# MSMR

Medical Surveillance Monthly Report September 2025 | Vol. 32 | No. 9




*A Publication of the Armed Forces Health Surveillance Division*

Medical Surveillance for Military Readiness

# Table of Contents

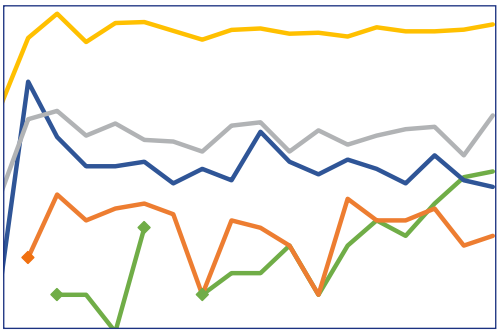










*Update*

# Absolute and Relative Morbidity Burdens Attributable to Various Illnesses and Injuries Among Active Component Members of the U.S. Armed Forces, 2024

*MSMR*'s annual burden of disease reports are designed to provide accurate estimations of the general health status of U.S. military personnel, for prioritization of effective interventions with measurable impacts on force readiness.[1] In these reports, diagnoses are grouped to inform readers of the major factors and variables each year affecting health care provision within the Military Health System (MHS). Although the burden of disease within a health system can be classified into several categories, the majority of the global disease burden results from noncommunicable diseases, followed by communicable diseases, maternal and neonatal diseases, nutritional diseases, and injuries.[2]

To broadly describe the morbidity burden among active component service members (ACSMs), since 2001 *MSMR* has used a classification system derived from the Global Burden of Disease (GBD) Study.[3,4] This systematic classification, developed through a 30-year scientific effort, quantifies major diseases, risk factors, and intermediate clinical outcomes in a standardized manner, enabling comparisons between populations and health problems over time.[5,6] *MSMR* utilizes the GBD classification system in combination with an International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM) chapter-based system for categorizing hospitalizations and ambulatory care visits among the MHS population.

To improve the utility of this information, these classification schemes are refined by *MSMR*'s editorial staff. The major classification system for diagnoses, ICD-10-CM, features more than 68,000 separate codes.[5] While the ICD-10-CM is organized in logical chapters, the groupings are not optimal for articulating burdens of disease within a military population. Consequently, some re-groupings of diagnoses are necessary to achieve a meaningful depiction of the burden in the military population.

The burden of disease experienced by ACSMs—a demographic characterized by youth, good health, and a predominantly male population—is assumed to substantially differ from the burden observed for the general U.S. and global populations. This divergence is attributable to a constellation of factors, including 1) pre-accession medical screening designed to ensure physical fitness for military service, 2) mandatory periodic health assessments and screenings, which potentially lead to earlier detection of certain conditions, 3) frequent use of outpatient services for readiness-related requirements, 4) unique environmental and lifestyle factors associated with military life and training, and 5) universal access to medical care without direct financial cost. These factors, collectively, contribute to distinct morbidity burden profiles within the ACSM population.

Individuals enlist or are commissioned into the active component typically between the ages of 17 and 25 years, with almost all members ending service by age 50 years. In 2024, the largest age group within the U.S. active component was 20-24 years, followed by 25-29 years, according to Defense Medical Surveillance System (DMSS) data. Women accounted for 19.4% of the active component in 2024.

Within the military population and its unique environment, categories of illness and injury requiring hospitalization have historically differed from illness and injury categories that result in the most outpatient visits. Added requirements for military readiness are likely a major factor in outpatient health care provision, but rarely for hospitalization. The categories of medical conditions that account for the most medical encounters generally within the Military Health System may differ from those that affect the most individuals, or those that result in the most debilitating or long-lasting effects among service members.[4]

### What are the new findings?

Within the Military Health System in 2024, injuries, mental disorders, and musculoskeletal diseases were the major categories of medical conditions associated with the most medical encounters, greatest numbers of affected service members, and highest numbers of hospital bed days. Those three categories showed modest growth, increasing by about 0.8% compared to 2023. While reported health care encounters increased by 1.3% in 2024, the numbers of affected individuals and hospital bed days decreased by 4.4% and 2.9%, respectively.

### What is the impact on readiness and force health protection?

The major categories of medical conditions in this report present health challenges among U.S. active component service members that can affect force readiness. Continuous health surveillance, morbidity trend analysis, and timely reporting of comprehensive summaries of the major health issues affecting the active duty force provides crucial evidence to line commanders, Military Health System leaders, and health care providers as they establish policies and priorities for effective health care management and treatment of U.S. service members.

This annual summary uses several health care burden measures to quantify the impacts in 2024 of various illnesses and injuries among members of the active component of the U.S. Armed Forces. Health care burden metrics include the total number of medical encounters, individuals affected, and hospital bed days. A consistent and comparative description of the burden of diseases and injuries, and sub-populations affected, should be an important element of health decision-making and planning processes, providing valuable information for where changes in policy or preventive emphasis may improve the medical readiness of the force.[7]

## Methods

The population for this analysis included all individuals who served in the active components of the Army, Navy, Air Force, Marine Corps, or Space Force at any time during the surveillance period of January 1, 2024 through December 31, 2024. Each service member contributed medical records and person-time only for actual months served during the surveillance period.

All data in this analysis were derived from records maintained in the DMSS, which documents both ambulatory care encounters and hospitalizations of active component members of the U.S. Armed Forces. DMSS contains all encounters in military medical and civilian treatment facilities when reimbursed through the MHS. Encounters not routinely and completely documented within fixed military and nonmilitary hospitals and medical clinics (e.g., during deployments, field training exercises, or at sea) were excluded from this analysis.

DMSS data for all inpatient and outpatient medical encounters of ACSMs during the surveillance period were summarized according to the primary (i.e., first-listed) diagnosis if reported with an ICD-10 code between A00 and T88, in addition to an ICD-10 code beginning with Z37 ("outcome of delivery") or Department of Defense (DOD) unique personal history codes DOD0101–DOD0105 ("personal history of traumatic brain injury"). This year, 4 new diagnostic groups were added for analysis: pain in foot, chronic rhinitis, neoplasm of uncertain behavior of skin, and disorder of pituitary gland.

All illness- and injury-specific diagnoses, defined by ICD-10 codes, are grouped into 25 burden of disease-related categories, comprised of 157 medical conditions, based on a modified version of the classification system developed for the GBD Study.[4] This classification system was developed by the *MSMR* editorial staff in 2001 and is updated annually.

The GBD system groups diagnoses with common pathophysiological or etiological bases or significant DOD health policy importance. In this report, some diagnoses grouped into single categories in the GBD system (e.g., mental health disorders) were dis-aggregated to increase military relevance. In addition, injuries are classified by affected anatomical site rather than cause, as external causes of injuries are not required to be documented by providers.

The morbidity burdens attributable to various conditions were estimated based on the total number of medical encounters associated with each condition, i.e., total hospitalizations and ambulatory visits for the condition, with a limit of 1 encounter for an individual per condition each day; and numbers of service members affected by each condition, i.e., individuals with at least 1 medical encounter for the condition during the year; as well as total bed days during hospitalizations for each condition.

## Results

### Morbidity burden, by category

Provisional data indicate that affected ACSMs (n=557,980) experienced medical encounters due to injury more than any other morbidity-related category in 2024 **(Figure 1a)**. Ranking third in terms of hospital bed days, injuries accounted for about one-fourth (23.5%) of all medical encounters **(Figure 1b)**. The injury category combines ICD-10 'S' ("injury") and 'T' codes ("burns and poisonings"), but injuries account for about 98.1% of ambulatory encounters within the category (data not shown).

Mental health disorders accounted for more hospital bed days (n=195,726) than any other morbidity-related category, contributing over half (51.7%) of all hospital bed days, ranking fifth for individuals affected **(Figures 1a, 1b)**. Together, the injury and mental health disorder categories accounted for over two-thirds (63.0%) of all hospital bed days and 42.3% of all medical encounters in 2024.

Maternal conditions (pregnancy complications and delivery) accounted for a relatively large proportion of all hospital bed days (n=54,348, 14.4%) but a much smaller proportion of medical encounters overall (n=203,467, 1.4%) **(Figures 1a, 1b)**. As women comprised only 19.4% of the active duty force in 2024, these summary statistics understate the impact of these conditions among that group. Maternal conditions were the most frequent category for hospitalization among women in the active component.

### Medical encounters, by condition

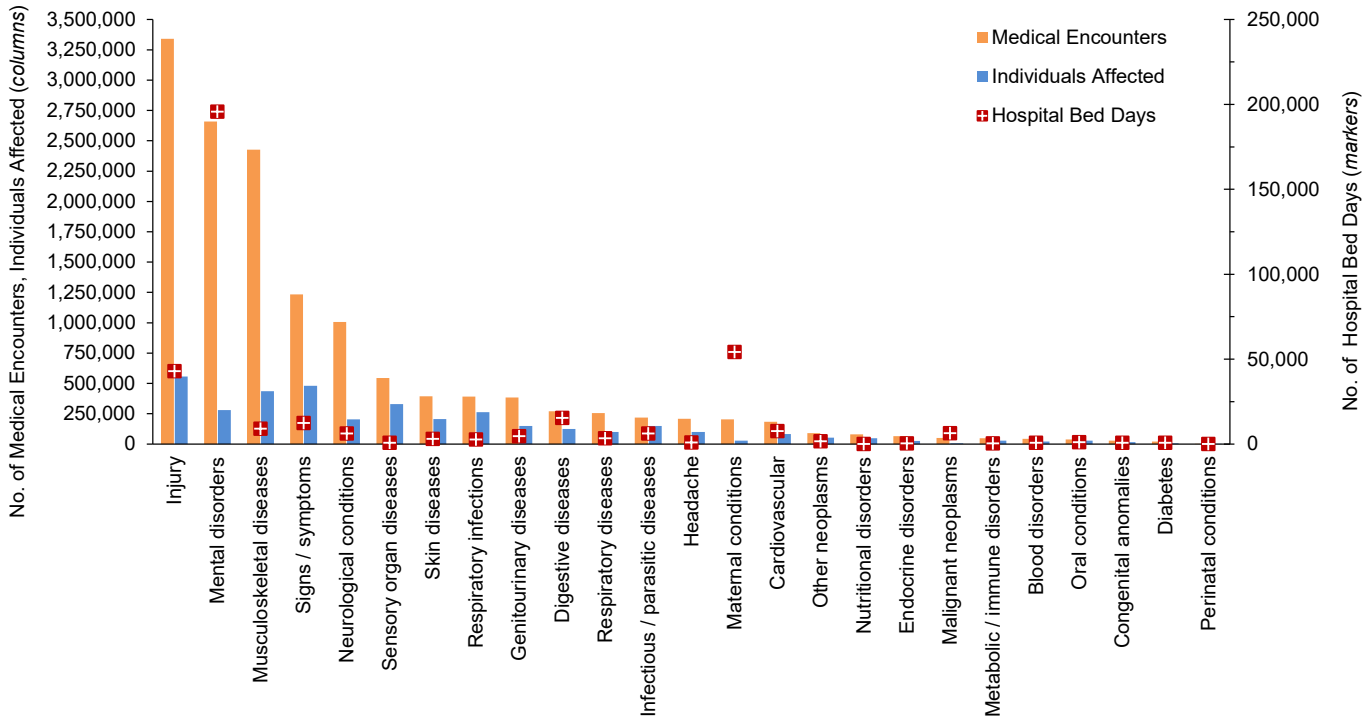
In 2024, almost one-third (33.4%) of all illness- and injury-related medical encounters were due to 5 medical conditions: other back problems (lower back pain, other dorsalgia), knee, arm / shoulder, organic sleep disorders (insomnia, obstructive sleep apnea), and anxiety **(Figure 2)**. Moreover, the 10 conditions associated with the most medical encounters constituted more than half (55.3%) of all illness- and injury-related medical encounters.

The categories of conditions that accounted for the most medical encounters among ACSMs in 2024 were predominantly injuries, mental health disorders, and musculoskeletal diseases. Among reported injuries, knee (6.4%), arm / shoulder (6.2%), foot / ankle (3.7%), and leg (3.3%) resulted in the most medical encounters **(Figure 2** and **Table)**. Mental health disorder diagnoses resulted most frequently from anxiety (5.8%), adjustment (4.2%), mood (4.2%), and substance abuse disorders (2.7%). Other back problems (9.1%), all other musculoskeletal diseases (4.4%), and cervicalgia (1.8%) generated the most medical encounters from musculoskeletal diseases. COVID-19 accounted for 0.2% of total medical encounters in 2024, ranked fifty-eighth, declining from 0.3% in 2023.

### Individuals affected, by category

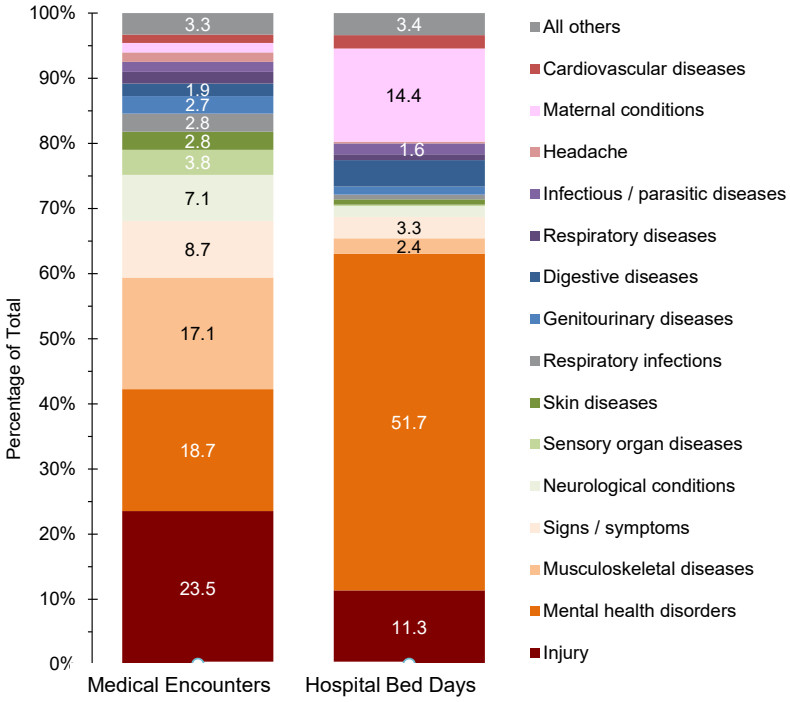
In 2024, the 10 categories of conditions that affected the most service members were signs, symptoms, and other ill-defined conditions (all other signs and symptoms), musculoskeletal diseases (other back problems, all other musculoskeletal diseases), respiratory infections (upper respiratory infections) sensory organ diseases (refraction / accommodation), neurological conditions (organic sleep disorders), injuries (knee, arm / shoulder), respiratory diseases, and skin diseases (all other skin diseases). COVID-19 affected 23,173 ACSMs and ranked forty-seventh for members affected, a considerable decrease in rank from thirty-fifth in 2023.

**FIGURE 1a.** Numbers of Medical Encounters[a], Individuals Affected[b] and Hospital Bed Days by Burden of Disease Major Category[c], Active Component, U.S. Armed Forces, 2024




Abbreviation: No., number.
[a] Medical encounters include total hospitalizations and ambulatory visits for the condition (with no more than 1 encounter per individual per day per condition).
[b] Individuals with at least 1 hospitalization or ambulatory visit for the condition.
[c] Burden of disease major categories modified from those defined in Global Burden of Disease Study.[3,4]

**FIGURE 1b.** Percentage of Medical Encounters[a] and Hospital Bed Days Attributable to Burden of Disease Major Categories[b], Active Component, U.S. Armed Forces, 2024

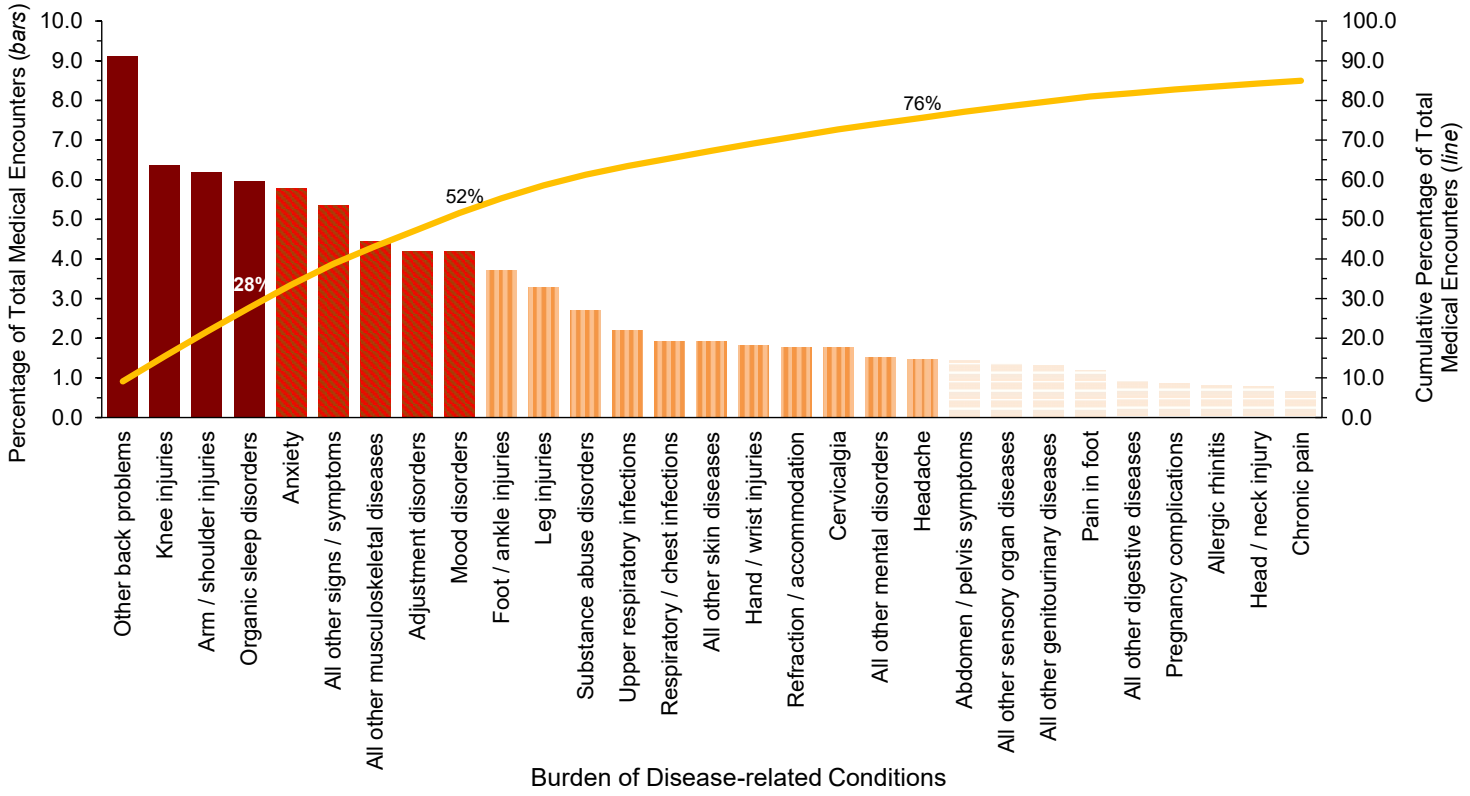



[a] Medical encounters include total hospitalizations and ambulatory visits for the condition (with no more than 1 encounter per individual per day per condition).
[b] Burden of disease major categories modified from those defined in Global Burden of Disease Study.[3,4]

## Hospital bed days, by condition

Mood and substance abuse disorders accounted for nearly one-third (32.7%) of all hospital bed days in 2024 **(Figure 3)**. Four mental health disorders (mood, substance abuse, adjustment, anxiety) and 2 maternal conditions (pregnancy complications, delivery) together accounted for almost two-thirds (60.7%) of all hospital bed days **(Table** and **Figure 3)**. About 11.3% of all hospital bed days were attributable to injury. COVID-19 accounted for 0.1% of total hospital bed days among ACSMs **(Table)**.

**FIGURE 2.** Percentage and Cumulative Percentage Distribution, Burden of Disease-related Conditions[a] that Accounted for the Most Medical Encounters, Active Component, U.S. Armed Forces, 2024




[a] Burden of disease-related conditions modified from those defined in Global Burden of Disease Study.[3,4]

### Relationships between health care burden indicators

There was a strong positive correlation between numbers of medical encounters attributable to various medical conditions with numbers of individuals affected by those conditions (r=0.85) (data not shown). The 3 leading causes of medical encounters were among the 5 medical conditions that most affected individuals **(Table)**, while weak-to-moderate positive relationships were detected between numbers of hospital bed days attributable to conditions with numbers of individuals affected by those conditions (r=0.20), or numbers of medical encounters related to a medical condition (r=0.40). For example, substance abuse disorders and labor and delivery ranked high in terms of total bed days, these conditions affected relatively few ACSMs in 2024.

## Discussion

This *MSMR* report provides the most recent data available for major disease classification and analysis comparable to previous reports. The total number of conditions reported in 2024 increased by 0.8% compared to 2023, and medical encounters increased by 1.3%. The numbers of affected individuals and hospital bed days decreased, however, by 4.4% and 2.9%, respectively. While numbers of individuals affected and hospital bed days decreased in 2024, the major diseases and conditions observed in this analysis are consistent with previous *MSMR* reports on the morbidity and health care burdens of the U.S. military.

Compared to 2023, both numbers of medical encounters and hospital bed days decreased for 5 major categories—mental health disorders, musculoskeletal diseases, respiratory diseases, maternal conditions, and blood disorders—while in the remaining categories, changes in numbers of medical encounters and hospital bed days were inconsistent. Injuries, mental health disorders, and musculoskeletal disorders were the categories in 2024 associated with the most medical encounters, highest numbers of affected service members, and greatest numbers of hospital bed days.

Only 9 of the 157 medical conditions that comprise this report, or just 5.7% of the listed conditions, accounted for slightly more than half (51.6%) of all illness- and injury-related medical encounters: 2 anatomical, site-defined injuries (knee, arm/shoulder), 3 mental health disorders (anxiety, adjustment, mood disorders), 2 musculoskeletal conditions (other back problems, all other musculoskeletal diseases), 1 sign, symptom or ill-defined condition (all other signs and symptoms), and 1 neurological condition (organic sleep disorders).

The pattern of illness and injury among U.S. ACSMs is distinct from other population groups, with different demographic

**TABLE.** Health Care Burdens Attributable to Various Diseases and Injuries, Active Component, U.S. Armed Forces, 2024

| Major Category Condition[a] | Medical Encounters[b] | | Individuals Affected[c] | | Hospital Bed Days | |
|---|---|---|---|---|---|---|
| | No. | Rank[d] | No. | Rank[d] | No. | Rank[d] |
| Total | 14,197,058 | | | | 378,693 | |
| **Injury, poisoning** | **3,340,649** | | | | **42,962** | |
| Knee injury | 903,534 | 2 | 168,709 | 7 | 892 | 41 |
| Arm, shoulder injury | 879,731 | 3 | 156,505 | 9 | 2,809 | 24 |
| Foot, ankle injury | 525,792 | 10 | 144,691 | 11 | 1,913 | 29 |
| Leg injury | 463,982 | 11 | 107,647 | 16 | 7,209 | 10 |
| Hand, wrist injury | 257,951 | 16 | 88,008 | 18 | 1,197 | 36 |
| Head, neck injury | 109,753 | 28 | 53,409 | 26 | 11,645 | 7 |
| Back, abdomen injury | 58,913 | 36 | 31,844 | 35 | 5,071 | 14 |
| Unspecified injury | 37,272 | 46 | 25,100 | 43 | 854 | 42 |
| Other complications not otherwise specified | 34,326 | 50 | 18,205 | 57 | 6,958 | 11 |
| Other harm from external causes | 26,528 | 57 | 16,999 | 58 | 742 | 48 |
| Environmental injury/poisoning | 22,909 | 64 | 16,908 | 59 | 784 | 45 |
| Poisoning, non-drug | 6,411 | 105 | 4,924 | 91 | 294 | 74 |
| Poisoning, drugs | 4,463 | 114 | 1,563 | 112 | 2,243 | 26 |
| Other superficial injury | 3,868 | 117 | 1,078 | 118 | 3 | 146 |
| All other injuries | 3,237 | 119 | 2,708 | 105 | 160 | 85 |
| Other burns | 1,953 | 126 | 1,194 | 117 | 188 | 83 |
| Under-dosing | 26 | 157 | 26 | 155 | 0 | 150 |
| **Mental disorders** | **2,660,116** | | | | **195,726** | |
| Anxiety | 820,844 | 5 | 129,721 | 12 | 26,862 | 5 |
| Adjustment disorder | 593,359 | 8 | 112,119 | 15 | 32,554 | 4 |
| Mood disorder | 593,268 | 9 | 77,524 | 20 | 65,371 | 1 |
| Substance abuse disorder | 383,340 | 12 | 30,178 | 37 | 58,584 | 2 |
| All other mental disorders | 216,219 | 19 | 62,798 | 23 | 3,760 | 19 |
| Personality disorder | 20,666 | 68 | 3,734 | 98 | 2,194 | 27 |
| Psychotic disorder | 17,419 | 71 | 1,655 | 111 | 5,957 | 13 |
| Somatoform disorder | 9,984 | 91 | 3,784 | 97 | 427 | 65 |
| Tobacco dependence | 5,017 | 111 | 3,069 | 101 | 17 | 127 |
| **Musculoskeletal diseases** | **2,427,408** | | | | **9,083** | |
| Other back problems | 1,294,680 | 1 | 247,383 | 2 | 3,880 | 18 |
| All other musculoskeletal diseases | 630,910 | 7 | 196,122 | 5 | 4,175 | 17 |
| Cervicalgia | 252,100 | 18 | 61,970 | 25 | 89 | 97 |
| Pain in foot | 168,750 | 24 | 71,302 | 21 | 15 | 129 |
| Osteoarthritis | 45,411 | 44 | 20,771 | 52 | 479 | 58 |
| Other knee disorders | 16,432 | 72 | 6,521 | 79 | 356 | 67 |
| Other shoulder disorders | 15,165 | 77 | 6,584 | 78 | 68 | 101 |
| Rheumatoid arthritis | 3,960 | 116 | 1,399 | 114 | 21 | 125 |
| **Signs, symptoms, ill-defined conditions** | **1,234,823** | | | | **12,423** | |
| All other signs and symptoms | 758,270 | 6 | 329,863 | 1 | 10,574 | 8 |
| Respiratory, chest signs and symptoms | 273,022 | 14 | 163,807 | 8 | 756 | 47 |
| Abdomen, pelvis signs and symptoms | 203,531 | 21 | 124,481 | 13 | 1,093 | 38 |
| **Neurological conditions** | **1,007,643** | | | | **6,251** | |
| Organic sleep disorder | 845,886 | 4 | 172,142 | 6 | 525 | 56 |
| Chronic pain | 92,779 | 29 | 27,871 | 39 | 298 | 73 |
| All other neurological conditions | 47,406 | 41 | 18,228 | 56 | 4,581 | 16 |
| Other mononeuritis, upper/lower limbs | 13,046 | 84 | 5,971 | 80 | 29 | 119 |
| Epilepsy | 5,827 | 106 | 1,881 | 109 | 709 | 50 |
| Multiple sclerosis | 2,476 | 124 | 504 | 129 | 101 | 94 |
| Parkinson's disease | 223 | 148 | 54 | 147 | 8 | 138 |

**TABLE (cont).** Health Care Burdens Attributable to Various Diseases and Injuries, Active Component, U.S. Armed Forces, 2024

| Major Category Condition[a] | Medical Encounters[b] | | Individuals Affected[c] | | Hospital Bed Days | |
|---|---|---|---|---|---|---|
| | No. | Rank[d] | No. | Rank[d] | No. | Rank[d] |
| **Sensory organ diseases** | **545,237** | | | | **828** | |
| Refraction, accommodation | 252,513 | 17 | 206,459 | 4 | 2 | 147 |
| All other sensory organ diseases | 193,346 | 22 | 119,617 | 14 | 800 | 44 |
| Hearing disorder | 82,075 | 32 | 48,695 | 27 | 6 | 141 |
| Glaucoma | 15,510 | 76 | 10,321 | 70 | 5 | 144 |
| Cataracts | 1,793 | 128 | 963 | 119 | 15 | 129 |
| **Skin diseases** | **395,364** | | | | **3,119** | |
| All other skin diseases | 272,738 | 15 | 152,833 | 10 | 3,056 | 22 |
| Sebaceous gland disease | 73,933 | 34 | 41,377 | 29 | 27 | 121 |
| Contact dermatitis | 48,693 | 40 | 35,973 | 32 | 36 | 113 |
| **Infectious and parasitic diseases** | **219,126** | | | | **6,212** | |
| All other infectious and parasitic diseases | 92,425 | 30 | 62,288 | 24 | 4,996 | 15 |
| Unspecified viral infection | 31,754 | 52 | 29,171 | 38 | 45 | 109 |
| Tinea skin infection | 26,613 | 56 | 20,937 | 51 | 0 | 150 |
| COVID-19 | 26,418 | 58 | 23,173 | 47 | 258 | 76 |
| Diarrheal disease | 18,140 | 69 | 15,739 | 61 | 651 | 53 |
| Sexually transmitted disease (STD) | 15,895 | 74 | 11,807 | 67 | 116 | 91 |
| Chlamydia | 5,656 | 108 | 5,034 | 89 | 10 | 134 |
| Hepatitis B, C | 1,261 | 131 | 539 | 127 | 2 | 147 |
| Tuberculosis | 340 | 143 | 169 | 141 | 22 | 124 |
| Intestinal nematode infection | 330 | 144 | 282 | 136 | 0 | 150 |
| Malaria | 158 | 151 | 57 | 146 | 70 | 100 |
| Tropical cluster | 73 | 155 | 41 | 151 | 2 | 147 |
| Bacterial meningitis | 63 | 156 | 20 | 156 | 40 | 111 |
| **Respiratory infections** | **390,987** | | | | **2,682** | |
| Upper respiratory infection | 311,946 | 13 | 229,755 | 3 | 449 | 62 |
| Lower respiratory infection | 49,347 | 39 | 31,959 | 33 | 2,180 | 28 |
| Otitis media | 29,694 | 53 | 23,243 | 46 | 53 | 105 |
| **Respiratory diseases** | **255,014** | | | | **3,462** | |
| Allergic rhinitis | 113,649 | 27 | 38,889 | 31 | 11 | 133 |
| All other respiratory diseases | 46,858 | 42 | 27,340 | 41 | 2890 | 23 |
| Asthma | 33,632 | 51 | 15,154 | 62 | 274 | 75 |
| Chronic sinusitis | 24,122 | 61 | 16,678 | 60 | 36 | 113 |
| Deviated nasal septum | 16,149 | 73 | 8,806 | 72 | 213 | 80 |
| Chronic rhinitis | 11,908 | 86 | 8,751 | 73 | 0 | 150 |
| Chronic obstructive pulmonary disease | 8,696 | 95 | 7,428 | 74 | 38 | 112 |
| **Genitourinary diseases** | **383,433** | | | | **4,674** | |
| All other genitourinary diseases | 186,694 | 23 | 87,963 | 19 | 1,730 | 30 |
| Female genital pain | 59,224 | 35 | 24,829 | 44 | 48 | 108 |
| Menstrual disorder | 36,248 | 47 | 22,053 | 48 | 336 | 69 |
| UTI, cystitis | 25,557 | 59 | 19,058 | 54 | 211 | 81 |
| Other breast disorders | 24,340 | 60 | 12,591 | 66 | 304 | 72 |
| Vaginitis, vulvitis | 18,136 | 70 | 13,515 | 65 | 0 | 150 |
| Kidney stones | 15,632 | 75 | 6,634 | 77 | 454 | 61 |
| Nephritis, nephrosis | 14,269 | 79 | 5,154 | 88 | 1,557 | 31 |
| Benign prostatic hypertrophy | 3,333 | 118 | 2,068 | 108 | 34 | 118 |
| **Digestive diseases** | **271,707** | | | | **15,407** | |
| All other digestive diseases | 129,648 | 25 | 67,054 | 22 | 8,814 | 9 |
| Esophagus disease | 54,746 | 37 | 31,932 | 34 | 690 | 51 |
| Other gastroenteritis and colitis | 46,466 | 43 | 30,455 | 36 | 1,511 | 32 |
| Constipation | 21,229 | 66 | 14,296 | 64 | 86 | 98 |
| Inguinal hernia | 10,092 | 90 | 3,929 | 96 | 168 | 84 |
| Appendicitis | 7,321 | 100 | 2,829 | 104 | 3,463 | 21 |
| Peptic ulcer disease | 1,352 | 130 | 807 | 121 | 321 | 71 |
| Cirrhosis of liver | 853 | 135 | 209 | 139 | 354 | 68 |

