deformities, and disease; and pes planus. While the rank order for these conditions is different from 2007 and previous years, the same conditions comprise the top seven EPTS discharge conditions in both time periods. In all years considered, psychiatric conditions comprised only a small part of EPTS discharges and this may partly be a result of active screening for these conditions in basic training at Lackland Air Force Base and in Air Force categorization of such conditions as administrative rather than EPTS discharges.

**TABLE 2.60B TOP 20<sup>†</sup> PRIMARY EPTS DISCHARGE CONDITIONS FOR ACTIVE DUTY ENLISTEES IN 2006 AND 2007: AIR FORCE**

DoDI (6130.4)	Primary EPTS condition	2006		2007	
		n	%	n	%
493	Asthma	249	26.2	329	26.3
346	Headaches Migraines	88	9.3	80	6.4
719.46	Lower leg pain, deformities, or disease <sup>‡</sup>	57	6.0	79	6.3
724	Unspecified disorders of back	65	6.8	59	4.7
717.7	Chondromalacia and Patellofemoral Pain syndrome	10	1.1	88	7.0
754.6	Pes planus, congenital	16	1.7	72	5.8
734	Pes planus, acquired	60	6.3	15	1.2
719.47	Ankle or foot pain, deformities or disease	18	1.9	42	3.4
728.71	Plantar fasciitis, current	15	1.6	18	1.4
719.41	Shoulder pain	10	1.1	18	1.4
732.4	Osteochondritis of the tibial tuberosity (Osgood-Schlatter Disease)	11	1.2	17	1.4
733	Other disorders of bone and cartilage	2	0.2	25	2.0
718.81	Shoulder instability	10	1.1	14	1.1
728	Muscle paralysis, contracture, or atrophy	2	0.2	22	1.8
780.2	Syncope	14	1.5	10	0.8
784.0	Headaches, recurrent	10	1.1	13	1.0
737	Deviation or curvature of spine	4	0.4	18	1.4
345	Convulsive disorders	14	1.5	7	0.6
746	Congenital anomalies of heart and great vessels	12	1.3	6	0.5
354	Carpal and cubital syndromes/wrist neuropathies	10	1.1	7	0.6
Other	All other EPTS discharge conditions	273	28.7	311	24.9
Total	Total of all EPTS discharge conditions	950	-	1,250	-

<sup>†</sup> Conditions in this table were ordered by the sum of counts in 2006 and 2007, except for the category other EPTS discharges.

<sup>‡</sup> Includes shin splints.

## **Part II: EPTS discharges with an accession record**

EPTS discharges among enlistees who accessed during 2002-2007 are summarized in Tables 2.61 through 2.67. Note that all references to years refer to the year of accession rather than the year of discharge. Discharge numbers reflect only discharges occurring among individuals with an accession record in the specific year. As mentioned, an EPTS discharge can only be obtained within the first 180 days of service.

Relative risks are used to compare the likelihood of EPTS discharge between demographic groups. The baseline group chosen for each comparison depends on the factor being considered. For factors with some inherent order (e.g., age group, which ranges from younger to older) it is the first or last group in that order, as appropriate. Otherwise, the baseline group is generally the largest group. All comparisons, particularly those by service branch, should be taken in light of EPTS data reporting fluctuations by service and over time (see “Data Sources” for details).

Table 2.61 shows EPTS discharges reported among individuals accessed into enlisted service during each year from 2002 through 2007. Other than an apparent decrease in frequency in 2004-2006, no obvious pattern seems to exist in the number of EPTS discharges reported in 2002 through 2007. The percent of accessions receiving an EPTS discharge remained relatively stable over the same time period. The percentage of accession discharged for an EPTS condition was lowest in 2006.

**TABLE 2.61 EPTS DISCHARGES BY ACCESSION YEAR**

<b>Year of accession</b>	<b>Accessions</b>	<b>Discharges</b>	<b>% Discharged</b>
2002	177,907	6,068	3.4
2003	164,821	5,567	3.4
2004	139,618	4,831	3.5
2005	130,600	4,359	3.3
2006	160,082	4,698	2.9
2007	159,229	5,484	3.4
Total	932,257	31,007	-

Enlisted accessions between 2002 and 2007 ending in EPTS discharges are shown in Table 2.62 for each branch of service. It shows that the EPTS discharge varies across the services. Marines have the highest discharge rate and the Air Force has the lowest. The differences are significant.

**TABLE 2.62 ENLISTED ACCESSIONS IN 2002 – 2007 ENDING IN EPTS DISCHARGE: BY SERVICE**

<b>Service</b>	<b>Accessions</b>	<b>Discharged</b>	<b>% Discharged</b>	<b>Relative risk</b>	<b>95% CI</b>
Army	334,870	11,115	3.3	1.00	-
Navy	223,336	7,896	3.5	1.07	(1.04, 1.10)
Marines	191,403	7,433	3.9	1.17	(1.14, 1.20)
Air Force	182,648	4,563	2.5	0.75	(0.73, 0.78)

Table 2.63 shows the numbers of accessions and subsequent EPTS discharges reported by gender. The risk of EPTS discharge is significantly higher among females relative to males.

**TABLE 2.63 ENLISTED ACCESSIONS IN 2002 – 2007 ENDING IN EPTS DISCHARGE: GENDER**

Gender	Accessions	Discharged	% Discharged	Relative risk	95% CI
Male	778,028	23,199	2.98	1.00	-
Female	154,225	7,807	5.06	1.70	(1.66, 1.74)

The number of EPTS discharges and accessions are shown by race for the period of 2002 to 2007 in Table 2.64. The likelihood of EPTS discharge was the highest among whites, and the lowest among others. The difference was significant.

**TABLE 2.64 ENLISTED ACCESSIONS IN 2002 – 2007 ENDING IN EPTS DISCHARGE: RACE**

Race <sup>†</sup>	Accessions	Discharged	% Discharged	Relative risk	95% CI
White	643,564	22,532	3.50	1.00	-
Black	128,848	3,977	3.09	0.88	(0.85, 0.91)
Other	82,867	2,160	2.61	0.74	(0.71, 0.78)
Missing or declined	76,978	2,338	3.04	0.87	(0.83, 0.90)

<sup>†</sup> Note: New categories for race were available beginning in 2003. However, greater numbers of applicants chose not to indicate their race.

Table 2.65 shows the numbers of accessions and EPTS discharges by age for the period of 2002 to 2007. The risk of discharge increases with increasing age group. Furthermore, the likelihood of EPTS discharge for each group is significantly higher relative to the next younger age group. The trend of discharge with age is significant.

