

Accession Medical Standards Analysis and Research Activity 2020 Annual Report



Medical Disqualifications, Medical Waivers,
Accessions and Outcomes
in FY 2016-2019 Military Applicants



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Material has been reviewed by the Walter Reed Army Institute of Research. There is no objection to its publication. The opinions or assertions contained herein are the private views of the authors, and are not to be construed as official, or as reflecting true views of the Department of the Army or the Department of Defense. The investigators have adhered to the policies for protection of human subjects as prescribed in AR 70-25.





REPORT AT A GLANCE

Report Introduction

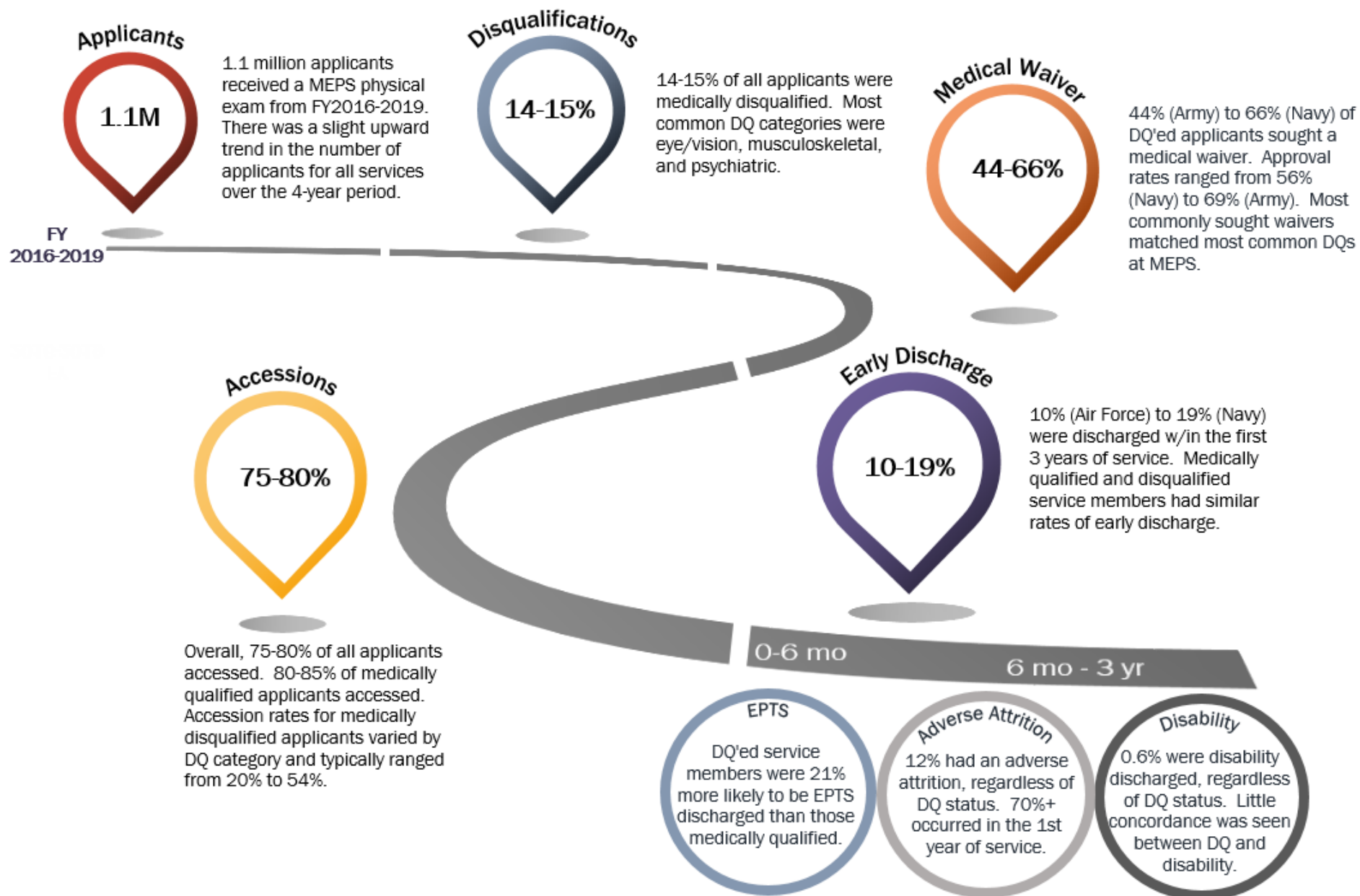
25 Years

To commemorate 25 years of accession medical standard analytics, AMSARA made 5 significant changes to this report:

1. Utilized a longitudinal approach following service members from application to end of service.
2. Updated the disqualification categories to align with the 2018 DoDI 6130.03, Vol 1.
3. Lengthened the follow-up period to capture more end of service outcomes.
4. Added temporal trends to highlight patterns and detect fluctuations due to changes in policies or processes.
5. Integrated impactful data visualizations for easier interpretability to support decision-making.

More Info

<https://www.wrair.army.mil/collaborate/amsara>



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Mission and Vision

Mission

Execute advanced analytics and epidemiological research for evaluating accession medical standards and their changes to promote, inform, and support evidence-based DOD policy decisions aimed at optimizing the selection of new recruits and enhancing service member medical readiness.

Vision

Provide historic perspective, experience, expertise, and tailored real-time evidence-based analytical research support to the DOD leadership for optimizing accession policies, medical readiness, and responsiveness to the ever-changing needs of service member.

Objectives

Provide analytic and research support to:

- Improve service member health, readiness, and resilience
- Optimize recruitment, retention, and deployment
- Reduce medical attrition and disability

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EXECUTIVE SUMMARY

In 1995, the Surgeon General of the Army (Research and Development) established the Accession Medical Standards Analysis and Research Activity (AMSARA), at the request of Assistant Secretary of Defense (Health Affairs), as a mechanism to provide the DOD with evidenced-based evaluations of accession medical standards. Under the guidance of the Medical and Personnel Executive Steering Committee (MEDPERS) and the Accession Medical Standards Working Group (AMSWG), our AMSARA team issues annual reports, briefings, and publications to include comprehensive analyses of service member accession and attrition data, allowing DOD stakeholders to make informed policy decisions.

This report is divided into three Sections. Section 1 describes pre-accession characteristics of military applicants and accessions. Section 2 describes medical waiver considerations and approval rates, both overall and by disqualification (DQ) category. Section 3 compares rates of early discharge (adverse attrition, existing prior to service discharge, disability discharge) between medically disqualified and medically qualified applicants.

This year, AMSARA made five significant changes to the report. To provide a more comprehensive evaluation of accession medical standards, AMSARA utilized a new longitudinal approach following service members from application to end of service, and aligned DQ categories with the DoDI 6130.03. AMSARA also added temporal trends to better evaluate the impact of policy changes, and lengthened the follow-up period to improve estimates for end of service outcomes. Finally, we have included more impactful data visualizations for easier translation from data point to decision.



KEY FINDINGS

Section 1: Applicants and Accessions

Overall Application and Accession Metrics

- From FY 2016 through 2019, approximately 1.1 million applicants received a physical examination at a Military Entrance Processing Station (MEPS).
 - Most applicants were white, male, and/or between the ages of 17-20 years.
 - The demographic distribution remained relatively stable over the four-year period, except for a small increase in those applying while still in high school.
- The overall rate of accession varied by service ranging from 74% among Navy and Marine Corps applicants to 80% among Army and Air Force applicants.

Rates and Trends of Medical DQs

- Approximately 14-15% of all applicants were medically disqualified.
- The most common reasons for DQ were eye/vision disorders, musculoskeletal conditions (including spine, extremities, neck), and psychiatric disorders.
- Accession rates for medically disqualified applicants varied by DQ category and typically ranged from 20% to 54%.
- Although the proportion of applicants disqualified under most DQ categories remained relatively stable over the four-year period, there were a few notable exceptions which may be a result of updates to the DoDI 6130.03 in FY 2018.
 - There was an upward trend in the proportion of applicants disqualified under the eyes, hearing, or abdominal organs/gastrointestinal categories.
 - Although rare (<5%), there was a downward trend in the proportion of endocrine or miscellaneous DQs over the time period.

Section 2: Medical Waiver Considerations

Overall Medical Waiver Consideration and Approval Metrics

- Approximately 8,000 Army applicants were considered for a medical waiver per year, while the Navy, Marine Corps and Air Force Service Medical Waiver Review Authorities (SMWRA) each considered roughly 4,000 medical waivers annually.
 - The proportion of disqualified applicants who sought a medical waiver ranged from 44% (Army) to 66% (Navy).
- Overall, waiver approval rates ranged from 56% (Navy) to 69% (Army).

Medical Waiver Considerations and Approvals by DQ Category

- Similar to the most common DQs at MEPS, the most commonly sought waivers fell under the eye, vision, musculoskeletal, and psychiatric categories.
- Waiver consideration and approval rates varied widely by service and DQ category.

Section 3: Early Discharge

Overall Early Discharge Metrics

- Approximately 10% (Air Force) to 19% (Navy) of service members who applied between FY 2016-2019 were discharged from the military within the first three years of service.
- Medically qualified and disqualified service members appear to have similar rates of early discharge for all discharge types (adverse attrition, disability, EPTS).
- Adverse attrition accounted for 83-95% of all early discharges.

Adverse Attrition

- Approximately 11.5% of both medically qualified and disqualified service members adversely attrited within the first three years of service.
 - The Navy had the highest rate of adverse attrition (18%), while the Air Force had the lowest rate (8%).
- For all services, the rate of adverse attrition was highest during the first 90 days of service, approximately the time from application to the end of basic training.
- There was no significant difference in the likelihood of adverse attrition between those medically qualified and those disqualified under 20 of the 29 DQ categories.
 - Service members disqualified under the dental, endocrine/metabolic, psychiatric or miscellaneous categories were 15-35% more likely to adversely attrite.

Disability Discharge

- Approximately 0.6% of service members were disability discharged within the first three years of service, regardless of DQ status.
- Overall, there was no significant difference in the likelihood of disability discharge between medically qualified and disqualified service members.
- Little to no concordance was observed between DQ category and reason for disability discharge (<1%).

EPTS Discharge

- Although EPTS discharge rates appeared similar between medically disqualified service members (1.1%) and medically qualified service members (0.9%), medically disqualified service members were 21% more likely to be EPTS discharged.
 - Service members disqualified under the lungs, miscellaneous conditions of the extremities, head, heart, female genital system, spine/sacroiliac joints, blood/blood forming tissue, rheumatologic or neurological categories were significantly more likely to be EPTS discharged.
- Little concordance was observed between DQ category and EPTS discharge category (<0.6%).
- The most common reasons for EPTS discharge were psychiatric disorders and musculoskeletal conditions.

Introduction

Since 1995, the Accession Medical Standards Analysis and Research Activity (AMSARA) has supported the efforts of the Medical-Personnel Executive Steering Committee (MEDPERS) and Accession Medical Standards Working Group (AMSWG). MEDPERS was established by the Under Secretary of Defense (Personnel and Readiness) to integrate the medical and personnel communities to provide policy guidance and establish medical standards for accessions, stemming

from evidence-based information provided by analysis and research. The committee is co-chaired by the Deputy Assistant Secretary of Defense (DASD)-Military Personnel Policy and the DASD-Health Services Policy & Oversight and is comprised of representatives from the Office of the Assistant Secretary of Defense (OASD)-Health Readiness Policy and Oversight, OASD-Health Services Policy and Oversight, OASD-Reserve and Manpower Personnel, OASD-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 AMSWG is a subordinate working group which reviews accession medical policy issues contained in Department of Defense (DOD) Instruction 6130.03 Volume 1¹, 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.

Military and civilian staffing within the Walter Reed Army Institute of Research (WRAIR) Center for Enabling Capabilities (CEC) which supported this effort included COL Philip Smith, CEC Director; LTC William Washington, Director, Statistics and Epidemiology Branch; and Dr. Natalya Weber, Contracting Officer Representative for AMSARA IDIQ contract. AMSARA is augmented with contract support through ManTech Health. ManTech staff in 2020 included Program Manager Amanda Kelley; Principal Analyst Caitlin Rushin; Statistician Xiaoshu Feng; Study Coordinator Rhonda Jackson; and Analysts Daniel Gedeon, Katherine Garcia-Rosales, Jessica Murray, and Thomas Wilkerson.

AMSARA’s Key Objectives

1. Evaluate impact and research priorities for military medical standards and screening procedures by quantifying burden associated with various medical conditions and service-related outcomes, including medical DQs for enlistment, accession medical waivers, discharges due to conditions existing prior to service or disability, early attrition from service, and deployment readiness.
2. Review and validate current DOD medical standards and screening procedures, or establish evidence-based scientific grounds for revisions.
3. Describe and evaluate separations from military service including attrition, existed prior to service discharges and disability discharges.
4. Identify non-medical factors that influence medical attrition in military applicants/accessions, such as service branch, sex, age, race, education, and aptitude.
5. Quantify the effect of waived or medically disqualifying conditions in military accessions in terms of morbidity, disability, deployment and attrition.
6. Characterize medical waiver considerations in terms of disqualification type, severity, and other condition-specific factors influencing waiver approval.
7. Validate service-specific medical waiver policies in terms of morbidity, attrition, disability, and deployment.

Report Overview

The focus of this report is to describe pre-accession characteristics of military applicants and accessions, particularly medical disqualifications and waivers, and generate comparisons of end of service outcomes between medically qualified and disqualified applicants.

This year, AMSARA made five significant changes to the report in order to provide more meaningful and actionable results:

1. Rather than analyzing disqualifications, waivers and outcomes in isolation, AMSARA has utilized a new longitudinal approach following service members from application to end of service. Since the DoDI 6130.03 undergoes regular updates and modifications, this longitudinal evaluation better describes and compares disqualification and waiver approval rates and end of service outcomes between applicant pools, potentially evaluated under different accession medical standards. This new approach is further detailed in the 'Report Overview' box on the right side of this page.
2. Integrated year-to-year trends which highlight patterns and detect fluctuations due to changes in policies or medical standards.
3. Updated disqualification categories, aligned to the DoDI 6130.30 subsections (e.g. upper extremities), to allow for a more targeted evaluation of specific medical standards and their impact on the service member's career. These new categories replaced the previously utilized Clinical Classification System categories.
4. Longer follow-up time for end of service outcomes, which provides a more comprehensive description of the effect of medical standards on medical readiness.
5. Developed impactful data visualizations for easier interpretability to support evidence-based decision-making.

Due to these changes and the transactional nature of the data, caution should be taken when comparing results to previous AMSARA annual reports.

REPORT OVERVIEW

Section 1 describes demographic, medical and service-related characteristics and accession information for all ***individuals who received a MEPS physical exam between FY 2016-2019*** for enlisted service to the Army, Navy, Marine Corps, or Air Force. Within Section 1, accession rates and pre-accession characteristics are compared between medically qualified and disqualified applicants.

Section 2 describes the ***accession medical waivers*** sought by those FY 2016-2019 applicants who were considered medically disqualified at the time of their most recent application to service.

Section 3 includes analyses of various ***early discharge*** endpoints among the accessed population described above. A longitudinal approach is employed to describe the process from application to early discharge, by discharge type (e.g. adverse attrition), time in service (70, 365, 730, and 1095+ days), demographic characteristic (e.g. race), disqualification status from the MEPS examination, or unfitting condition type (where applicable).

Key Terms & Definitions

Unless otherwise noted, these terms and definitions are for the purpose of this report.

Accession: Applicants who received a MEPS physical exam during FY 2016-2019 and subsequently signed an oath of enlistment. Since a physical exam is valid for up to two years, the rate of accession among FY2018 and FY2019 applicants may be underestimated due to a lack of sufficient follow-up time. Accessions with either no record of a MEPS physical examination or with a physical examination date that occurred after accession (e.g. applicants with prior service) were excluded.

Applicant: An individual who has commenced processing for enlistment in any of the military services between FY 2016-2019. Individuals who applied to more than one service were counted once per service. Individuals identified as having prior service in any U.S. military component were excluded from all analyses. Individuals who applied for enlisted service and subsequently accessed as officers or warrant officers (as indicated by a pay grade of O1-O6 or W1-W5) were excluded from accession and end of service outcomes.

Application: An applicant's request to enlist in a specific service. For this report, all applications were based on the fiscal year and results of the applicant's most recently completed MEPS physical exam.

Disqualification (DQ): Current or verified past medical history of a condition which does not meet the physical and medical standards for accession into military service (DoDI 6130.03). Medical DQs per DoDI 6130.03 are referenced using International Classification of Diseases, 9th or 10th revision (ICD-9/10) codes.

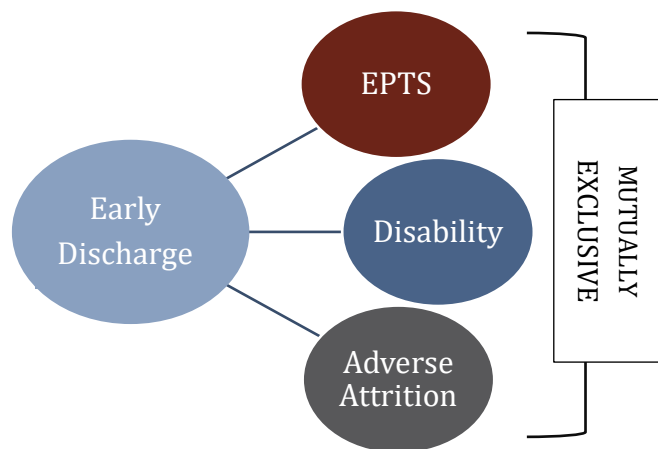
- Medical DQs assigned during the MEPS physical exam may be later cleared by the MEPS Chief Medical Officer (CMO). Cleared medical DQs were excluded from this report.
- Other types of DQs not listed within the DoDI 6130.03 may be identified at MEPS, such as unmet height and weight standards or positive alcohol or drug test results. These DQs were also excluded from this report.

Results within this report should be interpreted with caution as applicants may have also had administrative DQs (e.g. prior arrests) which caused them to be ineligible for accession. Also, the reason for early discharge may not have been related to the medical DQ (e.g. misconduct).

Disqualification Category: Disqualifications were categorized according to subsections listed in DoDI 6130.03 (e.g. upper extremities). The DOD transitioned from the use of ICD-9 codes for disqualifications to ICD-10 codes in FY 2015. To allow for comparisons over this transition period, AMSARA utilized the Center for Medicare and Medicaid's (CMS) General Equivalence Mapping System (GEMS) to convert ICD-9 codes into ICD-10 codes, which were then referenced to the DoDI 6130.03 subsections. In cases where the ICD code assigned was not specifically listed in the DoDI 6130.03 reference table, the code was assigned to the most clinically meaningful subsection. Because physical examinations are valid for up to two years, ICD-9 codes are expected to persist through at least FY 2019.

Early Discharge: Separation from service within the first three years. Early discharge was further classified into three separate endpoints: adverse attrition, disability discharge, and existing prior to service (EPTS) discharge.

1. **Adverse Attrition:** A discharge within 3 years of service with an inter-service separation code (ISC) for one of the following reasons: early release; unqualified for active duty; failure to meet weight, behavioral and performance criteria; erroneous enlistment; or other early administrative separations, such as breach of contract. ISC code categories included as adverse attrition are listed in Table 1.



Adverse attrition rates may be underestimated for Reserve and National Guard due to incompleteness of separation data.

TABLE 1: INTER-SERVICE SEPARATION CODE CATEGORIES INCLUDED AS ADVERSE ATTRITION

ISC Code	Description	ISC Code	Description
1002-1008	Early Release	1094	Pregnancy
1016	Unqualified for Active Duty - Other	1095	Underage
1017	Failure to Meet Weight/Body Fat Standards	1096	Conscientious Objector
1022	Dependency or Hardship	1097	Parenthood
1060-1088	Failure to Meet Minimum Behavioral and Performance Criteria	1098	Breach of Contract
1090	Secretarial Authority	1099	Other Separation or Discharge
1091	Erroneous Enlistment or Induction	1101	Dropped from Strength for Desertion
1092	Sole Surviving Family Member	1102	Dropped from Strength for Imprisonment
1093	Marriage		

2. **Disability Discharge:** A discharge within 3 years of service due to a disability evaluation resulting in one of the following dispositions: temporary disability retirement list (TDRL), permanent disability retirement list (PDRL), or separation with severance pay (SWSP), regardless of ISC at separation. Date of the service member's most recent disability disposition was used to calculate time in service. Due to the rarity of disability discharge, disability discharges related to any condition were included. Therefore, the condition(s) that caused the disability discharge may not be related to the pre-accession disqualification or medical waiver. Previous AMSARA annual reports evaluated service members for disability discharge during the first year of service using the first Medical Evaluation Board (MEB)

evaluation for the service member; therefore, results may be different than previously reported.

3. **EPTS Discharge:** A discharge within 180 days of service due to a condition which was verified to have existed prior to service and which was not permanently aggravated by military service (DoDI 1332.18, AR 635-200 Chapter 5-10, MCO 1900.16 Chapter 2). Service members were categorized as EPTS upon presence of an EPTS record, regardless of the ISC code assigned at separation. Due to the rarity of EPTS discharge, EPTS discharges related to any condition were included, therefore, the condition(s) that caused the EPTS discharge may not be related to the pre-accession disqualification or medical waiver. Data received by AMSARA for EPTS discharges may be incomplete due to the lack of a common data collection system and the lack of a specific DMDC ISC code for EPTS discharge; therefore, all results should be interpreted with caution (see Table 2).

Medical Qualification Status: Qualification decision based on the presence or absence of a medical disqualification listed in DoDI 6130.03 found during the MEPS medical review.

The two categories for medical disqualification status among applicants are as follows:

1. **Medically Qualified:** An applicant in accordance to requirements listed in the DoDI 6130.03, Volume 1. Applicants with only non-medical DQs were considered medically qualified.

2. **Medically Disqualified:** An applicant considered medically disqualified per DoDI 6130.03, Volume 1 and were referenced by an International Classification of Diseases, 9th or 10th revision (ICD-9/10) code listed in their US Military Entrance Processing Command Integrated Resource System (USMIRS) application record.

