

AMSARA

Accession Medical Standards
Analysis & Research Activity



Attrition & Morbidity Data for 2014 Accessions

Annual Report 2015

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Executive Summary

The Accession Medical Standards Analysis and Research Activity (AMSARA) has completed its nineteenth year of providing the Department of Defense with evidence-based evaluations of accession medical standards. AMSARA evaluates 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 fiscal year (FY) 2014 accessions.

Section 1 of this report, Special Studies, presents brief reports on selected research conducted at AMSARA. Special studies in this annual report include: analysis of the cost effectiveness of using the Tailored Adaptive Personality Assessment System (TAPAS) to screen applicants for military service; descriptive analyses of the prevalence of disqualifications and waivers for curvature of spine, sexual and gender identity disorders, and anaphylaxis in military applicants; and an analysis of the distribution of body fat percentage in the ARMS population.

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 FY14 and are compared to the five-year aggregate data from FY 2009-2013. Data are collected while the recruits are in their first year of service. By convention, the annual report is dated for the first complete year after enlistment (FY 2015). Comparisons can be made between services and between enlisted components (active, reserve, National Guard).

Approximately 250,000 active, reserve, and National Guard enlisted applicants were examined for medical fitness at Military Entrance Processing Stations (MEPS) in 2014, compared to approximately 308,000 per year average from 2009 to 2013. Among active component applicants at MEPS between 2009 and 2014, about 20% were medically disqualified, 8% applied for an accession medical waiver, 6% were approved for a medical waiver, and 74% accessed. Reserve component applicants at MEPS had a 20% medical disqualification rate, 7% waiver application rate, 5% waiver approval rate, and 67% accession rate. Among National Guard applicants at MEPS the medical disqualification rate was 24% and the accession rate was 71%. Accession medical waiver data is currently incomplete for National Guard applicants.

In 2014, there were approximately 207,000 active, reserve, and National Guard enlisted accessions as compared to an average of 227,000 per year in the period from 2009 to 2013. Among active component accessions between 2009 and 2014 13% accessed with a history of medical disqualification, 6% accessed with a waiver, and 2% were hospitalized in the first year of service. When examining discharges among active component accessions between 2009 and 2013, 2% accessions had a discharge for conditions that existed prior to service (EPTS), 0.27% had a disability discharge in the first year of service, and 12% experienced attrition in the first year of service. In reserve accessions 14% accessed with a previous medical disqualification, 5% accessed with a medical waiver, and 1% were hospitalized in the first year of service. About 1% of reserve accessions had an EPTS discharge and 0.13% had a disability discharge in the first year of service. Among National Guard accessions between 2009 and 2014, 15% accessed with a history of medical disqualification and 1% were hospitalized in the first year of service. About 1% of National Guard accessions had an EPTS

discharge and 0.11% had a disability discharge in the first year of service. Attrition rates in the reserve component and National Guard are underestimated due to the high prevalence of interservice separation codes (ISC) indicating that the reason for the discharge was unknown.

Approximately 14% (2009-2013) of applicants for active component enlisted service were initially disqualified for service due to permanently disqualifying medical conditions, and another 5% (2009-2013) received temporary disqualifications for conditions that could be remediated. Such recruits, however, are less likely to ultimately become service members, with approximately 49% of 2009-2013 applicants with permanent disqualifications and 54% of 2009-2013 applicants with temporarily disqualifying conditions subsequently gained onto active component, compared to 79% of fully qualified recruits who accessed. In 2014, disorders of refraction and accommodation (i.e. visual impairment) were the most common reason for medical disqualification. This is the third consecutive year since 1995 that body weight was not the most common reason for medical disqualification and was replaced by disorders of refraction and accommodation. Overweight/obesity and nondependent abuse of cannabis, both historically common temporary disqualifications, continued to decrease compared to previous years.

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, about 18,000 applications for accession medical waivers were considered in 2014 in the Army and Air Force. Data on waiver applications in the Navy and Marine Corps for FY 2014 were not reported in time to meet the publication deadline for this annual report. The percentage of waivers approved varies substantially by the medical condition being considered, with overall approval percentages ranging from 60% to over 90% 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.

Hospitalization data are provided for the period from 2009 to 2014. In 2014, there were approximately 2,200 hospitalizations among enlistees (all services) in the first year of service. The rate of first year hospitalization in 2014 was lower than the rate observed in 2009-2013. The top reasons for hospitalization within the first year of service among 2014 accessions were psychiatric conditions, pneumonia and influenza, and infections of the skin and subcutaneous tissue. In the second year of service, the frequency of hospitalizations for complications of pregnancy increased dramatically when compared to the first year of service, with pregnancy the most common reason for hospital admission in the second year. For first-time active duty enlistees who accessed in 2009-2014, Army and Marine Corps enlistees had the highest risk of hospitalization. Navy enlistees had the lowest risk of hospitalization. Women, whites, those over 25 years of age at the time of enlistment, those with lower military aptitude score on the Armed Forces Qualification Test (AFQT), and those with a permanent or temporary medical disqualification were at higher risk for hospitalization.

All-cause attrition of first-time active duty recruits following 90, 180, 365, and 730 days of service is also described. At two years, the Army had the highest rate of attrition for all services (approximately 17%) while the Air Force had the lowest (about 12%). Female sex,

white race, older age at the time of enlistment, lower educational attainment, lower percentile score on the AFQT, and having a permanent or temporary medical disqualification were all characteristics associated with significantly higher attrition.

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 indicate. Documentation of EPTS discharges is requested from each Initial Entry Training (IET) site by USMEPCOM (US Military Entrance Processing Command) but this reporting is not required by service regulations. The total numbers of reported discharges have varied over time and by training base.

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 continue to be the most common causes of EPTS discharges reported to USMEPCOM. Risk of EPTS discharge varies by service, with those in the Army having the lowest risk and Navy the highest. Increased risk of EPTS discharge is observed for females, recruits older than 30 years of age at accession, whites, recruits without a high school education at accession, recruits who scored in the lower AFQT percentile score groups, and recruits with a medical disqualification.

Disability evaluation is infrequent among new enlistees, with less than one percent of enlistees being considered for such a discharge within the first year of service. The rate of disability evaluation has decreased over the period 2009-2014. The most common disability evaluations during the first year of service for 2009 to 2014 accessions were for diseases of the spine, skull, limbs, and extremities in all services. Other common conditions prompting disability evaluation in the first year of service included prosthetic implants and diseases of the musculoskeletal system, and psychiatric and neurologic disorders. Risk of evaluation for disability discharge in the first year of service was highest in the Army and lowest in the Navy. Characteristics associated with increased risk of disability evaluation include being female, white, aged over 30 at time of accession, and having a lower AFQT score, and medical disqualification.

AMSARA is committed to further development of evidence-based medical 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 more than 15 years of research:

1. Various databases must be improved. For example, waiver data do not provide sufficient clinical detail such as severity, duration and prognosis to allow analyses of waiver decision criteria.
2. EPTS classification and reporting from the IET sites to USMEPCOM, 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 develop expertise in cost-benefit analyses in order to better advise DoD medical standards policy makers.
4. AMSARA should continue prospective and retrospective cohort studies similar to the Assessment of Recruit Motivation and Strength (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, including assessments of the Omaha 5 and the Tailored Adaptive Personality Assessment System (TAPAS), that are outcome oriented (morbidity, occupational qualification and performance, deployability, and attrition) in the area of physical and mental fitness, including motivation to serve, should be prioritized.
5. Rather than study accession medical standards in isolation, medical standards across the continuum of a service member'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. In FY 2009 at the direction of ASD Health Affairs, Clinical Program and Policy AMSARA began to systematically evaluate each service's Disability Evaluation System. The first annual retention medical standards analysis and research report was published for FY 2010, with subsequent reports since that time.

Introduction to the Accession Medical Standards Analysis & Research Activity

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 Deputy Assistant Secretary of Defense (Military Personnel Policy) and the Principal Deputy Assistant Secretary of Defense (Health Affairs) and comprises representatives from the Office of the Assistant Secretary of Defense (Force Health Protection and Readiness), Office of the Assistant Secretary of Defense (Clinical and Program Policy), Office of the Assistant Secretary of Defense (Reserve and Manpower Personnel), Office of the Assistant Secretary of Defense (Civilian Personnel Policy), 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 6130.03, 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. AMSARA support the efforts of the Medical-Personnel Executive Steering Committee and the Accession Medical Standards Working Group. The mission of AMSARA is to support the development of evidence-based medical 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.

INTRODUCTION

AMSARA Annual Report 2015

Military staffing to support this effort includes MAJ Michael Boivin, Chief, Department of Epidemiology, Preventive Medicine Branch and LTC Paul Kwon, Director, Preventive Medicine Branch.

AMSARA is augmented with contract support through ManTech Health. Staff in 2015 included Dr. David N. Cowan, Program Manager; Elizabeth Packnett, Principal Public Health Analyst; Xiaoshu Feng, Statistician; Hoda Elmasry, Alexis Oetting, Nadia Urban, Public Health Analysts; and Janice Gary, Senior Task Supervisor (Admin).

INTRODUCTION SPECIAL STUDIES SUMMARY APPLICANTS/ACCESSIONS DQS WAIVERS
HOSPITALIZATIONS ATTRITION EPTS DISABILITY DATA SOURCES CHARTER ACRONYMS

Special Studies

Cost Effectiveness Analysis of the Tailored Adaptive Personality Assessment System in US Army Personnel

Background

Psychiatric disorders are a persistent problem among military service members and place considerable occupational and financial burdens on individuals and the military as a whole. Relying on psychiatric screening by physicians at application or self-report by individuals are not reliable means of capturing all pre-existing cases. Recruit selection tools such as the Tailored Adaptive Personality Assessment System (TAPAS) may help mitigate this by assessing non-cognitive correlates of pre-existing psychiatric symptoms. As such, this study sought to evaluate the cost effectiveness of using TAPAS as an accession screen for pre-existing psychiatric conditions among newly accessed enlisted Army soldiers.

Methods

All non-prior service, active duty Army TAPAS takers who accessed in fiscal year 2010 were included. Non-TAPAS takers were randomly selected from the fiscal year 2010 non-prior service, active duty accession population and matched to TAPAS takers on sex at a ratio of 1:1. Individuals who failed TAPAS and scored in the lowest percentile of the Armed Forces Qualification Test (AFQT) were not eligible for enlistment; as such, all service members who score in the lowest AFQT percentile were excluded from the study.

TAPAS measures analyzed in this study include the dual composite scores of Can Do and Will Do. The Can Do composite score predicts an individual's work-related knowledge and their graduation from basic training while the Will Do composite score predicts aspects such as fitness and ability to get accustomed to life in the military. Cost measures consisted of psychiatric disorders (excluding mental retardation) based on International Classification of Disease 9th revision (ICD-9) codes 290-316 and included both ambulatory and military treatment facility (MTF) costs for fiscal year 2010. Effectiveness was measured in terms of years of service. The main outcome of interest, Net Cost Effectiveness (NCE), was calculated by taking the difference between the average psychiatric healthcare cost per Soldier per year of military service of TAPAS takers and non-TAPAS takers. As such, a negative NCE would indicate TAPAS takers were less expensive than non-TAPAS takers.

Results

Table 1.1 and 1.2 show the NCE of using TAPAS from the Will Do composite score and psychiatric healthcare cost perspectives stratified by sex. Among females, TAPAS takers were less expensive than non-TAPAS takers for all but one quintile (4th quintile, NCE: \$8.89). Males showed more consistent results as the NCE decreased at each quintile through the 4th quintile. Results from Can Do composite score perspective are shown in Tables 2a and 2b. Similar to the Will Do composite score, the NCE for females by Can Do quintiles shows a lower cost associated with each quintile except the 4th quintile. Males, however, show less consistency than

with the Will Do quintile. While male TAPAS takers at each quintile cost less than non-TAPAS takers, there is no discernable trend in the results.

Conclusions

While no consistent linear trends were observed for either Will Do or Can Do for either sex, the majority of the findings show TAPAS takers cost less than non-TAPAS takers. Given individuals who failed TAPAS were ineligible for enlistment, it is possible those screened out were at higher risk for psychiatric diagnoses; this may partially explain the reason TAPAS takers were less expensive than non-TAPAS takers. Results from this study bolster the establishment of interventions utilizing TAPAS data to either screen out individuals or provide preventive interventions to those newly accessed in an effort to reduce early attrition.

TABLE 1.1: MENTAL HEALTH COSTS AMONG ACTIVE DUTY SOLDIERS BY TAPAS QUINTILES (WILL DO) VS. TAPAS NO (FEMALE)

Quintile	n	Total Cost	Average Cost	Incremental Costs	Total Years of Service (Effectiveness)	Average Years of Service	Incremental Effectiveness	Cost-Effectiveness	Net Cost Effectiveness
1st	385	\$ 119,834	\$311.3	\$ (106)	916	2.38	0.08	\$130.89	\$ (50.46)
2nd	380	\$ 26,258	\$332.3	\$ (85)	886	2.33	0.03	\$142.53	\$ (38.81)
3rd	381	\$79,579	\$208.9	\$ (208)	863	2.27	-0.03	\$92.18	\$ (89.16)
4th	381	\$174,158	\$457.1	\$40	915	2.40	0.10	\$190.24	\$ 8.89
5th	385	\$129,520	\$336.4	\$ (81)	945	2.45	0.15	\$137.07	\$ (44.27)
No	1,929	\$804,796	\$417.0			2.30		\$181.35	

TABLE 1.2: MENTAL HEALTH COSTS AMONG ACTIVE DUTY SOLDIERS BY TAPAS QUINTILES (WILL DO) VS. TAPAS NO (MALE)

Quintile	n	Total Cost	Average Cost	Incremental Costs	Total Years of Service (Effectiveness)	Average Years of Service	Incremental Effectiveness	Cost-Effectiveness	Net Cost Effectiveness
1st	2,591	\$452,712	\$175	\$(242)	6,766	2.61	0.07	\$66.91	\$ (34.45)
2nd	2,579	\$402,350	\$156	\$(261)	6,781	2.63	0.09	\$59.33	\$ (42.02)
3rd	2,581	\$349,091	\$135	\$(282)	6,799	2.63	0.10	\$51.34	\$ (50.01)
4th	2,589	\$345,521	\$133	\$(284)	6,823	2.64	0.10	\$50.64	\$ (50.72)
5th	2,603	\$350,614	\$135	\$(283)	6,892	2.65	0.11	\$50.88	\$ (50.48)
No	13,080	\$3,365,116	\$ 257			2.54		\$101.36	

TABLE 1.3: MENTAL HEALTH COSTS AMONG ACTIVE DUTY SOLDIERS BY TAPAS QUINTILES (CAN DO) VS. TAPAS NO (FEMALE)

Quintile	n	Total Cost	Average Cost	Incremental Costs	Total Years of Service (Effectiveness)	Average Years of Service	Incremental Effectiveness	Cost-Effectiveness	Net Cost Effectiveness
1st	385	\$150,724	\$391	\$(26)	907	2.36	0.06	\$166.15	\$ (15.20)
2nd	377	\$141,381	\$375	\$(42)	892	2.37	0.06	\$158.55	\$ (22.80)
3rd	380	\$108,522	\$286	\$(132)	900	2.37	0.07	\$120.54	\$ (60.81)
4th	383	\$173,686	\$453	\$36	898	2.35	0.05	\$193.32	\$ 11.97
5th	387	\$55,036	\$142	\$(275)	927	2.40	0.10	\$59.35	\$ (122.00)
No	1,929	\$804,796	\$417			2.30		\$181.35	

TABLE 1.4: MENTAL HEALTH COSTS AMONG ACTIVE DUTY SOLDIERS BY TAPAS QUINTILES (CAN DO) VS. TAPAS NO (MALE)

Quintile	n	Total Cost	Average Cost	Incremental Costs	Total Years of Service (Effectiveness)	Average Years of Service	Incremental Effectiveness	Cost-Effectiveness	Net Cost Effectiveness
1st	385	\$150,724	\$391	\$(26)	907	2.36	0.06	\$166.15	\$ (15.20)
2nd	377	\$141,381	\$375	\$(42)	892	2.37	0.06	\$158.55	\$ (22.80)
3rd	380	\$108,522	\$286	\$(132)	900	2.37	0.07	\$120.54	\$ (60.81)
4th	383	\$173,686	\$453	\$36	898	2.35	0.05	\$193.32	\$ 11.97
5th	387	\$55,036	\$142	\$(275)	927	2.40	0.10	\$59.35	\$ (122.00)
No	1,929	\$804,796	\$417			2.30		\$181.35	

Disqualifications and Waivers for Curvature of Spine in First Time Enlisted Active Duty Applicants: FY 2008-2013

Background

Current deviation or curvature of the spine is considered disqualifying for military enlistment if the curvature interferes with physical activity or proper wearing of the military uniform, is symptomatic, or if the degree of curvature exceeds certain standards[1]. All spinal curvature disorders are listed under the same standard within the medical standards for enlistment regardless of the type of curvature: scoliosis, lordosis, or kyphosis [1]. Scoliosis is present in about 2% of adolescents and is not progressive in most patients; however, progression is more likely with a greater degree of curvature [2,3]. Scoliosis in adolescents has been associated with subsequent back problems in adulthood [3-7]. Because most spinal curvature disorders are referred to generically as scoliosis, estimates of the prevalence of lordosis and kyphosis are difficult to obtain. However, there is some evidence that the type of spinal curvature may be more strongly associated with pain [3, 6, 8, 9] and other morbidity [4, 6, 9]. The objective of this study was describe the prevalence of medical disqualifications and waivers due to curvature of spine and to determine whether the specific type of spinal curvature disorder (i.e. scoliosis, lordosis, kyphosis) associated with disqualification or waiver could be distinguished in the records of applicants for military service.

Methods

All first time applicants for enlisted active duty who received a physical exam at MEPS from FY 2008 to FY 2013 were included in this study. Applicants were considered disqualified (DQ) if they had either a medical failure code or an ICD-9 code listed in their applicant record. Accessions among applicants that occurred more than two years after the most recent physical exam date were excluded. Waiver applications were assigned to applicants if the waiver occurred in the two years following physical examination at MEPS.

Disqualifications and waivers were deemed related to curvature of spine if the ICD-9 code corresponding to curvature of the spine (i.e. 737) was listed in the applicant or waiver record at least once. The curvature of spine category was further subdivided using the fourth digit of the ICD-9 code, where available, regardless of the fifth digit. Table 1.5 lists the definitions of the four-digit ICD-9 codes for curvature of spine used for this study. In cases where an applicant or waiver record contained the ICD-9 code ‘737’ without a fourth digit, the disqualification or waiver was categorized as ‘Curvature of the spine’ with no distinction in the type of curvature (i.e. scoliosis, lordosis, or kyphosis).

TABLE 1.5: CURVATURE OF SPINE DISQUALIFICATIONS AND WAIVERS ICD-9 CODE CATEGORIES

ICD-9 Code	Definition
737	Curvature of spine
737.0	Adolescent postural kyphosis
737.1	Kyphosis (acquired)
737.2	Lordosis (acquired)
737.3	Kyphoscoliosis and scoliosis
737.4	Curvature of spine with other conditions
737.8	Other curvatures of spine
737.9	Unspecified curvature of spine

Results

Medical disqualifications for curvature of spine in first-time enlisted active duty applicants to all services are shown in table 1.6 for 2008-2011 in aggregate and separately for 2012 and 2013. Overall, about 0.15% of 2008-2011 applicants were disqualified for curvature of spine; 36% of these disqualified applicants subsequently accessed. In 2012, about 0.2% of applicants were disqualified for curvature of spine and about 0.33% were disqualified in 2013. Because applicants have two years to access and complete accession data were not available on 2012 and 2013 applicants, accession rates are not provided for these applicant years. The most common type of curvature of the spine among those disqualified was curvature of the spine without a fourth digit to specify the nature of the curve. Over 80% of applicants disqualified for curvature of spine had no additional digits to specify the nature of the curvature of spine that resulted in disqualification.

Tables 1.7-1.10 show waivers applied for curvature of spine in first-time enlisted active duty applicants for each service. In the Army (Table 1.7), 0.20-0.25% of applicants for enlisted active duty applied for a waiver, 70-90% of curvature of spine waivers were approved, and the accession rate among those with approved waivers was nearly 90%. The majority of waivers were for curvature of spine without a determination on what the nature of the curvature was (i.e. 737 with no additional digits). However, approval rates varied from 67-100% depending upon the type of curvature with the lowest approval rates observed in those with applied for unspecified curvature of the spine waivers and the highest in curvature of spine with other conditions (737.4).

In the Navy (Table 1.8) and Marine Corps (Table 1.9) the only ICD-9 code used in waiver applications was 737 without additional digits. Navy curvature of spine waivers accounted for 0.15-0.38% of all applicants for enlisted active duty. The overall waiver approval rate for curvature of spine ranged from 23-28% and the accession rate among those with an approved waiver was about 80%. Marine Corps curvature of spine waivers were sought in 0.04-0.11% of applicants for enlisted active duty. The approval rate for curvature of spine waivers was from 35-90% depending upon year of application. About 90% of applicants with an approved waiver for curvature of spine accessed onto enlisted active duty in the Marine Corps.

Air Force applicants sought waivers for curvature of spine at a rate of 0.06-0.21% depending upon year of application for enlisted active duty service (Table 1.10). The overall approval rate for curvature of spine waivers ranged from 20-90% depending upon year of application. Among those who were approved for a curvature of spine waiver, about 80% accessed onto enlisted active duty. The most common type of curvature of spine identified was curvature of spine with other conditions (ICD-9 Code 737.4) which comprised 40-70% of applications for curvature of spine waivers, depending upon the year of application for military service. In the Air Force, the highest waiver approval rates among curvature of spine waiver applicants were in curvature of spine (ICD-9 Code 737 without additional digits) and kyphoscoliosis and scoliosis.

Conclusions

Disqualifications and waivers for curvature of spine are rare, occurring in less than 0.5% of the applicant population. Non-specific ICD-9 coding associated with both disqualifications and waivers for curvature of the spine precludes any meaningful assessment of prevalence of different types of spinal curvature disorders in this population. Among those disqualified for curvature of spine at MEPS, about 80% of applicants with a curvature of spine disqualification had no fourth digit associated with the ICD-9 code for curvature of spine (737), making it impossible to determine the nature of curvature that precipitated the disqualification. In the waiver applicant population, use of the fourth digit varied by service. Navy and Marine Corps waivers for curvature of spine were exclusively coded using only the three digit ICD-9 code. In the Army and Air Force, the fourth digit was utilized more frequently but three digit waiver codes were still common.

In its current form, the existing disqualification and waiver data is not sufficient to make informed policy recommendations with respect to the type and severity of spinal curvature deformities. Given existing evidence that degree and type of curvature may have important impacts on back problems and other morbidity [3,4,6,8,9], the ability to make the distinction in the type of curvature present is essential to develop evidence-based medical accessions standards for military applicants. Further study of a cohort of military accessions with the specific type of pre-existing spinal curvature disorder noted in the applicant and waiver record is necessary in order to provide evidence to support either the inclusion or exclusion of these applicants.

TABLE 1.6: MEDICAL DISQUALIFICATIONS FOR CURVATURE OF SPINE IN FIRST-TIME ACTIVE COMPONENT APPLICANTS 2008-2011, 2012, 2013: ALL SERVICES

	2008-2011				2012			2013		
	DQ (n)	DQ (%)	Access (%)	Access Rate*	DQ (n)	DQ (%)	Access (%)	DQ (n)	DQ (%)	Access (%)
Curvature of spine (3 digits only)	1,116	0.122	0.044	36.0	333	0.166	0.060	555	0.275	0.044
Lordosis (acquired)	26	0.003	0.001	23.1	25	0.012	0.005	65	0.032	0.007
Kyphoscoliosis and scoliosis	174	0.019	0.007	37.4	30	0.015	0.004	23	0.011	0.002
Adolescent postural kyphosis	31	0.003	0.001	35.5	5	0.002	0.000	8	0.004	<0.001
Curvature of spine with other conditions	12	0.001	<0.001	16.7	6	0.003	0.002	1	<0.001	0.0
Unspecified curvature of spine	4	<0.001	<0.001	25.0	0	-	-	0	-	-
Total Curvature of Spine DQ	1,363	0.149	0.053	36.0	403	0.201	0.072	665	0.329	0.054
Total Applicants	917,573				200,942			201,861		

*Rate of accession per 100 applicants with each medical condition.

TABLE 1.7: ACCESSION MEDICAL WAIVERS FOR CURVATURE OF SPINE IN FIRST-TIME ACTIVE COMPONENT APPLICANTS 2008-2013: ARMY

Conditions	2008-2011				2012			2013		
	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]	Access Rate [*]	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]
Curvature of Spine (3 digits only)	377	0.107	88.8	89.3	110	0.163	97.6	119	0.167	98.4
Curvature of spine with other conditions	128	0.036	85.3	90.6	24	0.036	88.9	24	0.034	96.9
Lordosis (acquired)	64	0.018	92.2	83.3	7	0.010	83.3	20	0.028	100.0
Kyphoscoliosis and scoliosis	21	0.006	49.3	89.3	11	0.016	50.0	11	0.015	33.3
Unspecified curvature of spine	3	0.001	80.7	66.7	0	-	94.1	1	0.001	92.9
Curvature of Spine (3 digits only)	2	0.001	61.1	100.0	110	0.163	66.7	119	0.167	18.2
Curvature of spine with other conditions	28	0.008	92.9	89.3	24	0.036	100.0	24	0.034	88.9
Lordosis (acquired)	30	0.009	90.0	90.6	7	0.010	100.0	20	0.028	100.0
Total Curvature of Spine Waivers	643	0.182	71.7	88.3	163	0.242	85.3	218	0.306	89.5
Total Waivers	35,103	9.9	67.1	83.7	7,535	11.2	68.1	7,495	10.5	72.5
Total Applicants	353,087				67,480			71,132		

* Rate of accession per 100 applicants with each medical condition.

† Rate of approval per 100 waiver applicants with each medical condition.

TABLE 1.8: ACCESSION MEDICAL WAIVERS FOR CURVATURE OF SPINE IN FIRST-TIME ACTIVE COMPONENT APPLICANTS 2008-2013: NAVY

Conditions	2008-2011				2012			2013		
	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]	Access Rate [*]	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]
Curvature of Spine (3 digits only)	330	0.149	26.4	80.5	131	0.248	23.7	208	0.382	28.4
Total Curvature of Spine Waivers	330	0.149	26.4	80.5	131	0.248	23.7	208	0.382	28.4
Total Waivers	16,465	7.4	61.1	80.3	5,348	10.1	57.9	5,244	9.6	63.0
Total Applicants	221,492				52,788			54,392		

* Rate of accession per 100 applicants with each medical condition.

† Rate of approval per 100 waiver applicants with each medical condition.

TABLE 1.9: ACCESSION MEDICAL WAIVERS FOR CURVATURE OF SPINE IN FIRST-TIME ACTIVE COMPONENT APPLICANTS 2008-2013: MARINE CORPS

Conditions	2008-2011				2012			2013		
	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]	Access Rate [*]	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]
Curvature of Spine (3 digits only)	206	0.106	35.0	84.7	22	0.053	50.0	17	0.038	70.6
Total Curvature of Spine Waivers	206	0.106	35.0	84.7	22	0.053	50.0	17	0.038	89.5
Total Waivers	8,354	4.3	74.6	80.3	1,676	4.0	90.9	1,116	2.5	86.3
Total Applicants	194,345				41,568			44,351		

* Rate of accession per 100 applicants with each medical condition.

† Rate of approval per 100 waiver applicants with each medical condition.

TABLE 1.10: ACCESSION MEDICAL WAIVERS FOR CURVATURE OF SPINE IN FIRST-TIME ACTIVE COMPONENT APPLICANTS 2008-2013: AIR FORCE

Conditions	2008-2011				2012			2013		
	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]	Access Rate [*]	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]
Curvature of spine with other conditions	38	0.024	21.1	75.0	56	0.147	19.6	35	0.108	20.0
Curvature of spine (3 digits only)	18	0.011	44.4	87.5	5	0.013	0.0	7	0.022	42.9
Kyphoscoliosis and scoliosis	7	0.004	42.9	66.7	5	0.013	20.0	5	0.015	60.0
Lordosis (acquired)	6	0.004	0.0	0.0	3	0.008	0.0	3	0.009	0.0
Adolescent postural kyphosis	7	0.004	28.6	50.0	1	0.003	100.0	0	-	-
Total Curvature of Spine Waivers	99	0.063	27.3	77.8	79	0.208	20.3	51	0.157	89.5
Total Waivers	10,096	6.4	71.6	85.2	3,338	8.8	67	2,222	6.827	71.8
Total Applicants	157,170				37,995			32,546		

* Rate of accession per 100 applicants with each medical condition.

† Rate of approval per 100 waiver applicants with each medical condition.

References

1. Undersecretary of Defense, Personnel and Readiness. *Medical Standards for Appointment, Enlistment, or Induction in the Military Services*. U.S. Department of Defense. Department of Defense Instruction 6130.03. 13 Sep 2011.
2. Hresko, T.M., *Idiopathic Scoliosis in Adolescents*. New England Journal of Medicine, 2013. 368: p.834-841.
3. Asher, M.A., Burton, D.C., *Adolescent Idiopathic Scoliosis: Natural History and Long Term Treatment Effects*. Scoliosis, 2006. 1(1): p. 2.
4. Weinstein, S.L., Zavala, D.C., Ponseti, I.V., *Idiopathic Scoliosis: Long-Term Follow-Up and Prognosis in Untreated Patients*. The Journal of Bone and Joint Surgery, 1981. 63(5): p. 702-712.
5. Nachemson, A., *Adult Scoliosis and Back Pain*. Spine, 1979. 4(6): p. 513-517.
6. Gemeaux, V., et al., *Analysis of Low Back Pain in Adults with Scoliosis*. Spine, 2008. 33(4): p. 402-405.
7. Grauers A., et al., *Prevalence of Back Problems in 1069 Adults with Idiopathic Scoliosis and 158 Adults without Scoliosis*. Spine, 2014. 39(11): p.886-892.
8. Schwab, F.J., et al., *Adult Scoliosis: A Quantitative Radiographic and Clinical Analysis*. Spine, 2002. 27(4): p. 387-392.
9. Glassman, S.D., et al., *Correlation of Radiographic Parameters and Clinical Symptoms in Adult Scoliosis*, Spine, 2005. 30(6): p. 682-688.

Disqualifications and Waivers for Sexual and Gender Identity Disorders in First Time Enlisted Active Duty Applicants: 2008-2013

Background

Under current military enlistment regulations, transgender applicants are disqualified from enlistment based upon the medical standards for sexual and gender identity disorders [1]. Transgender is an umbrella term for persons whose gender identity, gender expression or behavior does not conform to that typically associated with the sex to which they were assigned at birth [2]. A transgender individual may have transitioned to a different gender, but that it not necessary. Sexual and gender identity disorders, listed in the standard under Learning, Psychiatric, and Behavioral disqualifications, include “current or history of psychosexual conditions (302), including but not limited to transsexualism, exhibitionism, transvetism, voyeurism, and other paraphilias.” Physical changes are also disqualifying, as applicants with a “history of major abnormalities or defects of the genitalia such as change of sex (P64.5) (CPT 55970, 55980), hermaphroditism, pseudohermaphroditism, or pure gonadal dysgenesis (752.7)” will be medically disqualified [1]. There are an estimated 15,000 transgender service members currently serving in the United States military [3]; however, the prevalence of disqualifications of transgender military applicants is unknown. The objective of this study was to describe the prevalence of medical disqualifications and waivers due to sexual and gender identity disorders and to determine how medical codes are applied for this section of the standard.

Methods

All first time active duty enlisted applicants who received a physical exam at MEPS from FY2008 to FY 2013 were included in this study. Applicants were considered disqualified (DQ) if they had either an ICD-9 code or a medical failure code in their applicant record. Accessions among applicants that occurred more than two years after the most recent physical exam date were excluded. Waiver applications were assigned to applicants if the waiver occurred in the two years following physical examination at MEPS.