**TABLE 2.65 ENLISTED ACCESSIONS IN 2002 – 2007 ENDING IN EPTS DISCHARGE: AGE**

Age group	Accessions	Discharged	% Discharged	Relative risk	95% CI
17 – 20	650,876	21,324	3.28	1.00	-
21 – 25	224,920	7,496	3.33	1.02	(0.99, 1.04)
26 – 30	42,862	1,606	3.75	1.14	(1.09, 1.20)
< 30	13,599	581	4.27	1.30	(1.20, 1.41)

The number of EPTS discharges and accessions are shown by education level for 2002 to 2007 in Table 2.66. Relative to those accessions with a high school education at gain, enlistees with less than a high school education or who had some level of college education at gain were significantly more likely to receive an EPTS discharge. Those enlistees entering onto Active Duty service with a Bachelor's degree or higher had a significantly lower risk for EPTS discharge relative to enlistees with a high school education.

**TABLE 2.66 ENLISTED ACCESSIONS IN 2002 – 2007 ENDING IN EPTS DISCHARGE: EDUCATION LEVEL**

Education level	Accessions	Discharged	% Discharged	Relative risk	95% CI
Below HS grad <sup>†</sup>	5,698	221	3.88	1.15	(0.98, 1.02)
HS Diploma	842,429	28,304	3.36	1.00	-
Some college	27,040	968	3.58	1.07	(1.00, 1.13)
Bachelor's and higher	21,464	426	1.98	0.59	(0.54, 0.65)
Missing	35,626	1,088	-	-	-

<sup>†</sup> Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior.

Table 2.67 shows the enlisted accessions ending in EPTS discharge for the period between 2002 and 2007 by AFQT score. Those scoring in the highest percentile groups (93-99) had the lowest risk of EPTS discharge. Each lower percentile group had a significantly higher risk of EPTS discharge relative to the highest scoring group. The risk of EPTS discharge subsequently increases with each decreasing percentile category, with the highest risk of EPTS discharge occurring among those who scored in the 11<sup>th</sup> to 29<sup>th</sup> percentiles. There was no significant difference in the EPTS discharge rates between the two lowest percentile groups.

**TABLE 2.67 ENLISTED ACCESSIONS IN 2002 – 2007 ENDING IN EPTS DISCHARGE: AFQT SCORE**

AFQT score	Accessions	Discharged	% Discharged	Relative risk	95% CI
93 – 99	53,409	1,231	2.30	1.00	-
65 – 92	337,578	10,051	2.98	1.29	(1.22, 1.37)
50 – 64	239,306	8,376	3.50	1.52	(1.43, 1.61)
30 – 49	255,938	9,759	3.81	1.65	(1.56, 1.75)
11 – 29 <sup>†</sup>	41,998	1,585	3.77	1.64	(1.52, 1.76)
Missing	4,028	5	-	-	-

<sup>†</sup> Individuals scoring in the 10<sup>th</sup> percentile or lower are prohibited from applying, although some exceptions have been noted.

## **Disability Discharges among Army and Air Force Active Duty Enlistees**

Data on disability discharge considerations are compiled separately for each service by its disability agency. The Army and Air Force disability agencies have provided data on all disability discharge considerations during 2002-2007. The Navy/Marines agency has provided data only on a diagnosis-specific request basis rather than for all actions. Consequently, only Army and Air Force disability discharge data are summarized.

### ***Part I: Disability discharges irrespective of an accession record***

Numbers are presented irrespective of accession records; the years shown refer to the year of disability discharge. The individuals being discharged could have been in the service for any number of years. Medical diagnosis categories are taken from the Veterans Administration Schedule for Rating Disability (VASRD; see the "Disability" section in "Data Sources"). The grouping of VASRD codes was updated in the CY 2007 Annual Report. The current definitions are provided in the Data Sources Section (on Page 97). The revisions took into account the use of analogous codes which are unspecified disorders within a general diagnostic category. For example, code 5399 would indicate an unspecified muscle injury (in isolation) or a previously undefined condition (when in combination with a second or third code).

Table 2.68 shows the leading diagnoses for disability discharge for the Army. Data are shown in aggregate for 2002-2006 and separately for 2007. Collectively, impairments and disease of the spine, skull, limbs, and extremities, as well as other diseases of the musculoskeletal system (including joint replacement) were by far the most common diagnoses cited for disability discharges in both 2007 (56.7%) and the previous five-year period (62.7%). Affective and nonpsychotic mental disorders were the third leading cause of disability discharges in both time periods, accounting for 6.7% in 2002-2006 and 12.9% in 2007. These were followed (in decreasing frequency) by diseases of the peripheral nerves, which represented 3.0% of disability discharges in 2002-2006 and 4.4% in 2007.

**TABLE 2.68 PRIMARY DIAGNOSIS CATEGORIES FOR DISABILITY DISCHARGES FROM ACTIVE DUTY IN 2002 – 2006 VS 2007 (IRRESPECTIVE OF LENGTH OF SERVICE): ARMY**

Diagnosis category	2002 - 2006		2007	
	Count	%	Count	%
Impairment, limitation, ankylosis of joints, spine, skull, limbs, and extremities	15,148	31.4	3,177	29.9
Prosthetic Implants and diseases of the musculoskeletal system	15,134	31.3	2,851	26.8
Affective and nonpsychotic mental disorders <sup>†</sup>	3,256	6.7	1,375	12.9
Diseases of the peripheral nerves	1,434	3.0	465	4.4
Diseases of the trachea and bronchi	2,736	5.7	448	4.2
Organic Diseases of the Central Nervous System <sup>‡</sup>	1,267	2.6	336	3.2
Muscle injuries	931	1.9	267	2.5
Diseases of the endocrine system	1,081	2.2	147	1.4
Miscellaneous neurological disorders	786	1.6	146	1.4
Schizophrenia and other psychotic disorders <sup>§</sup>	610	1.3	146	1.4
Diseases of the digestive system	844	1.7	137	1.3
Diseases of the heart	597	1.2	133	1.3
Amputation or anatomical loss of upper and lower extremities	339	0.7	125	1.2
Convulsive disorders	460	1.0	123	1.2
Diseases of the Eye or loss of vision	418	0.9	105	1.0
Diseases of the respiratory system	540	1.1	99	0.9
Diseases of the genitourinary system	423	0.9	97	0.9
Diseases of the skin	477	1.0	89	0.8
Diseases of the arteries and veins	353	0.7	73	0.7
Diseases of the cranial nerves	235	0.5	45	0.4
Other	1,242	2.6	239	2.2
Total	48,311	-	10,623	-

<sup>†</sup> Anxiety, dissociative, somatoform, and mood disorders.