Medically qualified status was also assigned to applicants with a DQ cleared by the Chief Medical Officer after the MEPS physical exam, in the absence of any other medical DQ.

Medical Waiver: Applicants who did not meet accession medical standards per DoDI 6130.03 may submit a formal request to a Service Medical Waiver Review Authority (SMWRA) for consideration of suitability for military service. For this report, waiver considerations and approvals were counted among all medically disqualified applicants who had ever applied or been approved for a waiver from any SMWRA.

Physical Examination: Medical assessment performed at MEPS where applicants are evaluated for their qualifications to enter the military. This assessment includes a physical examination and interview, medical history review, height/weight measurements, hearing and vision examinations, urine and blood screenings, muscle group and joint maneuvers, and other qualification tests, such as the Armed Forces Qualification Test. For this report, medical DQs not listed in the DoDI 6130.03 were excluded from analysis.

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. For all analyses, data sets were merged at the individual level by Social Security Number (SSN). AMSARA maintains strict confidentiality of all received data. 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. Analysis and research results were provided only at the aggregate level, with no possibility of individual identification.

United States Military Entrance Processing Command (USMEPCOM)

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 USMEPCOM, North Chicago, IL, contain several hundred demographic, medical, and administrative elements on recruit applicants for each applicable component (active duty, reserve, National Guard) of each service (Air Force, Army, Coast Guard, Marine Corps, and Navy). These data also include records on a relatively small number of officer recruit applicants and other non-applicants receiving periodic physical examinations. The MEPS records provide extensive medical examination information, including date of examination, screening test results, medical qualification status, and medical disqualifications observed by or reported to physicians (where relevant). 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.

USMEPCOM also provided data on EPTS discharges. USMEPCOM requests a copy of official paperwork on all EPTS discharges from the training sites and records information, including a general medical categorization of the reason(s) for discharge and a judgment regarding why the individual was not rejected for service based on the pre-existing condition (i.e., concealment, waiver, or unawareness). The primary limitation of our EPTS discharge data is completeness. Overall, the numbers of records were unstable and underreported for most IET sites. All analyses on EPTS discharges should be considered as underestimates (Table 2).

TABLE 2: EPTS DISCHARGE DATA RECEIVED BY AMSARA BY TRAINING SITE AND YEAR

Fiscal Year of EPTS Discharge						
Service	Training Site	2016	2017	2018	2019 ¹	Total
Army	Fort Benning	887	1,008	0	-	1,895
	Fort Jackson	0	1,568	3	-	1,571
	Fort Knox	0	0	0	-	0
	Fort Leonard Wood	565	670	0	-	1,235
	Fort Sill	182	226	0	-	408
Navy	Great Lakes	0	0	869	-	869
Marine Corps	Parris Island	494	520	3	-	1,017
	San Diego	1	225	0	-	226
Air Force	Lackland AFB	723	721	0	-	1,444
Total		2,862	4,942	879	-	8,683

¹ FY2019 data was not received by AMSARA as of the time of this report.

Defense Manpower Data Center (DMDC)

DMDC provides information on service members at military service entry (gain or accession), military service exit (loss or discharge), and deployment. For this report, AMSARA utilized the following accession variables: SSN for linking with other data; demographic characteristics such as age and education; and service information including date of entry and initially assigned Military Occupation Specialty (MOS). These data were combined with MEPS data to determine accession percentages among applicants by demographic and other variables. Loss data utilized for this report included SSN for linking with other datasets, loss date for computing length of service, and 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 early attrition for reasons other than EPTS discharge and disability discharge.

DMDC also provides data on deployments of military personnel in support of Overseas Contingency Operations (OCO). The variables of primary interest are SSN for linking with other datasets, deployment start and end dates, and country codes.

U.S Army Recruiting Command (USAREC), Navy Bureau of Medicine and Surgery (BUMED), Navy Recruiting Command (NRC), and Air Education and Training Command (AETC)

Accession medical waiver data are received from USAREC for the Army, AETC for the Air Force, BUMED for the Marine Corps, and NRC for the Navy. Data are collected on all applicants who were considered for an accession medical waiver, i.e., those who received a medical disqualification at MEPS and sought a medical waiver for that disqualification. Medical waiver determinations are service-specific. Although the specifics of these data vary by service, they generally contain SSN for linking with other data, and information about the waiver consideration including the dates, the medical disqualification(s) for which an individual was seeking a waiver, and the final decision of the SMWRA.



U.S. Army Physical Disability Agency (USPDA), Secretary of the Navy Council of Review Boards (CORB) and Air Force Personnel Center (AFPC)

Data on disability discharge considerations are compiled separately for each service at the service specific disability agency. The U.S. Army Physical Disability Agency has provided data on all Army disability evaluations since 1995. The Secretary of the Navy CORB has provided data on all disability discharge evaluations for the Navy and Marine Corps since 2000. From 2007-2017, the Air Force Personnel Center (AFPC) provided data on all Air Force PEB evaluations, excluding re-evaluations while on the temporary disability retirement list (TDRL). Beginning in 2018, AMSARA began receiving all Air Force disability evaluations, including TDRL re-evaluations.

All disability agencies provide the following information: SSN for linking with other data, service and component, dates of evaluation and final disposition, and disposition (e.g. permanent disability retirement list, separation with or without benefits, TDRL, or return to duty as fit). For service members 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 Veterans Affairs Schedule for Rating Disabilities (VASRD). The conditions listed in the VASRD are less specific than the ICD-9/10. In some cases, the true disabling condition has no associated VASRD code, so the code most closely resembling the true condition is assigned. AMSARA therefore reports disabling conditions using broad body system categories based on the VASRD (Table 3).

TABLE 3: DISABILITY CATEGORIES BY VASRD CODE

VASRD code	Body System Category
5000-5399	Musculoskeletal
6000-6099	Eyes and Vision
6200-6299, except 6275 and 6276	Ears and Hearing
6275-6276	Other Sensory
6300-6354, except 6313-6315	Infectious Disease and Immune Disorders
6313-6315, 7900-7999	Endocrine and Nutritional Deficiencies
6502-6899	Respiratory
7000-7199	Cardiovascular
7200-7399	Digestive
7500-7599	Genitourinary
7610-7699	Gynecological and Disorders of the Breast
7700-7799	Hemic/Lymphatic
7800-7899	Dermatologic
8000-8999	Neurological
9201-9599	Psychiatric
9900-9999	Dental and Oral

Applicants and Accessions | ONE

Section 1 describes demographic, medical and service-related characteristics for all FY 2016-2019 applicants and accessions for enlisted service to the Army, Navy, Marine Corps, or Air Force.

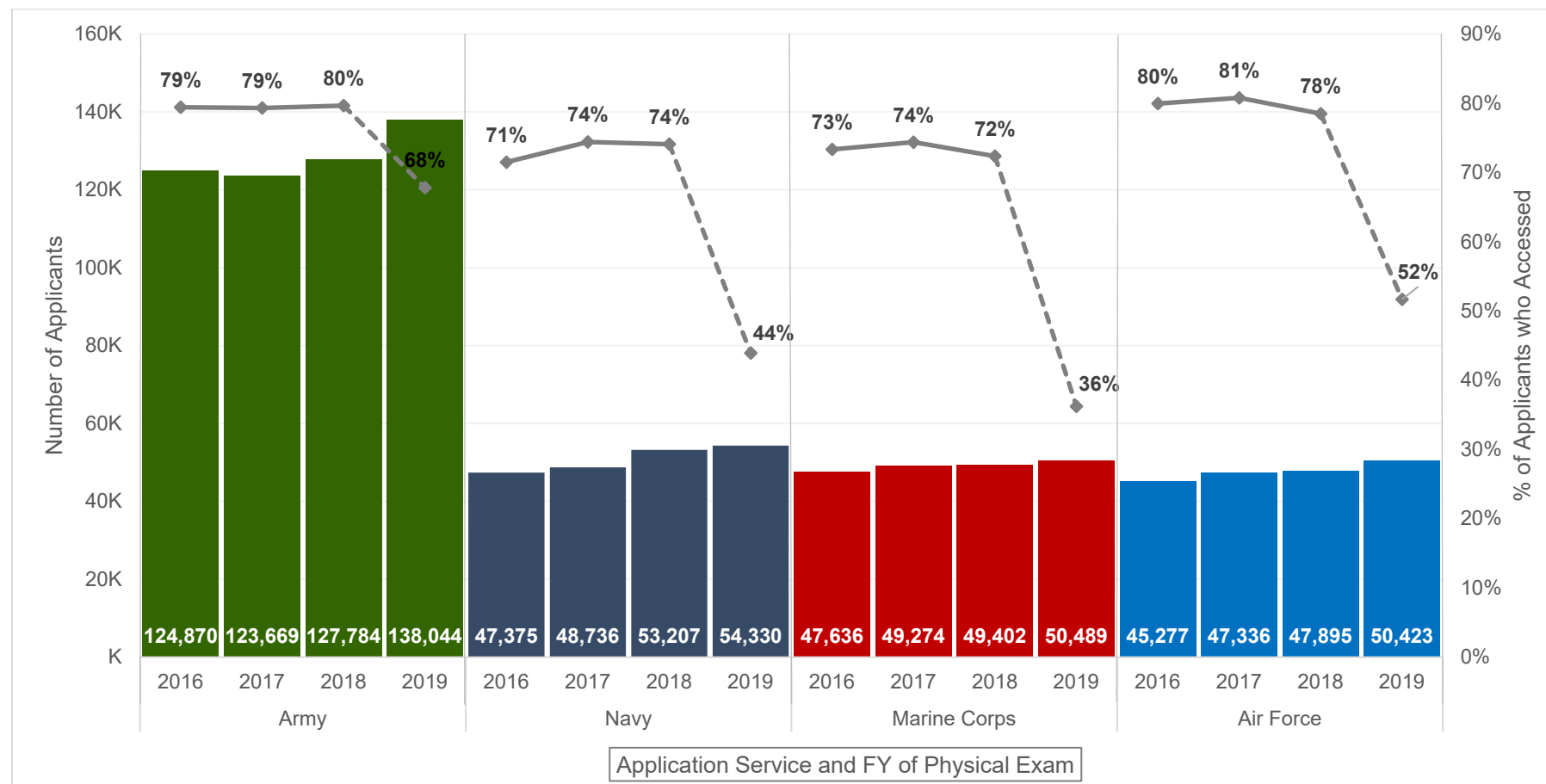
1: Surveillance Population

Figure 1 illustrates the surveillance population by service and MEPS physical exam year. Over the four-year period, approximately one million individuals received a MEPS medical exam. Approximately 4% of these individuals applied to more than one service; these individuals were counted for all services he or she sought entry, resulting in a total surveillance population of approximately 1.1 million applications.

In all services, the total number of applicants increased over the four-year period. The rate of accession varied by service and ranged from approximately 74% among Navy and Marine Corps applicants to 80% among Army and Air Force applicants. Approximately 95% of enlisted service members accessed within one year of application. However, since physical exam results at MEPS are valid for up to two years, the accession rate among FY 2018 and, particularly, FY 2019 applicants may be considered underestimates.



FIGURE 1: DESCRIPTION OF THE SURVEILLANCE POPULATION BY SERVICE AND FISCAL YEAR OF APPLICATION: FY 2016-2019¹



¹ Since MEPS physical exams are valid for up to two years, accession percentages among FY2018 and 2019 applicants may be underestimated due to insufficient follow up time. However, approximately 95% of enlisted service members accessed within 1 year of application.

2: Demographic Characteristics and Medical Disqualification Status among Applicants and Accessions

Tables 4A-D describe the demographic characteristics for all applicants seeking entry into enlisted military service during FY 2016-2019 and proportion of those applicants who accessed, by service. Temporal trends by year of the applicant's physical exam are presented in order to detect whether changes in medical standards disproportionately affect accession rates among specific subpopulations.

Tables 4A-D Key Findings

- Across all services and FYs, the majority of applicants were male (range: 72% Air Force to 90% Marine Corps), white (range: 60% Navy to 83% Marine Corps), and between the ages of 17-20 years old (range: 60% Air Force to 82% Marine Corps).
 - The distribution for gender, race, and age of applicants for all services remained relatively stable, with no more than a 3-percentage point difference over the four-year period.
 - Although the percentage point difference over the time period was small, a slight upward trend was seen in the percentage of applicants and accessions who were female (Army, Marine Corps, Air Force) and older than 20 years (Navy, Marine Corps, Air Force).
 - When comparing the distribution between applicants and accessions, there was a 3-percentage point or less difference in the distribution within all gender, race, and age categories for all services and FYs.
- Over the 4-year period, there was an upward trend for all services of individuals applying while still in high school.
 - The increase of younger applicants may be explained by modernization of recruitment outreach to attract applicants through social media, virtual events, and metropolitan areas.²
 - There were large differences between the proportion of applicants and accessions who had not received a high school diploma for FY 2019 Navy and Marine Corps applicants. This difference may be partially accounted for by the Delayed Entry Program, whereby individuals may apply for military service while still in high school and then access after graduation.
- The proportion of medically qualified (85-86%) and medically disqualified (14-15%) applicants remained stable over the four-year period.
 - Although specific DoDI 6130.03 medical accession standards were updated during the time period, these changes did not appear to change the proportion of medically disqualified applicants.

ARMY

TABLE 4A: DEMOGRAPHIC CHARACTERISTICS AND MEDICAL QUALIFICATION STATUS AMONG APPLICANTS AND ACCESSIONS FOR ENLISTED SERVICE, BY FISCAL YEAR OF APPLICATION: ARMY

	2016		2017		2018 ¹		2019 ¹	
	Applicants	Accessions	Applicants	Accessions	Applicants	Accessions	Applicants	Accessions
	%	%	%	%	%	%	%	%
Sex								
Male	78.2	79.0	78.9	79.5	77.8	78.4	76.0	76.9
Female	21.8	21.0	21.1	20.5	22.2	21.6	24.0	23.1
Age Group at MEPS								
17-20	62.2	64.8	63.1	65.5	61.6	63.9	61.8	64.3
21-25	25.9	25.2	25.8	24.8	25.8	25.4	25.0	24.5
>25	11.9	10.0	11.2	9.8	12.6	10.7	13.2	11.3
Race								
White	68.8	70.3	72.2	72.6	71.3	72.3	70.4	71.0
Black	23.1	23.0	21.9	21.6	21.9	21.7	23.4	23.0
Other	8.0	6.7	5.9	5.8	6.8	6.0	6.2	6.0
Education								
<HS Graduate	14.8	13.9	16.2	15.6	18.5	18.1	20.1	17.9
HS Diploma	74.0	76.1	74.2	75.1	70.5	71.7	69.4	72.4
Some College	3.9	3.8	3.6	3.6	3.8	3.8	3.6	3.6
≥Bachelor's	7.3	6.2	6.1	5.7	7.1	6.4	6.9	6.1
Medical Status								
Medically Qualified	86.0	91.9	85.7	91.4	85.8	92.1	86.2	93.9
Medically Disqualified	14.0	8.1	14.3	8.6	14.2	7.9	13.8	6.1
Total²	124,870	99,168	123,669	98,094	127,784	101,790	138,044	93,597

¹ Since MEPS physical exams are valid for up to two years, accession percentages among FY2018 and 2019 applicants may be underestimated due to insufficient follow up time. However, approximately 95% of enlisted service members accessed within 1 year of application.

² Service members with missing values for demographic variables included in the total.

NAVY

TABLE 4B: DEMOGRAPHIC CHARACTERISTICS AND MEDICAL QUALIFICATION STATUS AMONG APPLICANTS AND ACCESSIONS FOR ENLISTED SERVICE, BY FISCAL YEAR OF APPLICATION: NAVY

	2016		2017		2018 ¹		2019 ¹	
	Applicants	Accessions	Applicants	Accessions	Applicants	Accessions	Applicants	Accessions
	%	%	%	%	%	%	%	%
Sex								
Male	73.5	75.0	74.2	75.5	72.6	73.7	73.5	75.1
Female	26.5	25.0	25.8	24.5	27.4	26.3	26.5	24.9
Age Group at MEPS								
17-20	63.1	64.4	64.9	66.2	65.0	66.6	63.5	63.7
21-25	28.2	27.7	26.6	26.3	25.8	25.2	26.0	26.5
>25	8.7	8.0	8.4	7.5	9.3	8.2	10.4	9.8
Race								
White	63.3	63.2	64.2	64.1	60.1	60.0	62.2	61.2
Black	19.5	18.7	18.1	17.4	19.9	19.1	21.7	20.2
Other	17.2	18.1	17.7	18.5	20.0	20.9	16.1	18.7
Education								
<HS Graduate	7.9	4.4	10.3	7.6	15.0	12.8	16.6	7.3
HS Diploma	83.7	87.3	82.2	85.2	77.9	80.5	75.8	85.1
Some College	3.3	3.4	2.9	2.9	2.7	2.6	2.9	3.0
≥Bachelor's	5.1	4.9	4.6	4.3	4.4	4.1	4.7	4.6
Medical Status								
Medically Qualified	85.8	93.1	86.3	93.4	86.7	94.3	86.2	92.4
Medically Disqualified	14.2	6.9	13.7	6.6	13.3	5.7	13.8	7.6
Total²	47,375	33,870	48,736	36,265	53,207	39,422	54,330	23,867

¹ Since MEPS physical exams are valid for up to two years, accession percentages among FY2018 and 2019 applicants may be underestimated due to insufficient follow up time. However, approximately 95% of enlisted service members accessed within 1 year of application.

² Service members with missing values for demographic variables included in the total.

MARINE CORPS

TABLE 4C: DEMOGRAPHIC CHARACTERISTICS AND MEDICAL QUALIFICATION STATUS AMONG APPLICANTS AND ACCESSIONS FOR ENLISTED SERVICE, BY FISCAL YEAR OF APPLICATION: MARINE CORPS

	2016		2017		2018 ¹		2019 ¹	
	Applicants	Accessions	Applicants	Accessions	Applicants	Accessions	Applicants	Accessions
	%	%	%	%	%	%	%	%
Sex								
Male	90.1	91.1	89.6	90.7	89.3	90.6	88.8	91.7
Female	9.9	8.9	10.4	9.3	10.7	9.4	11.2	8.3
Age Group at MEPS								
17-20	81.3	82.3	81.6	82.5	81.5	82.3	81.9	79.0
21-25	16.8	16.1	16.3	15.7	16.3	15.7	15.7	18.6
>25	1.9	1.6	2.0	1.8	2.2	2.0	2.3	2.4
Race								
White	82.3	83.0	82.9	83.6	82.6	83.4	81.1	80.8
Black	10.7	10.0	9.8	9.2	10.1	9.5	11.0	11.1
Other	7.0	6.9	7.4	7.2	7.3	7.2	7.9	8.1
Education								
<HS Graduate	15.8	10.8	19.8	15.9	21.6	16.8	34.0	9.7
HS Diploma	81.0	86.0	77.3	81.1	75.4	80.1	63.7	87.3
Some College	2.2	2.2	2.0	2.0	2.1	2.2	1.6	2.1
≥Bachelor's	1.1	1.0	0.9	0.9	0.9	0.9	0.7	0.9
Medical Status								
Medically Qualified	86.7	92.9	86.8	92.6	86.4	91.9	86.5	93.2
Medically Disqualified	13.3	7.1	13.2	7.4	13.6	8.1	13.5	6.8
Total²	47,636	34,934	49,274	36,648	49,402	35,745	50,489	18,293

¹ Since MEPS physical exams are valid for up to two years, accession percentages among FY2018 and 2019 applicants may be underestimated due to insufficient follow up time. However, approximately 95% of enlisted service members accessed within 1 year of application.

² Service members with missing values for demographic variables included in the total.

AIR FORCE

TABLE 4D: DEMOGRAPHIC CHARACTERISTICS AND MEDICAL QUALIFICATION STATUS AMONG APPLICANTS AND ACCESSIONS FOR ENLISTED SERVICE, BY FISCAL YEAR OF APPLICATION: AIR FORCE

	2016		2017		2018 ¹		2019 ¹	
	Applicants	Accessions	Applicants	Accessions	Applicants	Accessions	Applicants	Accessions
	%	%	%	%	%	%	%	%
Sex								
Male	74.1	75.3	73.8	74.9	72.4	73.6	71.6	73.0
Female	25.9	24.7	26.2	25.1	27.6	26.4	28.4	27.0
Age Group at MEPS								
17-20	60.5	62.1	60.3	62.0	59.6	61.1	60.0	58.9
21-25	29.0	28.7	28.9	28.6	28.8	28.7	28.1	29.4
>25	10.6	9.2	10.8	9.4	11.7	10.2	11.9	11.7
Race								
White	70.7	71.4	71.8	72.4	71.6	72.2	69.0	70.5
Black	18.7	18.1	17.9	17.2	18.1	17.6	20.2	18.9
Other	10.5	10.5	10.3	10.3	10.3	10.2	10.8	10.6
Education								
<HS Graduate	11.9	11.7	13.0	13.0	14.9	14.6	17.7	15.2
HS Diploma	71.2	72.2	70.3	71.1	67.1	68.4	64.7	66.9
Some College	8.7	9.0	8.9	9.2	9.5	9.9	10.1	11.2
≥Bachelor's	8.2	7.1	7.8	6.7	8.5	7.1	7.5	6.7
Medical Status								
Medically Qualified	85.8	92.8	85.2	91.6	84.0	91.5	84.2	94.5
Medically Disqualified	14.2	7.2	14.8	8.4	16.0	8.5	15.8	5.5
Total²	45,277	36,202	47,336	38,238	47,895	37,595	50,423	26,062

¹ Since MEPS physical exams are valid for up to two years, accession percentages among FY2018 and 2019 applicants may be underestimated due to insufficient follow up time. However, approximately 95% of enlisted service members accessed within 1 year of application.

² Service members with missing values for demographic variables included in the total.

3: Medical Disqualifications

Tables 5A-D present the distribution of DoDI 6130.03 disqualification (DQ) categories among all FY 2016-2019 medically disqualified applicants, and the percentage of disqualified applicants who subsequently accessed. For each service, AMSARA chose five (5) specific DQ categories to assess temporal trends, based on either significant updates to the medical standard in 2018 and/or a notable change in the direction/strength of the trend line (**Figures 2A-D**). DQ categories were not mutually exclusive and applicants disqualified under more than one DoDI 6130.03 subsection were counted once within each relevant DoDI subsection.