Although there is no specific ICD-9 code for transgender, transgender applicants are disqualified under the umbrella code ICD-9 code 302 in the standard. In addition to 302, applicants with a procedure code (P64.5) or CPT code (55970, 55980) for operations for sex transformation, which is disqualifying under the male and female genitalia sections of 6130.03, were also captured. The full list of ICD-9 codes and their descriptions are shown in Table 1.11. In cases where an applicant or waiver record contained the ICD-9 code ‘302’ without a fourth digit, the disqualification or waiver was categorized as ‘Sexual or gender identity disorder’ with no distinction in the type of disorder.

TABLE 1.11: SEXUAL AND GENDER IDENTITY DISORDERS DISQUALIFICATION AND WAIVER ICD-9 CODE CATEGORIES

ICD-9 Code	Definition
302	Sexual and gender identity disorders
302.0	Ego-dystonic sexual orientation
302.1	Zoophilia
302.2	Pedophilia
302.3	Transvestic fetishism
302.4	Exhibitionism
302.5	Transsexualism
302.6	Gender identity disorder in children
302.7	Psychosexual dysfunction
302.8 (except 302.85)	Other specified psychosexual disorders
302.85	Gender identity disorder in adolescents or adults
302.9	Unspecified psychosexual disorder
P64.5, CPT 55970, 55980	Operations for sex transformation

Results

Table 1.12 shows the number of first time enlisted active duty applicants with a medical disqualification related to gender and identity disorders for FY 2008-2011 in aggregate and separately for 2012 and 2013. A small number of applicants have been disqualified for any sexual and gender identity disorders. Overall, less than 0.005% of applicants in 2008-2011 were disqualified for a sexual and gender identity disorder; 20.5% of these disqualified applicants accessed. About 0.003% of applicants in 2012 and less than 0.002% in 2013 were disqualified for a sexual and gender identity disorder; none of these applicants subsequently accessed. The most common medically disqualifying condition in this category was sexual and gender identity disorders without a fourth digit to specify the type of disorder. The next most common code is unspecified psychosexual disorder. The third most common medically disqualifying condition is operations for sex transformation. This is a procedure code under operations on the male genital organs.

Waiver applications between FY 2008 and 2013 for sexual and gender identity disorders are shown in Table 1.13. The Army had the highest number of waiver applications for sexual and gender identity disorders, although there were only 12 applications, 25% of which were approved and only 1 accession. Over 50% of waiver applications were for sexual and gender identity disorders without the fourth digit (302). The approval rate for 302 was 14.3% with no accessions. The next most common waiver application was for other specified psychosexual disorder (302.8 excluding 302.85), which had an approval rate of 50% and 1 accession.

In the Navy, there were 9 waiver applications for operations for sex transformation (P64.5); 44% of which were approved, with 3 applicants ultimately accessing. There were no waiver applications for any other conditions. The Marine Corps did not have any waiver applications for sexual and gender identity disorders. The Air Force had one waiver application for other specified psychosexual disorders, which was approved and the applicant subsequently accessed.

Conclusions

Disqualifications and waivers for sexual and gender identity disorder are extremely rare, occurring in less than 0.005% of the applicant population. It is difficult to determine the number of transgender applicants due to non-specific ICD-9 coding used in the applicant and waiver records, in addition to the lack of a specific transgender ICD-9 code. Nearly half of the disqualifications for sexual and gender identity disorder had no fourth digit associated with the ICD-9 code for sexual and gender disorder (302), which makes it unclear what the specific cause for disqualification was. In the Army waiver data, the three digit code 302 made up nearly 60% of waiver applications.

In the Navy, the ICD-9 procedure code P64.5, which indicates the applicant had an operation for a sex transformation, was the most common code in the waiver records. The description of P64.5 in the ICD-9 codebook differs from what is listed in the DODI 6130.03 standard, which disqualifies applicants with a “History of major abnormalities or defects of the genitalia including but not limited to change of sex.” The difference in the ICD-9 text and the DODI 6130.03 text implies that the code may have a more general use than specifically identifying operations for sex transformations.

Changing views regarding transgender identity in the medical community [4] have led to calls for changes in the military’s medical accession and retention standards for transgender applicants [5-6]. The Accession Medical Standards Working Group is currently reviewing all the accession medical policy issues contained in DODI 6130.03; however, based on the limitations outlined here, the disqualification and waiver data on transgender applicants is not sufficient to inform policy recommendations.

TABLE 1.12: MEDICAL DISQUALIFICATIONS FOR SEXUAL AND GENDER IDENTITY DISORDERS IN FIRST-TIME ACTIVE COMPONENT APPLICANTS 2008-2011, 2012, 2013: ALL SERVICES

	2008-2011				2012			2013		
	DQ (n)	DQ (%)	Access (%)	Access Rate*	DQ (n)	DQ (%)	Access (%)	DQ (n)	DQ (%)	Access (%)
Sexual and gender identity disorders	21	0.0023	0.0004	19	1	0.0005	0.0	2	0.001	0.0
Unspecified psychosexual disorder	9	0.001	0.0001	11.1	1	0.0005	0.0	0	-	-
Other specified psychosexual disorders	5	0.0005	0.0001	20	0	-	-	0	-	-
Operations for sex transformation	4	0.0004	0.0002	50	1	0.0005	0	1	0.0005	0.0
Psychosexual dysfunction	3	0.0003	0.0001	33.3	0	-	-	0	-	-
Ego-dystonic sexual orientation	2	0.0002	0.0	0.0	1	0.0005	0.0	0	-	-
Gender identity disorder in children	1	0.0001	0.0	0.0	0	-	-	0	-	-
Pedophilia	1	0.0001	0.0001	100	0	-	-	0	-	-
Total Sexual and Gender Identity Disorders DQ	44	0.0048	0.001	20.5	5	0.0025	0.0000	3	0.0015	0
Total Applicants	917,573				200,942			201,861		

*Rate of accession per 100 applicants with each medical condition.

TABLE 1.13: ACCESSION MEDICAL WAIVERS FOR SEXUAL AND GENDER IDENTITY DISORDERS IN FIRST-TIME ACTIVE COMPONENT APPLICANTS 2008-2013 BY SERVICE

Conditions	Army			Navy			Marine Corps			Air Force		
	Waiver Apply (n)	Waiver Approve Rate [†]	Access Rate [*]	Waiver Apply (n)	Waiver Approve Rate [†]	Access Rate [*]	Waiver Apply (n)	Waiver Approve Rate [†]	Access Rate [*]	Waiver Apply (n)	Waiver Approve Rate [†]	Access Rate [*]
Sexual and gender identity disorders	7	14.3	0.0	0	-	-	0	-	-	0	-	-
Other specified psychosexual disorders	4	50	50.0	0	-	-	0	-	-	1	100	100
Unspecified psychosexual disorder	1	0.0	0.0	0	-	-	0	-	-	0	-	-
Operations for sex transformation	0	-	-	9	44.4	75	0	-	-	0	-	-
Total Sexual and Gender Identity Disorders Waivers	12	25.0	33.3	9	44.4	75.0	0	-	-	1	100	100
Total Waivers	50,133	68.1	79.8	27,048	60.8	72.4	11,146	78.2	76.7	15,656	70.7	76.9
Total Applicants	491,699			328,372			280,264			227,711		

* Rate of accession per 100 applicants with each medical condition.

† Rate of approval per 100 waiver applicants with each medical condition.

References

1. Undersecretary of Defense, Personnel and Readiness. *Medical Standards for Appointment, Enlistment, or Induction in the Military Services*. U.S. Department of Defense. Department of Defense Instruction 6130.03. 13 Sep 2011.
2. American Psychological Association. *Answers to your questions about transgender people, gender identity and gender expression*. Washington, D.C., 2014. <http://www.apa.org/topics/lgbt/transgender.aspx>. Accessed 02 Jul 2015.
3. Gates, G.J. and Herman, J.L., *Transgender Military Service in the United States*. The Williams Institute, UCLA School of Law. 2014. Available at <http://williamsinstitute.law.ucla.edu/wp-content/uploads/Transgender-Military-Service-May-2014.pdf>. Accessed 02 July 2015.
4. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders: DSM-5™ (5th ed.)*. Arlington, VA, American Psychiatric Publishing Inc, 2013.
5. American Medical Association House of Delegates. *Military Medical Policies Affecting Transgender Individuals*. American Medical Association. Resolution 011 (A-15). 2015.
6. Pollock, G.S., et al., *Report of the Planning Commission on Transgender Military Service*. Palm Center. San Francisco, 2014.

Disqualifications and Waivers for Allergy and Anaphylaxis in First Time Enlisted Active Duty Applicants: FY 2009-2013

Background

Anaphylaxis is a serious, life-threatening systemic hypersensitivity reaction which is rapid in onset [1] and may require immediate medical attention. Recent studies and reports have suggested that the prevalence of allergies, particularly food allergies is on the rise in industrialized countries [2-5]. A history of anaphylaxis or systemic allergic reactions to food is considered disqualifying for military enlistment. Anaphylaxis or allergies to stinging insects, food, latex or medicine are all disqualifying and would require obtaining an accession medical waiver except under certain conditions [6]. Anaphylaxis to stinging insects is disqualifying unless the applicant has been treated successfully with maintenance venom immunotherapy for 3-5 years. A history of systemic allergic reactions to food or food additives, defined as a “temporally related, systemic, multi-system reaction to a specific food” is disqualifying; however, the presence of a food-specific immunoglobulin E antibody without a correlated clinical history is not disqualifying. Idiopathic anaphylaxis or anaphylaxis triggered by latex or medicinal agents is disqualifying too [6].

As with all medically disqualifying conditions, the possibility of anaphylaxis or a severe allergic reaction while on duty could have negative consequences for the Soldier’s health and safety. The risks to the Soldier depend on the type of trigger for the anaphylaxis or allergy. The fifth digit of an International Classification of Diseases, 9th edition (ICD-9) code must be used in order to differentiate between the types of triggers of allergy and anaphylaxis. The purpose of this review is to describe the prevalence of medical disqualifications and waivers due to allergy and anaphylaxis as well as determine whether the different types of allergy and anaphylaxis could be distinguished in the records of applicants for military service.

Methods

First time active duty applicants who received a physical exam at MEPS from FY2008 to 2013 were included. Applicants were considered disqualified (DQ) if they had either an ICD-9 code or a medical failure code in their applicant record. Accessions among applicants that occurred more than two years after the most recent physical exam date were excluded. Waiver applications were assigned to applicants if the waiver occurred in the two years following physical examination at MEPS.

Disqualifications and waivers related to allergy and anaphylaxis had at least one of the ICD-9 codes listed in the applicant or waiver record. Table 1.14 lists the definitions of the four and five-digit ICD-9 codes for allergy and anaphylaxis used in this study. Due to differences in coding by the Navy waiver authority, in which in-house codes are recorded in the waiver record instead of ICD-9 codes, waiver records with the ICD-9 code 995.7 were captured only for Navy applicants. Waiver applicants may have a waiver with more than one condition, but are counted once per condition.

TABLE 1.14: ALLERGY AND ANAPHYLAXIS DISQUALIFICATION AND WAIVER ICD-9 CODE CATEGORIES

ICD-9 Code	Definition
989.5	Anaphylaxis to stinging insects
995.0	Other anaphylactic shock
995.6	Anaphylactic shock due to adverse food reaction
995.60	Anaphylactic shock due to unspecified food
995.61	Anaphylactic shock due to peanuts
995.62	Anaphylactic shock due to crustaceans
995.63	Anaphylactic shock due to fruits and vegetables
995.64	Anaphylactic shock due to tree nuts and seeds
995.65	Anaphylactic shock due to fish
995.66	Anaphylactic shock due to food additives
995.67	Anaphylactic shock due to milk products
995.68	Anaphylactic shock due to eggs
995.69	Anaphylactic shock due to other specified food
995.7 (Navy only)	Adverse reaction to food, not elsewhere classified
V15.0	Allergy, other than to medicinal agents
V15.01	Allergy to peanuts
V15.02	Allergy to milk products
V15.03	Allergy to eggs
V15.04	Allergy to seafood
V15.05	Allergy to other foods
V15.06	Allergy to insects
V15.07	Allergy to latex
V15.08	Allergy to radiographic dye
V15.09	Other allergy, other than to medicinal agents

Results

Medical disqualifications for allergy and anaphylaxis in first time enlisted active duty applicants to all services are shown in Table 1.15 for 2008-2011 in aggregate and separately for 2012 and 2013. Overall, 0.3% of applicants were disqualified for allergy and anaphylaxis in 2008-2011, of which 46.3% subsequently accessed. About 0.6% of applicants in 2012 were disqualified for allergy and anaphylaxis and 0.9% were disqualified in 2013. Because applicants have two years to access and complete accession data were not available on 2012 and 2013 applicants, accession rates were not provided for these years. The most commonly disqualifying condition was other anaphylactic shock (995.0), which is a code used for allergic shock and anaphylactic reactions not otherwise specified. The second most common disqualifying condition was anaphylactic shock due to adverse food reaction (995.6).

Tables 1.16 through 1.19 show the waivers applied and approval rates for allergy and anaphylaxis conditions for each service. In the Army (Table 1.16), 0.20-0.36% of applicants applied for a waiver, 80-89% of allergy and anaphylaxis waivers were approved, and the accession rate among those with approved waivers was 78%.

Waiver applications for allergy and anaphylaxis have made up a greater proportion of waiver applications among applicants in 2012 and 2013 compared to the previous five year period. The majority of waivers were for other anaphylactic shock, a code describing allergic shock or anaphylaxis not otherwise specified. The second most commonly waived condition, anaphylactic shock due to adverse food reaction is a four digit code that also does not specify the cause of

anaphylaxis. Allergies to seafood were the most common five digit code used among waivers. Anaphylaxis to stinging insects was the fourth most common waiver application, but it also had one of the lowest approval rates among allergy and anaphylaxis waivers (33-50%). The approval rates ranged from as low as 18% to as high as 100% depending on the type of allergies and anaphylaxis. Allergies and anaphylaxis related to insects, peanuts, and tree nuts had the lowest approval rates, while waivers for seafood and unspecified allergies and anaphylaxis had the highest approval rates. .

Among Navy waiver applications, only four allergy and anaphylaxis-related conditions were used, as seen in Table 1.17. Applicants in the Navy with allergy and anaphylaxis waivers accounted for 0.42-2.0% of applicants for enlisted active duty. The proportion of applicants with a waiver application for any allergy or anaphylaxis condition has increased significantly in 2012 and 2013 compared to the previous five year period. The most common condition was other anaphylactic shock (995.0), followed by adverse reactions to food not elsewhere classified (995.7). The other two waived conditions were five digit V codes, allergy to latex (V15.07) and allergy to milk products (V15.02). The proportion of applicants with a waiver for other anaphylactic shock increased in 2012 and 2013 compared to the previous five year period with over 1.6% of Navy active duty enlisted applicants with a waiver application for 995.0. The accession rate for this condition was 75%. The approval rates for allergy and anaphylaxis waivers in the Navy were as low as 20% and as high as 100%, but were generally between 63 and 89%.

The Marine Corps waivers for allergy and anaphylaxis, shown in Table 1.18, were given for other anaphylactic shock. There were zero waiver applications for allergy and anaphylaxis in 2012 and 2013. Among Marine Corps applicants for enlisted active duty, 0.06% sought a waiver for other anaphylactic shock, 90% of waivers were approved, and 81% of applicants subsequently accessed.

The Air Force had low numbers of applications for allergy and anaphylaxis waivers (Table 1.19) similar to the Marine Corps. Air Force applicants sought waivers for allergy and anaphylaxis at a rate of 0.02-0.07% depending on year of application for enlisted active duty service. Overall, the approval rate for allergy and anaphylaxis was low, ranging from 42-53%. The accession rate for approved waivers was around 85%. The number of waiver applications in 2012 and 2013 was less than 20 for both years. The most common waiver applications were for anaphylaxis to stinging insects (989.5), allergy to seafood (V15.04), and other anaphylactic shock (995.0). Both anaphylaxis to stinging insects and allergy to seafood had low approval rates around 53-54%, while other anaphylactic shock had an approval rate around 87%. The accession rate for the most common conditions ranged from 80-95%.

Conclusions

Disqualifications and waivers for anaphylaxis and allergy occur in less than 1% of the applicant population; however, the percent of applicants with a medical disqualification or a waiver application for these types of conditions has increased in 2012 and 2013 compared to the previous five year period. The most common type of anaphylaxis in the applicant records was

idiopathic anaphylaxis (995.0) in which the allergen is unknown. The second most common type of anaphylaxis in the applicant records was anaphylactic shock due to adverse food reaction, which is 995.6 without a fifth digit to specify the food allergen. This is particularly problematic in the Navy and Marine Corps data, as information about the type of allergen is not available from the applicant records.

A lack of specificity in the data with regard to allergens could limit the ability to make informed policy recommendations regarding disqualifications and waivers for anaphylaxis and allergies. It is recommended that providers at MEPS utilize the fifth digit with regard to anaphylaxis and allergy as much as possible in order to distinguish between the types of allergens.

TABLE 1.15: MEDICAL DISQUALIFICATIONS FOR ALLERGY AND ANAPHYLAXIS IN FIRST-TIME ACTIVE COMPONENT APPLICANTS 2008-2011, 2012, 2013: ALL SERVICES

	2008-2011				2012			2013		
	DQ (n)	DQ (%)	Access (%)	Access Rate*	DQ (n)	DQ (%)	Access (%)	DQ (n)	DQ (%)	Access (%)
Other anaphylactic shock	1,173	0.1278	0.0641	50.1	780	0.3882	0.2284	1,229	0.6088	0.1853
Anaphylactic shock due to adverse food reaction	284	0.0310	0.0145	46.8	98	0.0488	0.0219	115	0.0570	0.0159
Anaphylactic shock due to unspecified food	251	0.0274	0.0131	47.8	86	0.0428	0.0234	83	0.0411	0.0084
Anaphylaxis to stinging insects	268	0.0292	0.0110	37.7	69	0.0343	0.0134	71	0.0352	0.0054
Allergy to latex	159	0.0173	0.0064	37.1	76	0.0378	0.0164	66	0.0327	0.0079
Allergy to seafood	237	0.0258	0.0125	48.5	38	0.0189	0.0090	63	0.0312	0.0089
Allergy to other foods	129	0.0141	0.0060	42.6	21	0.0105	0.0050	42	0.0208	0.0054
Anaphylactic shock due to crustaceans	88	0.0096	0.0035	36.4	31	0.0154	0.0055	32	0.0159	0.0059
Anaphylactic shock due to peanuts	100	0.0109	0.0035	32.0	22	0.0109	0.0015	32	0.0159	0.0
Anaphylactic shock due to tree nuts and seeds	48	0.0052	0.0022	41.7	5	0.0025	0.0015	17	0.0084	0.0025
Allergy to peanuts	85	0.0093	0.0033	35.3	18	0.0090	0.0025	15	0.0074	0.0015
Anaphylactic shock due to fruits and vegetables	32	0.0035	0.0022	62.5	12	0.0060	0.0025	11	0.0054	0.0015
Anaphylactic shock due to fish	38	0.0041	0.0026	63.2	9	0.0045	0.0020	10	0.0050	0.0020
Adverse food reactions, not elsewhere classified	23	0.0025	0.0012	47.8	13	0.0065	0.0045	9	0.0045	0.0015
Anaphylactic shock due to other specified food	34	0.0037	0.0019	50.0	8	0.0040	0.0020	9	0.0045	0.0020

	2008-2011				2012			2013		
	DQ (n)	DQ (%)	Access (%)	Access Rate*	DQ (n)	DQ (%)	Access (%)	DQ (n)	DQ (%)	Access (%)
Other allergy, other than to medicinal agents	61	0.0066	0.0036	54.1	9	0.0045	0.0030	7	0.0035	0.0010
Anaphylactic shock due to eggs	20	0.0022	0.0010	45.0	4	0.0020	0	6	0.0030	0.0005
Anaphylactic shock due to milk products	29	0.0032	0.0016	51.7	6	0.0030	0.0005	4	0.0020	0.0005
Allergy to eggs	10	0.0011	0.0004	40.0	5	0.0025	0.0015	2	0.0010	0.0005
Anaphylactic shock due to food additives	6	0.0007	0.0003	50.0	2	0.0010	0.0005	2	0.0010	0.0
Allergy to insects	56	0.0061	0.0023	37.5	6	0.0030	0.0020	2	0.0010	0.0005
Allergy to milk products	37	0.0040	0.0016	40.5	2	0.0010	0.0005	1	0.0005	0.0
Allergy to radiographic dye	1	0.0001	0.0	0.0	1	0.0005	0.0005	0	-	-
Total Allergy and Anaphylaxis DQ	3,083	0.3	0.2	46.3	1,291	0.6	0.3	1,784	0.9	0.3
Total Applicants	917,573				200,942			201,861		

*Rate of accession per 100 applicants with each medical condition.

TABLE 1.16: ACCESSION MEDICAL WAIVERS FOR ALLERGY AND ANAPHYLAXIS OF SPINE IN FIRST-TIME ACTIVE COMPONENT APPLICANTS 2008-2013: ARMY

Conditions	2008-2011				2012			2013		
	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]	Access Rate [*]	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]
Other anaphylactic shock	224	0.0634	88.8	75.9	127	0.1882	97.6	125	0.176	98.4
Anaphylactic shock due to adverse food reaction	95	0.0269	85.3	77.8	27	0.0400	88.9	32	0.045	96.9
Allergy to seafood	51	0.0144	92.2	76.6	12	0.0178	83.3	15	0.021	100.0
Anaphylaxis to stinging insects	73	0.0207	49.3	91.7	12	0.0178	50.0	15	0.021	33.3
Anaphylactic shock due to unspecified food	57	0.0161	80.7	78.3	17	0.0252	94.1	14	0.020	92.9
Anaphylactic shock due to peanuts	18	0.0051	61.1	72.7	3	0.0044	66.7	11	0.015	18.2
Allergy to other foods	28	0.0079	92.9	80.8	4	0.0059	100.0	9	0.013	88.9
Anaphylactic shock due to crustaceans	30	0.0085	90.0	70.4	5	0.0074	100.0	9	0.013	100.0
Anaphylactic shock due to other specified food	6	0.0017	66.7	75.0	2	0.0030	100.0	6	0.008	100.0
Allergy to latex	35	0.0099	77.1	74.1	19	0.0282	63.2	4	0.006	75.0
Allergy to peanuts	15	0.0042	60.0	88.9	4	0.0059	50.0	4	0.006	50.0
Anaphylactic shock due to tree nuts and seeds	9	0.0025	55.6	100.0	2	0.0030	100.0	4	0.006	100.0
Anaphylactic shock due to fruits and vegetables	4	0.0011	100.0	100.0	0	-	-	3	0.004	100.0
Anaphylactic shock due to eggs	8	0.0023	75.0	83.3	1	0.0015	0.0	2	0.003	100.0
Allergy to insects	13	0.0037	46.2	100.0	3	0.0044	0.0	1	0.001	100.0
Anaphylactic shock due to fish	13	0.0037	92.3	83.3	1	0.0015	100.0	1	0.001	100.0
Anaphylactic shock due to food additives	0	-	-	-	0	-	-	1	0.001	100.0
Anaphylactic shock due to milk products	4	0.0011	100.0	100.0	0	-	-	1	0.001	100.0
Other allergy, other than to medicinal agents	13	0.0037	100.0	69.2	2	0.0030	0.0	1	0.001	100.0
Allergy to eggs	2	0.0006	50.0	100.0	1	0.0015	0.0	0	-	-
Allergy to milk products	7	0.0020	71.4	80.0	1	0.0015	100.0	0	-	-
Allergy to other than medical agents	0	-	-	-	2	0.0030	100.0	0	-	-
Total Allergy and Anaphylaxis Waivers	695	0.197	80.9	78.1	244	0.362	87.7	257	0.361	89.5
Total Waivers	35,103	9.9	67.1	83.7	7,535	11.2	68.1	7,495	10.5	72.5
Total Applicants	353,087				67,480			71,132		

* Rate of accession per 100 applicants with each medical condition.

† Rate of approval per 100 waiver applicants with each medical condition.

TABLE 1.17: ACCESSION MEDICAL WAIVERS FOR ALLERGY AND ANAPHYLAXIS OF SPINE IN FIRST-TIME ACTIVE COMPONENT APPLICANTS 2008-2013: NAVY

Conditions	2008-2011				2012			2013		
	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]	Access Rate [*]	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]
Other anaphylactic shock	575	0.2596	81.6	75.9	506	0.959	81.8	922	1.695	87.6
Adverse reaction to food, not elsewhere classified	307	0.1386	84.7	73.1	133	0.252	63.2	152	0.279	78.9
Allergy to latex	46	0.0208	89.1	80.5	13	0.025	84.6	10	0.018	100
Allergy to milk products	11	0.005	81.8	77.8	5	0.009	20	2	0.004	50
Total Allergy and Anaphylaxis Waivers	921	0.4158	83.6	75.3	648	1.228	77.9	1,070	1.967	86.4
Total Waivers	16,456	7.4	61.1	80.3	5,348	10.1	57.9	5,244	9.6	63
Total Applicants	221,492				52,788			54,392		

* Rate of accession per 100 applicants with each medical condition.

† Rate of approval per 100 waiver applicants with each medical condition.

TABLE 1.18: ACCESSION MEDICAL WAIVERS FOR ALLERGY AND ANAPHYLAXIS OF SPINE IN FIRST-TIME ACTIVE COMPONENT APPLICANTS 2008-2013: MARINE CORPS

Conditions	2008-2011				2012			2013		
	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]	Access Rate [*]	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]
Other anaphylactic shock	116	0.0597	90.5	81.9	0	-	-	0	-	-
Total Allergy and Anaphylaxis Waivers	116	0.0597	90.5	81.9	0	-	-	0	-	-
Total Waivers	8,354	4.3	74.6	81.9	1,676	4.0	90.9	1,116	2.5	86.3
Total Applicants	194,345				41,568			44,351		

* Rate of accession per 100 applicants with each medical condition.

† Rate of approval per 100 waiver applicants with each medical condition.

TABLE 1.19: ACCESSION MEDICAL WAIVERS FOR ALLERGY AND ANAPHYLAXIS OF SPINE IN FIRST-TIME ACTIVE COMPONENT APPLICANTS 2008-2013: AIR FORCE

Conditions	2008-2011				2012			2013		
	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]	Access Rate [*]	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve Rate [†]
Anaphylaxis to stinging insects	31	0.0197	54.8	82.4	0	-	-	2	0.0061	100
Other anaphylactic shock	23	0.0146	87	95	5	0.0132	100	1	0.0031	0.0
Allergy to peanuts	15	0.0095	6.7	100	5	0.0132	20	1	0.0031	0.0
Anaphylactic shock due to adverse food reaction	6	0.0038	83.3	80	1	0.0026	-	1	0.0031	0.0
Allergy to latex	2	0.0013	-	-	0	-	-	1	0.0031	100
Anaphylactic shock due to unspecified food	0	-	-	-	0	-	-	1	0.0031	-
Allergy to seafood	28	0.0178	53.6	80	3	0.0079	-	0	-	-
Allergy to other foods	10	0.0064	20	50	3	0.0079	-	0	-	-
Other allergy, other than to medicinal agents	4	0.0025	100	100	1	0.0026	-	0	-	-
Anaphylactic shock due to fruits and vegetables	1	0.0006	-	-	1	0.0026	0.0026	0	-	-
Allergy to milk products	1	0.0006	100	100	0	-	-	0	-	-
Allergy to eggs	0	-	-	-	1	0.0026	0.0026	0	-	-
Anaphylactic shock due to milk products	0	-	-	-	1	0.0026	-	0	-	-
Total Allergy and Anaphylaxis Waivers	119	0.0757	53.8	85.9	19	0.05	42.1	7	0.0215	42.9
Total Waivers	10,096	6.4	71.6	85.2	3,338	8.8	67	2,222	6.8	71.8
Total Applicants	157,170				37,995			32,546		

* Rate of accession per 100 applicants with each medical condition.

† Rate of approval per 100 waiver applicants with each medical condition.

References

1. Sampson, H.A., et al., *Second symposium on the definition and management of anaphylaxis: Summary report—Second National Institute of Allergy and Infectious Disease/Food Allergy and Anaphylaxis Network symposium*. Journal of Allergy and Clinical Immunology, 2006. 117(2): p. 391-397.
2. Jackson, K.D., et al., *Trends in allergic conditions among children: United States, 1997-2011*. U.S. Department of Health and Human Services. National Center for Health Statistics Data Brief, No 121. May 2013.
3. Sicherer, S.H., et al., *US prevalence of self-reported peanut, tree nut, and sesame allergy: 11-year follow-up*. Journal of Allergy and Clinical Immunology, 2010. 125(6): 1322-1326.
4. Nwaru, B.I., et al., *The epidemiology of food allergy in Europe: a systematic review and meta-analysis*. Allergy, 2014. 69: 62-75.
5. Venter, C, et al., *Time trends in the prevalence of peanut allergy: three cohorts of children from the same geographical location in the UK*. Allergy, 2010. 65: 103-108.
6. Undersecretary of Defense, Personnel and Readiness. *Medical Standards for Appointment, Enlistment, or Induction in the Military Services*. U.S. Department of Defense. Department of Defense Instruction 6130.03. 13 Sep 2011.

Body Fat Percent Distribution in ARMS Study Population

Background

Results from the National Health and Nutrition Examination Survey (NHANES) indicated in 2011-2012 the prevalence of overweight and obesity among adolescents aged 12-19 was 34.5%. This high prevalence in overweight/obesity has held steady since 2003-2004 [1]. In 2006, it was estimated that 35% of male and 28% of female applicants to military service were overweight or obese based on current BMI standards [2]. The increase of overweight and obese individuals has led to a drop in the pool of eligible recruits applying to military service who can meet approved height and weight standards.

The Assessment of Recruit Motivation and Strength (ARMS) study [3-7] provided an opportunity for otherwise-qualified applicants who exceeding Army weight for height and body fat standards but passed a pre-accession physical fitness test to gain a military accession waiver. The purpose of this study is to describe the distribution of body fat percent (BF%) in the ARMS applicant population of recruits who received waivers for exceeding body fat standards compared to those who met body fat standards and for whom body fat percent data is recorded.

Methods

A total of 11,369 study subjects were first-time applicants to the US Army entering between February 2005 and September 2006 at six military entrance processing stations (MEPS). This study describes body fat percent distribution among those who exceeded body fat standards (EBF) and the traditional recruit population (fully-qualified [FQ]), separately. Both groups were required to take a pre-accession physical fitness test during this time period but only those exceeding body fat percent were required to pass to enter the military. In addition to passing the ARMS test, to enter service, maximum body fat for EBF subjects could not exceed 30% for males and 36% for females based on the current standards for applicants aged 40 and older (see Table 1.20). Body fat percent data is available for nearly all EBF subjects (99%). However, only 27% of FQ subjects have recorded body fat percent data as soldiers who met screening table weight for age and measured height were not required to undertake body fat assessment (8). Subjects with missing data for body fat percent were excluded from this analysis (N=7,444). Age, race and smoking status at time of entry into military service were also recorded.

TABLE 1.20 ARMY MAXIMUM ALLOWABLE PERCENT BODY FAT STANDARDS [8]

Age (Years)	Sex	
	Men	Women
18-20	26%	32%
21-27	26%	32%
28-39	28%	34%
≥40	30%	36%

Results

Demographic characteristics of the ARMS study subset are presented in Table 1.21. Among men, there were 822 exceeding BF% and 2,170 meeting standards. Among women, 316 exceeded BF% and 617 met standards. Most subjects were male (76.2%), aged 18-20 years (56.9%), white (70.5%) and nonsmokers (77.4%). Among men, the proportion of subjects aged 28-39 years was higher among FQs than EBFs (7.6% versus 2.2%, respectively, $p < 0.0001$). Among men, race differed between groups, with more black individuals in the FQ compared to EBF group (11.2% versus 7.5%, respectively, $p < 0.0001$). There was no significant difference in proportions of smokers between male FQs and EBFs. Among women, there was no significant difference in age, race or smoking status between FQs and EBFs.