**TABLE (cont).** Health Care Burdens Attributable to Various Diseases and Injuries, Active Component, U.S. Armed Forces, 2024

| Major Category Condition[a] | Medical Encounters[b] | | Individuals Affected[c] | | Hospital Bed Days | |
|---|---|---|---|---|---|---|
| | No. | Rank[d] | No. | Rank[d] | No. | Rank[d] |
| **Maternal conditions** | **203,467** | | | | **54,348** | |
| Pregnancy complications, delivery | 121,660 | 26 | 24,673 | 45 | 33,961 | 3 |
| All other maternal disorders | 44,321 | 45 | 11,736 | 68 | 5,978 | 12 |
| Delivery | 21,631 | 65 | 9,033 | 71 | 12,626 | 6 |
| Ectopic pregnancy, miscarriage, abortion | 10,173 | 89 | 4,420 | 93 | 456 | 60 |
| Puerperium complications | 5,682 | 107 | 3,014 | 102 | 1,327 | 35 |
| **Headache** | **208,826** | | | | **988** | |
| Headache | 208,826 | 20 | 100,169 | 17 | 988 | 40 |
| **Cardiovascular diseases** | **185,229** | | | | **7,721** | |
| All other cardiovascular diseases | 88,514 | 31 | 42,079 | 28 | 3,488 | 20 |
| Essential hypertension | 75,545 | 33 | 39,104 | 30 | 432 | 64 |
| Cerebrovascular disease | 9,687 | 93 | 2,221 | 107 | 2,622 | 25 |
| Ischemic heart disease | 7,647 | 98 | 2,980 | 103 | 782 | 46 |
| Inflammatory | 3,133 | 120 | 1,520 | 113 | 391 | 66 |
| Rheumatic heart disease | 703 | 137 | 629 | 125 | 6 | 141 |
| **Other neoplasms** | **89,143** | | | | **1,763** | |
| All other neoplasms | 35,225 | 49 | 21,803 | 49 | 1,135 | 37 |
| Benign skin neoplasm | 23,806 | 63 | 18,841 | 55 | 10 | 134 |
| Neoplasm of uncertain behavior of skin | 13,454 | 82 | 11,381 | 69 | 0 | 150 |
| Lipoma | 9,899 | 92 | 5,805 | 83 | 55 | 104 |
| Uterine leiomyoma | 6,759 | 103 | 3,117 | 100 | 563 | 55 |
| **Endocrine disorders** | **65,946** | | | | **461** | |
| Hypothyroidism | 14,663 | 78 | 7,194 | 75 | 27 | 121 |
| Other thyroid disorders | 14,193 | 80 | 5,553 | 85 | 196 | 82 |
| Testicular hypofunction | 14,056 | 81 | 5,692 | 84 | 6 | 141 |
| All other endocrine disorders | 9,491 | 94 | 4,822 | 92 | 218 | 79 |
| Polycystic ovarian syndrome | 7,082 | 101 | 3,952 | 95 | 9 | 136 |
| Unspecified disorder of pituitary gland | 6,461 | 104 | 3,565 | 99 | 5 | 144 |
| **Malignant neoplasms** | **50,547** | | | | **6,365** | |
| All other malignant neoplasms | 7,957 | 96 | 1,209 | 116 | 1,388 | 34 |
| Lymphoma and multiple myeloma | 7,583 | 99 | 649 | 124 | 841 | 43 |
| Breast cancer | 5,610 | 109 | 511 | 128 | 434 | 63 |
| Melanoma and other skin cancers | 5,151 | 110 | 2,226 | 106 | 75 | 99 |
| Leukemia | 4,652 | 112 | 287 | 135 | 1,486 | 33 |
| Testicular cancer | 4,497 | 113 | 653 | 123 | 226 | 77 |
| Colon, rectum cancers | 4,412 | 115 | 324 | 134 | 656 | 52 |
| Brain cancer | 3,017 | 121 | 224 | 137 | 477 | 59 |
| Thyroid cancer | 2,006 | 125 | 452 | 131 | 107 | 92 |
| Mouth, oropharynx cancers | 1,164 | 132 | 138 | 142 | 94 | 96 |
| Prostate cancer | 1,125 | 133 | 220 | 138 | 52 | 106 |
| Cervix uteri cancer | 974 | 134 | 498 | 130 | 15 | 129 |
| Trachea, bronchus, lung cancers | 612 | 140 | 83 | 143 | 133 | 87 |
| Stomach cancer | 549 | 141 | 34 | 153 | 98 | 95 |
| Pancreatic cancer | 299 | 145 | 47 | 150 | 127 | 88 |
| Ovarian cancer | 268 | 146 | 52 | 148 | 21 | 125 |
| Liver cancer | 237 | 147 | 38 | 152 | 23 | 123 |
| Corpus uteri cancer | 167 | 150 | 31 | 154 | 14 | 132 |
| Bladder cancer | 156 | 152 | 48 | 149 | 35 | 116 |
| Esophagus cancer | 111 | 154 | 9 | 157 | 63 | 102 |
| **Metabolic and immune disorders** | **48,247** | | | | **494** | |
| Lipoid metabolism disorder | 26,861 | 55 | 19,750 | 53 | 51 | 107 |
| Other metabolic disorders | 10,641 | 88 | 5,840 | 82 | 333 | 70 |
| Gout | 7,871 | 97 | 3,991 | 94 | 8 | 138 |
| Immune disorder | 2,874 | 123 | 952 | 120 | 102 | 93 |

**TABLE (cont).** Health Care Burdens Attributable to Various Diseases and Injuries, Active Component, U.S. Armed Forces, 2024

| Major Category Condition[a] | Medical Encounters[b] | | Individuals Affected[c] | | Hospital Bed Days | |
|---|---|---|---|---|---|---|
| | No. | Rank[d] | No. | Rank[d] | No. | Rank[d] |
| **Nutritional disorders** | **80,982** | | | | **107** | |
| Overweight, obesity | 52,329 | 38 | 27,539 | 40 | 42 | 110 |
| All other nutritional disorders | 28,454 | 54 | 21,705 | 50 | 36 | 113 |
| Protein-energy malnutrition | 199 | 149 | 79 | 144 | 29 | 119 |
| **Blood disorders** | **43,712** | | | | **871** | |
| All other blood disorders | 13,244 | 83 | 5,908 | 81 | 486 | 57 |
| Other non-deficiency anemias | 12,193 | 85 | 6,910 | 76 | 220 | 78 |
| Iron deficiency anemia | 10,873 | 87 | 4,949 | 90 | 122 | 89 |
| Hereditary anemia | 6,767 | 102 | 5,247 | 86 | 35 | 116 |
| Other deficiency anemias | 635 | 138 | 398 | 133 | 8 | 138 |
| **Oral conditions** | **38,650** | | | | **1,072** | |
| All other oral conditions | 35,948 | 48 | 25,521 | 42 | 1,063 | 39 |
| Dental caries | 1,877 | 127 | 1,790 | 110 | 0 | 150 |
| Periodontal disease | 825 | 136 | 779 | 122 | 9 | 136 |
| **Congenital anomalies** | **28,502** | | | | **862** | |
| All other congenital anomalies | 23,929 | 62 | 14,493 | 63 | 585 | 54 |
| Congenital heart disease | 2,898 | 122 | 1,307 | 115 | 122 | 89 |
| Other circulatory anomalies | 1,675 | 129 | 623 | 126 | 155 | 86 |
| **Diabetes mellitus** | **21,099** | | | | **733** | |
| Diabetes mellitus | 21,099 | 67 | 5,191 | 87 | 733 | 49 |
| **Conditions arising during perinatal period[e]** | **1,201** | | | | **79** | |
| All other perinatal anomalies | 627 | 139 | 401 | 132 | 62 | 103 |
| Low birth weight | 447 | 142 | 186 | 140 | 0 | 150 |
| Birth asphyxia and birth trauma | 127 | 153 | 69 | 145 | 17 | 127 |

Abbreviations: No., number; UTI, urinary tract infection; STD, sexually transmitted disease.
[a] Burden of disease major categories and burden of disease-related conditions modified from those defined in Global Burden of Disease Study.[3,4]
[b] Medical encounters include total hospitalizations and ambulatory visits for the condition (with no more than 1 encounter per individual per day per condition).
[c] Individuals with at least 1 hospitalization or ambulatory visit for the condition.
[d] Rank based on the number of encounters, individuals affected, or hospital bed days in the respective columns within the listing of 157 burden-related disease conditions. For hospital bed days, there were 8 conditions with the rank of 150 (0); 14 other conditions had tied rankings.
[e] Conditions affecting newborns erroneously coded on service member medical records.

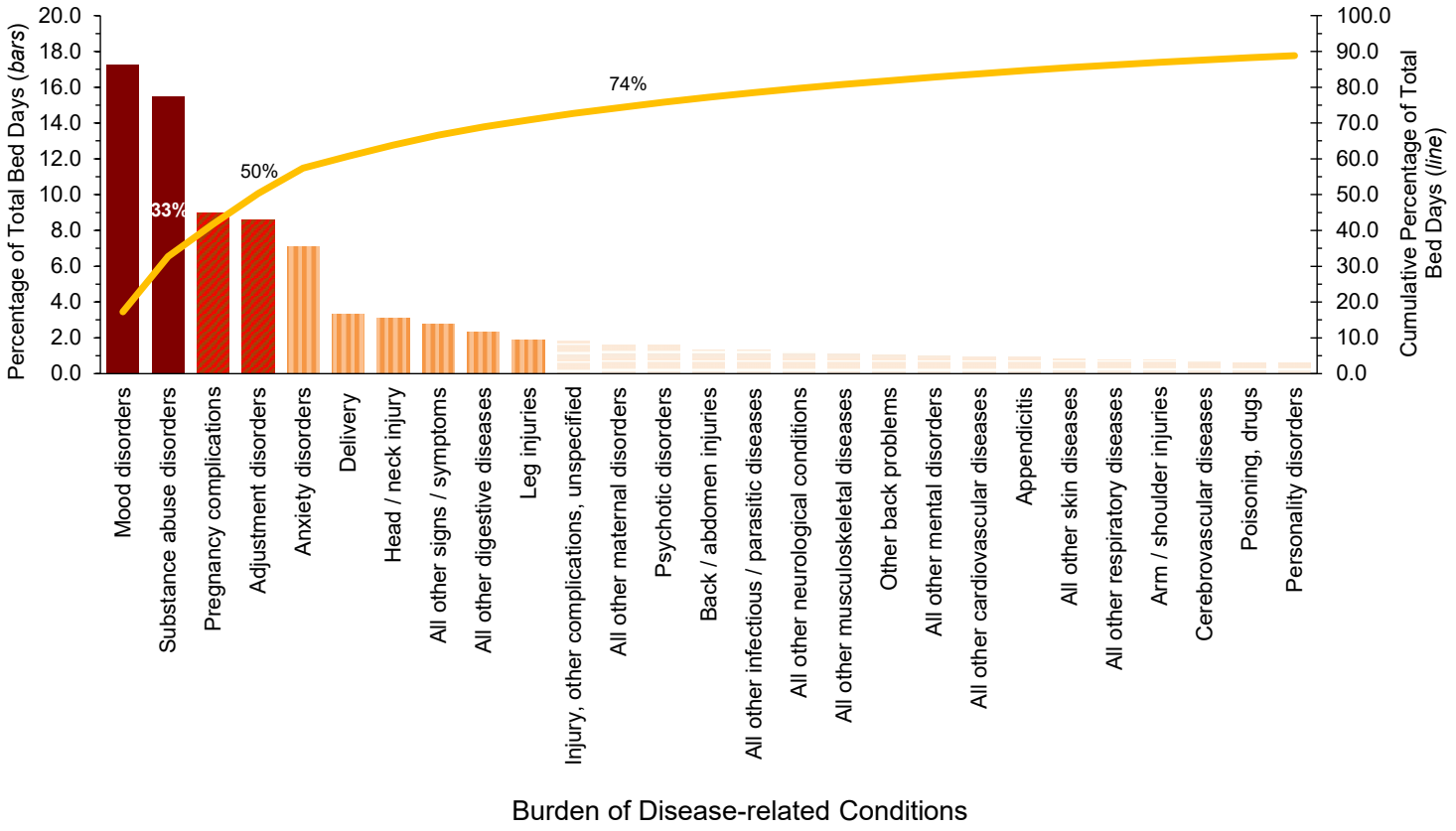
distributions and occupational hazards. Injuries, mental disorders, and musculoskeletal diseases are identified in the literature as among the leading causes of morbidity and disability among service members throughout military history, affecting readiness and health care provision.[8-10] A previous study reported that injuries were the single leading cause of death, disability, hospitalization, outpatient visits, and manpower loss among U.S. military service members.[8] Exposure to intense physical demands during training and in operational environments increases risk of musculoskeletal injury, which contributes to significant morbidity among military personnel.[11] Due to lifestyles that can be influenced by operational conditions, multiple combat missions, and familial separations, among other factors, a number of mental disorders including occupational stress, depression, and suicide are common among military personnel.[9] Some studies have reported significant associations between major depressive disorder and deployment.[10]

Reporting on the burden of disease and injury includes reliable quantification of their physical and psychosocial health impacts, as well as risk factors, that can provide valuable information about a population's health status, for optimal resource allocation for prevention and treatment. Accurate estimates can be used to predict expected health care use and costs, prioritize effective interventions, and evaluate their impacts and cost effectiveness.[6] Current, accurate information on the scale of health disorders among service members, groups at significant risk, and trends in their health statuses over time are critical for policy-makers and commanders.

Preventing injuries and illnesses in service members requires not only routine injury and disease monitoring, but informed, pervasive understanding of the link between health-related factors and disease occurrence, a comprehensive medical surveillance system for successful prevention programs, and data-driven research prioritization. These surveillance, analysis, and reporting efforts can culminate in effective partnerships between commanders, policy-makers, and service members for direct actions to prevent disease and injury.[8,11]

With psychosocial factors shown to be implicated in increased risk of back pain, for example, addressing related health care issues holistically, rather than divided among discrete categories, would be beneficial.[12,13] Integrated approaches to care not only address identified burdens of medical

**FIGURE 3.** Percentage and Cumulative Percentage Distribution, Burden of Disease-related Conditions[a] that Accounted for the Most Hospital Bed Days, Active Component, U.S. Armed Forces, 2024




[a] Burden of disease-related conditions modified from those defined in Global Burden of Disease Study.[3,4]

conditions but their associated risk factors. The unique health challenges of the military population share risk factors and medical conditions with the civilian population, with the added complexities of service experience and the nature of combat.[14]

## References


1. Hernandez JBR, Kim PY. Epidemiology morbidity and mortality. In: *StatPearls* [internet]. Updated Oct. 3, 2022. StatPearls Publishing;2024. https://www.ncbi.nlm.nih.gov/books/nbk547668
2. Roser M, Ritchie H, Spooner F. Burden of Disease. 2024. Accessed Aug. 14, 2025. https://ourworldindata.org/burden-of-disease
3. World Health Organization. *The Global Burden of Disease: 2004 Update*. World Health Organization;2008. Accessed Aug. 14, 2025. https://www.who.int/publications/i/item/9789241563710
4. Murray CJL, Lopez AD, eds. *The Global Burden of Disease: A Comprehensive Assessment of Mortality and Disability from Diseases, Injuries, and Risk Factors in 1990 and Projected to 2020*. Harvard University Press;1996:120-122.
5. Murray CJL. The Global Burden of Disease Study at 30 years. *Nat Med*. 2022;28(10):2019-2026. doi:10.1038/s41591-022-01990-1
6. Devleesschauwer B, Maertens de Noordhout C, Smit GS, et al. Quantifying burden of disease to support public health policy in Belgium: opportunities and constraints. *BMC Public Health*. 2014;14:1196. doi:10.1186/1471-2458-14-11967
7. World Health Organization. *WHO Methods and Data Sources for Global Burden of Disease Estimates 2000-2019*. World Health Organization;2020. Accessed Jun. 4, 2024. https://www.who.int/docs/default-source/gho-documents/global-health-estimates/ghe2019_daly-methods.pdf
8. Jones BH, Perrotta DM, Canham-Chervak ML, Nee MA, Brundage JF. Injuries in the military: a review and commentary focused on prevention. *Am J Prev Med*. 2000;18(3 suppl 1):71-84. doi:10.1016/s0749-379(99)00169-5
9. Moradi Y, Dowran B, Sepandi M. The global prevalence of depression, suicide ideation, and attempts in the military forces: a systematic review and meta-analysis of cross sectional studies. *BMC Psychiatry*. 2021;21(1):510. doi:10.1186/s12888-021-03526-2
10. Packnett ER, Elmasry H, Toolin CF, Cowan DN, Boivin MR. Epidemiology of major depressive disorder disability in the US military: FY 2007-2012. *J Nerv Ment Dis*. 2017;205(9):672-678. doi:10.1097/nmd.0000000000000692
11. Lovalekar M, Hauret K, Roy T, et al. Musculoskeletal injuries in military personnel: descriptive epidemiology, risk factor identification, and prevention. *J Sci Med Sport*. 2021;24(10):963-969. doi:10.1016/j.jsams.2021.03.016
12. To D, Rezai M, Murnaghan K, Cancelliere C. Risk factors for low back pain in active military personnel: a systematic review. *Chiropr Man Therap*. 2021;29(1):52. doi:10.1186/s12998-021-00409-x
13. Meints SM, Edwards RR. Evaluating psychosocial contributions to chronic pain outcomes. *Prog Neuropsychopharmacol Biol Psychiatry*. 2018;87(pt b):168-182. doi:10.1016/j.pnpbp.2018.01.017
14. Alruwaili A, Khorram-Manesh A, Ratnayake A, Robinson Y, Goniewicz K. Supporting the frontlines: a scoping review addressing the health challenges of military personnel and veterans. Healthcare (Basel). 2023;11(21):2870. doi:10.3390/healthcare11212870

*Update*

# Hospitalizations Among Active Component Members of the U.S. Armed Forces, 2024

This report documents the frequencies, rates, trends, and distributions of hospitalizations among active component service members (ACSMs) of the U.S. Army, Navy, Air Force, Space Force, and Marine Corps during calendar year 2024. Summaries are based on standardized hospitalization records at U.S. military and non-military (reimbursed through the Military Health System) medical facilities worldwide that are routinely maintained in the Defense Medical Surveillance System (DMSS).

In this report, primary (i.e., first-listed) discharge diagnoses are considered indicative of the primary cause of hospitalization. As in prior *MSMR* reports, summaries are based on the first 3 digits of the International Classification of Diseases, 10th Revision (ICD-10) codes of the primary discharge diagnoses. Hospitalizations not routinely documented by standardized, automated records, e.g., during field training exercises or while shipboard, are not available in a centralized location for health surveillance purposes and are excluded from this report. Incidence rates were calculated per 1,000 person-years (p-yrs). Percent change in incidence was calculated using unrounded rates.

## Frequencies, rates and trends

In 2024, 58,860 hospitalizations were recorded for ACSMs of the U.S. Army, Navy, Air Force, Space Force, and Marine Corps **(Table 1)**; 50.6% of these hospitalizations were in non-military facilities (data not shown), compared to 46.5% in 2023.

Between 2015 and 2024, the total crude hospitalization rates declined gradually from a high of 55.1 per 1,000 p-yrs in 2015 to a low of 47.3 per 1,000 p-yrs in 2024, representing a decrease of 14% during the 10-year surveillance period. For military facilities, the decline was more pronounced, falling from 36.8 per 1,000 p-yrs in 2015 to 23.4 per 1,000 p-yrs in 2024, about a 36% reduction over the same period. The hospitalization rates between 2015 and 2019 were relatively stable, fluctuating within a narrow range. In 2020, an inflection point occurred, with rates dropping more than 10% below the 2019 level. Although rates rebounded near pre-COVID-19 pandemic levels in 2021 and 2022, they subsequently resumed a decline, reaching their lowest levels in 2024 **(Figure 1)**. Since 2020 was an atypical year due to COVID-19, causing disruptions in health care, this report mainly focuses on changes between 2022 and 2024.

## Hospitalizations, by ICD-10 major diagnostic categories

In 2024, just 4 ICD-10 major diagnostic categories accounted for almost three-quarters (72.2%) of all active component hospitalizations: mental health disorders (29.2%), pregnancy and delivery (26.2%), injury (8.9%), and digestive system (7.9%) **(Table 1)**. Consistent with findings for 2020 and 2022, hospitalizations for mental health disorders in 2024 accounted for more than any other major diagnostic category; 2009 was the last year in which any other diagnostic category—pregnancy and delivery—surpassed mental health disorder hospitalizations (data not shown).

The largest absolute reduction in hospitalizations occurred in the mental health disorders major diagnostic category, with 4,313 fewer hospitalizations in 2024 compared to 2022, translating into a 16.5% rate decrease **(Table 1)**. The number (rate decrease) of pregnancy and delivery hospitalizations decreased by 1,537 (-9.1%) cases, musculoskeletal conditions by 433 (-12.0%) cases, and the 'other' category by 506 (-32.2%) cases. The steepest rate drop, of nearly 80% (234 fewer cases), occurred in COVID-19 hospitalizations. Additional categories with comparatively large declines included injury (-379, -2.7%), digestive system (-326, -2.4%), and signs, symptoms and ill-defined conditions (-258, -6.8%), further contributing to the overall downward trajectory.

At the same time, several major diagnostic categories increased in both frequency and rate of hospitalizations. The largest increases were observed in the respiratory system (225 additional cases, 22.6% rate increase), infectious and parasitic diseases (209, 28.1%), and skin and subcutaneous tissue (80, 16.3%) diagnostic categories.

### What are the new findings?

The hospitalization rate among U.S. active component service members in 2024 at both military and non-military medical facilities was 47.3 per 1,000 person-years, the lowest since 2015, continuing the general declining trend observed over the previous 9 years. It also represents a reduction of 14.0% from the 2015 peak, and 2.8% from the 2023 rate. As in prior years, over half (55.4%) of hospitalizations for active component members were associated with primary diagnoses in 2 categories: mental health disorders and pregnancy conditions.

### What is the impact on readiness and force health protection?

As in prior years, mental health disorders, including substance abuse disorders, were associated with the longest median hospital stay, 6 days; 5% of hospitalizations for mental health disorders had durations greater than 30 days. Prolonged hospitalizations, after care, and early attrition due to these common disorders can diminish not merely individual but unit operational readiness.

**TABLE 1.** Numbers, Rates[a] and Ranks[b] of Hospitalizations by ICD-10 Major Diagnostic Category, Active Component, U.S. Armed Forces, 2020, 2022 and 2024

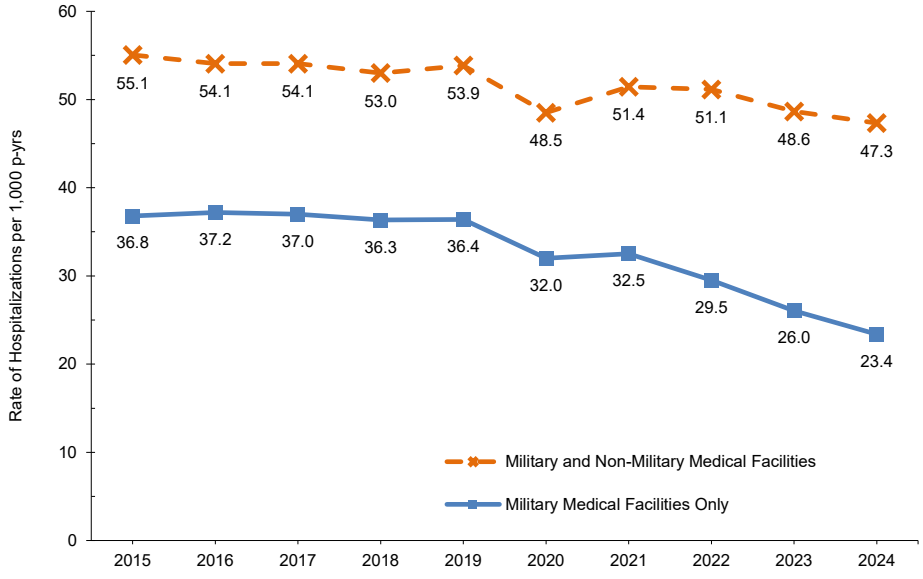
| | 2020 | | | 2022 | | | 2024 | | |
|---|---|---|---|---|---|---|---|---|---|
| Major Diagnostic Category (ICD-10) | No. | Rate[a] | Rank[b] | No. | Rate[a] | Rank[b] | No. | Rate[a] | Rank[b] |
| Mental disorders (F01–F99) | 18,284 | 13.8 | 1 | 21,525 | 16.6 | 1 | 17,212 | 13.8 | 1 |
| Pregnancy and delivery (O00–O9A, relevant Z codes) | 16,344 | 12.3 | 2 | 16,931 | 13.0 | 2 | 15,394 | 12.4 | 2 |
| Pregnancy and delivery (O00–O9A, relevant Z codes)[c] | 16,344 | 71.74 | | 16,931 | 74.61 | | 15,394 | 69.25 | |
| Injury, poisoning (S00–T88, DOD0101–DOD0105) | 5,721 | 4.3 | 3 | 5,594 | 4.3 | 3 | 5,215 | 4.2 | 3 |
| Digestive system (K00–K95) | 5,280 | 4.0 | 4 | 4,991 | 3.8 | 4 | 4,665 | 3.8 | 4 |
| Musculoskeletal system (M00–M99) | 4,026 | 3.0 | 5 | 3,601 | 2.8 | 5 | 3,168 | 2.5 | 5 |
| Signs, symptoms, ill-defined conditions (R00–R99) | 2,465 | 1.9 | 6 | 2,410 | 1.9 | 6 | 2,152 | 1.7 | 6 |
| Genitourinary system (N00–N99) | 1,611 | 1.2 | 8 | 1,522 | 1.2 | 8 | 1,519 | 1.2 | 7 |
| Respiratory system (J00–J99, U07.0) | 1,516 | 1.1 | 10 | 1,291 | 1.0 | 11 | 1,516 | 1.2 | 8 |
| Circulatory system (I00–I99) | 1,520 | 1.1 | 9 | 1,503 | 1.2 | 9 | 1,456 | 1.2 | 9 |
| Nervous system and sensory organ disorders (G00–G99, H00–H95) | 1,293 | 1.0 | 11 | 1,338 | 1.0 | 10 | 1,348 | 1.1 | 10 |
| Neoplasms (C00–D49) | 1,232 | 0.9 | 12 | 1,223 | 0.9 | 12 | 1,181 | 0.9 | 11 |
| Infectious and parasitic diseases (A00–B99) | 884 | 0.7 | 13 | 921 | 0.7 | 13 | 1,130 | 0.9 | 12 |
| Other (Z00–Z99, except pregnancy-related)[d] | 1,841 | 1.4 | 7 | 1,569 | 1.2 | 7 | 1,063 | 0.9 | 13 |
| Skin and subcutaneous tissue (L00–L99) | 752 | 0.6 | 14 | 703 | 0.5 | 14 | 783 | 0.6 | 14 |
| Endocrine, nutritional, metabolic disorders (E00–E89) | 575 | 0.4 | 15 | 511 | 0.4 | 15 | 528 | 0.4 | 15 |
| Hematological and immune disorders (D50–D89) | 295 | 0.2 | 17 | 272 | 0.2 | 17 | 249 | 0.2 | 16 |
| Congenital anomalies (Q00–Q99) | 208 | 0.2 | 18 | 210 | 0.2 | 18 | 224 | 0.2 | 17 |
| COVID-19 (U07.1, U09.9) | 527 | 0.4 | 16 | 291 | 0.2 | 16 | 57 | 0.05 | 18 |
| Total | 64,374 | 48.5 | | 66,406 | 51.1 | | 58,860 | 47.3 | |

Abbreviations: ICD, International Classification of Diseases, 10th Revision; No., number.
[a] Rate per 1,000 person-years.
[b] Rank of major diagnostic category based on number of hospitalizations.
[c] Rate of pregnancy and delivery-related hospitalizations among females only.
[d] Other factors influencing health status and contact with health services (excluding pregnancy-related).

## Hospitalizations, by sex

The hospitalization rate (for all causes) for active component service women in 2024 was more than 3 times that of service men (112.2 per 1,000 p-yrs vs. 33.2 per 1,000 p-yrs, respectively). These data are consistent with hospitalization rate trends published in 2022 for women and men ages 18-44 years (95 per 1,000 p-yrs and 37 per 1,000 p-yrs, respectively) in the general U.S. population.[1] Excluding pregnancy and delivery, the rate of hospitalizations among women (42.2 per 1,000 p-yrs) was 29.2% higher than among men (33.2 per 1,000 p-yrs) in 2024 (data not shown). This rate difference was primarily due to hospitalizations for mental health disorders (female:male rate difference [RD] 4.8 per 1,000 p-yrs) and genitourinary systems (RD 2.3 per 1,000 p-yrs) (data not shown).

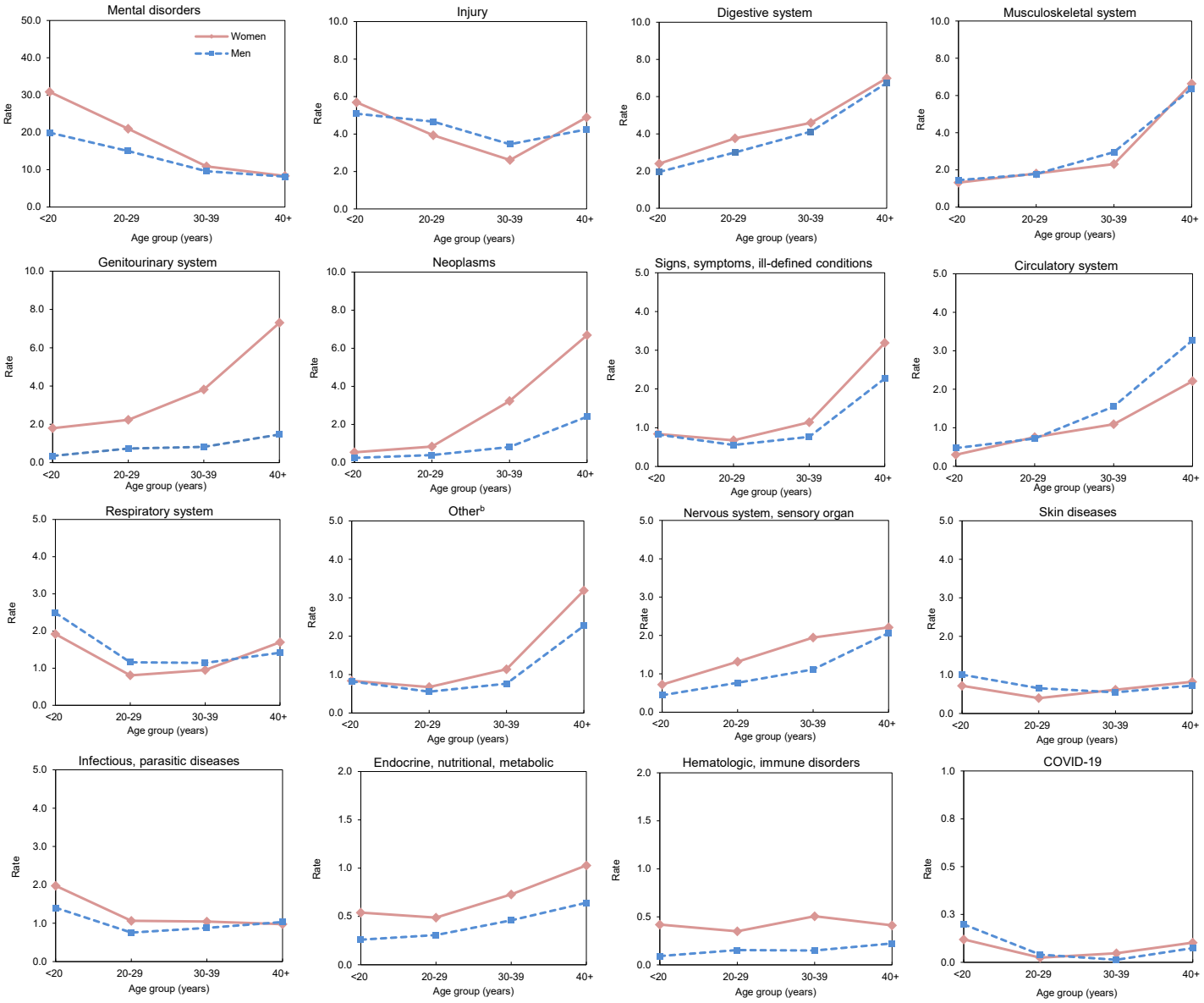
**FIGURE 1.** Rates of Hospitalization, by Type of Medical Facility, Active Component, U.S. Armed Forces, 2015–2024



Relationships between age and hospitalization rates varied by major diagnostic category **(Figure 2)**. Rates among women in all age groups were consistently higher for the mental health disorders, genitourinary system, nervous and sensory organ diseases, digestive systems, neoplasms, endocrine, nutritional, metabolic, hematological, and immune disorders, and the 'other' diagnostic category. As in prior years, the sex gap was greatest for conditions in genitourinary system category, with females admitted at rates 3 to 5 times those of males of all age groups. Similarly, hospitalization rates for neoplasms, hematological and immune disorders were more than twice as high among women. In contrast, rates among men were higher than those among women in all age groups for conditions in the respiratory system category. Hospitalization rates of mental health disorders were 50% higher among younger women, under age 30 years, and were comparable among older age groups.