Tables 5A-D and Figures 2A-D Key Findings

- Among all disqualified FY 2016-2019 applicants, approximately one out of every four were medically disqualified for eyes, vision, and/or a musculoskeletal condition (spine, neck, upper extremities, lower extremities, miscellaneous conditions of the extremities,). Approximately 15-21% of disqualified applicants were disqualified for a psychiatric disorder.
 - Within the DoDI 6130.03, there are several overlapping DQ codes between the eyes and vision subsections which, in part, could explain the similar high proportions for both subsections.
- Accession rates for medically disqualified applicants varied by DQ category and typically ranged from 20% to 54%.
 - Although the prevalence of hearing related DQs was rare (<3%) overall, applicants medically disqualified for hearing had the lowest rate of accession (range: 3% Marine Corps to 10% Air Force).
- The proportion of applicants disqualified under most DQ categories remained relatively stable over the 4-year period (results not shown), with a few notable exceptions:
 - The proportion disqualified under eyes appears to have increased over time among applicants to all services.
 - The proportion with hearing related DQs increased from <1% in 2016 and 2017, to 5% in 2019, which may be a result of the change to the hearing standards in the 2018 DoDI 6130.03.
 - The proportion with abdominal organs and gastrointestinal (GI) DQs doubled when comparing the 2016-2018 rates (1%) to the 2019 rate (3%). This doubling may be due to several changes to the abdominal/GI medical standards, or the presence of unspecific DQ codes which are listed in more than one subsection (e.g. code Z98.89:Post-procedural states is listed under 6 separate subsections) .
 - The proportions among 2019 disqualified applicants for both the endocrine and miscellaneous categories were approximately half the proportions in 2016 and 2017; these changes may be due medical standard changes.

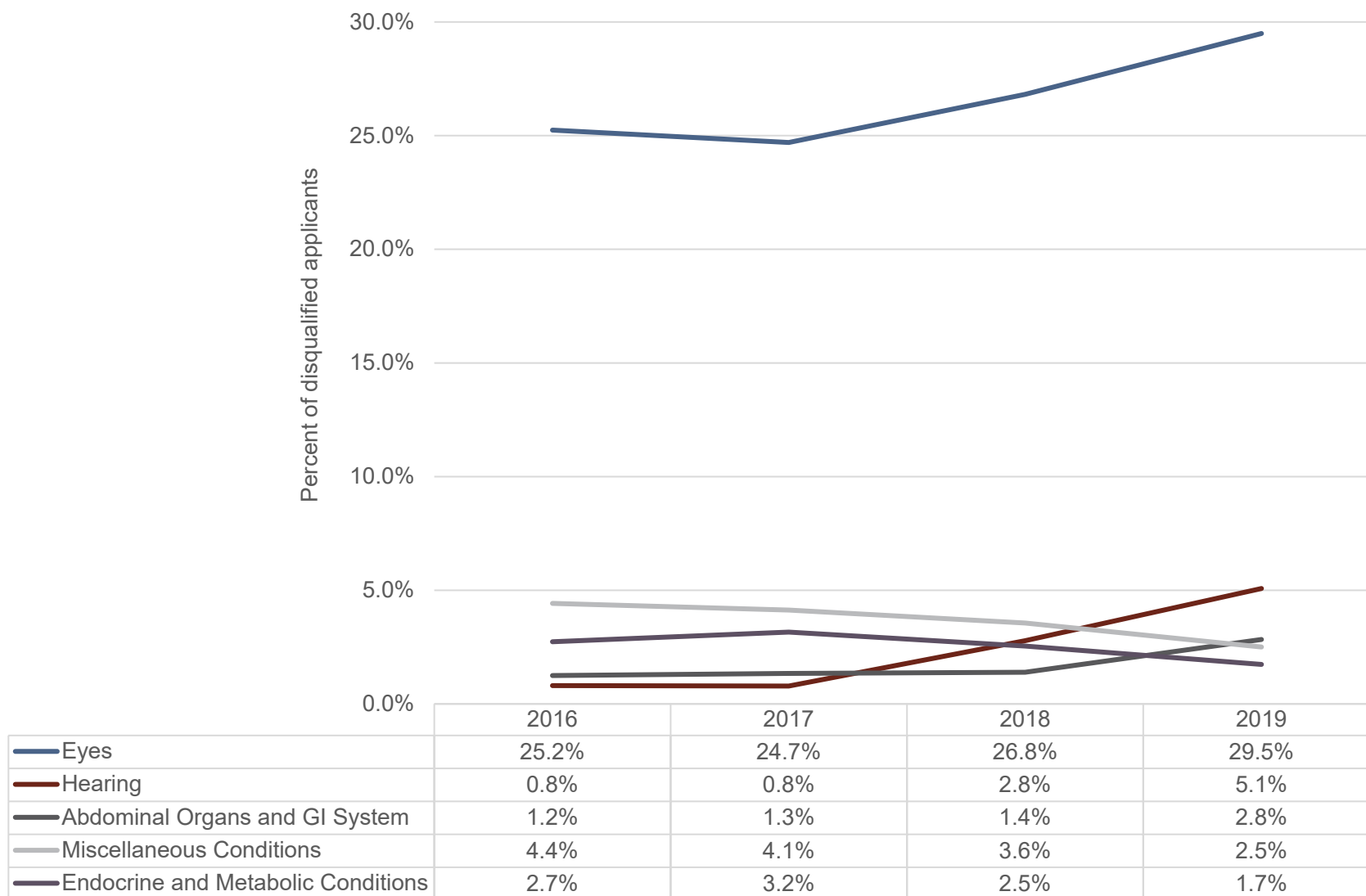
ARMY

TABLE 5A: DISTRIBUTION OF DISQUALIFICATIONS AND DISQUALIFICATION-SPECIFIC ACCESSION RATES AMONG FY 2016-2019 MEDICALLY DISQUALIFIED APPLICANTS: ARMY

Disqualification Category ¹	Disqualified Applicants		% who Accessed
	n	%	
2. Head	172	0.2	52.9
3. Eyes	19,251	26.6	53.3
4. Vision	15,939	22.0	54.6
5. Ears	1,578	2.2	38.7
6. Hearing	1,752	2.4	7.0
7. Nose, Sinuses, Mouth, and Larynx	334	0.5	39.2
8. Dental	1,237	1.7	22.4
9. Neck	104	0.1	48.1
10. Lungs, Chest Wall, Pleura, and Mediastinum	4,010	5.5	33.1
11. Heart	1,298	1.8	31.2
12. Abdominal Organs and Gastrointestinal System	1,248	1.7	34.2
13. Female Genital System	1,135	1.6	24.3
14. Male Genital System	1,890	2.6	50.9
15. Urinary System	1,734	2.4	36.4
16. Spine and Sacroiliac Joint Conditions	2,519	3.5	40.3
17. Upper Extremities	2,995	4.1	56.3
18. Lower Extremities	5,784	8.0	48.4
19. Miscellaneous Conditions of the Extremities	9,029	12.5	57.3
20. Vascular System	863	1.2	37.2
21. Skin and Cellular Tissue Conditions	5,019	6.9	39.1
22. Blood and Blood Forming Conditions	367	0.5	31.1
23. Systemic Conditions	3,972	5.5	43.8
24. Endocrine and Metabolic Conditions	1,828	2.5	38.3
25. Rheumatologic Conditions	822	1.1	36.1
26. Neurologic Conditions	2,268	3.1	36.6
27. Sleep Disorders	310	0.4	29.0
28. Learning, Psychiatric, and Behavioral Disorders	10,795	14.9	23.8
29. Tumors and Malignancies	216	0.3	35.2
30. Miscellaneous Conditions	2,624	3.6	34.3
Total Disqualified Applicants	72,304		

¹ Disqualification categories were based on subsections listed in the DoDI 6130.03. Disqualification categories are not mutually exclusive; applicants with multiple disqualifications may be counted in more than one subsection.

FIGURE 2A: TEMPORAL TREND OF THE PROPORTION OF FY 2016-2019 DISQUALIFIED APPLICANTS WITH SELECTED DISQUALIFICATIONS: ARMY



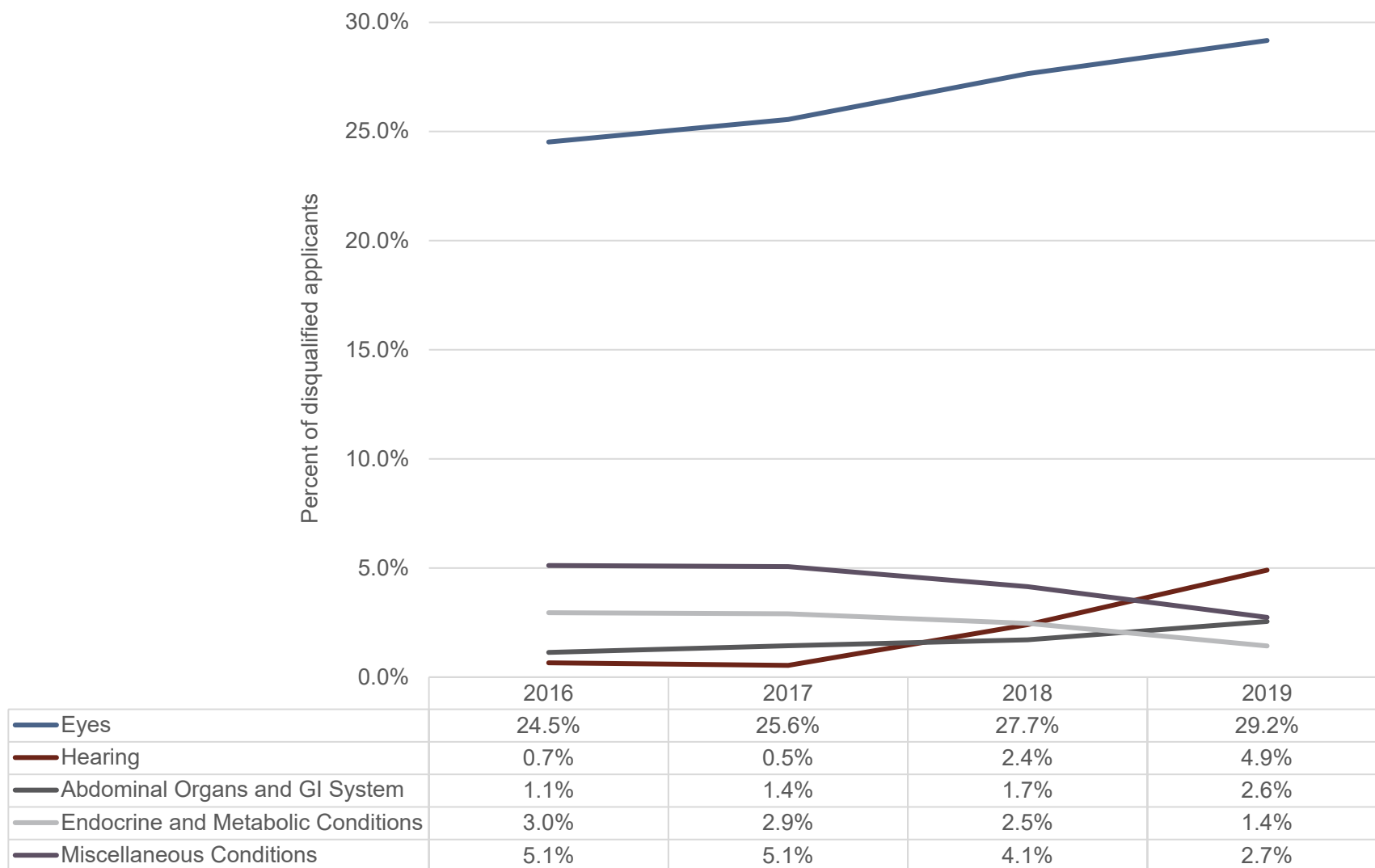
NAVY

TABLE 5B: DISTRIBUTION OF DISQUALIFICATIONS AND DISQUALIFICATION-SPECIFIC ACCESSION RATES AMONG FY 2016-2019 MEDICALLY DISQUALIFIED APPLICANTS: NAVY

Disqualification Category ¹	Disqualified Applicants		% who Accessed
	n	%	
2. Head	64	0.2	45.3
3. Eyes	7,486	26.8	42.2
4. Vision	6,256	22.4	43.1
5. Ears	578	2.1	29.4
6. Hearing	617	2.2	9.1
7. Nose, Sinuses, Mouth, and Larynx	138	0.5	22.5
8. Dental	379	1.4	20.8
9. Neck	42	0.2	23.8
10. Lungs, Chest Wall, Pleura, and Mediastinum	1,773	6.3	22.0
11. Heart	553	2.0	19.3
12. Abdominal Organs and Gastrointestinal System	484	1.7	22.1
13. Female Genital System	438	1.6	21.7
14. Male Genital System	703	2.5	40.1
15. Urinary System	739	2.6	28.6
16. Spine and Sacroiliac Joint Conditions	1,011	3.6	21.4
17. Upper Extremities	969	3.5	44.9
18. Lower Extremities	2,097	7.5	35.0
19. Miscellaneous Conditions of the Extremities	3,165	11.3	44.6
20. Vascular System	337	1.2	17.5
21. Skin and Cellular Tissue Conditions	2,005	7.2	22.6
22. Blood and Blood Forming Conditions	146	0.5	20.5
23. Systemic Conditions	1,641	5.9	35.8
24. Endocrine and Metabolic Conditions	673	2.4	32.4
25. Rheumatologic Conditions	292	1.0	18.2
26. Neurologic Conditions	910	3.3	21.9
27. Sleep Disorders	109	0.4	19.3
28. Learning, Psychiatric, and Behavioral Disorders	4,304	15.4	16.6
29. Tumors and Malignancies	107	0.4	27.1
30. Miscellaneous Conditions	1,179	4.2	29.3
Total Disqualified Applicants	27,929		

¹ Disqualification categories were based on subsections listed in the DoDI 6130.03. Disqualification categories are not mutually exclusive; applicants with multiple disqualifications may be counted in more than one subsection.

FIGURE 2B: TEMPORAL TREND OF THE PROPORTION OF FY 2016-2019 DISQUALIFIED APPLICANTS WITH SELECTED DISQUALIFICATIONS: NAVY



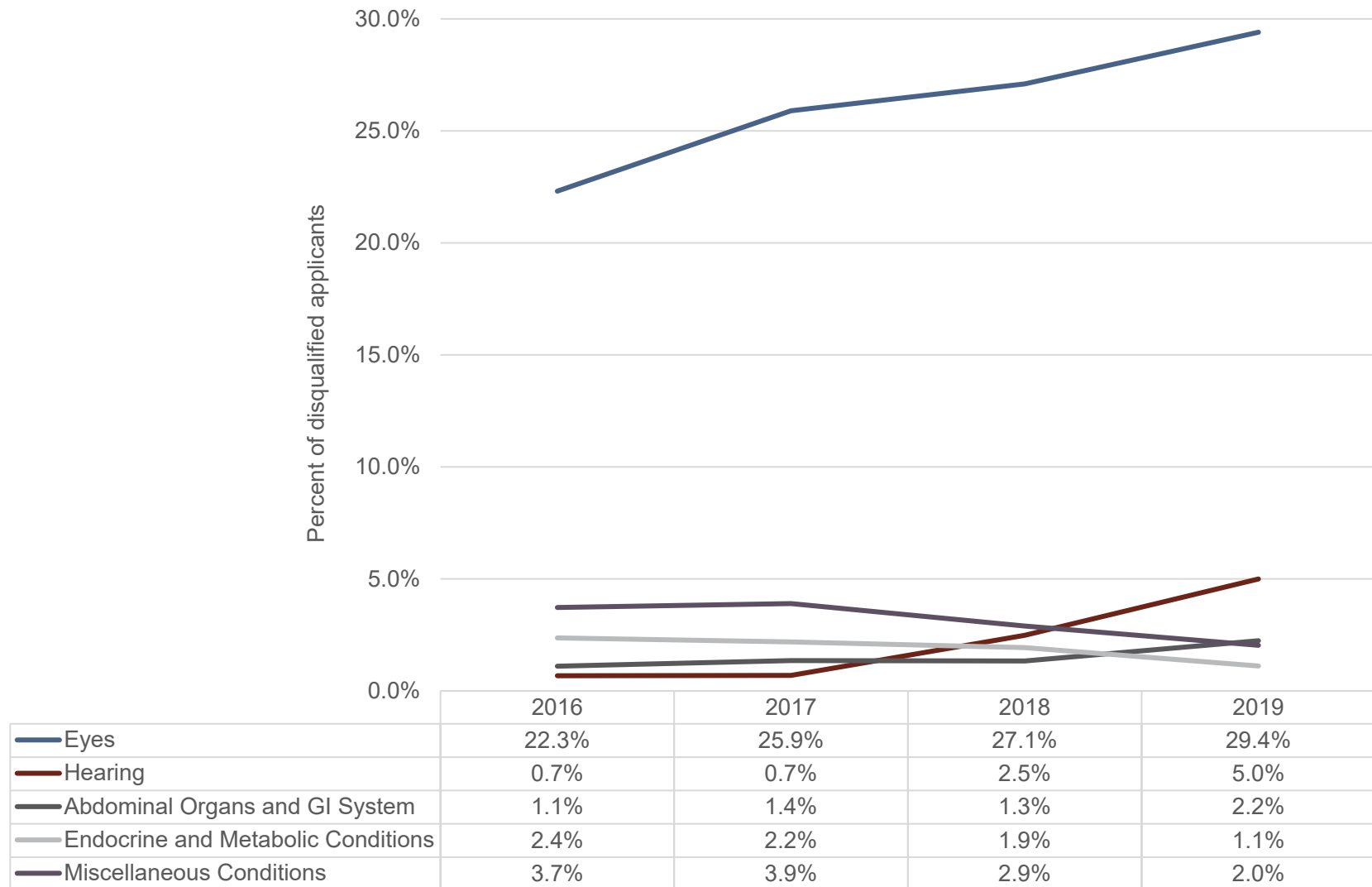
MARINE CORPS

TABLE 5C: DISTRIBUTION OF DISQUALIFICATIONS AND DISQUALIFICATION-SPECIFIC ACCESSION RATES AMONG FY 2016-2019 MEDICALLY DISQUALIFIED APPLICANTS: MARINE CORPS

Disqualification Category ¹	Disqualified Applicants		% who Accessed
	n	%	
2. Head	82	0.3	46.3
3. Eyes	6,922	26.3	39.6
4. Vision	6,003	22.8	39.7
5. Ears	523	2.0	32.9
6. Hearing	596	2.3	2.5
7. Nose, Sinuses, Mouth, and Larynx	136	0.5	37.5
8. Dental	292	1.1	20.9
9. Neck	43	0.2	39.5
10. Lungs, Chest Wall, Pleura, and Mediastinum	1,759	6.7	32.1
11. Heart	515	2.0	31.3
12. Abdominal Organs and Gastrointestinal System	401	1.5	29.2
13. Female Genital System	159	0.6	20.1
14. Male Genital System	814	3.1	50.9
15. Urinary System	627	2.4	32.4
16. Spine and Sacroiliac Joint Conditions	810	3.1	34.2
17. Upper Extremities	640	2.4	28.1
18. Lower Extremities	1,577	6.0	31.4
19. Miscellaneous Conditions of the Extremities	2,366	9.0	40.7
20. Vascular System	186	0.7	30.1
21. Skin and Cellular Tissue Conditions	1,827	6.9	32.2
22. Blood and Blood Forming Conditions	109	0.4	32.1
23. Systemic Conditions	1,235	4.7	31.3
24. Endocrine and Metabolic Conditions	498	1.9	38.8
25. Rheumatologic Conditions	273	1.0	24.9
26. Neurologic Conditions	919	3.5	29.6
27. Sleep Disorders	133	0.5	22.6
28. Learning, Psychiatric, and Behavioral Disorders	5,736	21.8	33.7
29. Tumors and Malignancies	90	0.3	23.3
30. Miscellaneous Conditions	823	3.1	30.1
Total Disqualified Applicants	26,368		

¹ Disqualification categories were based on subsections listed in the DoDI 6130.03. Disqualification categories are not mutually exclusive; applicants with multiple disqualifications may be counted in more than one subsection..