<sup>‡</sup> Various dementias.

<sup>§</sup> Schizophrenia, Delusional disorder, psychotic disorder, Schizoaffective disorder, and Major Affective Disorder.



Table 2.69 shows the leading diagnoses for disability discharge for the Air Force. Disability data from 2002 to 2006 are presented in aggregate while 2007 data is summarized separately. Impairments and disease of the spine, skull, limbs, and extremities accounted for 30.0% of disability discharges in 2007 and 21.5% in the period from 2002 to 2006. Affective and nonpsychotic mental disorders were the second most common discharge condition in 2002-2006 (19.0%) and in 2007 (17.7%). The proportion of disabilities that are accounted for by impairments and disease of the spine, skull, limbs, and extremities increased in 2007 relative to 2002-2006. A similar observation was made previously in 2005. Diseases of the trachea and bronchi (9.9%) were the third leading cause of disability discharge in 2002-2006, but these were surpassed in number by discharges for prosthetic implants and diseases of the musculoskeletal system (11.6%) in 2007. Diseases of the trachea and bronchi were the fifth leading cause of disability discharges in 2007.

**TABLE 2.69 PRIMARY DIAGNOSIS CATEGORIES FOR DISABILITY DISCHARGES FROM ACTIVE DUTY IN 2002 – 2006 VS 2007 (IRRESPECTIVE OF LENGTH OF SERVICE): AIR FORCE**

Diagnosis category	2002-2006		2007	
	Count	%	Count	%
Impairment, limitation, ankylosis of joints, spine, skull, limbs, and extremities	2,614	21.5	779	30.0
Affective and nonpsychotic mental disorders <sup>†</sup>	2,319	19.0	459	17.7
Diseases of the trachea and bronchi	1,207	9.9	109	4.2
Prosthetic Implants and diseases of the musculoskeletal system	925	7.6	300	11.6
Diseases of the digestive system	449	3.7	120	4.6
Miscellaneous neurological disorders	400	3.3	98	3.8
Organic Diseases of the Central Nervous System <sup>§</sup>	353	2.9	66	2.5
Diseases of the peripheral nerves	313	2.6	100	3.9
Diseases of the endocrine system	300	2.5	44	1.7
Schizophrenia and other psychotic disorders <sup>‡</sup>	298	2.4	52	2.0
Convulsive disorders	276	2.3	44	1.7
Muscle injuries	258	2.1	65	2.5
Diseases of the heart	249	2.0	57	2.2
The hemic and lymphatic systems	138	1.1	26	1.0
Organic psychotic disorders	130	1.1	21	0.8
Diseases of the genitourinary system	121	1.0	41	1.6
Diseases of the respiratory system	116	1.0	52	2.0
Diseases of the cranial nerves	104	0.9	15	0.6
Diseases of the arteries and veins	102	0.8	34	1.3
Diseases of the Eye or loss of vision	81	0.7	23	0.9
Other	366	3.3	92	3.5
Total	11,119	-	2,597	-

<sup>†</sup> Anxiety, dissociative, somatoform, and mood disorders.

<sup>‡</sup> Various dementias.

<sup>§</sup> Schizophrenia, Delusional disorder, psychotic disorder, Schizoaffective disorder, and Major Affective Disorder.

## Part II: Disability discharges with an accession record

Numbers of medical disability discharges within the first year of service among Army and Air Force personnel who accessed during 2002 to 2007 are presented in Tables 2.70 through 2.76. Relative risks are used to compare the likelihood of disability discharge between demographic groups. The baseline group chosen for each comparison depends on the factor being considered. For factors with some inherent order (e.g., age group, which ranges from younger to older) it is the first or last group in that order, as appropriate. Otherwise, the baseline group is generally the largest group. Disability discharge data were unavailable for the Marines and Navy (see the “Disability” section in “Data Sources”).

Table 2.70 shows the numbers of disability discharges reported among individuals accessed into the Army or Air Force enlisted service during each year from 2002 to 2007. Results are shown for each year of accession. The percentages of disability discharges within one year of service are increasing over time. In 2002, the percentage of disability discharges was 0.63% and increased to 0.87% in 2006. The percentage of disabilities occurring in the first year of Active Duty service for accessions in 2007 is underestimated due to incomplete follow-up time.

**TABLE 2.70 DISABILITY DISCHARGES FOR ACTIVE DUTY WITHIN ONE YEAR OF SERVICE IN 2002 – 2007: BY YEAR**

Year of accession	Total accessed	Discharged within one year of accession	
		Count	%
2002	104,945	662	0.63
2003	96,408	580	0.60
2004	70,407	499	0.71
2005	64,132	541	0.84
2006	93,369	816	0.87
2007 <sup>†</sup>	88,257	382	0.43 <sup>†</sup>

<sup>†</sup> Follow-up for disability discharges among 2007 accessions is incomplete.

Table 2.71 shows the Active Duty enlisted accessions that ended in a disability discharge by service. Relative to Army enlistees, accessions ending in disability discharge during the first year of service were significantly less likely among Air Force enlistees.

**TABLE 2.71 DISABILITY DISCHARGES FOR ACTIVE DUTY WITHIN ONE YEAR OF SERVICE IN 2002 – 2007: BY SERVICE**

Service	Total accessions	Discharged within one year of accession			
		Count	%	Relative risk	95% CI
Army	334,870	2,614	0.78	1.00	-
Air Force	182,648	866	0.47	0.61	(0.56, 0.66)

The demographic characteristics of Army and Air Force accessions ending in disability discharge within one year of service are shown in Tables 2.72 through 2.76. Females were more than twice as likely to be discharged for disabilities as males were. The risk of disability discharge also increased with increasing age. Each younger age group had a significantly lower risk of disability discharge relative to the older age group. On comparison of the risk of disability discharge across race groups, whites clearly have a higher risk of discharge compared to all other racial groups except for those who declined to report race. With respect to the level of education attained by accession, the highest risk of disability discharge was observed for enlistees who had some level of college education prior to accession, which was significantly greater relative to accessions with a high school education. The lowest risk of disability discharge was for soldiers with less than a high school education.