TABLE 1.21: CHARACTERISTICS OF STUDY PARTICIPANTS (N=3,925)

	Men				Women			
	FQ (n=2,170)		EBF (n=822)		FQ (n=617)		EBF (n=316)	
	n	%	n	%	n	%	n	%
Age (Years)								
18-20	1,154	53.2	497	60.5	381	61.8	202	63.9
21-27	850	39.2	307	37.3	187	30.3	102	32.3
28-39	166	7.6	18	2.2	49	7.9	12	3.8
Race								
White	1,595	73.5	608	74.0	367	59.5	198	62.7
Black	243	11.2	62	7.5	156	25.3	79	25.0
Other/Missing	332	15.3	152	18.5	94	15.2	39	12.3
Smoker								
No	1,641	75.6	629	76.5	508	82.3	261	82.6
Yes	509	23.5	188	22.9	103	16.7	48	15.2
Missing	20	0.9	5	0.6	6	1.0	7	2.2

FQ: Fully Qualified; EBF: Exceeds Body Fat Standards

Figure 1.1 presents data on the body fat percent profile of fully-qualified male subjects by age category. Overall, mean body fat percent recorded for FQ males is 24% (data not shown). The majority of FQ males in all three age categories had recorded body fat percent of 26% or lower (18-20 years [82%]; 21-27 years [78%]; 28-39 years [58%]). A quarter of FQ males aged 18-20 years and nearly a third of those aged 21-27 years had recorded body fat percent between 25% and 26%. Of those FQ males aged 28-39 years, over half had body fat recorded between 25% and 28%.

The distribution of body fat percent among fully-qualified female subjects is shown in Figure 1.2. Mean body fat percent for FQ females is 31% (data not shown). Most FQ females in all three age categories had recorded body fat percent not exceeding 32% (18-20 years [81%]; 21-27 years [71%]; 28-39 years [53%]). Over half of FQ females aged 18-20 years and nearly two-thirds of those aged 21-27 years had recorded body fat percent between 29% and 32%. Eighty-

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six percent of FQ females aged 28-39 years had body fat not exceeding 34%, the maximum allowable percent standard for that age category.

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FIGURE 1.1: DISTRIBUTION OF SUBJECTS BODY FAT PERCENTAGE BY AGE CATEGORY: FULLY-QUALIFIED MEN

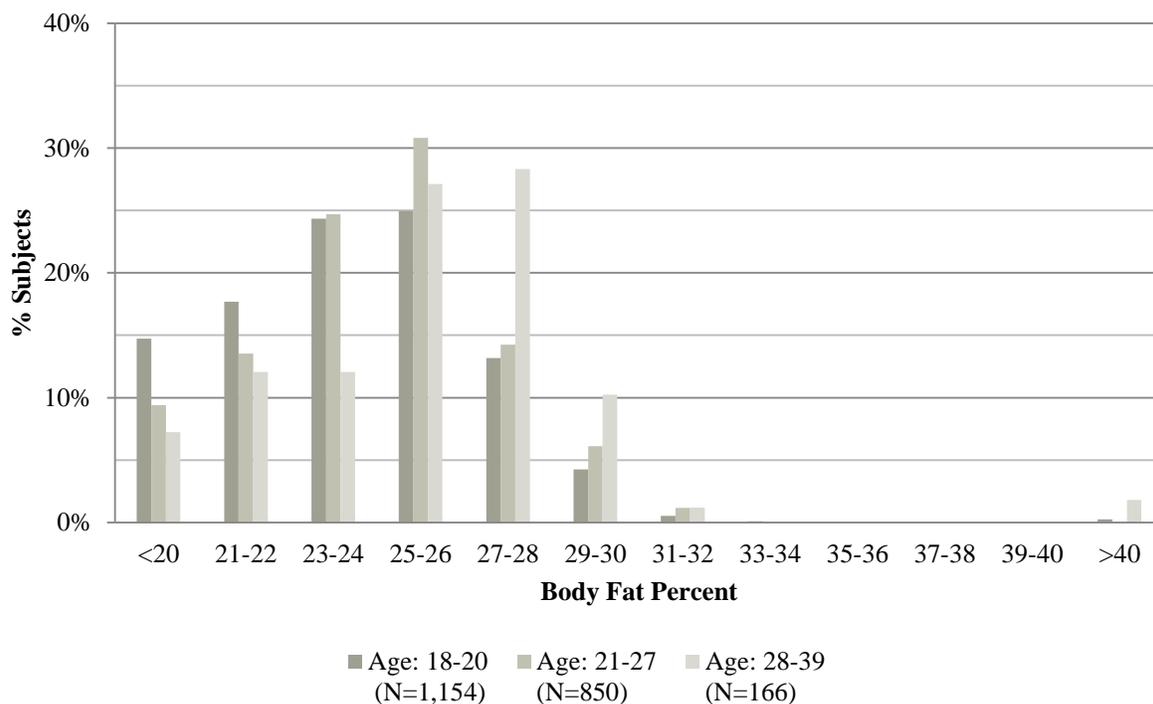


FIGURE 1.2: DISTRIBUTION OF SUBJECTS BODY FAT PERCENTAGE BY AGE CATEGORY: FULLY-QUALIFIED WOMEN

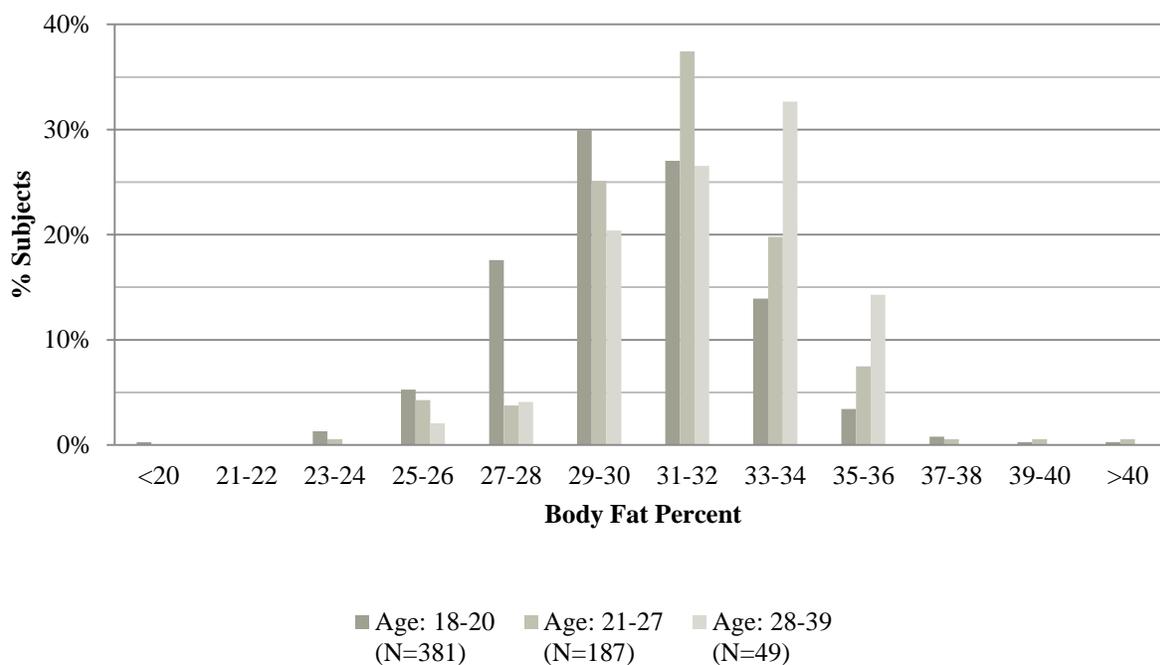


Figure 1.3 depicts the distribution of body fat percent among EBF males. The mean body fat percent recorded for this group is 28% (data not shown). Over 95% of EBF males had recorded body fat percent of 30% or lower, the maximum allowable percent standard for those aged 40 and older (18-20 years [97%]; 21-27 years [94%]; 28-39 years [61%]). Over two-thirds of EBF males aged 18-20 years and nearly three-quarters of those aged 21-27 years had recorded body fat percent between 27% and 30%. All eighteen EBF males aged 28-39 years had body fat recorded between 27% and 32%.

Figure 1.4 describes the body fat percent profile of EBF females. Overall, mean body fat percent for all EBF females is 33% (data not shown). Ninety-four percent of all EBF females had recorded body fat percent of 36% or lower (18-20 years [96%]; 21-27 years [90%]; 28-39 years [86%]). Approximately sixty percent of EBF females aged 18-27 years had recorded body fat percent between 33% and 36%. Among the twelve EBF females aged 28-39 years, two (14%) exceeded 36%, the maximum allowable percent standard for those aged 40 and older.

Conclusions

The preceding study described the distribution of body fat percent among a subset of ARMS subjects in 2005 and 2006 for whom body fat data was available. Nearly two-thirds of ARMS subjects had missing body fat percent data (74% of WQ and 1% of EBF) and were excluded from the analysis. The results of the study show that while the majority of fully qualified subjects did not exceed age-specific Army maximum allowable percent body fat standards, 19% of males and 21% of females surpassed these limits at the time of body fat percent assessment. Among EBF subjects, 5% of males and 6% of females exceeded the current standard for allowable maximum percent body fat for applicants aged 40 years and older, the limit set for accession for individuals who obtained an ARMS waiver. Thus, either errors occurred in the data recording or recruits who initially exceeded weight for age and measured height body fat standards, lost weight to meet Army standards before entering service.

According to NHANES, 1999-2004, average body fat for US males in the general population ranged from 23% at age 16-19 years to 26% at age 20-39 years. For US females, the average body fat was higher, ranging from 35% at age 16-19 years to 38% at age 20-39 years (9). Among the subset of ARMS subjects aged 18-39 years, mean body fat ranged from 24% among WQ males, to 28% among EBF males and 31% among WQ females to 33% among EBF females. These findings suggest that body fat percent in the ARMS population versus the general population is slightly higher among men and slightly lower among women. However, as the data currently exist, analysis of body fat percent should be interpreted with caution. More rigorous investigation is required to reach any strong conclusions.

FIGURE 1.3: DISTRIBUTION OF SUBJECTS BODY FAT PERCENTAGE BY AGE CATEGORY: EBF MEN

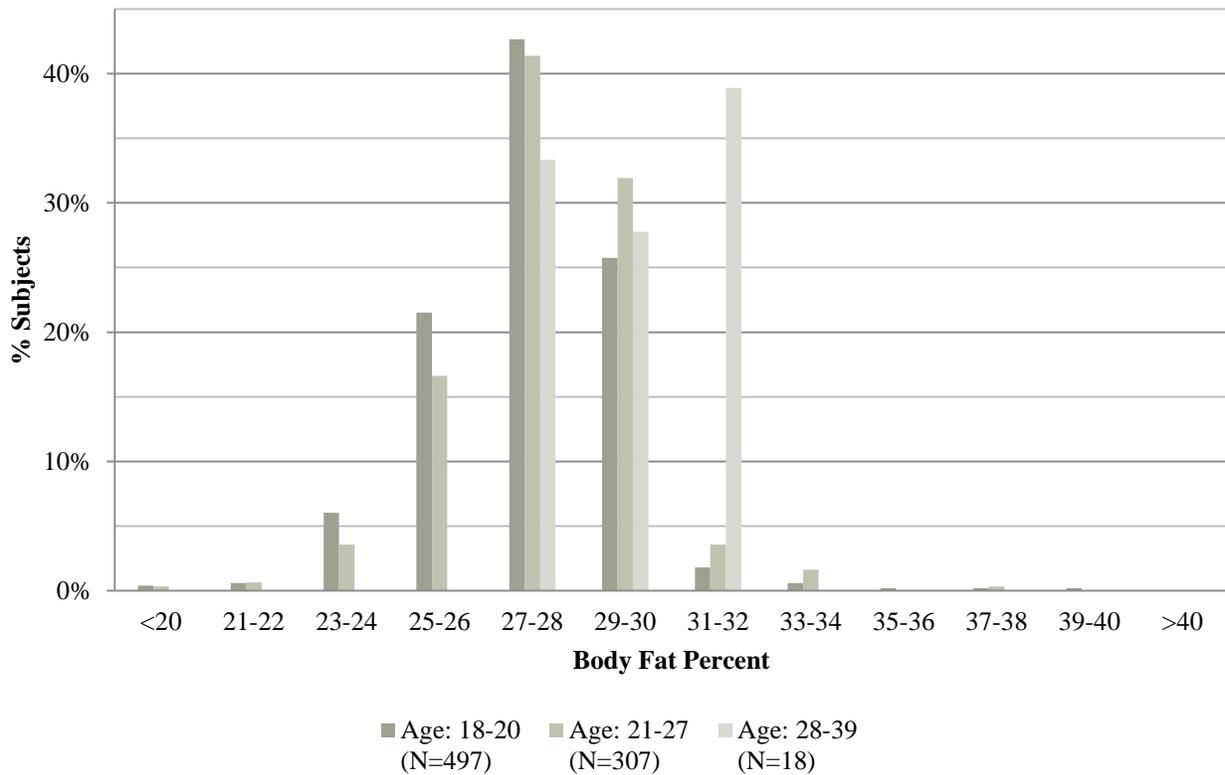
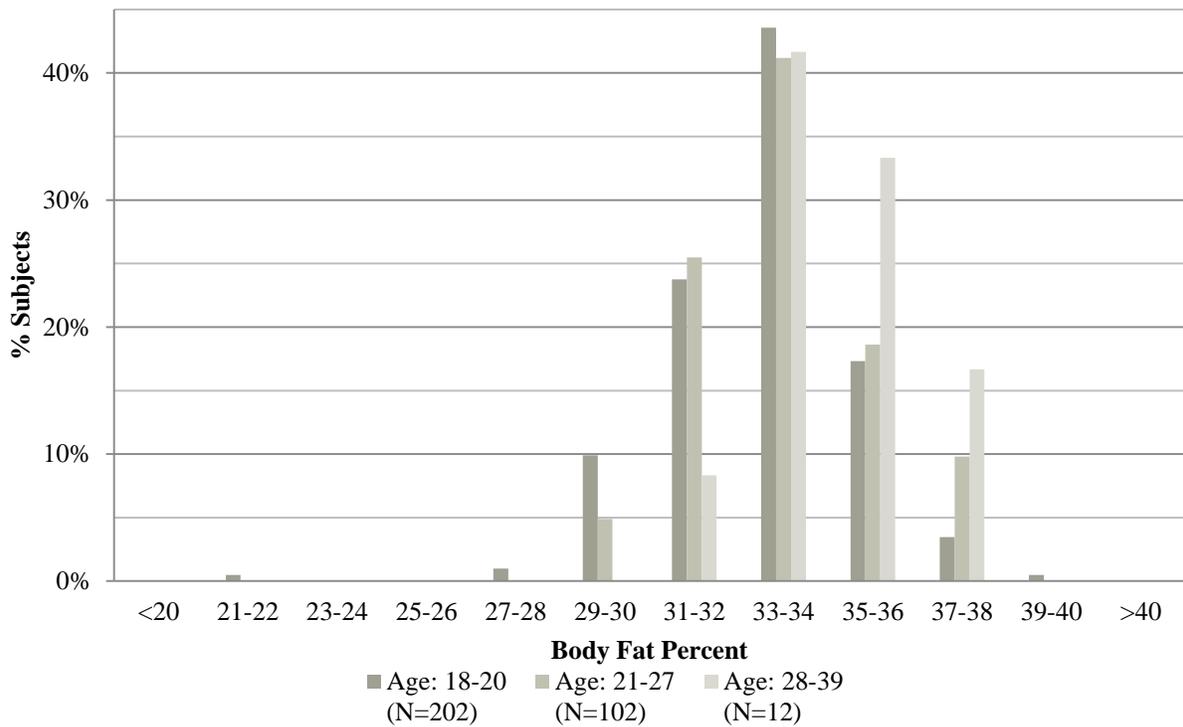


FIGURE 1.4: DISTRIBUTION OF SUBJECTS BODY FAT PERCENTAGE BY AGE CATEGORY: EBF WOMEN



References

1. Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of childhood and adult obesity in the United States, 2011-2012. *Journal of the American Medical Association* 2014;311(8):806-814.
2. Armed Forces Health Surveillance Center. Diagnoses of Overweight/Obesity AC, U.S. Armed Forces, 1998–2008. *Medical Surveillance Monthly Report (MSMR)* 2009;16:2–6.
3. Niebuhr DW, Scott CT, Powers TE, et al. Assessment of recruit motivation and strength study: preaccession physical fitness assessment predicts early attrition. *Mil Med* 2008;173(6):555-562.
4. Niebuhr DW, Scott CT, Li Y, Bedno SA, Han W, Powers TE. Preaccession fitness and body composition as predictors of attrition in U.S. Army recruits. *Mil Med* 2009;174(7):695-701.
5. Bedno SA, Li Y, Han W, et al. Exertional heat illness among overweight U.S. Army recruits in basic training. *Aviat Space Environ Med* 2010;81(2):107-111.
6. Gubata ME, Cowan DN, Bedno SA, Urban N, Niebuhr DW. Self-reported physical activity and preaccession fitness testing in U.S. Army applicants. *Mil Med* 2011;176(8):922-925.
7. Cowan DN, Bedno SA, Urban N, Yi B, Niebuhr DW. Musculoskeletal injuries among overweight army trainees: incidence and health care utilization. *Occup Med (Lond)* 2011;61(4):247-252.
8. Department of the Army: Army Regulation 40-501: Standards of Medical Fitness, December 14, 2007. Headquarters, Department of the Army, Washington, DC. Available at http://www.apd.army.mil/pdf/files/r40_501.pdf; accessed July 1, 2015.
9. Borrud LG, Flegal KM, Looker AC, Everhart JE, et al. Body composition data for individuals eight years of age and older: U.S. population, 1999–2004. *National Center for Health Statistics. Vital Health Stat* 11(250). 2010. Available at http://www.cdc.gov/nchs/data/series/sr_11/sr11_250.pdf; accessed July 2, 2015.

Descriptive Statistics for Enlisted Service Applicants and Accessions

The characteristics of the source populations applying for enlisted service in the active, reserve, and National Guard components of the military are described from fiscal year 2009 to fiscal year 2015. The characteristics of the accessed populations are compared; subsequent attritions are also shown. Individuals identified as having prior service in any U.S. military component are excluded. An *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 fiscal year (FY).
- The “Accessions” shown in the following tables are from among the “Applicants” shown in the relevant preceding column. For example, columns showing fiscal year 2015 accessions are summarizing accessions only among individuals who applied for service in fiscal year 2015. Notation is made when complete follow-up is not available.
- Only data through fiscal year 2015 are included. Therefore, numbers and percentages gained (i.e. accessions) among applicants in 2015 refer only to those gained through September 30, 2015.
- 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 2015 who received a discharge, only discharges with a SSN matching a 2015 accession record SSN were included.
- Under the subsections titled “Active Component Applicants and Accessions,” “Reserve Component Applicants and Accessions,” “National Guard Component Applicants and Accessions,” 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 with an Accession Record,” age, education level, and Armed Forces Qualification Test (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 corrected, such as being overweight or recently using marijuana; these individuals may enter the military without a waiver after the condition is corrected. Permanent medical disqualifications are for all other disqualifying conditions described in DoD Instruction 6130.03.
- Beginning in the FY 2008 Annual report, the way International Classification of Diseases, 9th 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 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 leading 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.

TABLE 2.1: LIST OF ICD-9 CODING GROUPS SUMMARIZED TO THE FOURTH DIGIT

ICD-9[†]	Condition
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

[†]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.

Summary Statistics for Applicants and Accessions for Enlisted Service

Tables 2.2 through 2.4 show the rates of medical disqualification, waiver application, waiver approval, and accession of the enlisted applicant population between 2009 and 2014 by fiscal year of physical exam. Applicants are restricted to Army, Navy, Marine Corps, and Air Force applicants and rates are stratified by component. Applicants may appear in more than one table if they applied to more than one component. However, for each component, each applicant is only counted once. Applicants were considered disqualified if they had an International Classification of Diseases, 9th revision (ICD-9) or other medical failure (OMF) code listed in their US Military Entrance Processing Command Integrated Resource System (USMIRS) application record. Waiver applicants and approvals were included if an individual applied for or was approved for a waiver in the 730 days following their physical exam. Only waiver applications and approvals from the service applied to were included. Similarly, applicants were counted as accessions if they accessed into the same service they applied and the accession date followed the physical exam date.

Medical disqualification (DQ), waiver, and accession rates are shown in Table 2.2 for enlisted active component applicants by year for all services. Overall, about 20% of applicants received either a temporary or permanent medical disqualification. The proportion of active component applicants with a medical disqualification has remained relatively consistent in the period from 2009 to 2014. About 8% of active component applicants apply for a medical waiver and roughly 6% of active component applicants are approved for a medical waiver. In the period from 2009 to 2013 the rate of waiver application has increased slightly but no clear trend in the rate of waiver approval is evident. The accession rate of active component applicants has remained relatively consistent throughout the time period from 2009 to 2014 with between 72% and 75% of applicants accessing. Accession rates of 2014 applicants are not reported due to insufficient follow up time. Medical waiver data for Navy and Marine Corps for 2014 were not available at the time of publication. Therefore, estimates of waiver application and approval rates among active component applicants should be considered underestimates.

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TABLE 2.2: DISQUALIFICATION, WAIVER, AND ACCESSION RATES FOR ENLISTED ACTIVE COMPONENT APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION BY YEAR: ALL SERVICES

	Applicant (n)	DQ (n)	DQ (%)	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve (n)	Waiver Approve (%)	Access (n)	Access (%)
2009	260,340	53,011	20.4	19,253	7.4	14,197	5.5	188,537	72.4
2010	215,691	41,245	19.1	16,294	7.6	11,180	5.2	158,074	73.3
2011	201,319	38,178	19.0	15,911	7.9	10,877	5.4	149,690	74.4
2012	200,173	37,955	19.0	17,826	8.9	12,712	6.4	152,317	76.1
2013	206,217	41,983	20.4	18,562	9.0	13,768	6.7	153,697	74.5
2014*	173,286	32,789	18.9	9,719 [†]	5.6	6,943 [†]	4.0	-	-
Total	1,257,026	245,161	19.5	97,565	7.8	69,677	5.5	802,315	74.0

DQ: Disqualification; Access: Accessions

*Accessions among 2014 applicants not calculated due to lack of sufficient follow up time.

[†] Waiver data were not reported by the Navy or Marine Corps in time to meet the publication deadline for this annual report. Therefore, 2014 waiver counts and percentages should be considered underestimates.

Table 2.3 shows medical disqualification, waiver, and accession rates for enlisted reserve component applicants by year of physical exam for all services. Overall, about 20% of applicants received either a temporary or permanent medical disqualification. The proportion of reserve component applicants with a medical disqualification has decreased slightly during this time period from 22% in 2009 to 19% in 2014. About 7% of reserved applicants apply for a medical waiver and roughly 5% of reserved applicants are approved for a medical waiver. In the period from 2009 to 2013 no clear trend in the rate of waiver application or approval is evident for reserve component applicants. The accession rate of reserve component applicants has remained relatively consistent throughout the time period from 2009 to 2011 with between 67% and 70% of applicants accessing. In 2012 and 2013, the accession rate among reserve applicants was lower than observed in the period from 2009 to 2011. Accession rates of 2014 applicants are not reported due to insufficient follow up time. Medical waiver data for Navy and Marine Corps were not available for 2014 at the time of publication. Therefore, estimates of waiver application and approval rates among reserve applicants should be considered underestimates.

TABLE 2.3: DISQUALIFICATION, WAIVER, AND ACCESSION RATES FOR ENLISTED RESERVE COMPONENT APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION BY YEAR: ALL SERVICES

	Applicant (n)	DQ (n)	DQ (%)	Waiver Apply (n)	Waiver Apply (%)	Waiver Approve (n)	Waiver Approve (%)	Access (n)	Access (%)
2009	47,437	10,549	22.2	3,577	7.5	2,708	5.7	33,249	70.1
2010	35,547	7,085	19.9	2,274	6.4	1,653	4.7	24,127	67.9
2011	37,877	7,500	19.8	2,547	6.7	1,795	4.7	26,651	70.4
2012	34,176	6,868	20.1	2,643	7.7	1,932	5.7	21,489	62.9
2013	34,699	7,258	20.9	2,752	7.9	2,135	6.2	21,993	63.4
2014*	31,920	6,054	19.0	1,755 [†]	5.5	1,298 [†]	4.1	-	-
Total	221,656	45,314	20.4	15,548	7.0	11,521	5.2	127,509	67.2

DQ: Disqualification; Access: Accessions

*Accessions among 2014 applicants not calculated due to lack of sufficient follow up time.

[†] Waiver data were not reported by the Navy or Marine Corps in time to meet the publication deadline for this annual report. Therefore, 2014 waiver counts and percentages should be considered underestimates.

Table 2.4 shows medical disqualification and accession rates for enlisted National Guard applicants by year of physical exam for all services. Overall, about 24% of applicants received either a temporary or permanent medical disqualification. The proportion of National Guard applicants with a medical disqualification has decreased during this time period from 27% in 2009 to 21% in 2014. The accession rate of National Guard component applicants has remained relatively consistent throughout the time period from 2009 to 2012 with between 74% and 77% of applicants accessing. In 2013, the accession rate among National Guard applicants was much lower (55%) than observed in the period from 2009 to 2012 (74-77%). Accession rates of 2014 applicants are not reported due to insufficient follow up time. Medical waiver data are not available for National Guard applicants.

TABLE 2.4: DISQUALIFICATION, WAIVER, AND ACCESSION RATES FOR ENLISTED NATIONAL GUARD APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION BY YEAR: ARMY AND AIR FORCE

	Applicant (n)	DQ (n)	DQ (%)	Access (n)	Access (%)
2009	58,728	15,625	26.6	43,556	74.2
2010	55,096	13,656	24.8	42,095	76.4
2011	46,713	10,717	22.9	36,234	77.6
2012	52,203	11,597	22.2	38,810	74.3
2013	54,296	12,938	23.8	29,790	54.9
2014	51,258	10,945	21.4	-	-
Total	318,294	75,478	23.7	190,485	71.3

DQ: Disqualification; Access: Accessions

*Accessions among 2014 applicants not calculated due to lack of sufficient follow up time.

Tables 2.5 through 2.7 show the rates of medical disqualification, waiver approval, existed prior to service (EPTS) discharge, hospitalization, disability discharge, and attrition of the enlisted accessed population between 2009 and 2014 by fiscal year of accession. Accessions are restricted to Army, Navy, Marine Corps, and Air Force applicants and rates are stratified by component. Accessions were considered disqualified if they had an ICD-9 or OMF code listed in their MIRS application record. Waiver records were available from 2009-2014 for the Army and Air Force; Navy and Marine Corps had not provided waiver records for 2014 at time of publication. Therefore, waiver application and approval rates for 2014 should be considered underestimates. Waiver approvals were included if an individual was approved for a waiver in the 730 days following their physical exam. Only waivers from the service accessed to were included. Similarly, EPTS discharges were restricted to discharges that occurred in the first 180 days of service from the service and component of accession. Hospitalization, disability, and attrition were restricted to events that occurred in the first 365 days of service where the service and component at time of event (i.e. hospitalization, disability, or attrition) matched the service and component at accession.

Medical disqualification, waiver, EPTS discharge, hospitalization, disability discharge, and attrition rates are shown in Table 2.5 for enlisted active component accessions by year for all services. Overall, about 13% of accessions received either a temporary or permanent medical disqualification. The proportion of accessions with a history of either a permanent or temporary medical disqualification has decreased slightly from 2009 to 2014. Waiver approval rates were about 6% overall in the active component accessed population and appear to be increasing in 2013-2014 accessions after remaining relative stable in the period from 2009 to 2012. EPTS discharges occurred in about 2% of active component accessions and have varied from 2-3% from 2008 to 2012. Overall, about 2% of active component accessions are hospitalized in the first year of service; the proportion of active component accession hospitalized in the first year of service has decreased between 2009 and 2014. Less than 0.5% of active component accessions are disability discharged in the first year of service and the rate of disability discharge in the first year appear to be decreasing in the period from 2009 to 2013. Attrition in the first year of service has remained relatively stable in the period from 2009 to 2013, occurring in about 11% of accessions.

Table 2.6 shows medical disqualification, waiver, EPTS discharge, hospitalization, disability discharge, and attrition rates for enlisted reserve component accessions by year of accession. However, attrition rates presented for enlisted reserve accessions are likely under estimated as the majority of discharges from enlisted reserve service are accompanied by an ISC that indicates the reason for separation was unknown and thus not considered attrition by AMSARA (see Table 2.46). Overall, about 14% of accessions received either a temporary or permanent medical disqualification. About 5% of reserve component accessions access with a medical waiver. The rate of waivers in the accessed reserve population was relatively consistent before increasing slightly in 2013 and 2014. Overall EPTS rates in reserve component accessions were about 1% and were relatively consistent prior to a decrease in 2012. Hospitalization in the first year of service occurred in about 1% of reserve component accessions and has varied between 0.9% and 1.6% of total reserve accessions. Hospitalization rates in the first year of reserve service are likely underestimated relative to the active component because hospitalizations outside of Military Treatment Facilities are not included in this report. Disability discharge in the first year of service occurred less than 0.5% of reserve accessions and has generally decreased over time. Attrition in the first year of service in the reserve component was about 4% regardless of year of accession.

Table 2.7 shows medical disqualification, waiver, EPTS discharge, hospitalization, disability discharge, and attrition rates for enlisted National Guard component accessions by year of accession. However, attrition rates presented for enlisted National Guard accessions are likely under estimated as the majority of discharges from enlisted National Guard service are accompanied by an ISC that indicates the reason for separation was unknown and thus not considered attrition by AMSARA (see Table 2.46). Medical waiver data are not available for National Guard accessions. Overall, about 15% of applicants received either a temporary or

permanent medical disqualification. The proportion of National Guard applicants with a medical disqualification has decreased slightly during this time period from 17% in 2009 to 15% in 2014. Overall EPTS rates in National Guard accessions were about 1% and were relatively consistent over time prior to a decrease in 2012. Hospitalization in the first year of service occurred in about 1% of National Guard accessions and has varied between 0.6% and 1.3% of total National Guard accessions. Hospitalization rate in the first year of National Guard service are likely underestimated relative to the active component because hospitalizations outside of Military Treatment Facilities are not included in this report. Disability discharge in the first year of service occurred less than 0.2% of reserve accessions and has generally decreased over time. Attrition in the first year of service in the reserve component was about less than 0.5% regardless of year of accession.

TABLE 2.5: DISQUALIFICATION, WAIVER, EPTS, HOSPITALIZATION, DISABILITY, AND ATTRITION RATES AMONG ENLISTED ACTIVE COMPONENT ACCESSIONS BY YEAR: ALL SERVICES

	Accession (n)	DQ (n)	DQ (%)	Waiver Approved (n)	Waiver Approved (%)	EPTS (n)	EPTS (%)	Hosp (n) [†]	Hosp (%)	Disability (n) [†]	Disability Discharge (%)	Attrition (n) [†]	Attrition (%)
2009	161,104	22,666	14.1	9,269	5.8	3,761	2.3	4,746	2.9	787	0.49	20,212	12.5
2010	159,765	21,438	13.4	9,293	5.8	3,791	2.4	4,294	2.7	574	0.36	17,748	11.1
2011	152,674	18,844	12.3	8,805	5.8	4,141	2.7	4,098	2.7	456	0.30	16,764	11.0
2012	155,683	18,911	12.1	9,627	6.2	3,348	2.2	3,798	2.4	264	0.17	18,117	11.6
2013	165,957	22,169	13.4	13,030	7.9	1,852	1.1	3,842	2.3	362	0.22	19,045	11.5
2014*	139,997	20,046	14.3	9,754	7.0	-	-	1,809	1.3	80	0.06	-	-
Total	935,180	124,074	13.3	59,778	6.4	16,893	2.1	22,587	2.4	2,523	0.27	91,886	11.6

DQ: Disqualifications; EPTS: Existed Prior to Service Discharges; Hosp: Hospitalizations

*EPTS and Attrition not calculated for 2014 accessions due to lack of sufficient follow up time.