FIGURE 2C: TEMPORAL TREND OF THE PROPORTION OF FY 2016-2019 DISQUALIFIED APPLICANTS WITH SELECTED DISQUALIFICATIONS: MARINE CORPS



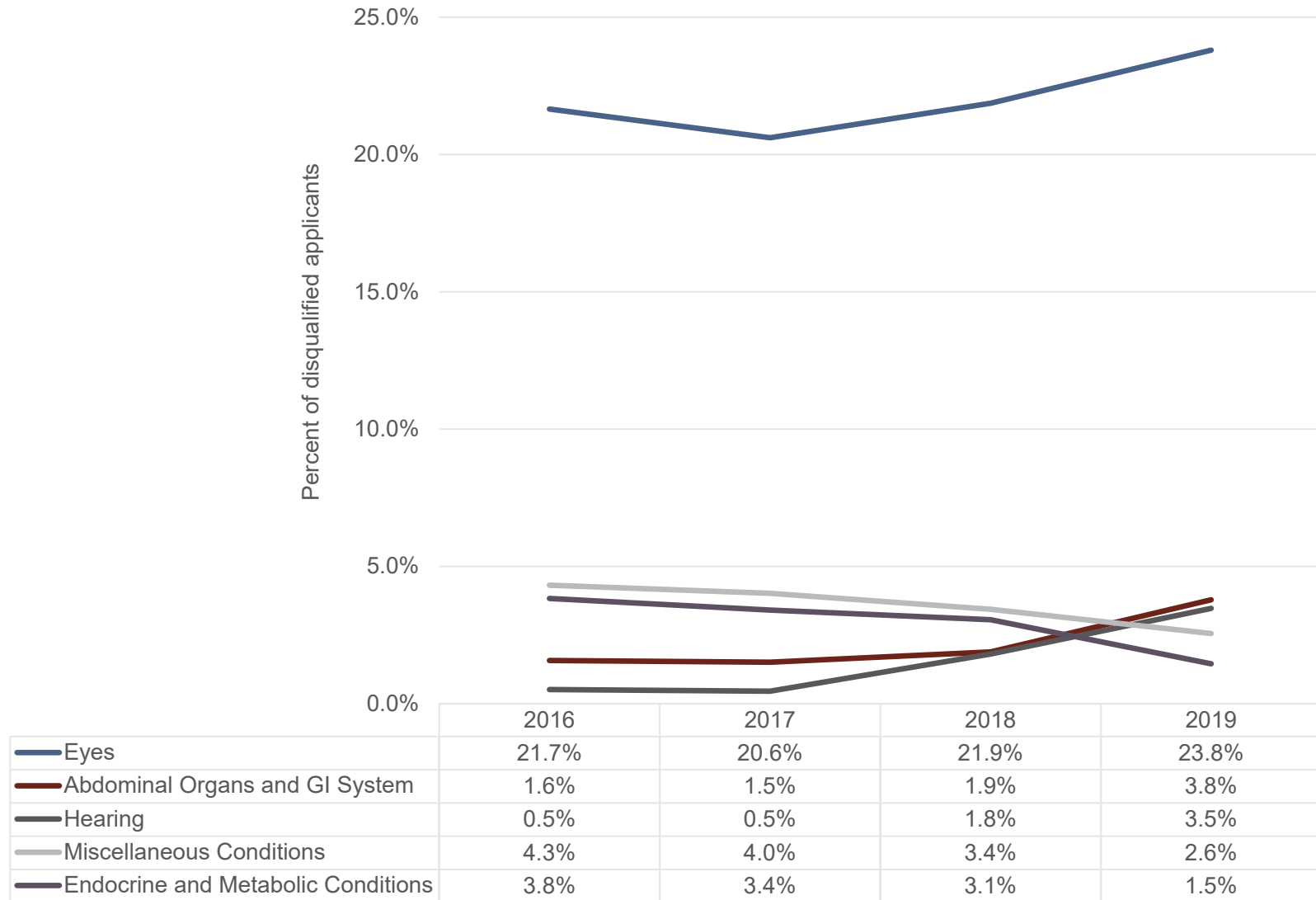
AIR FORCE

TABLE 5D: DISTRIBUTION OF DISQUALIFICATIONS AND DISQUALIFICATION-SPECIFIC ACCESSION RATES AMONG FY 2016-2019 MEDICALLY DISQUALIFIED APPLICANTS: AIR FORCE

Disqualification Category ¹	Disqualified Applicants		% who Accessed
	n	%	
2. Head	98	0.3	55.1
3. Eyes	6,414	22.0	40.9
4. Vision	4,977	17.1	41.1
5. Ears	698	2.4	31.7
6. Hearing	481	1.7	9.6
7. Nose, Sinuses, Mouth, and Larynx	214	0.7	28.5
8. Dental	309	1.1	26.2
9. Neck	56	0.2	46.4
10. Lungs, Chest Wall, Pleura, and Mediastinum	2,631	9.0	24.8
11. Heart	620	2.1	30.0
12. Abdominal Organs and Gastrointestinal System	654	2.2	26.5
13. Female Genital System	490	1.7	20.2
14. Male Genital System	729	2.5	44.0
15. Urinary System	1,012	3.5	32.2
16. Spine and Sacroiliac Joint Conditions	1,130	3.9	21.3
17. Upper Extremities	1,130	3.9	50.7
18. Lower Extremities	2,179	7.5	41.7
19. Miscellaneous Conditions of the Extremities	4,018	13.8	48.5
20. Vascular System	373	1.3	32.2
21. Skin and Cellular Tissue Conditions	2,269	7.8	24.5
22. Blood and Blood Forming Conditions	223	0.8	26.5
23. Systemic Conditions	1,832	6.3	29.6
24. Endocrine and Metabolic Conditions	836	2.9	40.0
25. Rheumatologic Conditions	360	1.2	27.8
26. Neurologic Conditions	1,260	4.3	33.8
27. Sleep Disorders	157	0.5	17.2
28. Learning, Psychiatric, and Behavioral Disorders	4,897	16.8	32.6
29. Tumors and Malignancies	126	0.4	40.5
30. Miscellaneous Conditions	1,027	3.5	34.9
Total Disqualified Applicants	29,090		

¹ Disqualification categories were based on subsections listed in the DoDI 6130.03. Disqualification categories are not mutually exclusive; applicants with multiple disqualifications may be counted in more than one subsection.

FIGURE 2D: TEMPORAL TREND OF THE PROPORTION OF FY 2016-2019 DISQUALIFIED APPLICANTS WITH SELECTED DISQUALIFICATIONS: AIR FORCE



Service Medical Waivers | TWO

Medically disqualified applicants must seek a medical waiver from a SMWRA in order to access into military service. Section 2 describes ***waiver considerations*** among FY 2016-2019 medically disqualified applicants for enlisted service to the Army, Navy, Marine Corps, or Air Force.

In previously published AMSARA annual reports, waiver data was not evaluated in conjunction with other data sources. In this report, a longitudinal approach was utilized and applicants were followed from their MEPS medical examination to waiver application and SMWRA approval decision. For this report, all applicants considered for an accession medical waiver must have been medically disqualified at MEPS between FY 2016-2019 and must have applied for a



medical waiver within two years of their MEPS examination. In cases where an applicant sought more than one waiver per SMWRA, waiver decisions and recommendations from the applicant's most recent waiver consideration was evaluated. Due to the longitudinal approach, disqualifications described in this section were those identified during the MEPS exam, while approval determinations were derived from the waiver record.

Findings should be interpreted with caution and any comparisons between results published in this report and previous AMSARA annual reports may be due to changes in disqualification coding structure and/or accession medical standards rather than actual number/rate of disqualifications among waiver considerations. Additionally, the longitudinal approach utilized for this report may impact the overall number of waiver considerations.

1: Overall Medical Waiver Considerations and Approval Rates

Table 6 presents the number of medical waivers sought by FY 2016-2019 medically disqualified applicants and the overall approval rate by SMWRA and year. **Figure 3** provides a year-over-year trend analysis of the waiver approval rate per SMWRA.

Table 6 and Figure 3 Key Findings

- The waiver approval rate varied by service and year.
 - Overall, the four-year waiver approval rate ranged from 56% (Navy) to 71% (Marine Corps).
 - Over the time period, the approval rates remained relatively stable for Air Force, while the Army approval rate appears to be trending downward.
 - For the Navy, the approval rate increased from nearly 50% from 2016-2018 to 77% in 2019. Conversely, the approval rate for the Marine Corps dropped 9 percentage points from around 73% in 2016-2018 to 64% in 2019.
 - The trends may have been influenced by a database system change in 2019 and/or 2019 Navy recruiting goals.



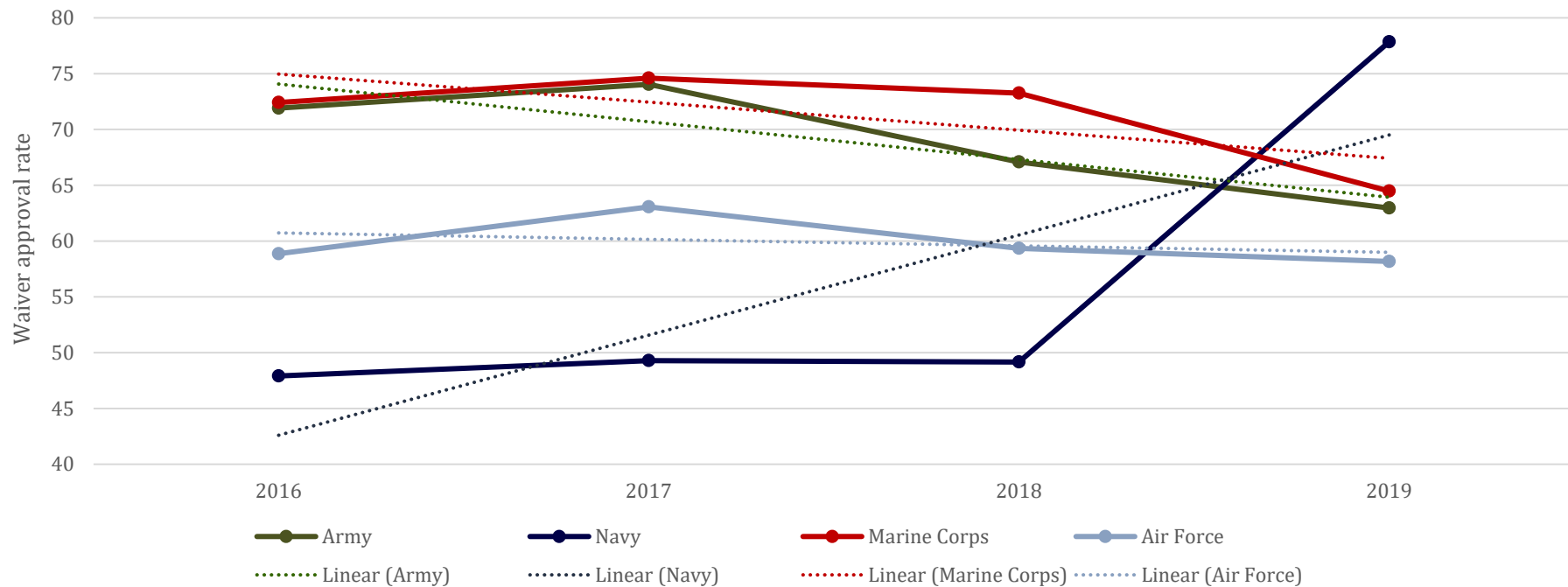
TABLE 6: NUMBER OF WAIVER CONSIDERATIONS AND OVERALL APPROVAL RATE OVER TIME, BY SMWRA

	Army		Navy		Marine Corps		Air Force	
Application FY	n	Approval Rate ¹	n	Approval Rate ¹	n	Approval Rate ¹	n	Approval Rate ¹
2016	8,646	71.9	4,356	47.9	3,745	72.4	3,943	58.9
2017	8,363	74.0	4,350	49.3	4,074	74.6	4,296	63.1
2018	6,759	67.1	5,144	49.2	4,532	73.3	4,516	59.3
2019 ²	8,382	63.0	4,645	77.8	3,947	64.5	3,189	58.2
Total Considerations	32,150	69.1	18,495	56.1	16,298	71.3	15,944	60.0

¹ Approval rates represent the proportion of approved waivers of the total waivers considered per service and year of MEPS physical exam.

² In FY 2019, AMSARA received an increased number of remedial waiver records for the Marine Corps which may lower approval rates.

FIGURE 3: TEMPORAL TREND OF WAIVER APPROVAL RATES BY SMWRA, FY 2016-2019



2: Medical Waiver Considerations and Approval Rates per Disqualification Category

Tables 7A-D present the number of waivers sought and waiver approval rates per disqualification category for each SMWRA. Disqualifications were identified during the MEPS physical exam and categories were based on subsections listed in the 2018 DoDI 6130.03. Temporal trends for waiver approval rates per SMWRA are presented for five (5) specific DQ categories chosen by AMSARA based on either a significant update to the medical standard in 2018 or a notable change in the trend direction/strength of the approval rate trend line (**Figures 4A-D**).

Tables 7A-D and Figures 4A-D Key Findings

- In alignment with the most common DQs at MEPS, the most frequently sought waivers fell under the eye, vision, musculoskeletal, and learning, behavioral and psychiatric disorders (psychiatric) categories.
- Medically disqualified Army applicants had the lowest waiver application rate, both overall (44%) and for 28 of the 29 DQ categories (range: 19-55%). Alternatively, medically disqualified Navy applicants had the highest waiver application rate both overall (66%) and for 21 DQ categories (range: 43-81%).
 - For all services, the lowest waiver application rate was among those disqualified under female genital system.
- Although alignment was seen between most common DQs and most common waiver applications, the waiver approval rates for these categories varied by service.
 - Army had the highest approval ratings for all musculoskeletal related DQs, including miscellaneous conditions of the extremities (86%), lower extremities (77%), upper extremities (85%), and spine and sacroiliac joint conditions (64%).
 - 55% (Army) to 80% (Navy) of applicants disqualified under eyes or vision sought a medical waiver, and most (70-80%) were approved.
 - The waiver approval rate for psychiatric DQs varied by SMWRA, ranging from 48% (Army) to 68% (Marine Corps).
- Of all DQ categories, hearing waivers had the lowest approval rate for the Army (5%), Marine Corps (8%) and Air Force (20%).
- Navy waiver approval rates for all five selected DQ categories were notably higher among FY 2019 applicants than in previous years. Conversely, Army waiver approval rates declined over the time period for four out of the five selected DQ categories.
- Waiver approval rates for miscellaneous conditions and endocrine/metabolic conditions generally declined over the time period for the Army, Marine Corps, and Air Force.

ARMY

TABLE 7A: MEDICAL WAIVER APPLICATION AND WAIVER APPROVAL RATES PER DISQUALIFICATION CATEGORY AMONG FY 2016-2019 MEDICALLY DISQUALIFIED APPLICANTS: ARMY

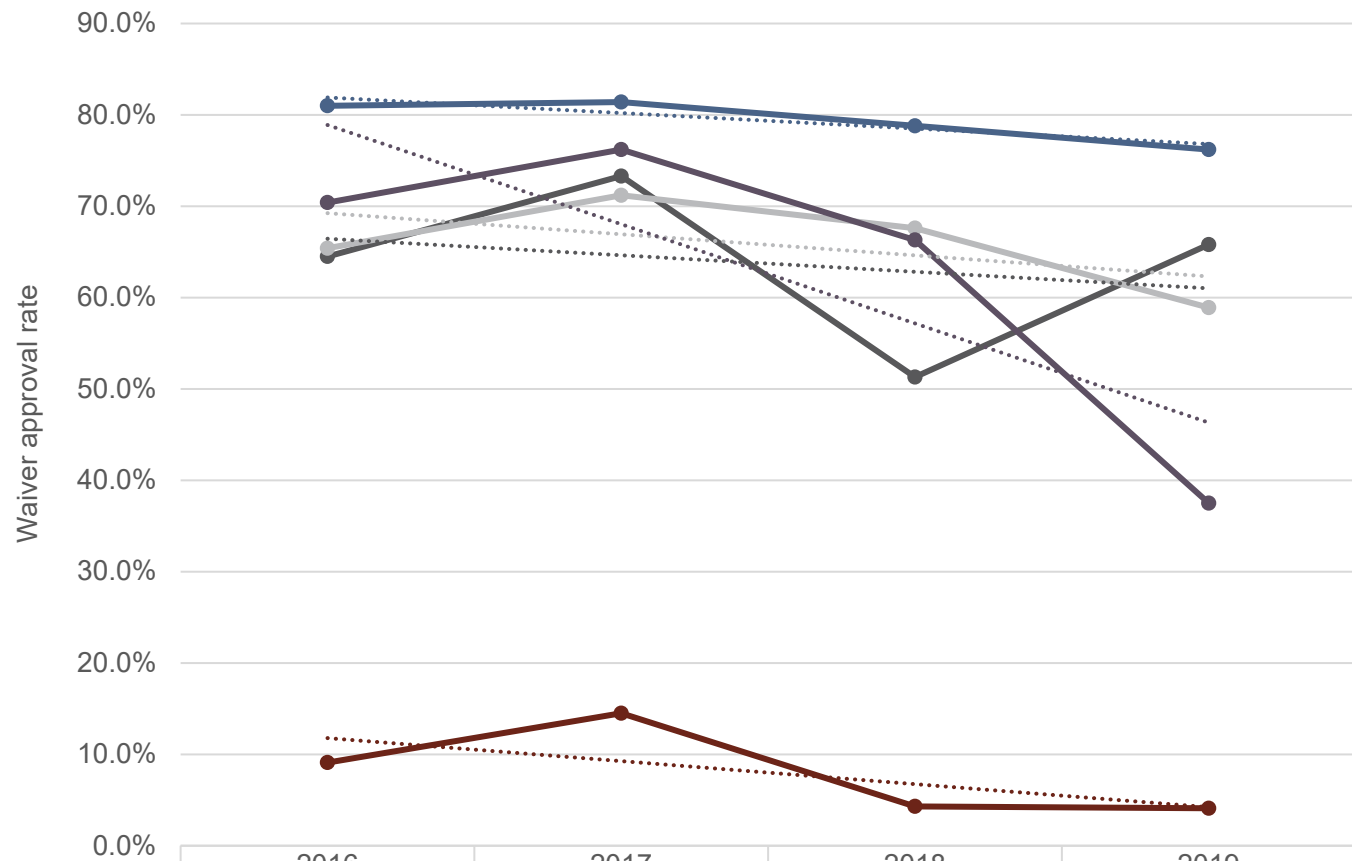
Disqualification Category ¹	Applied for Waiver n	% with DQ who sought a Waiver ²	Waiver Approval Rate ³
2. Head	86	50.0	81.4
3. Eyes	10,491	54.5	79.2
4. Vision	8,748	54.9	79.9
5. Ears	746	47.3	64.3
6. Hearing	776	44.3	5.5
7. Nose, Sinuses, Mouth, and Larynx	140	41.9	66.4
8. Dental	369	29.8	58.8
9. Neck	52	50.0	71.2
10. Lungs, Chest Wall, Pleura, and Mediastinum	1,668	41.6	54.0
11. Heart	526	40.5	49.8
12. Abdominal Organs and Gastrointestinal System	506	40.5	64.8
13. Female Genital System	215	18.9	73.5
14. Male Genital System	902	47.7	79.8
15. Urinary System	731	42.2	63.9
16. Spine and Sacroiliac Joint Conditions	1,183	47.0	64.0
17. Upper Extremities	1,437	48.0	85.3
18. Lower Extremities	2,640	45.6	76.7
19. Miscellaneous Conditions of the Extremities	4,414	48.9	85.9
20. Vascular System	375	43.5	64.0
21. Skin and Cellular Tissue Conditions	2,130	42.4	71.9
22. Blood and Blood Forming Conditions	154	42.0	55.2
23. Systemic Conditions	1,557	39.2	77.2
24. Endocrine and Metabolic Conditions	764	41.8	65.6
25. Rheumatologic Conditions	366	44.5	54.6
26. Neurologic Conditions	833	36.7	64.3
27. Sleep Disorders	97	31.3	44.3
28. Learning, Psychiatric, and Behavioral Disorders	3,456	32.0	48.1
29. Tumors and Malignancies	96	44.4	58.3
30. Miscellaneous Conditions	988	37.7	66.7
Total Applied for Waiver	32,150 (44.4%)		
Total Disqualified Applicants	72,304		

¹ Disqualification categories were based on subsections listed in the DoDI 6130.03. Categories are not mutually exclusive, applicants with multiple disqualifications under different DQ categories were counted more than once.

² Percentages represent the proportion of applicants who sought a medical waiver out of the total disqualified applicants per DQ category.

³ Approval rates represent the proportion of approved waivers of the total waivers considered per DQ category.

FIGURE 4A: TEMPORAL TREND OF WAIVER APPROVAL RATES FOR SELECTED DISQUALIFICATIONS AMONG FY 2016-2019 APPLICANTS: ARMY



	2016	2017	2018	2019
—●— Eyes	81.0%	81.4%	78.8%	76.2%
—●— Hearing	9.1%	14.5%	4.3%	4.1%
—●— Abdominal Organs and GI System	64.5%	73.3%	51.3%	65.8%
—●— Miscellaneous Conditions	65.4%	71.2%	67.6%	58.9%
—●— Endocrine and Metabolic Conditions	70.4%	76.2%	66.3%	37.5%

NAVY

TABLE 7B: MEDICAL WAIVER APPLICATION AND WAIVER APPROVAL RATES PER DISQUALIFICATION CATEGORY AMONG FY 2016-2019 MEDICALLY DISQUALIFIED APPLICANTS: NAVY

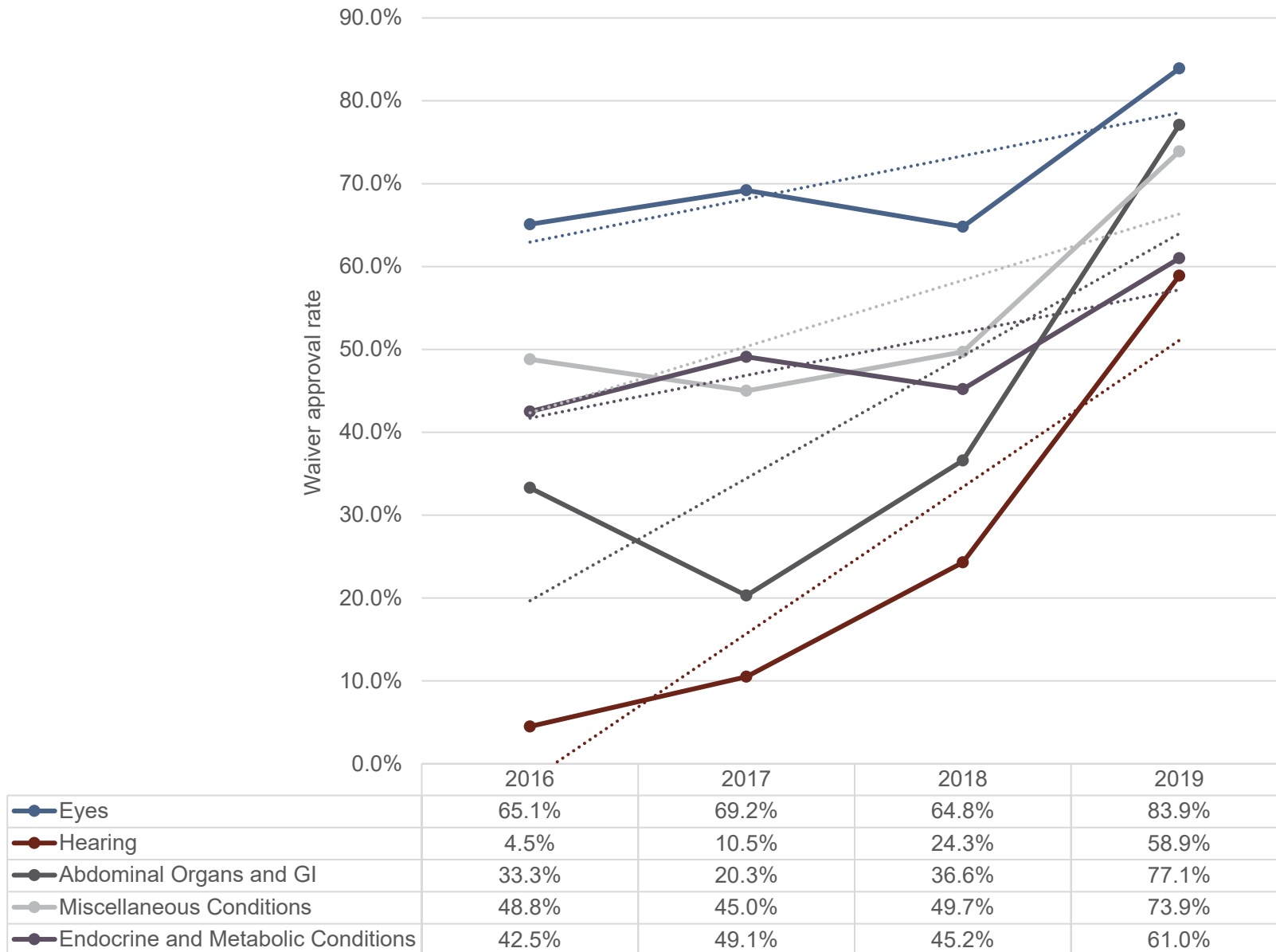
Disqualification Category¹	Applied for Waiver n	% with DQ who sought a Waiver²	Waiver Approval Rate³
2. Head	38	59.4	60.5
3. Eyes	5,925	79.1	71.0
4. Vision	5,035	80.5	73.3
5. Ears	341	59.0	56.0
6. Hearing	384	62.2	43.8
7. Nose, Sinuses, Mouth, and Larynx	80	58.0	46.3
8. Dental	185	48.8	48.6
9. Neck	27	64.3	33.3
10. Lungs, Chest Wall, Pleura, and Mediastinum	1,209	68.2	42.3
11. Heart	392	70.9	38.5
12. Abdominal Organs and Gastrointestinal System	291	60.1	47.4
13. Female Genital System	187	42.7	61.5
14. Male Genital System	459	65.3	57.1
15. Urinary System	489	66.2	46.6
16. Spine and Sacroiliac Joint Conditions	710	70.2	40.7
17. Upper Extremities	594	61.3	69.4
18. Lower Extremities	1,328	63.3	57.7
19. Miscellaneous Conditions of the Extremities	2,063	65.2	70.9
20. Vascular System	227	67.4	33.9
21. Skin and Cellular Tissue Conditions	1,270	63.3	43.3
22. Blood and Blood Forming Conditions	94	64.4	38.3
23. Systemic Conditions	959	58.4	61.9
24. Endocrine and Metabolic Conditions	413	61.4	47.7
25. Rheumatologic Conditions	193	66.1	29.0
26. Neurologic Conditions	532	58.5	43.8
27. Sleep Disorders	68	62.4	32.4
28. Learning, Psychiatric, and Behavioral Disorders	2,544	59.1	37.2
29. Tumors and Malignancies	65	60.7	53.8
30. Miscellaneous Conditions	664	56.3	51.4
Total Applied for Waiver	18,495 (66.2%)		
Total Disqualified Applicants	27,929		

¹ Disqualification categories were based on subsections listed in the DoDI 6130.03. Categories are not mutually exclusive, applicants with multiple disqualifications across different DQ categories were counted more than once.