**TABLE 2.72 DISABILITY DISCHARGES FOR ACTIVE DUTY WITHIN ONE YEAR OF SERVICE IN 2002 – 2007: BY GENDER**

Gender	Total accessions	Discharged within one year of accession			
		Count	%	Relative risk	95% CI
Male	415,715	2,192	0.53	1.00	-
Female	101,800	1,288	1.27	2.40	(2.24, 2.57)
Missing	3	-	-	-	-

**TABLE 2.73 DISABILITY DISCHARGES FOR ACTIVE DUTY WITHIN ONE YEAR OF SERVICE IN 2002 – 2007: BY AGE**

Age	Total accessions	Discharged within one year of service			
		Count	%	Relative risk	95% CI
17 – 21	336,295	1,905	0.57	1.00	-
21 – 25	141,353	1,074	0.76	1.34	(1.24, 1.45)
26 – 30	29,368	331	1.13	1.99	(1.77, 2.23)
> 30	10,502	170	1.62	2.86	(2.45, 3.34)

**TABLE 2.74 DISABILITY DISCHARGES FOR ACTIVE DUTY WITHIN ONE YEAR OF SERVICE IN 2002 – 2007: BY RACE**

Race <sup>†</sup>	Total accession	Discharged within one year of service			
		Count	%	Relative risk	95% CI
White	349,060	2,444	0.70	1.00	-
Black	71,561	338	0.47	0.67	(0.60, 0.76)
Other	34,672	204	0.59	0.84	(0.73, 0.97)
Declined	62,225	494	0.79	1.13	(1.03, 1.25)

<sup>†</sup> Note: New categories for race were available beginning in 2003. However, greater numbers of applicants chose not to indicate their race.

**TABLE 2.75 DISABILITY DISCHARGES FOR ACTIVE DUTY WITHIN ONE YEAR OF SERVICE IN 2002 – 2007: BY EDUCATION**

Education level	Total accessions	Discharged within one year of service			
		Count	%	Relative risk	95% CI
Below HS graduate <sup>†</sup>	1,051	5	0.48	0.71	(0.30, 1.72)
HS diploma	455,903	3,034	0.67	1.00	-
Some college	15,490	154	0.99	1.49	(1.27, 1.76)
Bachelor's and higher	15,104	116	0.77	1.15	(0.96, 1.39)
Missing	29,970	171	-	-	-

<sup>†</sup> Encompasses the following three cases: 1) one who is pursuing completion of the GED or other test-based high school equivalency diploma, vocational school, or secondary school, etc.; 2) one who is not attending high school and who is neither a high school graduate nor an alternative high school credential holder; 3) one who is attending high school but is not yet a senior.

Table 2.76 shows the numbers and likelihood of disability discharge within the first year of service by AFQT percentile score. All the discharge rates were similar to each other and no significant difference was found when comparing the likelihood of disability discharge within one year of service between any two AFQT score categories.

**TABLE 2.76 DISABILITY DISCHARGES FOR ACTIVE DUTY WITHIN ONE YEAR OF SERVICE IN 2002 – 2007: BY AFQT SCORE**

AFQT score	Total accessions	Discharged within one year of service			
		Count	%	Relative risk	95% CI
93 – 99	30,827	204	0.66	1.00	-
65 – 92	188,629	1,342	0.71	1.08	(0.93, 1.25)
50 – 64	134,719	889	0.66	1.00	(0.86, 1.16)
30 – 49	137,289	890	0.65	0.98	(0.84, 1.14)
11 – 29 <sup>†</sup>	23,935	152	0.64	0.96	(0.78, 1.18)
Missing	2,119	3	-	-	-

<sup>†</sup> Individuals scoring in the 10<sup>th</sup> percentile or lower are prohibited from applying, although some exceptions have been noted.

Table 2.77 shows the leading diagnoses for disability discharge for the Army within the first year of service. Data are shown in aggregate for 2002-2007. While disability discharges for impairments and disease of the spine, skull, limbs, and extremities, as well as other diseases of the musculoskeletal system (including joint replacement) accounted for 56.7% of all Army disability discharges in 2007 (irrespective of length of service, see Table 2.68), such conditions account for 84.1% of disability discharges that occur within one year of accession (Table 2.77). All other disability discharges among first-year soldiers collectively account for only 16% of the total with all of these categories individually representing less than 2% of all disability discharges each.

**TABLE 2.77 DIAGNOSIS CATEGORIES FOR DISABILITY DISCHARGES AMONG FIRST-TIME ACTIVE DUTY PERSONNEL WITHIN THE FIRST YEAR OF SERVICE FOR 2002 – 2006 VS 2007: ARMY**

Diagnosis category	2002 - 2007	
	Count	%
Prosthetic Implants and diseases of the musculoskeletal system	1,772	67.8
Impairment, limitation, ankylosis of joints, spine, skull, limbs, and extremities	427	16.3
Diseases of the endocrine system	49	1.9
Diseases of the peripheral nerves	49	1.9
Diseases of the trachea and bronchi	49	1.9
Affective and nonpsychotic mental disorders <sup>†</sup>	47	1.8
Muscle injuries	47	1.8
Organic Diseases of the Central Nervous System <sup>‡</sup>	27	1.0
Schizophrenia and other psychotic disorders <sup>§</sup>	26	1.0
Diseases of the arteries and veins	15	0.6
Convulsive disorders	13	0.5
Diseases of the Eye or loss of vision	12	0.5
Miscellaneous neurological disorders	11	0.4
Diseases of the skin	10	0.4
Diseases of the heart	9	0.3
The hemic and lymphatic systems	6	0.2
Diseases of the cranial nerves	5	0.2
Diseases of the genitourinary system	5	0.2
Diseases of the respiratory system	5	0.2
Diseases of the digestive system	4	0.2
Other and unspecified disorders of the sensory organs	3	0.1
Diseases of the nose and throat	1	0.0
Missing	22	0.8
Total	2,614	-

<sup>†</sup> Anxiety, dissociative, somatoform, and mood disorders.

<sup>‡</sup> Various dementias.

<sup>§</sup> Schizophrenia, Delusional disorder, psychotic disorder, Schizoaffective disorder, and Major Affective Disorder.

Table 2.78 shows the leading diagnoses for disability discharge for the Air Force within the first year of service. Data are shown in aggregate for 2002-2007. As was observed for first-year Army soldiers, disability discharges for impairments and disease of the spine, skull, limbs, and extremities, as well as other diseases of the musculoskeletal system (including joint replacement) were the largest single category for disability discharges among first-year Air Force enlistees. However, unlike the Army, the proportion of disability discharges accounted for by these conditions within the first year of Active Duty service (53.4%) is not strikingly in excess of the same proportion irrespective of length of service (41.6%, see Table 2.69). The proportion of all disability discharges accounted for by Schizophrenia and other psychotic disorders as well as for diseases of the trachea and bronchi is larger when analysis is limited to the first year of service (Table 2.78) than when no time limit is applied (Table 2.69).