[†]In the first 365 days of service.

TABLE 2.6: DISQUALIFICATION, WAIVER, EPTS, HOSPITALIZATION, DISABILITY, AND ATTRITION RATES AMONG ENLISTED RESERVE COMPONENT ACCESSIONS BY YEAR: ALL SERVICES

	Accession Count	DQ Count	DQ Percent	Waiver Approved Count	Waiver Approved Percent	EPTS Count	EPTS Percent	Hosp Count*	Hosp Percent	Disability Count*	Disability Discharge Percent	Attrition Count*	Attrition Percent
2009	35,279	5,434	15.4	1,617	4.6	423	1.2	407	1.2	69	0.20	1,476	4.2
2010	28,340	3,705	13.1	1,227	4.3	404	1.4	240	0.9	52	0.18	1,320	4.7
2011	30,485	3,809	12.5	1,407	4.6	450	1.5	495	1.6	43	0.14	1,254	4.1
2012	24,323	3,172	13.0	1,183	4.9	162	0.7	361	1.5	16	0.07	1,034	4.3
2013	21,287	2,837	13.3	1,283	6.0	142	0.7	266	1.3	27	0.13	1,067	5.0
2014*	24,585	3,434	14.0	1,444	5.9	-	-	206	0.8	7	0.03	-	-
Total	164,299	22,391	13.6	8,161	5.0	1,581	1.1	1,975	1.2	214	0.13	6,151	4.4

DQ: Disqualifications; EPTS: Existed Prior to Service Discharges; Hosp: Hospitalizations

*EPTS and Attrition not calculated for 2014 accessions due to lack of sufficient follow up time.

[†]In the first 365 days of service.

TABLE 2.7: DISQUALIFICATION, WAIVER, EPTS, HOSPITALIZATION, DISABILITY, AND ATTRITION RATES AMONG ENLISTED NATIONAL GUARD ACCESSIONS BY YEAR: ARMY AND AIR FORCE

	Accession (n)	DQ (n)	DQ (%)	Waiver Approved (n)	Waiver Approved (%)	EPTS (n)	EPTS (%)	Hosp (n)[†]	Hosp (%)	Disability (n)[†]	Disability Discharge (%)
2009	47,435	8,088	17.1	536	1.1	450	1.0	103	0.22	172	0.36
2010	46,182	7,151	15.5	744	1.6	402	0.9	88	0.19	112	0.24
2011	40,256	5,700	14.2	669	1.7	509	1.3	49	0.12	116	0.29
2012	42,132	5,722	13.6	290	0.7	455	1.1	7	0.02	92	0.22
2013	28,689	4,461	15.5	94	0.3	323	1.1	29	0.10	64	0.22
2014*	42,705	6,342	14.9	-	-	253	0.6	6	0.01	-	-
Total	247,399	37,464	15.1	2,333	1.1	2,392	1.0	282	0.11	556	0.27

DQ: Disqualifications; EPTS: Existed Prior to Service Discharges; Hosp: Hospitalizations

*EPTS and Attrition not calculated for 2014 accessions due to lack of sufficient follow up time.

[†]In the first 365 days of service.

Applicants and Accessions

Active Component Applicants and Accessions

Tables 2.8 and 2.9 describe the population of applicants who received a medical examination and subsequent accessions for active component enlisted service in the Army, Navy, Marine Corps and Air Force. Individuals were counted once, either in the component and service in which they access, or for applicants who did not access, in the service and component applied to on their most recent date of application. Applicants for enlisted service who subsequently accessed as officers (as indicated by a pay grade of O01-06), were included as applicants, but excluded from accessions.

Table 2.8 shows by year for 2009-2014 the number of applicants for enlisted service, the accession counts and rates within one year and within two years of application, and the overall accession rate. 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. Due to the lack of full two-year follow-up data for 2013 applicants and one-year and two-year follow-up for 2014 applicants, the corresponding accession rates and overall rates were underestimated (see note below Table 2.8). Accession rates within one and two years of application were lowest for 2009-2010 and highest during 2012 and 2013.

TABLE 2.8: ACCESSION RATE FOR ENLISTED ACTIVE COMPONENT APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2008-2014: ALL SERVICES

Year of exam	Applicants (n)	Within 1 year of application (n)	Within 1 year of application (%)	Within 2 years of application (n)	Within 2 years of application (%)	Total Accessed (n)	Overall Accessed (%)
2009	260,340	171,798	66.0	187,649	72.1	188,537	72.4
2010	215,691	142,420	66.0	157,243	72.9	158,074	73.3
2011	201,319	136,590	67.8	149,290	74.2	149,690	74.4
2012	200,173	140,781	70.3	152,217	76.0	152,317	76.1
2013	206,217	144,332	70.0	153,697	74.5 [†]	153,697	74.5 [†]
2014	173,286	68,373	39.5 [†]	68,373	39.5 [†]	68,373	39.5 [†]
Total Applicants	1,257,026	804,294		868,469		870,688	

[†]The proportion of applicants who accessed was underestimated due to lack of sufficient follow-up data since only accessions through 2014 are reported in the above table.

Table 2.9 shows demographic characteristics (at time of application) and accession rates for the applicant pools in 2009-2013 and 2014. Most applicants in 2014 were male (81%), aged 17-20 years (70%), and white (71%). In 2014, two-third of applicants had a high school diploma (67%) and nearly three-quarter scored in the 50th percentile or higher for Armed Forces Qualification Test (AFQT) score (72%). The percentage of fully qualified applicants in 2014 was similar to that observed in 2009-2013 (81% and 80% respectively). The percentage of temporary disqualified applicants and accessions in 2014 was slightly lower than observed in 2009-2013 (4% versus 5% in 2009-2013 and 3% versus 4% in 2009-2013, respectively). The percentage of female accessions in 2014 was 19%, slightly higher than 17% observed in 2009-2013. The percentage of applicants between the ages of 17 and 20 was larger in 2014 than in 2009-2013 (70% and 66%, respectively). In 2014, the percentage of white applicants and accessions was slightly less than in previous years (71% versus 73% in 2009-2013 and 72% versus 74% in 2009-2013, respectively). In 2014 21% of applicants had not completed high school at the time of application compared to 12% the previous five years; most were in the Delayed Entry Program (DEP) and completed high school prior to accession. Graduation from high school prior to accession among applicants who were high school seniors at the time of application accounts for much of the difference in education noted when comparing 2014 applicants and accessions. The distribution of AFQT score among applicants and accessions in 2014 was similar to that observed in 2009-2013. The percentage of fully qualified accessions in 2014 was similar to that observed in 2009-2013 (88% and 87% respectively).

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TABLE 2.9: DEMOGRAPHIC CHARACTERISTICS OF ENLISTED ACTIVE COMPONENT APPLICANTS WHO RECEIVED A MEDICAL EXAMINATION IN 2009-2013 VS. 2014: ALL SERVICES

	2009 – 2013				2014			
	Applicants		Accessions		Applicants		Accessions	
	n	%	n	%	n	%	n	%
Sex*								
Male	886,449	81.8	668,582	83.3	139,824	80.8	55,604	81.3
Female	196,982	18.2	133,733	16.7	33,314	19.2	12,769	18.7
Age Group at MEPS*								
17 – 20	716,541	66.1	549,888	68.5	120,543	69.6	47,133	68.9
21 – 25	278,881	25.7	199,278	24.8	41,513	24.0	17,216	25.2
> 25	88,291	8.1	53,137	6.6	11,227	6.5	4,024	5.9
Race*								
White	791,607	73.0	593,672	74.0	122,842	70.9	48,931	71.6
Black	178,901	16.5	134,810	16.8	32,519	18.8	13,912	20.3
Other	113,232	10.4	73,833	9.2	17,925	10.3	5,530	8.1
Education*								
Below HS Senior**	6,927	0.6	4,121	0.5	1,132	0.7	19	<0.1
HS Senior	127,840	11.8	77,691	9.7	34,274	19.8	5,836	8.5
HS Diploma	792,061	73.1	616,879	76.9	116,114	67.0	54,800	80.1
Some College	72,907	6.7	55,624	6.9	8,706	5.0	4,023	5.9
Bachelor's and above	84,005	7.8	48,000	6.0	13,060	7.5	3,695	5.4
AFQT Score*								
93 – 99	75,245	6.9	58,449	7.3	10,872	6.3	4,204	6.1
65 – 92	419,620	38.7	324,525	40.4	65,155	37.6	26,169	38.3
50 – 64	290,225	26.8	221,382	27.6	48,719	28.1	19,980	29.2
30 – 49	251,723	23.2	184,514	23.0	41,186	23.8	17,469	25.5
11 – 29	10,030	0.9	1,819	0.2	1,544	0.9	44	0.1
< 11‡	188	<0.1	24	<0.1	31	<0.1	0	<0.1
Missing	36,709	3.4	11,602	1.4	5,779	3.3	507	0.7
Medical Status								
Fully Qualified	871,373	80.4	695,876	86.7	140,497	81.1	60,378	88.3
Permanent DQ	153,992	14.2	74,763	9.3	26,136	15.1	6,313	9.2
Temporary DQ	58,375	5.4	31,676	3.9	6,653	3.8	1,682	2.5
Total	1,083,740	100.0	802,315	100.0	173,286	100.0	68,373	100.0

MEPS: Military Entrance Processing Station; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification

* Individuals with missing values for demographic variables are included in the total.

** 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.

‡ Individuals scoring in the 10 percentile or lower are prohibited from applying, therefore, the observed accessions most likely reflect data capture errors.

Reserve Component Applicants and Accessions

Tables 2.10 and 2.11 describe the characteristics of applicants for the enlisted reserve component of the Army, Navy, Marines, and Air Force. Data on applicants who underwent medical examinations at any MEPS are shown for the period from 2009 to 2013 in aggregate and separately for 2014. These results include only civilians with no prior service applying for the reserve component and do not include direct accessions from active component military. Individuals were counted only once, either in the component and service in which they access, or for applicants who did not access, in the component and service applied to on their most recent day of application. Reserve applicants who subsequently accessed as officers (as indicated by a pay grade at gain of O01-06), were included as applicants, but excluded from accessions.

Table 2.10 shows by year for 2009-2014 the number of applicants for the reserve component, the accession counts and rates within one year and two years of application, and overall accession counts and rates. 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. Due to the lack of full two-year follow-up data for 2013 applicants and one-year and two-year follow-up for 2014 applicants, the corresponding accession rates were underestimated (see note below Table 2.10). Though the number of reserve applicants dropped substantially from 47,437 in 2009 to 35,547 in 2010, the applicant numbers remained consistent from 2010 to 2013. The accession rates of reserve applicants within one year of application were lowest during 2012 (60%) and highest in 2011 (68%). Accession rates within two years of application were lowest during 2012 (63%) and highest in 2011 (70%).

TABLE 2.10: ACCESSION RATE FOR ENLISTED RESERVE COMPONENT APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2009-2014: ALL SERVICES

Year of exam	Applicants (n)	Within 1 year of application (n)	Within 1 year of application (%)	Within 2 years of application (n)	Within 2 years of application (%)	Total Accessed (n)	Overall Accessed (%)
2009	47,437	32,087	67.6	33,240	70.1	33,249	70.1
2010	35,547	23,103	65.0	24,123	67.9	24,127	67.9
2011	37,877	25,902	68.4	26,634	70.3	26,651	70.4
2012	34,176	20,428	59.8	21,484	62.9	21,489	62.9
2013	34,699	21,435	61.8	21,993	63.4 [†]	21,993	63.4 [†]
2014	31,920	18,176	56.9 [†]	18,176	56.9 [†]	18,176	56.9 [†]
Total Applicants	221,656	141,131		145,650		145,685	

[†]The proportion of applicants who accessed was underestimated due to lack of sufficient follow-up data since only accessions through 2014 are reported in the above table.

Table 2.11 describes the demographic characteristics (at time of application) and accession rates for reserve component applicants in 2009-2013 and 2014. The demographic profile of reserve component applicants in 2014 was largely consistent with the demographic profile of accessions over the same time periods. Most applicants in 2014 were male (76%), between the ages of 17 and 20 (69%), and white (66%, excluding applicants who declined to provide their racial status and those with missing records). In 2014, 61% of applicants had a high school diploma and over two-thirds scored in the 50th to 99nd percentile for AFQT score (68%). The proportion of applicants in 2014 who were classified as high school senior was higher than the previous five years (22% versus 15% in 2009-2013). This increase in the percent of high school senior applicants corresponded to a decrease in the percentage of applicants with a high school diploma and some college in 2014 (61% and 6%, respectively) relative to the previous five years (65% and 9%, respectively). The distribution of educational categories among accessions reflected the applicant population. The distribution of AFQT score among applicants and accessions in 2014 was similar to that observed in 2009-2013. The percentage of fully qualified applicants in 2014 is similar to the percentages observed from 2009 to 2013 (81% and 79% respectively). In 2014 (4%) of applicants were considered temporary medically qualified compared to (6%) from the previous five years; this slight decrease was consistent with a decrease in the percent of accessions who were temporarily disqualified over the same time periods (3%) relative to the previous five years (5%). The percentage of fully qualified accessions in 2014 was similar to that observed in 2009-2013 (88% and 86% respectively).

TABLE 2.11: DEMOGRAPHIC CHARACTERISTICS OF ENLISTED RESERVE COMPONENT APPLICANTS WHO RECEIVED A MEDICAL EXAMINATION IN 2009-2013 VS. 2014: ALL SERVICES

	2009 – 2013				2014			
	Applicants		Accessions		Applicants		Accessions	
	n	%	n	%	n	%	n	%
Sex*								
Male	145,466	76.7	98,827	77.5	24,330	76.3	13,579	74.7
Female	44,219	23.3	28,682	22.5	7,572	23.7	4,597	25.3
Age Group at MEPS*								
17 – 20	121,772	64.2	84,794	66.5	22,008	68.9	13,031	71.7
21 – 25	44,273	23.3	28,655	22.5	6,749	21.1	3,663	20.2
> 25	23,690	12.5	14,059	11.0	3,163	9.9	1,482	8.2
Race*								
White	133,502	70.4	92,168	72.3	21,196	66.4	12,254	67.4
Black	39,858	21.0	26,127	20.5	7,742	24.3	4,510	24.8
Other	16,376	8.6	9,214	7.2	2,982	9.3	1,412	7.8
Education*								
Below HS Senior**	8,237	4.3	7,023	5.5	1,333	4.2	1,113	6.1
HS Senior	28,165	14.8	20,513	16.1	6,917	21.7	4,059	22.3
HS Diploma	122,379	64.5	80,571	63.2	19,500	61.1	10,785	59.3
Some College	17,870	9.4	11,942	9.4	1,997	6.3	1,155	6.4
Bachelor's and above	13,085	6.9	7,460	5.9	2,173	6.8	1,064	5.9
AFQT Score*								
93 – 99	12,222	6.4	8,159	6.4	1,760	5.5	979	5.4
65 – 92	70,257	37.0	48,849	38.3	11,557	36.2	6,619	36.4
50 – 64	48,802	25.7	33,267	26.1	8,443	26.5	4,827	26.6
30 – 49	53,626	28.3	36,068	28.3	9,472	29.7	5,715	31.4
11 – 29	3,574	1.9	932	0.7	474	1.5	24	0.1
< 11‡	141	0.1	59	<0.1	10	<0.1	0	<0.1
Missing	1,114	0.6	175	0.1	204	0.6	12	0.1
Medical Status								
Fully Qualified	150,476	79.3	110,215	86.4	25,866	81.0	15,930	87.6
Permanent DQ	27,766	14.6	11,264	8.8	4,706	14.7	1,691	9.3
Temporary DQ	11,494	6.1	6,030	4.7	1,348	4.2	555	3.1
Total	189,736	100.0	127,509	100.0	31,920	100.0	18,176	100.0

MEPS: Military Entrance Processing Station; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification

* Individuals with missing values for demographic variables are included in the total.

** 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.

‡ Individuals scoring in the 10 percentile or lower are prohibited from applying, therefore, the observed accessions most likely reflect data capture errors.

Army and Air National Guard Applicants and Accessions

Tables 2.12 and 2.13 describe the characteristics of applicants in the enlisted National Guard of the Army and Air Force. The Navy and Marine Corps do not have a National Guard component. Data on National Guard applicants who received a medical examination at MEPS are shown for the period from 2009 through 2013 (in aggregate) and separately for 2014. These results include only civilians with no prior service applying for the National Guard and do not include direct accessions from active component military. Individuals were counted only once, either in the component and service in which they access, or for applicants, in the service and component applied to on their most recent day of application. National Guard applicants who subsequently accessed as officers (as indicated by a pay grade at gain of O01-06), were included as applicants, but excluded from accessions.

Table 2.12 shows by year for 2009-2014 the number of applicants for the National Guard, the accession counts and rates within one year and two years of application, and overall accession counts and rates. 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. Due to the lack of full two-year follow-up data for 2013 applicants and one-year and two-year follow-up for 2014 applicants, the corresponding accession rates and overall rates were underestimated (see note below Table 2.12). In 2011 the number of National Guard applicants dropped to 46,713 from 55,096 in 2010 and increased in 2012 (52,203) to counts previously observed and the trend continued in 2013 with 54,296 applicants. The accession rate of National Guard applicants within one year of application decreased in 2013 (54%) and increased in 2014 (74%) to rates previously observed between 2009 and 2012 (72.4%-76.3%). The reason for the significant drop in the accession rate in 2013 remains unclear. Accession rates of applicants at the one and two year mark were similar to overall accession rates.

TABLE 2.12: ACCESSION RATE FOR ENLISTED NATIONAL GUARD COMPONENT APPLICANTS AT MEPS WHO RECEIVED A MEDICAL EXAMINATION IN 2009-2014: ARMY AND AIR FORCE

Year of exam	Applicants (n)	Within 1 year of application (n)	% Within 1 year of application (%)	Within 2 years of application (n)	Within 2 years of application (%)	Total Accessed (n)	Overall Accessed (%)
2009	58,728	42,535	72.4	43,542	74.1	43,556	74.2
2010	55,096	41,243	74.9	42,089	76.4	42,095	76.4
2011	46,713	35,627	76.3	36,220	77.5	36,234	77.6
2012	52,203	38,113	73.0	38,806	74.3	38,810	74.3
2013	54,296	29,249	53.9	29,790	54.9 [†]	29,790	54.9 [†]
2014	51,258	38,063	74.3 [†]	38,063	74.3 [†]	38,063	74.3 [†]
Total Applicants	318,294	224,830		228,510		228,548	

[†] The proportion of applicants who accessed was underestimated due to a lack of sufficient follow-up data since only accessions through 2014 are reported in the above table.

Table 2.13 describes the demographics characteristics (at the time of application) and accession rates for National Guard applicants in 2009-2013 and 2014. In 2014, nearly three-quarters of applicants were male (75%) and over two-thirds were aged 17-20 (69%). Most National Guard applicants in 2014 were white (73%), whose highest attained education (at application) was a high school diploma (57%). The percentage of male applicants in 2014 was 75%, slightly lower than 78% observed in 2009-2013. In 2014 the percentage of applicants between the ages of 17 and 20 was larger than in 2009-2013 (69% and 64%, respectively). In 2014, a smaller percentage of whites applied for service than in previous years (73% versus 78% in 2009-2013) which corresponded to an increase in black applicants (22% versus 17% in 2009-2013). In 2014, a slightly lower percentage of applicants to National Guard had a high school diploma to the previous five year period (57% versus 61% in 2009-2013). This decrease corresponded to an increase in the percent of applicants who were high school seniors in 2014 (23% versus 16% in 2009-2013). The distribution of sex, age, race, and education among applicants and accessions in 2014 was similar to that observed in 2009-2013. Most applicants in 2014 were classified as medically qualified (79%); the percentage increased slightly from (76%) for the previous five years. In 2014 (7%) of applicants were considered temporary medically qualified compared to (9%) from the previous five years; this slight decrease was consistent with a decrease in the percent of accessions who were temporarily disqualified over the same time periods (5%) relative to the previous five years (7%). The percentage of fully qualified accessions in 2014 was slightly higher to that observed in 2009-2013 (88% and 85% respectively).

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TABLE 2.13: DEMOGRAPHIC CHARACTERISTICS OF ENLISTED NATIONAL GUARD APPLICANTS WHO RECEIVED A MEDICAL EXAMINATION IN 2009-2013 VS. 2014: ARMY AND AIR FORCE

	2009 – 2013				2014			
	Applicants		Accessions		Applicants		Accessions	
	n	%	n	%	n	%	n	%
Sex*								
Male	209,103	78.3	150,785	79.2	38,314	74.8	28,795	75.7
Female	57,859	21.7	39,700	20.8	12,932	25.2	9,268	24.3
Age Group at MEPS*								
17 – 20	171,895	64.4	126,636	66.5	35,583	69.4	27,396	72.0
21 – 25	63,169	23.7	43,348	22.8	10,572	20.6	7,400	19.4
> 25	31,961	12.0	20,492	10.8	5,103	10.0	3,267	8.6
Race*								
White	206,852	77.5	153,062	80.4	37,368	72.9	28,449	74.7
Black	44,622	16.7	30,006	15.8	11,340	22.1	8,065	21.2
Other	15,562	5.8	7,417	3.9	2,550	5.0	1,549	4.1
Education*								
Below HS Senior**	24,985	9.4	19,182	10.1	4,258	8.3	3,510	9.2
HS Senior	43,718	16.4	34,145	17.9	11,847	23.1	9,543	25.1
HS Diploma	163,607	61.3	113,389	59.5	29,330	57.2	20,928	55.0
Some College	19,188	7.2	13,794	7.2	2,731	5.3	1,951	5.1
Bachelor's and above	15,538	5.8	9,975	5.2	3,092	6.0	2,131	5.6
AFQT Score*								
93 – 99	16,093	6.0	12,035	6.3	2,852	5.6	2,201	5.8
65 – 92	92,877	34.8	70,770	37.2	16,084	31.4	12,774	33.6
50 – 64	67,885	25.4	50,555	26.5	11,668	22.8	9,195	24.2
30 – 49	79,576	29.8	54,379	28.5	17,443	34.0	13,093	34.4
11 – 29	9,222	3.5	2,534	1.3	2,987	5.8	756	2.0
< 11‡	148	0.1	3	<0.1	32	0.1	1	<0.1
Missing	1,235	0.5	209	0.1	192	0.4	43	0.1
Medical Status								
Fully Qualified	202,503	75.8	160,939	84.5	40,313	78.6	33,371	87.7
Permanent DQ	39,561	14.8	15,779	8.3	7,359	14.4	2,922	7.7
Temporary DQ	24,972	9.4	13,767	7.2	3,586	7.0	1,770	4.7
Total	267,036	100.0	190,485	100.0	51,258	100.0	38,063	100.0

MEPS: Military Entrance Processing Station; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification

* Individuals with missing values for demographic variables are included in the total.

** 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.

‡ Individuals scoring in the 10 percentile or lower are prohibited from applying, therefore, the observed accessions most likely reflect data capture errors.

Disqualifications

Table 2.14 shows the most common medical disqualifications according to the ICD-9 code assigned to each disqualifying condition among applicants for enlisted active component service for 2009 to 2013 in aggregate and separately for 2014. Within this table, the number of disqualifications for a given condition is provided along with the proportion of disqualified applicants with the condition and the prevalence of the disqualification among all MEPS applicants. These conditions are ranked according to the number of disqualifications in 2014. Some disqualified individuals have more than one disqualifying medical condition; however, applicants are counted only once per condition.

The most frequent disqualifying condition in 2014 was disorders of refraction and accommodation, a permanent disqualification that requires an accession medical waiver. Disorders of refraction and accommodation accounted for a notably larger proportion of disqualifications in 2014 applicants (15%) as compared to applicants in the previous five years (10%). The prevalence of disqualifications for disorders of refraction and accommodation was also higher in 2014 (2,741 per 100,000 applicants) compared to applicants in the previous five years (1,987 per 100,000 applicants). The next most common condition was obesity and other hyperalimentation (9% of disqualifications), a temporary condition, which has decreased relative to the previous five year period (13% of disqualifications). The third most common reason for medical disqualification was certain adverse effects not elsewhere classified (8% of disqualifications), which includes allergy and anaphylaxis. This category were only 5% of disqualifications in the previous five year period. Disqualifications for *Cannabis* abuse (4% in 2014) were similar relative to the previous five years.

DISQUALIFICATIONS

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TABLE 2.14: MEDICAL DISQUALIFICATION OF FIRST-TIME ACTIVE COMPONENT ENLISTED APPLICANTS BY ALL ICD-9 CODES IN 2009-2013 vs. 2014: ALL SERVICES

Condition [†]	2009-2013			2014		
	n	% [‡]	Rate [§]	n	% [‡]	Rate [§]
Disorders of refraction and accommodation	21,534	10.1	1,987	4,749	14.5	2,741
Obesity and other hyperalimentation	28,308	13.3	2,612	3,069	9.4	1,771
Certain adverse effects, not elsewhere classified	10,565	5.0	975	2,450	7.5	1,414
Abnormal loss of weight and underweight	10,105	4.8	932	1,991	6.1	1,149
Hyperkinetic syndrome of childhood	6,435	3.0	594	1,554	4.7	897
<i>Cannabis</i> abuse	9,904	4.7	914	1,280	3.9	739
Neurotic disorders	6,118	2.9	565	1,141	3.5	658
Hearing loss	8,338	3.9	769	1,071	3.3	618
Other joint derangement, not elsewhere classified	3,806	1.8	351	1,038	3.2	599
Asthma	6,724	3.2	620	937	2.9	541
Total applicants at MEPS	1,083,740			173,286		
Total of disqualified applicants	212,367			32,789		

[†] Condition categories are not mutually exclusive.

[‡] Indicates the percentage of medically disqualified MEPS applicants with the specified condition.

[§] Indicates the number of individuals with the specified condition for every 100,000 applicants screened at MEPS.

Table 2.15 shows the most common medical disqualifications according to the ICD-9 code assigned to each disqualifying condition among applicants for enlisted reserve component service for 2009 to 2013 in aggregate and separately for 2014. The most frequent disqualifying condition in 2014 was disorders of refraction and accommodation. Disorders of refraction and accommodation accounted for a larger proportion of disqualifications in 2014 applicants (17%) as compared to applicants in the previous five years (11%). The prevalence of disqualifications for disorders of refraction and accommodation was also higher in 2014 (3,170 per 100,000 applicants) compared to applicants in the previous five years (2,250 per 100,000 applicants). The next most common condition was obesity and other hyperalimentation (12%), which decreased relative to the previous five year period (16%). The third most common reason for medical disqualification was certain adverse effects, not elsewhere classified, including allergies and anaphylaxis (8% of disqualifications), which increased slightly compared to the previous five year period (5% of disqualifications). Disqualifications for *Cannabis* abuse (3% in 2014) were similar relative to the previous five years.

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TABLE 2.15: MEDICAL DISQUALIFICATION OF FIRST-TIME RESERVE COMPONENT ENLISTED APPLICANTS BY ALL ICD-9 CODES IN 2009-2013 VS. 2014: ALL SERVICES

Condition [†]	2009-2013			2014		
	n	% [‡]	Rate [§]	n	% [‡]	Rate [§]
Disorders of refraction and accommodation	4,269	10.9	2,250	1,012	16.7	3,170
Obesity and other hyperalimentation	6,315	16.1	3,328	737	12.2	2,309
Certain adverse effects, not elsewhere classified	2,076	5.3	1,094	472	7.8	1,479
Abnormal loss of weight and underweight	1,948	5.0	1,027	402	6.6	1,259
Hearing loss	1,532	3.9	807	219	3.6	686
Neurotic disorders	1,055	2.7	556	179	3.0	561
<i>Cannabis</i> abuse	1,289	3.3	679	168	2.8	526
Curvature of spine	475	1.2	250	163	2.7	511
Asthma	1,130	2.9	596	145	2.4	454
Other joint derangement, not elsewhere classified	610	1.6	321	145	2.4	454
Total applicants at MEPS		189,736			31,920	
Total of disqualified applicants		39,260			6,054	

[†] Condition categories are not mutually exclusive.

[‡] Indicates the percentage of medically disqualified MEPS applicants with the specified condition.

[§] Indicates the number of individuals with the specified condition for every 100,000 applicants screened at MEPS.

Table 2.16 shows the most common medical disqualifications according to the ICD-9 code assigned to each disqualifying condition among applicants for enlisted National Guard service for 2009 to 2013 in aggregate and separately for 2014. Unlike the active and reserve components, obesity and other hyperalimentation remains the leading reason for disqualification among National Guard applicants. In 2014, 23% of disqualified applicants were disqualified for obesity and other hyperalimentation, similar to the previous five year period. Disorders of refraction and accommodation were the second most common causes for disqualification in National Guard applicants, though these disqualifications accounted for a notably larger proportion of disqualifications in 2014 applicants (12%) as compared to the previous five years (8%). The next most common condition was certain adverse effects not elsewhere classified, including allergies and anaphylaxis (7% of disqualifications), which increased relative to the previous five year period (5% of disqualifications). Disqualifications for *Cannabis* abuse (3% in 2014) decreased in prevalence in the applicant population by about 50% in 2014 relative to the previous five years.

TABLE 2.16: MEDICAL DISQUALIFICATION OF FIRST-TIME NATIONAL GUARD ENLISTED APPLICANTS BY ALL ICD-9 CODES IN 2009-2013 vs. 2014: ARMY AND AIR FORCE

Condition [†]	2009-2013			2014		
	n	% [‡]	Rate [§]	n	% [‡]	Rate [§]
Obesity and other hyperalimentation	15,039	23.3	5,632	2,511	22.9	4,899
Disorders of refraction and accommodation	5,263	8.2	1,971	1,333	12.2	2,601
Certain adverse effects, not elsewhere classified	3,054	4.7	1,144	772	7.1	1,506
Hearing loss	2,882	4.5	1,079	435	4.0	849
Neurotic disorders	1,769	2.7	662	366	3.3	714
Abnormal loss of weight and underweight	1,675	2.6	627	359	3.3	700
Hyperkinetic syndrome of childhood	1,266	2.0	474	274	2.5	535
<i>Cannabis</i> abuse	2,923	4.5	1,095	271	2.5	529
Other derangement of joint, not elsewhere classified	952	1.5	357	265	2.4	517
Asthma	1,560	2.4	584	244	2.2	476
Total applicants at MEPS		267,036		51,258		
Total of disqualified applicants		64,533		10,945		

[†] Condition categories are not mutually exclusive.

[‡] Indicates the percentage of medically disqualified MEPS applicants for the specified condition.

[§] Indicates the number of individuals with the specified condition for every 100,000 applicants screened at MEPS.

Table 2.17-2.19 shows the medical disqualifications among applicants for enlisted active, reserve, and National Guard component service during the period between 2009 and 2013, and separately for 2014 according to other medical failure (OMF) codes provided by the US Military Entrance Processing Command (USMEPCOM). These conditions are ranked according to the number of disqualifications in 2014. Some disqualified individuals have more than one disqualifying medical condition; therefore, the number of disqualifications is greater than the number of individuals disqualified.

Table 2.17 shows the most common disqualifying conditions according to OMF codes for medical disqualifications among enlisted reserve component applicants during the period between 2009 and 2013, and separately for 2014. Weight and body build is the leading category for disqualification in 2014, accounting for 16% of disqualified individuals, which is down from 19% in 2009 through 2013. This is considered a temporary disqualifying condition that can be remediated by the applicant without need for an accession medical waiver. Refraction is the second most common medical disqualification observed, with 13% of individuals disqualified for this reason in 2014, which is higher compared to the prevalence observed in the previous five years (9%). Psychiatric is the third most common disqualification category in 2014, accounting for 13% of disqualifications.