Hospitalization rates among both sexes generally increased with age for most diagnostic categories except mental health disorders, injury, skin and subcutaneous tissue, respiratory system, infectious and parasitic diseases, and COVID-19. Rates decreased for both sexes with increasing age for mental health disorders and were relatively stable among all age groups for infectious and parasitic diseases, skin and subcutaneous tissue categories, and hematological and immune disorders.

**FIGURE 2.** Rates[a] of Hospitalization by ICD-10 Major Diagnostic Category, Age Group and Sex, Active Component, U.S. Armed Forces, 2024




Abbreviation: ICD-10, International Classification of Diseases, 10th Revision.
[a] Rate per 1,000 person-years
[b] Other factors influencing health status and contact with health services (Z00–Z99, excluding pregnancy-related).

### Most frequent diagnoses

Mental health disorders represented a significant portion of hospital admissions among ACSMs. Mental health disorder diagnoses, collectively, accounted for over 40% of all hospitalizations among men and women—excluding pregnancy and delivery. Adjustment disorders were the primary discharge diagnosis for both men (n=3,869) and women (n=1,127) **(Tables 2 and 3)** in 2024, accounting for nearly 30% of total mental health disorder hospitalizations. The next 4 most frequent mental health diagnoses, for both sexes, were alcohol- and depression-related disorders, including recurrent major depressive disorder (severe without psychotic features), and post-traumatic stress disorder (PTSD). The pregnancy and delivery category constituted the top major diagnostic category for women, accounting for over three-fifths (62.6%) of all female hospitalizations **(Table 3)**.

Other common causes of hospitalization, regardless of sex, included other and unspecified acute appendicitis; sepsis, unspecified organism; and other symptoms and signs involving emotional state; as well as other specified disorders of muscle for men and abnormal uterine and vaginal bleeding for women.

### Durations of hospitalizations

When graphically represented, hospitalization durations demonstrate a highly right-skewed (positive) distribution, with the lower limit equal to 1 day and a mode of 3 days. Because length of hospital stay is not normally distributed, the median duration with interquartile range (IQR) was chosen as the best measure of central tendency. The median (IQR) duration of hospital stays (for all causes) has remained generally stable at 3 (2-5) days but increased to 4 (2-6) days in 2022 and has remained at that level **(Figure 3)**.

Median duration days of hospitalization varied substantially by major diagnostic category. The shortest durations of stays (median days, IQR) were observed for musculoskeletal system, genitourinary system, and digestive system hospitalizations (2 days, 2-6). The longest stays were for mental health disorder (6 days, 4-13) and 'other' (5 days, 3-16) hospitalizations. The remaining categories had a median of 3 (2-7) days.

Five percent of hospitalization stays exceeded 10 days for one half of ICD diagnostic categories: hematological and immune disorders (11 days), infectious and parasitic diseases (12 days), circulatory system (14 days), signs, symptoms and ill-defined conditions (22 days), nervous system and sensory organ diseases (23 days), neoplasms (24 days), injury (30 days), mental health disorders (34 days), and 'other' (primarily orthopedic aftercare and rehabilitation following prior illness or injury) (42 days) **(Figure 4)**.

### Hospitalizations, by service

Among active component members of the Navy, Air Force, and Space Force, pregnancy and delivery accounted for more hospitalizations than any other diagnostic category, while among ACSMs of the Army and Marine Corps, mental health disorders were the leading cause of hospitalization **(Table 4)**. Prior to 2020, pregnancy and delivery were ranked first for both Navy and Air Force ACSMs. Among all the services, the crude hospitalization rate for mental health disorders in 2024 was highest among Army ACSMs (16.1 per 1,000 p-yrs).

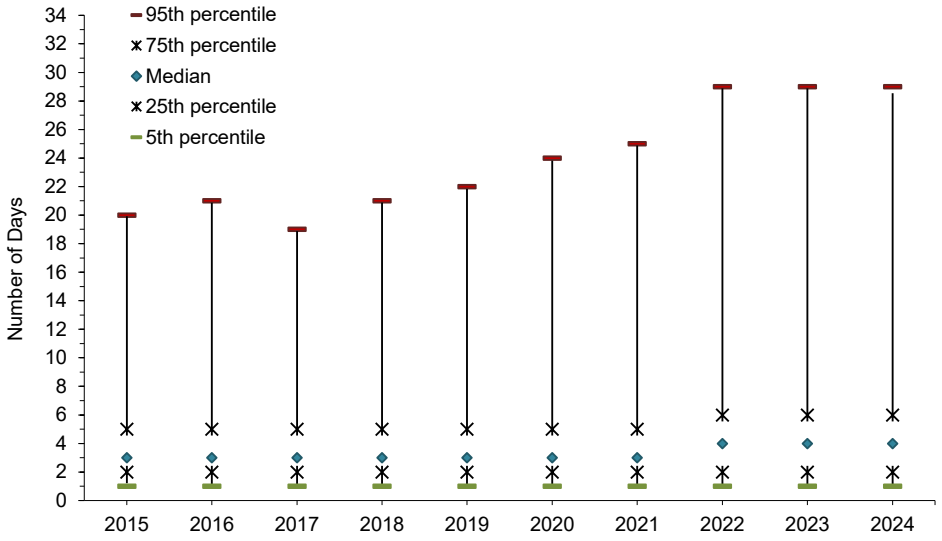
Injury was the third leading hospitalization category among Army and Marine Corps ACSMs, 5.4 per 1,000 p-yrs and 5.0 per 1,000 p-yrs, respectively. Among Navy, Air Force and Space Force ACSMs, the third highest rate of hospitalizations was for the digestive system category, at 3.8, 3.0, and 2.8 per 1,000 p-yrs, respectively.

## Discussion

The 2024 crude annual hospitalization rate marks the lowest recorded level since 2015, continuing a general downward trend observed over the last 10 years. The decline appears largely driven by reductions in hospitalizations in mental health disorders, pregnancy and delivery, musculoskeletal system, and 'other' categories. A significant decrease in hospitalizations in 2020 coincided with COVID-19 pandemic-related changes in health care provision, while the post-pandemic period saw a dramatic drop in COVID-19 hospitalizations.

As in past years, in 2024 mental health disorders accounted for more hospitalizations than any other major diagnostic category. Within the mental health disorders category, adjustment disorders, alcohol dependence, depressive disorders, and PTSD were among the leading primary

**FIGURE 3.** Duration of Hospital Stay, Active Component, U.S. Armed Forces, 2015–2024




Abbreviation: No., number.

**TABLE 2.** Numbers and Percentages of the Most Frequent Diagnoses During Hospitalization Among Men ♂, by ICD-10 Major Diagnostic Category, Active Component, U.S. Armed Forces, 2024

| Diagnostic Category (ICD-10 codes) | No. | %[a] |
|---|---|---|
| **Mental disorders (F01-F99)** | **13,267** | |
| Adjustment disorder | 3,869 | 29.2 |
| Alcohol dependence | 2,565 | 19.3 |
| Major depressive disorder, recurrent severe without psychotic features | 1,355 | 10.2 |
| Post-traumatic stress disorder (PTSD) | 582 | 4.4 |
| Depression, unspecified | 502 | 3.8 |
| **Injury, poisoning (S00–T98, DOD0101–DOD0105)** | **4,376** | |
| Concussion | 200 | 4.6 |
| Infection following procedure | 161 | 3.7 |
| Fracture of shaft of tibia | 122 | 2.8 |
| Other fractures of lower leg | 99 | 2.3 |
| Fracture of shaft of femur | 98 | 2.2 |
| **Digestive system (K00–K95)** | **3,737** | |
| Other and unspecified acute appendicitis | 814 | 21.8 |
| Acute appendicitis with localized peritonitis | 250 | 6.7 |
| Acute pancreatitis, unspecified | 165 | 4.4 |
| Alcohol induced acute pancreatitis | 147 | 3.9 |
| Calculus of gallbladder with acute cholecystitis | 116 | 3.1 |
| **Musculoskeletal system (M00–M99)** | **2,649** | |
| Other specified disorders of muscle | 467 | 17.6 |
| Thoracic, thoracolumbar, lumbosacral intervertebral disc disorders with radiculopathy | 212 | 8.0 |
| Spinal stenosis | 182 | 6.9 |
| Anomalies of dental arch relationship | 148 | 5.6 |
| Other spondylosis with radiculopathy | 101 | 3.8 |
| **Symptoms, signs, abnormal clinical and laboratory findings, NEC (R00–R99)** | **1,667** | |
| Other symptoms and signs involving emotional state | 345 | 20.7 |
| Syncope and collapse | 153 | 9.2 |
| Other symptoms and signs involving cognitive functions and awareness | 128 | 7.7 |
| Chest pain, unspecified | 95 | 5.7 |
| Other chest pain | 79 | 4.7 |
| **Circulatory system (I00–I99)** | **1,246** | |
| Pulmonary embolism without acute cor pulmonale | 124 | 10.0 |
| Non-ST elevation (NSTEMI) myocardial infarction | 77 | 6.2 |
| Paroxysmal atrial fibrillation | 58 | 4.7 |
| Unspecified atrial fibrillation and atrial flutter | 48 | 3.9 |
| Atherosclerotic heart disease of native coronary artery | 38 | 3.0 |
| **Respiratory system (J00-J99, U07.0)** | **1,292** | |
| Pneumonia, unspecified organism | 211 | 16.3 |
| Peritonsillar abscess | 110 | 8.5 |
| Deviated nasal septum | 81 | 6.3 |
| Acute respiratory failure | 73 | 5.7 |
| Other pneumothorax and air leak | 66 | 5.1 |
| **Nervous system and sensory organ disorders (G00–G99, H00–H95)** | **1,008** | |
| Sleep apnea | 100 | 9.9 |
| Epilepsy, unspecified | 56 | 5.6 |
| Acute pain, not elsewhere classified | 31 | 3.1 |
| Transient cerebral ischemic attack, unspecified | 30 | 3.0 |
| Brachial plexus disorder | 28 | 2.8 |
| **Other (Z00–Z99, except pregnancy-related)[b]** | **832** | |
| Encounter for antineoplastic chemotherapy and immunotherapy | 182 | 21.9 |
| Aftercare following joint replacement surgery | 141 | 16.9 |
| Encounter for other orthopedic aftercare | 102 | 12.3 |
| Encounter for other specified post-procedural aftercare | 53 | 6.4 |
| Encounter for examination and observation for unspecified reason | 45 | 5.4 |
| **Infectious and parasitic diseases (A00–B99)** | **881** | |
| Sepsis, unspecified organism | 413 | 46.9 |
| Infectious gastroenteritis, colitis, unspecified | 71 | 8.1 |
| Other specified sepsis | 33 | 3.7 |
| Viral intestinal infection, unspecified | 24 | 2.7 |
| Sepsis due to other Gram-negative organisms | 22 | 2.5 |
| **Genitourinary system (N00–N99)** | **831** | |
| Acute kidney failure, unspecified | 223 | 26.8 |
| Hydronephrosis with renal and ureteral calculous obstruction | 75 | 9.0 |
| Calculus of ureter | 43 | 5.2 |
| Torsion of testis | 37 | 4.5 |
| Calculus of kidney | 31 | 3.7 |
| **Neoplasms (C00–D49)** | **735** | |
| Malignant neoplasm of thyroid gland | 28 | 3.8 |
| Malignant neoplasm of rectum | 24 | 3.3 |
| Acute myeloblastic leukemia | 23 | 3.1 |
| Malignant neoplasm of prostate | 21 | 2.9 |
| Benign neoplasm of pituitary gland | 21 | 2.9 |
| **Skin and subcutaneous tissue (L00–L99)** | **667** | |
| Cellulitis and acute lymphangitis of other parts of limb | 283 | 42.4 |
| Cellulitis and acute lymphangitis of face, neck | 50 | 7.5 |
| Cutaneous abscess, furuncle and carbuncle of limb | 35 | 5.2 |
| Pilonidal cyst and sinus with abscess | 32 | 4.8 |
| Cellulitis and acute lymphangitis of finger, toe | 26 | 3.9 |
| **Endocrine, nutritional, metabolic diseases (E00–E89)** | **393** | |
| Type 2 diabetes mellitus with ketoacidosis | 57 | 14.5 |
| Type 1 diabetes mellitus with ketoacidosis | 49 | 12.5 |
| Dehydration | 39 | 9.9 |
| Type 2 diabetes mellitus with other specified complications | 34 | 8.7 |
| Hypo-osmolality, hyponatremia | 24 | 6.1 |
| **Hematological and immune disorders (D50–D89)** | **159** | |
| Neutropenia, unspecified | 18 | 11.3 |
| Immune thrombocytopenic purpura | 17 | 10.7 |
| Other specified aplastic anemias and other bone marrow failure syndromes | 12 | 7.5 |
| Acute posthemorrhagic anemia | 11 | 6.9 |
| Agranulocytosis secondary to cancer chemotherapy | 11 | 6.9 |
| **Congenital anomalies (Q00–Q99)** | **139** | |
| Other congenital deformities of hip | 15 | 10.8 |
| Atrial septal defect | 14 | 10.1 |
| Arteriovenous malformation of cerebral vessels | 12 | 8.6 |
| Malformation of coronary vessels | 8 | 5.8 |
| Meckel's diverticulum (displaced) (hypertrophic) | 7 | 5.0 |
| **COVID-19 (ICD-10: U07.1, U09.9)** | **47** | |
| COVID-19 | 47 | 100 |

Abbreviations: ICD, International Classification of Diseases, 10th Revision; No., number; NSTEMI, non-ST segment elevation myocardial infarction; NEC, not elsewhere classified.
[a] Percentage of the total number of hospitalizations within the diagnostic category.
[b] Other factors influencing health status and contact with health services (excluding pregnancy-related).

**TABLE 3.** Numbers and Percentages of the Most Frequent Diagnoses During Hospitalization Among Women ♀, by ICD-10 Major Diagnostic Category, Active Component, U.S. Armed Forces, 2024

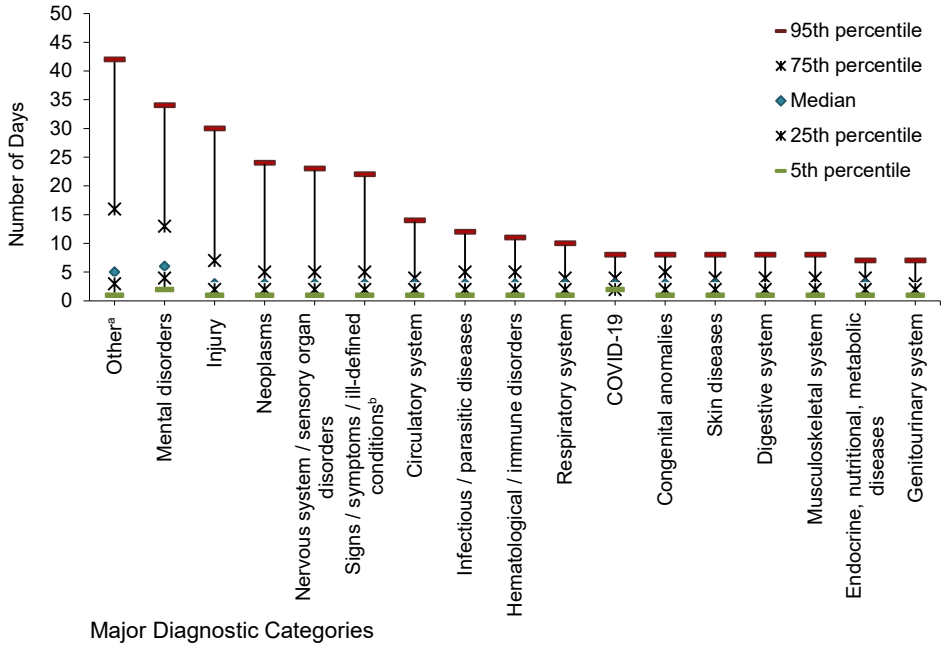
| Diagnostic Category (ICD-10-CM codes) | No. | %[a] |
|---|---|---|
| **Pregnancy and delivery (O00–O99, relevant Z codes)** | **15,394** | |
| Post-term pregnancy | 1,621 | 10.5 |
| Maternal care due to uterine scar from previous surgery | 949 | 6.2 |
| Abnormality in fetal heart rate, rhythm complicating labor and delivery | 835 | 5.4 |
| Premature rupture of membranes, onset of labor within 24 hours of rupture | 833 | 5.4 |
| Gestational [pregnancy-induced] hypertension without significant proteinuria, complicating childbirth | 749 | 4.9 |
| **Mental disorders (F01–F99)** | **3,945** | |
| Adjustment disorder | 1,127 | 28.6 |
| Major depressive disorder, recurrent severe without psychotic features | 531 | 13.5 |
| Post-traumatic stress disorder (PTSD) | 386 | 9.8 |
| Alcohol dependence | 307 | 7.8 |
| Depression, unspecified | 158 | 4.0 |
| **Digestive system (K00–K95)** | **928** | |
| Other and unspecified acute appendicitis | 167 | 18.0 |
| Calculus of gallbladder with acute cholecystitis | 69 | 7.4 |
| Calculus of gallbladder with other cholecystitis | 48 | 5.2 |
| Acute cholecystitis | 42 | 4.5 |
| Acute appendicitis with localized peritonitis | 29 | 3.1 |
| **Injury, poisoning (S00–T98, DOD0101–DOD0105)** | **839** | |
| Poisoning by, adverse effect of, under-dosing of 4-aminophenol derivatives | 53 | 6.3 |
| Infection following a procedure | 47 | 5.6 |
| Poisoning by, adverse effect of, under-dosing of other and unspecified antidepressants | 45 | 5.4 |
| Other fractures of lower leg | 26 | 3.1 |
| Unspecified injury | 25 | 3.0 |
| **Genitourinary system (N00–N99)** | **688** | |
| Abnormal uterine and vaginal bleeding, unspecified | 116 | 16.9 |
| Acute pyelonephritis | 51 | 7.4 |
| Other and unspecified ovarian cysts | 47 | 6.8 |
| Hypertrophy of breast | 46 | 6.7 |
| Tubulo-interstitial nephritis, not specified as acute or chronic | 24 | 3.5 |
| **Musculoskeletal system (M00–M99)** | **519** | |
| Anomalies of dental arch relationship | 49 | 9.4 |
| Other specified disorders of muscle | 35 | 6.7 |
| Spinal stenosis | 30 | 5.8 |
| Major anomaly of jaw size | 29 | 5.6 |
| Stress fracture | 28 | 5.4 |
| **Symptoms, signs, abnormal clinical and laboratory findings, NEC (R00–R99)** | **485** | |
| Other symptoms and signs involving emotional state | 93 | 19.2 |
| Syncope and collapse | 49 | 10.1 |
| Unspecified abdominal pain | 42 | 8.7 |
| Pain localized to other parts of lower abdomen | 28 | 5.8 |
| Pain localized to upper abdomen | 22 | 4.5 |
| **Neoplasms (C00–D49)** | **446** | |
| Leiomyoma of uterus, unspecified | 116 | 26.0 |
| Intramural leiomyoma of uterus | 59 | 13.2 |
| Subserosal leiomyoma of uterus | 38 | 8.5 |
| Malignant neoplasm of breast of unspecified site | 23 | 5.2 |
| Malignant neoplasm of thyroid gland | 14 | 3.1 |
| **Nervous system and sensory organ disorders (G00–G99, H00–H95)** | **340** | |
| Acute pain, not elsewhere classified | 30 | 8.8 |
| Migraine, unspecified | 18 | 5.3 |
| Brachial plexus disorders | 17 | 5.0 |
| Migraine with aura | 16 | 4.7 |
| Benign intracranial hypertension | 16 | 4.7 |
| **Other (Z00–Z99, except pregnancy-related)[b]** | **231** | |
| Encounter for other orthopedic aftercare | 41 | 17.7 |
| Aftercare following joint replacement surgery | 30 | 13.0 |
| Encounter for examination and observation for unspecified reason | 24 | 10.4 |
| Encounter for other specified post-procedural aftercare | 16 | 6.9 |
| Encounter for breast reconstruction following mastectomy | 14 | 6.1 |
| **Infectious and parasitic diseases (A00–B99)** | **249** | |
| Sepsis, unspecified organism | 114 | 45.8 |
| Sepsis due to other Gram-negative organisms | 22 | 8.8 |
| Infectious gastroenteritis and colitis, unspecified | 20 | 8.0 |
| Other specified sepsis | 9 | 3.6 |
| Viral intestinal infection, unspecified | 6 | 2.4 |
| **Circulatory system (I00–I99)** | **210** | |
| Pulmonary embolism without acute cor pulmonale | 33 | 15.7 |
| Supraventricular tachycardia | 13 | 6.2 |
| Acute embolism and thrombosis of deep veins of lower extremity | 13 | 6.2 |
| Essential (primary) hypertension | 7 | 3.3 |
| Non-ST elevation (NSTEMI) myocardial infarction | 7 | 3.3 |
| **Respiratory system (J00–J99, U07.0)** | **224** | |
| Pneumonia, unspecified organism | 36 | 16.1 |
| Acute respiratory failure | 15 | 6.7 |
| Peritonsillar abscess | 13 | 5.8 |
| Other intraoperative, post-procedural complications and disorders of respiratory system, not elsewhere classified | 13 | 5.8 |
| Acute tonsillitis, unspecified | 12 | 5.4 |
| **Endocrine, nutritional, metabolic diseases (E00–E89)** | **135** | |
| Thyrotoxicosis with diffuse goiter | 18 | 13.3 |
| Type 2 diabetes mellitus with ketoacidosis | 11 | 8.1 |
| Dehydration | 10 | 7.4 |
| Hypokalemia | 9 | 6.7 |
| Obesity due to excess calories | 7 | 5.2 |
| **Skin and subcutaneous tissue (L00–L99)** | **116** | |
| Cellulitis and acute lymphangitis of other parts of limb | 33 | 28.4 |
| Pilonidal cyst and sinus with abscess | 8 | 6.9 |
| Cellulitis and acute lymphangitis of face, neck | 7 | 6.0 |
| Cutaneous abscess, furuncle and carbuncle of limb | 6 | 5.2 |
| Cellulitis and acute lymphangitis of finger, toe | 6 | 5.2 |
| **Congenital anomalies (Q00–Q99)** | **85** | |
| Iron deficiency anemia, unspecified | 21 | 23.3 |
| Acute posthemorrhagic anemia | 15 | 16.7 |
| Iron deficiency anemia secondary to blood loss (chronic) | 9 | 10.0 |
| Anemia, unspecified | 7 | 7.8 |
| Immune thrombocytopenic purpura | 7 | 7.8 |
| **Hematological and immune disorders (D50–D89)** | **90** | |
| Anemia, unspecified | 19 | 21.1 |
| Iron deficiency anemia, unspecified | 14 | 15.6 |
| Iron deficiency anemia secondary to blood loss (chronic) | 10 | 11.1 |
| Other iron deficiency anemias | 7 | 7.8 |
| Acute posthemorrhagic anemia | 7 | 7.8 |
| **COVID-19 (U07.1, U09.9)** | **10** | |
| COVID-19 | 9 | 90.0 |
| Post COVID-19 condition, unspecified | 1 | 10.0 |

Abbreviations: ICD, International Classification of Diseases, 10th Revision; No., number; NSTEMI, non-ST segment elevation myocardial infarction; NEC, not elsewhere classified.

[a] Percentage of the total number of hospitalizations within diagnostic category.

[b] Other factors influencing health status and contact with health services (excluding pregnancy-related).

**FIGURE 4.** Duration of Hospital Stay by ICD-10 Major Diagnostic Category, Active Component, U.S. Armed Forces, 2015–2024




Abbreviations: No., number. ; ICD, International Classification of Diseases, 10th Revision.
[a] Other factors influencing health status and contact with health services (excluding pregnancy-related).
[b] Includes ill-defined conditions.

discharge diagnoses for both men and women. At the same time, modest increases were observed in both hospitalization frequencies and rates for respiratory system, infectious and parasitic diseases, and skin and subcutaneous tissue categories. Neoplasms and circulatory system categories demonstrated small absolute declines but slight rate increases, likely due to denominator (person-time) or demographic fluctuations. Although the overall hospitalization rate continued to decline in 2024, these findings indicate that the downward trend was not uniform for diagnostic categories.

Certain limitations should be considered when interpreting these results. This summary is based on primary (first-listed) discharge diagnoses only, but in many hospitalized cases, multiple conditions can be present; for example, joint pain (category, musculoskeletal) may be co-listed with an injury (category, injury). In such cases, only the first-listed discharge diagnosis would be accounted in this report.

**TABLE 4.** Numbers and Rates[a] of Hospitalizations, by Service and ICD-10 Diagnostic Category, Active Component, U.S. Armed Forces, 2024

| | Army | | Navy | | Air Force | | Space Force | | Marine Corps | |
|---|---|---|---|---|---|---|---|---|---|---|
| Major Diagnostic Category (ICD-10 codes) | No. | Rate[a] | No. | Rate[a] | No. | Rate[a] | No. | Rate[a] | No. | Rate[a] |
| Mental disorders (F01–F99) | 7,048 | 16.1 | 4,338 | 13.4 | 3,276 | 10.6 | 66 | 7.2 | 2,484 | 15.0 |
| Pregnancy and delivery (O00–O9A, relevant Z codes) | 5,339 | 12.2 | 4,486 | 13.9 | 4,220 | 13.7 | 95 | 10.3 | 1,254 | 7.6 |
| Injury, poisoning (S00–T88, DOD0101–DOD0105) | 2,365 | 5.4 | 1,151 | 3.6 | 857 | 2.8 | 11 | 1.2 | 831 | 5.0 |
| Digestive system (K00–K95) | 1,964 | 4.5 | 1,231 | 3.8 | 927 | 3.0 | 26 | 2.8 | 517 | 3.1 |
| Musculoskeletal system (M00–M99) | 1,565 | 3.6 | 619 | 1.9 | 572 | 1.9 | 19 | 2.1 | 393 | 2.4 |
| Signs, symptoms, ill-defined conditions (R00–R99) | 1,080 | 2.5 | 482 | 1.5 | 373 | 1.2 | 16 | 1.7 | 201 | 1.2 |
| Genitourinary system (N00–N99) | 654 | 1.5 | 339 | 1.1 | 374 | 1.2 | 8 | 0.9 | 144 | 0.9 |
| Respiratory system (J00–J99, U07.0) | 631 | 1.4 | 335 | 1.0 | 294 | 1.0 | 9 | 1.0 | 247 | 1.5 |
| Circulatory system (I00–I99) | 623 | 1.4 | 364 | 1.1 | 326 | 1.1 | 7 | 0.8 | 136 | 0.8 |
| Nervous system and sensory organ disorders (G00–G99, H00–H95) | 621 | 1.4 | 319 | 1.0 | 264 | 0.9 | 7 | 0.8 | 137 | 0.8 |
| Neoplasms (C00–D49) | 447 | 1.0 | 294 | 0.9 | 341 | 1.1 | 14 | 1.5 | 85 | 0.5 |
| Infectious and parasitic diseases (A00–B99) | 429 | 1.0 | 296 | 0.9 | 238 | 0.8 | 9 | 1.0 | 158 | 1.0 |
| Other (Z00–Z99, except pregnancy-related)[b] | 426 | 1.0 | 245 | 0.8 | 239 | 0.8 | 10 | 1.1 | 143 | 0.9 |
| Skin and subcutaneous tissue (L00–L99) | 336 | 0.8 | 191 | 0.6 | 96 | 0.3 | 5 | 0.5 | 155 | 0.9 |
| Endocrine, nutritional, metabolic diseases (E00–E89) | 233 | 0.5 | 149 | 0.5 | 90 | 0.3 | 4 | 0.4 | 52 | 0.3 |
| Hematological and immune disorders (D50–D89) | 105 | 0.2 | 52 | 0.2 | 72 | 0.2 | 2 | 0.2 | 18 | 0.1 |
| Congenital anomalies (Q00–Q99) | 86 | 0.2 | 56 | 0.2 | 42 | 0.1 | | | 40 | 0.2 |
| COVID-19 (U07.1, U09.9) | 20 | 0.0 | 13 | 0.0 | 13 | 0.0 | 2 | 0.2 | 9 | 0.1 |
| Total | 23,972 | 54.8 | 14,960 | 46.4 | 12,614 | 40.8 | 310 | 33.6 | 7,004 | 42.3 |

Abbreviations: ICD, International Classification of Diseases; No., number.
[a] Rates are based on 1,000 person-years.
[b] Other factors influencing health status and contact with health services (excluding pregnancy-related).

Discharge coding among multiple categories could lead to under-estimation of hospitalization rates for common conditions.

Since May 2023, DMSS data have been housed and analyzed from the Military Health System Information Platform (MIP). All military treatment facilities are now using GENESIS software to electronically capture medical care. Data completeness issues related to data transfers from GENESIS to the Medical Data Store (MDR) to DMSS have improved significantly. Regardless of the electronic system used to capture hospitalizations, every hospitalization record requires completion of a discharge summary before the event record is reported in the system. Consequently, timeliness of reporting can still be an issue that may lead to under-estimates of true counts and rates of hospitalizations for the most recent year of reporting. As a result, direct comparison between the 2024 data and data from prior years should be interpreted with caution.

## Reference

1. National Center for Health Statistics, Centers for Disease Control and Prevention. Table: people with hospital stays in the past year, by selected characteristics—United States, selected years 1997–2019. National Hospital Care Survey. U.S. Dept. of Health and Human Services. Accessed Aug. 25, 2025. https://www.cdc.gov/nchs/data/hus/2020-2021/hospstay.pdf

*Update*

# Ambulatory Health Care Visits Among Active Component Members of the U.S. Armed Forces, 2024

This report documents the frequencies, rates, trends, and characteristics of ambulatory health care visits in 2024 of active component members of the U.S. Army, Navy, Air Force, Marine Corps, and Space Force. Ambulatory visits of U.S. service members in fixed military and non-military (reimbursed through the Military Health System) hospitals and clinics are documented by standardized records that are routinely archived in the Defense Medical Surveillance System (DMSS) for health surveillance purposes. Ambulatory visits not routinely and completely documented within fixed military and non-military hospitals and clinics (e.g., during deployments, field training exercises, or at sea) are not included in this analysis.