**TABLE 2.78 DIAGNOSIS CATEGORIES FOR DISABILITY DISCHARGES AMONG FIRST-TIME ACTIVE DUTY PERSONNEL WITHIN THE FIRST YEAR OF SERVICE FOR 2002 – 2006 VS 2007: AIR FORCE**

Diagnosis category	2002 - 2007	
	Count	%
Impairment, limitation, ankylosis of joints, spine, skull, limbs, and extremities	308	35.6
Prosthetic Implants and diseases of the musculoskeletal system	154	17.8
Schizophrenia and other psychotic disorders <sup>†</sup>	76	8.8
Diseases of the trachea and bronchi	73	8.4
Affective and nonpsychotic mental disorders <sup>‡</sup>	61	7.0
Muscle injuries	25	2.9
Convulsive disorders	22	2.5
Diseases of the digestive system	22	2.5
Miscellaneous neurological disorders	17	2.0
Diseases of the peripheral nerves	14	1.6
Diseases of the genitourinary system	12	1.4
Diseases of the heart	12	1.4
Organic Diseases of the Central Nervous System <sup>§</sup>	12	1.4
Diseases of the endocrine system	11	1.3
Diseases of the arteries and veins	8	0.9
Diseases of the respiratory system	8	0.9
Diseases of the skin	7	0.8
Organic psychotic disorders	5	0.6
Diseases of the Eye or loss of vision	3	0.3
Dental and oral conditions	2	0.2
Diseases of the cranial nerves	2	0.2
Gynecological conditions and disorders of the breast	2	0.2
Infectious diseases, immune disorders, and nutritional deficiencies	2	0.2
The hemic and lymphatic systems	2	0.2
Diseases of the Ear	1	0.1
Diseases of the nose and throat	1	0.1
Other and unspecified disorders of the sensory organs	1	0.1
Missing	3	0.3
Total	866	-

<sup>†</sup> Schizophrenia, Delusional disorder, psychotic disorder, Schizoaffective disorder, and Major Affective Disorder.

<sup>‡</sup> Anxiety, dissociative, somatoform, and mood disorders.

<sup>§</sup> Various dementias.

### **3. DATA SOURCES**

The Accession Medical Standards Analysis and Research Activity (AMSARA) requests and receives data from various sources, most of which are the primary collection agencies for the data they provide to AMSARA. Because data are seldom collected with the goal of epidemiologic study, AMSARA coordinates with the appropriate points of contact to ensure that the following major data types needed for AMSARA studies are in an appropriate form for epidemiologic work.

As mentioned under “Charter and Supporting Documents,” AMSARA maintains strict confidentiality of all data it receives. No external access to the data is allowed, and internal access is limited to a small number of primary analysts on an as-necessary basis. Research results are provided only at the aggregate level, with no possibility of individual identification.

#### **MEPS**

AMSARA receives data on all applicants who undergo an accession medical examination 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, Coast Guard, Marines, and Navy). These data also include records on a relatively small number of officer recruit applicants and other non-applicants receiving periodic physical examinations.

From the data records provided by USMEPCOM, AMSARA extracts personal, medical, and administrative variables that are often of use in studies of military attrition. These include personal identifiers (e.g., name and SSN) for linking with other data, demographics (e.g., gender, age, and race), and a wide range of other information that is often relevant to military attrition studies (e.g., intended service, education level at the time of application, and AFQT scores).

In addition, the MEPS records provide extensive medical examination information, including date of examination, medical qualification status, medical disqualification codes (where relevant), and any waiver requirements. Results of some specific tests are also extracted, including those for hearing/vision, alcohol/drug use, and measurements of height, weight, and blood pressure.

A medical disqualification is categorized as either temporary (condition that can be remediated, e.g., being overweight) or permanent (condition that remains with the applicant, e.g., history of asthma). For those applicants with a permanent disqualification, an accession medical waiver from a service-specific waiver authority is required for the applicant to be eligible for accession into the service (see “Waiver”).

MEPS data are the primary source of demographic information on new accessions into the armed forces and of initial medical conditions and medical qualification status. These data are linked by AMSARA to the Defense Manpower Data Center (DMDC) gain files (see “Active Duty

Enlistee Gain/Loss”) to verify new accessions into the military and to provide benchmark descriptive statistics. These linked data are also used in epidemiologic investigations related to the military’s accession medical standards, such as selecting and matching subjects for survival studies to compare retention patterns among new recruits with various medical histories.

## **Active Duty Enlistee Gain and Loss Files**

The DMDC provides data on individuals entering military service (gain or accession) and on individuals exiting military service (loss). Gain and loss data, which are AMSARA’s primary sources of information about who is, or has been, in the military, include when an individual began duty and when or if an individual exited the military. From this information the length of service can be determined for any individual entering and leaving during the periods studied. This information is vital to survival analyses and attrition studies presented in several AMSARA annual reports.

Gain data include approximately 50 variables. Of these, AMSARA has identified 25 of primary interest: personal identifiers (e.g., name and SSN) for linking with other data; demographics such as age, education, and Armed Forces Qualification Test (AFQT) score at the time of accession; and service information including date of entry and Initial Entry Training (IET) site. These data are combined with MEPS data to determine accession percentages among applicants by demographic and other variables. Also, as mentioned under “MEPS,” these linked data are used in epidemiologic investigations related to the military’s accession medical standards.

Loss data also include approximately 50 variables, many of which are the same as those found in the gain file, although they reflect the individual’s status at the time of loss rather than at the time of gain. The variables of primary interest to AMSARA are personal identifiers for linking with other data, the loss date for computing length of service, and the Inter-service Separation Code (ISC) as a secondary source of the reason for leaving the military. These data serve as the primary source of information on all-cause attrition from the service and are linked with the MEPS and gain data for studies of attrition.

A problem with the loss data lies in the broad nature of the ISC that characterizes the cause of the loss. Although each service maintains its own codes for describing discharge reasons, these are replaced at DMDC by a consolidated ISC to provide a common coding system for all military discharges. Many categories have overlapping definitions, making it difficult to determine the real reason for discharge. For example, a discharge for Existing Prior to Service (EPTS) pregnancy might be coded “pregnancy,” “condition existing prior to service,” or “fraudulent enlistment.” This lack of specificity, as well as inter-service differences in discharge categorizations, has been encountered in comparing other sources of loss information (i.e., EPTS and disability discharge data) with the DMDC loss data. Moreover, a study of Army discharges at one IET site indicates that the reasons underlying many discharges are more complex than can be fully characterized by any single loss code [1].