² Percentages represent the proportion of applicants who sought a medical waiver out of the total disqualified applicants per DQ category.

³ Approval rates represent the proportion of approved waivers of the total waivers considered per DQ category.

FIGURE 4B: TEMPORAL TREND OF WAIVER APPROVAL RATES FOR SELECTED DISQUALIFICATIONS AMONG FY 2016-2019 APPLICANTS: NAVY



MARINE CORPS

TABLE 7C: MEDICAL WAIVER APPLICATION AND WAIVER APPROVAL RATES PER DISQUALIFICATION CATEGORY AMONG FY 2016-2019 MEDICALLY DISQUALIFIED APPLICANTS: MARINE CORPS

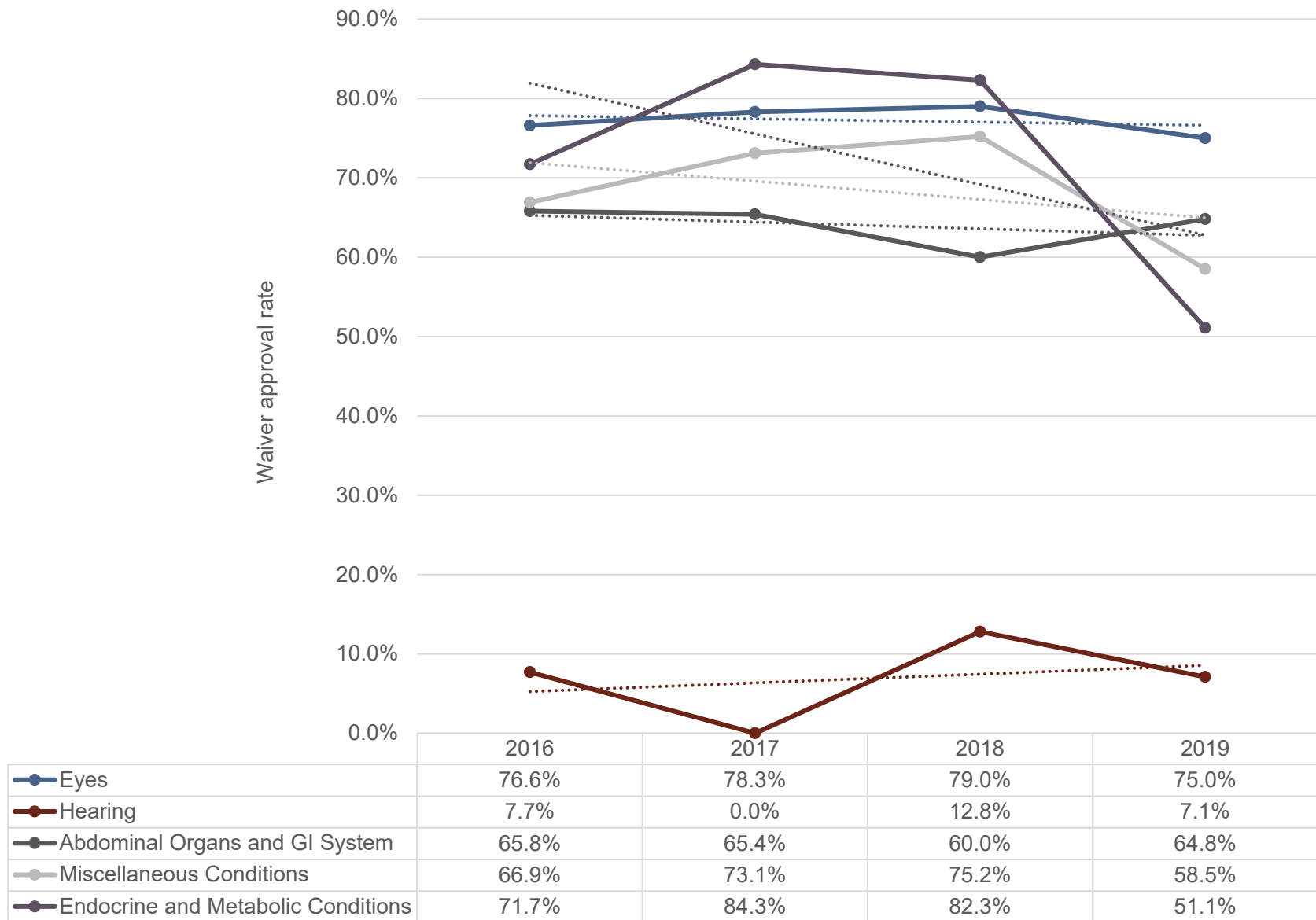
Disqualification Category¹	Applied for Waiver n	% with DQ who sought a Waiver²	Waiver Approval Rate³
2. Head	59	72.0	81.4
3. Eyes	5,006	72.3	77.2
4. Vision	4,373	72.8	78.0
5. Ears	323	61.8	71.8
6. Hearing	276	46.3	8.3
7. Nose, Sinuses, Mouth, and Larynx	86	63.2	73.3
8. Dental	117	40.1	59.8
9. Neck	27	62.8	70.4
10. Lungs, Chest Wall, Pleura, and Mediastinum	1,100	62.5	66.1
11. Heart	297	57.7	66.3
12. Abdominal Organs and Gastrointestinal System	241	60.1	63.9
13. Female Genital System	63	39.6	77.8
14. Male Genital System	578	71.0	86.0
15. Urinary System	378	60.3	71.2
16. Spine and Sacroiliac Joint Conditions	542	66.9	63.8
17. Upper Extremities	409	63.9	52.6
18. Lower Extremities	993	63.0	64.4
19. Miscellaneous Conditions of the Extremities	1,717	72.6	70.3
20. Vascular System	116	62.4	58.6
21. Skin and Cellular Tissue Conditions	1,034	56.6	71.7
22. Blood and Blood Forming Conditions	60	55.0	66.7
23. Systemic Conditions	703	56.9	70.7
24. Endocrine and Metabolic Conditions	322	64.7	75.5
25. Rheumatologic Conditions	144	52.7	52.8
26. Neurologic Conditions	504	54.8	68.3
27. Sleep Disorders	57	42.9	64.9
28. Learning, Psychiatric, and Behavioral Disorders	2,904	50.6	68.0
29. Tumors and Malignancies	46	51.1	63.0
30. Miscellaneous Conditions	425	51.6	69.6
Total Applied for Waiver	16,298 (61.8%)		
Total Disqualified Applicants	26,368		

¹ Disqualification categories were based on subsections listed in the DoDI 6130.03. Categories are not mutually exclusive, applicants with multiple disqualifications across different DQ categories were counted more than once.

² Percentages represent the proportion of applicants who sought a medical waiver out of the total disqualified applicants per DQ category.

³ Approval rates represent the proportion of approved waivers of the total waivers considered per DQ category.

FIGURE 4C: TEMPORAL TREND OF WAIVER APPROVAL RATES FOR SELECTED DISQUALIFICATIONS AMONG FY 2016-2019 APPLICANTS: MARINE CORPS



AIR FORCE

TABLE 7D: MEDICAL WAIVER APPLICATION AND WAIVER APPROVAL RATES PER DISQUALIFICATION CATEGORY AMONG FY 2016-2019 MEDICALLY DISQUALIFIED APPLICANTS: AIR FORCE

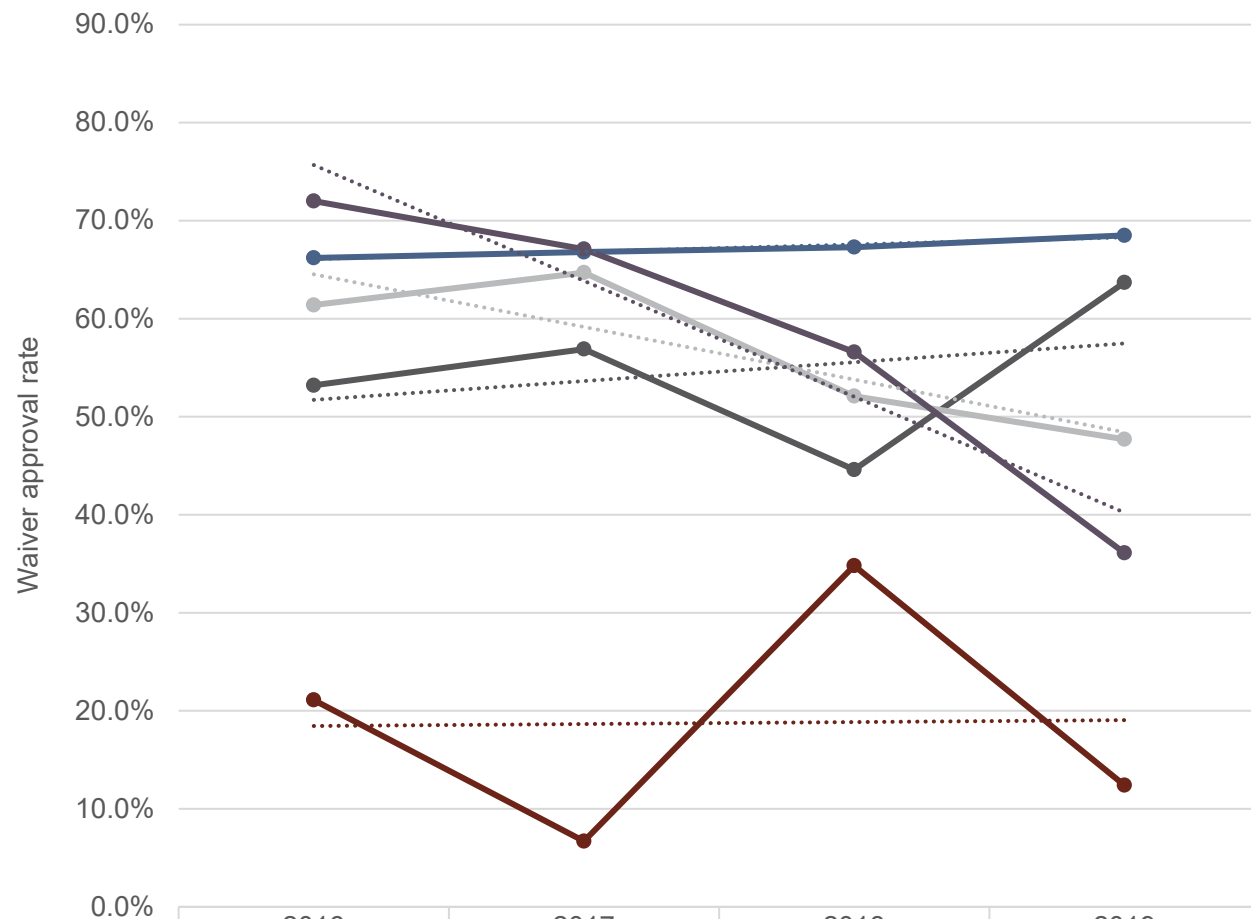
Disqualification Category ¹	Applied for Waiver n	% with DQ who sought a Waiver ²	Waiver Approval Rate ³
2. Head	56	57.1	89.3
3. Eyes	3,928	61.2	67.2
4. Vision	3,060	61.5	67.9
5. Ears	370	53.0	62.2
6. Hearing	197	41.0	20.3
7. Nose, Sinuses, Mouth, and Larynx	107	50.0	43.9
8. Dental	152	49.2	45.4
9. Neck	34	60.7	61.8
10. Lungs, Chest Wall, Pleura, and Mediastinum	1,341	51.0	40.6
11. Heart	320	51.6	51.9
12. Abdominal Organs and Gastrointestinal System	327	50.0	55.7
13. Female Genital System	156	31.8	57.1
14. Male Genital System	445	61.0	67.4
15. Urinary System	560	55.3	56.8
16. Spine and Sacroiliac Joint Conditions	609	53.9	35.3
17. Upper Extremities	633	56.0	78.5
18. Lower Extremities	1,202	55.2	65.4
19. Miscellaneous Conditions of the Extremities	2,269	56.5	77.3
20. Vascular System	178	47.7	52.8
21. Skin and Cellular Tissue Conditions	1,158	51.0	41.0
22. Blood and Blood Forming Conditions	131	58.7	39.7
23. Systemic Conditions	830	45.3	55.4
24. Endocrine and Metabolic Conditions	451	53.9	63.2
25. Rheumatologic Conditions	191	53.1	43.5
26. Neurologic Conditions	628	49.8	56.8
27. Sleep Disorders	68	43.3	41.2
28. Learning, Psychiatric, and Behavioral Disorders	2,718	55.5	56.4
29. Tumors and Malignancies	62	49.2	58.1
30. Miscellaneous Conditions	519	50.5	58.2
Total Applied for Waiver	15,944 (54.8%)		
Total Disqualified Applicants	29,090		

¹ Disqualification categories were based on subsections listed in the DoDI 6130.03. Categories are not mutually exclusive, applicants with multiple disqualifications across different DQ categories were counted more than once.

² Percentages represent the proportion of applicants who sought a medical waiver out of the total disqualified applicants per DQ category.

³ Approval rates represent the proportion of approved waivers of the total waivers considered per DQ category.

FIGURE 4D: TEMPORAL TREND OF WAIVER APPROVAL RATES FOR SELECTED DISQUALIFICATIONS AMONG FY 2016-2019 APPLICANTS: AIR FORCE



	2016	2017	2018	2019
—●— Eyes	66.2%	66.8%	67.3%	68.5%
—●— Hearing	21.1%	6.7%	34.8%	12.4%
—●— Abdominal Organs and GI System	53.2%	56.9%	44.6%	63.7%
—●— Miscellaneous Conditions	61.4%	64.7%	52.1%	47.7%
—●— Endocrine and Metabolic Conditions	72.0%	67.1%	56.6%	36.1%

Early Discharge | THREE

Section 3 describes *early discharge* among FY 2016-2019 applicants for enlisted service who accessed into the Army, Navy, Marine Corps, or Air Force, stratified by discharge type (i.e. adverse attrition, disability discharge, EPTS discharge) and time period to discharge (i.e. 180 days, 1 year, 2-3 years). Refer to 'Key Terms & Definitions' page in the **Introduction** section for definitions of each early discharge type.



Since this report utilized a longitudinal approach, following service members from application to early discharge, the eligible population for this section were all service members with a MEPS physical examination between FY 2016-2019 who accessed and were discharged within three years of their first accession date. Comparisons to attrition and disability rates in previously published AMSARA annual reports should be made with caution since AMSARA lengthened the follow-up period from one year to three years, and

updated the definition of adverse attrition. In previous annual reports, AMSARA assessed adverse attrition based on the service member's first separation record only. Due to the transactional nature of the separations dataset, AMSARA updated the adverse attrition definition to exclude those with a subsequent accession record after their last separation record, under the assumption the service member was still in service. This updated definition may lower the rates of adverse attrition both overall and within each time period.

Unadjusted and adjusted relative risks were calculated to compare the likelihood of early discharge among medically disqualified/waived accessions for each of the disqualification categories compared to medically qualified accessions (unadjusted results not shown). Adjusted models controlled for age at application, race, gender, and service. Rates of early discharge were calculated per 10,000 service members. Rates of early discharge may be underestimated, as some service members may not have adequate follow-up time. Censoring may result from insufficient follow-up times.

1: Early Discharge Rates by Medical Disqualification Status

Tables 8A-E compare the percentage of early discharge, both overall and by discharge type, over time between medically qualified and disqualified accessions for each service. **Figures 5A-E** present the distribution of early discharge type (adverse attrition, disability discharge, EPTS discharge) among all early discharges per service.

For this report, separation data was available up to 30 September 2019. Due to limited follow-up time, rates of early discharge should be considered underestimated, especially among FY 2018-2019 applicants.

Table 8A-E and Figures 5A-E Key Findings

- Among FY 2016-2019 applicants who accessed, approximately 10% (Air Force) to 19% (Navy) were discharged from military service within the first three years of service.
 - Adverse attrition accounted for 83-95% of all early discharges.
 - Disability and EPTS discharge were rare outcomes; less than 1% were separated early due to disability or EPTS.
- Generally, the rate of early discharge did not widely differ according to medical qualification status (medically disqualified vs. medically qualified).
- The proportion separated early due to adverse attrition, disability discharge or EPTS discharge varied by service. Inter-service variations may be related to service-related exposures (e.g. military occupation specialty, deployment characteristics).
 - Sailors had the highest proportion with an adverse attrition (18%), but the lowest proportion with a disability discharge (0.3%) or an EPTS discharge (0.6%).
 - Soldiers had the highest proportion with a disability discharge (0.8%) or an EPTS discharge (0.9%).
 - Airmen had the lowest percentage with an adverse attrition (8.6%).

DOD

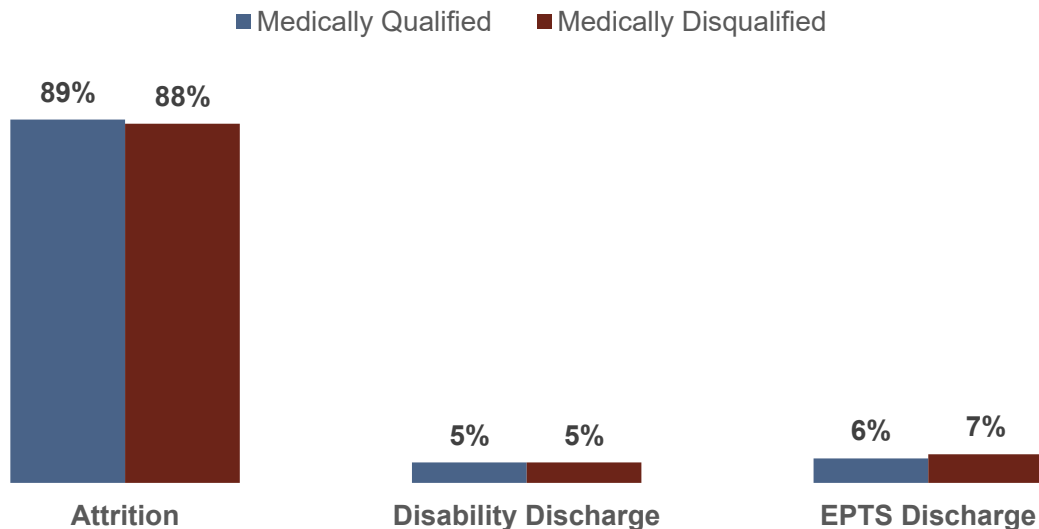
TABLE 8A: DISTRIBUTION OF EARLY DISCHARGE TYPE BY FY MEPS EXAMINATION AND MEDICAL QUALIFICATION STATUS: DOD

Application FY	Medical Qualification Status	Early Discharge Type ¹						
		Accessions	Adverse Attrition		Disability Discharge		EPTS Discharge ²	
		n	n	%	n	%	n	%
2016	Medically Qualified	188,699	26,306	13.9	2,715	1.4	3,005	1.6
	Medically Disqualified	15,475	2,080	13.4	259	1.7	366	2.4
2017	Medically Qualified	192,561	25,220	13.1	1,433	0.7	2,118	1.1
	Medically Disqualified	16,684	2,211	13.3	112	0.7	154	0.9
2018	Medically Qualified	198,195	23,175	11.7	399	0.2	293	0.1
	Medically Disqualified	16,357	1,802	11.0	30	0.2	12	0.1
2019	Medically Qualified	151,609	10,093	6.7	30	0.02	-	-
	Medically Disqualified	10,210	639	6.3	0	0.0	-	-
Overall		789,790	91,526	11.6	4,978	0.6	5,948	0.8

1 Early discharge may be underestimated due to limited follow-up time.

2 EPTS data received by AMSARA was incomplete for 2018 and AMSARA has not received data on FY 2019 EPTS discharges, therefore all EPTS discharges may be underestimated.