As in prior *MSMR* reports, all records of ambulatory health care visits by active component service members (ACSMs) were categorized according to the International Classification of Diseases, 10th Revision (ICD-10) codes entered in the primary (i.e., first-listed) diagnostic position of the visit records. Incidence rates were calculated per 1,000 person-years (p-yrs). Percent change in incidence was calculated using unrounded rates.

## Frequencies, rates and trends

In 2024, U.S. ACSMs completed 18,821,239 ambulatory visits for medical care, resulting in a crude annual rate—for all causes—of 16,563.4 visits per 1,000 p-yrs, or 16.5 visits per p-yr **(Table 1)**. The observed rate represents an increase of 10.8% from 2023, despite the absolute number of visits continuing a decline from a peak in 2021 **(Figure 1)**. Excluding the 'other' major diagnostic category, there were 15,220.739 documented ambulatory visits for illnesses and injuries (ICD-10: A00–T88, including relevant pregnancy 'Z' codes) in 2024, corresponding to a crude rate of 13.4 visits per p-yr, which is 17.4% higher than in 2022 (11.4 per p-yr) and 55.6% higher than in 2020 (8.6 per p-yr).

A 'Z' code in the first diagnostic position identifies administrative visits within the 'other' category that reflects the care related to other factors influencing health status and contact with health services (excluding pregnancy). After a sharp decline observed in Z-coded encounters in 2023[1] compared to 2021 and 2019, the frequency in 2024 remained relatively stable, with a slight 3.7% increase over the previous year (data not shown).

## Ambulatory visits, by ICD-10 major diagnostic categories

As in prior years, the leading 5 major diagnostic categories in 2024 remained consistent, accounting for almost four-fifths (79.5%) of all ambulatory visits among ACSMs. Musculoskeletal system/connective tissue disorders (28.1%) rose to become the leading category in 2024, surpassing 'other' (19.1%), which was the dominant category in 2020 and 2022. Mental health disorders (14.5%), disorders of the nervous system and sensory organs (9.8%), and signs, symptoms and ill-defined conditions (7.9%) maintained stable rankings **(Table 1)**. Rankings for other diagnostic categories were largely stable, with only a modest shift in endocrine disorders surpassing infectious diseases. In contrast, COVID-19 fell to the lowest rank, representing only 0.1% of visits, down from 0.8% in 2022, reflecting pandemic peak and decline.

Excluding the 'other' category, rates of ambulatory visits increased in all but 1 of the 17 major diagnostic categories of illnesses and injuries between 2020 and 2024. As in prior years, diagnostic 'S' codes (for injuries), as opposed to 'T' codes (burns and poisonings), accounted for nearly 90% of all ambulatory encounters within this major diagnostic category (data not shown). Excluding the 'other' major diagnostic category, COVID-19 was the sole diagnostic category to decline in both numbers and rates within the illness and injury major category, with visits decreasing by 62.9%. Musculoskeletal system conditions accounted for the highest growth in ambulatory visits, totaling an additional 1,675,234 visits (rate increase of 70.9%) from 2020 to 2024, followed by mental health disorders (650,888 more visits, 53.2% rate increase). Except for infectious diseases and pregnancy

### What are the new findings?

In 2024 the rate of ambulatory visits in U.S. military and non-military medical facilities was 16.5 visits per person-year, 10.8% higher than the 2023 rate. Excluding administrative visits, the crude annual rate of 13.4 visits per person-year for illnesses and injuries in 2024 was 17.4% higher than in 2022 and 55.6% higher than in 2020. The numbers and rates of primary causes for ambulatory visits have increased in 16 of 18 diagnostic categories from 2020 to 2024, except for 'other' and COVID-19 diagnoses. Musculoskeletal, mental, and nervous system or sensory organ disorders remain the leading causes of ambulatory visits, with substantial increases from 2020 to 2024. Musculoskeletal disorders showed the largest absolute ambulatory visit increase, with 1,675,234 total additional visits in 2024 in comparison to 2020, followed by mental health disorders, which increased by 650,888 visits during the same period.

### What is the impact on readiness and force health protection?

Disorders of the musculoskeletal, mental, and nervous system and sensory organ major diagnostic categories are already known to have significant impacts on the well-being of military personnel and operational readiness. Unaddressed musculoskeletal injuries and mental health disorders may lead to prolonged periods of unoccupied time, reduced ability to meet the physical and psychological demands of military service, and contribute to attrition.

**TABLE 1.** Numbers, Rates[a] and Ranks[b] of Ambulatory Visits, by ICD-10 Major Diagnostic Category, Active Component, U.S. Armed Forces, 2020, 2022 and 2024

| | 2020 | | | 2022 | | | 2024 | | |
|---|---|---|---|---|---|---|---|---|---|
| ICD-10 Major Diagnostic Category | No. | Rate | Rank | No. | Rate | Rank | No. | Rate | Rank |
| Musculoskeletal system (M00–M99) | 3,617,917 | 2,726.3 | 2 | 5,008,322 | 3,857.1 | 2 | 5,293,151 | 4,658.2 | 1 |
| Other (Z00–Z99, except pregnancy-related)[c] | 7,919,267 | 5,967.6 | 1 | 6,024,545 | 4,639.7 | 1 | 3,600,500 | 3,168.6 | 2 |
| Mental disorders (F01–F99) | 2,087,067 | 1,572.7 | 3 | 2,649,250 | 2,040.3 | 3 | 2,737,955 | 2,409.5 | 3 |
| Nervous system and sensory organ disorders (G00–G99, H00–H95) | 1,331,414 | 1,003.3 | 4 | 1,698,433 | 1,308.0 | 4 | 1,843,803 | 1,622.6 | 4 |
| Signs, symptoms, ill-defined conditions (R00–R99) | 1,233,754 | 929.7 | 5 | 1,557,645 | 1,199.6 | 5 | 1,487,884 | 1,309.4 | 5 |
| Injury, poisoning (S00–T88, DOD0101–DOD0105) | 679,734 | 512.2 | 6 | 862,796 | 664.5 | 6 | 866,110 | 762.2 | 6 |
| Respiratory system (J00–J99, U07.0) | 511,242 | 385.2 | 7 | 581,557 | 447.9 | 7 | 652,743 | 574.4 | 7 |
| Skin and subcutaneous tissue diseases (L00–L99) | 348,221 | 262.4 | 9 | 434,957 | 335.0 | 8 | 432,238 | 380.4 | 8 |
| Pregnancy and delivery (O00–O9A, relevant Z codes) | 365,569 | 275.5 | 8 | 414,311 | 319.1 | 9 | 400,117 | 352.1 | 9 |
| Pregnancy and delivery, females only (O00–O9A, relevant Z codes) | | 1,604.6 | | | 1,825.7 | | | 1,971.1 | |
| Genitourinary system (N00–N99) | 286,276 | 215.7 | 10 | 344,783 | 265.5 | 10 | 354,320 | 311.8 | 10 |
| Digestive system (K00–K95) | 228,903 | 172.5 | 11 | 299,015 | 230.3 | 11 | 326,319 | 287.2 | 11 |
| Endocrine, nutritional, metabolic diseases (E00–E89) | 138,273 | 104.2 | 13 | 177,188 | 136.5 | 13 | 213,415 | 187.8 | 12 |
| Infectious and parasitic diseases (A00–B99) | 211,744 | 159.6 | 12 | 214,398 | 165.1 | 12 | 190,315 | 167.5 | 13 |
| Circulatory system (I00–I99) | 129112 | 97.3 | 14 | 170667 | 131.4 | 15 | 170386 | 149.9 | 14 |
| Neoplasms (C00–D49) | 115,404 | 87.0 | 15 | 146,859 | 113.1 | 16 | 146,410 | 128.8 | 15 |
| Hematological and immune disorders (D50–D89) | 37,967 | 28.6 | 17 | 48,612 | 37.4 | 17 | 49,258 | 43.3 | 16 |
| Congenital anomalies (Q00–Q99) | 18,275 | 13.8 | 18 | 28,917 | 22.3 | 18 | 29,395 | 25.9 | 17 |
| COVID-19 (U07.1, U09.9) | 84,793 | 63.9 | 16 | 172,606 | 132.9 | 14 | 26,920 | 23.7 | 18 |
| Total | 19,344,932 | 14,577.4 | | 20,834,861 | 16,045.7 | | 18,821,239 | 16,563.4 | |

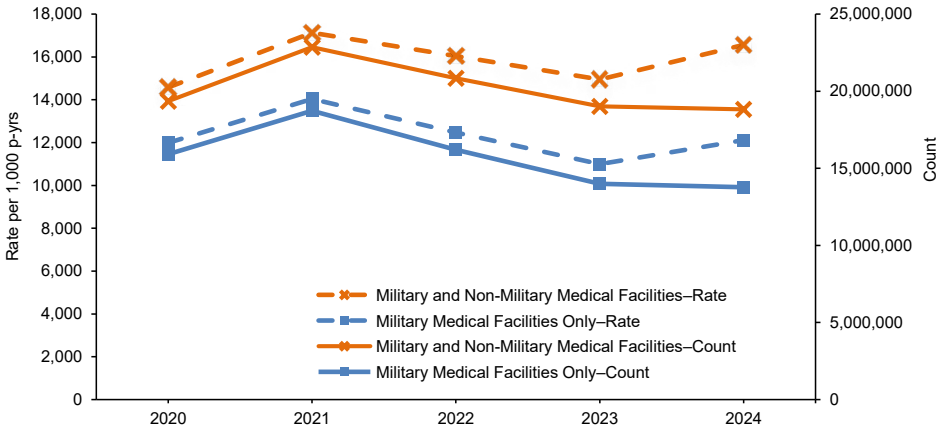
Abbreviations: ICD, International Classification of Diseases; No., number.
[a] Rate per 1,000 person-years.
[b] Rank of major diagnostic category based on number of ambulatory visits.
[c] Other factors influencing health status and contact with health services (excluding pregnancy-related).

and delivery-related visits, all other diagnostic categories exhibited rate increases exceeding 40% **(Figure 2)**. Infectious diseases increased by only 5%, while pregnancy and delivery-related visits increased by 27.8%.

## Ambulatory visits, by sex

For both male and female ACSMs, joint pain comprised over 40% of all diagnoses within the musculoskeletal system category. Adjustment disorder was the leading diagnosis in the mental health category, representing approximately 20% among both sexes **(Tables 2** and **3)**. Unspecified and iron deficiency types of anemia were among the leading diagnoses within the hematological and immune disorders major diagnostic category, accounting for 28.2% and 56.7% of diagnoses among service men and women,

**FIGURE 1.** Counts and Rates of Ambulatory Visits by Year, Active Component, U.S. Armed Forces, 2020–2024




Abbreviation: P-yrs, person-years.

**TABLE 2.** Numbers and Percentages of the Most Frequent Diagnoses During Ambulatory Visits Among Men ♂, by ICD-10 Major Diagnostic Category, Active Component, U.S. Armed Forces, 2024

| Diagnostic Category (ICD-10 codes) | No. | %[a] |
|---|---|---|
| **Infectious and parasitic diseases (A00–B99)** | **139,390** | |
| Viral infection, unspecified | 23,121 | 16.6 |
| Viral wart, unspecified | 8,825 | 6.3 |
| Tinea unguium | 8,411 | 6.0 |
| Viral intestinal infection, unspecified | 8,198 | 5.9 |
| Plantar wart | 6,835 | 4.9 |
| **Neoplasms (C00–D49)** | **103,508** | |
| Neoplasm of uncertain behavior of skin | 10,423 | 10.1 |
| Melanocytic nevi, unspecified | 7,367 | 7.1 |
| Melanocytic nevi of trunk | 4,132 | 4.0 |
| Benign lipomatous neoplasm, unspecified | 3,832 | 3.7 |
| Malignant neoplasm of testis, unspecified whether descended or undescended | 3,313 | 3.2 |
| **Endocrine, nutritional, metabolic diseases (E00–E89)** | **141,812** | |
| Obesity, unspecified | 19,474 | 13.7 |
| Hyperlipidemia, unspecified | 17,090 | 12.1 |
| Testicular hypofunction | 14,072 | 9.9 |
| Vitamin D deficiency, unspecified | 13,354 | 9.4 |
| Type 2 diabetes mellitus without complications | 11,147 | 7.9 |
| **Hematological and immune disorders (D50–D89)** | **26,681** | |
| Anemia, unspecified | 5,122 | 19.2 |
| Other specified disorders of white blood cells | 2,945 | 11.0 |
| Sickle cell trait | 2,440 | 9.1 |
| Iron deficiency anemia, unspecified | 2,405 | 9.0 |
| Glucose-6-phosphate dehydrogenase (G6PD) | 1,691 | 6.3 |
| **Mental disorders (F01–F99)** | **1,880,354** | |
| Adjustment disorder | 354,778 | 18.9 |
| Alcohol dependence | 242,595 | 12.9 |
| Post-traumatic stress disorder (PTSD) | 240,217 | 12.8 |
| Anxiety disorder, unspecified | 130,854 | 7.0 |
| Generalized anxiety disorder | 115,299 | 6.1 |
| **Nervous system and sensory organ disorders (G00–G99, H00–H95)** | **1,496,485** | |
| Sleep apnea | 659,207 | 44.1 |
| Myopia | 113,240 | 7.6 |
| Chronic pain, not elsewhere classified | 61,735 | 4.1 |
| Insomnia | 44,903 | 3.0 |
| Astigmatism | 40,782 | 2.7 |
| **Circulatory system (I00–I99)** | **140,343** | |
| Essential (primary) hypertension | 65,148 | 46.4 |
| Scrotal varices | 4,490 | 3.2 |
| Atherosclerotic heart disease of native coronary artery | 3,377 | 2.4 |
| Pulmonary embolism without acute cor pulmonale | 2,920 | 2.1 |
| Acute embolism, thrombosis of deep veins of lower extremity | 2,881 | 2.1 |
| **Respiratory system (J00–J99)** | **473,115** | |
| Acute upper respiratory infection, unspecified | 130,351 | 27.6 |
| Acute pharyngitis, unspecified | 45,874 | 9.7 |
| Allergic rhinitis due to pollen | 35,517 | 7.5 |
| Allergic rhinitis, unspecified | 24,264 | 5.1 |
| Pneumonia, unspecified organism | 23,712 | 5.0 |
| **Digestive system (K00–K95)** | **249,155** | |
| Gastroesophageal reflux disease without esophagitis | 32,509 | 13.0 |
| Non-infective gastroenteritis, colitis, unspecified | 25,322 | 10.2 |
| Melena | 10,585 | 4.2 |
| Constipation | 10,179 | 4.1 |
| Hemorrhage of anus and rectum | 9,037 | 3.6 |
| **Genitourinary system (N00–N99)** | **131,311** | |
| Other specified disorders of male genital organs | 26,062 | 19.8 |
| Male erectile dysfunction, unspecified | 15,795 | 12.0 |
| Calculus of kidney | 8,862 | 6.7 |
| Hypertrophy of breast | 6,394 | 4.9 |
| Male infertility, unspecified | 5,208 | 4.0 |
| **Skin and subcutaneous tissue (L00–L99)** | **319,032** | |
| Pseudofolliculitis barbae | 46,211 | 14.5 |
| Acne vulgaris | 24,635 | 7.7 |
| Dermatitis, unspecified | 21,560 | 6.8 |
| Ingrowing nail | 17,487 | 5.5 |
| Pilonidal cyst and sinus without abscess | 9,979 | 3.1 |
| **Musculoskeletal system, connective tissue (M00–M99)** | **3,999,023** | |
| Pain in joint | 1,688,914 | 42.2 |
| Low back pain | 592,419 | 14.8 |
| Pain in limb, hand, foot, fingers, toes | 319,851 | 8.0 |
| Cervicalgia | 184,082 | 4.6 |
| Dorsalgia, unspecified | 104,525 | 2.6 |
| **Congenital anomalies (Q00–Q99)** | **20,955** | |
| Other specified congenital malformations of skin | 2,650 | 12.6 |
| Congenital *pes planus* | 2,516 | 12.0 |
| Congenital *pes cavus* | 1,624 | 7.7 |
| Other congenital deformities of feet | 989 | 4.7 |
| Atrial septal defect | 903 | 4.3 |
| **Symptoms, signs, abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)** | **1,049,838** | |
| Other symptoms and signs involving emotional state | 74,864 | 7.1 |
| Headache, unspecified | 56,031 | 5.3 |
| Chest pain, unspecified | 51,606 | 4.9 |
| Other abnormalities of breathing | 39,718 | 3.8 |
| Unspecified abdominal pain | 38,734 | 3.7 |
| **Injury, poisoning (S00–T98, DOD0101–DOD0105)** | **701,386** | |
| Sprain of ankle | 41,361 | 5.9 |
| Concussion | 27,000 | 3.8 |
| Sprain of shoulder joint | 25,685 | 3.7 |
| Sprain of cruciate ligament of knee | 25,065 | 3.6 |
| Unspecified injury of ankle, foot | 18,085 | 2.6 |
| **Other (Z00–Z99, except pregnancy-related)[b]** | **2,658,328** | |
| Encounter for other specified special examination | 214,061 | 8.1 |
| Encounter for administrative examinations, unspecified | 207,888 | 7.8 |
| Encounter for immunization | 192,791 | 7.3 |
| Encounter for issue of medical certificate | 181,653 | 6.8 |
| Encounter for other administrative examination | 142,319 | 5.4 |

Abbreviations: ICD, International Classification of Diseases, 10th Revision; No., number; G6PD, glucose-6-phosphate dehydrogenase.
[a] Percentage of the total number of hospitalizations within the diagnostic category.
[b] Other factors influencing health status and contact with health services (excluding pregnancy-related).

**TABLE 3.** Numbers and Percentages of the Most Frequent Diagnoses During Ambulatory Visits Among Women ♀, by ICD-10 Major Diagnostic Category, Active Component, U.S. Armed Forces, 2024

| Diagnostic Category (ICD-10 codes) | No. | %[a] |
|---|---|---|
| **Infectious and parasitic diseases (A00–B99)** | **50,925** | |
| Viral infection, unspecified | 9,377 | 18.4 |
| Candidiasis of vulva and vagina | 5,093 | 10.0 |
| Viral intestinal infection, unspecified | 2,791 | 5.5 |
| Other viral agents as the cause of disease classified elsewhere | 2,683 | 5.3 |
| Tinea unguium | 1,919 | 3.8 |
| **Neoplasms (C00–D49)** | **42,902** | |
| Leiomyoma of uterus, unspecified | 5,567 | 13.0 |
| Malignant neoplasm of breast of unspecified site | 3,631 | 8.5 |
| Neoplasm of uncertain behavior of skin | 3,079 | 7.2 |
| Melanocytic nevi, unspecified | 2,625 | 6.1 |
| Benign neoplasm of pituitary gland | 1,432 | 3.3 |
| **Endocrine, nutritional, metabolic diseases (E00–E89)** | **71,603** | |
| Obesity, unspecified | 13,890 | 19.4 |
| Vitamin D deficiency, unspecified | 7,996 | 11.2 |
| Polycystic ovarian syndrome | 7,116 | 9.9 |
| Hypothyroidism, unspecified | 5,791 | 8.1 |
| Overweight | 4,102 | 5.7 |
| **Hematological and immune disorders (D50–D89)** | **22,577** | |
| Iron deficiency anemia, unspecified | 6,476 | 28.7 |
| Anemia, unspecified | 6,312 | 28.0 |
| Sickle cell trait | 1,225 | 5.4 |
| Iron deficiency anemia secondary to blood loss (chronic) | 1,139 | 5.0 |
| Other specified disorders of white blood cells | 1,103 | 4.9 |
| **Mental disorders (F01–F99)** | **857,601** | |
| Adjustment disorder | 176,933 | 20.6 |
| Post-traumatic stress disorder (PTSD) | 129,684 | 15.1 |
| Generalized anxiety disorder | 83,008 | 9.7 |
| Anxiety disorder, unspecified | 72,758 | 8.5 |
| Major depressive disorder, recurrent/moderate | 49,304 | 5.7 |
| **Nervous system and sensory organ disorders (G00–G99, H00–H95)** | **347,318** | |
| Sleep apnea | 59,172 | 17.0 |
| Myopia | 41,002 | 11.8 |
| Chronic pain, not elsewhere classified | 21,840 | 6.3 |
| Migraine, unspecified | 19,925 | 5.7 |
| Insomnia | 13,558 | 3.9 |
| **Circulatory system (I00–I99)** | **30,043** | |
| Essential (primary) hypertension | 10,776 | 35.9 |
| Supraventricular tachycardia | 1,164 | 3.9 |
| Varicose veins of lower extremities with other complications | 1,103 | 3.7 |
| Venous insufficiency (chronic) (peripheral) | 892 | 3.0 |
| Raynaud's syndrome | 810 | 2.7 |
| **Respiratory system (J00–J99)** | **179,628** | |
| Acute upper respiratory infection, unspecified | 51,783 | 28.8 |
| Acute pharyngitis, unspecified | 20,994 | 11.7 |
| Allergic rhinitis due to pollen | 13,582 | 7.6 |
| Allergic rhinitis, unspecified | 9,943 | 5.5 |
| Acute nasopharyngitis [common cold] | 8,022 | 4.5 |
| **Digestive system (K00–K95)** | **77,164** | |
| Constipation | 11,880 | 15.4 |
| Non-infective gastroenteritis and colitis, unspecified | 8,700 | 11.3 |
| Gastroesophageal reflux disease without esophagitis | 8,193 | 10.6 |
| Unspecified hemorrhoids | 2,541 | 3.3 |
| Melena | 2,271 | 2.9 |
| **Genitourinary system (N00–N99)** | **223,009** | |
| Acute vaginitis | 17,376 | 7.8 |
| Stress incontinence, female/male | 17,255 | 7.7 |
| Urinary tract infection, site not specified | 16,538 | 7.4 |
| Abnormal uterine and vaginal bleeding, unspecified | 15,477 | 6.9 |
| Other specified non-inflammatory disorders of vagina | 14,624 | 6.6 |
| **Pregnancy and childbirth (O00–O99, relevant Z codes)** | **400,117** | |
| Encounter for care and examination of lactating mother | 57,402 | 14.3 |
| Pregnant state, incidental | 32,117 | 8.0 |
| Encounter for supervision of normal first pregnancy | 18,316 | 4.6 |
| Encounter for supervision of other normal pregnancy | 17,383 | 4.3 |
| Other specified pregnancy-related conditions | 15,244 | 3.8 |
| **Skin and subcutaneous tissue (L00–L99)** | **113,206** | |
| Acne vulgaris | 19,533 | 17.3 |
| Dermatitis, unspecified | 8,699 | 7.7 |
| Urticaria, unspecified | 3,897 | 3.4 |
| Non-scarring hair loss, unspecified | 3,562 | 3.1 |
| Ingrowing nail | 3,320 | 2.9 |
| **Musculoskeletal system and connective tissue (M00–M99)** | **1,294,128** | |
| Pain in joint | 537,864 | 41.6 |
| Low back pain | 182,116 | 14.1 |
| Pain in limb, hand, foot, fingers, toes | 107,462 | 8.3 |
| Cervicalgia | 70,329 | 5.4 |
| Dorsalgia, unspecified | 35,506 | 2.7 |
| **Symptoms, signs, abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)** | **438,046** | |
| Pelvic , perineal pain | 30,466 | 7.0 |
| Headache, unspecified | 27,539 | 6.3 |
| Unspecified abdominal pain | 25,013 | 5.7 |
| Other symptoms and signs involving emotional state | 24,597 | 5.6 |
| Chest pain, unspecified | 14,445 | 3.3 |
| **Injury, poisoning (S00–T98, DOD0101–DOD0105)** | **164,724** | |
| Sprain of ankle | 13,372 | 8.1 |
| Concussion | 7,464 | 4.5 |
| Sprain of cruciate ligament of knee | 5,661 | 3.4 |
| Unspecified injury of ankle, foot | 4,641 | 2.8 |
| Injury of muscle, fascia, tendon of abdomen, lower back, pelvis | 3,767 | 2.3 |
| **Other (Z00–Z99, except pregnancy-related)[b]** | **942,172** | |
| Encounter for administrative examinations, unspecified | 59,790 | 6.3 |
| Encounter for immunization | 49,780 | 5.3 |
| Encounter for other specified special examinations | 46,775 | 5.0 |
| Encounter for issue of medical certificate | 46,351 | 4.9 |
| Other specified counseling | 43,523 | 4.6 |

Abbreviations: ICD, International Classification of Diseases, 10th Revision; No., number.
[a] Percentage of the total number of hospitalizations within the diagnostic category.
[b] Other factors influencing health status and contact with health services (excluding pregnancy-related).

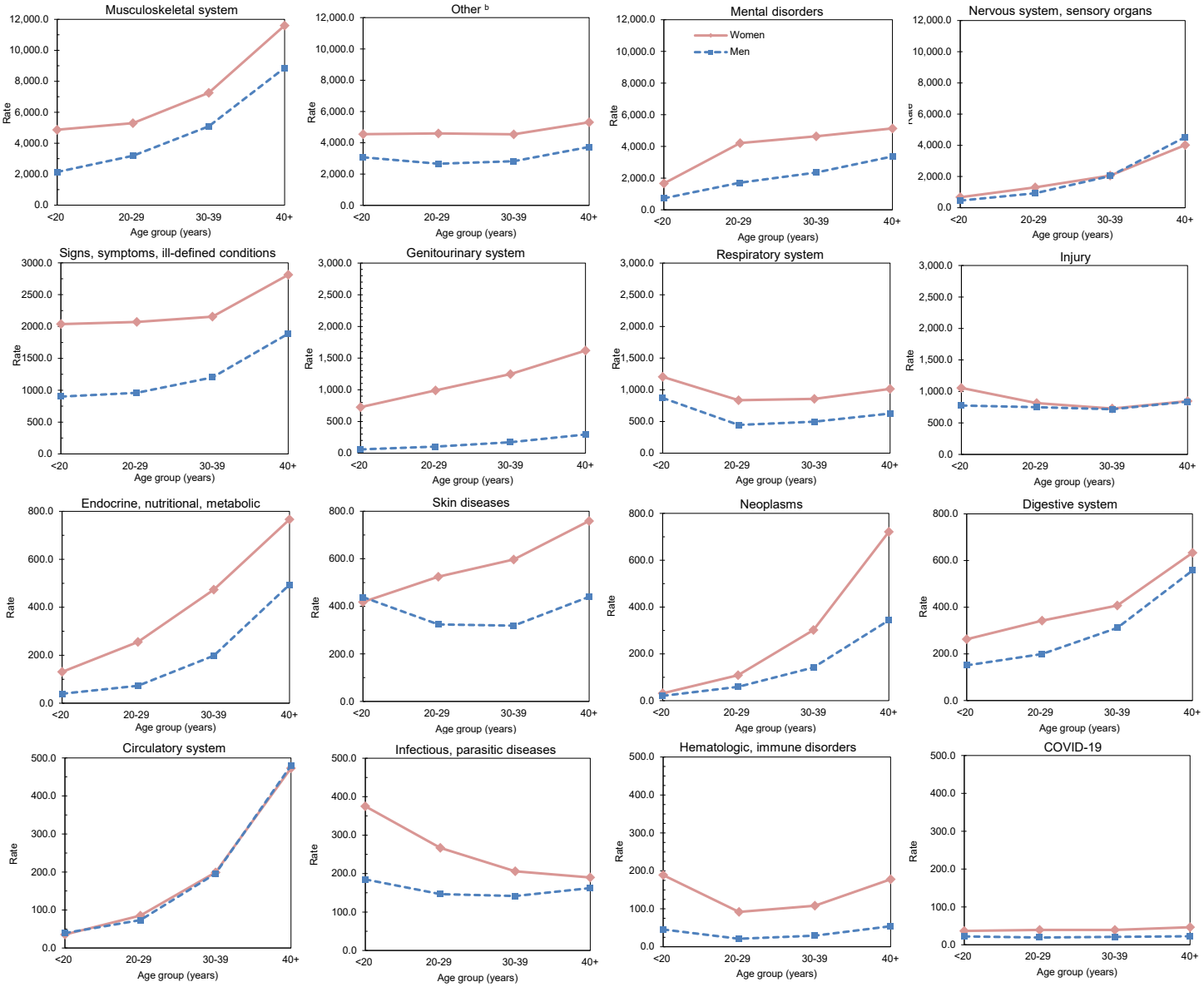
respectively **(Tables 2** and **3)**. Unspecified viral infection and unspecified acute upper respiratory infection were the leading diagnoses in 2024 for infectious and parasitic diseases and disorders of the respiratory system, respectively **(Tables 2** and **3)**. While congenital anomalies were not frequently diagnosed among women, nearly a quarter (24.4%) of the congenital anomalies in men were attributed to congenital deformities of feet, including congenital *pes planus* (flat foot) and congenital *pes cavus* (high arch) **(Table 2)**.

In 2024, service men accounted for nearly three-fourths (71.6%) of all illness- and injury-related visits, but the annual crude rate for service women (21.3 visits per p-yr) was 82.8% higher than among service men (11.7 visits per p-yr) (data not shown). Excluding pregnancy- and delivery-related visits, which accounted for 9.4% of all non-Z-coded ambulatory visits among service women, the illness and injury ambulatory visit rate was 19.4 visits per p-yr, 65.9% higher than among service men.

Rates of illness- and injury-specific diagnoses among service women exceeded male rates by 50% in all major diagnostic categories except diagnoses for nervous system and sensory organs, circulatory system, digestive system, and injury (data not shown). Female rates were more than twice those of male rates for conditions in the hematological, mental, genitourinary, and endocrine-, nutritional- and metabolic-related disorder categories.