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TABLE 2.17: MEDICAL DISQUALIFICATION OF FIRST-TIME ACTIVE COMPONENT ENLISTED APPLICANTS BY ALL LISTED USMEPCOM FAILURE CODES IN 2009-2013 VS. 2014: ALL SERVICES

Condition [†]	2009-2013			2014		
	n	% [‡]	Rate [§]	n	% [‡]	Rate [§]
Weight, body build	39,873	18.8	3,679	5,153	15.7	2,974
Refraction	19,934	9.4	1,839	4,356	13.3	2,514
Psychiatric	24,192	11.4	2,232	4,133	12.6	2,385
Skin, lymphatics, allergies	17,782	8.4	1,641	3,563	10.9	2,056
Lower extremities (except feet)	14,470	6.8	1,335	2,802	8.5	1,617
Upper extremities	11,923	5.6	1,100	2,234	6.8	1,289
Lungs and chest (includes breast)	13,409	6.3	1,237	2,021	6.2	1,166
Genitourinary	7,870	3.7	726	1,330	4.1	768
<i>Cannabis</i> test positive	9,333	4.4	861	1,144	3.5	660
Eyes-General	6,030	2.8	556	1,105	3.4	638
Total applicants at MEPS			1,083,740			173,286
Total of disqualified applicants			212,367			32,789

[†] Condition categories are not mutually exclusive.

[‡] Indicates the percentage of medically disqualified MEPS applicants with the specified condition.

[§] Indicates the number of individuals with the specified condition for every 100,000 applicants screened at MEPS.

Table 2.18 shows the most common disqualifying conditions according to OMF codes for medical disqualifications among enlisted reserve component applicants during the period between 2009 and 2013, and separately for 2014. Weight and body build is the leading category for disqualification in 2014, accounting for 19% of disqualified individuals, which is down from 23% in 2009 through 2013. This is generally considered a temporary disqualifying condition that can be remediated by the applicant without need for an accession medical waiver. Refraction is the second most common medical disqualification observed (15%) and has increased in prevalence among disqualified applicants relative to the previous five years (10%). Skin, lymphatics, allergies is the third most common disqualification category in 2014 accounting for 10% of disqualifications.

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TABLE 2.18: MEDICAL DISQUALIFICATION OF FIRST-TIME RESERVE COMPONENT ENLISTED APPLICANTS BY ALL LISTED USMEPCOM FAILURE CODES IN 2009-2013 VS. 2014: ALL SERVICES

Condition [†]	2009-2013			2014		
	n	% [‡]	Rate [§]	n	% [‡]	Rate [§]
Weight, body build	8,814	22.5	4,645	1,170	19.3	3,665
Refraction	3,952	10.1	2,083	905	14.9	2,835
Skin, lymphatics, allergies	3,286	8.4	1,732	606	10.0	1,898
Psychiatric	3,856	9.8	2,032	562	9.3	1,761
Lower extremities (except feet)	2,570	6.5	1,355	479	7.9	1,501
Upper extremities	1,981	5.0	1,044	345	5.7	1,081
Lungs and chest (includes breast)	2,487	6.3	1,311	312	5.2	977
Spine, other musculoskeletal	968	2.5	510	221	3.7	692
Genitourinary	1,413	3.6	745	218	3.6	683
Audiometer	1,513	3.9	797	211	3.5	661
Total applicants at MEPS		189,736			31,920	
Total of disqualified applicants		39,260			6,054	

[†] Condition categories are not mutually exclusive.

[‡] Indicates the percentage of medically disqualified MEPS applicants with the specified condition.

[§] Indicates the number of individuals with the specified condition for every 100,000 applicants screened at MEPS.

Table 2.19 shows the most common disqualifying conditions according to OMF codes for medical disqualifications among enlisted National Guard applicants during the period between 2009 and 2013, and separately for 2014. Weight and body build is the leading category for disqualification in 2014, accounting for 28% of disqualified individuals, which is similar to the previous five year period (29%). This is considered a temporary disqualifying condition that can be remediated by the applicant without need for an accession medical waiver. Refraction is the second most common medical disqualification observed in 2014 (11%) which has increased in prevalence compared to the previous five years (8%). Psychiatric is the third most common disqualification category in 2014, accounting for 10% of disqualifications, which is similar to the prevalence in the previous five years (11%).

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TABLE 2.19: MEDICAL DISQUALIFICATION OF FIRST-TIME NATIONAL GUARD ENLISTED APPLICANTS BY ALL LISTED USMEPCOM FAILURE CODES IN 2009-2013 VS. 2014: ARMY AND AIR FORCE

Condition [†]	2009-2013			2014		
	n	% [‡]	Rate [§]	n	% [‡]	Rate [§]
Weight, body build	18,556	28.8	6,949	3,030	27.7	5,911
Refraction	4,988	7.7	1,868	1,241	11.3	2,421
Psychiatric	6,917	10.7	2,590	1,125	10.3	2,195
Skin, lymphatics, allergies	4,967	7.7	1,860	1,059	9.7	2,066
Lower extremities (except feet)	3,948	6.1	1,478	707	6.5	1,379
Upper extremities	2,975	4.6	1,114	612	5.6	1,194
Lungs and chest (includes breast)	3,506	5.4	1,313	559	5.1	1,091
<i>Cannabis</i> test positive	4,472	6.9	1,675	458	4.2	894
Audiometer	2,889	4.5	1,082	420	3.8	819
Genitourinary	1,986	3.1	744	372	3.4	726
Total applicants at MEPS		267,036			51,258	
Total of disqualified applicants		64,533			10,945	

[†] Condition categories are not mutually exclusive.

[‡] Indicates the percentage of medically disqualified MEPS applicants with the specified condition.

[§] 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 Military Entrance Processing Station (MEPS) may be granted an accession medical waiver for the disqualifying condition(s) from a service-specific waiver authority. This section summarizes waiver considerations that occurred between fiscal years 2009 to 2014. Tables 2.20-2.29 examine all waiver considerations for waiver applicants, regardless of whether or not there is a corresponding Defense Manpower Data Center (DMDC) accession record. Because waivers are granted prior to accession by each service, no distinction between active and reserve components is made at the time of waiver application. Some waiver applicants with prior military service but no prior approved medical waiver may also be included in these tables. Individuals applying to multiple waiver authorities may appear more than once. Thus, these tables address the spectrum of waiver applications seen by the waiver authorities. In addition, the waiver conditions most frequently applied for and the most frequently waived conditions for each service's waiver applicants are shown. Tables 2.30-2.33 examine only those approved waiver records for which there is an accession record, and the individual has no prior service as defined elsewhere in this report. Medical waiver data for Navy and Marine Corps for 2014 were not available at the time of publication. Therefore, estimates of waiver application and approval rates among active component applicants should be considered underestimates.

Part I: Medical waivers irrespective of an accession record

Table 2.20 shows the number of active and reserve component waiver considerations and approval percentages by branch of service and year of waiver decision from 2009 to 2014. Multiple waiver considerations to the same waiver authority most frequently reflect resubmissions for the same condition, perhaps with additional information. Multiple waiver records are counted in each year and in each service in which they were considered. Approval percentages represent the proportion of the total waivers considered by each service that year, listed in the table as "Count", who had a waiver approved in each service by 2014. Waiver considerations and approval rates in the Army have generally declined through 2012, but increased in 2013. Waiver considerations and approval rates in the Army in 2014 were similar to 2013. In the Navy, the number of waiver considerations began to increase from 2011 onward. The approval rate for Navy waivers had declined since 2009, but saw an increase in 2013. The approval rates among Air Force waivers have been on the decline since 2009, apart from a small increase in 2013. Marine Corps waiver data were incomplete in 2010 and 2011. Medical waiver data for Navy and Marine Corps for 2014 were not available at the time of publication. Therefore, estimates of waiver application and approval rates among active component applicants should be considered underestimates.

TABLE 2.20: ACTIVE AND RESERVE COMPONENT WAIVER CONSIDERATIONS BY YEAR AND SERVICE* 2009-2014

Year	Army			Navy			Marine Corps			Air Force		
	Consider (n)	Approved (n)	Approved (%)	Consider (n)	Approved (n)	Approved (%)	Consider (n)	Approved (n)	Approved (%)	Consider (n)	Approved (n)	Approved (%)
2009	18,591	12,139	65.3	4,775	3,122	65.4	3,852	2,739	71.1	3,214	2,220	69.1
2010	15,698	9,151	58.3	4,763	2,876	60.4	2,189 ^{***}	1,501	68.6	3,264	2,193	67.2
2011	14,887	8,381	56.3	5,171	3,082	59.6	805 ^{***}	591	73.4	2,892	1,793	62.0
2012	14,255	7,854	55.1	6,101	3,502	57.4	2,365	2,081	88.0	4,060	2,281	56.2
2013	15,620	9,637	61.7	7,681	4,693	61.1	2,424	2,106	86.9	3,630	2,178	60.0
2014 ^{**}	15,336	9,493	61.9	0	-	-	142	122	85.9	3,758	2,056	54.7
Total	94,387			28,491			11,777			20,818		

* Applicants may be counted more than once per year and in multiple services.

** Waiver data were not reported by the Navy or Marine Corps in time to meet the publication deadline for this annual report. Therefore, 2014 waiver counts and percentages should be considered underestimates.

*** Value undercounted due to missing Marine waiver records from 2010 and 2011.

Table 2.21 describes active and reserve component waiver considerations by service, including the number of considerations per individual and the frequency with which applicants have multiple conditions. The Army had the highest number of waiver applications and applicants in the period from 2009 to 2014 (94,387 applications, 87,598 applicants) followed by the Navy (28,491 applications, 27,856 applicants). On average, most waiver applicants did not apply for waivers more than once within a given service. Most applicants (72-87%) had a single condition regardless of service. The highest percentage of applicants with more than one condition (27%) was found in the Air Force.

TABLE 2.21: ACTIVE AND RESERVE COMPONENT WAIVER CONSIDERATION COUNTS*: 2009-2014

	Army	Navy**	Marine Corps†	Air Force
All waiver considerations	94,387	28,491	11,777	20,818
Individuals	87,598	27,856	11,290	20,479
Average number of considerations per applicant	1.08	1.02	1.04	1.02
Applicants with a single condition	73,951 (84.4%)	21,776 (78.2%)	9,778 (86.6%)	15,055 (73.5%)
Applicants with multiple conditions	19,586 (22.4%)	5,416 (19.4%)	1,968 (17.4%)	5,561 (27.2%)
Applicants with missing conditions	850 (1.0%)	1,299 (4.7%)	31 (0.3%)	202 (1.0%)

* Applicants can be counted in multiple services.

** Value undercounted due to missing Navy waiver records from 2014.

† Value undercounted due to missing Marine waiver records from 2010, 2011 and 2014.

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Tables 2.22 through 2.25 show by service the medical conditions for which waivers were most frequently applied and the approval rate for individuals with these conditions in 2009-2014. Waiver considerations from the years 2009 to 2013 are shown in aggregate to facilitate the comparison of waivers in 2014 to previous years.

Medical accession waiver considerations and approvals for the Army are shown in Table 2.22. Disorders of refraction and accommodation were the most common medical disqualifications for which waivers were sought in 2014. The percentage of applications for waivers for disorders of refraction and accommodation (17%) increased compared to the previous five year period (13%). Certain adverse effects not elsewhere classified, an ICD-9 code group that includes allergies and anaphylaxis, was the second most common waiver application in 2014 (9%). The percentage of applications for these waivers increased compared to the previous five year period (6%). The third leading waiver application type in 2014 was hyperkinetic syndrome of childhood (7%) which was also a higher percentage of waiver applications compared to the previous five years (3%).

TABLE 2.22: LEADING CONDITIONS FOR ACTIVE AND RESERVE COMPONENT ACCESSION WAIVERS CONSIDERED IN 2009-2013 vs. 2014: ARMY

Condition [†]	2009-2013				2014			
	Applied		Approved		Applied		Approved	
	n	% [‡]	n	% [§]	n	% [‡]	n	% [§]
Disorders of refraction and accommodation	10,243	13.0	8,526	18.1	2,544	16.6	2,261	23.8
Certain adverse effects, not elsewhere classified ^{‡‡}	4,564	5.8	3,831	8.1	1,329	8.7	1,155	12.2
Hyperkinetic syndrome of childhood	2,681	3.4	1,355	2.9	990	6.5	507	5.3
Hearing loss	5,717	7.2	2,164	4.6	801	5.2	168	1.8
Neurotic disorders	3,392	4.3	589	1.2	664	4.3	72	0.8
Other joint derangement, not elsewhere classified	1,809	2.3	1,358	2.9	593	3.9	500	5.3
Asthma	2,985	3.8	1,188	2.5	565	3.7	237	2.5
Curvature of spine	1,335	1.7	953	2.0	481	3.1	419	4.4
Internal derangement of knee	1,705	2.2	975	2.1	384	2.5	284	3.0
Contact dermatitis and other eczema	1,558	2.0	1,048	2.2	300	2.0	238	2.5
Corneal opacity and other disorders of cornea	1,007	1.3	218	0.5	246	1.6	57	0.6
Total considerations*	79,051				15,336			
Total of approved applicants*	47,166 (59.7%)				9,491 (61.9%)			

[†] Condition categories are not mutually exclusive.

[‡] Indicates the percentage of waiver applicants for the specified condition category, among total waivers considered.

[§] Indicates the percentage of approved waiver applicants for the specified condition category, among total approved waivers.

^{‡‡} Codes in this category typically include unspecified allergies and anaphylactic shock.

* This category includes waiver applicants with missing condition values.

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Table 2.23 shows the leading accession medical waiver conditions applied for and approved by the Navy comparing 2014 to the previous five year period in aggregate; however, Navy medical waiver data for 2014 was not available at the time of publication. The most common waiver application in the previous five year period was for myopia (10%). The second most common waiver application was for allergic manifestations (8%), including allergies to food, medication, and latex. The third most common waiver application was for astigmatism (8%).

TABLE 2.23: LEADING CONDITIONS FOR ACTIVE AND RESERVE COMPONENT ENLISTED ACCESSION WAIVERS CONSIDERED IN 2009-2013 VS. 2014: NAVY

Condition [†]	2009-2013				2014 ^{**}			
	Applied		Approved		Applied		Approved	
	n	% [‡]	n	% [§]	n	% [‡]	n	% [§]
Myopia	2,704	9.5	1,541	8.9	-	-	-	-
Allergic Manifestations	2,327	8.2	1,953	11.3	-	-	-	-
Astigmatism	2,315	8.1	1,777	10.3	-	-	-	-
Hearing deficiency	1,650	5.8	302	1.7	-	-	-	-
Asthma	1,159	4.1	604	3.5	-	-	-	-
Attention deficit w/ hyperactivity	927	3.3	494	2.9	-	-	-	-
Deviation or curvature of spine	691	2.4	187	1.1	-	-	-	-
Blood pressure, elevated without diagnosis of hypertension	647	2.3	402	2.3	-	-	-	-
Self-inflicted injury by unspecified means	627	2.2	302	1.7	-	-	-	-
Adverse food reactions, not elsewhere classified	585	2.1	452	2.6	-	-	-	-
Shoulder dislocation, recurrent	577	2.0	503	2.9	-	-	-	-
Total considerations*	28,491				-			
Total of approved applicants*	17,282 (60.7%)				-			

[†] Condition categories are not mutually exclusive.

[‡] Indicates the percentage of waiver applicants for the specified condition category, among total waivers considered.

[§] Indicates the percentage of approved waiver applicants for the specified condition category, among total approved waivers.

* This category includes waiver applicants with missing condition values.

** Waiver data were not reported by the Navy in time to meet the publication deadline for this annual report.

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Table 2.24 shows the leading conditions among enlisted Marine Corps applicants for waivers for 2014 as compared to the period from 2009 to 2013 in aggregate. Complete medical waiver data for 2014 was unavailable at the time of publication; however, a small number of records from October 2014 were available and are included in the table. From 2009-2013, the most common medical waiver application was for disorders of refraction and accommodation (18%). The next most common waiver application was for other nonspecific abnormal findings (16%). The third most common waiver application in the previous five years was for certain adverse effects not elsewhere classified (8%), including allergies to food, medication and latex.

TABLE 2.24: LEADING CONDITIONS FOR ACTIVE AND RESERVE COMPONENT ENLISTED ACCESSION WAIVERS CONSIDERED IN 2009-2013 vs. 2014: MARINE CORPS

Condition [†]	2009-2013				2014**			
	Applied		Approved		Applied		Approved	
	n	% [‡]	n	% [§]	n	% [‡]	n	% [§]
Disorders of refraction and accommodation	2,063	17.7	1,793	19.9	33	23.2	33	27.0
Other nonspecific abnormal findings	1,838	15.8	1,448	16.1	22	15.5	15	12.3
Certain adverse effects, not elsewhere classified ^{**}	949	8.2	891	9.9	23	16.2	22	18.0
Asthma	775	6.7	599	6.6	13	9.2	9	7.4
Hearing loss	610	5.2	302	3.3	3	2.1	1	0.8
Hyperkinetic syndrome of childhood	537	4.6	440	4.9	3	2.1	3	2.5
Neurotic disorders	532	4.6	414	4.6	7	4.9	7	5.7
Late effects of musculoskeletal and connective tissue injuries	326	2.8	273	3.0	3	2.1	3	2.5
Other and unspecified disorders of bone and cartilage	302	2.6	254	2.8	4	2.8	3	2.5
Contact dermatitis and other eczema	280	2.4	230	2.6	6	4.2	6	4.9
Curvature of spine	264	2.3	98	1.1	4	2.8	3	2.5
Total considerations*	11,635				142			
Total of approved applicants*	9,019 (77.5%)				122 (85.9%)			

[†] Condition categories are not mutually exclusive.

[‡] Indicates the percentage of waiver applicants for the specified condition category, among total waivers considered.

[§] Indicates the percentage of approved waiver applicants for the specified condition category, among total approved waivers.

^{**} Codes in this category typically include unspecified allergies and anaphylactic shock.

* This category includes waiver applicants with missing condition values.

** Waiver data were not reported by the Marine Corps in time to meet the publication deadline for this annual report. Therefore, 2014 waiver counts and percentages should be considered underestimates.

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Leading conditions for accession medical waiver application are shown in Table 2.25 for the Air Force. In 2014, disorders of refraction and accommodation were the most common reasons for which waivers were sought (15%). The prevalence of these waiver applications was similar to the previous five year period (14%). Certain adverse effects not elsewhere classified was the second most common reason for waiver applications in 2014 (12%). The prevalence for these waivers in 2014 was nearly double that of the previous five year period (6%). The third most common waiver requested in 2014 in the Air Force was waivers for hyperkinetic syndrome of childhood. The prevalence of these waivers among the applicant population in 2014 (9%) increased slightly compared to the previous five years (7%).

TABLE 2.25: LEADING CONDITIONS FOR ACTIVE AND RESERVE COMPONENT ENLISTED ACCESSION WAIVERS CONSIDERED IN 2009-2013 vs. 2014: AIR FORCE

Condition [†]	2009-2013				2014			
	Applied		Approved		Applied		Approved	
	n	% [‡]	n	% [§]	n	% [‡]	n	% [§]
Disorders of refraction and accommodation	2,369	13.9	1,601	15.0	555	14.8	385	18.7
Certain adverse effects, not elsewhere classified ^{**}	1,057	6.2	811	7.6	435	11.6	318	15.5
Hyperkinetic syndrome of childhood	1,146	6.7	752	7.1	330	8.8	153	7.4
Asthma	962	5.6	496	4.7	224	6.0	66	3.2
Neurotic disorders	644	3.8	407	3.8	188	5.0	100	4.9
Other joint derangement, not elsewhere classified	435	2.5	362	3.4	147	3.9	98	4.8
Affective psychoses	663	3.9	364	3.4	123	3.3	49	2.4
Curvature of spine	200	1.2	49	0.5	114	3.0	25	1.2
Contact dermatitis and other eczema	500	2.9	181	1.7	104	2.8	26	1.3
Hearing loss	607	3.6	94	0.9	100	2.7	6	0.3
Recurrent dislocation of joint	263	1.5	224	2.1	68	1.8	44	2.1
Total considerations*	17,060				3,758			
Total of approved applicants*	10,666 (62.5%)				2,054 (54.7%)			

[†] Condition categories are not mutually exclusive.

[‡] Indicates the percentage of waiver applicants for the specified condition category, among total waivers considered.

[§] Indicates the percentage of approved waiver applicants for the specified condition category, among total approved waivers.

^{**} Codes in this category typically include unspecified allergies and anaphylactic shock.

* This category includes waiver applicants with missing condition values.

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Tables 2.26 through 2.29 show the most frequently approved waiver conditions ranked by waiver consideration approval percentage for 2014, sorted in descending order by overall approval rate. The same population of considerations was used as in Tables 2.22 to 2.25. Note that all conditions are not mutually exclusive and an individual may appear in the table in multiple condition rows.

In Table 2.26, among active and reserve Army applicants, waivers for disorders of refraction and accommodation (89%) had the highest proportion of approved applicants in 2014. The next most highly approved condition was curvature of spine (87%) which significantly increased in the proportion of approved waiver applications in 2014 compared to the previous five year period. Certain adverse effects not elsewhere classified (87%), which includes allergies and anaphylaxis, was the third most commonly waived condition.

TABLE 2.26: CONDITION-SPECIFIC CATEGORIES FOR THOSE ACCESSION MEDICAL WAIVERS WITH THE HIGHEST PROPORTION OF APPROVED APPLICATIONS AMONG ACTIVE AND RESERVE COMPONENT **ARMY** ENLISTEES: 2009-2013vs. 2014

Condition [†]	Total		2009-2013		2014	
	n	%*	n	%*	n	%*
Disorders of refraction and accommodation	12,787	84.4	10,243	83.2	2,544	88.9
Curvature of spine	1,816	75.6	1,335	71.4	481	87.1
Certain adverse effects, not elsewhere classified	5,893	84.6	4,564	83.9	1,329	86.9
Other joint derangement, not elsewhere classified	2,402	77.4	1,809	75.1	593	84.3
Dislocation of shoulder	1,256	74.9	1,038	73.0	218	83.9
Contact dermatitis and other eczema	1,858	69.2	1,558	67.3	300	79.3
Internal derangement of knee	2,089	60.3	1,705	57.2	384	74.0
Congenital anomalies of genital organs	1,303	74.1	1,057	75.2	246	69.1
Hyperkinetic syndrome of childhood	3,671	50.7	2,681	50.5	990	51.2
Asthma	3,550	40.1	2,985	39.8	565	41.9

* Indicates the percent of waivers approved among all waivers applied.

[†] Condition categories are not mutually exclusive.

^{**} Codes in this category typically include unspecified allergies and anaphylactic shock.

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Navy waiver applications for 2014 were unavailable at the time of publication and are missing in Table 2.27. From 2009 to 2013, shoulder instability (89%) had the highest approval rate, followed by recurrent shoulder dislocations (87%) and allergic manifestations (84%).

TABLE 2.27: CONDITION-SPECIFIC CATEGORIES FOR THOSE ACCESSION MEDICAL WAIVERS WITH THE HIGHEST PROPORTION OF APPROVED APPLICATIONS AMONG ACTIVE AND RESERVE COMPONENT NAVY ENLISTEES: 2009-2013 vs. 2014

Condition [†]	Total		2009-2013		2014	
	n	%*	n	%*	n	%*
Shoulder instability	484	88.8	484	88.8	-	-
Shoulder dislocation, recurrent	577	87.2	577	87.2	-	-
Allergic Manifestations	2,327	83.9	2,327	83.9	-	-
Keratorefractive surgery	490	81.2	490	81.2	-	-
Adverse food reactions, not elsewhere classified	585	77.3	585	77.3	-	-
Astigmatism	2,315	76.8	2,315	76.8	-	-
Blood pressure, elevated without diagnosis of hypertension	647	62.1	647	62.1	-	-
Myopia	2,704	57.0	2,704	57.0	-	-
Attention deficit w/ hyperactivity	927	53.3	927	53.3	-	-
Asthma	1,159	52.1	1,159	52.1	-	-

*Indicates the percent of waivers approved among all waivers applied.

†Condition categories are not mutually exclusive.

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Table 2.28 shows the conditions with the highest proportion of approved applicants for the Marine Corps in 2009-2013 and 2014. Waiver applications for 2014 were unavailable at the time of publication except for a small number of records from October 2014, which are presented in the table. From 2009 to 2013, certain adverse effects not elsewhere classified, including allergic reactions and history of anaphylaxis (94%), disorders of refraction and accommodation (86.9%), and other and unspecified disorders of bone or cartilage (84%).

TABLE 2.28: CONDITION-SPECIFIC CATEGORIES FOR THOSE ACCESSION MEDICAL WAIVERS WITH THE HIGHEST PROPORTION OF APPROVED APPLICATIONS AMONG ACTIVE AND RESERVE COMPONENT **MARINE CORPS** ENLISTEES: 2009-2013 vs. 2014

Condition [†]	Total		2009-2013		2014	
	n	%*	n	%*	n	%*
Certain adverse effects, not elsewhere classified	972	93.9	949	93.9	23	95.7
Disorders of refraction and accommodation	2,096	87.1	2,063	86.9	33	100.0
Other and unspecified disorders of bone and cartilage	306	84.0	302	84.1	4	75.0
Late effects of musculoskeletal and connective tissue injuries	329	83.9	326	83.7	3	100.0
Contact dermatitis and other eczema	286	82.5	280	82.1	6	100.0
Hyperkinetic syndrome of childhood	540	82.0	537	81.9	3	100.0
Other nonspecific abnormal findings	1,860	78.7	1,838	78.8	22	68.2
Neurotic disorders	539	78.1	532	77.8	7	100.0
Asthma	788	77.2	775	77.3	13	69.2
Hearing loss	613	49.4	610	49.5	3	33.3

* Indicates the percent of waivers approved among all waivers applied.

[†] Condition categories are not mutually exclusive.

** Codes in this category typically include unspecified allergies and anaphylactic shock.

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Table 2.29 shows that among Air Force applicants, the conditions with the highest proportion of approved applications generally had a low number of applicants. Waiver approvals were most common among applications for certain adverse effects not elsewhere classified, which includes allergy and anaphylaxis (73.1%). Congenital anomalies of the genital organs was the second most commonly approved waiver (70.9%), and disorders of refraction and accommodation were the third most commonly approved waivers (69.4%).

TABLE 2.29: CONDITION-SPECIFIC CATEGORIES FOR THOSE ACCESSION MEDICAL WAIVERS WITH THE HIGHEST PROPORTION OF APPROVED APPLICATIONS AMONG ACTIVE AND RESERVE COMPONENT **AIR FORCE** ENLISTEES: 2009-2013 vs. 2014

Condition [†]	Total		2009-2013		2014	
	n	%*	n	%*	n	%*
Certain adverse effects, not elsewhere classified	1,492	75.7	1,057	76.7	435	73.1
Congenital anomalies of genital organs	310	83.2	255	85.9	55	70.9
Disorders of refraction and accommodation	2,924	67.9	2,369	67.6	555	69.4
Strabismus and other disorders of binocular eye movements	220	67.3	155	67.1	65	67.7
Other joint derangement, not elsewhere classified	582	79.0	435	83.2	147	66.7
Recurrent dislocation of joint	331	81.0	263	85.2	68	64.7
Neurotic disorders	832	60.9	644	63.2	188	53.2
Hyperkinetic syndrome of childhood	1,476	61.3	1,146	65.6	330	46.4
Affective psychoses	786	52.5	663	54.9	123	39.8
Asthma	1,186	47.4	962	51.6	224	29.5

* Indicates the percent of waivers approved among all waivers applied.

[†] Condition categories are not mutually exclusive.

^{**} Codes in this category typically include unspecified allergies and anaphylactic shock

Part II: Medical waivers with an accession record

Table 2.30 and Table 2.31 show by component the number of enlisted applicants who were granted accession medical waivers and had a MEPS physical examination record indicating no prior service. Applicants are counted once in each component to which they applied, in the most recent year of waiver consideration. Results are shown for each year from 2009 to 2014 for all service branches combined. Navy and Marine Corps medical waiver data for fiscal year 2014 were unavailable at the time of publication and therefore the waiver application numbers are underestimated for 2014. Individuals are counted as accessions only in the component to which they accessed. For example, an enlistee who applied for both active and reserve component but enlisted into the active component is only considered an accession when examining active component waiver applicants. Among reserve component waiver considerations this individual is only considered an applicant.

In Table 2.30, the rate of active component applicants granted waivers who subsequently accessed has remained between 74 and 83% from 2009 to 2013. There was a decrease in waiver applicants with approved waivers in 2014; however, that is most likely due to missing records from the Navy and Marine Corps. In Table 2.31, the accession rate for reserve applicants was consistently lower compared to active component applicants. The accession rate for both active and reserve component enlistees with waivers has remained consistent since 2011. Again, comparisons to 2014 are difficult due to missing waiver records from the Navy and Marine Corps.

TABLE 2.30: ACTIVE COMPONENT ACCESSIONS FOR ENLISTED APPLICANTS WHO RECEIVED A WAIVER IN 2009–2014[†] BY YEAR: ALL SERVICES

Year of waiver consideration	Applicants with waivers granted	Total Applicants who accessed	
		n	%
2009	14,575	10,897	74.8
2010*	11,911	9,220	77.4
2011*	10,563	8,486	80.3
2012	12,319	10,323	83.8
2013	14,904	12,462	83.6
2014‡	9,220	4,962	53.8

[†] Considers accessions among only those applicants with both a MEPS physical examination for Active component service and an approved waiver.

* Value undercounted due to missing Marine Corps waiver records from 2010 and 2011.

‡ Value undercounted due to missing Marine Corps and Navy waiver records from 2014. The accession rate was underestimated due to a lack of sufficient follow up time.

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TABLE 2.31: RESERVE COMPONENT ACCESSIONS FOR ENLISTED APPLICANTS WHO RECEIVED A WAIVER IN 2009–2014[†] BY YEAR: ALL SERVICES

Year of waiver consideration	Applicants with waivers granted	Total Applicants who accessed	
		n	%
2009	3,458	1,794	51.9
2010*	2,329	1,118	48.0
2011*	2,068	1,215	58.8
2012	2,127	1,198	56.3
2013	2,349	1,370	58.3
2014‡	1,742	1,159	66.5

[†] Considers accessions among only those applicants with both a MEPS physical examination for Active component service and an approved waiver.

* Value undercounted due to missing Marine Corps waiver records from 2010 and 2011.

‡ Value undercounted due to missing Marine Corps and Navy waiver records from 2014. The accession rate was also underestimated due to a lack of sufficient follow up time.

Table 2.32 shows the demographic characteristics of active component waiver applicants and accessions with an approved medical waiver. Individuals who accessed with waivers in 2014 were similar to the waiver applicant population with respect to sex, age, and race. In 2014, applicants with less than a high school diploma made up a smaller proportion of accessions compared to applicants. The proportion of applicants and accessions with education beyond a high school diploma was lower in 2014 compared to the previous five year period. Over 99% of all applicants and accessions approved for a waiver had a permanently disqualified medical status with relatively few fully qualified and temporary disqualified individuals.