FIGURE 5A: COMPARISON OF THE DISTRIBUTION OF ADVERSE ATTRITION, DISABILITY DISCHARGE AND EPTS DISCHARGE AMONG ALL EARLY DISCHARGES, BY MEDICAL DISQUALIFICATION STATUS: DOD



1 Percent out of the total number of early discharges among medically qualified accessions (n=94,787).

2 Percent out of the total number of early discharges among medically disqualified accessions (n=7,665)

ARMY

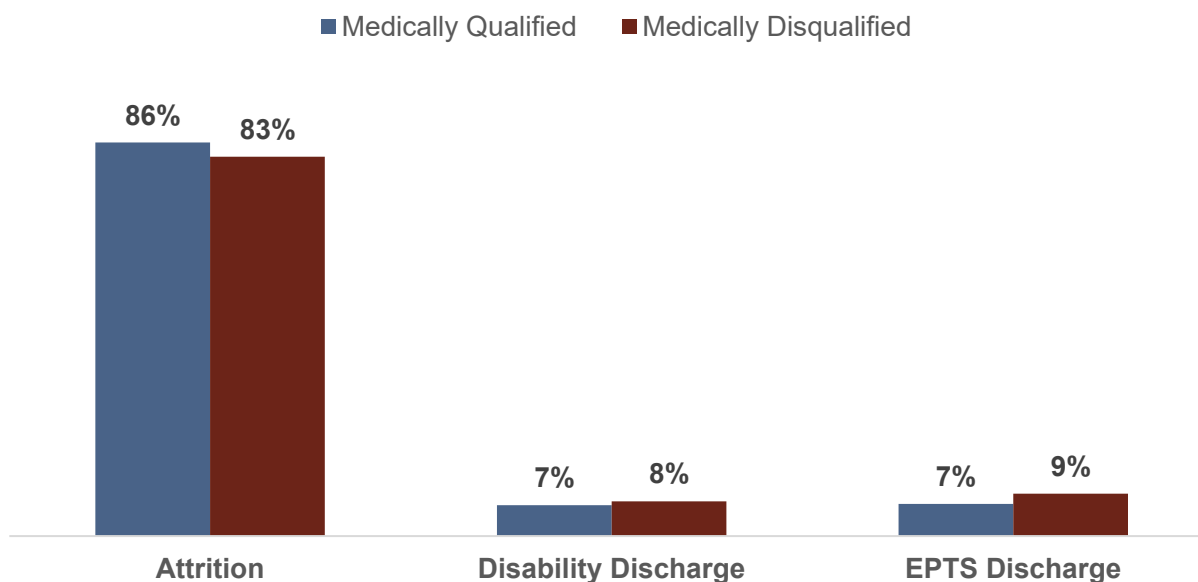
TABLE 8B: DISTRIBUTION OF EARLY DISCHARGE TYPE BY FY MEPS EXAMINATION AND MEDICAL QUALIFICATION STATUS: ARMY

FY MEPS Examination	Medical Qualification Status	Early Discharge Type ¹						
		Accessed	Adverse Attrition		Disability Discharge		EPTS Discharge ²	
		n	n	%	n	%	n	%
2016	Medically Qualified	91,140	12,383	13.6	1,726	1.9	1,891	2.1
	Medically Disqualified	8,028	975	12.1	164	2.0	240	3.0
2017	Medically Qualified	89,705	10,865	12.1	929	1.0	1,164	1.3
	Medically Disqualified	8,389	993	11.8	79	0.9	84	1.0
2018	Medically Qualified	93,780	9,886	10.5	257	0.3	0	0.0
	Medically Disqualified	8,010	728	9.1	22	0.3	0	0.0
2019	Medically Qualified	87,876	4,265	4.9	21	0.0	-	-
	Medically Disqualified	5,721	201	3.5	0	0.0	-	-
Total		392,649	40,296	10.3	3,198	0.8	3,379	0.9

1 Early discharge may be underestimated due to limited follow-up time.

2 EPTS data received by AMSARA was incomplete for 2018 and AMSARA has not received data on FY 2019 EPTS discharges, therefore all EPTS discharges may be underestimated.

FIGURE 5B: COMPARISON OF THE DISTRIBUTION OF ADVERSE ATTRITION, DISABILITY DISCHARGE AND EPTS DISCHARGE AMONG ALL EARLY DISCHARGES, BY MEDICAL DISQUALIFICATION STATUS: ARMY



1 Percent out of the total number of early discharges among medically qualified accessions (n=43,387).

2 Percent out of the total number of early discharges among medically disqualified accessions (n=3,486).

NAVY

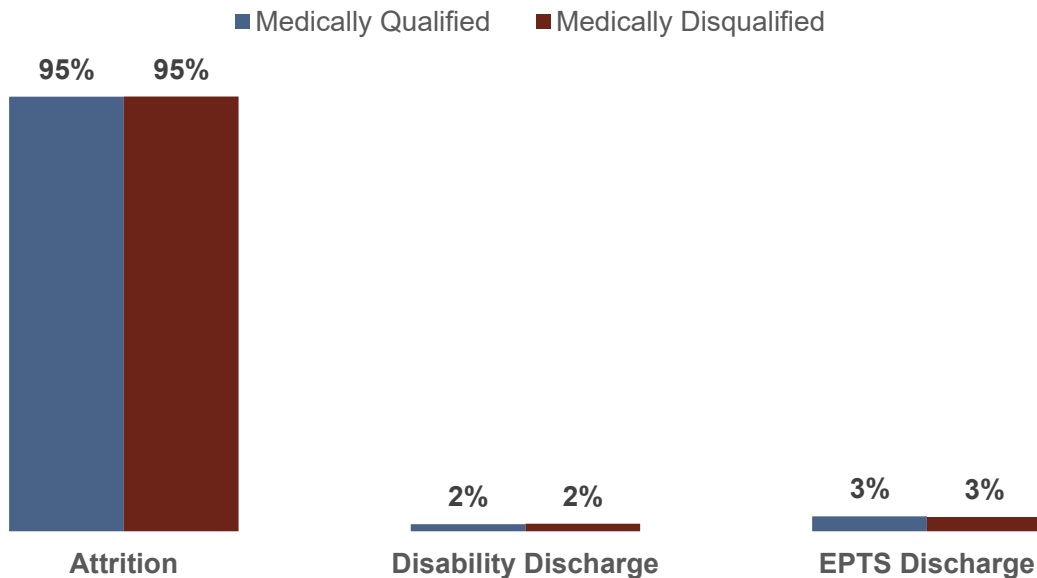
TABLE 8C: DISTRIBUTION OF EARLY DISCHARGES BY FY MEPS EXAMINATION AND MEDICAL QUALIFICATION STATUS: NAVY

FY MEPS Examination	Medical Qualification Status	Early Discharge Type ¹						
		Accessed	Adverse Attrition		Disability Discharge		EPTS Discharge ²	
		n	n	%	n	%	n	%
2016	Medically Qualified	31,539	5,944	18.8	229	0.7	12	0.0
	Medically Disqualified	2,331	511	21.9	23	1.0	4	0.2
2017	Medically Qualified	33,866	6,225	18.4	93	0.3	466	1.4
	Medically Disqualified	2,399	463	19.3	4	0.2	39	1.6
2018	Medically Qualified	37,171	6,975	18.8	35	0.1	293	0.8
	Medically Disqualified	2,251	437	19.4	2	0.1	12	0.5
2019	Medically Qualified	22,061	3,361	15.2	6	0.0	-	-
	Medically Disqualified	1,806	257	14.2	0	0.0	-	-
Total		133,424	24,173	18.1	392	0.3	826	0.6

¹ Early discharge may be underestimated due to limited follow-up time.

² EPTS data received by AMSARA was incomplete for 2018 and AMSARA has not received data on FY 2019 EPTS discharges, therefore all EPTS discharges may be underestimated.

FIGURE 5C: COMPARISON OF THE DISTRIBUTION OF ADVERSE ATTRITION, DISABILITY DISCHARGE AND EPTS DISCHARGE AMONG ALL EARLY DISCHARGES, BY MEDICAL DISQUALIFICATION STATUS: NAVY



¹ Percent out of the total number of early discharges among medically qualified accessions (n=23,639).

² Percent out of the total number of early discharges among medically disqualified accessions (n=1,752).

MARINE CORPS

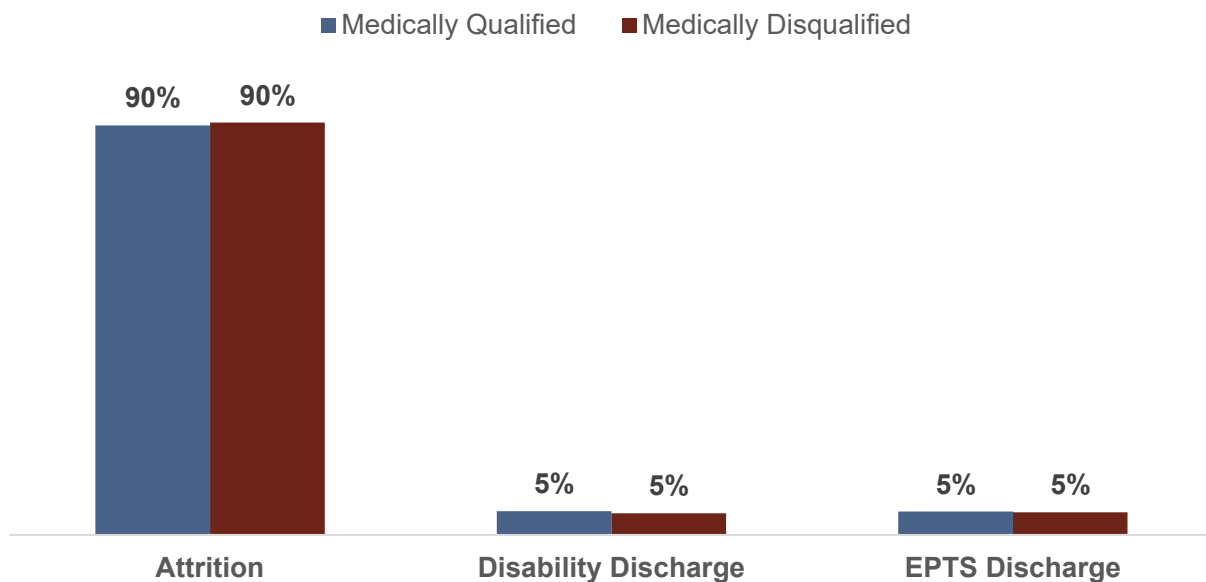
TABLE 8D: DISTRIBUTION OF EARLY DISCHARGES BY FY MEPS EXAMINATION AND MEDICAL QUALIFICATION STATUS: MARINE CORPS

FY MEPS Examination	Medical Qualification Status	Early Discharge Type ¹						
		Accessed	Adverse Attrition		Disability Discharge		EPTS Discharge ²	
		n	n	%	n	%	n	%
2016	Medically Qualified	32,442	4,213	13.0	495	1.5	491	1.5
	Medically Disqualified	2,492	353	14.2	49	2.0	50	2.0
2017	Medically Qualified	33,950	4,354	12.8	249	0.7	301	0.9
	Medically Disqualified	2,698	428	15.9	19	0.7	22	0.8
2018	Medically Qualified	32,853	3,793	11.5	56	0.2	0	0.0
	Medically Disqualified	2,892	397	13.7	1	0.0	0	0.0
2019	Medically Qualified	17,055	1,505	8.8	2	0.0	-	-
	Medically Disqualified	1,238	135	10.9	0	0.0	-	-
Total		125,620	15,178	12.1	871	0.7	864	0.7

1 Early discharge may be underestimated due to limited follow-up time.

2 EPTS data received by AMSARA was incomplete for 2018 and AMSARA has not received data on FY 2019 EPTS discharges, therefore all EPTS discharges may be underestimated.

FIGURE 5D: COMPARISON OF THE DISTRIBUTION OF ADVERSE ATTRITION, DISABILITY DISCHARGE AND EPTS DISCHARGE AMONG ALL EARLY DISCHARGES, BY MEDICAL DISQUALIFICATION STATUS: MARINE CORPS



1 Percent out of the total number of early discharges among medically qualified accessions (n=15,459).

2 Percent out of the total number of early discharges among medically disqualified accessions (n=1,454).

AIR FORCE

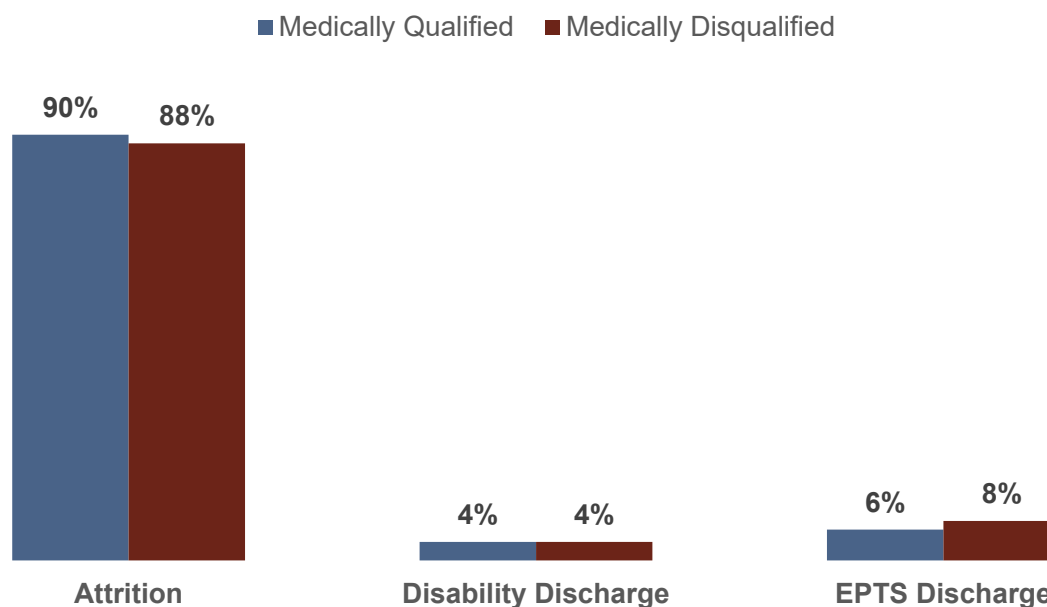
TABLE 8E: DISTRIBUTION OF EARLY DISCHARGES BY FY MEPS EXAMINATION AND MEDICAL QUALIFICATION STATUS: AIR FORCE

FY MEPS Examination	Medical Qualification Status	Early Discharge Type ¹						
		Accessed	Adverse Attrition		Disability Discharge		EPTS Discharge ²	
		n	n	%	n	%	n	%
2016	Medically Qualified	33,578	3,766	11.2	265	0.8	611	1.8
	Medically Disqualified	2,624	241	9.2	23	0.9	72	2.7
2017	Medically Qualified	35,040	3,776	10.8	162	0.5	187	0.5
	Medically Disqualified	3,198	327	10.2	10	0.3	9	0.3
2018	Medically Qualified	34,391	2,521	7.3	51	0.1	0	0.0
	Medically Disqualified	3,204	240	7.5	5	0.2	0	0.0
2019	Medically Qualified	24,617	962	3.9	1	0.0	-	-
	Medically Disqualified	1,445	46	3.2	0	0.0	-	-
Total		138,097	11,879	8.6	517	0.4	879	0.6

1 Early discharge may be underestimated due to limited follow-up time.

2 EPTS data received by AMSARA was incomplete for 2018 and AMSARA has not received data on FY 2019 EPTS discharges, therefore all EPTS discharges may be underestimated.

FIGURE 5E: COMPARISON OF THE DISTRIBUTION OF ADVERSE ATTRITION, DISABILITY DISCHARGE AND EPTS DISCHARGE AMONG ALL EARLY DISCHARGES, BY MEDICAL DISQUALIFICATION STATUS: AIR FORCE



1 Percent out of the total number of early discharges among medically qualified accessions (n=12,302).

2 Percent out of the total number of early discharges among medically disqualified accessions (n=973).

2: Adverse Attrition

Tables 9A-E compare the rate of adverse attrition by time in service between medically qualified and disqualified accessions, for all DOD services combined and for each service individually. **Figure 6** presents a visualized comparison of the overall rates of adverse attrition between medically qualified and disqualified accessions by time in service. Time in service was calculated from the first accession date to the last reported separation date for each service member.

For this report, separation data was available up to 30 September 2019. Due to limited follow-up time, adverse attrition rates should be considered underestimated, especially among FY 2018-2019 applicants.

Tables 9A-E and Figure 6 Key Findings

- Approximately 11.5% of all enlisted service members adversely attrited within the first three years of service. Adverse attrition rates were lowest in the Air Force (8%) and highest in the Navy (18%).
 - More than 70% of all adverse attritions occurred within the first year of service.
- For all services, the rate of adverse attrition was highest during the first 90 days of service, approximately the time from application to the end of basic training.
 - The rate of adverse attrition within the first 90 days was highest among Sailors (13-15%) and lowest among Soldiers and Airmen (about 4%).
- Overall, medically qualified and disqualified service members had similar rates of adverse attrition both overall and during each time period.

DOD

TABLE 9A: COMPARISON OF ADVERSE ATTRITION RATES BETWEEN MEDICALLY QUALIFIED AND MEDICALLY DISQUALIFIED ACCESSIONS BY TIME IN SERVICE AND APPLICATION YEAR: DOD

Application FY	Accessed	Time in Service									
		0-90 Days		91-180 Days		181-365 Days		366-730 Days		731-1095 Days	
	n	%	Cumul %	%	Cumul %	%	Cumul %	%	Cumul %	%	Cumul %
MEDICALLY QUALIFIED											
2016	188,699	4.6	4.6	1.7	6.3	1.7	8	3.3	11.3	2.6	13.9
2017	192,561	5.7	5.7	2.0	7.7	1.9	9.6	2.8	12.4	0.7 ¹	13.1 ¹
2018	198,195	7.4	7.4	2.1	9.5	1.4	10.9	0.8 ¹	11.7 ¹	-	-
2019	151,609	5.3	5.3	1.2 ¹	6.4 ¹	0.2 ¹	6.7 ¹	-	-	-	-
Total	731,064	5.8	5.8	1.8¹	7.6¹	1.3¹	8.9¹	1.8¹	10.7¹	0.9¹	11.6¹
MEDICALLY DISQUALIFIED											
2016	15,475	5.0	5.0	2.0	7.0	1.6	8.6	2.7	11.3	2.1	13.4
2017	16,684	6.5	6.5	2.3	8.8	1.7	10.5	2.4	12.9	0.4 ¹	13.3 ¹
2018	16,357	7.5	7.5	1.9	9.4	1.1	10.5	0.6 ¹	11 ¹	-	-
2019	10,210	5.4	5.4	0.6 ¹	6.1 ¹	0.2 ¹	6.3 ¹	-	-	-	-
Total	58,726	6.2	6.2	1.8¹	8.0¹	1.2¹	9.3¹	1.5	10.8¹	0.7¹	11.5¹

FY:Fiscal Year; Cumul:Cumulative

¹ Rates of attrition may be underestimated due to limited follow-up time.

ARMY

TABLE 9B: COMPARISON OF ADVERSE ATTRITION RATES BETWEEN MEDICALLY QUALIFIED AND MEDICALLY DISQUALIFIED ACCESSIONS BY TIME IN SERVICE AND APPLICATION YEAR: ARMY

Application FY	Accessed	Time in Service									
		0-90 Days		91-180 Days		181-365 Days		366-730 Days		731-1095 Days	
	n	%	Cumul %	%	Cumul %	%	Cumul %	%	Cumul %	%	Cumul %
MEDICALLY QUALIFIED											
2016	91,140	3.2	3.2	1.8	5.0	1.6	6.7	3.8	10.5	3.1	13.6
2017	89,705	3.2	3.2	2.4	5.6	2.2	7.8	3.4	11.2	0.9 ¹	12.1 ¹
2018	93,780	4.9	4.9	2.8	7.7	1.7	9.4	1.1 ¹	10.5 ¹	-	-
2019	87,876	3.0	3.0	1.6 ¹	4.6 ¹	0.3 ¹	4.9 ¹	-	-	-	-
Total	362,501	3.6	3.6	2.2¹	5.8¹	1.5¹	7.2¹	2.1¹	9.3¹	1.0¹	10.3¹
MEDICALLY DISQUALIFIED											
2016	8,028	2.9	2.9	2.0	4.9	1.8	6.7	2.8	9.5	2.6	12.1
2017	8,389	3.9	3.9	2.8	6.7	1.9	8.6	2.8	11.3	0.5 ¹	11.8 ¹
2018	8,010	4.6	4.6	2.6	7.2	1.2	8.5	0.6 ¹	9.1 ¹	-	-
2019	5,721	2.7	2.7	0.7 ¹	3.3 ¹	0.2 ¹	3.5 ¹	-	-	-	-
Total	30,148	3.6	3.6	2.1¹	5.7¹	1.4¹	7.1¹	1.7¹	8.8¹	0.8¹	9.6¹

FY:Fiscal Year; Cumul:Cumulative

¹ Rates of attrition may be underestimated due to limited follow-up time.