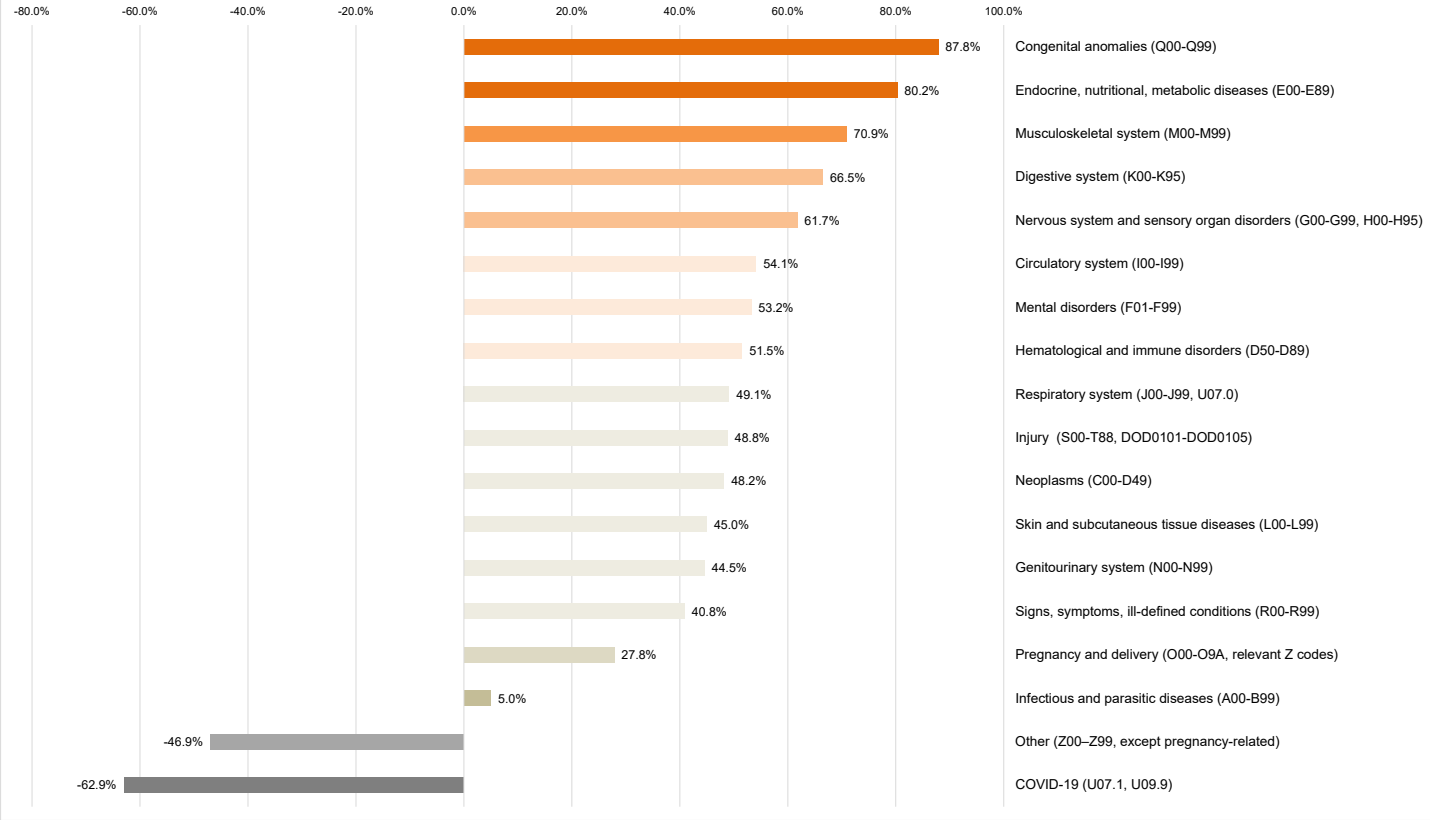
Relationships between age group and ambulatory visit rates were broadly similar

**FIGURE 2.** Rates[a] of Ambulatory Visits by ICD-10 Major Diagnostic Category, Age Group, and Sex, Active component, U.S. Armed Forces, 2024




Abbreviation: ICD, International Classification of Diseases, 10th Revision.
[a] Rate per 1,000 person-years.
[b] Other factors influencing health status and contact with health services (excluding pregnancy-related).

**FIGURE 3.** Rate Changes in Ambulatory Visits by ICD-10 Major Diagnostic Category, U.S. Armed Forces, 2020–2024




among men and women within all diagnostic categories **(Figure 2)**. Ambulatory rates for musculoskeletal system, mental health disorders, neoplasms, disorders in nervous, digestive, circulatory systems, and endocrine-, nutritional- and metabolic-related conditions rose more steeply with advancing age than other categories of illness or injury **(Figure 2)**.

Eight of the 10 leading diagnoses among ambulatory visits were the same for male and female service members: pain in joint; lower back pain; adjustment disorders; pain in limb, hand, foot, fingers, or toes; post-traumatic stress disorder (PTSD); cervicalgia (neck pain); unspecified anxiety disorder; and sleep apnea. Sleep apnea was the second-most frequent illness- or injury-specific primary diagnosis for men, but ninth for women. The difference in the rate rank order of mental disorders is also worth noting. Alcohol dependence and unspecified acute respiratory infections were the sixth and tenth most frequent diagnoses, respectively, for men but were not identified among the leading 10 causes of ambulatory visits for women, while generalized anxiety disorder and unspecified dorsalgia were among the 10 most common diagnoses for women **(Tables 2** and **3)**.

## Discussion

In 2024, ambulatory visits among ACSMs increased by 10.8% compared to 2023, reaching 16.5 visits per person-year, although remaining below the 2021 peak. Rates for all major diagnostic categories increased, with the exception of the 'other' major diagnostic category and COVID-19. The largest absolute increase in the number of ambulatory visits was observed for musculoskeletal system disorders, which surpassed the 'other' category as the most frequent diagnosis. Notable growth was also seen within the mental health, nervous system, injury, and respiratory system categories. While infectious, endocrine, circulatory, neoplasms, hematological, and congenital anomalies experienced modest increases, their rankings remained relatively stable, at the lower end of the spectrum. When excluding visits documented by ICD-10 Z codes, the rate of illness- and injury-specific ambulatory visits was approximately 17% higher than in 2022, and over 55% higher than in 2020. The rate of encounters for COVID-19 peaked in 2022 (when it ranked fourteenth) and then sharply declined to last place by 2024, reflecting the pandemic peak and decline.

The sex-specific rate ratio for illness and injury-specific ambulatory encounters showed that female service members used outpatient care more often than their male counterparts (21.3 vs. 11.7 visits per p-yr, respectively). This is consistent with a recent report based on the 2022 National Ambulatory Medical Care Survey indicating that civilian women use health care services approximately 1.8 times more than civilian men.[2] The crude annual rate of illness- and injury-related visits among ACSMs (13.4 visits per p-yr), however, far exceeds the rate of ambulatory visits among civilians ages 18-44 years (324.6 visits per 1,000 persons, or about 0.3 visits per p-yr).[2]

Future analyses comparing the major diagnostic category rates to civilian counterparts may be useful to further elucidate the costs of readiness.

Several limitations should be considered when interpreting these findings. Unit level ambulatory care, care by non-credentialed providers (e.g., medics, corpsmen), and at deployed medical treatment facilities (including ships at sea) are not included. This summary does not reflect that the nature and rates of illnesses and injuries may vary between deployed and non-deployed ACSMs.

Prior reports described the number of virtual versus in-person ambulatory encounters, but data quality issues about the variable delineating this encounter type have also been identified; it is an area of active inquiry.

This summary is based on primary (i.e., first-listed) diagnosis codes reported on ambulatory visit records, and the current summary discounts morbidity related to co-morbid and complicating conditions that may have been documented in secondary diagnostic positions within health care records. The accuracy of reported diagnoses likely varies according to medical condition, clinical setting, care provider, and treatment facility, as the information is collected for non-surveillance purposes. Although specific diagnoses during individual encounters were potentially not definitive, final, or even correct, summaries of the frequencies, trends, and natures of ambulatory encounters among ACSMs provide descriptive evidence to inform further research and evaluation.

Rates and frequencies reported do not reflect unique individuals, but a rate of total ambulatory visits per person-year. This report documents all ambulatory health care visits but does not estimate incidence rates for the diagnoses described. These data provide descriptors for health care provision, which elevate rates for disorders requiring increased numbers of ambulatory visits. In contrast to common, self-limited, and minor illnesses and injuries that require little, if any, follow-up or continuing care, illnesses and injuries necessitating multiple ambulatory visits for evaluation, treatment, and rehabilitation are over-represented in this summary.

## References


1. Armed Forces Health Surveillance Division. Ambulatory health care visits among active component members of the U.S. Armed Forces, 2023. *MSMR*. 2024;31(6):19-25. Accessed Aug. 21, 2025. https://www.health.mil/news/articles/2024/06/01/msmr-ambulatory-care-2023

2. Santo L, Peters ZJ, Guluma L, Ashman JJ. Visits to health centers among adults, by selected characteristics: United States, 2022. *Natl Health Stat Report*. 2024;22(211):cS353454. doi:10.15620/cdc/59282

*Update*

# Morbidity Burdens Attributable to Various Illnesses and Injuries Among Deployed Active and Reserve Component Service Members of the U.S. Armed Forces, 2024

Each year, *MSMR* estimates illness and injury-related morbidity and health care burdens on the U.S. Armed Forces and the Military Health System (MHS), and this report updates previous analyses of these burden distributions among active and reserve component service members in deployed settings. While deployed service members are primarily selected from a subset of the active component, the reserve component contributes a substantial portion of U.S. deployed forces.

This report utilizes data from the Theater Medical Data Store (TMDS), which documents service members' inpatient and outpatient encounters while treated in an operational environment. TMDS receives medical data from Theater Medical Information Program-Joint (TMIP-J) applications, including AHLTA-Theater, TMIP-Composite Health Care System Cache, Mobile Computing Capability, Maritime Medical Modules, and the U.S. Transportation Command Regulating and Command and Control Evacuation System (TRAC2ES).[1]

The health encounters of service members deployed to 2 specific theaters of operation, U.S. Central Command (CENTCOM) and U.S. Africa Command (AFRICOM), are the subject of this report. While U.S. service members are deployed to all the geographic combatant commands, the largest concentrations without access to permanent medical facilities are in the CENTCOM and AFRICOM areas of operation.[2] While this report focuses on medical encounters of service members treated in CENTCOM and AFRICOM operational environments during the 2024 calendar year, future reports may incorporate other combatant commands as circumstances dictate and data become available.

## Methods

The surveillance population included all individuals who served in the active or reserve components of the U.S. Army, Navy, Air Force, Marine Corps, or Space Force with health care encounters captured in the TMDS during the surveillance period. Analysis was restricted to encounters where the theater of care specified was CENTCOM or AFRICOM, or where the name of the theater of operation was missing or null; by default, this excluded encounters in the U.S. Northern Command (NORTHCOM), U.S. European Command (EUCOM), U.S. Indo-Pacific Command (INDOPACOM), or U.S. Southern Command (SOUTHCOM) theaters of operations. In addition, TMDS-recorded medical encounters where the data source was identified as Shipboard Automated Medical System, or where the military treatment facility descriptor indicated that care was provided aboard ship, were excluded from this analysis. Encounters from aeromedical staging facilities outside of CENTCOM or AFRICOM were also excluded.

Morbidity burdens attributable to various conditions were estimated by diagnosis distribution according to the 17 traditional categories of the International Classification of Diseases (ICD) system, with an 18th category for COVID-19. Extended ICD-10 (10th Revision) code groupings were also reviewed for the most common diagnoses. The TMDS has not fully transitioned to ICD-10 codes, so some ICD-9 (9th Revision) codes were included. Primary diagnoses that did not correspond to an ICD-9 or ICD-10 code are not reported in this health care burden analysis.

### What are the new findings?

Musculoskeletal disorders, in combination with administrative and other health services (ICD-10 'Z' codes), accounted for more than half of the total medical encounters in 2024 among service members deployed to the U.S. Central Command (CENTCOM) or Africa Command (AFRICOM). Lower back pain accounted for the most frequent musculoskeletal condition among male and female service members deployed to CENTCOM and AFRICOM.

### What is the impact on readiness and force health protection?

Thorough examination of the most common causes of injury and illness during deployment can assist senior leaders in the development and implementation of strategies to reduce preventable medical issues, enhance force readiness, and ensure fighting strength.

## Results

A total of 191,579 medical encounters occurred among 52,066 individuals deployed to Southwest Asia, the Middle East, and Africa in 2024. Of those 191,579 total medical encounters documented in 2024 among deployed service members, 227 (0.1%) were recorded as hospitalizations. Most medical encounters (n=146,384, 76.4%), individuals affected (n=42,344, 81.3%), and hospitalizations (n=181, 79.7%) occurred among male service members.

In 2024, the largest percentages of medical encounters among deployed service members were coded as musculoskeletal system / connective tissue disorders, followed by administrative and other health services (i.e., 'Z' codes, including factors influencing health status and health service

contact) **(Figure)**. The most common diagnosis within the musculoskeletal system / connective tissue disorders group was for unspecified lower back pain (ICD-10 codes beginning with M545) **(Table)**. The percentage of total medical encounters attributed to other health services decreased from 32.1% in 2020 to 22.8% in 2024. COVID-19 accounted for only 0.3% of deployed service members' total medical encounters in 2024 **(Figure)**.

The percentages of in-theater medical encounters attributed to musculoskeletal system disorders increased from 2020 (23.4%) to 2024 (30.9%) **(Figure)**. Unspecified lower back pain (M5450) was the most frequent ICD-10 diagnostic code for musculoskeletal encounters among both men and women **(Table)**. The second-most frequent ICD-10 diagnostic code for musculoskeletal encounters among male service members was pain in the right shoulder (M25511), while for female service members it was pain in the right knee (M25561) **(Table)**.

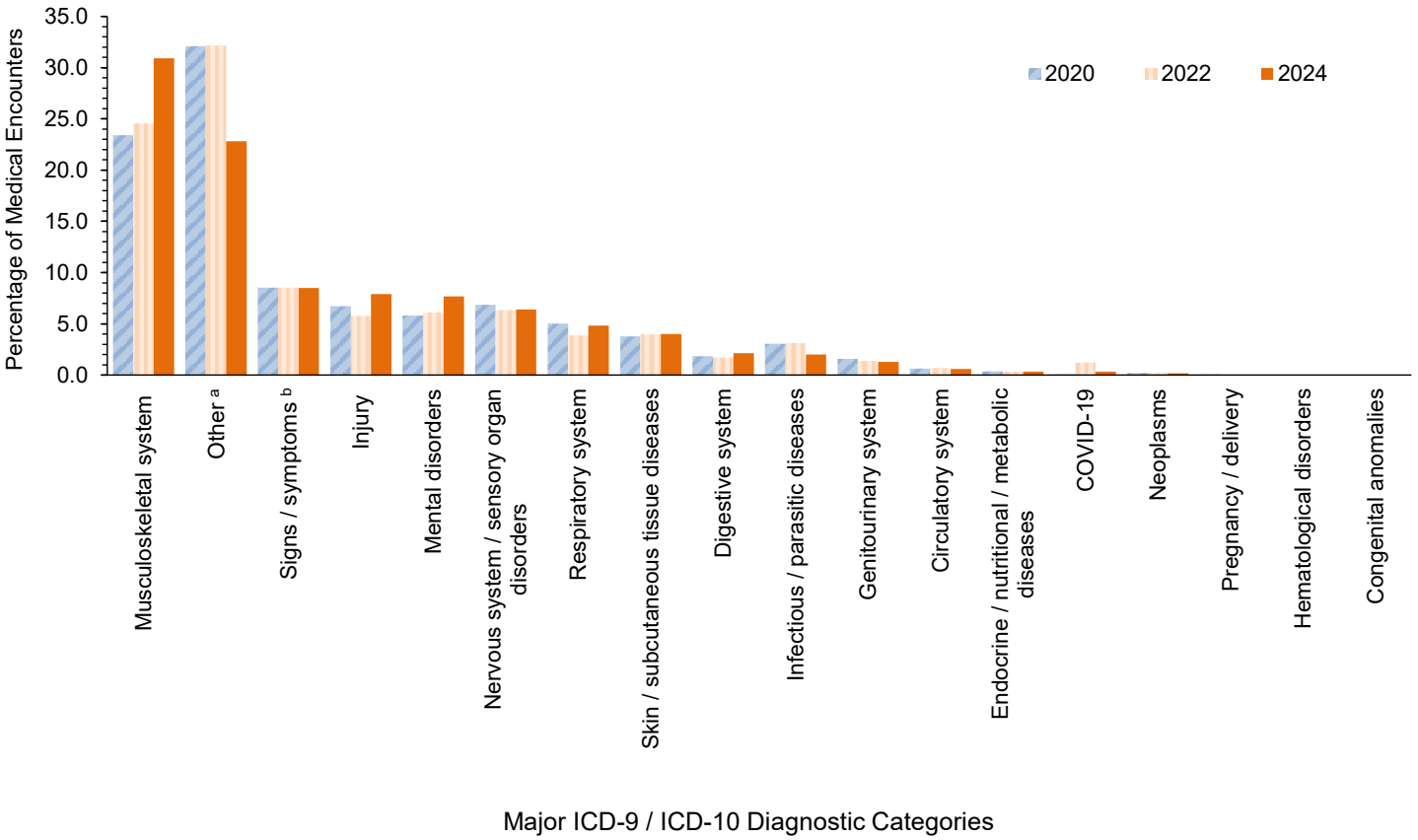
The percentages of in-theater medical encounters attributed to mental health disorders increased slightly during the surveillance period, from 5.8% in 2020 to 7.7% in 2024 **(Figure)**. Unspecified reaction to severe stress (F439) accounted for the most frequent mental health disorder diagnoses, with a slightly higher percentage of in-theater encounters for this disorder among women (1.5%) than men (1.0%) **(Table)**.

## Discussion

As in prior annual reports of illness and injury-related morbidity and care burdens in deployed settings, musculoskeletal disorders, in combination with administrative and other health services, accounted for more than half of the total medical encounters in theater. In prior reports during the surveillance period, encounters for COVID-19 screening contributed to an increase in encounters for administrative and other health services, as this specific Z code (Z1152) accounted for almost 5% of all in-theater medical encounters in 2022.[3]

This report documents an increased percentage of in-theater medical encounters for musculoskeletal disorders, consistent with the 2020-2024 increased rate of in-garrison ambulatory encounters for musculoskeletal disorders. The percentage of total ambulatory encounters attributed to musculoskeletal disorders in garrison (28.1%) was similar to the percentage observed in theater (30.9%).[4] No absolute rate comparisons can be made due to the lack of in-theater denominator (person-time) data.

**FIGURE.** Major ICD-9 / ICD-10 Diagnostic Categories of In-Theater Medical Encounters, Active Component, U.S. Armed Forces, 2020, 2022 and 2024




Abbreviations: ICD-9, International Classification of Diseases, 9th Revision; ICD-10, International Classification of Diseases, 10th Revision; COVID-19, coronavirus disease 2019.
[a] Other factors influencing health status and contact with health services (excluding pregnancy-related).
[b] Includes ill-defined conditions.

**TABLE.** Most Frequent ICD-10 Diagnostic Codes for In-Theater Medical Encounters by Sex, Active Component, U.S. Armed Forces, 2024

| Total | | | | Male | | | | Female | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ICD-10 Code[a] | ICD-10 Code Description | No. | % | ICD-10 Code[a] | ICD-10 Code Description | No. | % | ICD-10 Code[a] | ICD-10 Code Description | No. | % |
| Z029 | Encounter for administrative examinations, unspecified | 9,900 | 5.2 | Z029 | Encounter for administrative examinations, unspecified | 7,283 | 5.0 | Z029 | Encounter for administrative examinations, unspecified | 2,617 | 5.8 |
| M5450 | Low back pain, unspecified | 8,851 | 4.6 | M5450 | Low back pain, unspecified | 7,055 | 4.8 | M5450 | Low back pain, unspecified | 1,796 | 4.0 |
| Z5682 | Military deployment status | 5,709 | 3.0 | Z5682 | Military deployment status | 4,560 | 3.1 | Z5682 | Military deployment status | 1,149 | 2.6 |
| M25511 | Pain in right shoulder | 4,238 | 2.2 | M25511 | Pain in right shoulder | 3,634 | 2.5 | J069 | Acute upper respiratory infection, unspecified | 965 | 2.2 |
| M25561 | Pain in right knee | 3,829 | 2.0 | M25512 | Pain in left shoulder | 3,154 | 2.2 | M25561 | Pain in right knee | 902 | 2.0 |
| J069 | Acute upper respiratory infection, unspecified | 3,762 | 2.0 | M25561 | Pain in right knee | 2,927 | 2.0 | M542 | Cervicalgia | 791 | 1.8 |
| M25512 | Pain in left shoulder | 3,647 | 1.9 | M25562 | Pain in left knee | 2,805 | 1.9 | M25562 | Pain in left knee | 724 | 1.6 |
| M25562 | Pain in left knee | 3,529 | 1.9 | J069 | Acute upper respiratory infection, unspecified | 2,797 | 1.9 | F439 | Reaction to severe stress, unspecified | 662 | 1.5 |
| M542 | Cervicalgia | 3,314 | 1.7 | M542 | Cervicalgia | 2,523 | 1.7 | Z0289 | Encounter for other administrative examinations | 612 | 1.4 |
| Z23 | Encounter for immunization | 2,794 | 1.5 | Z9182 | Personal history of military deployment | 2,354 | 1.6 | M25511 | Pain in right shoulder | 604 | 1.3 |
| Z9182 | Personal history of military deployment | 2,751 | 1.4 | Z23 | Encounter for immunization | 2,256 | 1.5 | M25551 | Pain in right hip | 555 | 1.2 |
| M545 | Low back pain | 2,591 | 1.4 | M545 | Low back pain | 2,240 | 1.5 | F4323 | Adjustment disorder with mixed anxiety and depressed mood | 540 | 1.2 |
| Z0289 | Encounter for other administrative examinations | 2,565 | 1.3 | L731 | Pseudofolliculitis barbae | 2,057 | 1.4 | Z23 | Encounter for immunization | 538 | 1.2 |
| R197 | Diarrhea, unspecified | 2,205 | 1.2 | Z0289 | Encounter for other administrative examination | 1,953 | 1.3 | Z7189 | Other specified counseling | 525 | 1.2 |
| F439 | Reaction to severe stress, unspecified | 2,146 | 1.1 | R197 | Diarrhea, unspecified | 1,739 | 1.2 | M25512 | Pain in left shoulder | 493 | 1.1 |
| L731 | Pseudofolliculitis barbae | 2,060 | 1.1 | F439 | Reaction to severe stress, unspecified | 1,484 | 1.0 | R197 | Diarrhea, unspecified | 466 | 1.0 |
| Z7189 | Other specified counseling | 1,883 | 1.0 | Z7189 | Other specified counseling | 1,358 | 0.9 | M25552 | Pain in left hip | 448 | 1.0 |
| F4323 | Adjustment disorder with mixed anxiety and depressed mood | 1,820 | 1.0 | G4726 | Circadian rhythm sleep disorder, shift work type | 1,306 | 0.9 | Z719 | Counseling, unspecified | 446 | 1.0 |
| J00 | Acute nasopharyngitis [common cold] | 1,577 | 0.8 | F4323 | Adjustment disorder with mixed anxiety and depressed mood | 1,280 | 0.9 | Z733 | Stress, not elsewhere classified | 406 | 0.9 |
| M25571 | Pain in right ankle, joints of right foot | 1,537 | 0.8 | J00 | Acute nasopharyngitis [common cold] | 1,173 | 0.8 | J00 | Acute nasopharyngitis [common cold] | 404 | 0.9 |
| M25551 | Pain in right hip | 1,498 | 0.8 | M25572 | Pain in left ankle, joints of left foot | 1,146 | 0.8 | M5459 | Other low back pain | 404 | 0.9 |
| G4726 | Circadian rhythm sleep disorder, shift work type | 1,478 | 0.8 | M25571 | Pain in right ankle, joints of right foot | 1,143 | 0.8 | Z9182 | Personal history of military deployment | 397 | 0.9 |
| Z719 | Counseling, unspecified | 1,459 | 0.8 | Z719 | Counseling, unspecified | 1,013 | 0.7 | M25571 | Pain in right ankle, joints of right foot | 394 | 0.9 |
| M25572 | Pain in left ankle, joints of left foot | 1,445 | 0.8 | M5459 | Other low back pain | 1,001 | 0.7 | R519 | Headache, unspecified | 377 | 0.8 |
| M5459 | Other low back pain | 1,405 | 0.7 | R519 | Headache, unspecified | 967 | 0.7 | M545 | Low back pain | 351 | 0.8 |
| R519 | Headache, unspecified | 1,344 | 0.7 | R21 | Rash and other non-specific skin eruption | 961 | 0.7 | R21 | Rash and other non-specific skin eruption | 343 | 0.8 |
| R21 | Rash and other non-specific skin eruption | 1,304 | 0.7 | Z760 | Encounter for issue of repeat prescription | 958 | 0.7 | F419 | Anxiety disorder, unspecified | 336 | 0.7 |
| Z760 | Encounter for issue of repeat prescription | 1,279 | 0.7 | M549 | Dorsalgia, unspecified | 956 | 0.7 | Z760 | Encounter for issue of repeat prescription | 321 | 0.7 |
| M549 | Dorsalgia, unspecified | 1,246 | 0.7 | M25551 | Pain in right hip | 943 | 0.6 | F5102 | Adjustment insomnia | 303 | 0.7 |
| M25552 | Pain in left hip | 1,143 | 0.6 | M546 | Pain in thoracic spine | 899 | 0.6 | R109 | Unspecified abdominal pain | 302 | 0.7 |
| F5102 | Adjustment insomnia | 1,121 | 0.6 | F5102 | Adjustment insomnia | 818 | 0.6 | M25572 | Pain in left ankle, joints of left foot | 299 | 0.7 |
| M546 | Pain in thoracic spine | 1,111 | 0.6 | G4729 | Other circadian rhythm sleep disorder | 810 | 0.6 | M549 | Dorsalgia, unspecified | 290 | 0.6 |
| Z733 | Stress, not elsewhere classified | 1,109 | 0.6 | Z733 | Stress, not elsewhere classified | 703 | 0.5 | Z658 | Other specified problems related to psychological circumstances | 249 | 0.6 |
| F419 | Anxiety disorder, unspecified | 915 | 0.5 | G4700 | Insomnia, unspecified | 698 | 0.5 | M79671 | Pain in right foot | 239 | 0.5 |
| G4729 | Other circadian rhythm sleep disorder | 915 | 0.5 | M25552 | Pain in left hip | 695 | 0.5 | M722 | Plantar fascial fibromatosis | 227 | 0.5 |
| R109 | Unspecified abdominal pain | 882 | 0.5 | Z5739 | Occupational exposure to other air contaminants | 676 | 0.5 | M25531 | Pain in right wrist | 225 | 0.5 |
| G4700 | Insomnia, unspecified | 851 | 0.4 | I10 | Essential (primary) hypertension | 627 | 0.4 | J029 | Acute pharyngitis, unspecified | 220 | 0.5 |
| M722 | Plantar fascial fibromatosis | 821 | 0.4 | F4320 | Adjustment disorder, unspecified | 598 | 0.4 | N760 | Acute vaginitis | 219 | 0.5 |
| Z5739 | Occupational exposure to other air contaminants | 808 | 0.4 | M722 | Plantar fascial fibromatosis | 594 | 0.4 | M546 | Pain in thoracic spine | 212 | 0.5 |
| Z658 | Other specified problems related to psychological circumstances | 793 | 0.4 | R109 | Unspecified abdominal pain | 580 | 0.4 | F4310 | Post-traumatic stress disorder, unspecified | 210 | 0.5 |
| M79671 | Pain in right foot | 792 | 0.4 | F419 | Anxiety disorder, unspecified | 579 | 0.4 | F4322 | Adjustment disorder with anxiety | 209 | 0.5 |

Abbreviations: ICD-10, International Classification of Diseases, 10th Revision; No., number; ICD-9, International Classification of Diseases, 9th Revision; TMDS, Theater Medical Data Store.
[a] Some ICD-9 codes still appear in TMDS. While medical encounters documented with ICD-9 codes were included in the overall analysis for major diagnostic category analysis, the summary of these codes are excluded from this table.

Some conditions, including diabetes, pregnancy, or congenital anomalies, often preclude service member deployment. Due to medical pre-screening, service members who are deployed demonstrate a lower rate of medical conditions that could interfere with deployment operations than their non-deployed counterparts. Deployed service members are also less likely to require medical care for pre-screened conditions.

When interpreting these results and analyses, several limitations of these data should be considered. Not all medical encounters in theaters of operations are recorded in the TMDS. Some care by in-theater medical personnel occurs at small, remote, or austere locations where electronic documentation of diagnosis and treatment is infeasible, and some emergency medical care for stabilization of combat-injured service members prior to evacuation may not be routinely captured in the TMDS. Due to the exigencies of deployment settings that can complicate accurate data reporting or transmission, this report may under-estimate the true burden of health care in the areas of operations assessed.

In any review that relies on ICD coding, some diagnosis misclassification should be expected due to coding errors within the electronic health record. Although the aggregated distributions of illnesses and injuries presented in this report are compatible with assessments derived from other examinations of morbidity in military populations (both deployed and non-deployed), instances of highly unlikely diagnostic codes for a deployed population have been observed. This misclassification bias is likely minor and non-differential.

Because this report only includes medical encounters from CENTCOM and AFRICOM, it does not describe any medical encounters from the recent deployment of troops to EUCOM, INDOPACOM, and SOUTHCOM. Each area of operation is unique, with vastly different medical assets, medical evacuation capabilities, and deployed service member populations. Consequently, the results from CENTCOM or AFRICOM may not be generalizable to other combatant commands.

## References


1. Defense Health Agency, U.S. Department of Defense. Joint Operational Medicine Information Systems Theater Medical Data Store. Fact Sheet. Jul. 2019. Accessed Apr. 18, 2025. https://www.health.mil/reference-center/fact-sheets/2019/07/30/tmds-fact-sheet
2. The White House. Letter to the Speaker of the House and President *pro tempore* of the Senate Regarding the War Powers Report. Dec. 6, 2024. Accessed Apr. 18, 2025. https://bidenwhitehouse.archives.gov/briefing-room/statements-releases/2024/12/06/letter-to-the-speaker-of-the-house-and-president-pro-tempore-of-the-senate-regarding-the-war-powers-report-5
3. Armed Forces Health Surveillance Division. Morbidity burdens attributable to various illnesses and injuries among deployed active and reserve component service members of the U.S. Armed Forces, 2022. *MSMR*. 2023;30(7):2-5. Accessed Aug. 21, 2025. https://www.health.mil/news/articles/2024/07/01/msmr-deployed-morbidity-2023
4. Armed Forces Health Surveillance Division. Ambulatory health care visits among active component members of the U.S. Armed Forces, 2024. *MSMR*. 2025;32(9):21-27.

*Update*

# Medical Evacuations out of U.S. Central and U.S. Africa Commands Among the Active and Reserve Components of the U.S. Armed Forces, 2024

This report summarizes the nature, numbers, and trends of conditions for which military members were medically evacuated from the U.S. Central Command (CENTCOM) or Africa Central Command (AFRICOM) operations in 2024, with historical comparisons to the previous 4 years. During deployed military operations, initial medical care is provided by military medical personnel stationed within the operational theater, but some injuries and illnesses require medical care outside the theater of operation. In such cases, affected individuals may be transported to a permanent military medical facility, usually in Europe or the U.S., for definitive diagnosis or care. Because medical evacuations are resource-intensive, they are employed for serious medical conditions, some of which are directly related to participation in, or support of, military operations. Other medical conditions that are unrelated to operational activities but necessitate medical evacuation may be preventable.

With completion of the withdrawal of all U.S. military forces from Afghanistan on August 31, 2021, followed by the conclusion of the U.S. combat mission in Iraq on December 9, 2021,[1,2] U.S. military operations were substantially reduced in the CENTCOM area of responsibility (AOR). To sustain counterterrorism operation successes, force deployment continues in all AORs, in addition to assistance, advice, and accompaniment of selected partners' security forces.[3]

This report only includes medical evacuations from CENTCOM and AFRICOM, without describing any medical evacuations from troop deployment to the U.S. European Command (EUCOM), U.S. Indo-Pacific Command (INDOPACOM), or U.S. Southern Command (SOUTHCOM). *MSMR* has historically reported medical evacuations from CENTCOM due to large numbers of service members deployed for named operations including Operation Iraqi Freedom, Operation Enduring Freedom, and Operation New Dawn. The AFRICOM AOR was added to this annual report in 2021 due counterterrorism force deployment.[3] Future reports may review medical evacuations from other AORs, as required by leadership interest or changing operational tempos.

**What are the new findings?**

Non-battle injuries constituted the most frequent diagnostic categories for service members medically evacuated in 2024 from U.S. Central Command (CENTCOM) and U.S. Africa Command (AFRICOM). Of the 714 CENTCOM service members and 171 AFRICOM service members evacuated for medical reasons in 2024, hospitalization was required for 228 (31.9%) and 42 (24.6%), respectively. Most service members evacuated from CENTCOM or AFRICOM were returned to full duty status after their post-evacuation hospitalizations or outpatient evaluations.

**What is the impact on readiness and force health protection?**

In 2024, evacuations for disease and non-battle injuries from U.S. CENTCOM and AFRICOM were similar to numbers observed in 2022 and 2023. Non-battle injuries and mental health disorders are the leading causes for medical evacuations and should remain the focus for future prevention efforts.

## Methods

The surveillance population for this analysis includes all members of the active and reserve components of the U.S. Army, Navy, Air Force, Space Force, and Marine Corps deployed to the CENTCOM or AFRICOM AORs for any length of time from January 1, 2020 through December 31, 2024. Medical evacuations by the U.S. Transportation Command (TRANSCOM) from the CENTCOM or AFRICOM AORs to a medical treatment facility outside the operational theater were assessed from records maintained in the TRANSCOM Regulating and Command & Control Evacuation System (TRAC2ES). CENTCOM and AFRICOM evacuation data are presented separately.