TABLE 2.32: DEMOGRAPHIC CHARACTERISTICS OF ACTIVE COMPONENT ENLISTED APPLICANTS WHO RECEIVED AN ACCESSION MEDICAL WAIVER COMPARED TO ACTIVE COMPONENT ACCESSIONS 2009-2013 vs. 2014: ALL SERVICES

	2009-2013				2014			
	All waivers		Accessed only		All waivers		Accessed only	
	n	%	n	%	n	%	n	%
Sex*								
Male	52,742	82.1	42,682	83.1	7,778	84.4	4,274	86.1
Female	11,527	17.9	8,706	16.9	1,442	15.6	688	13.9
Age at Waiver*								
17 – 20	37,840	58.9	31,489	61.3	5,665	61.4	3,051	61.5
21 – 25	18,455	28.7	14,775	28.8	2,780	30.2	1,520	30.6
> 25	7,977	12.4	5,124	10.0	775	8.4	391	7.9
Race*								
White	48,955	76.2	39,506	76.9	6,918	75.0	3,802	76.6
Black	8,878	13.8	7,109	13.8	1,652	17.9	887	17.9
Other	6,439	10.0	4,773	9.3	650	7.0	273	5.5
Education Level*								
Below HS senior**	360	0.6	230	0.4	53	0.6	3	0.1
HS senior	4,940	7.7	3,355	6.5	832	9.0	224	4.5
HS diploma	48,155	74.9	39,527	76.9	6,918	75.0	4,038	81.4
Some college	5,661	8.8	4,490	8.7	681	7.4	365	7.4
Bachelor's and higher	5,156	8.0	3,786	7.4	736	8.0	332	6.7
AFQT Score*								
93-99	6,226	9.7	5,016	9.8	690	7.5	362	7.3
65-92	27,002	42.0	21,970	42.8	3,506	38.0	1,879	37.9
50-64	16,994	26.4	13,793	26.8	2,458	26.7	1,298	26.2
30-49	13,268	20.6	10,507	20.4	2,532	27.5	1,420	28.6
11-29	241	0.4	96	0.2	28	0.3	2	0.0
<11	6	0.0	3	0.0	2	0.0	1	0.0
Medical Status								
Fully Qualified	311	0.5	166	0.3	14	0.2	3	0.1
Permanent DQ	63,708	99.1	51,030	99.3	9,200	99.8	4,956	99.9
Temporary DQ	253	0.4	192	0.4	6	0.1	3	0.1
Total	64,272		51,388		9,220		4,962	

HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification

* Individuals with missing values for demographic variables are included in the total.

** 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 2.33 shows the demographic characteristics for reserve component waiver applicants and accessions with an approved medical waiver. The distribution of the demographic characteristics sex, age, and race were very different in individuals who accessed with waivers in 2014 compared to the previous five years; however, this difference is most likely due to missing Navy and Marine Corps waiver records from 2014. Applicants and accessions in 2014 were younger compared to the previous five year period, with a smaller proportion over the age of 25. In 2014, a greater proportion of applicants and accessions had less than a high school diploma. Over 99% of reserve applicants and accessions had a permanently disqualified medical status.

TABLE 2.33: DEMOGRAPHIC CHARACTERISTICS OF RESERVE COMPONENT ENLISTED APPLICANTS WHO RECEIVED AN ACCESSION MEDICAL WAIVER COMPARED TO RESERVE COMPONENT ACCESSIONS 2009-2013 VS. 2014: ALL SERVICES

	2009-2013				2014			
	All waivers		Accessed only		All waivers		Accessed only	
	n	%	n	%	n	%	n	%
Sex*								
Male	9,658	78.3	5,155	77.0	1,279	73.4	844	78.8
Female	2,673	21.7	1,540	23.0	463	26.6	315	27.2
Age at Waiver*								
17 – 20	5,920	48.0	3,894	58.2	1,119	64.2	787	67.9
21 – 25	2,640	21.4	1,580	23.6	382	21.9	252	21.7
> 25	3,771	30.6	1,221	18.2	241	13.8	120	10.4
Race*								
White	9,232	74.9	5,109	76.3	1,234	70.8	826	71.3
Black	2,009	16.3	1,063	15.9	385	22.1	262	22.6
Other	1,090	8.8	523	7.8	123	7.1	71	6.1
Education Level*								
Below HS senior**	408	3.3	312	4.7	91	5.2	74	6.4
HS senior	1,294	10.5	897	13.4	334	19.2	249	21.5
HS diploma	7,936	64.4	4,197	62.7	1,012	58.1	664	57.3
Some college	1,263	10.2	674	10.1	126	7.2	71	6.1
Bachelor's and higher	1,430	11.6	615	9.2	179	10.3	101	8.7
AFQT Score*								
93-99	994	8.1	560	8.4	90	5.2	65	5.6
65-92	4,403	35.7	2,682	40.1	634	36.4	439	37.9
50-64	2,827	22.9	1,666	24.9	406	23.3	268	23.1
30-49	2,846	23.1	1,702	25.4	589	33.8	387	33.4
11-29	136	1.1	45	0.7	8	0.5	0	0.0
<11	16	0.1	3	0.0	0	0.0	0	0.0
Medical Status								
Fully Qualified	41	0.3	2	0.0	1	0.1	0	0.0
Permanent DQ	12,178	98.8	6,684	99.8	1,737	99.7	1,158	99.9
Temporary DQ	112	0.9	9	0.1	4	0.2	1	0.1
Total	12,331		6,695		1,742		1,159	

HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification

* Individuals with missing values for demographic variables are included in the total.

** 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.

Hospitalizations

This section summarizes hospitalization records of service members admitted to any military treatment facility. Hospitalization records are summarized for all services by component for enlistees who began service during FY 2009-2014 and for whom AMSARA has a corresponding accession record. This section accordingly examines hospitalizations among active, reserve and National Guard component enlistees early in service. Relative risks are used to compare the risk of hospitalization across demographic groups. The comparison group chosen 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 comparison group is generally the largest group.

Table 2.34 through 2.36 show the hospitalizations and individuals hospitalized by component among those who accessed each year from 2009-2014. Hospitalizations are separated into two groups: one that includes hospitalizations occurring within the first year of service and one that includes hospitalizations occurring within the second year of service. Due to the lack of full two-year follow-up time for 2013 enlistees and one-year and two-year follow-up for 2014 enlistees, the corresponding counts for hospitalizations and individuals hospitalized were underestimated. Because multiple hospitalizations can occur per person, results are shown both in terms of hospitalizations (“Admissions”) and individuals hospitalized (“Individuals”). The proportion of individuals hospitalized (% of individuals) is relatively stable for active, reserve, and National Guard component enlistees between 2009 and 2013.

TABLE 2.34: ACTIVE COMPONENT HOSPITALIZATIONS IN 2009- 2014 BY YEAR: ALL SERVICES

Year	Total accessed	> 1 year of service			1-2 years of service		
		Admissions	Individuals	% of Individuals	Admissions	Individuals	% of Individuals
2009	161,104	5,443	4,743	2.9	5,698	4,364	2.7
2010	159,765	4,876	4,286	2.7	5,812	4,357	2.7
2011	152,674	4,638	4,097	2.7	4,815	3,796	2.5
2012	155,683	4,318	3,790	2.4	4,480	3,544	2.3
2013	165,957	4,327	3,839	2.3	2,308	1,870	1.1*
2014	139,997	1,998	1,810	1.3*	-	-	-
Total	935,180	25,600	22,565	2.4	23,113	17,931	1.9

* May be underestimated due to lack of follow-up time.

TABLE 2.35: RESERVE COMPONENT HOSPITALIZATIONS IN 2009- 2014 BY YEAR: ALL SERVICES

Year	Total accessed	>1 year of service			1-2 years of service		
		Admissions	Individuals	% of Individuals	Admissions	Individuals	% of Individuals
2009	35,279	448	407	1.2	68	57	0.2
2010	28,340	258	241	0.9	114	83	0.3
2011	30,485	539	495	1.6	100	76	0.2
2012	24,323	393	361	1.5	58	47	0.2
2013	21,287	288	268	1.3	27	20	0.1*
2014	24,585	220	206	0.8*	-	-	-
Total	164,299	2,146	1,978	1.2	367	283	0.2

* May be underestimated due to lack of follow-up time.

TABLE 2.36: NATIONAL GUARD HOSPITALIZATIONS IN 2009- 2014 BY YEAR: ARMY AND AIR FORCE

Year	Total accessed	>1 year of service			1-2 years of service		
		Admissions	Individuals	% of Individuals	Admissions	Individuals	% of Individuals
2009	47,435	444	413	0.9	75	59	0.1
2010	46,182	413	371	0.8	135	102	0.2
2011	40,256	511	477	1.2	89	75	0.2
2012	42,132	502	455	1.1	94	77	0.2
2013	28,689	351	322	1.1	40	37	0.1*
2014	42,705	270	254	0.6*	-	-	-
Total	247,399	2,491	2,292	0.9	433	350	0.1

* May be underestimated due to lack of follow-up time.

Table 2.37 shows that the risk of hospitalization within one year of accession for active component enlisted personnel varies by service. Army enlistees had a higher risk of hospitalization in the first year of service compared to Navy and Air Force enlistees, but not the Marine Corps enlistees. Navy active component enlistees had the lowest risk of hospitalization among all services. The demographic characteristics of active component enlistees within one year of accession show that the risk of hospitalization was greatest for women, enlistees over the age of 25, white enlistees, those who had less than a high school diploma, and enlistees with an AFQT score in the lowest percentile group, 11-29. The risk of hospitalization is significantly higher among the two disqualified group for medical status compared to the fully qualified group. Enlistees with temporary disqualifications have the highest risk of hospitalization.

TABLE 2.37: HOSPITAL ADMISSIONS WITHIN ONE YEAR OF ACCESSION FOR ACTIVE COMPONENT ENLISTED PERSONNEL ACCESSED IN 2009 – 2014: ALL SERVICES

	Accessed (n)	Admissions (n)	n	%	Individuals hospitalized	
					Crude RR	95% CI
Service*						
Army (REF)	371,130	12,739	11,243	3.0	1.00	-
Navy	214,144	2,548	2,214	1.0	0.34	(0.33, 0.36)
Marine Corps	181,841	6,538	5,820	3.2	1.06	(1.02, 1.09)
Air Force	168,065	3,775	3,288	2.0	0.65	(0.62, 0.67)
Sex*						
Male (REF)	779,199	20,314	17,987	2.3	1.00	-
Female [†]	155,981	5,286	4,578	2.9	1.27	(1.23, 1.31)
Age at Accession*						
17 – 20 (REF)	603,224	16,685	14,766	2.4	1.00	-
21 – 25	263,337	6,747	5,918	2.2	0.92	(0.89, 0.95)
> 25	68,607	2,168	1,881	2.7	1.12	(1.07, 1.17)
Race*						
White (REF)	689,531	19,666	17,304	2.5	1.00	-
Black	159,304	4,180	3,714	2.3	0.93	(0.90, 0.96)
Other	86,345	1,754	1,547	1.8	0.71	(0.68, 0.75)
Education Level*						
Below HS graduate**	1,766	88	76	4.3	1.78	(1.43, 2.22)
HS diploma (REF)	806,844	22,107	19,491	2.4	1.00	-
Some college	74,217	2,306	2,014	2.7	1.12	(1.07, 1.18)
Bachelor's or higher	52,171	1,094	979	1.9	0.78	(0.73, 0.83)
AFQT Score*						
93 – 99 (REF)	66,736	1,559	1,373	2.1	1.00	-
65 – 92	376,550	9,907	8,726	2.3	1.13	(1.06, 1.19)
50 – 64	259,887	7,249	6,356	2.4	1.19	(1.12, 1.26)
30 – 49	221,302	6,764	6,009	2.7	1.32	(1.25, 1.40)
11 – 29	2,635	103	83	3.1	1.53	(1.23, 1.90)
Medical Status						
Fully Qualified (REF)	811,106	21,558	19,056	2.3	1.00	-
Temporary DQ	37,385	1,382	1,178	3.2	1.34	(1.27, 1.42)
Permanent DQ	86,689	2,660	2,331	2.7	1.14	(1.10, 1.19)
Total	935,180	25,600	22,565	2.4		

RR: Relative Risk; CI: Confidence Interval; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification; REF: Referent Group

* Individuals with missing values for demographic variables are included in the total.

[†] Hospitalizations for pregnancy/childbirth are included.

** 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 2.38 shows the risk of hospitalization within one year of accession for reserve component enlisted personnel. Marine Corps enlistees had the highest risk of hospitalization in the first year of service, while Navy enlistees had the lowest risk of hospitalization. The risk of hospitalization within one year of accession was lowest for reserve component enlistees over the age of 25, enlistees who had less than a high school diploma and those who were fully qualified. There was no difference in risk by sex, race, and AFQT score.

TABLE 2.38: HOSPITAL ADMISSIONS WITHIN ONE YEAR OF ACCESSION FOR RESERVE COMPONENT ENLISTED PERSONNEL ACCESSED IN 2009–2014: ALL SERVICES

	Accessed (n)	Admissions (n)	n	Individuals hospitalized		
				%	Crude RR	95% CI
Service*						
Army (REF)	91,582	1,077	995	1.1	1.00	-
Navy	17,977	87	76	0.4	0.39	(0.31, 0.49)
Marine Corps	33,081	761	712	2.2	1.98	(1.80, 2.18)
Air Force	21,659	221	195	0.9	0.83	(0.71, 0.97)
Sex*						
Male (REF)	127,199	1,667	1,539	1.2	1.00	-
Female [†]	37,100	479	439	1.2	0.98	(0.88, 1.09)
Age at Accession*						
17 – 20 (REF)	100,773	1,387	1,278	1.3	1.00	-
21 – 25	39,828	510	481	1.2	0.95	(0.86, 1.06)
> 25	23,524	249	219	0.9	0.73	(0.64, 0.85)
Race*						
White (REF)	117,732	1,568	1,438	1.2	1.00	-
Black	33,899	426	397	1.2	0.96	(0.86, 1.07)
Other	12,668	152	143	1.1	0.92	(0.78, 1.10)
Education Level*						
Below HS graduate**	7,817	60	57	0.7	0.58	(0.45, 0.76)
HS diploma (REF)	128,397	1,746	1,605	1.3	1.00	-
Some college	17,525	228	214	1.2	0.98	(0.85, 1.13)
Bachelor's or higher	10,501	112	102	1.0	0.78	(0.64, 0.95)
AFQT Score*						
93 – 99 (REF)	10,192	136	123	1.2	1.00	-
65 – 92	61,566	846	768	1.2	1.03	(0.86, 1.25)
50 – 64	42,319	546	507	1.2	0.99	(0.82, 1.21)
30 – 49	46,216	607	570	1.2	1.02	(0.84, 1.24)
11 – 29	1,193	11	10	0.8	0.69	(0.37, 1.32)
Medical Status						
Fully Qualified (REF)	141,908	1,788	1,658	1.2	1.00	-
Temporary DQ	7,744	120	108	1.4	1.19	(0.98, 1.45)
Permanent DQ	14,647	238	212	1.4	1.24	(1.07, 1.43)
Total	164,299	2,146	1,978	1.2		

RR: Relative Risk; CI: Confidence Interval; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification; REF: Referent Group

* Individuals with missing values for demographic variables are included in the total.

[†] Hospitalizations for pregnancy/childbirth are included.

** 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 2.39 shows the risk of hospitalization within one year of accession for National Guard enlisted personnel. The risk of hospitalization in the first year of service was highest for Army National Guard enlistees, women, those between ages 21 and 25 and black enlistees. National Guard enlistees who had less than a high school diploma had lower risk of hospitalization than enlistees with other education credentials. There was no difference in risk by AFQT score or medical status.

TABLE 2.39: HOSPITAL ADMISSIONS WITHIN ONE YEAR OF ACCESSION FOR NATIONAL GUARD ENLISTED PERSONNEL ACCESSED IN 2009–2014: ARMY AND AIR FORCE

	Accessed (n)	Admissions (n)	n	Individuals hospitalized		
				%	Crude RR	95% CI
Service						
Army(REF)	217,486	2,309	2,126	1.0	1.00	-
Air Force	29,913	182	166	0.6	0.57	(0.48, 0.66)
Sex*						
Male (REF)	195,339	1,886	1,731	0.9	1.00	-
Female [†]	52,059	605	561	1.1	1.22	(1.11, 1.34)
Age at Accession*						
17 – 20 (REF)	159,366	1,495	1,388	0.9	1.00	-
21 – 25	57,040	659	604	1.1	1.22	(1.11, 1.34)
> 25	30,965	337	300	1.0	1.11	(0.98, 1.26)
Race*						
White (REF)	196,779	1,930	1,776	0.9	1.00	-
Black	40,350	454	413	1.0	1.13	(1.02, 1.26)
Other	10,270	107	103	1.0	1.11	(0.91, 1.35)
Education Level*						
Below HS graduate**	21,421	176	164	0.8	0.82	(0.70, 0.97)
HS diploma (REF)	176,346	1,782	1,639	0.9	1.00	-
Some college	34,858	384	353	1.0	1.09	(0.97, 1.22)
Bachelor's or higher	14,562	149	136	0.9	1.00	(0.84, 1.20)
AFQT Score*						
93 – 99 (REF)	15,671	146	134	0.9	1.00	-
65 – 92	90,167	889	822	0.9	1.07	(0.89, 1.28)
50 – 64	63,823	655	599	0.9	1.10	(0.91, 1.32)
30 – 49	72,572	772	710	1.0	1.14	(0.95, 1.38)
11 – 29	3,582	27	25	0.7	0.82	(0.53, 1.25)
Medical Status						
Fully Qualified (REF)	209,935	2,115	1,948	0.9	1.00	-
Temporary DQ	16,981	172	159	0.9	1.01	(0.86, 1.19)
Permanent DQ	20,483	204	185	0.9	0.97	(0.84, 1.13)
Total	247,399	2,491	2,292	0.9		

RR: Relative Risk; CI: Confidence Interval; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification; REF: Referent Group

* Individuals with missing values for demographic variables are included in the total.

[†] Hospitalizations for pregnancy/childbirth are included.

** 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.

Hospitalizations for enlisted service members by condition category and service are shown in Tables 2.40 to 2.45 for the years 2009 to 2013 in aggregate and separately for 2014. The most common condition categories in the first and second year of service for each component are shown.

Table 2.40 shows the most common condition categories during the first year of service for active component enlistees by service. For each service, mental disorders were the most common conditions for which hospitalizations occurred in the first year of service in 2009-2013 and 2014. The percentage of hospitalizations in 2014 attributable to this category was lower in the Army (23%) and Marine Corps (25%) than in the Navy (29%) and the Air Force (40%). Compared to the previous five year period, the percentage of mental disorders in 2014 has increased for each service. Among Army enlistees, the next most common condition categories in 2014 were pneumonia and influenza (7%), nonspecific symptoms (7%), and psychoses (6%). The percentage of hospitalizations for pneumonia and influenza and nonspecific symptoms has decreased and for psychoses has increased compared to 2009-2013. Among Navy enlistees in 2014, the next most common reasons for hospitalization were psychoses (10%), appendicitis (6%) and nonspecific symptoms (5%). Among Marine Corps, infections of the skin and subcutaneous tissue (14%), pneumonia and influenza (10%), and fracture (4%) were the next most common hospitalizations in 2014. Psychoses (6%), appendicitis (6%), and nonspecific symptoms (4%) were the next most common hospitalizations among Air Force enlistees.

TABLE 2.40: DISTRIBUTION OF PRIMARY CAUSE CATEGORIES FOR HOSPITALIZATIONS DURING FIRST YEAR OF SERVICE AMONG ACTIVE COMPONENT ENLISTEES IN 2009-2013 VS. 2014 BY SERVICE

Category	Army		Navy		Marine Corps		Air Force	
	2009-2013*	2014*	2009-2013*	2014*	2009-2013*	2014*	2009-2013*	2014*
Mental disorders (not including psychoses)	17.6	22.6	26.9	29.2	19.6	24.9	33.1	39.5
Pneumonia and influenza	11.0	7.2	3.6	2.7	14.5	10.0	5.7	1.6
Infections of skin and subcutaneous tissue	6.7	4.6	5.1	4.7	11.6	13.9	5.6	2.8
Fracture	6.1	4.7	3.6	3.7	4.6	3.5	2.3	2.6
Psychoses	5.8	5.5	7.5	9.5	3.6	3.5	5.0	5.9
Nonspecific symptoms	5.3	7.2	5.3	5.1	4.0	3.7	6.5	3.8
Injuries	4.2	3.3	2.6	2.3	2.8	2.9	1.8	0.7
Appendicitis	3.1	4.0	5.7	5.6	3.3	2.6	4.6	5.6
Alcohol and drug dependence	2.2	2.7	4.7	5.1	1.0	1.4	0.9	0.9
Rheumatism, excluding the back	2.2	2.4	1.6	1.4	3.6	4.4	1.8	3.1
Other and unspecified effects of external causes	2.2	3.5	0.5	0.6	2.5	2.1	1.3	1.2

* % of total hospitalizations

As shown in Table 2.41, during the second year of service for active component enlistees hospitalizations for complications of pregnancy, childbirth, and the puerperium are the most common across the services, except for in the Marine Corps in which mental disorders were again a slightly more common cause of hospitalizations. The percentage of hospitalizations in 2014 in this category was higher among Navy (37%), Air Force (37%), and Army (31%) enlistees than among the Marine Corp enlistees (21%). Hospitalizations for this condition category were similar compared to the previous five years. Mental disorders were the next most common cause of hospitalization in the Army (16%), Navy (20%), and Air Force (9%) and the number one cause of hospitalizations among the Marine Corps (21%). In all services but the Air Force, there was an increase in hospitalizations for mental disorders compared to the previous five year period. Fracture was the third most common condition for hospitalization in the Army (5%) and Marine Corps (6%), which were down from the previous five year period in both services. Psychoses was the third most common hospitalization condition in the Navy (8%) and Air Force (5%).

TABLE 2.41: DISTRIBUTION OF PRIMARY CAUSE CATEGORIES FOR HOSPITALIZATIONS DURING SECOND YEAR OF SERVICE AMONG ACTIVE COMPONENT ENLISTEES IN 2009-2013 VS. 2014 BY SERVICE

Category	Army		Navy		Marine Corps		Air Force	
	2009-2013*	2014*	2009-2013*	2014*	2009-2013*	2014*	2009-2013*	2014*
Complications of pregnancy, childbirth, and the puerperium	30.5	30.8	38.6	37.3	18.7	20.8	36.7	36.6
Mental disorders (not including psychoses)	12.7	16.1	19.0	20.2	18.9	21.1	9.2	8.6
Fracture	8.2	4.7	3.3	2.5	9.9	6.0	2.9	1.5
Injuries	7.5	2.7	1.7	1.6	9.2	4.5	2.4	1.8
Psychoses	4.4	4.3	7.2	8.3	6.4	5.5	6.3	5.0
Nonspecific symptoms	3.1	3.1	2.7	2.8	3.1	4.1	3.6	3.8
Alcohol and drug dependence	2.6	4.3	3.2	4.4	3.1	2.9	2.1	1.2
Appendicitis	2.6	3.9	2.9	2.5	3.9	4.5	4.9	5.0
Poisoning and toxic effects	2.0	1.8	1.9	2.4	2.2	2.3	1.6	1.2
Complications of surgical and medical care, not elsewhere classified	1.9	2.0	1.1	1.0	1.7	2.8	2.1	1.8
Infections of skin and subcutaneous tissue	1.7	1.8	1.6	1.7	3.0	3.4	2.3	1.8

* % of total hospitalizations

Table 2.42 and Table 2.43 show the most common condition categories during the first and second year of service among reserve component enlistees by service. In Table 2.42, diseases of the oral cavity, salivary glands, and jaws in the first year of service was the most common condition category for hospitalization in 2014 in the Army (14%), an increase from the previous five year period. In the Navy, psychoses (26%) was the most common condition for which hospitalizations occurred in the first year of service in 2014, a large increase from the previous five year period. In the Marine Corps, pneumonia and influenza (25%) was the most common cause of hospitalization. Mental disorders (40%) and infections of skin and subcutaneous tissue (16%) were the first and second most common cause and of hospitalization in the Air Force. For Army Reserve enlistees, mental disorders (12%), nonspecific symptoms (9%) and pneumonia and influenza (7%) were among the top three condition categories. In the Navy, fracture (11%) and infections of skin and subcutaneous tissue (11%) were tied for the next most common conditions for hospitalization, and among Marine Corps Reserves, mental disorders (15%) and infections of skin and subcutaneous tissue (15%) were the next most common conditions.

TABLE 2.42: DISTRIBUTION OF PRIMARY CAUSE CATEGORIES FOR HOSPITALIZATIONS DURING FIRST YEAR OF SERVICE AMONG RESERVE COMPONENT ENLISTEES IN 2009-2013 VS. 2014 BY SERVICE

Category	Army		Navy		Marine Corps		Air Force	
	2009-2013*	2014*	2009-2013*	2014*	2009-2013*	2014*	2009-2013*	2014*
Pneumonia and influenza	14.4	7.1	1.6	0.0	21.7	15.3	3.7	4.0
Mental disorders (not including psychoses)	13.3	12.3	18.0	0.0	12.8	14.5	28.3	40.0
Infections of skin and subcutaneous tissue	6.1	3.2	1.6	10.5	15.0	14.5	4.7	16.0
Nonspecific symptoms	6.1	9.0	3.3	0.0	2.8	2.4	13.6	4.0
Psychoses	5.8	5.8	3.3	26.3	2.0	0.8	8.9	0.0
Rheumatism, excluding the back	4.6	1.3	1.6	0.0	6.4	8.9	1.0	4.0
Fracture	4.0	5.8	6.6	10.5	2.3	4.0	3.1	4.0
Diseases of the oral cavity, salivary glands, and jaws	3.9	14.2	0.0	0.0	2.1	3.2	5.2	0.0
Appendicitis	3.9	4.5	14.8	5.3	3.5	0.8	0.5	0.0
Injuries	3.0	1.9	0.0	5.3	1.6	3.2	1.0	4.0
Osteopathies, chondropathies, and acquired musculokeletal deformities	2.5	5.2	1.6	5.3	1.3	3.2	0.0	0.0

* % of total hospitalizations

Table 2.43 shows the most common conditions requiring hospitalization during the second year of reserve component service. Among Army reserve enlistees in 2014, mental disorders (17%) and nonspecific symptoms (13%) were the most common cause of hospitalization in the second year of service. In the Navy in 2014, psychoses (33%) and complications of pregnancy, childbirth, and the puerperium (25%) were the top two condition categories for hospitalization. There were only eight hospitalization records for Marine Corps Reserves in the second year of service in 2014; however, the top conditions for 2009-2013 were mental disorders (20%), psychoses (13%), and infections of the skin and subcutaneous tissue (9%). There were only three hospitalization records for the Air Force Reserve enlistees in the second year of service in 2014, two of which were for complications of pregnancy, childbirth, and the puerperium. Complications of pregnancy, childbirth, and the puerperium (16%) were also the most common cause of hospitalizations for the Air Force Reserves in 2009-2013.

TABLE 2.43: DISTRIBUTION OF PRIMARY CAUSE CATEGORIES FOR HOSPITALIZATIONS DURING SECOND YEAR OF SERVICE AMONG RESERVE COMPONENT ENLISTEES IN 2009-2013 VS. 2014 BY SERVICE

Category	Army		Navy		Marine Corps		Air Force	
	2009-2013*	2014*	2009-2013*	2014*	2009-2013*	2014*	2009-2013*	2014*
Mental disorders (not including psychoses)	24.1	16.7	13.5	8.3	20.0	37.5	2.3	0.0
Complications of pregnancy, childbirth, and the puerperium	6.2	0.0	36.5	25.0	0.0	0.0	15.9	66.7
Nonspecific symptoms	6.2	12.5	5.8	0.0	4.4	0.0	9.1	0.0
Infections of skin and subcutaneous tissue	5.6	8.3	1.9	8.3	8.9	37.5	4.5	0.0
Psychoses	3.1	0.0	3.8	33.3	13.3	0.0	4.5	0.0
Diseases of the oral cavity, salivary glands, and jaws	3.1	4.2	0.0	0.0	0.0	0.0	4.5	0.0
Diseases of esophagus, stomach, and duodenum	3.1	0.0	1.9	0.0	0.0	0.0	0.0	0.0
Appendicitis	3.1	8.3	9.6	0.0	4.4	0.0	2.3	0.0
Other diseases due to viruses and chlamydiae	2.5	0.0	0.0	0.0	2.2	0.0	0.0	0.0
Acute respiratory infections	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Noninfectious enteritis and colitis	2.5	4.2	0.0	0.0	4.4	0.0	4.5	0.0

* % of total hospitalizations

Table 2.44 and Table 2.45 show the primary cause categories for hospitalization during the first and second year of service, respectively, among National Guard enlistees by service. As shown in Table 2.44, in 2014, mental disorders were the most common cause of hospitalization among both Army (14%) and Air (38%) National Guard enlistees. The percentage of hospitalizations due to mental disorders increased for both Army and Air National Guard compared to the previous five year period. Pneumonia and influenza (10%), infections of skin and nonspecific symptoms (9%), and nonspecific symptoms (9%) were the next most common causes of hospitalization in the Army National Guard in the first year of service. Among Air National Guard enlistees, psychoses (9%), nonspecific symptoms (6%) and infections of skin and subcutaneous tissue (6%) were the next most common causes of hospitalization.

TABLE 2.44: DISTRIBUTION OF PRIMARY CAUSE CATEGORIES FOR HOSPITALIZATIONS DURING FIRST YEAR OF SERVICE AMONG NATIONAL GUARD ENLISTEES IN 2009-2013 VS. 2014 BY SERVICE

Category	Army		Air Force	
	2009-2013*	2014*	2009-2013*	2014*
Pneumonia and influenza	16.8	10.4	4.8	0.0
Mental disorders (not including psychoses)	13.0	14.4	27.4	38.2
Infections of skin and subcutaneous tissue	8.9	6.1	5.5	5.9
Nonspecific symptoms	5.4	8.6	9.6	5.9
Psychoses	5.2	2.3	4.1	8.8
Fracture	5.0	4.3	3.4	2.9
Injuries	3.5	2.8	1.4	0.0
Rheumatism, excluding the back	3.2	2.8	4.1	2.9
Acute respiratory infections	2.9	3.8	1.4	0.0
Osteopathies, chondropathies, and acquired musculoskeletal deformities	2.7	2.8	0.0	2.9

* % of total hospitalizations

Table 2.45 shows the causes for hospitalization in the second year of service for the National Guard. Mental disorders (13%), pneumonia and influenza (13%), and other and unspecified effects of external causes (10%) were the most common causes of hospitalization among Army National Guard enlistees in the second year of service in 2014. The number of hospitalizations in the second year of service for the Air Guard was too small for comparisons in 2014. During the previous five year period, fracture (14%) and appendicitis (14%) were the top causes of hospitalizations.

TABLE 2.45: DISTRIBUTION OF PRIMARY CAUSE CATEGORIES FOR HOSPITALIZATIONS DURING SECOND YEAR OF SERVICE AMONG NATIONAL GUARD ENLISTEES IN 2009-2013 VS. 2014 BY SERVICE

Category	Army		Air Force	
	2009-2013*	2014*	2009-2013*	2014*
Mental disorders (not including psychoses)	16.3	13.1	0.0	22.2
Fracture	8.9	6.6	13.6	0.0
Nonspecific symptoms	6.7	8.2	9.1	11.1
Infections of skin and subcutaneous tissue	5.8	1.6	4.5	11.1
Injuries	5.8	1.6	4.5	0.0
Psychoses	5.4	3.3	4.5	11.1
Diseases of the oral cavity, salivary glands, and jaws	3.8	6.6	4.5	0.0
Pneumonia and influenza	3.5	13.1	4.5	11.1
Appendicitis	3.2	1.6	13.6	0.0
Other and unspecified effects of external causes	2.9	9.8	4.5	0.0

* % of total hospitalizations

Attrition

Attrition is one of the key outcomes of interest to AMSARA. This section provides a description of attrition among first-time active duty, reserves, and National Guard enlisted accessions into the Army, Navy, Marines, and Air Force from 2009 to 2014. Tables 2.47-2.49 displays the period-specific and cumulative probability of service member attrition at 90, 180, 365, and 730 days following accession by service, year of accession, sex, race, age at accession, education, AFQT percentile score at accession, and medical disqualification status. Censoring may result from a lack of full follow-up or from certain DMDC transactions that result in the generation of a loss date but are not considered adverse events. The most common cause of non-attrition loss was expiration of term of service (1001), followed by disability with severance pay (1011) and other early releases (1008). Loss records generated for these events, noted in Table 2.46, were not counted among the attritions reported in Tables 2.47-2.49.