NAVY

TABLE 9C: COMPARISON OF ADVERSE ATTRITION RATES BETWEEN MEDICALLY QUALIFIED AND MEDICALLY DISQUALIFIED ACCESSIONS BY TIME IN SERVICE AND APPLICATION YEAR: NAVY

Application FY	Accessed	Time in Service									
		0-90 Days		91-180 Days		181-365 Days		366-730 Days		731-1095 Days	
	n	%	Cumul %	%	Cumul %	%	Cumul %	%	Cumul %	%	Cumul %
MEDICALLY QUALIFIED											
2016	31,539	10.4	10.4	2.2	12.7	1.6	14.3	2.7	17.0	1.9	18.8
2017	33,866	12.3	12.3	2.3	14.6	1.5	16.1	2.0	18.1	0.3 ¹	18.4 ¹
2018	37,171	15.6	15.6	1.6	17.2	1.0	18.2	0.5 ¹	18.8 ¹	-	-
2019	22,061	14.4	14.4	0.7 ¹	15.1 ¹	0.1 ¹	15.2 ¹	-	-	-	-
Total	124,637	13.2	13.2	1.8¹	15.0¹	1.1¹	16.1¹	1.4¹	17.5¹	0.6¹	18.1¹
MEDICALLY DISQUALIFIED											
2016	2,331	13.3	13.3	3.0	16.4	1.5	17.9	2.6	20.5	1.4	21.9
2017	2,399	14.0	14.0	2.1	16.1	1.3	17.4	1.8	19.1	0.2 ¹	19.3 ¹
2018	2,251	16.9	16.9	1.3	18.3	0.8	19.1	0.4 ¹	19.4 ¹	-	-
2019	1,806	13.6	13.6	0.4 ¹	14.0 ¹	0.2 ¹	14.2 ¹	-	-	-	-
Total	8,787	14.5	14.5	1.8¹	16.3¹	1.0¹	17.3¹	1.3¹	18.6¹	0.4¹	19.0¹

FY:Fiscal Year; Cumul:Cumulative

¹ Rates of attrition may be underestimated due to limited follow-up time.

MARINE CORPS

TABLE 9D: COMPARISON OF ADVERSE ATTRITION RATES BETWEEN MEDICALLY QUALIFIED AND MEDICALLY DISQUALIFIED ACCESSIONS BY TIME IN SERVICE AND APPLICATION YEAR: MARINE CORPS

Application FY	Accessed n	Time in Service									
		0-90 Days		91-180 Days		181-365 Days		366-730 Days		731-1095 Days	
		%	Cumul %	%	Cumul %	%	Cumul %	%	Cumul %	%	Cumul %
MEDICALLY QUALIFIED											
2016	32,442	4.7	4.7	1.4	6.1	1.4	7.5	3.2	10.7	2.3	13.0
2017	33,950	7.2	7.2	1.5	8.8	1.4	10.1	2.2	12.3	0.5 ¹	12.8 ¹
2018	32,853	8.9	8.9	1.3	10.2	0.9	11.1	0.4 ¹	11.5 ¹	-	-
2019	17,055	7.9	7.9	0.8 ¹	8.7 ¹	0.1 ¹	8.8 ¹	-	-	-	-
Total	116,300	7.1	7.1	1.3¹	8.4¹	1.1¹	9.5¹	1.6¹	11.1¹	0.8¹	11.9¹
MEDICALLY DISQUALIFIED											
2016	2,492	6.4	6.4	1.6	8.0	1.0	9.0	3.3	12.3	1.9	14.2
2017	2,698	10.6	10.6	1.7	12.3	1.4	13.7	1.9	15.6	0.3 ¹	15.9 ¹
2018	2,892	10.7	10.7	1.7	12.4	1.0	13.3	0.4 ¹	13.7 ¹	-	-
2019	1,238	9.6	9.6	1.1 ¹	10.7 ¹	0.2 ¹	10.9 ¹	-	-	-	-
Total	9,320	9.3	9.3	1.6¹	11.0¹	1.0¹	12.0¹	1.5¹	13.5¹	0.6¹	14.1¹

FY:Fiscal Year; Cumul:Cumulative

¹ Rates of attrition may be underestimated due to limited follow-up time.

AIR FORCE

TABLE 9E: COMPARISON OF ADVERSE ATTRITION RATES BETWEEN MEDICALLY QUALIFIED AND MEDICALLY DISQUALIFIED ACCESSIONS BY TIME IN SERVICE AND APPLICATION YEAR: AIR FORCE

Application FY	Accessed	Time in Service									
		0-90 Days		91-180 Days		181-365 Days		366-730 Days		731-1095 Days	
	n	%	Cumul %	%	Cumul %	%	Cumul %	%	Cumul %	%	Cumul %
MEDICALLY QUALIFIED											
2016	33,578	2.9	2.9	1.2	4.2	2.0	6.2	2.9	9.0	2.2	11.2
2017	35,040	4.4	4.4	1.2	5.6	1.8	7.4	2.6	10.1	0.7 ¹	10.8 ¹
2018	34,391	4.2	4.2	1.1	5.4	1.3	6.7	0.7 ¹	7.3 ¹	-	-
2019	24,617	3.2	3.2	0.5 ¹	3.7 ¹	0.2 ¹	3.9 ¹	-	-	-	-
Total	127,626	3.7	3.7	1.0¹	4.8¹	1.4¹	6.2¹	1.7¹	7.9¹	0.8¹	8.6¹
MEDICALLY DISQUALIFIED											
2016	2,624	2.7	2.7	1.5	4.2	1.5	5.8	2.1	7.9	1.3	9.2
2017	3,198	4.4	4.4	1.7	6.1	1.6	7.7	2.2	9.8	0.4 ¹	10.2 ¹
2018	3,204	5.1	5.1	0.8	5.8	1.0	6.8	0.7 ¹	7.5 ¹	-	-
2019	1,445	2.7	2.7	0.3 ¹	3.0 ¹	0.1 ¹	3.2 ¹	-	-	-	-
Total	10,471	4.0	4.0	1.2¹	5.1¹	1.2¹	6.3¹	1.4¹	7.7¹	0.4¹	8.2¹

FY:Fiscal Year; Cumul:Cumulative

¹ Rates of attrition may be underestimated due to limited follow-up time.

FIGURE 6: COMPARISON OF THE RATES OF ADVERSE ATTRITION BETWEEN MEDICALLY QUALIFIED AND DISQUALIFIED ACCESSIONS BY TIME IN SERVICE AND APPLICATION YEAR: DOD

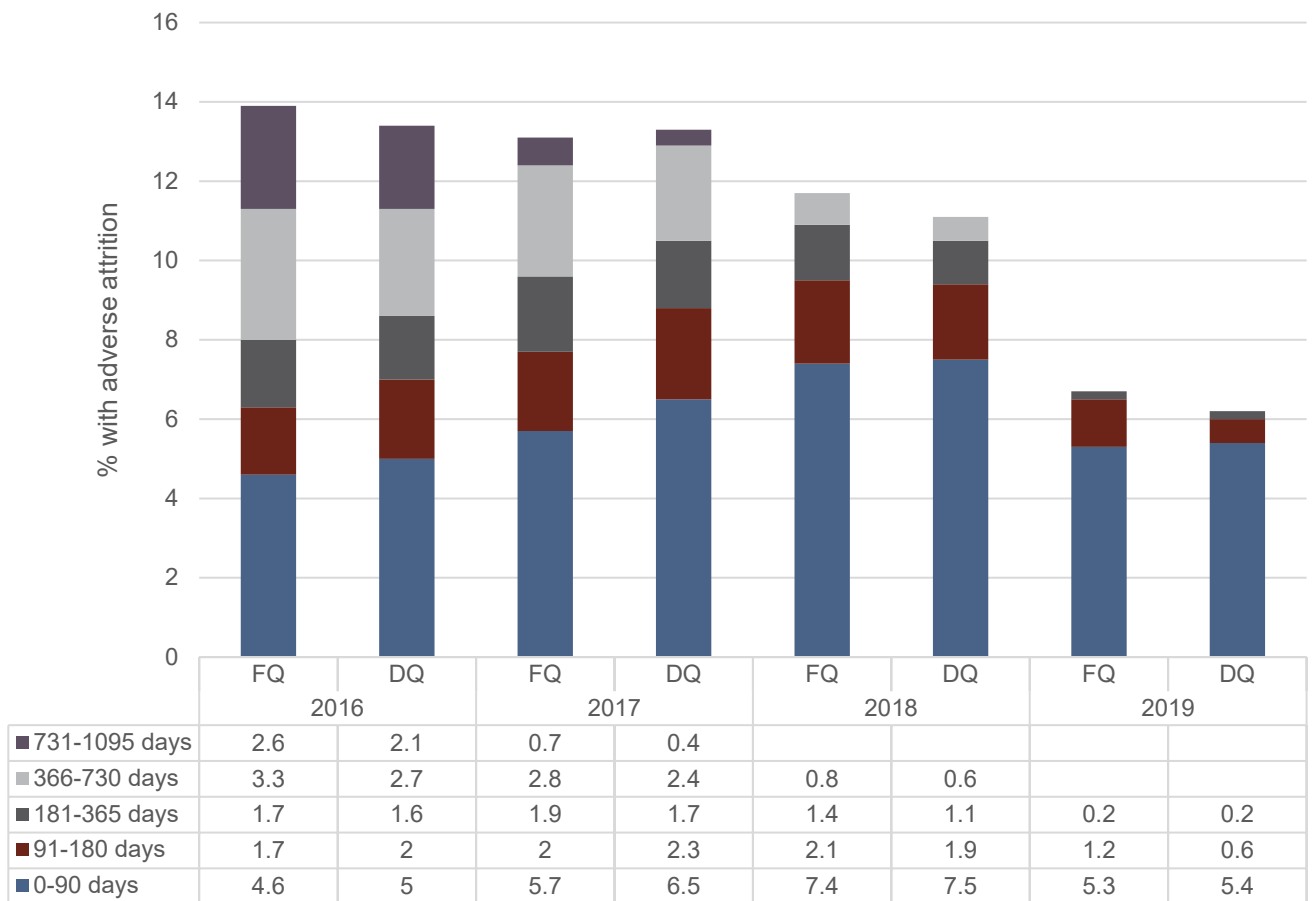


Table 10 presents the proportion and likelihood of adverse attrition among medically disqualified service members per disqualification category compared to medically qualified service members. Relative risks and 95% confidence intervals were calculated to assess likelihood of adverse attrition; all relative risks were adjusted for age at application, gender, race, and service.

Table 10 Key Findings

- The proportion of medically disqualified service members who adversely attrited within the first three years of service varied by medical disqualification category, ranging from about 8% (ears, neck) to 14% (dental, endocrine/metabolic).
 - In comparison, nearly 12% of medically qualified service members had an adverse attrition.
- Overall, there was no significant difference in the likelihood of adverse attrition between medically qualified and medically disqualified service members (RR: 1.02; 95% CI: 0.99, 1.04).
 - The likelihood of adverse attrition did not significantly differ between medically qualified and medically disqualified service members for 20 out of the 29 disqualification categories.
- Service members medically disqualified under the dental (RR: 1.31; 95% CI: 1.05, 1.73), endocrine/metabolic (RR: 1.35; 95% CI: 1.12, 1.52), psychiatric (RR: 1.15; 95% CI: 1.07, 1.24) or miscellaneous (RR: 1.16; 95% CI: 1.02, 1.33) categories were more likely to have an adverse attrition when compared to medically qualified service members.
- Service members medically disqualified under the ears, lungs, female genital system, upper extremities, or miscellaneous conditions of the extremities categories were significantly less likely to have an adverse attrition than medically qualified service members.

TABLE 10: LIKELIHOOD OF ADVERSE ATTRITION WITHIN THE FIRST THREE YEARS OF SERVICE AMONG MEDICALLY DISQUALIFIED ACCESSIONS, BY DISQUALIFICATION CATEGORY

Disqualification Category ¹	Adverse Attrition among Medically DQ'ed Accessions		RR _a ²	95% CI
	n	%		
2. Head	20	9.4	0.83	(0.53, 1.33)
3. Eyes	2,186	11.6	1.02	(0.97, 1.07)
4. Vision	1,884	11.9	1.04	(0.99, 1.09)
5. Ears	93	7.9	0.69	(0.56, 0.86)
6. Hearing	25	10.5	0.90	(0.59, 1.37)
7. Nose, Sinuses, Mouth, and Larynx	32	11.7	1.07	(0.74, 1.55)
8. Dental	72	14.5	1.35	(1.05, 1.73)
9. Neck	8	7.8	0.68	(0.33, 1.40)
10. Lungs, Chest Wall, Pleura, and Mediastinum	274	9.3	0.82	(0.72, 0.93)
11. Heart	86	10.0	0.89	(0.71, 1.11)
12. Abdominal Organs and Gastrointestinal System	81	9.8	0.90	(0.71, 1.13)
13. Female Genital System	46	9.2	0.71	(0.52, 0.96)
14. Male Genital System	208	10.5	0.94	(0.81, 1.09)
15. Urinary System	132	9.6	0.85	(0.71, 1.01)
16. Spine and Sacroiliac Joint Conditions	210	12.0	1.07	(0.93, 1.24)
17. Upper Extremities	274	9.5	0.86	(0.76, 0.97)
18. Lower Extremities	544	11.0	0.99	(0.90, 1.08)
19. Miscellaneous Conditions of the Extremities	861	9.1	0.81	(0.75, 0.87)
20. Vascular System	55	9.9	0.98	(0.74, 1.29)
21. Skin and Cellular Tissue Conditions	410	11.5	1.02	(0.92, 1.13)
22. Blood and Blood Forming Conditions	28	11.8	1.08	(0.72, 1.60)
23. Systemic Conditions	393	12.1	1.04	(0.94, 1.16)
24. Endocrine and Metabolic Conditions	203	14.0	1.31	(1.12, 1.52)
25. Rheumatologic Conditions	69	13.3	1.26	(0.97, 1.62)
26. Neurologic Conditions	179	10.4	0.93	(0.80, 1.09)
27. Sleep Disorders	19	11.3	1.04	(0.64, 1.68)
28. Learning, Psychiatric, and Behavioral Disorders	861	12.6	1.15	(1.07, 1.24)
29. Tumors and Malignancies	17	9.6	0.87	(0.53, 1.44)
30. Miscellaneous Conditions	244	13.2	1.16	(1.02, 1.33)
Total Disqualified w/ Adverse Attrition	6,732	11.5	1.02	(0.99, 1.04)

DQ: Disqualified; RR: Relative Risk; CI: Confidence Interval.

¹ Categories are not mutually exclusive, accessions with multiple disqualifications across disqualification categories are counted more than once.

² Adjusted Relative Risk, adjusted for age at application, gender, race, and service. The comparison group for all models was fully qualified accession; 11.6% of fully qualified accessions had an early adverse attrition.

3: Disability Discharge

Table 11 compares the overall rates of disability discharge, in the first three years of service, between medically qualified and disqualified FY2016-2019 accessions for all DOD services combined. **Table 12** compares the rate of disability discharge between medically qualified and disqualified accessions by time in service. **Figure 7** presents a visualized comparison of the overall rates of disability discharge between medically qualified and disqualified accessions by time in service. Due to the rarity of the disability outcome, results in this section are presented overall rather by service.

Due to limited follow-up time, early disability discharge rates should be considered underestimated among FY 2017-2019 applicants.

Tables 11-12 and Figure 7 Key Findings

- Disability discharge within the first three years of service was a rare outcome, with an overall rate of 63-68 per 10,000 accessions.
 - The rate of disability discharge appears to decrease over time, however this is likely due to limited follow-up time among FY2017-2019 applicants.
- Service members had the highest rate of disability discharge after the first year of service.
 - Disability discharge relates to service-connected conditions and/or injuries. Accessions who are in service longer may be more at risk of injury.
- Medically qualified and disqualified accessions were disability discharged at a similar rate at each follow-up point.

TABLE 11: COMPARISON OF THE RATE OF DISABILITY DISCHARGE BY MEDICAL QUALIFICATION STATUS AND APPLICATION FY

Application FY	Medically Qualified			Medically Disqualified		
	Accessed	Disability Discharge		Accessed	Disability Discharge	
	n	n	Rate ¹	n	n	Rate ¹
2016	188,699	2,715	144	15,475	259	167
2017	192,561	1,433	74	16,684	112	67
2018	198,195	399	20	16,357	30	18
2019	151,609	30	2	10,210	-	-
Total	731,064	4,577	63	58,726	401	68

¹ Rate per 10,000 accessions.

TABLE 12: COMPARISON OF EARLY DISABILITY DISCHARGE RATES BETWEEN MEDICALLY QUALIFIED AND MEDICALLY DISQUALIFIED ACCESSIONS BY TIME IN SERVICE AND APPLICATION YEAR

Application FY	Accessed	Time in Service									
		0-90 Days		91-180 Days		181-365 Days		366-730 Days		731-1095 Days	
	n	%	Cumul %	%	Cumul %	%	Cumul %	%	Cumul %	%	Cumul %
MEDICALLY QUALIFIED											
2016	188,699	0.001	0.001	0.01	0.01	0.07	0.08	0.46	0.54	0.9	1.44
2017	192,561	0.001	0.001	0.01	0.01	0.1	0.11	0.37	0.48	0.27	0.74
2018	198,195	0.002	0.002	0.01	0.01	0.08	0.09	0.11	0.2	-	-
2019	151,609	0.001	0.001	0.01	0.01	0.01	0.02	-	-	-	-
Total	731,064	0.001	0.001	0.01	0.01	0.07	0.08	0.25	0.32	0.30	0.63
MEDICALLY DISQUALIFIED											
2016	15,475	-	-	0.01	0.01	0.09	0.1	0.63	0.73	0.94	1.67
2017	16,684	-	-	-	-	0.08	0.08	0.35	0.43	0.25	0.67
2018	16,357	0.01	0.01	0.01	0.02	0.07	0.09	0.09	0.18	-	-
2019	10,210	-	-	-	-	-	-	-	-	-	-
Total	58,726	0.002	0.002	0.01	0.01	0.07	0.07	0.29	0.36	0.32	0.68

FY: Fiscal Year; Cumul: Cumulative

1 Rates of attrition may be underestimated due to limited follow-up time.

FIGURE 7: COMPARISON OF THE RATE OF EARLY DISABILITY DISCHARGE BETWEEN MEDICALLY QUALIFIED AND DISQUALIFIED ACCESSIONS BY TIME IN SERVICE

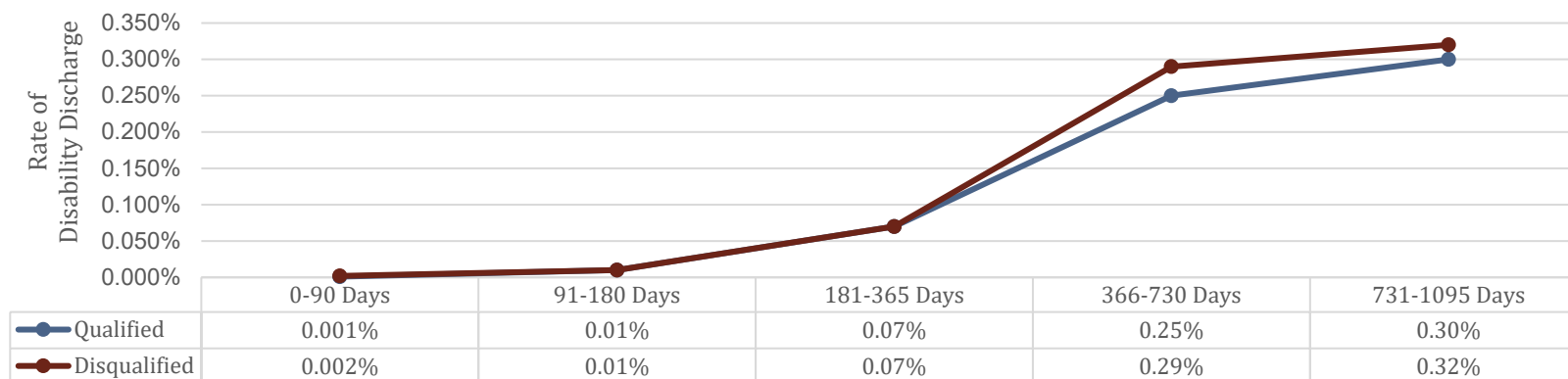


Table 13 presents the proportion and likelihood of early disability discharge among medically disqualified service members per disqualification category compared to medically qualified service members. Relative risks and 95% confidence intervals were calculated to assess likelihood of early disability discharge; all relative risks were adjusted for age at application, gender, race, and service.

Table 13 Key Findings

- The proportion of medically disqualified service members who were disability discharged within the first three years of service varied by medical disqualification category, and ranged from about 0.4% (urinary) to 2% (neck).
 - In comparison, 0.6% of medically qualified service members were disability discharged within 3 years.
- Overall, there was no significant difference in the likelihood of early disability discharge between medically qualified and medically disqualified service members (RR: 1.07; 95% CI: 0.96, 1.08).
 - For 26 out of the 29 disqualification categories, the likelihood of early disability discharge did not significantly differ between medically qualified and medically disqualified service members.
- Service members medically disqualified for a condition of the extremities were 41-59% more likely to be disability discharged than medically qualified service members.