Medical evacuations were classified by the cause and nature of the precipitating medical condition, based on information in relevant evacuation and medical encounter records. All medical evacuations were classified as battle injuries or non-battle injuries and illnesses, based on entries in the TRAC2ES evacuation record. Evacuations due to non-battle injuries and illnesses were further classified into 18 illness and injury categories based on International Classification of Diseases, 9th and 10th Revisions (ICD-9 and ICD-10, respectively) diagnostic codes reported in medical encounter records following evacuation.

All records of hospitalizations and ambulatory visits at a permanent military medical facility in the U.S. or Europe within an interval of 5 days preceding to 10 days following the reported date of each medical evacuation were identified from Defense Medical Surveillance System (DMSS) data. The primary (i.e., first-listed) diagnosis for either hospitalization or earliest ambulatory visit after evacuation was used to classify the condition that necessitated the evacuation. If the first-listed diagnostic code specified an external cause of injury (ICD-9 'E' code, ICD-10 'V', 'W', 'X', or 'Y' codes) or an encounter for a condition other than a current illness or injury, the secondary diagnosis specifying illness

or injury (ICD-9, 001–999; ICD-10, A00–T88, U07.1, U09.9) was used. If no secondary diagnosis was provided, or if the secondary diagnosis also was an external cause code, the first-listed diagnostic code of a subsequent encounter was used.

## Results

In 2024, there were 714 medical evacuations from the CENTCOM AOR and 171 from the AFRICOM AOR. These medical evacuations were required to be associated with at least 1 subsequent medical encounter at a permanent medical facility outside the operational theater, within the requisite inclusion timeframe **(Table 1)**. Non-battle injuries accounted for the most medical encounters after an evacuation from both CENTCOM (n=198, 27.7%) and AFRICOM (n=52, 30.4%) **(Table 1)**. Mental health disorders accounted for the second-most medical encounters following a CENTCOM evacuation (n=196, 27.5%).

Annual CENTCOM medical evacuations attributable to battle injuries were highest in 2020 (n=59) and subsequently decreased in 2021 (n=7), 2022 (n=3), 2023 (n=14) and 2024 (n=20), following the conclusion of major combat operations (data not shown). Annual CENTCOM medical evacuations attributable to non-battle injuries also declined, from 1,134 to 694 during the 2020–2024 surveillance period **(Figure)**. Annual medical evacuations from AFRICOM attributable to battle injuries peaked at 4 in 2020, falling below this number in 2021 (n=1), 2022 (n=2), 2023 (n=1) and 2024 (n=0) (data not shown). Notably, the annual number of AFRICOM medical evacuations attributable to non-battle injuries and diseases remained much lower than CENTCOM during the 2020–2024 surveillance period **(Figure)**.

### Demographic and military characteristics

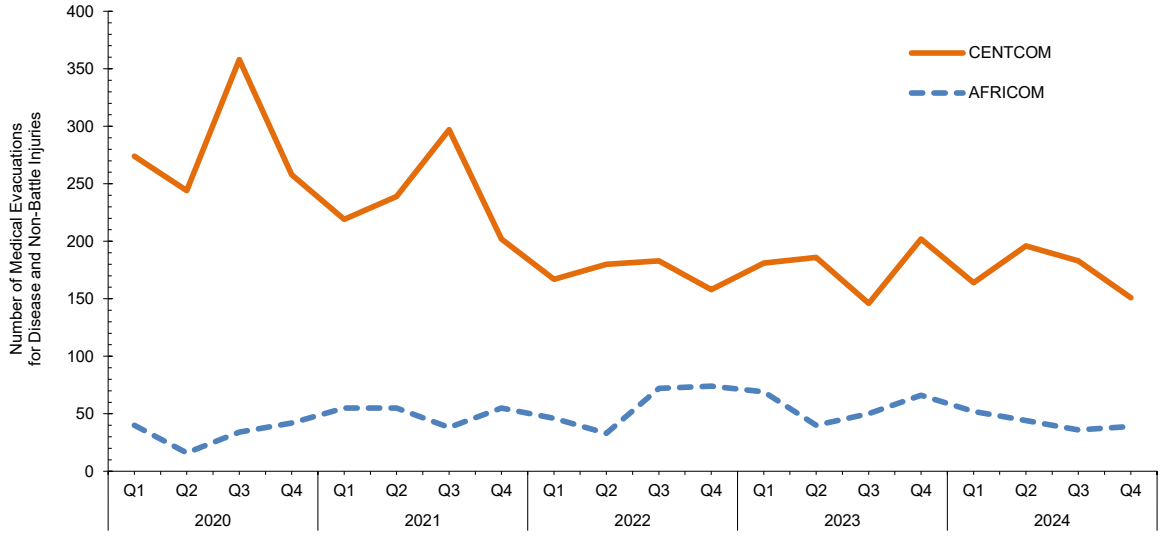
The leading major diagnostic categories following evacuations from CENTCOM in 2024 were non-battle injuries for men (n=173, 30.7%) and mental disorders for women (n=49, 32.9%). In AFRICOM, the leading major diagnostic categories in 2024 were non-battle injuries for both men (n=45, 30.2%) and women (n=7, 31.8%) **(Table 1)**. Female CENTCOM service members had a higher proportion of medical evacuations for mental health disorders compared to male CENTCOM service members (32.9% and 25.8%, respectively) **(Table 1)**.

**TABLE 1.** Numbers and Percentages of Medical Encounters Following Medical Evacuation[a] from Theater, by Area of Responsibility and Major ICD-10 Diagnostic Category, U.S. Armed Forces, 2024

| | CENTCOM | | | | | | AFRICOM | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Men | | Women | | Total | | Men | | Women | |
| Major Diagnostic Category (ICD-10 codes) | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Non-battle injury, poisoning (ICD-10: S00–T88, DOD0101–DOD0105) | 198 | 27.7 | 174 | 30.9 | 24 | 16.0 | 52 | 30.4 | 45 | 30.2 | 7 | 31.8 |
| Mental disorders (ICD-10: F01–F99) | 196 | 27.5 | 146 | 25.9 | 50 | 33.3 | 21 | 12.3 | 17 | 11.4 | 4 | 18.2 |
| Musculoskeletal system (ICD-10: M00–M99) | 77 | 10.8 | 65 | 11.5 | 12 | 8.0 | 20 | 11.7 | 19 | 12.8 | 1 | 4.5 |
| Signs, symptoms, ill-defined conditions (ICD-10: R00–R99) | 70 | 9.8 | 51 | 9.0 | 19 | 12.7 | 25 | 14.6 | 23 | 15.4 | 2 | 9.1 |
| Digestive system (ICD-10: K00–K95) | 40 | 5.6 | 34 | 6.0 | 6 | 4.0 | 14 | 8.2 | 11 | 7.4 | 3 | 13.6 |
| Nervous system and sensory organ disorders (ICD-10: G00–G99, H00–H95) | 29 | 4.1 | 21 | 3.7 | 8 | 5.3 | 13 | 7.6 | 10 | 6.7 | 3 | 13.6 |
| Battle injuries (from TRAC2ES records) | 20 | 2.8 | 16 | 2.8 | 4 | 2.7 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Circulatory system (ICD-10: I00–I99) | 18 | 2.5 | 16 | 2.8 | 2 | 1.3 | 3 | 1.8 | 3 | 2.0 | 0 | 0.0 |
| Genitourinary system (ICD-10: N00–N99) | 16 | 2.2 | 5 | 0.9 | 11 | 7.3 | 5 | 2.9 | 4 | 2.7 | 1 | 4.5 |
| Respiratory system (ICD-10: J00–J99, U07.0) | 12 | 1.7 | 11 | 2.0 | 1 | 0.7 | 1 | 0.6 | 1 | 0.7 | 0 | 0.0 |
| Neoplasms (ICD-10: C00–D49) | 9 | 1.3 | 7 | 1.2 | 2 | 1.3 | 3 | 1.8 | 3 | 2.0 | 0 | 0.0 |
| Other (ICD-10: Z00–Z99, except pregnancy-related) | 7 | 1.0 | 1 | 0.2 | 6 | 4.0 | 6 | 3.5 | 5 | 3.4 | 1 | 4.5 |
| Endocrine, nutritional, metabolic diseases (ICD-10: E00–E89) | 6 | 0.8 | 5 | 0.9 | 1 | 0.7 | 1 | 0.6 | 1 | 0.7 | 0 | 0.0 |
| Skin and subcutaneous tissue diseases (ICD-10: L00–L99) | 6 | 0.8 | 5 | 0.9 | 1 | 0.7 | 2 | 1.2 | 2 | 1.3 | 0 | 0.0 |
| Infectious and parasitic diseases (ICD-10: A00–B99) | 4 | 0.6 | 3 | 0.5 | 1 | 0.7 | 5 | 2.9 | 5 | 3.4 | 0 | 0.0 |
| Congenital anomalies (ICD-10: Q00–Q99) | 3 | 0.4 | 3 | 0.5 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Pregnancy and childbirth (ICD-10: O00–O9A, relevant Z codes) | 2 | 0.3 | 0 | 0.0 | 2 | 1.3 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Hematological disorders (ICD-10: D50–D89) | 1 | 0.1 | 1 | 0.2 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| COVID-19 (U07.1, U09.9) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Total | 714 | 100 | 564 | 100 | 150 | 100 | 171 | 100 | 149 | 100 | 22 | 100 |

Abbreviations: CENTCOM, U.S. Central Command; AFRICOM, U.S. African Command; ICD, International Classification of Diseases, 10th Revision; No., number; TRAC2ES, U.S. Transportation Command (TRANSCOM) Regulating and Command & Control Evacuation System.
[a] Classified as Disease and non-Battle Injuries from 'injury_type' field in TRAC2ES

**FIGURE.** Numbers of Medical Evacuations of U.S. Service Members for Disease and Non-Battle Injuries, by Area of Responsibility and Quarter Year, 2020–2024[a]




| | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|
| AFRICOM | 132 | 203 | 225 | 225 | 171 |
| CENTCOM | 1,134 | 957 | 688 | 715 | 694 |

Abbreviations: CENTCOM, U.S. Central Command; AFRICOM, U.S. Africa Command; Q1, first quarter; Q2, second quarter; Q3, third quarter; Q4, fourth quarter.
[a] These classifications are based on causal event of medical evacuation-linked medical encounters.

The largest numbers and proportions of evacuees from CENTCOM and AFRICOM involved non-Hispanic White service members, those aged 20-24 years, members of the Army, and senior enlisted personnel. Most medical evacuations from CENTCOM (86.7%) and AFRICOM (85.4%) were assigned routine precedence **(Table 2)**.

### Most frequent specific diagnoses

Among men and women in both AORs, the leading 3-digit ICD-10 code for mental health disorders (F43) indicated reaction to severe stress and adjustment disorders **(Table 3)**. This ICD-10 code represented over two-thirds of the mental disorder diagnoses among men in CENTCOM and women in both AORs (data not shown). In CENTCOM, evacuations for other joint disorders and wrist/hand fractures were the second- and third-most common 3-digit ICD-10 codes for men **(Table 3)**.

### Disposition

Hospitalization was required for 228 (31.7%) of CENTCOM (n=714) and 42 (24.6%) of AFRICOM (n=171) medical evacuees in 2024 (data not shown).

## Discussion

In 2024, only 20 (2.8%) medical evacuations from CENTCOM and none (0) from AFRICOM were associated with battle injuries in TRAC2ES records. Evacuations for disease and non-battle injuries from CENTCOM and AFRICOM in 2024 remained similar to numbers observed in 2022 and 2023. These trends reflect the continued counterterrorism force deployment throughout CENTCOM and AFRICOM AORs.[3]

The leading diagnoses of AFRICOM non-battle injuries were not clustered around any specific ICD-10 code but were distributed among diagnoses such as muscle and tendon injuries and fractures. This heterogeneity of injury type may be due to the large proportion due to occupational hazards in the deployed environment. Classification by cause of injury, rather than affected body system, may be more appropriate for this population; the ICD chapter for external causes of morbidity codes is intended for secondary coding purposes and is not mandatory, however. Consequently, completeness and specificity of these external cause codes for injury-related diagnoses may vary according to coding practices.[4]

The leading diagnoses of CENTCOM non-battle injuries were also heterogenous and included unclassified joint disorders, fractures, dislocation and sprains, and tendon injuries. The proportion of CENTCOM medical evacuations attributed to mental health disorders in 2023 (27.5%, n=199) and 2024 (27.5%, n=196) represents a sustained decline after increasing proportional trends reported in 2020 (27.1%, n=323), 2021 (33.3%, n=321), and 2022 (38.6%, n=267).[5-8] The proportions of medical evacuations due to mental health disorders are considerably higher than the proportion (11.6%, n=5,892) described by a *MSMR* report that examined evacuations from Iraq during a 9-year period from 2003 through 2011.[9]

**TABLE 2.** Demographic and Military Characteristics of Service Members Medically Evacuated from the U.S. Central and Africa Command Areas of Responsibility, U.S. Armed Forces, 2024

| | CENTCOM | | AFRICOM | |
|---|---|---|---|---|
| | No. | % | No. | % |
| Total | 714 | 100 | 171 | 100 |
| Sex | | | | |
| Male | 564 | 79.0 | 149 | 87.1 |
| Female | 150 | 21.0 | 22 | 12.9 |
| Age group, y | | | | |
| <20 | 12 | 1.7 | 6 | 3.5 |
| 20–24 | 202 | 28.3 | 44 | 25.7 |
| 25–29 | 170 | 23.8 | 30 | 17.5 |
| 30–34 | 124 | 17.4 | 32 | 18.7 |
| 35–39 | 107 | 15.0 | 31 | 18.1 |
| 40–44 | 56 | 7.8 | 10 | 5.8 |
| 45+ | 43 | 6.0 | 18 | 10.5 |
| Race and ethnicity | | | | |
| White, non-Hispanic | 353 | 49.4 | 101 | 59.1 |
| Black, non-Hispanic | 168 | 23.5 | 31 | 18.1 |
| Hispanic | 111 | 15.5 | 30 | 17.5 |
| Other/unknown | 82 | 11.5 | 9 | 5.3 |
| Service | | | | |
| Army | 465 | 65.1 | 93 | 54.4 |
| Navy | 101 | 14.1 | 28 | 16.4 |
| Air Force | 138 | 19.3 | 43 | 25.1 |
| Marine Corps | 10 | 1.4 | 7 | 4.1 |
| Component | | | | |
| Active | 347 | 48.6 | 57 | 33.3 |
| Reserve, Guard | 367 | 51.4 | 114 | 66.7 |
| Rank, grade | | | | |
| Junior enlisted (E1–E4) | 279 | 39.1 | 57 | 33.3 |
| Senior enlisted (E5–E9) | 341 | 47.8 | 97 | 56.7 |
| Junior officer (O1–O3; W1–W3) | 70 | 9.8 | 6 | 3.5 |
| Senior officer (O4–O10; W4–W5) | 24 | 3.4 | 11 | 6.4 |
| Military occupation | | | | |
| Combat-specific[a] | 103 | 14.4 | 42 | 24.6 |
| Motor transport | 42 | 5.9 | 2 | 1.2 |
| Pilot, air crew | 16 | 2.2 | 1 | |
| Repair, engineering | 197 | 27.6 | 40 | 23.4 |
| Communications, intelligence | 164 | 23.0 | 41 | 24.0 |
| Health care | 61 | 8.5 | 6 | 3.5 |
| Other/unknown | 131 | 18.3 | 39 | 22.8 |
| Marital status | | | | |
| Married | 344 | 48.2 | 87 | 50.9 |
| Single, never married | 319 | 44.7 | 68 | 39.8 |
| Other/unknown | 51 | 7.1 | 16 | 9.4 |
| Education | | | | |
| High school or less | 452 | 63.3 | 96 | 56.1 |
| Some college | 76 | 10.6 | 22 | 12.9 |
| College | 153 | 21.4 | 41 | 24.0 |
| Other/unknown | 33 | 4.6 | 12 | 7.0 |
| Precedence[b] | | | | |
| Routine | 619 | 86.7 | 146 | 85.4 |
| Priority | 84 | 11.8 | 20 | 11.7 |
| Urgent | 11 | 1.5 | 5 | 2.9 |
| Transportation mode | | | | |
| Military | 483 | 67.6 | 38 | 22.2 |
| Commercial | 26 | 3.6 | 5 | 2.9 |
| Other/unknown | 205 | 28.7 | 128 | 74.9 |

Abbreviations: CENTCOM, U.S. Central Command; AFRICOM, U.S. Africa Command; No., number; y, years.
[a] Infantry/artillery/combat engineering/armor.
[b] Data field within U.S. Transportation Command (TRANSCOM) Regulating and Command & Control Evacuation System (TRAC2ES).

Several important limitations should be considered when interpreting these results. Demographic data for the deployed population, i.e., person-time for individuals eligible for medical evacuation, are not readily available. The lack of deployed individual person-time precludes calculation of stratified and overall rates for medical evacuations.

Most causes of medical evacuations were estimated for this report from primary (i.e., first-listed) diagnoses in DMSS recorded during hospitalizations or initial outpatient encounters following evacuation. Diagnoses recorded in theater through the Theater Medical Data Store (TMDS) are not reflected in this analysis. In some cases, clinical evaluations at fixed medical treatment facilities following medical evacuation may have eliminated serious conditions that were clinically suspected while in theater, resulting in possible misclassification errors.

Battle injuries rely on proper classification in the TRAC2ES system. Misclassification errors may occur, and given the small number of battle injuries, any misclassification will have a disproportionate effect.

**TABLE 3.** Most Frequent Three-Digit ICD-10 Diagnoses Associated with Medical Evacuations, by Area of Responsibility and Sex, U.S. Armed Forces, 2023

| CENTCOM | | | | | |
|---|---|---|---|---|---|
| Males | | | Females | | |
| 3-Digit ICD-10 Code | ICD-10 Code Description | No. | 3-Digit ICD-10 Code | ICD-10 Code Description | No. |
| F43 | Reaction to severe stress, adjustment disorders | 109 | F43 | Reaction to severe stress, adjustment disorders | 35 |
| M25 | Other joint disorder, not elsewhere classified | 26 | M25 | Other joint disorder, not elsewhere classified | 8 |
| S62 | Fracture, wrist and hand | 23 | F32 | Depressive episode | 6 |
| S83 | Dislocation and sprain of joints and ligaments of knee | 17 | R10 | Abdominal and pelvic pain | 5 |
| M54 | Dorsalgia | 13 | S83 | Dislocation and sprain of joints and ligaments of knee | 4 |
| **AFRICOM** | | | | | |
| Males | | | Females | | |
| 3-Digit ICD-10 Code | ICD-10 Code Description | No. | 3-Digit ICD-10 Code | ICD-10 Code Description | No. |
| F43 | Reaction to severe stress, adjustment disorders | 8 | F43 | Reaction to severe stress, adjustment disorders | 4 |
| M54 | Dorsalgia | 7 | G45 | Transient cerebral ischemic attacks and related syndromes | 1 |
| M25 | Other joint disorder, not elsewhere classified | 6 | H00 | Hordeolum and chalazion | 1 |
| S62 | Fracture, wrist and hand | 6 | H52 | Disorders of refraction and accommodation | 1 |
| Z02 | Encounter for administrative examination | 5 | K35 | Acute appendicitis | 1 |

Abbreviations: ICD, International Classification of Diseases, 10th Revision; CENTCOM, Central Command; AFRICOM, Africa Command; No., number.

## References


1. C-SPAN. White House Event: President Biden Remarks on US Withdrawal from Afghanistan. Aug. 31, 2021. Accessed Apr. 18, 2025. https://www.c-span.org/program/white-house-event/president-biden-remarks-on-us-withdrawal-from-afghanistan/602343
2. Kullab, S, The Associated Press. US formally ends combat mission in Iraq. *Military Times.* Dec. 9, 2021. Accessed Apr. 18, 2025. https://www.militarytimes.com/news/your-military/2021/12/09/us-formally-ends-combat-mission-in-iraq
3. The White House. Letter to the Speaker of the House and President *pro tempore* of the Senate Regarding the War Powers Report. Dec. 6, 2024. Accessed Apr. 18, 2025. https://bidenwhitehouse.archives.gov/briefing-room/statements-releases/2024/12/06/letter-to-the-speaker-of-the-house-and-president-pro-tempore-of-the-senate-regarding-the-war-powers-report-5
4. Canham-Chervak M, Schuh-Renner A, Stahlman SL, Rappole C, Jones BH. External cause coding of injury encounters in the Military Health System among active component U.S. service members, 2016-2019. *MSMR.* 2025;32(2):2-9. Accessed Aug. 21, 2025. https://www.health.mil/news/articles/2025/02/01/msmr-injury-cause-coding
5. Armed Forces Health Surveillance Division. Medical evacuations out of the U.S. central command, active and reserve components, U.S. Armed Forces, 2020. *MSMR.* 2021;28(5):28-33. Accessed Aug. 21, 2025. https://www.health.mil/reference-center/reports/2021/05/01/medical-surveillance-monthly-report-volume-28-number-05
6. Armed Forces Health Surveillance Division. Medical evacuations out of the U.S. central and U.S. Africa commands, active and reserve components, U.S. Armed Forces, 2021. *MSMR.* 2022;29(6):27-33. Accessed Aug. 21, 2025. https://www.health.mil/news/articles/2022/06/01/medevac-msmr
7. Armed Forces Health Surveillance Division. Medical evacuations out of U.S. central and U.S. Africa commands among active and reserve components, U.S. Armed Forces, 2022. *MSMR.* 2023;30(7):6-10. Accessed Aug. 21, 2025. https://www.health.mil/news/articles/2023/07/01/medical-evacuations
8. Armed Forces Health Surveillance Division. Medical evacuations out of U.S. central and Africa commands among the active and reserve components of the U.S. Armed Forces, 2023. *MSMR.* 2024;31(7):2-6. Accessed Aug. 21, 2025. https://www.health.mil/news/articles/2024/07/01/msmr-medical-evacuations-2023
9. Armed Forces Health Surveillance Center. Medical evacuations from Operation Iraqi Freedom/Operation New Dawn, active and reserve components, U.S. Armed Forces, 2003-2011. *MSMR.* 2012;19(2):18-21. Accessed Aug. 21, 2025. https://www.health.mil/reference-center/reports/2012/01/01/medical-surveillance-monthly-report-volume-19-number-2

*Update*

# Absolute and Relative Morbidity Burdens Attributable to Various Illnesses and Injuries Among Active Component Members of the U.S. Coast Guard, 2024

The U.S. Coast Guard is a military service that operates under the authority of the U.S. Department of Homeland Security, providing law and maritime safety enforcement, marine and environmental protection and military naval support.[1,2] It is the second smallest service of the U.S. Armed Forces, with approximately 45,940 active component service members, and the only military service operating outside the authority of the Department of Defense (DOD). Coast Guard personnel are eligible to use DOD health care facilities, but because many service members are not stationed near a DOD installation, the Coast Guard operates primary care clinics in areas with sufficiently large Coast Guard populations, which is limited to providing primary care.[1]

Recent research indicates that Coast Guard beneficiaries (i.e., active duty service members, reservists entitled to specific care, retirees, dependents) face challenges obtaining care meeting access standards due to several factors, including staffing shortages at Coast Guard clinics, data gaps, a lack of information to ensure member assignments optimally address the health needs of dependents, and more.[1] A higher proportion of civilian hospitalizations among Coast Guard members has been noted[3]; this difference may extend to ambulatory care as well. The *MSMR* annual morbidity burden report excluded hospitalization data for the U.S. Coast Guard service members from 2016 through 2021 due to missing data.[3,4]

To quantify the impacts of various illnesses and injuries among members of the active component of the U.S. Coast Guard in 2024, this summary report employs the same disease classification system and morbidity burden measures that were used in the general active component burden analysis.

## Methods

The population for this analysis included all individuals who served in the active component of the Coast Guard at any time during the surveillance period of January 1, 2024 through November 30, 2024. The methodology for summarizing absolute and relative Coast Guard morbidity burdens in 2024 is identical to the methodology described on page 5 of this issue that determined the absolute and relative burdens attributed to various illnesses and injuries among the active component of the U.S. Armed Forces.

## Results

In 2024, a total of 36,686 Coast Guard service members had 470,239 total medical encounters, which included 10,143 hospital bed days reported, for a rate of 0.28 hospital bed days per Coast Guard member who experienced at least 1 medical encounter, either ambulatory or hospitalization.

### Morbidity burden, by category

In 2024, more active component Coast Guard members experienced medical encounters for injury (n=16,297) than any other morbidity-related category **(Figure 1a)**. Second-most frequent in terms of hospital bed days, injury accounted for over one-fifth (22.1%) of all medical encounters **(Figure 1b)**.

Mental health disorders accounted for more hospital bed days (n=5,376) than any other morbidity-related category, constituting over half (53.0%) of all hospital bed days, and fifth in terms of numbers of individuals affected **(Figures 1a, 1b)**. Combined, injury and mental health disorders accounted for over three-fifths (65.8%) of all hospital bed days and more than two-fifths (42.1%) of all medical encounters.

Maternal conditions (pregnancy complications, delivery), accounted for a relatively large proportion of all hospital bed days (n=1,280, 12.6%) but a much smaller proportion of total medical encounters (n=4,094 0.9%) **(Figures 1a, 1b)**. Maternal conditions were the most prevalent medical condition among female active component Coast Guard members. Women comprised approximately one-sixth (16.4%) of the active duty Coast Guard in 2024.

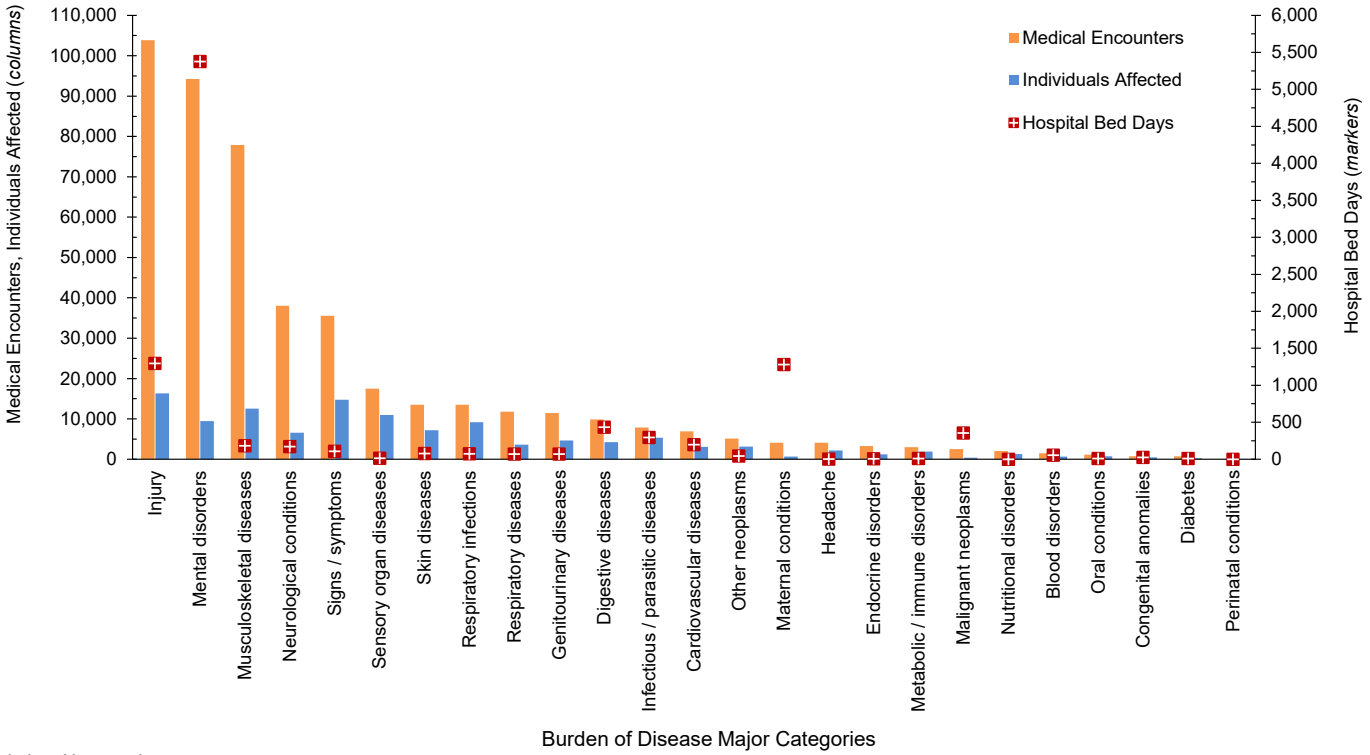
### What are the new findings?

In 2024, injuries, mental health disorders, and musculoskeletal diseases were the categories of medical conditions associated with the most medical encounters, greatest numbers of members affected, and largest numbers of hospital days among active duty Coast Guard members, similar to Department of Defense active component service members. When compared to 2023, medical encounters rose by 6.2%, hospital bed days increased by 13.7%, and major category conditions increased by 5.7%. In 2024, COVID-19 accounted for 0.3% of total medical encounters, a decrease from 0.4% in 2023, and 0.2% of hospital bed days reported in 2024.

### What is the impact on readiness and force health protection?

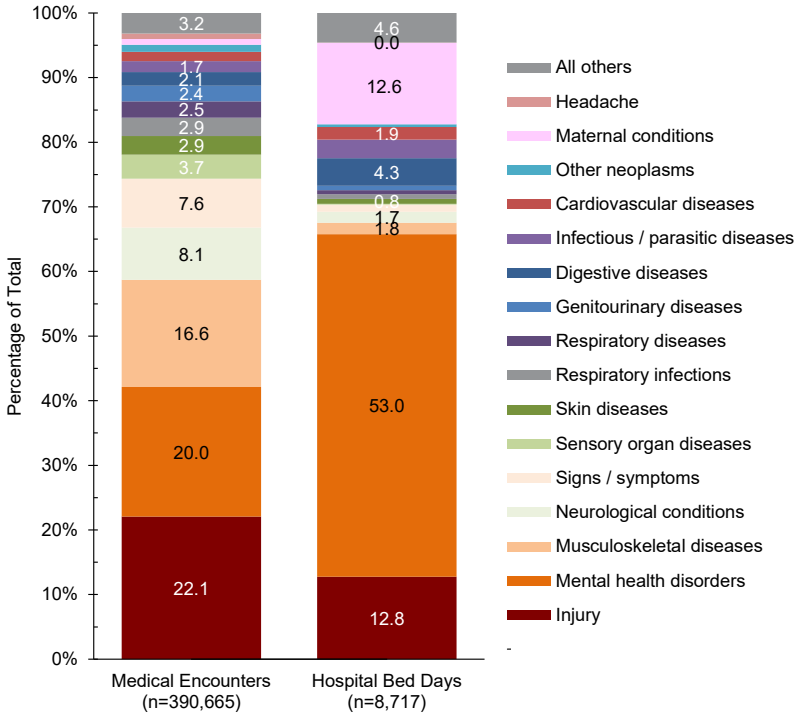
The major condition categories in this report present health challenges for members of the U.S. Coast Guard and affect their service readiness. Loss of duty availability related to illness and injury diminishes Coast Guard personnel readiness. Coast Guard members have unique occupational exposures that may benefit from specific risk reduction programs to mitigate these threats.