ATTRITION

TABLE 2.46: INTERSERVICE SEPARATION CODE LOSS CATEGORIES EXCLUDED FROM ATTRITION

ISC Code	Description	ISC Code	Description
1000	Unknown or Invalid	1031	Death, Non-Battle - Disease
1001	Expiration of Term of Service	1032	Death, Non-battle - Other
1003	Early Release - To Attend School	1033	Death, NS
1004	Early Release – Police Duty	1040	Officer Commissioning Program
1005	Early Release - In the National Interest	1041	Warrant Officer Program
1006	Early Release – Seasonal Employment	1042	Military Service Academy
1007	Early Release – To Teach	1050	Retirement, 20-30 yrs of Service
1008	Early Release - Other (incl RIF/VSI/SSB)	1051	Retirement, Over 30 yrs of Service
1011	Disability - Severance Pay	1052	Retirement, Other Categories
1012	Permanent Disability - Retired	1100	Immediate Reenlistment
1013	Temporary Disability - Retired	1103	Record Correction
1014	Disability - Non EPTS - No Severance Pay	1104	Dropped from Strength as MIA/POW
1015	Disability - Title 10 Retirement	1105	Dropped from Strength, Other
1030	Death, Battle Casualty		

ISC: Interservice Separation Code; RIF: Reduction in force; VSI: voluntary separation initiative; SSB: special separation benefit; MIA: missing in action; POW: prisoner of war

Table 2.47 shows the period specific attrition percent as well as the cumulative attrition percent at 90, 180, 365, and 730 days following accession onto enlisted Active Duty from 2009-2014. Overall attrition in enlisted Active Duty accessions in the first two years of service was about 14%. About half of the attrition that occurs during the first two years of service occurs in the first 90 days of service (7%).

Overall, the Marine Corps and the Air Force had the lowest percent attrition (12%) at two years of service while the Army had the highest (17%). Attrition in the first 90 days of service was highest in the Navy (8%) and lowest in the Air Force (5%). The patterns of cumulative attrition percent after one year of service was similar to the pattern observed at two years.

When examined by year of accession, cumulative attrition was highest across the time points in those who accessed in 2009. Two years of complete follow-up time were not available for all 2013 and 2014 accessions. Therefore, attrition rates are not provided for 2013 accessions after 365 days and are not provided for 2014 accessions after 180 days.

The proportion of accessions lost is consistently higher at all points of follow-up for females relative to males. Cumulative attrition was similar across all age categories, although the 17-20 age group tended to have the highest rates of attrition.

Whites had the highest proportion of losses among accessions at all points of follow-up, from 90 days (7%) through 2 years (14%). When attrition was examined by education level it was found that enlistees with higher levels of education had lower rates of attrition. Those with a bachelor's degree and above consistently had the lowest proportion of losses among accessions at all points of follow-up. Those without a high school diploma had the highest rates of attrition at all points of follow-up. Attrition rates by AFQT percentile scores followed a pattern similar to education. The proportion lost at all points of follow-up was lowest for the highest percentile score group (93-99) and highest in the lowest percentile group.

At all points of follow-up by medical status, the attrition rates were lowest among fully qualified accessions.

TABLE 2.47: ATTRITION AMONG FIRST TIME ACTIVE COMPONENT ENLISTED ACCESSIONS IN 2009-2014 BY DAYS SINCE ACCESSION: ALL SERVICES

	Days 0-90		Days 91-180		Days 181-365		Days 366-730						
	Accessed (n)	n	Attrition Period (%)	Cumul (%)	n	Attrition Period (%)	Cumul (%)	n	Attrition Period (%)	Cumul (%)			
Service													
Army	371,130	25,063	6.8	6.8	12,187	3.3	10.0	9,175	2.5	12.5	14,890	4.0	16.5
Navy	214,144	17,742	8.3	8.3	2,791	1.3	9.6	3,828	1.8	11.4	5,444	2.5	13.9
Marine Corps	181,841	11,520	6.3	6.3	2,456	1.4	7.7	3,033	1.7	9.4	3,800	2.1	11.4
Air Force	168,065	8,046	4.8	4.8	3,712	2.2	7.0	3,790	2.3	9.3	4,549	2.7	12.0
FY of Accession													
2009	161,104	11,591	7.2	7.2	3,898	2.4	9.6	4,723	2.9	12.5	6,803	4.2	16.8
2010	159,765	10,174	6.4	6.4	3,830	2.4	8.8	3,744	2.3	11.1	6,408	4.0	15.1
2011	152,674	9,707	6.4	6.4	3,583	2.3	8.7	3,474	2.3	11.0	6,367	4.2	15.2
2012	155,683	11,265	7.2	7.2	3,322	2.1	9.4	3,530	2.3	11.6	5,924	3.8	15.4
2013 [†]	165,957	11,246	6.8	6.8	4,199	2.5	9.3	3,600	2.2	11.5	-	-	-
2014 [†]	139,997	8,388	6.0	6.0	2,314	1.7	7.6	-	-	-	-	-	-
Sex*													
Male	779,199	47,063	6.0	6.0	15,722	2.0	8.1	15,466	2.0	10.0	23,088	3.0	13.0
Female	155,981	15,308	9.8	9.8	5,424	3.5	13.3	4,360	2.8	16.1	5,595	3.6	19.7
Age at Accession*													
17 – 20	603,236	41,367	6.9	6.9	14,516	2.4	9.3	14,367	2.4	11.6	20,677	3.4	15.1
21 – 25	263,337	16,620	6.3	6.3	5,236	2.0	8.3	4,413	1.7	10.0	6,609	2.5	12.5
> 25	68,607	4,384	6.4	6.4	1,394	2.0	8.4	1,046	1.5	9.9	1,397	2.0	12.0
Race*													
White	689,531	47,161	6.8	6.8	15,783	2.3	9.1	15,034	2.2	11.3	20,698	3.0	14.3
Black	159,304	9,524	6.0	6.0	3,618	2.3	8.2	3,146	2.0	10.2	5,840	3.7	13.9
Other	86,345	5,686	6.6	6.6	1,745	2.0	8.6	1,646	1.9	10.5	2,145	2.5	13.0
Education Level*													
Below HS graduate**	1,766	139	7.9	7.9	116	6.6	14.4	80	4.5	19.0	143	8.1	27.1
HS diploma	806,844	55,070	6.8	6.8	18,591	2.3	9.1	17,639	2.2	11.3	25,649	3.2	14.5
Some college	74,217	4,879	6.6	6.6	1,770	2.4	9.0	1,444	1.9	10.9	2,227	3.0	13.9
Bachelor's or higher	52,171	2,260	4.3	4.3	658	1.3	5.6	646	1.2	6.8	664	1.3	8.1
AFQT Score*													
93 – 99	66,736	3,135	4.7	4.7	1,041	1.6	6.3	972	1.5	7.7	1,313	2.0	9.7
65 – 92	376,550	22,982	6.1	6.1	7,159	1.9	8.0	7,805	2.1	10.1	9,923	2.6	12.7
50 – 64	259,887	18,409	7.1	7.1	6,128	2.4	9.4	5,976	2.3	11.7	8,585	3.3	15.0
30 – 49	221,302	16,882	7.6	7.6	6,644	3.0	10.6	4,848	2.2	12.8	8,707	3.9	16.8
11 – 29	2,635	148	5.6	5.6	123	4.7	10.3	85	3.2	13.5	80	3.0	16.5
Medical Status													
Fully Qualified	811,106	51,502	6.3	6.3	17,507	2.2	8.5	17,063	2.1	10.6	24,853	3.1	13.7
Temporary DQ	37,385	3,091	8.3	8.3	1,264	3.4	11.6	998	2.7	14.3	1,496	4.0	18.3
Permanent DQ	86,689	7,778	9.0	9.0	2,375	2.7	11.7	1,765	2.0	13.7	2,334	2.7	16.4
Total[†]	935,180	62,371	6.7	6.7	21,146	2.3	8.9	19,826	2.1	11.1	28,683	3.1	14.1

FY: Fiscal Year; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification; Cummul: Cumulative

*Individuals with missing values for demographic variables are included in the total.

[†]Attrition is not calculated after 365 days among 2012 accessions or after 180 days in 2013 accessions due to lack of sufficient follow up time.

** 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 2.48 shows the period-specific attrition percent as well as the cumulative attrition percent at 90, 180, 365, and 730 days following accession onto enlisted reserve from 2009-2014. Overall, attrition in enlisted reserve accessions in the first two years of service was about 5%. About half of the attrition that occurs during the first two years of service occurs in the first 180 days of service (3%).

Overall, the Marine Corps and Air Force had the highest percent attrition (10-11%) at two years of service while the Navy has the lowest attrition (0.8%). Attrition in the first 90 days of service was highest in the Marine Corps (6%) and lowest in the Army and Navy (0.1-0.3%). At 365 days, the percent of attrition was similar in the Marine Corps and Air Force (8%), with lower rates observed in the Army (3%) and Navy (0.4%). The pattern of cumulative attrition percent after one year of service was similar to the pattern observed at two years.

When examined by year of accession, cumulative attrition did not vary substantially regardless of the time period of attrition. Two years of complete follow-up time were not available for all 2013 and 2014 accessions. Therefore, attrition rates are not provided for 2013 accessions after 365 days and are not provided for 2014 accessions after 180 days.

The proportion of accessions lost is slightly lower in females than males in the first 90 days. After the first 180 days of service females have higher rates of attrition relative to males. Attrition rates were similar for reserve enlistees in the 17-20 and 21-25 age groups. The attrition rate at each time period of attrition was lowest among reserve enlistees over the age of 25.

Attrition was comparable among White and Black enlisted reserves. Individuals within other race categories had lower attrition than both White and Black reservists regardless of the time of attrition. When attrition was examined by education level it was found that enlistees with higher levels of education had lower rates of attrition. Those with a bachelor's degree and above consistently had the lowest proportion of losses among accessions at all points of follow-up. Attrition rates by AFQT percentile scores followed a pattern similar to education.

At all points of follow-up, the attrition rates were lowest among fully qualified accessions. At 90 days, attrition was highest among those with a permanent medical disqualification. After 90 days the rate of attrition among those with temporary and permanent disqualifications was similar and higher than the attrition rate among fully qualified accessions.

TABLE 2.48: ATTRITION AMONG FIRST TIME RESERVE COMPONENT ENLISTED ACCESSIONS IN 2009-2014 BY DAYS SINCE ACCESSION: ALL SERVICES

	Days 0-90		Days 91-180		Days 181-365		Days 366-730						
	Accessed (n)	n	Attrition Period (%)	Cumul (%)	n	Attrition Period (%)	Cumul (%)	n	Attrition Period (%)	Cumul (%)			
Service													
Army	91,582	300	0.3	0.3	1,026	1.1	1.4	1,073	1.2	2.6	239	0.3	2.9
Navy	17,977	25	0.1	0.1	7	<0.1	0.2	32	0.2	0.4	77	0.4	0.8
Marine Corps	33,081	2,026	6.1	6.1	392	1.2	7.3	274	0.8	8.1	779	2.4	10.5
Air Force	21,659	212	1.0	1.0	598	2.8	3.7	1,003	4.6	8.4	621	2.9	11.2
FY of Accession													
2009	35,279	541	1.5	1.5	469	1.3	2.9	466	1.3	4.2	379	1.1	5.3
2010	28,340	468	1.7	1.7	342	1.2	2.9	510	1.8	4.7	466	1.6	6.3
2011	30,485	403	1.3	1.3	374	1.2	2.5	477	1.6	4.1	353	1.2	5.3
2012	24,323	340	1.4	1.4	284	1.2	2.6	410	1.7	4.3	392	1.6	5.9
2013†	21,287	366	1.7	1.7	311	1.5	3.2	390	1.8	5.0	-	-	-
2014†	24,585	445	1.8	1.8	243	1.0	2.8	-	-	-	-	-	-
Sex*													
Male	127,199	2,221	1.7	1.7	1,323	1.0	2.8	1,488	1.2	4.0	1,380	1.1	5.0
Female	37,100	342	0.9	0.9	700	1.9	2.8	894	2.4	5.2	336	0.9	6.1
Age at Accession*													
17 – 20	100,947	1,709	1.7	1.7	1,232	1.2	2.9	1,522	1.5	4.4	1,168	1.2	5.6
21 – 25	39,828	647	1.6	1.6	526	1.3	2.9	560	1.4	4.4	406	1.0	5.4
> 25	23,524	207	0.9	0.9	265	1.1	2.0	300	1.3	3.3	142	0.6	3.9
Race*													
White	117,732	2,058	1.7	1.7	1,463	1.2	3.0	1,679	1.4	4.4	1,231	1.0	5.5
Black	33,899	399	1.2	1.2	475	1.4	2.6	584	1.7	4.3	379	1.1	5.4
Other	12,668	106	0.8	0.8	85	0.7	1.5	119	0.9	2.4	106	0.8	3.3
Education Level*													
Below HS graduate**	7,817	7	0.1	0.1	73	0.9	1.0	72	0.9	1.9	36	0.5	2.4
HS diploma	128,397	2,244	1.7	1.7	1,610	1.3	3.0	1,874	1.5	4.5	1,479	1.2	5.6
Some college	17,525	187	1.1	1.1	255	1.5	2.5	308	1.8	4.3	145	0.8	5.1
Bachelor's or higher	10,501	122	1.2	1.2	85	0.8	2.0	124	1.2	3.2	56	0.5	3.7
AFQT Score*													
93 – 99	10,192	136	1.3	1.3	73	0.7	2.1	101	1.0	3.0	83	0.8	3.9
65 – 92	61,566	935	1.5	1.5	630	1.0	2.5	805	1.3	3.8	601	1.0	4.8
50 – 64	42,319	653	1.5	1.5	573	1.4	2.9	637	1.5	4.4	500	1.2	5.6
30 – 49	46,216	776	1.7	1.7	726	1.6	3.2	781	1.7	4.9	519	1.1	6.1
11 – 29	1,193	10	0.8	0.8	15	1.3	2.1	23	1.9	4.0	6	0.5	4.5
Medical Status													
Fully Qualified	141,908	2,080	1.5	1.5	1,664	1.2	2.6	1,996	1.4	4.0	1,503	1.1	5.1
Temporary DQ	7,744	146	1.9	1.9	124	1.6	3.5	143	1.8	6.6	88	1.1	7.8
Permanent DQ	14,647	337	2.3	2.3	235	1.6	3.9	243	1.7	4.9	125	0.9	5.7
Total	164,299	2,563	1.6	1.6	2,023	1.2	2.8	2,382	1.4	4.2	1,716	1.0	5.3

FY: Fiscal Year; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification; Cummul: Cumulative

*Individuals with missing values for demographic variables are included in the total.

†Attrition is not calculated after 365 days among 2012 accessions or after 180 days in 2013 accessions due to lack of sufficient follow up time.

** 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 2.49 shows the period-specific attrition percent as well as the cumulative attrition percent at 90, 180, 365, and 730 days following accession onto enlisted National Guard service from 2009-2014. A relatively small number of personnel met AMSARA criteria for attrition in the first two years of service; less than 1% of the total National Guard population regardless of time period. Therefore, no conclusions can be drawn with respect to attrition among National Guard Service members.

TABLE 2.49: ATTRITION AMONG FIRST TIME NATIONAL GUARD COMPONENT ENLISTED ACCESSIONS IN 2009-2014 BY DAYS SINCE ACCESSION: ALL SERVICES

	Accessed (n)	n	Days 0-90 Attrition		Days 91-180 Attrition		Days 181-365 Attrition		Days 366-730 Attrition				
			Period (%)	Cumul (%)	n	Period (%)	Cumul (%)	n	Period (%)	Cumul (%)			
Service													
Army	217,486	3	<0.1	<0.1	19	<0.1	<0.1	29	<0.1	<0.1	13	<0.1	<0.1
Air Force	29,913	12	<0.1	<0.1	78	0.3	0.3	417	1.4	1.7	849	2.8	4.5
FY of Accession													
2009	47,435	3	<0.1	<0.1	30	0.1	0.1	139	0.3	0.4	296	0.6	1.0
2010	46,182	5	<0.1	<0.1	19	<0.1	0.1	88	0.2	0.2	214	0.5	0.7
2011	40,256	3	<0.1	<0.1	24	0.1	0.1	89	0.2	0.3	135	0.3	0.6
2012	42,132	3	<0.1	<0.1	16	<0.1	<0.1	73	0.2	0.2	179	0.4	0.6
2013	28,689	1	<0.1	<0.1	7	<0.1	<0.1	56	0.2	0.2	-	-	-
2014	42,705	-	-	-	1	<0.1	<0.1	-	-	-	-	-	-
Sex													
Male	195,339	8	<0.1	<0.1	72	<0.1	<0.1	315	0.2	0.2	621	0.3	0.5
Female	52,059	7	<0.1	<0.1	25	<0.1	0.1	131	0.3	0.3	241	0.5	0.8
Age at Accession													
17 – 20	159,394	5	<0.1	<0.1	56	<0.1	<0.1	242	0.2	0.2	445	0.3	0.5
21 – 25	57,040	5	<0.1	<0.1	28	<0.1	0.1	123	0.2	0.3	259	0.5	0.7
> 25	30,965	5	<0.1	<0.1	13	<0.1	0.1	81	0.3	0.3	158	0.5	0.8
Race													
White	196,779	14	<0.1	<0.1	81	<0.1	<0.1	377	0.2	0.2	713	0.4	0.6
Black	40,350	1	<0.1	<0.1	9	<0.1	<0.1	51	0.1	0.2	119	0.3	0.4
Other	10,270	0	-	-	7	0.1	0.1	18	0.2	0.2	30	0.3	0.5
Education Level													
Below HS graduate**	21,421		<0.1	<0.1	0	-	-	5	<0.1	<0.1	2	<0.1	<0.1
HS diploma	176,346	12	<0.1	<0.1	79	<0.1	0.1	380	0.2	0.3	707	0.4	0.7
Some college	34,858	2	<0.1	<0.1	13	<0.1	<0.1	34	0.1	0.1	91	0.3	0.4
Bachelor's or higher	14,562	1	<0.1	<0.1	5	<0.1	<0.1	26	0.2	0.2	56	0.4	0.6
AFQT Score													
93 – 99	15,671	0	-	-	3	<0.1	<0.1	18	0.1	0.1	48	0.3	0.4
65 – 92	90,167	6	<0.1	<0.1	31	<0.1	<0.1	155	0.2	0.2	340	0.4	0.6
50 – 64	63,823	3	<0.1	<0.1	33	0.1	0.1	128	0.2	0.3	224	0.4	0.6
30 – 49	72,572	6	<0.1	<0.1	29	<0.1	<0.1	143	0.2	0.2	238	0.3	0.6
11 – 29	3,582	0	-	-	0	-	-	0	-	-	0	-	-
Medical Status													
Fully Qualified	209,935	11	<0.1	<0.1	82	<0.1	<0.1	375	0.2	0.2	732	0.3	0.6
Temporary DQ	16,981	2	<0.1	<0.1	6	<0.1	<0.1	36	0.2	0.3	60	0.4	0.6
Permanent DQ	20,483	2	<0.1	<0.1	9	<0.1	0.1	35	0.2	0.2	70	0.3	0.6
Total†	247,399	15	<0.1	<0.1	97	<0.1	<0.1	446	0.2	0.2	862	0.3	0.6

FY: Fiscal Year; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification; Cummul: Cumulative

*Individuals with missing values for demographic variables are included in the total.

†Attrition is not calculated after 365 days among 2012 accessions or after 180 days in 2013 accessions due to lack of sufficient follow up time.

** 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

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 (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, reserve, and National Guard components are included. Part II only summarizes records for which a corresponding accession record is available. Due to the significant differences in the population between active, reserve, and National Guard components, results in Part II are stratified by component.

Part I: EPTS discharges irrespective of accession record

The number of EPTS discharge records by service branch, component, and year of discharge are shown for the period between 2009 and 2013 in Table 2.50. Numbers for each service and component often differ considerably from year to year. Fluctuations in the numbers of reported EPTS discharges are also apparent for active component in each service branch. Army reported EPTS discharges from active component varied from 664 in 2013 to 1,424 in 2009. Air Force reported EPTS discharges from active component ranged from 357 in 2012 to 597 in 2010. In the Marine Corps and Navy, EPTS discharge counts vary from 573 in 2012 to 759 in 2011 and 367 in 2013 to 1,727 in 2012, respectively.

TABLE 2.50: EPTS DISCHARGES OF ENLISTEES IN 2009-2013 BY SERVICE, COMPONENT, AND YEAR

Service	Component	2009	2010	2011	2012	2013	Total
Army	Active	1,424	1,528	1,820	830	664	6,266
	National Guard	657	666	918	341	245	2,827
	Reserve	262	207	276	88	29	862
Navy	Active	1,420	1,447	1,384	1,727	367	6,345
	Reserve	112	83	120	136	32	483
Marine Corps	Active	713	667	759	573	630	3,342
	Reserve	90	105	102	81	113	491
Air Force	Active	570	597	557	357	567	2,648
	National Guard	4	4	2	1	1	12
	Reserve	60	79	96	51	34	320
Total		5,312	5,383	6,034	4,185	2,682	23,596

Table 2.51 shows EPTS discharges between 2009 and 2013 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 with the most reported EPTS discharges. Psychiatric discharges were the most common cause of EPTS discharges in the Army, accounting for 29% of all EPTS discharges, and in the Marine Corps, accounting for 39% of all EPTS discharges. Other orthopedic conditions were the most common cause of EPTS discharge in the Navy, accounting for 14% of discharges. Orthopedic conditions of the feet were the most common reason for EPTS discharge in the Air Force and accounted for 14% of all discharges. As a group, orthopedic conditions, including knee, back, feet, general, and other, account about 40% of discharges from the Army. All orthopedic conditions were also leading causes of EPTS discharge in the Navy (46%), Marine Corps (31%), and Air Force (58%). The observed differences in EPTS discharge 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 2.51: EPTS DISCHARGES OF ENLISTEES IN 2009-2013 BY CATEGORY AND SERVICE: ALL COMPONENTS

Condition	Army		Navy		Marine Corps		Air Force	
	n	%	n	%	n	%	n	%
Psychiatric - other	2,864	28.8	45	0.7	1,498	39.1	19	0.6
Ortho - other	1,149	11.5	943	13.8	208	5.4	306	10.3
Ortho - back	947	9.5	532	7.8	172	4.5	263	8.8
Ortho - knee	835	8.4	597	8.7	154	4.0	417	14.0
Asthma	794	8.0	772	11.3	305	8.0	241	8.1
Other - general	616	6.2	792	11.6	570	14.9	338	11.3
Ortho - feet	435	4.4	283	4.1	66	1.7	418	14.0
G-U (Incl. pregnancy)	368	3.7	402	5.9	119	3.1	129	4.3
Eyes - other	309	3.1	399	5.8	106	2.8	76	2.6
Neurology - other	260	2.6	691	10.1	162	4.2	237	8.0
All other categories	1,256	12.6	1,312	19.2	405	10.6	480	16.1
Other/Missing	122	1.2	30	0.4	68	1.8	56	1.9
Total	9,955		6,828		3,833		2,980	

Table 2.52 shows the 10 most common conditions leading to EPTS discharge for all Army enlistees in 2013, compared to the prevalence of EPTS discharges due to these conditions in 2009-2012. In 2013, lower leg pain, unspecified disorders of back, and asthma were the leading causes of EPTS discharges. The observed prevalence of EPTS discharges for the leading conditions in 2013 was generally similar to the prevalence of conditions observed in the period from 2009 to 2012. However, discharges for depressive disorder decreased in prevalence from 8% in 2009 to 2012 to 4% in 2013, and discharges for adjustment disorder disorders decreased from 3% of all discharges to 1%. EPTS discharges for neurotic, mood, somatoform, dissociative, or factitious disorder decreased in prevalence in 2013, to 1% of all discharges from 3% in 2009 to 2012.

TABLE 2.52: LEADING PRIMARY EPTS DISCHARGE CONDITIONS FOR ALL ENLISTEES IN 2009-2012 vs. 2013: ARMY

Primary EPTS condition	2009-2012		2013	
	n	%	n	%
Asthma	749	8.3	56	6.0
Depressive disorder, not elsewhere classified	707	7.8	41	4.4
Lower leg pain, deformities, and disease (includes shin splints)	545	6.0	68	7.2
Unspecified disorders of back	491	5.4	63	6.7
Adjustment disorders	289	3.2	7	0.7
Neurotic, mood, somatoform, dissociative, or factitious disorder	283	3.1	12	1.3
ADD/ADHD	278	3.1	31	3.3
Ankle or foot pain, deformities or disease	236	2.6	22	2.3
Shoulder pain, disease, injury (current)	222	2.5	35	3.7
Depression, Major, Recurrent	209	2.3	14	1.5
All other EPTS discharge conditions	5,008	55.5	589	62.8
Total for EPTS discharge conditions	9,017		938	

Table 2.53 shows the 10 most common conditions leading to EPTS discharge for all Navy enlistees in 2013, compared to the prevalence of the same conditions in 2009-2012. In 2013, asthma, migraines and lower leg pain were the leading cause of EPTS discharge. The prevalence of EPTS discharges for lower leg pain (4%) and unspecified disorders of back (2%) were both lower in 2013 than in previous years (8% and 4%, respectively).

TABLE 2.53: LEADING PRIMARY EPTS DISCHARGE CONDITIONS FOR ALL ENLISTEES IN 2009-2012 VS. 2013: NAVY

Primary EPTS condition	2009-2012		2013	
	n	%	n	%
Asthma	721	11.2	56	14.0
Lower leg pain, deformities, and disease (includes shin splints)	532	8.3	16	4.0
Headaches, migraines	329	5.1	46	11.5
Unspecified disorders of back	270	4.2	9	2.3
Chest pain	255	4.0	12	3.0
Headaches, recurrent	240	3.7	30	7.5
Knee limitation of motion due to disease	179	2.8	6	1.5
Deviation or curvature of spine	172	2.7	5	1.3
Ankle or foot pain, deformities or disease	164	2.6	4	1.0
Keratoconus of any degree	137	2.1	5	1.3
All other EPTS discharge conditions	3,430	53.4	210	52.6
Total for EPTS discharge conditions	6,429		399	

Table 2.54 shows the 10 most common conditions leading to EPTS discharge for all Marine Corps enlistees in 2013, compared to the prevalence of the same conditions in 2009-2012. In 2013, suicidal behavior, asthma, and depressive disorders were the leading cause of EPTS discharge. The prevalence of EPTS discharges for depressive disorders, (5%), adjustment disorders (2%), and neurotic, mood, somatoform, dissociative, or factitious disorders (3%) all decreased in 2013 from previous years. However, the prevalence of EPTS discharges for suicide behavior increased from 5% in 2009-2012 to 12% in 2013.

TABLE 2.54: LEADING PRIMARY EPTS DISCHARGE CONDITIONS FOR ALL ENLISTEES IN 2009-2012 vs. 2013: MARINE CORPS

Primary EPTS condition	2009-2012		2013	
	n	%	n	%
Depressive disorder, not elsewhere classified	312	10.1	38	5.1
Asthma	269	8.7	47	6.3
Adjustment disorders	180	5.8	18	2.4
Suicide behavior, gesture or attempt	155	5.0	91	12.2
Neurotic, mood, somatoform, dissociative, or factitious disorder	106	3.4	13	1.7
ADD/ADHD	103	3.3	28	3.8
Allergic manifestations	89	2.9	27	3.6
Lower leg pain, deformities, and disease (includes shin splints)	87	2.8	16	2.1
Unspecified disorders of back	71	2.3	17	2.3
Personality disorders	63	2.0	1	0.1
All other EPTS discharge conditions	1,655	53.6	450	60.3
Total for EPTS discharge conditions	3,090		746	

Table 2.55 shows the 10 most common conditions leading to EPTS discharge for all enlistees the Air Force in 2013, compared to prevalence of the same condition 2009-2012. In 2013, lower leg pain, asthma, and unspecified disorders of back, were the leading causes of EPTS discharges. The prevalence of EPTS discharges for asthma (6%), pes planus, congenital or acquired (5%) and headaches (4%) decreased in 2013 relative to previous years. The prevalence discharges due to lower leg pain, deformities, and diseases increased in 2013 (15%) relative to previous years (12%).

TABLE 2.55: LEADING PRIMARY EPTS DISCHARGE CONDITIONS FOR ALL ENLISTEES IN 2009-2012 vs. 2013: AIR FORCE

Primary EPTS condition	2009-2012		2013	
	n	%	n	%
Lower leg pain, deformities, and disease (includes shin splints)	280	11.8	90	15.0
Asthma	214	9.0	38	6.3
Pes planus, congenital or acquired	244	10.3	27	4.5
Headaches, migraines	141	5.9	13	2.2
Unspecified disorders of back	120	5.0	32	5.3
Deviation or curvature of spine	88	3.7	8	1.3
Ankle or foot pain, deformities or disease	52	2.2	23	3.8
Chest pain	43	1.8	27	4.5
Headaches, recurrent	42	1.8	12	2.0
Plantar fasciitis, current	38	1.6	5	0.8
All other EPTS discharge conditions	1,116	46.9	327	54.3
Total for EPTS discharge conditions	2,378		602	

Part II: EPTS discharges with an accession record

EPTS discharges among all enlistees who accessed during 2009-2013 are summarized in Tables 2.56 to 2.61. 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 condition must be identified within the first 180 days of service; if the service member is hospitalized at 180 days of service, their EPTS discharge may not occur until after their hospital discharge.

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 2.56 shows EPTS discharges reported among individuals accessed into enlisted active component service during each year from 2009 through 2013. EPTS discharge data for 2013 are not complete due to delays in reporting. The number of EPTS discharges and percent of accessions receiving an EPTS discharge was highest in 2011 and lowest in 2012.

TABLE 2.56: EPTS DISCHARGES FROM ACTIVE COMPONENT BY ACCESSION YEAR: ALL SERVICES

Year of accession	Accessions (n)	Discharges (n)	Discharges (%)
2009	161,104	3,761	2.3
2010	159,765	3,791	2.4
2011	152,674	4,141	2.7
2012	155,683	3,348	2.2
2013	165,957	1,852	1.1
Total	795,183	16,893	2.1

Table 2.57 shows EPTS discharges reported among individuals accessed into enlisted reserve component service during each year from 2009 through 2013. EPTS discharge data for 2013 are not complete due to delays in reporting; therefore the total discharges are less than expected. The number of EPTS discharges and the percent of accessions receiving an EPTS discharge from the reserve component in 2009 through 2011 has remained relatively consistent. The number of discharges decreased from 450 (1.5%) in 2011 to 162 (0.7%) in 2012.

TABLE 2.57: EPTS DISCHARGES FROM RESERVE COMPONENT BY ACCESSION YEAR: ALL SERVICES

Year of accession	Accessions (n)	Discharges (n)	Discharges (%)
2009	35,279	423	1.2
2010	28,340	404	1.4
2011	30,485	450	1.5
2012	24,323	162	0.7
2013	21,287	142	0.7
Total	139,714	1,581	1.1

Table 2.58 shows EPTS discharges reported among individuals accessed into enlisted National Guard component service during each year from 2009 through 2013. EPTS discharge data for 2013 are not complete due to delays in reporting; therefore the total discharges are less than expected. The number of EPTS discharges and the percent of accessions receiving an EPTS discharge from the guard component in 2009 through 2011 has remained relatively consistent and decreased from 669 (2%) in 2011 to 290 (0.7%) in 2012.

TABLE 2.58: EPTS DISCHARGES FROM NATIONAL GUARD BY ACCESSION YEAR: ALL SERVICES

Year of accession	Accessions (n)	Discharges (n)	Discharges (%)
2009	47,435	536	1.1
2010	46,182	744	1.6
2011	40,256	669	1.7
2012	42,132	290	0.7
2013	28,689	94	0.3
Total	204,694	2,333	1.1

Characteristics of enlisted active component accessions that ended in EPTS discharge are shown in Table 2.59. The Air Force had similar risks of EPTS discharge compared to the Army. Risk of EPTS discharge among the Marine Corps was slightly higher compared to the Army and highest among Navy relative to the Army. The risk of EPTS discharge is significantly higher among females relative to males. Risk of EPTS discharge in those aged 21-25 and those over 25 were significantly lower than among those aged 17-20. Risk of EPTS discharge is significantly lower in blacks relative to whites and higher in other race groups compared to whites. Enlistees entering onto active duty service with some college or a bachelor's degree had significantly lower risk of EPTS discharge relative to high school graduates. Relative to the highest percentile AFQT score group all other AFQT score groups, with the exception of the lowest percentile AFQT score group, were associated with significantly higher EPTS discharge risk. Both medically disqualified groups had a significantly higher risk of EPTS discharge relative to accessions who were fully medically qualified.