TABLE 13: LIKELIHOOD OF DISABILITY DISCHARGE WITHIN THE FIRST THREE YEARS OF SERVICE AMONG MEDICALLY DISQUALIFIED ACCESSIONS, BY DISQUALIFICATION CATEGORY

Disqualification Category ¹	Disability Discharge among Medically DQ'ed Accessions			
	n	%	RR _a ²	95% CI
2. Head	1	0.47	0.83	(0.12, 5.90)
3. Eyes	110	0.59	0.92	(0.76, 1.11)
4. Vision	89	0.56	0.88	(0.71, 1.09)
5. Ears	6	0.51	0.84	(0.37, 1.87)
6. Hearing	-	-	-	-
7. Nose, Sinuses, Mouth, and Larynx	-	-	-	-
8. Dental	5	1.00	1.49	(0.62, 3.60)
9. Neck	2	1.94	2.89	(0.71-11.73)
10. Lungs, Chest Wall, Pleura, and Mediastinum	19	0.65	1.06	(0.67, 1.67)
11. Heart	5	0.58	0.93	(0.39, 2.24)
12. Abdominal Organs and Gastrointestinal System	4	0.49	0.72	(0.27, 1.93)
13. Female Genital System	3	0.60	0.59	(0.19, 1.83)
14. Male Genital System	16	0.81	1.45	(0.89, 2.38)
15. Urinary System	6	0.44	0.66	(0.30, 1.48)
16. Spine and Sacroiliac Joint Conditions	15	0.86	1.20	(0.72, 2.00)
17. Upper Extremities	28	0.97	1.59	(1.09, 2.31)
18. Lower Extremities	46	0.93	1.44	(1.08, 1.93)
19. Miscellaneous Conditions of the Extremities	83	0.87	1.41	(1.13, 1.75)
20. Vascular System	4	0.72	1.13	(0.42, 3.04)
21. Skin and Cellular Tissue Conditions	31	0.87	1.34	(0.94, 1.91)
22. Blood and Blood Forming Conditions	3	1.26	1.85	(0.59, 5.78)
23. Systemic Conditions	21	0.65	0.97	(0.63, 1.49)
24. Endocrine and Metabolic Conditions	10	0.69	1.05	(0.56, 1.96)
25. Rheumatologic Conditions	7	1.35	1.99	(0.94, 4.21)
26. Neurologic Conditions	15	0.87	1.40	(0.84, 2.32)
27. Sleep Disorders	1	0.60	0.92	(0.13, 6.58)
28. Learning, Psychiatric, and Behavioral Disorders	37	0.54	0.86	(0.62, 1.18)
29. Tumors and Malignancies	2	1.13	1.91	(0.47, 7.72)
30. Miscellaneous Conditions	10	0.54	0.84	(0.45, 1.56)
Total Disqualified w/ Disability Discharge³	401	0.68	1.07	(0.96, 1.18)

CI: Confidence Interval

1 Categories are not mutually exclusive, accessions with multiple disqualifications across different disqualification categories are counted more than once.

2 Adjusted relative risk, adjusted for age at application, gender, race, and service. The comparison group for all models was fully qualified accessions; 0.63% of fully qualified accessions had an early disability discharge.

3 Since disability discharge was a rare outcome, relative risks should be interpreted with caution.

Table 14 describes concordance between medical disqualifications and reason for disability discharge for the leading disqualification categories. The ten most common medical disqualifications categories were mapped to the most clinically relevant Veteran Affairs for Schedule Rating Disabilities (VASRD) body system categories. Systemic conditions and miscellaneous conditions were among the most common medical disqualifications; however, these DQ categories may map to multiple VASRD body system categories and were therefore not included.

Table 14 Key Findings

- Little concordance was observed between disqualification category and reason for early disability discharge.
 - Less than 1% of service members were disability discharged for conditions within a similar body system of their medical disqualification for the 10 most common disqualification categories.
 - The highest concordance was seen among those disqualified for a musculoskeletal condition. This result may be over-estimated because the VASRD body system category does not specify location of the musculoskeletal injury. For example, a service member may have been disqualified for an upper extremity condition but disability discharged due to a lower extremity condition.

TABLE 14: CONCORDANCE BETWEEN LEADING DISQUALIFICATION CATEGORIES AND REASON FOR EARLY DISABILITY DISCHARGE

Disqualification Category ¹	VASRD Body System	Disqualified Accessions n	Disability Discharged n	%
3. Eyes	Eyes and Vision	18,793	1	0.01
4. Vision	Eyes and Vision	15,826	1	0.01
10. Lungs, Chest Wall, Pleura, and Mediastinum	Respiratory	2,933	3	0.1
16. Spine and Sacroiliac Joint Conditions	Musculoskeletal	1,750	11	0.63
17. Upper Extremities	Musculoskeletal	2,873	24	0.8
18. Lower Extremities	Musculoskeletal	4,936	32	0.6
19. Miscellaneous Conditions of the Extremities	Musculoskeletal	9,497	63	0.7
21. Skin and Cellular Tissue Conditions	Dermatologic	3,564	-	
26. Neurologic Conditions	Neurologic	1,727	-	
28. Learning, Psychiatric and Behavioral Disorders	Psychiatric	6,819	9	0.1

¹ Categories are not mutually exclusive, service members with multiple disqualifications across different DQ categories are counted more than once.

4: EPTS Discharge

Table 15 compares the rate of existed prior to service (EPTS) discharge between medically qualified and disqualified accessions by application fiscal year. Data received by AMSARA for EPTS discharges is incomplete and therefore all results should be interpreted with caution.

Table 15 Key Findings

- In FY 2016, medically disqualified service members were EPTS discharged at a higher rate (237 per 10,000 accessions) than medically qualified service members (159 per 10,000 accessions).
- The rate and number of accessions discharged due to EPTS appears to decrease over the time period. However, FY 2018 data was under-reported and should be considered an under-estimate.

TABLE 15: COMPARISON OF THE RATE OF EPTS DISCHARGE BETWEEN MEDICALLY QUALIFIED AND DISQUALIFIED ACCESSIONS BY APPLICATION YEAR

Application FY	Medically Qualified			Medically Disqualified		
	Accessed	EPTS Discharge		Accessed	EPTS Discharge	
	n	n	Rate ¹	n	n	Rate ¹
2016	188,699	3,005	159	15,475	366	237
2017	192,561	2,118	110	16,684	154	92
2018 ²	198,195	293	15	16,357	12	7
2019 ³	-	-	-	-	-	-
Total	579,455	5,416	93	48,516	532	110

¹ Rate per 10,000 accessions.

² FY 2018 EPTS data received by AMSARA was underreported, therefore these results may be underestimated.

³ FY 2019 EPTS data were unavailable to AMSARA at the time of this report.

Table 16 presents the proportion and likelihood of EPTS discharge among medically disqualified service members per disqualification category compared to medically qualified service members. Relative risks and 95% confidence intervals were calculated to assess likelihood of EPTS discharge; all relative risks were adjusted for age at application, gender, race, and service.

Table 16 Key Findings

- The proportion of medically disqualified service members who were discharged due to EPTS varied by medical disqualification category, and ranged from about 0.4% (hearing, abdominal organs/gastrointestinal system, urinary system) to 2.8% (head).
 - In comparison, 0.9% of medically qualified service members were EPTS discharged.
- Overall, EPTS discharge was 21% more likely to occur among medically disqualified service members than medically qualified service members (RR: 1.21; 95% CI: 1.10, 1.32).
- For 21 out of the 29 disqualification categories, the likelihood of EPTS discharge did not significantly differ between medically qualified and medically disqualified service members.
 - EPTS discharge was 25% to 52% more likely to occur among service members medically disqualified under the lungs (RR: 1.52; 95% CI: 1.08, 2.14) or miscellaneous conditions of the extremities (RR: 1.25; 95% CI: 1.02, 1.54) categories when compared to medically qualified service members.
 - EPTS discharge was two to three times more likely among service members medically disqualified under the head, heart, female genital system, spine/sacroiliac joints, blood/blood forming tissue, rheumatologic or neurological categories than medically qualified service members.

TABLE 16: LIKELIHOOD OF EPTS DISCHARGE AMONG MEDICALLY DISQUALIFIED ACCESSIONS, BY DISQUALIFICATION CATEGORY

Disqualification Category ¹	EPTS Discharge among Medically DQ'ed Accessions			
	n	%	RR _a ²	95% CI
2. Head	6	2.8	3.91	(1.74, 8.82)
3. Eyes	131	0.7	0.93	(0.78, 1.10)
4. Vision	100	0.6	0.84	(0.69, 1.03)
5. Ears	14	1.2	1.59	(0.94, 2.69)
6. Hearing	1	0.4	0.56	(0.08, 4.00)
7. Nose, Sinuses, Mouth, and Larynx	3	1.1	1.46	(0.47, 4.55)
8. Dental	7	1.4	1.91	(0.90, 4.03)
9. Neck	1	1.0	1.22	(0.17, 8.78)
10. Lungs, Chest Wall, Pleura, and Mediastinum	33	1.1	1.52	(1.08, 2.14)
11. Heart	14	1.6	2.20	(1.30, 3.74)
12. Abdominal Organs and Gastrointestinal System	3	0.4	0.47	(0.15, 1.47)
13. Female Genital System	9	1.8	2.14	(1.10, 4.14)
14. Male Genital System	15	0.8	1.04	(0.62, 1.73)
15. Urinary System	6	0.4	0.58	(0.26, 1.28)
16. Spine and Sacroiliac Joint Conditions	32	1.8	2.37	(1.67, 3.37)
17. Upper Extremities	26	0.9	1.17	(0.80, 1.73)
18. Lower Extremities	50	1.0	1.32	(1.00, 1.75)
19. Miscellaneous Conditions of the Extremities	91	1.0	1.25	(1.02, 1.54)
20. Vascular System	7	1.3	1.74	(0.82, 3.67)
21. Skin and Cellular Tissue Conditions	29	0.8	1.10	(0.77, 1.59)
22. Blood and Blood Forming Conditions	5	2.1	2.83	(1.17, 6.88)
23. Systemic Conditions	20	0.6	0.82	(0.53, 1.27)
24. Endocrine and Metabolic Conditions	13	0.9	1.18	(0.68, 2.03)
25. Rheumatologic Conditions	11	2.1	2.76	(1.52, 5.02)
26. Neurologic Conditions	20	1.2	1.53	(0.98, 2.38)
27. Sleep Disorders	1	0.6	0.78	(0.11, 5.56)
28. Learning, Psychiatric, and Behavioral Disorders	57	0.8	1.12	(0.86, 1.45)
29. Tumors and Malignancies	2	1.1	1.54	(0.38, 6.20)
30. Miscellaneous Conditions	16	0.9	1.15	(0.70, 1.89)
Total Disqualified w/ EPTS Discharge³	532	1.1	1.21	(1.10, 1.32)

CI: Confidence Interval

1 Categories are not mutually exclusive, service members with multiple disqualifications across different DQ categories were counted more than once.

2 Adjusted relative risk, adjusted for age at application, gender, race, and service. The comparison group for all models was fully qualified accession; 0.9% of fully qualified accessions were EPTS discharged.

3 Since EPTS discharge was a rare outcome, relative risks should be interpreted with caution.

Table 17 describes concordance between medical disqualifications and reason for EPTS discharge for the ten most common disqualification categories. EPTS conditions were derived from the service member's separation record and then categorized based on DoDI 6130.03 disqualification categories.

Table 17 Key Findings

- Little concordance was observed between disqualification category and reason for EPTS discharge.
 - Approximately 2% of service members were EPTS discharged for conditions within a similar body system of their medical disqualification for the 10 most common disqualification categories.
 - The highest concordance was seen among those disqualified for a condition related to the lungs, chest wall, pleura, and mediastinum, however, less than 1% of those disqualified for a condition in this category received an EPTS discharge in the same category.

TABLE 17: CONCORDANCE BETWEEN LEADING DISQUALIFICATION CATEGORIES AND REASON FOR EPTS DISCHARGE

Disqualification and EPTS Category ¹	Disqualified Accessions	EPTS Discharged	
	n	n	%
3. Eyes	18,793	11	0.06
4. Vision	15,826	5	0.03
10. Lungs, Chest Wall, Pleura, and Mediastinum	2,933	15	0.51
17. Upper Extremities	2,873	12	0.42
18. Lower Extremities	4,936	18	0.36
19. Miscellaneous Conditions of the Extremities	9,497	35	0.37
21. Skin and Cellular Tissue Conditions	3,564	7	0.20
23. Systemic Conditions	3,254	1	0.03
28. Learning, Psychiatric and Behavioral Disorders	6,819	32	0.47
30. Miscellaneous Conditions	1,852	-	

¹ Categories are not mutually exclusive, service members with multiple disqualifications across different DQ categories are counted more than once.

Tables 18A-D display the most common reasons for EPTS discharge among all accessions who applied between FY 2016-2018, regardless of medical disqualification status. For consistency, EPTS conditions were derived from the service member's separation record and then categorized based on DoDI 6130.03 disqualification categories.

Tables 18A-D Key Findings

- In all services, the most common conditions for which service members were EPTS discharged were learning/psychiatric/behavioral disorders and musculoskeletal-related conditions (upper/lower/miscellaneous extremities, spine).
- The Army had the highest proportion of EPTS discharges related to the lungs, chest wall, pleura or mediastinum (12%) than the other services (2-6%).
- The Air Force had the highest proportion of endocrine-related EPTS discharges (17%) than the other services (<3%).

ARMY

TABLE 18A: MOST COMMON REASONS FOR EPTS DISCHARGE: ARMY

EPTS Condition Category ¹	EPTS Discharged	
	n	% ²
28. Learning, Psychiatric, and Behavioral Disorders	1,379	40.8
10. Lungs, Chest Wall, Pleura, and Mediastinum	395	11.7
18. Lower Extremities	333	9.9
16. Spine and Sacroiliac Joint Conditions	256	7.6
19. Miscellaneous Conditions of the Extremities	243	7.2
26. Neurologic Conditions	193	5.7
17. Upper Extremities	137	4.1
3. Eyes	75	2.2
11. Heart	64	1.9
25. Rheumatologic Conditions	62	1.8
Total EPTS discharges	3,379	

¹ Categories are not mutually exclusive; service members may be counted more than once if EPTS discharged with more than one condition.

² Represents the proportion of service members with the specific EPTS condition category out of the total number of EPTS discharges.

NAVY

TABLE 18B: MOST COMMON REASONS FOR EPTS DISCHARGE: NAVY

EPTS Condition Category ¹	EPTS Discharged	
	n	% ²
28. Learning, Psychiatric, and Behavioral Disorders	524	63.4
19. Miscellaneous Conditions of the Extremities	62	7.5
26. Neurologic Conditions	46	5.6
11. Heart	41	5.0
18. Lower Extremities	37	4.5
24. Endocrine and Metabolic Conditions	27	3.3
16. Spine and Sacroiliac Joint Conditions	24	2.9
10. Lungs, Chest Wall, Pleura, and Mediastinum	17	2.1
17. Upper Extremities	11	1.3
3. Eyes	11	1.3
Total EPTS discharges	826	

¹ Categories are not mutually exclusive; service members may be counted more than once if EPTS discharged with more than one condition.

² Represents the proportion of service members with the specific EPTS condition category out of the total number of EPTS discharges.

MARINE CORPS

TABLE 18C: MOST COMMON REASONS FOR EPTS DISCHARGE: MARINE CORPS

EPTS Condition Category ¹	EPTS Discharged	
	n	% ²
28. Learning, Psychiatric, and Behavioral Disorders	427	49.4
18. Lower Extremities	75	8.7
19. Miscellaneous Conditions of the Extremities	55	6.4
10. Lungs, Chest Wall, Pleura, and Mediastinum	49	5.7
26. Neurologic Conditions	46	5.3
16. Spine and Sacroiliac Joint Conditions	45	5.2
23. Systemic Conditions	31	3.6
25. Rheumatologic Conditions	21	2.4
11. Heart	19	2.2
17. Upper Extremities	18	2.1
Total EPTS discharges	864	

¹ Categories are not mutually exclusive; service members may be counted more than once if EPTS discharged with more than one condition.

² Represents the proportion of service members with the specific EPTS condition category out of the total number of EPTS discharges.

AIR FORCE

TABLE 18D: MOST COMMON REASONS FOR EPTS DISCHARGE: AIR FORCE

EPTS Condition Category ¹	EPTS Discharged	
	n	% ²
28. Learning, Psychiatric, and Behavioral Disorders	324	36.9
18. Lower Extremities	183	20.8
19. Miscellaneous Conditions of the Extremities	169	19.2
24. Endocrine and Metabolic Conditions	145	16.5
16. Spine and Sacroiliac Joint Conditions	44	5.0
11. Heart	35	4.0
26. Neurologic Conditions	33	3.8
10. Lungs, Chest Wall, Pleura, and Mediastinum	32	3.6
21. Skin and Cellular Tissue Conditions	32	3.6
23. Systemic Conditions	27	3.1
Total EPTS discharges	879	

¹ Categories are not mutually exclusive; service members may be counted more than once if EPTS discharged with more than one condition.

² Represents the proportion of service members with the specific EPTS condition category out of the total number of EPTS discharges.



Data Limitations

Due to several changes in the population and methods, caution should be taken when comparing these results to results in previous AMSARA annual reports.

1. In previous AMSARA annual reports, the follow-up period ended on the date of the service member's first separation. This year, AMSARA lengthened the follow-up period for both accessions and separations to account for the transactional nature of the accession and separation databases. Service members with an accession record immediately following a separation date were not considered separated from service, regardless of assigned inter-separation code (ISC). This change may lead to a decrease in rates of early separation.
2. Due to the use of both ICD-9 and ICD-10 codes during the time period of this report, AMSARA utilized the General Equivalence Mappings (GEMS) code crosswalk to convert ICD-9 to ICD-10 codes. Due to increased specificity in the ICD-10 coding system compared to that of the ICD-9, single ICD-9 codes may convert to multiple ICD-10 codes. The conversion of ICD-10 into DQ categories based on the DoDI 6130.03 should at least partially mitigate the complications caused by converting ICD-9 codes into multiple ICD-10 codes, as the resulting ICD-10 codes are likely to be within the same DQ category. Nonetheless, any comparisons between results published in this report versus results published in previous AMSARA annual reports may be due to changes in the disqualification coding structure and/or accession medical standards rather than actual number/rate of disqualifications within the applicant pool.

References

1. Department of Defense (DOD). (2018). Department of Defense Instruction (DoDI) 6130.03: Medical standards for appointment, enlistment, or induction into the military services.
2. Army Public Affairs. U.S. Army achieves recruiting goals. Online: https://www.army.mil/article/227317/u_s_army_achieves_recruiting_goals. Published September 17, 2019.

Pictures:

- Madero, C. (2021). Morning Colors [Photograph]. VIRIN 210113-M-MI059-1107. U.S. Dept of Defense: Online. <https://www.defense.gov/observe/photo-gallery/igphoto/2002565638/>
- Beard, N. (2019). Flag Prep [Photograph]. VIRIN 190830-N-QI061-2032C. U.S. Dept of Defense: Online. <https://www.defense.gov/observe/photo-gallery/igphoto/2002179666/>
- Barnes, S (2020). Unflagging Dedication [Photograph]. VIRIN 200719-N-EI1510-0072. U.S. Dept of Defense: Online. <https://www.defense.gov/observe/photo-gallery/igphoto/2002313838/>.
- Dobbs, B. (2020). Arena Oath [Photograph]. VIRIN 200227-N-RB168-0048. U.S. Dept of Defense: Online. <https://www.defense.gov/observe/photo-gallery/igphoto/2002256905/>
- Chapman, M. (2020). Navy Recruits [Photograph]. VIRIN 200602-N-NO492-1033. U.S. Dept of Defense: Online. <https://www.defense.gov/observe/photo-gallery/igphoto/2002313838/>.
- Saldivar, J. (2020). Military Graduation [Photograph]. VIRIN 200827-F-YQ806-0123C. U.S. Dept of Defense: Online. <https://www.defense.gov/observe/photo-gallery/igphoto/2002488907/>.
- Hecht, M. (2019). Plank Position [Photograph]. VIRIN 191019-Z-NI803-0373. U.S. Dept of Defense: Online. <https://www.defense.gov/observe/photo-gallery/igphoto/2002199105/>.
- Gunther, M. (2020). Fitness Test [Photograph]. VIRIN 200726-Z-IC052-1020M. U.S. Dept of Defense: Online. <https://www.defense.gov/observe/photo-gallery/igphoto/2002467720/>.
- Eberhart, M. (2020). Leg Tucks at Sunrise [Photograph]. VIRIN 200714-A-MQ748-0017. U.S. Dept of Defense: Online. <https://www.dvidshub.net/image/6438756/leg-tucks-sunrise>.
- Getsie, R. (2020). Nevada Guard Soldiers Working in Response to COVID-19 [Photograph]. VIRIN 201130-Z-ZF206-102. U.S. Dept of Defense: Online. <https://www.dvidshub.net/image/6450034/nevada-guard-soldiers-working-response-covid-19>
- Groue, K. (2020). Graduation Ceremony [Photograph]. VIRIN 201016-F-BD983-0146. U.S. Dept of Defense. <https://www.defense.gov/observe/photo-gallery/igphoto/2002520573/>.
- Gosun, U. (2020). U.S. Marines participate in a live-fire squad attack range during exercise Fuji Viper 21.1 [Photograph]. VIRIN 201210-M-TU214-2096. U.S. Dept of Defense: Online. <https://www.dvidshub.net/image/6460725/us-marines-participate-live-fire-squad-attack-range-during-exercise-fuji-viper-211>
- Cunningham, L. (2019). Corpsman Applies Boot [Photograph]. VIRIN 191202-N-LW757-1005. U.S. Dept of Defense. <https://www.dvidshub.net/image/5949834/corpsman-applies-boot>
- Dubois, K. (2021). Sky High [Photograph]. VIRIN 210728-F-AR942-9386A. U.S. Dept of Defense. Online. <https://www.defense.gov/observe/photo-gallery/igphoto/2002835851/>

Acronyms

AFQT	Armed Forces Qualification Test
AMSARA	Accession Medical Standards Analysis and Research Activity
AMSWG	Accession Medical Standards Working Group
BMI	Body Mass Index
BUMED	Navy Bureau of Medicine and Surgery
CCS	Clinical Classifications Software
CTS	Contingency Tracking System (DMDC)
DMDC	Defense Manpower Data Center
DOD	Department of Defense
DoDI	Department of Defense Instruction
DQ	Disqualification
EPTS	Existed Prior to Service
FY	Fiscal Year
GEMS	General Equivalence Mappings
IET	Initial Entry Training
ICD-9	International Classification of Diseases, 9 th Revision
ICD-10	International Classification of Diseases, 10 th Revision
ISC	Interservice Separation Code
MEPS	Military Entrance Processing Station
MOS	Military Occupation Specialty
OCO	Overseas Contingency Operations
SSN	Social Security Number
SMWRA	Service Medical Waiver Review Authority
USAREC	U.S. Army Recruiting Command
USMEDCOM	U.S. Medical Command
USMEPCOM	U.S. Military Entrance Processing Command
USMIRS	U.S. Military Entrance Processing Command Integrated Resource System
VASRD	Veterans Administration Schedule for Rating Disabilities
WRAIR	Walter Reed Army Institute of Research



Accession Medical Standards Analysis and Research Activity

Medical Standards Analytics and Research

Statistics and Epidemiology Branch

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