**FIGURE 1a.** Numbers of Medical Encounters[a], Individuals Affected[b] and Hospital Bed Days by Burden of Disease Major Category[c], Active Component, U.S. Coast Guard, 2024




Abbreviation: No., number.
[a] Medical encounters include total hospitalizations and ambulatory visits for the condition (with no more than 1 encounter per individual per day per condition).
[b] Individuals with at least 1 hospitalization or ambulatory visit for the condition.
[c] Burden of disease major categories modified from those defined in Global Burden of Disease Study.[7,8]

**FIGURE 1b.** Percentage of Medical Encounters[a] and Hospital Bed Days Attributable to Burden of Disease Major Categories[b], Active Component, U.S. Coast Guard, 2024

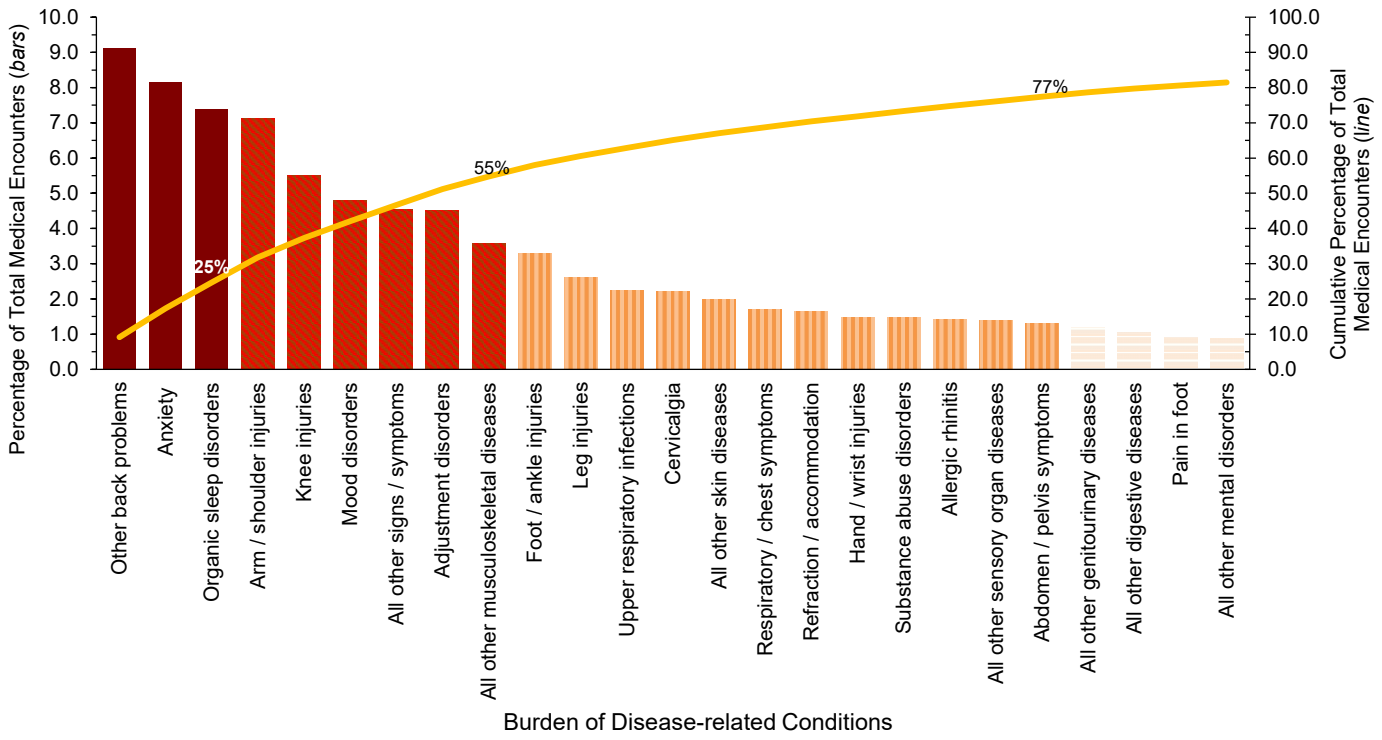



## Medical encounters, by condition

In 2024, 5 disease-related conditions accounted for more than one-third (37.3%) of all illness- and injury-related medical encounters among active component Coast Guard members: other back problems (includes lower back pain, other dorsalgia), anxiety disorders, organic sleep disorders (e.g., obstructive sleep apnea, insomnia), arm / shoulder injuries, and knee injuries **(Figure 2)**. Moreover, the 10 conditions associated with the most medical encounters constituted more than half (58.0%) of all illness- and injury-related medical encounters.

[a] Medical encounters include total hospitalizations and ambulatory visits for the condition (with no more than 1 encounter per individual per day per condition).
[b] Burden of disease major categories modified from those defined in Global Burden of Disease Study.[7,8]

**FIGURE 2.** Percentage and Cumulative Percentage Distribution, Burden of Disease-related Conditions[a] that Accounted for the Most Medical Encounters, Active Component, U.S. Coast Guard, 2024




[a] Burden of disease-related conditions modified from those defined in Global Burden of Disease Study.[7,8]

The disease-related conditions in 2024 that predominantly accounted for medical encounters among active component Coast Guard members were injuries, mental health disorders, and musculoskeletal diseases. Among the reported injuries, arm / shoulder (7.1%), knee (5.5%), foot / ankle (3.3%), and leg (2.6%) injuries accounted for the most medical encounters **(Figure 2** and **Table)**. Anxiety (8.2%), mood (4.8%), adjustment (4.5%), and substance abuse disorders (1.5%) were the 4 most frequent mental health disorder diagnoses. Other back problems (9.1%), all other musculoskeletal diseases (3.6%), and cervicalgia (2.2%) constituted the most medical encounters among musculoskeletal disorders. COVID-19 accounted for 0.3% of total medical encounters in 2024.

### Individuals affected, by condition

The 10 categories of conditions that affected the most Coast Guard members in 2024 were all other signs and symptoms, upper respiratory infections, other back problems, refraction / accommodation, organic sleep disorders, anxiety, all other skin diseases, all other musculoskeletal diseases, arm and shoulder conditions, and respiratory and chest issues. COVID-19 affected 1,167 Coast Guard members, ranking thirty-sixth for number of individuals affected, a slight drop from thirty-third in 2023.

### Hospital bed days, by condition

In 2024, substance abuse and mood disorders accounted for about two-fifths (40.5%) of all hospital bed days **(Figure 3)**. Four mental health disorders (substance abuse, mood, anxiety, adjustment) and 2 maternal conditions (pregnancy complications, delivery) combined accounted for more than three-fifths (61.7%) of all hospital bed days **(Table** and **Figure 3)**. About 12.8% of all hospital bed days were attributable to injuries. In 2024, 0.2% hospitalizations of active component Coast Guard members were due to COVID-19 **(Table)**.

## Discussion

Health care use within the Coast Guard was similar to the DOD when measured by total encounters and persons affected in 2024. The Coast Guard rate was 12.8 encounters per person (470,239 per 36,686 individuals), compared to the DOD rate of 12.3 encounters per person (14,197,058 per 1,150,913 individuals). The Coast Guard had a lower rate of hospitalization, however, with only 0.28 bed days per individual; the DOD reported 0.33 bed days per individual (378,693 per 1,150,913 individuals).

Compared to 2023, the number of Coast Guard medical encounters and hospital bed days increased by 6.2% and 13.7%,

**TABLE.** Health Care Burdens Attributable to Various Diseases and Injuries, Active Component, U.S. Coast Guard, 2024[a]

| Major Category Condition[b] | Medical Encounters[c] | | Individuals Affected[d] | | Hospital Bed Days | |
|---|---|---|---|---|---|---|
| | No. | Rank[e] | No. | Rank[e] | No. | Rank[e] |
| Total | 470,239 | | | | 10,143 | |
| **Injury, poisoning** | **103,865** | | | | **1,296** | |
| Arm, shoulder injury | 33,448 | 4 | 4,987 | 9 | 203 | 11 |
| Knee injury | 25,919 | 5 | 4,048 | 12 | 44 | 31 |
| Foot, ankle injury | 15,502 | 10 | 3,939 | 13 | 85 | 19 |
| Leg injury | 12,275 | 11 | 2,461 | 20 | 233 | 9 |
| Hand, wrist injury | 6,928 | 17 | 2,616 | 17 | 15 | 48 |
| Head, neck injury | 2,962 | 29 | 1,607 | 27 | 191 | 13 |
| Back, abdomen injury | 2,325 | 33 | 1,090 | 39 | 129 | 16 |
| Unspecified injury | 1,130 | 53 | 821 | 46 | 3 | 81 |
| Environmental injury/poisoning | 1,090 | 56 | 840 | 45 | 1 | 90 |
| Other complications, not otherwise specified | 988 | 57 | 541 | 57 | 326 | 5 |
| Other harm from external causes | 812 | 60 | 595 | 54 | 19 | 43 |
| Poisoning, non-drug | 270 | 97 | 177 | 88 | 4 | 75 |
| All other injuries | 108 | 117 | 91 | 102 | 0 | 93 |
| Poisoning, drugs | 55 | 127 | 26 | 124 | 43 | 32 |
| Other burns | 42 | 132 | 37 | 114 | 0 | 93 |
| Other superficial injury | 11 | 142 | 8 | 137 | 0 | 93 |
| **Mental disorders** | **94,235** | | | | **5,376** | |
| Anxiety disorder | 38,411 | 2 | 5,517 | 6 | 806 | 4 |
| Mood disorder | 22,535 | 6 | 2,607 | 18 | 2,001 | 2 |
| Adjustment disorder | 21,211 | 8 | 3,636 | 14 | 279 | 7 |
| Substance abuse disorder | 6,888 | 18 | 534 | 59 | 2,106 | 1 |
| All other mental disorders | 4,151 | 25 | 1,124 | 38 | 12 | 53 |
| Psychotic disorder | 505 | 77 | 44 | 112 | 164 | 14 |
| Personality disorder | 196 | 108 | 35 | 116 | 4 | 75 |
| Somatoform disorder | 184 | 113 | 70 | 105 | 4 | 75 |
| Tobacco dependence | 154 | 115 | 101 | 99 | 0 | 93 |
| **Musculoskeletal diseases** | **77,914** | | | | **181** | |
| Other back problems | 42,939 | 1 | 7,087 | 3 | 119 | 18 |
| All other musculoskeletal diseases | 16,782 | 9 | 5,259 | 8 | 50 | 28 |
| Cervicalgia | 10,376 | 13 | 1,960 | 23 | 3 | 81 |
| Pain in foot | 4,195 | 24 | 1,719 | 24 | 0 | 93 |
| Osteoarthritis | 2,086 | 36 | 961 | 41 | 2 | 85 |
| Other shoulder disorders | 715 | 63 | 302 | 73 | 0 | 93 |
| Other knee disorders | 636 | 72 | 240 | 82 | 7 | 62 |
| Rheumatoid arthritis | 185 | 112 | 70 | 105 | 0 | 93 |
| **Signs, symptoms, ill-defined conditions** | **35,565** | | | | **109** | |
| All other signs and symptoms | 21,371 | 7 | 10,332 | 1 | 74 | 21 |
| Respiratory, chest signs and symptoms | 8,005 | 15 | 4,905 | 10 | 13 | 50 |
| Abdomen, pelvis signs and symptoms | 6,189 | 21 | 3,565 | 15 | 22 | 39 |
| **Neurological conditions** | **38,052** | | | | **171** | |
| Organic sleep disorder | 34,714 | 3 | 5,869 | 5 | 4 | 75 |
| All other neurological conditions | 1,578 | 44 | 580 | 56 | 155 | 15 |
| Chronic pain | 883 | 58 | 375 | 65 | 0 | 93 |
| Other mononeuritis, upper/lower limbs | 454 | 80 | 208 | 85 | 0 | 93 |
| Epilepsy | 222 | 104 | 69 | 107 | 7 | 62 |
| Multiple sclerosis | 159 | 114 | 28 | 123 | 5 | 72 |
| Parkinson's disease | 42 | 132 | 2 | 144 | 0 | 93 |
| **Sensory organ diseases** | **17,475** | | | | **13** | |
| Refraction, accommodation | 7,678 | 16 | 6,601 | 4 | 0 | 93 |
| All other sensory organ diseases | 6,492 | 20 | 4,205 | 11 | 13 | 50 |
| Hearing disorders | 2,551 | 31 | 1,649 | 25 | 0 | 93 |
| Glaucoma | 675 | 69 | 421 | 61 | 0 | 93 |
| Cataracts | 79 | 120 | 55 | 108 | 0 | 93 |

**TABLE (cont).** Health Care Burdens Attributable to Various Diseases and Injuries, Active Component, U.S. Coast Guard, 2024[a]

| Major Category Condition[b] | Medical Encounters[c] | | Individuals Affected[d] | | Hospital Bed Days | |
|---|---|---|---|---|---|---|
| | No. | Rank[e] | No. | Rank[e] | No. | Rank[e] |
| **Infectious and parasitic diseases** | **7,874** | | | | **294** | |
| All other infectious and parasitic diseases | 3,832 | 27 | 2,418 | 21 | 254 | 8 |
| COVID-19 | 1,307 | 48 | 1,167 | 36 | 20 | 41 |
| Tinea skin infection | 1,186 | 51 | 895 | 43 | 0 | 93 |
| Unspecified viral infection | 691 | 66 | 647 | 52 | 6 | 64 |
| Diarrheal disease | 416 | 83 | 359 | 68 | 8 | 59 |
| Sexually transmitted disease (STD) | 340 | 90 | 266 | 79 | 0 | 93 |
| Chlamydia | 57 | 126 | 52 | 110 | 0 | 93 |
| Intestinal nematode infection | 22 | 138 | 14 | 131 | 0 | 93 |
| Tuberculosis | 7 | 143 | 5 | 139 | 0 | 93 |
| Bacterial meningitis | 6 | 144 | 1 | 149 | 6 | 64 |
| Hepatitis B, C | 6 | 144 | 5 | 139 | 0 | 93 |
| Malaria | 2 | 147 | 2 | 144 | 0 | 93 |
| Tropical cluster | 2 | 147 | 2 | 144 | 0 | 93 |
| **Skin diseases** | **13,533** | | | | **77** | |
| All other skin diseases | 9,313 | 14 | 5,322 | 7 | 71 | 22 |
| Sebaceous gland disease | 2,539 | 32 | 1,523 | 31 | 0 | 93 |
| Contact dermatitis | 1,681 | 41 | 1,315 | 33 | 6 | 64 |
| **Respiratory diseases** | **11,822** | | | | **68** | |
| Allergic rhinitis | 6,660 | 19 | 1,431 | 32 | 0 | 93 |
| All other respiratory diseases | 1,748 | 39 | 1,032 | 40 | 67 | 23 |
| Chronic sinusitis | 1,317 | 47 | 807 | 47 | 0 | 93 |
| Deviated nasal septum | 694 | 65 | 389 | 64 | 1 | 90 |
| Asthma | 606 | 75 | 312 | 72 | 0 | 93 |
| Chronic obstructive pulmonary disease | 447 | 81 | 365 | 67 | 0 | 93 |
| Chronic rhinitis | 350 | 88 | 242 | 81 | 0 | 93 |
| **Genitourinary diseases** | **11,418** | | | | **68** | |
| All other genitourinary diseases | 5,616 | 22 | 2,781 | 16 | 19 | 43 |
| Female genital pain | 1,378 | 45 | 629 | 53 | 0 | 93 |
| Menstrual disorder | 1,139 | 52 | 689 | 49 | 0 | 93 |
| UTI, cystitis | 809 | 61 | 586 | 55 | 6 | 64 |
| Other breast disorders | 788 | 62 | 406 | 63 | 3 | 81 |
| Kidney stones | 679 | 68 | 277 | 76 | 24 | 37 |
| Nephritis, nephrosis | 424 | 82 | 109 | 98 | 16 | 45 |
| Vaginitis, vulvitis | 348 | 89 | 281 | 75 | 0 | 93 |
| Benign prostatic hypertrophy | 237 | 101 | 137 | 93 | 0 | 93 |
| **Digestive diseases** | **9,880** | | | | **432** | |
| All other digestive diseases | 4,952 | 23 | 2,482 | 19 | 298 | 6 |
| Esophagus disease | 2,151 | 35 | 1,259 | 34 | 11 | 55 |
| Other gastroenteritis, colitis | 1,632 | 43 | 868 | 44 | 64 | 25 |
| Constipation | 479 | 79 | 356 | 69 | 1 | 90 |
| Inguinal hernia | 365 | 87 | 144 | 91 | 0 | 93 |
| Appendicitis | 187 | 111 | 77 | 103 | 52 | 27 |
| Cirrhosis of liver | 63 | 125 | 10 | 135 | 0 | 93 |
| Peptic ulcer disease | 51 | 130 | 29 | 122 | 6 | 64 |
| **Respiratory infections** | **13,500** | | | | **73** | |
| Upper respiratory infection | 10,551 | 12 | 7,830 | 2 | 25 | 36 |
| Lower respiratory infection | 1,679 | 42 | 1,242 | 35 | 48 | 29 |
| Otitis media | 1,270 | 49 | 958 | 42 | 0 | 93 |
| **Cardiovascular diseases** | **6,914** | | | | **196** | |
| All other cardiovascular diseases | 3,458 | 28 | 1,587 | 28 | 128 | 17 |
| Essential hypertension | 2,831 | 30 | 1,527 | 30 | 2 | 85 |
| Ischemic heart disease | 296 | 94 | 129 | 95 | 11 | 55 |
| Cerebrovascular disease | 215 | 105 | 99 | 100 | 45 | 30 |
| Inflammatory disease | 80 | 119 | 39 | 113 | 4 | 75 |
| Rheumatic heart disease | 34 | 135 | 32 | 120 | 6 | 64 |

**TABLE (cont).** Health Care Burdens Attributable to Various Diseases and Injuries, Active Component, U.S. Coast Guard, 2024[a]

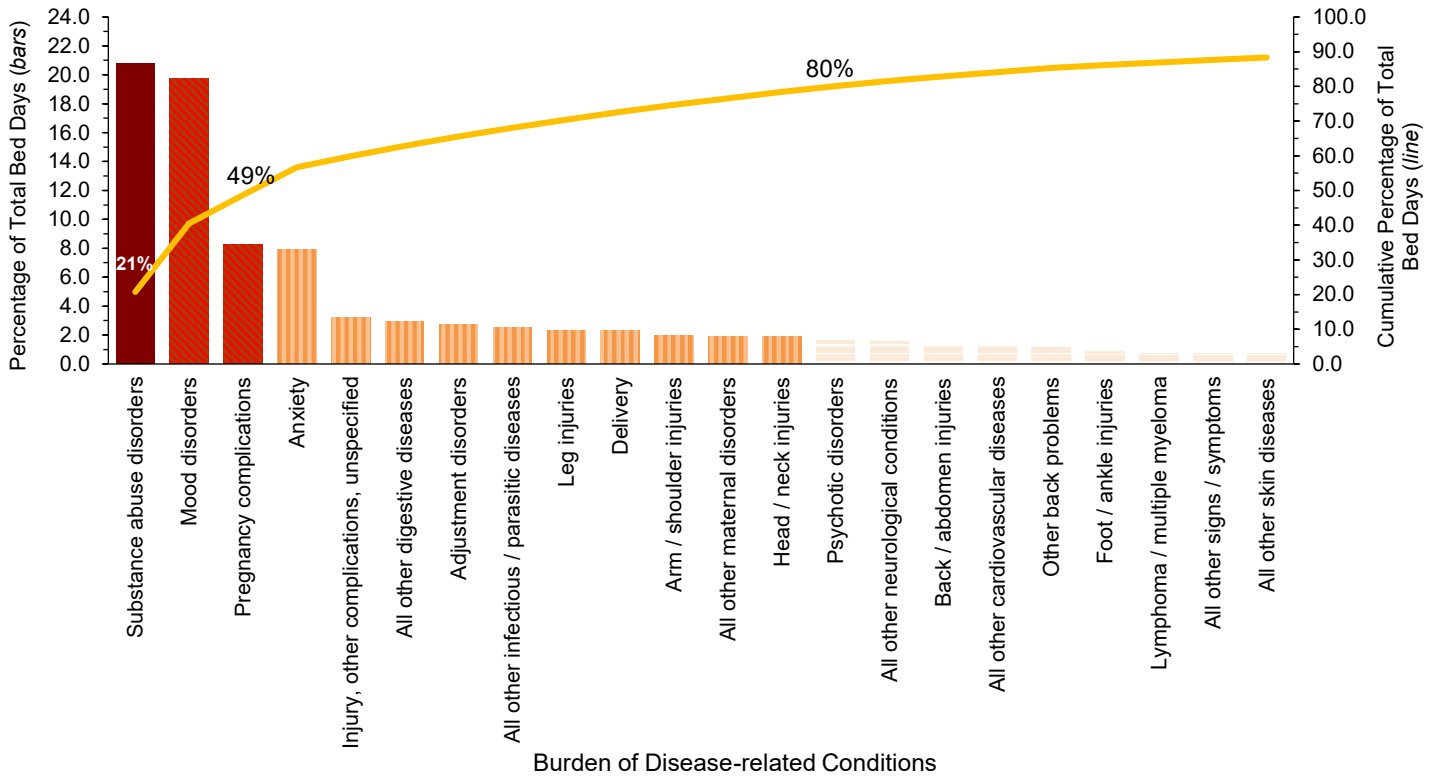
| Major Category Condition[b] | Medical Encounters[c] | | Individuals Affected[d] | | Hospital Bed Days | |
|---|---|---|---|---|---|---|
| | No. | Rank[e] | No. | Rank[e] | No. | Rank[e] |
| **Other neoplasms** | **5,117** | | | | **43** | |
| Benign skin neoplasm | 1,993 | 38 | 1,628 | 26 | 0 | 93 |
| All other neoplasms | 1,728 | 40 | 1,151 | 37 | 24 | 37 |
| Neoplasm of uncertain behavior of skin | 831 | 59 | 670 | 51 | 0 | 93 |
| Lipoma | 369 | 86 | 233 | 84 | 3 | 81 |
| Uterine leiomyoma | 196 | 108 | 95 | 101 | 16 | 45 |
| **Headache** | **4,084** | | | | **2** | |
| Headache | 4,084 | 26 | 2,178 | 22 | 2 | 85 |
| **Maternal conditions** | **4,094** | | | | **1,280** | |
| Pregnancy complications | 2,186 | 34 | 518 | 60 | 835 | 3 |
| All other maternal disorders | 1,196 | 50 | 353 | 70 | 193 | 12 |
| Delivery | 399 | 84 | 270 | 77 | 232 | 10 |
| Ectopic pregnancy, miscarriage, abortion | 225 | 103 | 75 | 104 | 5 | 72 |
| Puerperium complications | 88 | 118 | 54 | 109 | 15 | 48 |
| **Metabolic and immune disorders** | **3,184** | | | | **11** | |
| Unspecified disorder of pituitary gland | 194 | 110 | 110 | 97 | 0 | 93 |
| Lipoid metabolism disorder | 2,086 | 36 | 1,540 | 29 | 0 | 93 |
| Other metabolic disorders | 513 | 76 | 243 | 80 | 11 | 55 |
| Gout | 312 | 92 | 165 | 89 | 0 | 93 |
| Immune disorder | 79 | 120 | 34 | 117 | 0 | 93 |
| **Endocrine disorders** | **3,064** | | | | **6** | |
| Testicular hypofunction | 1,098 | 55 | 369 | 66 | 0 | 93 |
| Hypothyroidism | 673 | 70 | 337 | 71 | 0 | 93 |
| Other thyroid disorders | 662 | 71 | 283 | 74 | 2 | 85 |
| All other endocrine disorders | 383 | 85 | 190 | 86 | 4 | 75 |
| Polycystic ovarian syndrome | 248 | 100 | 122 | 96 | 0 | 93 |
| **Malignant neoplasms** | **2,501** | | | | **354** | |
| Melanoma, other skin cancers | 501 | 78 | 182 | 87 | 41 | 33 |
| Lymphoma, multiple myeloma | 311 | 93 | 30 | 121 | 76 | 20 |
| Leukemia | 286 | 95 | 22 | 126 | 65 | 24 |
| Colon, rectal cancers | 278 | 96 | 18 | 128 | 40 | 34 |
| All other malignant neoplasms | 267 | 99 | 45 | 111 | 59 | 26 |
| Breast cancer | 237 | 101 | 17 | 129 | 2 | 85 |
| Testicular cancer | 198 | 106 | 36 | 115 | 9 | 58 |
| Brain cancer | 132 | 116 | 11 | 133 | 40 | 34 |
| Trachea, bronchus, lung cancers | 71 | 122 | 4 | 141 | 6 | 64 |
| Mouth, oropharynx cancers | 69 | 123 | 4 | 141 | 16 | 45 |
| Prostate cancer | 55 | 127 | 6 | 138 | 0 | 93 |
| Thyroid cancer | 48 | 131 | 10 | 135 | 0 | 93 |
| Cervix uteri cancer | 24 | 137 | 11 | 133 | 0 | 93 |
| Bladder cancer | 21 | 139 | 2 | 144 | 0 | 93 |
| Corpus uteri cancer | 1 | 151 | 1 | 149 | 0 | 93 |
| Pancreatic cancer | 1 | 151 | 1 | 149 | 0 | 93 |
| Stomach cancer | 1 | 151 | 1 | 149 | 0 | 93 |
| **Nutritional disorders** | **2,009** | | | | **0** | |
| Overweight, obesity | 1,375 | 46 | 761 | 48 | 0 | 93 |
| All other nutritional disorders | 632 | 73 | 538 | 58 | 0 | 93 |
| Protein-energy malnutrition | 2 | 147 | 2 | 144 | 0 | 93 |
| **Blood disorders** | **1,516** | | | | **53** | |
| All other blood disorders | 680 | 67 | 270 | 77 | 21 | 40 |
| Iron deficiency anemia | 336 | 91 | 130 | 94 | 12 | 53 |
| Other non-deficiency anemias | 269 | 98 | 156 | 90 | 20 | 41 |
| Hereditary anemia | 197 | 107 | 140 | 92 | 0 | 93 |
| Other deficiency anemias | 34 | 135 | 26 | 124 | 0 | 93 |

**TABLE (cont).** Health Care Burdens Attributable to Various Diseases and Injuries, Active Component, U.S. Coast Guard, 2024[a]

| Major Category Condition[b] | Medical Encounters[c] | | Individuals Affected[d] | | Hospital Bed Days | |
|---|---|---|---|---|---|---|
| | No. | Rank[e] | No. | Rank[e] | No. | Rank[e] |
| **Diabetes mellitus** | **709** | | | | **8** | |
| Diabetes mellitus | 709 | 64 | 237 | 83 | 8 | 59 |
| **Oral conditions** | **1,157** | | | | **8** | |
| All other oral conditions | 1,104 | 54 | 671 | 50 | 8 | 59 |
| Periodontal disease | 35 | 134 | 33 | 119 | 0 | 93 |
| Dental caries | 18 | 140 | 17 | 129 | 0 | 93 |
| **Congenital anomalies** | **735** | | | | **24** | |
| All other congenital anomalies | 618 | 74 | 417 | 62 | 5 | 72 |
| Congenital heart disease | 64 | 124 | 34 | 117 | 6 | 64 |
| Other circulatory anomalies | 53 | 129 | 20 | 127 | 13 | 50 |
| **Conditions arising during perinatal period[f]** | **22** | | | | **0** | |
| All other perinatal anomalies | 17 | 141 | 12 | 132 | 0 | 93 |
| Birth asphyxia, birth trauma | 3 | 146 | 3 | 143 | 0 | 93 |
| Low birth weight | 2 | 147 | 1 | 149 | 0 | 93 |

Abbreviations: No., number; NOS, not otherwise specified; UTI, urinary tract infection; STD, sexually transmitted disease.
[a] Burden of disease major categories and burden of disease-related conditions modified from those defined in Global Burden of Disease Study.[7,8]
[b] Medical encounters include total hospitalizations and ambulatory visits for the condition (with no more than 1 encounter per individual per day per condition).
[c] Individuals with at least 1 hospitalization or ambulatory visit for the condition.
[d] Rank is based on number of encounters, individuals affected, or hospital bed days in the respective columns within the listing of 157 burden-related disease conditions. Nine pairs of tied values for medical encounters and 11 pairs of tied values for individuals affected were given the same ranking. For hospital bed days, there were 61 conditions with the rank of 93 (0); 17 other conditions had tied rankings.
[e] Conditions affecting newborns erroneously coded on service member medical records.

**FIGURE 3.** Percentage and Cumulative Percentage Distribution, Burden of Disease-related Conditions[a] that Accounted for the Most Hospital Bed Days, Active Component, U.S. Coast Guard, 2024




[a] Burden of disease-related conditions modified from those defined in Global Burden of Disease Study.[7,8]

respectively, and the major category conditions increased by 5.7%. While the number of Coast Guard medical encounters and the number of major category conditions increased in 2024, the rate of change was significantly lower than in 2023 (13.3% and 12.7%, respectively). Conversely, the rate of change in hospital bed days in 2024 (13.7%) was significantly higher than in 2023 (2.3%). Mental health disorders resulted in more hospital stays than any other morbidity-related category, and mental health-related medical encounters increased by 15.5% compared to last year. In 2024, the number of individuals affected decreased by 2.0% compared to 2023.

This report is consistent with the major findings of prior annual reports on morbidity burdens among active component U.S. service members. Injuries, mental health disorders, and musculoskeletal diseases were the categories of medical conditions associated with the most medical encounters, largest numbers of affected service members, and greatest numbers of hospital bed days; maternal conditions accounted for the most hospital bed days, followed by mental health disorders. When examining ICD codes to the fourth digit character, Coast Guard and DOD service members shared many disease-related conditions: other back problems within the musculoskeletal disease major diagnostic category; arm / shoulder and knee injuries within the injury major diagnostic category; anxiety disorders in the mental health disorder major diagnostic category; and organic sleep disorders within the neurological condition major diagnostic category.

COVID-19 did not account significantly for medical encounters in 2024 compared to 2023: COVID accounted for 0.2% of hospital bed days in 2024, compared to none (0) in 2023. In addition to the waning of the pandemic, active component service members represent a relatively young and healthy population that is less likely to experience severe consequences from COVID-19 infection.

Preventable illnesses and injuries, which contribute disproportionately to morbidity and health care burdens, should be high priority targets for intervention, research, and resources. In a 2018 survey, Coast Guard members reported several mental health issues including serious psychological distress, failure to receive mental health services despite need, and other preventable risky health behaviors.[5] Reliable access to health care is crucial for ensuring service members remain healthy and prepared for their missions. A lack of data hinders the Coast Guard from fully understanding healthcare accessibility issues, however.[1] To accurately portray the true burden of disease in this population, addressing and resolving the data gaps resulting from Coast Guard hospitalizations to civilian facilities is critical and should be a priority. Improving data collection processes and systems is crucial to addressing barriers to accessing health care.

Providing a matrix of major diseases each year enables the identification, in comparison with previous reports, of potentially avoidable health conditions among military personnel, and their proximate causes. Morbidity burden report findings can aid prioritization of effective interventions, provision of necessary care, and evaluation of their impacts and cost-effectiveness.[6]

## References


1. Cohen C, Chan EW, Tong PK, et al. Health Services for Coast Guard beneficiaries: Improving access to care for active duty service members, reservists, dependents and retirees. RAND Homeland Security Research Division, Homeland Security Operational Analysis Center. 2025. Accessed Aug. 15, 2025. https://www.rand.org/pubs/research_reports/RRA3018-1.html
2. United States Coast Guard. U.S. Dept. of Homeland Security. Accessed Aug. 15, 2025. https://www.uscg.mil
3. Pillai S, Chau M, Kamara I, Thomas D, Iskander J. Brief report: hospitalizations among active duty members of the U.S. Coast Guard, fiscal year 2021. *MSMR*. 2023;30(2):3-5. Accessed Aug. 15, 2025. https://www.health.mil/news/articles/2023/02/01/active-duty-coast-guard-hospitalizations-fy-2021
4. Armed Forces Health Surveillance Branch. Hospitalizations among members of the active component, U.S. Armed Forces, 2015. *MSMR*. 2016;23(4):8-16. Accessed Aug. 15, 2025. https://www.health.mil/reference-center/reports/2016/01/01/medical-surveillance-monthly-report-volume-23-number-4
5. Pulkkinen AJ. Let's talk about your behavioral health. *My Coast Guard*. U.S. Coast Guard. 2024. Accessed Aug. 15, 2025. https://www.mycg.uscg.mil/News/Article/3671040/lets-talk-about-your-behavioral-health
6. Devleesschauwer B, Maertens de Noordhout C, Smit GS, et al. Quantifying burden of disease to support public health policy in Belgium: opportunities and constraints. *BMC Public Health*. 2014;14:1196. doi:10.1186/1471-2458-14-1196
7. World Health Organization. *The Global Burden of Disease: 2004 Update*. World Health Organization;2008. Accessed Aug. 14, 2025. https://www.who.int/publications/i/item/9789241563710
8. Murray CJL, Lopez AD, eds. *The Global Burden of Disease: A Comprehensive Assessment of Mortality and Disability from Diseases, Injuries, and Risk Factors in 1990 and Projected to 2020*. Harvard University Press;1996:120-122.