## Medical Waiver

AMSARA receives records on all recruits who were considered for an accession medical waiver, i.e., those who received a permanent medical disqualification at the MEPS (see “MEPS”) and sought a waiver for that disqualification. Each service is responsible for making waiver decisions about its applicants. Data on these waiver considerations are generated and provided to AMSARA by each service waiver authority. Although the specifics of these data vary by service, they generally contain identifiers (e.g., name and SSN) for linking with other data, demographics (e.g., gender, age, and race), and information about the waiver consideration.

In particular, each record contains the date of the waiver consideration, indicators of the medical condition(s) for which the waiver was required, and the decision of the waiver authority. The Air Force and Army indicate medical conditions being considered for waiver using the full set of diagnostic codes in ICD-9, whereas the Navy (prior to 2006) and Marines code waiver conditions according to the subset of ICD-9 codes presented in DoD Instruction 6130.3 in association with medically disqualifying conditions.

Many AMSARA studies begin with the waiver data. Individuals granted waivers for a particular medically disqualifying condition are matched to the DMDC gain file to determine their date of entry, if any, into the service. Those found to have begun active duty within a specified time constitute the pool from which the main study subjects, and often their comparison subjects (fully qualified recruits), are drawn. Follow-up medical and attrition information during military service is appended to these records, and statistical comparisons can then be made. Specific details vary among studies. A few additional details of the data provided by each service waiver authority follow.

It should be noted that there are considerable changes over time in the numbers of waiver considerations and percentages approved for various conditions. While some of these changes are attributable to changed accession standards, others appear more likely to have resulted from changes in coding procedures or other unknown factors including the manpower needs of the services. AMSARA will work with the services' waiver authorities to reconcile these findings.

### ***Air Force***

The US Air Force Directorate of Medical Services and Training (Lackland AFB, TX) transmits, upon request, data on all officer and enlisted accession medical waivers. These data include SSN, name, action (e.g., approved, disapproved, other), and date of waiver consideration. In addition, ICD-9 codes are used to define the medically disqualifying condition(s) for which the waiver is being considered.

### ***Army***

The US Army Recruiting Command (USAREC, Fort Knox, KY) has provided monthly electronic accession medical waiver data since January 1997. Each data record contains name, SSN, action (e.g., approved, disapproved, other), and date of waiver consideration. In addition, ICD-9 codes are used to define the medically disqualifying condition(s) for which the waiver is being considered. Beginning in FY 2008, only one ICD-9 code, which represents the primary condition for which a waiver was considered, will be reported as opposed to previous years in which multiple ICD-9 codes were reported per individual (USAREC, personal communication).

## **Marines**

The US Navy Bureau of Medicine and Surgery (BUMED) in Washington, DC, provides, on request, accession and commissioning medical waiver data for enlisted personnel and officers, along with data from special programs such as Reserve Officers' Training Corps (ROTC) and the Naval Academy. Data include name, SSN, date of waiver consideration, and recommended action (e.g., approved, disapproved, other). In addition, the subset of ICD-9 codes listed in DoD Instruction (DoDI) 6130.3 is used to indicate the medically disqualifying condition(s) for which the waiver is being considered.

## **Navy**

The Office of the Commander, US Navy Recruiting Command (Millington, TN) provides accession medical waiver data on applicants for enlisted service in the Navy since May 2000. Prior to 2006, medically disqualifying conditions were encoded by the subset of ICD-9 codes defined by DoDI 6130.3. However, in 2006 and 2007, a hybrid coding system employing elements of both DoDI 6130.3 and the revised instruction, DoDI 6130.4 was in use.

## **Hospitalization**

The US Medical Command (USMEDCOM) Patient Administration Systems and Biostatistics Activity (PASBA) at Fort Sam Houston, TX provides hospitalization data on a yearly basis for all services except the Coast Guard. These data contain information on admissions of active duty officers and enlisted personnel to any military hospital. Information on each visit includes SSN for linking with other data, demographics (e.g., gender, age, and race), and details about the hospitalization. In particular, the medical nature of the hospitalization is coded according to the ICD-9, with up to eight codes per record to describe all conditions found. Date of admission, date of disposition, number of sick days, number of bed days, and indicators of the medical outcome are also included.

## **EPTS Discharges**

Discharges for EPTS medical conditions are of vital interest to AMSARA. A discharge for a medical condition can be classified as an EPTS discharge if the condition was verified to have existed before the recruit began service and if the complications leading to discharge arose no more than 180 days after the recruit began duty. USMEPCOM requests a copy of official paperwork on all EPTS discharges and records certain information about each. This information includes a rough medical categorization (20 categories) of the reason(s) for discharge and a judgment on each discharge regarding why (i.e., concealment, waiver, or unawareness) the person was not rejected for service on the basis of the preexisting condition. Beginning in August 1996, this paperwork has been regularly forwarded by USMEPCOM to AMSARA for additional data extraction, including more specific coding of medical conditions leading to discharge.

The primary concern with the EPTS discharge data is completeness. Table 3.1 summarizes the numbers of records provided to AMSARA over 2002-2007. Note that the numbers of records have been unstable over time for nearly all IET sites. For example, the numbers of EPTS records provided by the Marine Corps Training Depot in San Diego were considerably lower in 2002, 2005, and 2006. Furthermore, No EPTS discharges were reported by this training site in 2007. Within the Army, the number of EPTS discharges provided by all training sites except Fort

Jackson are considerably lower for 2005 through 2007 than for prior years. Although some variability in numbers of EPTS records over time is expected, underreporting is clearly a major source of the fluctuations.

**TABLE 3.1 EPTS DISCHARGE DATA REPORTED TO USMEPCOM BY TRAINING SITE AND YEAR<sup>†</sup>**

Training site		Year of EPTS discharge						Total
		2002	2003	2004	2005	2006	2007	
Army	Fort Benning	1,370	1,242	1,496	1,426	521	414	6,469
	Fort Jackson	822	1,242	1,231	1,002	905	1,007	6,209
	Fort Knox	582	546	377	224	148	297	2,174
	Fort Leonard Wood	864	684	741	582	386	414	3,671
	Fort Sill	314	697	567	205	244	259	2,286
Navy	Great Lakes	1,874	1,350	928	1,205	1,355	2,222	8,934
Marines <sup>‡</sup>	Parris Island	1,080	928	1,316	1,323	1,363	1,382	7,392
	San Diego	152	657	570	169	294	-	1,842
Air Force	Lackland AFB	784	754	649	590	1,024	1,339	5,140
Coast Guard	Cape May	203	166	191	166	228	317	1,271
Total		8,045	8,266	8,066	6,892	6,468	7,651	45,388

<sup>†</sup> Numbers may not sum to totals shown in Section 2 because information from specific training sites is incomplete and other requirements for records are different.