TABLE 2.59: CHARACTERISTICS OF ENLISTED ACTIVE COMPONENT ACCESSIONS IN 2009-2013 ENDING IN EPTS DISCHARGE: ALL SERVICES

	Accessions (n)	Discharged (n)	Discharged (%)	Crude RR	95% CI
Service					
Army (REF)	315,847	5,651	1.8	1.00	-
Navy	179,699	5,710	3.2	1.78	(1.71, 1.84)
Marine Corps	155,844	3,027	1.9	1.09	(1.04, 1.13)
Air Force	143,793	2,505	1.7	0.97	(0.93, 1.02)
Sex*					
Male (REF)	663,768	12,413	1.9	1.00	-
Female	131,415	4,480	3.4	1.82	(1.76, 1.89)
Age at Accession*					
17 – 20 (REF)	509,617	11,288	2.2	1.00	-
21 – 25	225,613	4,440	2.0	0.89	(0.86, 0.92)
> 25	59,941	1,165	1.9	0.88	(0.83, 0.93)
Race*					
White (REF)	589,156	12,578	2.1	1.00	-
Black	132,356	2,640	2.0	0.93	(0.90, 0.97)
Other	73,671	1,675	2.3	1.06	(1.01, 1.12)
Education Level*					
Below HS graduate**	1,720	40	2.3	1.05	(0.78, 1.43)
HS diploma (REF)	683,540	15,089	2.2	1.00	-
Some college	65,568	1,280	2.0	0.88	(0.84, 0.94)
Bachelor's or higher	44,174	481	1.1	0.49	(0.45, 0.54)
AFQT Score*					
93 – 99 (REF)	57,276	888	1.6	1.00	-
65 – 92	321,284	6,454	2.0	1.30	(1.21, 1.39)
50 – 64	218,766	5,064	2.3	1.49	(1.39, 1.60)
30 – 49	188,585	4,459	2.4	1.53	(1.42, 1.64)
11 – 29	2,379	27	1.1	0.73	(0.50, 1.07)
Medical Status					
Fully Qualified (REF)	691,155	13,465	1.9	1.00	-
Temporary DQ	33,285	909	2.7	1.40	(1.31, 1.50)
Permanent DQ	70,743	2,519	3.6	1.83	(1.75, 1.91)
Total	795,183	16,893	2.1		

RR: Relative Risk; CI: Confidence Interval; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification; REF: Referent Group

* Individuals with missing values for demographic variables are included in the total

** 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.

Characteristics of enlisted reserve component accessions that ended in EPTS discharge are shown in Table 2.60. All services had significantly higher risk of EPTS discharge when compared to the Army, The highest risk of EPTS discharge was found in the Navy. The risk of EPTS discharge is significantly higher among females relative to males. No significant differences were observed when comparing EPTS discharge risk in those aged 21-25 and those over 25 relative to those aged 17-20. No significant differences were observed when comparing EPTS discharge risk in blacks relative to whites though risk of EPTS discharge was significantly lower in those in other race groups. Enlistees entering military service with with a Bachelor's degree had significantly lower risk of EPTS discharge relative to high school graduates. Relative to the highest percentile AFQT score group AFQT scores in the 50th-64th percentile were associated with significantly higher EPTS discharge risk. Only permanent medical disqualification had a significantly higher risk of EPTS discharge relative to accessions who were fully medically qualified.

TABLE 2.60: CHARACTERISTICS OF ENLISTED RESERVE COMPONENT ACCESSIONS IN 2009-2013 ENDING IN EPTS DISCHARGE: ALL SERVICES

	Accessions (n)	Discharged (n)	Discharged (%)	Crude RR	95% CI
Service					
Army (REF)	78,069	649	0.8	1.00	-
Navy	15,077	241	1.6	1.92	(1.66, 2.23)
Marine Corps	27,503	397	1.4	1.74	(1.53, 1.97)
Air Force	19,065	294	1.5	1.86	(1.62, 2.13)
Sex*					
Male (REF)	108,318	1,076	1.0	1.00	-
Female	31,396	505	1.6	1.62	(1.46, 1.80)
Age at Accession*					
17 – 20 (REF)	84,134	939	1.1	1.00	-
21 – 25	34,520	377	1.1	0.98	(0.87, 1.10)
> 25	20,886	255	1.2	1.09	(0.95, 1.26)
Race*					
White (REF)	101,110	1,132	1.1	1.00	-
Black	28,055	357	1.3	1.14	(1.01, 1.28)
Other	10,549	92	0.9	0.78	(0.63, 0.96)
Education Level*					
Below HS graduate [†]	6,707	61	0.9	0.78	(0.61, 1.01)
HS diploma (REF)	108,400	1,256	1.2	1.00	-
Some college	15,710	195	1.2	1.07	(0.92, 1.24)
Bachelor's or higher	8,839	69	0.8	0.67	(0.53, 0.86)
AFQT Score*					
93 – 99 (REF)	8,851	87	1.0	1.00	-
65 – 92	52,450	516	1.0	1.00	(0.80, 1.25)
50 – 64	35,668	463	1.3	1.32	(1.05, 1.66)
30 – 49	38,922	471	1.2	1.23	(0.98, 1.55)
11 – 29	1,147	6	0.5	0.53	(0.23, 1.21)
Medical Status					
Fully Qualified (REF)	120,757	1,306	1.1	1.00	-
Temporary DQ	6,946	82	1.2	1.09	(0.87, 1.36)
Permanent DQ	12,011	193	1.6	1.49	(1.28, 1.73)
Total	139,714	1,581	1.1		

RR: Relative Risk; CI: Confidence Interval; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification; REF: Referent Group

* Individuals with missing values for demographic variables are included in the total.

** 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.

Characteristics of enlisted National Guard accessions that ended in EPTS discharge are shown in Table 2.61. Only eight National Guard EPTS discharges were from the Air Force. Therefore, no meaningful comparison of EPTS discharges can be made between services. The risk of EPTS discharge is significantly higher among females relative to males. No significant differences were observed when comparing EPTS discharge risk in those aged 21-25 relative to those 17-20 though risk of EPTS discharge was significantly lower in those in those over 25. Both black and other race groups were significantly less likely to have an EPTS discharge than whites. Enlistees entering military service with education less than high school had significantly higher risk of EPTS discharge relative to high school graduates. Those with some college or higher had significantly lower risk of EPTS discharge. Relative to the highest percentile AFQT score group (93-99) all other AFQT score groups, with the exception of the lowest percentile AFQT score group (11-29), were associated with significantly higher EPTS discharge risk. Permanent medical disqualifications were associated with a significantly higher risk of EPTS discharge relative to those fully qualified.

TABLE 2.61 CHARACTERISTICS OF ENLISTED **NATIONAL GUARD** ACCESSIONS IN 2009-2013 ENDING IN EPTS DISCHARGE: ARMY AND AIR FORCE

	Accessions	Discharged	% Discharged	Relative Risk	95% CI
Service					
Army	179,893	2,325	1.3	1.00	-
Air Force	24,801	8	0.0	0.02	(0.01, 0.05)
Sex					
Male	162,893	1,773	1.1	1.00	-
Female	41,800	560	1.3	1.23	(1.12, 1.35)
Age at Accession					
17 – 20	129,629	1,519	1.2	1.00	-
21 – 25	48,294	540	1.1	0.95	(0.87, 1.05)
> 25	26,745	274	1.0	0.87	(0.77, 0.99)
Race					
White	164,875	2,033	1.2	1.00	-
Black	31,377	252	0.8	0.65	(0.57, 0.74)
Other	8,442	48	0.6	0.46	(0.35, 0.61)
Education Level					
Below HS graduate [†]	17,988	284	1.6	1.31	(1.16, 1.49)
HS diploma	144,215	1,735	1.2	1.00	-
Some college	30,339	239	0.8	0.65	(0.57, 0.75)
Bachelor's or higher	11,977	74	0.6	0.51	(0.41, 0.65)
AFQT Score					
93 – 99	13,173	76	0.6	1.00	-
65 – 92	75,950	682	0.9	1.56	(1.23, 1.97)
50 – 64	53,603	674	1.3	2.18	(1.72, 2.76)
30 – 49	57,904	877	1.5	2.63	(2.08, 3.32)
11 – 29	2,625	22	0.8	1.45	(0.91, 2.33)
Medical Status					
Fully Qualified	173,572	1,890	1.1	1.00	-
Temporary DQ	14,824	184	1.2	1.14	(0.98, 1.32)
Permanent DQ	16,298	259	1.6	1.46	(1.28, 1.66)
Total	204,694	2,333	1.1		

[†] 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.

Disability Discharges in the First Year of Service

Table 2.62 through 2.71 describe disability discharges within the first year of military service among enlisted Army, Navy, Marine Corps, and Air Force personnel who accessed during fiscal year 2009 to 2014. Relative risks are used to compare the likelihood of having a disability discharge among 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 first or last group in that order as appropriate. Otherwise, the baseline group is generally the largest group.

Table 2.62 presents the number of disability discharges reported among individuals that enlisted in the Army, Navy, Marine Corps and Air Force active component enlisted service during 2009 to 2014. Results are shown for each year of accession. The highest rate of disability discharges (0.49%) occurred in 2009. Rates of disability discharge in the first year of service have decreased in each subsequent year. The number of disability discharges in the first year of service for accessions in 2014 is underestimated due to an incomplete follow up time.

TABLE 2.62: DISABILITY DISCHARGES FROM ACTIVE COMPONENT WITHIN IN THE FIRST YEAR OF SERVICE AMONG 2009–2014 ACCESSIONS: ALL SERVICES

Year of accession	Accessed (n)	Discharged within one year of accession	
		n	%
2009	161,104	786	0.49
2010	159,765	574	0.36
2011	152,674	456	0.30
2012	155,683	263	0.17
2013	165,957	362	0.22
2014*	139,997	80	0.06

*The rate of disability evaluation is underestimated due to lack of follow up data on individuals accessed in 2014.

Table 2.63 presents the number of disability discharges reported among individuals that accessed into the Army, Navy, Marine Corps and Air Force reserve component enlisted service during 2009 to 2014. Results are shown for each year of accession. The highest rate of disability discharges (0.20%) occurred in 2009. Rates of disability discharge have decreased in each subsequent year. The number of disability discharges in the first year of service for accessions in 2014 is underestimated due to an incomplete follow up time.

TABLE 2.63: DISABILITY DISCHARGES FROM RESERVE COMPONENT IN THE FIRST YEAR OF SERVICE AMONG 2009–2014 ACCESSIONS: ALL SERVICES

Year of accession	Total accessed	Evaluated within one year of accession	
		Count	%
2009	35,279	69	0.20
2010	28,340	52	0.18
2011	30,485	43	0.14
2012	24,323	16	0.07
2013	21,287	27	0.13
2014*	24,585	7	0.03

*The rate of disability evaluation is underestimated due to lack of follow up data on individuals accessed in 2014.

Table 2.64 presents the number of disability discharges reported among individuals that accessed into the Army and Air Force National Guard enlisted service during 2009 to 2014. Results are shown for each year of accession. The highest rate of disability discharges (0.22%) occurred in 2009. Rates of disability discharge in the first year of service have decreased in each subsequent year. The number of disability discharges in the first year of service for accessions in 2014 is underestimated due to an incomplete follow up time.

TABLE 2.64: DISABILITY DISCHARGES FROM NATIONAL GUARD IN THE FIRST YEAR OF SERVICE AMONG 2009–2014 ACCESSIONS: ALL SERVICES

Year of accession	Total accessed	Evaluated within one year of accession	
		Count	%
2009	47,435	102	0.22
2010	46,182	88	0.19
2011	40,256	49	0.12
2012	42,132	7	0.02
2013	28,689	29	0.10
2014*	42,705	6	0.01

*The rate of disability evaluation is underestimated due to lack of follow up data on individuals accessed in 2014.

Table 2.65 shows demographic characteristics, the total number of accessions, and the relative risk of having a disability discharge among active component enlistees in the Army, Navy, Marine Corps and the Air Force. Relative to the Army, disability discharge was significantly less likely among enlistees from all other services. Females were 2.31 times more likely to be disability discharged compared to males. Risk also increased significantly with increasing age. Being any race other than white showed decreased risk of being disability discharge.

In regards to education level, personnel who had not finished high school at the time of accession were 2.37 times, and those with some college education were 1.42 times, more likely to have a disability discharge compared to individuals with a high school diploma. Personnel with a bachelor’s or above degree were less likely to have a disability discharge. Risk of disability discharge was higher in all Armed Forces Qualification Test (AFQT) score groups relative to those with the highest AFQT scores, the 93rd-99th percentile group. Those with any type of medical disqualification were at significantly higher risk of disability discharge in the first year of service relative those who were fully qualified.

TABLE 2.65: DISABILITY DISCHARGES FROM ACTIVE COMPONENT IN THE FIRST YEAR OF SERVICE AMONG 2009-2014 ACCESSIONS: ALL SERVICES

	Accessions (n)	Discharged within one year of accession			
		n	%	Crude RR	95% CI
Service					
Army (REF)	371,130	1,375	0.37	1.00	-
Navy	214,144	169	0.08	0.21	(0.18, 0.25)
Marine Corps	181,841	539	0.30	0.80	(0.72, 0.88)
Air Force	168,065	438	0.26	0.70	(0.63, 0.78)
Sex*					
Male (REF)	779,199	1,722	0.22	1.00	-
Female	155,981	799	0.51	2.32	(2.13, 2.53)
Age at Accession*					
17 – 20 (REF)	603,236	1,455	0.24	1.00	-
21 – 25	263,337	740	0.28	1.17	(1.07, 1.27)
>25	68,607	326	0.48	1.97	(1.75, 2.23)
Race*					
White (REF)	689,531	2,032	0.29	1.00	-
Black	159,304	341	0.21	0.72	(0.65, 0.81)
Other	86,345	148	0.17	0.58	(0.49, 0.69)
Education Level*					
Below HS	1,766	11	0.62	2.37	(1.31, 4.30)
HS diploma	806,844	2,124	0.26	1.00	-
Some college	74,217	277	0.37	1.42	(1.25, 1.61)
Bachelor's or	52,171	109	0.21	0.79	(0.65, 0.96)
AFQT Score*					
93 – 99 (REF)	66,736	159	0.24	1.00	-
65 – 92	376,550	1,037	0.28	1.15	(0.98, 1.37)
50 – 64	259,887	727	0.28	1.17	(0.98, 1.39)
30 – 49	221,302	586	0.26	1.11	(0.93, 1.32)
11 – 29	2,635	10	0.38	1.60	(0.84, 3.03)
Medical Status					
Fully Qualified	811,106	2,045	0.25	1.00	-
Temporary DQ	37,385	162	0.43	1.72	(1.47, 2.02)
Permanent DQ	86,689	314	0.36	1.44	(1.28, 1.62)
Total	935,180	2,521	0.27		

RR: Relative Risk; CI: Confidence Interval; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification; REF: Referent Group

* Individuals with missing values for demographic variables are included in the total

** 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 2.66 shows demographic characteristics, the total number of accessions, and the relative risk of having a disability discharge among reserve component enlistees in the Army, Navy, Marine Corps and the Air Force. Relative to the Army, disability discharge was significantly less likely among enlistees from the Navy and Air Force. The risk of discharge among Marines nearly twice that of the risk in the Army. Females were 2.13 times more likely to be disability discharged compared to males. Risk also increased significantly with increasing age. The rate of disability discharge did not differ significantly when comparing white and black race. However, those with races other than white or black were significantly less likely to be disability discharged.

In regards to education level and AFQT scores, no significant differences in the risk of disability discharge were observed when comparing reserve component enlistees. No significant differences in the risk of disability discharge were observed when comparing fully qualified accessions to those with a history of disqualification.

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TABLE 2.66: DISABILITY DISCHARGES FROM RESERVE COMPONENT IN THE FIRST YEAR OF SERVICE AMONG 2009-2014 ACCESSIONS: ALL SERVICES

	Discharged within one year of accession				
	Accessions (n)	n	%	Crude RR	95% CI
Service					
Army (REF)	91,582	113	0.12	1.00	-
Navy	17,977	5	0.03	0.23	(0.09, 0.55)
Marine Corps	33,081	80	0.24	1.96	(1.47, 2.61)
Air Force	21,659	16	0.07	0.60	(0.35, 1.01)
Sex*					
Male (REF)	127,199	132	0.10	1.00	-
Female	37,100	82	0.22	2.13	(1.62, 2.81)
Age at Accession*					
17 – 20 (REF)	100,947	112	0.11	1.00	-
21 – 25	39,828	61	0.15	1.38	(1.01, 1.88)
>25	23,524	41	0.17	1.57	(1.10, 2.24)
Race*					
White (REF)	117,732	164	0.14	1.00	-
Black	33,899	37	0.11	0.78	(0.55, 1.12)
Other	12,668	13	0.10	0.74	(0.42, 1.30)
Education Level*					
Below HS	7,817	0	0.00	-	-
HS diploma (REF)	128,397	170	0.13	1.00	-
Some college	17,525	30	0.17	1.29	(0.87, 1.91)
Bachelor's or	10,501	14	0.13	1.01	(0.58, 1.74)
AFQT Score*					
93 – 99 (REF)	10,192	13	0.13	1.00	-
65 – 92	61,566	79	0.13	1.01	(0.56, 1.81)
50 – 64	42,319	51	0.12	0.94	(0.51, 1.74)
30 – 49	46,216	68	0.15	1.15	(0.64, 2.09)
11 – 29	1,193	3	0.25	1.97	(0.56, 6.94)
Medical Status					
Fully Qualified	141,908	179	0.13	1.00	-
Temporary DQ	7,744	9	0.12	0.92	(0.47, 1.80)
Permanent DQ	14,647	26	0.18	1.41	(0.93, 2.13)
Total	164,299	214	0.13		

RR: Relative Risk; CI: Confidence Interval; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification; REF: Referent Group

* Individuals with missing values for demographic variables are included in the total

** 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.

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Table 2.67 shows demographic characteristics, the total number of accessions, and the relative risk of having a disability discharge among National Guard enlistees in the Army and Air Force. Relative to the Army, disability discharge was significantly less likely among enlistees from the Air Force. Females were 3.19 times more likely to be disability discharged compared to males. Risk also increased significantly with increasing age. No significant differences in the risk of disability discharge were observed in National Guard enlistees by race, education, AFQT score percentile, or medical status at application.

TABLE 2.67 DISABILITY DISCHARGES FROM NATIONAL GUARD IN THE FIRST YEAR OF SERVICE AMONG 2009-2014 ACCESSIONS: ALL SERVICES

	Discharged within one year of accession				
	Accessions (n)	n	%	Crude RR	95% CI
Service					
Army (REF)	217,486	273	0.13	1.00	-
Air Force	29,913	8	0.03	0.21	(0.11, 0.43)
Sex*					
Male (REF)	195,339	152	0.08	1.00	-
Female	52,059	129	0.25	3.19	(2.52, 4.03)
Age at Accession*					
17 – 20 (REF)	159,394	136	0.09	1.00	-
21 – 25	57,040	66	0.12	1.36	(1.01, 1.82)
>25	30,965	79	0.26	2.99	(2.27, 3.95)
Race*					
White (REF)	196,779	233	0.12	1.00	-
Black	40,350	39	0.10	0.82	(0.58, 1.15)
Other	10,270	9	0.09	0.74	(0.38, 1.44)
Education Level*					
Below HS	21,421	16	0.07	0.65	(0.39, 1.08)
HS diploma (REF)	176,346	203	0.12	1.00	-
Some college	34,858	48	0.14	1.20	(0.87, 1.64)
Bachelor's or	14,562	14	0.10	0.84	(0.49, 1.44)
AFQT Score*					
93 – 99 (REF)	15,671	16	0.10	1.00	-
65 – 92	90,167	87	0.10	0.95	(0.55, 1.61)
50 – 64	63,823	95	0.15	1.46	(0.86, 2.48)
30 – 49	72,572	81	0.11	1.09	(0.64, 1.87)
11 – 29	3,582	2	0.06	0.55	(0.13, 2.38)
Medical Status					
Fully Qualified	209,935	231	0.11	1.00	-
Temporary DQ	16,981	25	0.15	1.34	(0.89, 2.02)
Permanent DQ	20,483	25	0.12	1.11	(0.73, 1.68)
Total	247,399	281	0.11		

RR: Relative Risk; CI: Confidence Interval; HS: High School; AFQT: Armed Forces Qualification Test; DQ: Disqualification; REF: Referent Group

* Individuals with missing values for demographic variables are included in the total

** 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.

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Tables 2.68-2.71 show the leading ten diagnoses for enlisted personnel who accessed from 2009 to 2014 and had a disability discharge. Results are shown by service, regardless of component.

The majority of Army enlistees disability discharged were diagnosed with conditions falling within two musculoskeletal categories: impairment, limitation and ankylosis of the joint, spine, skull limbs and extremities; and prosthetic implants and diseases of the musculoskeletal system (Table 2.58). Only 5% of disability discharges from the Army were for the third most common condition: diseases of the peripheral nerves.

Among Navy disability discharges (Table 2.59) the leading disability diagnosis was impairment, limitation and ankylosis of the joint, spine, skull limbs and extremities (23%) followed by prosthetic implants and diseases of the musculoskeletal system (11%). About 10% of disability discharges in the Navy were related to the third leading disability, convulsive disorders.

The largest diagnosis category among Marine Corps enlistees was impairment limitation and ankylosis of the joints, spine, skull, limbs and extremities (23%). Prosthetic implants and diseases of the musculoskeletal system was the second leading category (7%). Only 4% of disability discharges from the Marine Corps were for the third most common condition: diseases of the peripheral nerves.

In the Air Force the most common reasons for disability discharge were the same as the other three services: impairment limitation and ankylosis of the joints, spine, skull, limbs and extremities (34%) and prosthetic implants and diseases of the musculoskeletal system was the second leading category (17%). The Air Force had the largest percentage of disability discharges due to affective and non-psychotic mental disorders (10%), which was the third leading cause of disability in the first year of Air Force service.

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TABLE 2.68 DIAGNOSIS CATEGORIES FOR DISABILITY DISCHARGES AMONG FIRST-TIME ENLISTED PERSONNEL IN THE FIRST YEAR OF SERVICE FOR 2009–2014 ACCESSIONS: **ARMY**

Diagnosis category	2009-2014	
	Count	%*
Impairment, limitation and ankylosis of joints, spine, skull, limbs and extremities	1,111	63.1
Prosthetic implants and diseases of the musculoskeletal system	491	27.9
Diseases of the peripheral nerves	79	4.5
Affective and non-psychotic mental disorders	59	3.4
Miscellaneous neurological disorders	32	1.8
Diseases of the endocrine system	25	1.4
Diseases of the digestive system	24	1.4
Diseases of the trachea and bronchi	22	1.2
Organic diseases of the central nervous system	19	1.1
Muscle injuries	17	1.0
Total individuals	1,761	

*Represents the proportion of individuals evaluated for disability who were evaluated for each disability type.

TABLE 2.69 DIAGNOSIS CATEGORIES FOR DISABILITY DISCHARGES AMONG FIRST-TIME ENLISTED PERSONNEL IN THE FIRST YEAR OF SERVICE FOR 2009- 2014 ACCESSIONS: **NAVY**

Diagnosis category	2009-2014	
	Count	%*
Impairment, limitation and ankylosis of joints, spine, skull, limbs and extremities	40	23.0
Prosthetic implants and diseases of the musculoskeletal system	19	10.9
Convulsive disorders	17	9.8
Affective and non-psychotic mental disorders	14	8.0
Diseases of the digestive system	8	4.6
Organic diseases of central nervous system	5	2.9
Schizophrenia and other psychotic disorders	5	2.9
Diseases of the peripheral nerves	4	2.3
Diseases of the cranial nerves	3	1.7
Miscellaneous neurological disorders	3	1.7
Total individuals	174	

*Represents the proportion of individuals evaluated for disability who were evaluated for each disability type.

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TABLE 2.70 DIAGNOSIS CATEGORIES FOR DISABILITY DISCHARGES AMONG FIRST-TIME ENLISTED PERSONNEL WITHIN THE FIRST YEAR OF SERVICE FOR 2009–2014: **MARINE CORPS**

Diagnosis category	2009-2014	
	Count	%*
Impairment, limitation and ankylosis of joints, spine, skull, limbs and extremities	143	23.1
Prosthetic implants and diseases of the musculoskeletal system	40	6.5
Diseases of the peripheral nerves	26	4.2
Convulsive disorders	15	2.4
Affective and non-psychotic mental disorders	14	2.3
Diseases of the endocrine system	14	2.3
Diseases of the digestive system	12	1.9
Diseases of the trachea and bronchi	10	1.6
Muscle injuries	9	1.5
Schizophrenia and other psychotic disorders	9	1.5
Total individuals	619	

*Represents the proportion of individuals evaluated for disability who were evaluated for each disability type.

TABLE 2.71 DIAGNOSIS CATEGORIES FOR DISABILITY DISCHARGES AMONG FIRST-TIME ENLISTED PERSONNEL WITHIN THE FIRST YEAR OF SERVICE FOR 2009–2014: **AIR FORCE**

Diagnosis category	2009-2014	
	Count	%*
Impairment, limitation and ankylosis of joints, spine, skull, limbs and extremities	155	33.5
Prosthetic implants and diseases of the musculoskeletal system	78	16.9
Affective and non-psychotic mental disorders	47	10.2
Diseases of the trachea and bronchi	38	8.2
Schizophrenia and other psychotic disorders	33	7.1
Muscle injuries	25	5.4
Diseases of the peripheral nerves	20	4.3
Convulsive disorders	19	4.1
Diseases of the digestive system	16	3.5
Diseases of the endocrine system	11	2.4
Total individuals	462	

*Represents the proportion of individuals evaluated for disability who were evaluated for each disability type.

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 sources 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), 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.

The MEPS records provide extensive medical examination information, including date of examination, medical qualification status, medical disqualification codes (where relevant), medical conditions observed by or reported to physicians, and any waiver requirements. Medical conditions among applicants fall into two categories, 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 due to a permanent condition, 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”). Results of some specific tests are also extracted from the MEPS records including those for hearing/vision, alcohol/drug use, and measurements of height, weight, and blood pressure.

Gain and Loss Files

The Defense Manpower Data Center (DMDC) provides data on individuals entering military service (gain or accession) and on individuals exiting military service (loss or discharge). 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.

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, Unit Identification Code (UIC) of initially assigned unit, initially assigned Military Occupation Specialty code (MOS), 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, the UIC and MOS for grouping service members by occupation, 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.

Accession Medical Waiver

AMSARA receives records on all active and reserve component 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 and information about the waiver consideration including the medical condition(s) for which an individual was seeking a waiver and the final decision of the waiver authority.

Air Force

Air Education and Training Command (Randolph Air Force Base, TX) transmits, upon request, data on active and reserve component 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 U.S. Army Recruiting Command (USAREC, Fort Knox, KY) has provided annual 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.

Marine Corps

The U.S. Navy Bureau of Medicine and Surgery (BUMED) in Washington, DC, provides, on request, medical waiver data for enlisted personnel. 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) 6130.03 is used to indicate the medically disqualifying condition(s) for which the waiver is being considered.

Navy

The Office of the Commander, U.S. Navy Recruiting Command (Millington, TN) provides accession medical waiver data on applicants for enlisted service in the Navy since May 2000. Medically disqualifying conditions reported within the Navy waiver data file are recorded using in-house codes indicating which section of the DoDI 6130.03 is the basis for disqualification and waiver.

Hospitalization

Data on hospitalizations are obtained from the Military Health Systems Data Repository (MDR) annually. These data contain information on admissions of active duty officers and enlisted personnel to any military hospital; this includes individuals in the reserve component and National Guard who are activated or who have been activated within 6 months prior to admission. Information on each visit includes SSN for linking with other data, demographic characteristics (e.g., gender, age, and race), and details about the hospitalization. In particular, the medical diagnosis associated with the hospitalization is coded according to the ICD-9. 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 conditions that existed prior to service (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 general 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 limitation the EPTS discharge data is completeness. Table 3.1 summarizes the numbers of records provided to AMSARA over 2009-2013. The Marine Corps training site in San Diego has not provided EPTS discharge records since 2006. In the Army, both Ft. Jackson and Ft. Knox training sites have not provided EPTS records to AMSARA for FY 2012 and all training sites except Ft. Benning appear to have underreported EPTS discharges in FY 2012. Note that the numbers of records have been unstable over time for nearly all IET sites. While 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[†]

Training Site		Fiscal Year of EPTS Discharge					Total
		2009	2010	2011	2012	2013	
Army	Fort Benning	967	520	866	885	780	4,018
	Fort Jackson	19	606	838	1	5	1,469
	Fort Knox	333	286	138	0	0	757
	Fort Leonard Wood	837	804	873	240	2	2,756
	Fort Sill	187	185	299	133	150	954
Navy	Great Lakes	1,532	1,530	1,504	1,863	398	6,827
Marine Corps	Parris Island	803	772	861	654	745	3,835
	San Diego	0	0	0	0	0	0
Air Force	Lackland AFB	634	680	655	409	602	2,980
Coast Guard	Cape May	188	165	220	131	88	792
Total		5,500	5,548	6,254	4,316	2,770	24,388

[†] 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.

Disability Discharges in the First Year of Service

Data on disability discharge considerations are compiled separately for each service at its disability agency. The U.S. Army Physical Disability Agency has provided data on Army disability evaluations during 1995-2014 and continues to provide these data. The Air Force Personnel Center has provided data on the first evaluation for all individuals who received a final disposition of separation or retirement (i.e. fit dispositions, retained on the temporary disability retirement list not included) for the first time during the period of 1995–2010, but only provides data on all evaluations from the period of 2007-2014. Data from the Secretary of the Navy, Council of Review Boards, including all disability discharge considerations for the Navy and Marine Corps, are available from 2000 to 2014.

All disability agencies provide 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 medical condition(s) involved in each case are described using the condition codes of the Veterans Affairs 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, defined in Table 3.2, rather than attempting to interpret specific codes.

TABLE 3.2 VASRD CODE GROUPINGS

VASRD code	Conditions encompassed	VASRD code	Conditions encompassed
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
6280 - 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		

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 & DOCUMENTS

CHARTER AND SUPPORTING DOCUMENTS



HEALTH AFFAIRS

THE ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D. C. 20301-1200

DEC 06 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. Martin /br
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

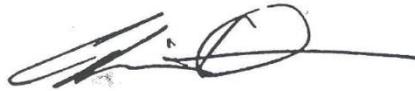
Office of Service Deputy Chiefs of Staff for Personnel, and Chief of Personnel and Training, HQ U.S. Coast Guard.

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



EDWIN DORN

Frequently Used Acronyms

AFQT	Armed Forces Qualification Test
AIM	Assessment of Individual Motivation
AMSARA	Accession Medical Standards Analysis and Research Activity
AMSWG	Accession Medical Standards Working Group
ARI	Army Research Institute for the Behavioral and Social Sciences
ARMS	Assessment of Recruit Motivation and Strength
BMI	Body Mass Index
BUMED	Navy Bureau of Medicine and Surgery
DMDC	Defense Manpower Data Center
DoD	Department of Defense
DQ	Disqualified
EPTS	Existed Prior to Service
FY	Fiscal Year
IET	Initial Entry Training
ICD-9	<i>International Classification of Diseases, 9th Revision</i>
ISC	Interservice Separation Code
MEPS	Military Entrance Processing Station
MOS	Military Occupation Specialty
OMF	Other Medical Failure
SSN	Social Security Number
TAPAS	Tailored Adaptive Personality Assessment System
USAREC	U.S. Army Recruiting Command
USMEDCOM	U.S. Medical Command
USMEPCOM	U.S. Military Entrance Processing Command
VASRD	Veterans Administration Schedule for Rating Disabilities
WRAIR	Walter Reed Army Institute of Research

ACRONYMS



Accession Medical Standards Analysis & Research Activity

Preventive Medicine Branch
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