<sup>‡</sup> EPTS discharges were not reported by the San Diego Marine Corps training site in CY 2007.

AMSARA has addressed many of these data inconsistencies with on-site officials and continues to emphasize the importance of these data to assessing and improving the fitness of future recruits.

In light of these shortcomings in the data, comparisons of EPTS discharges across services, or even across different training sites within the same service, should be interpreted with caution. Disparities may reflect differences in reporting procedures more than actual differences in discharge likelihood. Furthermore, counts of EPTS records should not be construed as representing all EPTS discharges. Instead, EPTS counts only represent discharges for which data were reported.

## Disability Discharges

Data on disability discharge considerations are compiled separately for each service at its disability agency. The Army agency has provided data on all disability discharge considerations during 1995–2007 and continues to provide these data. The Air Force agency has also provided data to cover the period of 1995–2007. The Navy/Marine agency has provided data only on a diagnosis-specific request basis rather than for all actions. Therefore, only Army and Air Force disability discharge data were summarized in Section 2.

The Army Physical Disability Agency (PDA) provides information on all disability cases considered, including personal identifiers (e.g., name and SSN), program (e.g., regular enlisted, academy, or officer), date of consideration, and disposition (e.g., permanent disability, separation with or without benefits, temporary disability, or return to duty as fit). For individuals receiving a disability discharge, medical condition codes and degree of disability (rating) are also included.

The Air Force Physical Disability Division provides data on all disability cases it considers, including much of the same information as outlined for the Army. Specifically, these data include personal identifiers (e.g., name and SSN), rank, date of consideration, and disposition (e.g., permanent disability, temporary disability, or return to duty as fit). For individuals receiving a disability discharge, medical condition codes and degree of disability are also included.

For both the Army and Air Force data, the medical condition(s) involved in each case are described using the condition codes of the Veterans Administration Schedule for Rating Disabilities (VASRD). This set is less comprehensive than the ICD-9 codes. In some cases the disabling condition has no associated code, so the code most closely resembling the true condition is used. AMSARA therefore only uses broad categories of disability condition codes rather than attempting to interpret specific codes. These categories are defined in Table 3.2 and reflect revisions made for the CY 2007 Annual Report

**TABLE 3.2 VASRD CODE GROUPINGS**

<b>VASRD code range</b>	<b>Conditions encompassed</b>	<b>VASRD code range</b>	<b>Conditions encompassed</b>
5000 - 5099	Prosthetic Implants and diseases of the musculoskeletal system	7300 - 7399	Diseases of the digestive system
5100 - 5199	Amputation or anatomical loss of upper and lower extremities	7500 - 7599	Diseases of the genitourinary system
5200 - 5299	Impairment, limitation, ankylosis of joints, spine, skull, limbs, and extremities	7600 - 7699	Gynecological conditions and disorders of the breast
5300 - 5399	Muscle injuries	7700 - 7799	The hemic and lymphatic systems
6000 - 6099	Diseases of the Eye or loss of vision	7800 - 7899	Diseases of the skin
6200 - 6269	Diseases of the Ear	7900 - 7999	Diseases of the endocrine system
6270 - 6279	Diseases of other sense organs (smell and taste)	8000 - 8099	Organic Diseases of the Central Nervous System
6000 - 6299	Other and unspecified disorders of the sensory organs	8100 - 8199	Miscellaneous neurological disorders
6300 - 6399	Infectious diseases, immune disorders, and nutritional deficiencies	8200 - 8499	Diseases of the cranial nerves
6500 - 6599	Diseases of the nose and throat	8500 - 8799	Diseases of the peripheral nerves
6600 - 6699	Diseases of the trachea and bronchi	8900 - 8999	Convulsive disorders
6700 - 6799	Tuberculosis	9200 - 9299	Schizophrenia and other psychotic disorders
6800 - 6899	Diseases of the respiratory system	9300 - 9399	Organic psychotic disorders
7000 - 7099	Diseases of the heart	9400 - 9599	Affective and nonpsychotic mental disorders
7100 - 7199	Diseases of the arteries and veins	9900 - 9999	Dental and oral conditions
7200 - 7299	Injury to the mouth, lips, tongue, and esophagus		

## REFERENCES

1. Niebuhr DW, Powers TE, Krauss MR, Cuda A, Johnson K. A Review of Initial Entry Training Discharges at Fort Leonard Wood, MO for Accuracy of Discharge Classification Type: Fiscal Year 2003. *Mil Med.* 2006 Nov;171 (11):1142-6.

# Charter and Supporting Documents

HA Control #: NONE  
Due Date: NONE

February 28, 1995

ASSISTANT SECRETARY OF DEFENSE  
(HEALTH AFFAIRS)  
EXECUTIVE SUMMARY/COVER BRIEF

MEMORANDUM FOR THE ASSISTANT SECRETARY OF DEFENSE  
(HEALTH AFFAIRS)

THROUGH: *Jm* Dr. Sue Bailey, DASD (CS)  
FROM: Action Officer, Colonel Ed Miller  
SUBJECT: Accession Medical Standards Analysis and Research  
Activity (AMSARA)  
PURPOSE: SIGNATURE--on request that the Assistant Surgeon  
General of the Army (Research and Development)  
establish an Accession Medical Standards Analysis  
and Research Activity (AMSARA).

DISCUSSION:

The Accessions Medical Standards Working Group which met over the summer sponsored through MFIM funding completed a functional economic analysis of the medical accessions examination process. One of the critical recommendations made by the Group was to establish a research activity to provide the Medical Accessions Standards Council (also recommended) with an evidence-based analysis of DoD accessions medical standards. The memorandum tasks the Army with the responsibility of establishing the activity resourced under the Defense Health Program. This has already been staffed with the Assistant Surgeon General of the Army (Research and Development)

RECOMMENDATION:  
Sign tasking memorandum to Army Surgeon General.

COORDINATION:  
✓ Mr. Conte, PDUSD(P&R) \_\_\_\_\_  
✓ Mr. Maddy, HB&P: See attached memo  
✓ Mr. Richards, EO: \_\_\_\_\_  
Dr. Martin, PDASD: \_\_\_\_\_

## CHARTER AND SUPPORTING DOCUMENTS



HEALTH AFFAIRS

THE ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D. C. 20307-1200

DEC 08 1995

MEMORANDUM FOR SURGEON GENERAL OF THE ARMY

SUBJECT: Military Medical Standards Analysis and Evaluation Data Set

The personnel community has asked OASD/HA to develop a fact based accessions policy to minimize medical attrition, quantitate risk in medical waivers, and to defend accession decisions when challenged.

The offices of Clinical Services and Military Personnel Policy have worked closely with epidemiologists at Walter Reed Army Institute of Research on the concept of a Military Medical Standard Analysis and Evaluation Data Set (MMSABDS) to apply quantitative analysis to a longitudinal data base.

The Army Center for Health Promotion and Preventive Medicine (CHPPM) maintains a data base of personnel, hospitalization, deployment and separation information for all Services. I would like WRAIR, in coordination with CHPPM, to serve as consultants to the Accession Medical Standard Steering Committee, modify and maintain the data base, and coordinate field research to answer specific questions germane to accession policy.

Therefore, I request that, by the end of December 1995, a proposal be submitted through you from WRAIR, outlining the consultant role and modifications needed to the data base. This should include funding requirements.

*Edward D. Mattes /sr*

Stephen C. Joseph, M.D., M.P.H.

cc:  
Commander WRAIR

**DEPARTMENT OF DEFENSE**  
**ACCESSION MEDICAL STANDARDS**  
**STEERING COMMITTEE**

**CHARTER**

**I. ESTABLISHMENT, PURPOSE AND SCOPE**

**A. ESTABLISHMENT**

The Under Secretary of Defense (Personnel and Readiness) establishes a Department of Defense Accession Medical Standards Steering Committee (hereafter referred to as the "Committee".) The Committee shall operate under the joint guidance of the Assistant Secretaries of Defense (Force Management Policy and Health Affairs [FMP & HA].)

**B. PURPOSE**

The Committee's main objective is to ensure the appropriate use of military members with regard to medical/physical characteristics, assuring a cost-efficient force of healthy members in military service capable of completing initial training and maintaining worldwide deployability. The primary purposes of the Committee are: (1) integrating the medical and personnel communities in providing policy guidance and establishing standards for accession medical/physical requirements, and (2) establishing accession medical standards and policy based on evidence-based information provided by analysis and research.

**C. SCOPE OF ACTIVITY**

1. The Committee's responsibility involves:

- a. Providing policy oversight and guidance to the accession medical/physical standards setting process.
  - b. Directing research and studies necessary to produce evidenced-based accession standards making the best use of resources.
  - c. Ensuring medical and personnel coordination when formulating accession policy changes.
  - d. Overseeing the common application of the accession medical standards as outlined in DoD Directive 6130.3, "Physical Standards for Appointment, Enlistment, and Induction."
-



e. Interfacing with other relevant Department of Defense and Department of Transportation organizations.

f. Recommending promulgation of new DoD directives as well as revisions to existing directives.

g. Recommending legislative proposals concerning accession medical/physical processing.

h. Reviewing, analyzing, formulating and implementing policy concerning the accession physical examination.

i. Issuing policy letters or memoranda providing interpretation of provisions of DoD directives.

j. Resolving conflicts of application of accession medical/physical standards and policies among the Military Services and other authorized agents.

k. Maintaining records and minutes of Committee meetings.

## II. ORGANIZATION

A. The Committee will be co-chaired by the Deputy Assistant Secretary of Defense (Military Personnel Policy) and the Deputy Assistant Secretary of Defense (Clinical Services). This will facilitate tasking the Deputy Chiefs of Staff for Personnel and the Surgeons General to assign staffers to relevant working groups, and to ensure DCS/Personnel and Surgeon General personal involvement with the various issues. The Committee will convene semiannually, at a minimum, and at the discretion of the Chairpersons.

B. Committee members are appointed by the Under Secretary of Defense (Personnel and Readiness) and provide ongoing liaison with their respective organizations concerning matters of medical/physical accession policy.

C. The Committee shall be composed of representatives from the following:

Office of the Assistant Secretary of Defense (Force Management Policy)

Office of the Assistant Secretary of Defense (Health Affairs)

Office of the Assistant Secretary of Defense (Reserve Affairs)

Office of Service Surgeons General

Office of Service Deputy Chiefs of Staff for Personnel, and Chief of Personnel and Training, HQ U.S. Coast Guard.

D. Representatives from the Office of the Assistant Secretary of Defense (Force Management Policy) and the Office of the Assistant Secretary of Defense (Health Affairs) shall serve as executive secretaries for the Committee, and maintain a working group, composed of representatives from each of the offices mentioned above, to receive and review issues pertinent to accession policy.

E. The Commander, U.S. Military Entrance Processing Command, and the Director, DoD Medical Examination Review Board shall serve as advisors to the Committee.

F. The Committee may invite consultants (i.e., training, recruiting, epidemiology) at the discretion of the Chairpersons.

Approved: JAN 16 1996  
Date

A handwritten signature in black ink, appearing to read 'EDWIN DORN', with a large, stylized flourish extending to the right.

EDWIN DORN

## Acronyms

ACL	anterior cruciate ligament	GED	general educational development
ADD	attention deficit disorder		
ADHD	attention deficit and hyperactivity disorder	HS	high school
AFB	Air Force base	ICD-9	<i>International Classification of Diseases, 9<sup>th</sup> Revision</i>
AFQT	Armed Forces Qualification Test	IET	Initial Entry Training
AMSARA	Accession Medical Standards Analysis and Research Activity	ISC	Interservice Separation Code
AMSWG	Accession Medical Standards Working Group	MEPS	Military Entrance Processing Station
ARMS	Assessment of Recruit Motivation and Strength	MIA	Missing in Action
AWOL	Absent Without Leave	MTF	Military Medical Treatment Faculty
BCT	Basic Combat Training	OMF	Objective Medical Findings
BMI	body mass index	POW	Prisoner of War
BUMED	Navy Bureau of Medicine and Surgery	RIF	Reduction in Force
CY	Calendar year	ROTC	Reserve Officer Training Corps
DEP	Delaped Entry Program	SSB	Special Separation with Benefits
DMDC	Defense Manpower Data Center	SSN	social security number
DoD	Department of Defense	USMEDCOM	US Medical Command
DoDI	Department of Defense Instruction	USMEPCOM	US Military Entrance Processing Command
DoDMERB	Department of Defense Medical Examination Review Board	VASRD	Veterans Administration Schedule for rating Disability
EPTS	existed prior to service	VSI	Voluntary Separation Incentive
		WRAIR	Walter Reed Army Institute of Research



Accession Medical Standards Analysis & Research Activity

Division of Preventive Medicine  
Walter Reed Army Institute of Research  
503 Robert Grant Road  
Forest Glen Annex  
Silver Spring, MD 20910  
(301)319-9600

<http://www.amsara.amedd.army.mil>