*Update*

# Absolute and Relative Morbidity Burdens Attributable to Various Illnesses and Injuries Among Non-Service Member Beneficiaries of the Military Health System, 2024

The Military Health System (MHS), a global, integrated health delivery system, is tasked with ensuring the medical readiness of the U.S. Armed Forces while fulfilling the individual health care needs of eligible military personnel and their dependents.[1] The MHS network comprises military hospitals and clinics worldwide (collectively called the "direct care system"), complemented by programs that enable care in the private sector through the TRICARE insurance program. While the first mission of the MHS enables the National Defense Strategy through a medically ready force, the inter-related mission to provide a medical benefit commensurate with the service and sacrifice of the U.S. Armed Forces extended TRICARE eligibility to approximately 9.4 million beneficiaries in fiscal year 2024.[2,3]

MHS beneficiaries are a diverse and heterogeneous population of service members, military retirees, and family members from all branches of military service under the authority of the Department of Defense.[2] Accordingly, each beneficiary category presents its own demographic, enrollment, and health care provision patterns. In fiscal years 2024 through 2029, the Military Health System Strategy prioritizes stability for the direct care system through a dedicated strategic objective to "attract and reattract beneficiaries to military treatment facilities, to improve efficiency and enrich clinical experience for the Ready Medical Force, and consciously fulfill the promise our nation makes to care for our beneficiaries."[3]

Beneficiaries enrolled in TRICARE, including many family members of service members and eligible retirees (primarily those aged 64 years and younger), may receive care at fixed military hospitals and clinics, or from private sector health care facilities that supplement direct military medical care. An important element of beneficiary care is the transition from TRICARE to Medicare. Once an individual reaches age 65, and becomes eligible for Medicare, TRICARE eligibility ends. If individuals enroll in Medicare, they receive a Medicare gap insurance, known as TRICARE for Life (TFL), funded through mechanisms outside of the Defense Health Program. While Medicare-eligible individuals remain eligible for direct care at military medical facilities, such care is contingent upon resource availability. Consequently, distribution of health care burden estimates should be considered in relation to beneficiary age category and source of care when interpreting health care provision data among MHS beneficiaries.

This report represents an updated summary of health care burdens among non-service member MHS beneficiaries during calendar year 2024. Health care burdens were quantified using a classification system derived from the Global Burden of Disease (GBD) Study,[4-7] in combination with diagnostic groupings from the International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM) chapter-based system for categorizing hospitalizations and ambulatory visits. This report presents stratified estimates for 4 age groups of health care recipients, with Medicare-eligible beneficiaries (over age 65 years) considered separately, as most of their care is provided and paid by non-MHS resources.

**What are the new findings?**

In 2024, mental health disorders accounted for the largest proportions of morbidity and health care burdens that affected the pediatric and younger adult age groups of non-service member Military Health System beneficiaries. Among adult beneficiaries older than age 45, musculoskeletal diseases was the leading diagnostic category for medical encounters. While provision of care from purchased care reimbursements or military medical facilities varied by age category, a majority of non-service member beneficiaries received care exclusively from private sector facilities.

**What is the impact on readiness and force health protection?**

Military Health System beneficiaries are a diverse, heterogeneous population of service members, retirees, and family members from all branches of military service under the U.S. Department of Defense. Each category of beneficiaries presents its own demographic, enrollment, and health care use patterns. The 2024-2029 Military Health System Strategy calls to attract and re-attract beneficiaries to military medical facilities, to improve efficiency, enrich the clinical experience for the ready medical force, and consciously fulfill the nation's promise to care for Military Health System beneficiaries. Routinely documented and reported trends in health care use and diagnostic patterns can help senior leaders improve resource allocation within the Military Health System to maximize efficiency, medical readiness, and the readiness of the medical forces.

## Methods

The surveillance population included all non-service member MHS beneficiaries who had at least 1 hospitalization or outpatient medical encounter from January 1 through December 31, 2024, with either a military hospital, clinic or health care provider, or through a private sector facility or provider (if reimbursed through TRICARE or through Medicare with a co-payment by TFL). All inpatient and outpatient medical encounters for this analysis were summarized according to the primary (i.e., first-listed) International Classification of Diseases, 10th Revision (ICD-10) codes that indicate the natures of illnesses

or injuries (A00–T88). Nearly all records of encounters with first-listed diagnoses coded with 'Z' (care other than for a current illness or injury, e.g., general medical examinations, after care, vaccinations) or 'V', 'W', 'X', or 'Y' (indicators of the external causes but not the natures of injuries) were excluded from the analysis; encounters with a code of Z37 ("outcome of delivery") in the primary position were retained.

For summary purposes, all illness and injury-specific diagnoses (as defined by ICD-10) were grouped into 157 burden of disease-related conditions and 25 major morbidity categories, based upon a modified version of the classification system developed for the Global Burden of Disease Study. This year, 4 new diagnostic groups were added: pain in foot, chronic rhinitis, neoplasm of uncertain behavior of skin, and disorder of the pituitary gland. The methodology for summarizing absolute and relative morbidity has been used annually since 2014 and is described elsewhere.[8] Results were stratified by source of health care (direct care, i.e., military hospitals and clinics vs. non-direct care, i.e., private sector medical facilities) and by age group (0-17 years, 18-44 years, 45-64 years, 65 years and older). For analysis of morbidity burdens within the youngest age group, developmental disorders were included in the general category of mental health disorders.

## Results

In 2024, the population of non-service member MHS care recipients included more female (56.8%) than male (43.2%) beneficiaries. Adults aged 65 years and older accounted for the highest number of individuals receiving health care (n=2.04 million, 33.0%), followed by pediatric beneficiaries aged 17 years and younger (n=1.46 million, 23.7%), adults ages 18-44 years (n=1.37 million, 22.2%), and older adults ages 45-64 years (n=1.30 million, 21.0%) **(Table 1)**.

A total of 6,180,903 non-service member MHS beneficiaries had 90,357,451 recorded medical encounters in 2024. Over half (50.9%) of these medical encounters were among 2,042,408 MHS beneficiaries aged 65 years or older **(Table 1)**. Provision of care for this age group was almost exclusively outsourced, with 91.0% of individuals age 65 years or older having medical encounters or hospital bed days documented only from purchased care reimbursements at private sector facilities **(Table 2)**.

Among TRICARE-eligible beneficiaries (under age 65 years), provision of care was also primarily exclusively from outsourced care. Adults ages 18-44 years received approximately one-third of their care exclusively from military clinics and hospitals (14.1%) or a combination of direct and outsourced care (20.4%) **(Table 2)**. The 3 most frequent morbidity-related categories accounting for the most medical encounters among TRICARE-eligible beneficiaries included mental health disorders, signs or symptoms of ill-defined conditions, and injury **(Figure 1a)**. Mental health disorders also represented the leading category for hospital bed days among beneficiaries under age 65 years, followed by maternal conditions **(Figure 1b)**.

### Pediatric beneficiaries under age 18 years

Pediatric patients accounted for 15.0% of all medical encounters, 23.7% of all individuals affected, and 8.1% of all hospital bed days among non-service member MHS beneficiaries in 2024 **(Table 1)**. On average, each pediatric beneficiary had 9.3 medical encounters during the year. Provision of care for pediatric patients was primarily through exclusive use of purchased care reimbursement in private settings (68.9%), followed by a combination of direct and outsourced care (19.8%). Only 11.3% of pediatric patients received all medical encounters or hospital bed days from direct MHS care **(Table 2)**.

In 2024, mental health disorders represented the largest burden of disease among pediatric beneficiary medical encounters (38.7%, n=5,260,830) and contributed to the highest number of hospital bed stays (58.1%, n=295,259) **(Figures 2a, 2b)**. On average, pediatric beneficiaries affected by a mental health disorder experienced 15.9 medical encounters during the year specifically related to this morbidity category (data not shown). More than two-thirds (69.2%) of all medical encounters for mental health disorders among pediatric beneficiaries were attributed to 3 groups of disorders: autistic disorder and pervasive developmental disorders (33.8%), developmental disorders of speech and language (24.4%), and attention-deficit hyperactivity disorders (11.0%) **(Figure 2c)**. Pediatric patients affected by an autistic disorder had, on average, 41.2 autism-related encounters per individual (data not shown). Despite the high numbers of encounters associated with these 3 categories of mental health disorders, over two-thirds (68.6%) of hospital bed days related to mental health disorders were attributable to mood disorders. Among all mood disorder-related bed days, over 50% were attributed to 2 diagnostic categories: recurrent severe major depressive disorder without psychotic features (30.6%, ICD10: F332) and disruptive mood dysregulation disorder (28.5%, ICD10: F3481) (data not shown).

Perinatal conditions, or medical issues occurring within 1 year of birth, accounted for the second highest number of hospital bed days (n=45,612, 9.0%) in 2024 among pediatric beneficiaries, after mental health disorders **(Figures 2a, 2b)**. Pediatric beneficiaries affected by malignant neoplasms had, on average, 12.6 neoplasm-related encounters per individual. The highest numbers of malignant neoplasm-related encounters and hospital bed days were attributable to leukemias (data not shown).

Respiratory infections (including upper and lower respiratory infections and otitis media) accounted for more medical encounters among pediatric beneficiaries (10.1%) compared to any older age group of beneficiaries **(Figures 2b, 3b, 4b, 5b)**.

### Beneficiaries ages 18–44 years

Non-service member beneficiaries ages 18-44 years accounted for 14.9% of all medical encounters, 22.2% of all individuals affected, and 9.8% of hospital bed days in 2024 **(Table 1)**. On average, each individual aged 18-44 years affected with an illness or injury (of any cause) had 9.8 medical encounters during the year. Provision of care for beneficiaries ages 18-44 was primarily through exclusive use of purchased

**TABLE 1.** Medical Encounters[a], Individuals Affected[b] and Hospital Bed Days, by Source of Care and Age Group, Non-Service Member MHS Beneficiaries, 2024

| | Medical Encounters | | Individuals Affected | | Hospital Bed Days | | Medical Encounters per Individual Affected |
|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | |
| All non-service member beneficiaries | 90,357,451 | — | 6,180,903 | — | 6,261,731 | — | 14.6 |
| Source of care | | | | | | | |
| Direct care only | 7,289,625 | 8.1 | 502,574 | 8.1 | 275,933 | 4.4 | 14.5 |
| Outsourced care only[c] | 83,067,826 | 91.9 | 4,701,644 | 76.1 | 5,985,798 | 95.6 | 17.7 |
| Direct and outsourced care[d] | N/A | N/A | 976,685 | 15.8 | N/A | N/A | N/A |
| Age group, y | | | | | | | |
| 0–17 | 13,594,874 | 15.0 | 1,464,102 | 23.7 | 507,922 | 8.1 | 9.3 |
| 18–44 | 13,423,894 | 14.9 | 1,373,626 | 22.2 | 615,156 | 9.8 | 9.8 |
| 45–64 | 17,320,065 | 19.2 | 1,300,764 | 21.0 | 781,706 | 12.5 | 13.3 |
| 65+ | 46,018,598 | 50.9 | 2,042,408 | 33.0 | 4,356,947 | 69.6 | 22.5 |
| Unknown | 40 | 0 | 3 | 0 | 0 | 0 | 13 |

Abbreviations: MHS, Military Health System; No., number; N/A, not applicable; y, years.
[a] Medical encounters include total hospitalizations and ambulatory visits for the condition (with no more than 1 encounter per individual per day per condition).
[b] Individuals with at least 1 hospitalization or ambulatory visit for the condition.
[c] Represents encounters or hospital bed days received under purchased care or care received under Medicare benefit.
[d] Represents a combination of care received directly at military hospitals or clinics and non-military medical facilities.

**TABLE 2.** Individuals Affected[a], by Age Group and Source of Care, Non-Service Member MHS Beneficiaries, 2024

| | Direct Care Only | | Outsourced Care Only[b] | | Direct and Outsourced Care[c] | | Total |
|---|---|---|---|---|---|---|---|
| Age group, y | No. | % | No. | % | No. | % | |
| 0–17 | 165,998 | 11.3 | 1,008,310 | 68.9 | 289,794 | 19.8 | 1,464,102 |
| 18–44 | 193,390 | 14.1 | 900,341 | 65.5 | 279,895 | 20.4 | 1,373,626 |
| 45–64 | 101,318 | 7.8 | 934,190 | 71.8 | 265,256 | 20.4 | 1,300,764 |
| 65+ | 41,867 | 2.0 | 1,858,803 | 91.0 | 141,738 | 6.9 | 2,042,408 |
| Unknown | 1 | | 0 | | 2 | | 3 |

Abbreviations: MHS, Military Health System; y, years; No., number.
[a] Individuals with at least 1 hospitalization or ambulatory visit for the condition.
[b] Represents encounters or hospital bed days received under purchased care or care received under Medicare benefit.
[c] Represents a combination of care received directly at military hospitals or clinics and non-military medical facilities.

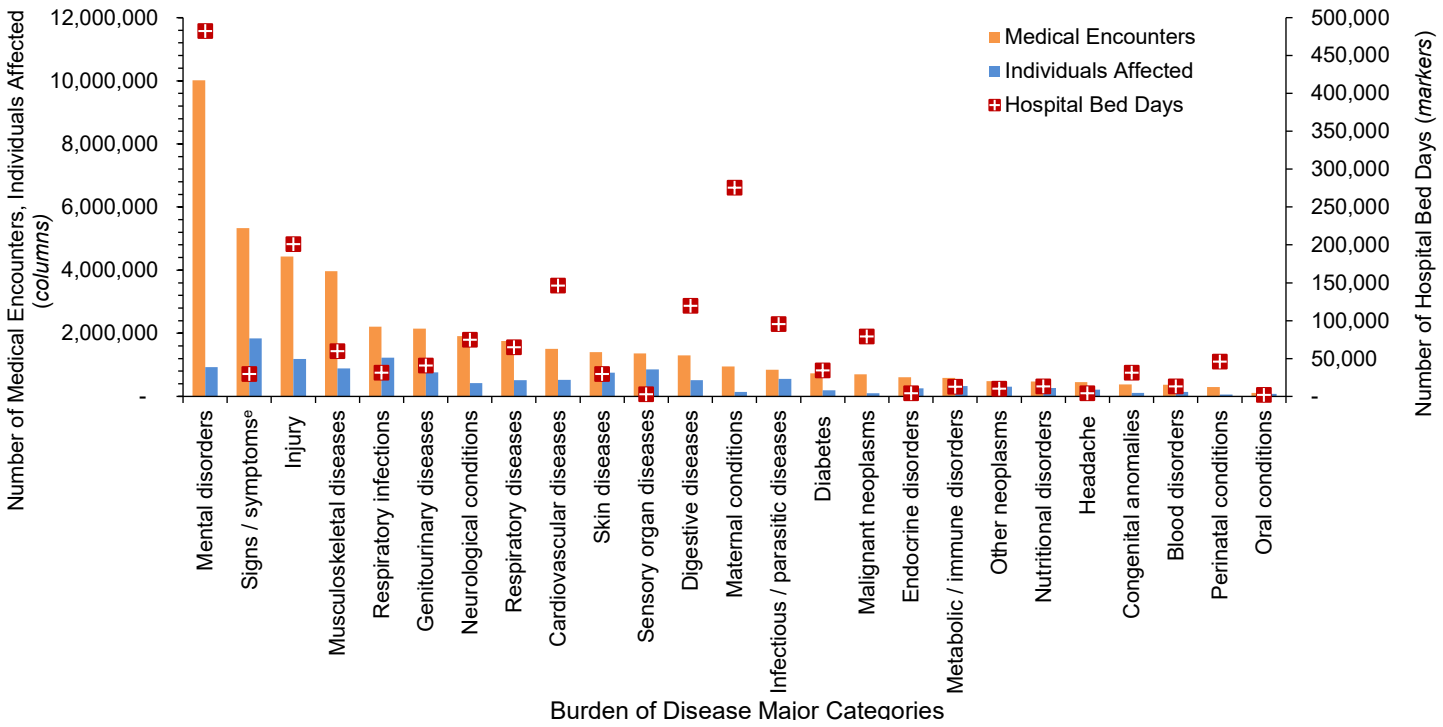
care reimbursement in private settings (65.5%), followed by a combination of direct and outsourced care (20.4%). Only 14.1% of beneficiaries ages 18-44 years received all medical encounters or hospital bed days from direct MHS care **(Table 2)**.

Mental health disorders accounted for the most medical encounters (n=3,304,305, 24.6%) among adult MHS beneficiaries ages 18-44 years in 2024 **(Figures 3a, 3b)**, also representing over one-fifth (20.7%) of total hospital bed days, and, on average, 8.5 mental health disorder-related encounters per individual. Anxiety disorders (35.9%), mood disorders (29.2%), and adjustment disorders (14.8%) accounted for over three-quarters (79.9%) of all medical mental health disorder encounters (data not shown). Mood and substance abuse disorders accounted for over three-quarters (47.1% and 28.6%, respectively) of hospital bed days for mental health disorders.

Maternal conditions accounted for more than two-fifths (n=274,180, 44.6%) of all hospital bed days among adults ages 18-44 years, as well as, on average, 6.7 medical encounters per affected individual **(Figures 3a, 3b)**. Of the 274,180 hospital bed days for maternal conditions, 62.4% were attributed to pregnancy complications and 20.2% to infant deliveries (data not shown).

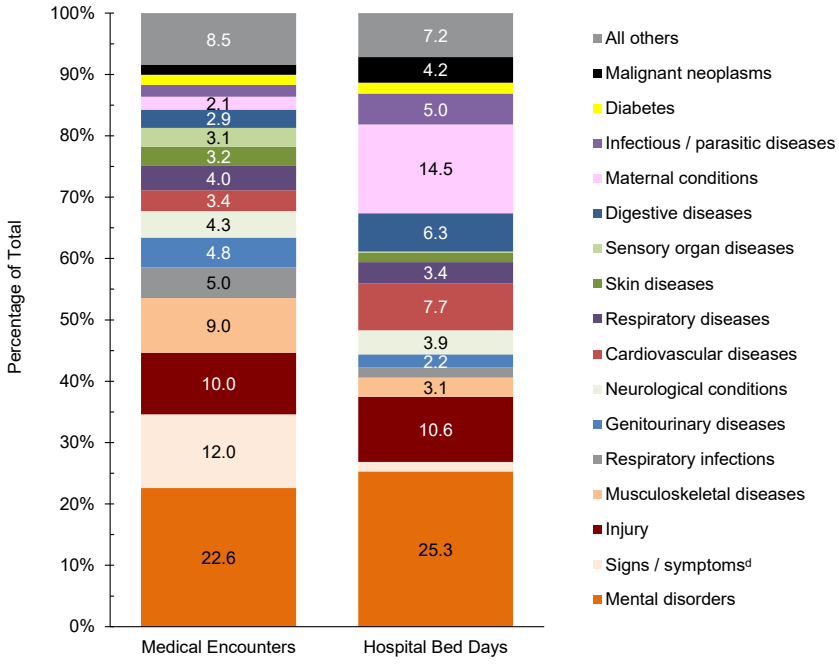
Malignant neoplasms, as a diagnostic group, resulted in 6.9 encounters, on average, per individual in 2024. Of the 104,672 medical encounters for malignant neoplasms among adults ages 18-44 years, 32.8% were attributed to malignant neoplasm of the breast (data not shown).

**FIGURE 1a.** Numbers of Medical Encounters[a], Individuals Affected[b] and Hospital Bed Days, by Burden of Disease Major Category[c], Non-Service Member MHS Beneficiaries[d] Under Age 65 Years, 2024




Abbreviation: No., number.
[a] Medical encounters include total hospitalizations and ambulatory visits for the condition (with no more than 1 encounter per individual per day per condition).
[b] Individuals with at least 1 hospitalization or ambulatory visit for the condition.
[c] Burden of disease major categories modified from those defined in Global Burden of Disease study.
[d] Source of care includes medical encounters or hospitalizations at military hospitals or clinics and non-military medical facilities.
[e] Includes ill-defined conditions.

**FIGURE 1b.** Percentages of Medical Encounters[a] and Hospital Bed Days, by Burden of Disease Major Category[b], Non-Service Member MHS Beneficiaries[c] Under Age 65 Years, 2024

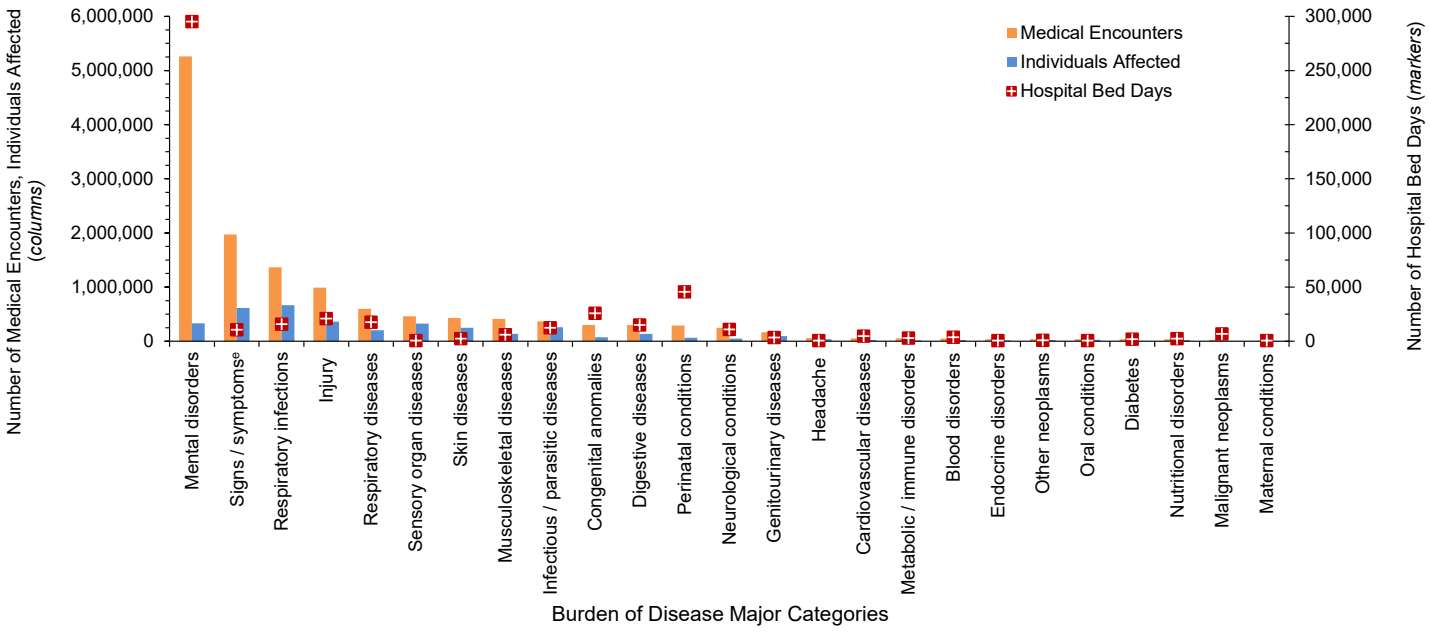



## Beneficiaries ages 45–64 years

Non-service member beneficiaries ages 45-64 years constituted approximately one-fifth (19.2%) of all medical encounters, 21.0% of all individuals affected, and 12.5% of hospital bed days in 2024 **(Table 1)**. Each affected individual aged 45-64 years had, on average, 13.3 medical encounters during the year. Provision of care for beneficiaries ages 45-64 years was primarily through exclusive use of purchased care reimbursement in private settings (71.8%),

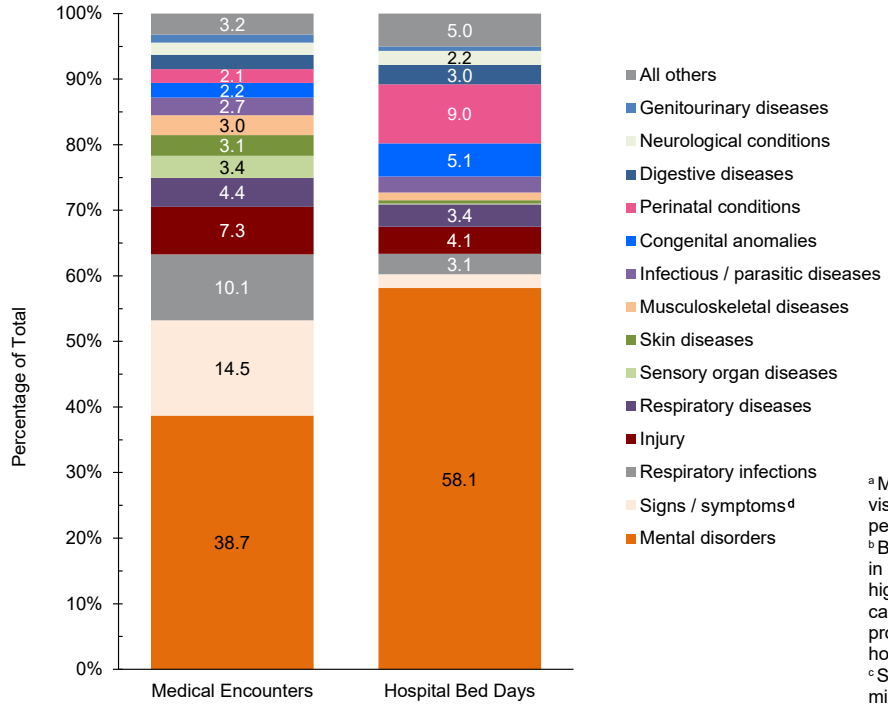
[a] Medical encounters include total hospitalizations and ambulatory visits for the condition (with no more than 1 encounter per individual per day per condition).
[b] Burden of disease major categories modified from those defined in Global Burden of Disease study.[3] The 15 categories with the highest percentages of medical encounters are depicted; additional categories are collapsed into an 'all others' grouping.
[c] Source of care includes medical encounters or hospitalizations at military hospitals or clinics and non-military medical facilities.
[d] Includes ill-defined conditions.

**FIGURE 2a.** Medical Encounters[a], Individuals Affected[b] and Hospital Bed Days, by Burden of Disease Major Category[c], Pediatric Non-Service Member MHS Beneficiaries[d], Ages 0–17 Years, 2024




[a] Medical encounters include total hospitalizations and ambulatory visits for the condition (with no more than 1 encounter per individual per day per condition).
[b] Individuals with at least 1 hospitalization or ambulatory visit for the condition.
[c] Burden of disease major categories modified from those defined in the Global Burden of Disease study.[3]
[d] Source of care includes medical encounters or hospitalizations at military hospitals or clinics and non-military medical facilities.
[e] Includes ill-defined conditions.

**FIGURE 2b.** Percentages of Medical Encounters[a] and Hospital Bed Days, by Burden of Disease Category[b], Pediatric Non-Service Member MHS Beneficiaries[c], Ages 0–17 Years, 2024

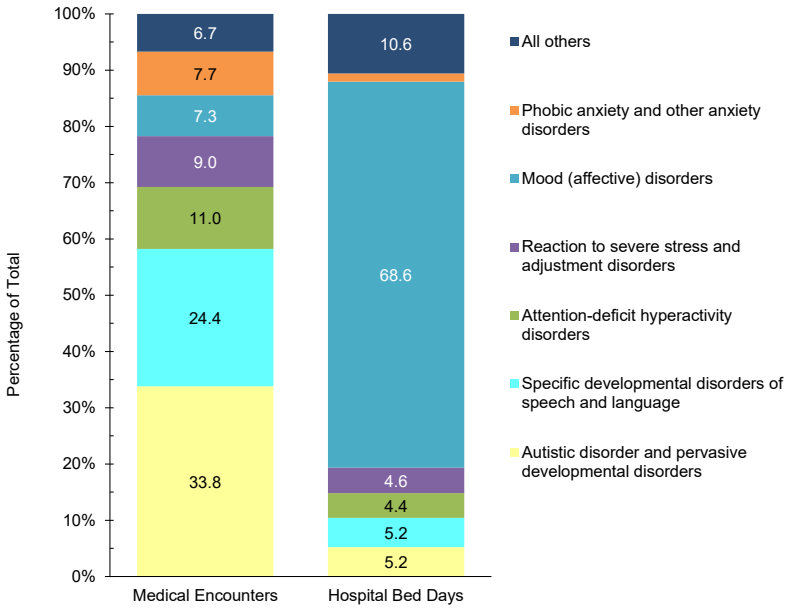



[a] Medical encounters include total hospitalizations and ambulatory visits for the condition (with no more than 1 encounter per individual per day per condition).
[b] Burden of disease major categories modified from those defined in Global Burden of Disease study.[3] The 14 categories with the highest percentages of medical encounters are depicted; additional categories are collapsed into an 'all others' grouping. Data labels are provided for categories with more than 2% of medical encounters and hospitalizations.
[c] Source of care includes medical encounters or hospitalizations at military hospitals or clinics and non-military medical facilities.
[d] Includes ill-defined conditions.

followed by a combination of direct and outsourced care (20.4%). Only 7.8% of beneficiaries ages 45-64 years received all medical encounters or hospital bed days from direct MHS care **(Table 2)**.

Of all morbidity-related categories, musculoskeletal diseases accounted for the most medical encounters (n=2,469,102, 14.3%) among older adult beneficiaries ages 45-64 years **(Figures 4a, 4b)**; back problems accounted for 41.9% of these musculoskeletal disease-related encounters (data not shown). Injury represented the highest proportion of hospital bed days (17.4%), second to cardiovascular disease (16.2%)

**FIGURE 2c.** Percentages of Medical Encounters[a] and Hospital Bed Days for Major Diagnostic Code Groupings[b] Under the Mental Health Disorder Burden of Disease Category[c], Pediatric Non-Service Member MHS Beneficiaries, Ages 0–17 Years, 2024




[a] Medical encounters include total hospitalizations and ambulatory visits for the condition (with no more than 1 encounter per individual per day per condition).
[b] Major diagnostic code groupings are defined as autistic disorder and pervasive developmental disorders (F840, F843, F845, F848, F849), specific developmental disorders of speech and language (F80), attention-deficit hyperactivity disorders (F90), reaction to severe stress and adjustment disorders (F43), mood disorders (F30, F31, F32, F33, F34, F39), phobic anxiety and other anxiety disorders (F40, F41).
[c] Burden of disease major categories modified from those defined in Global Burden of Disease study.[3]

among adults ages 45-64 years (data not shown). Digestive diseases (9.3%) and malignant neoplasms (7.9%) accounted for larger percentages of total hospital bed days among beneficiaries of this age group, compared to other age groups.

Malignant neoplasm of the breast represented the leading cause of neoplasm-related encounters (25.9%) in adult beneficiaries ages 45-64 years (data not shown).

### Medicare-eligible beneficiaries, ages 65 and older

Non-service member beneficiaries aged 65 years and older accounted for the most medical encounters (50.9%) and more than 2.3 times the number of hospital bed days in 2024 than all other age groups combined. On average, each affected individual in this age group had 22.5 medical encounters during the year **(Table 1)**. The provision of care for Medicare-eligible beneficiaries ages 65 and older was primarily through exclusive use of purchased care reimbursement in private settings (91.0%); only 2.1% received all medical encounters or hospital bed days from direct MHS care **(Table 2)**.

Musculoskeletal diseases (n=6,856,411, 14.9%) and cardiovascular diseases (n=6,323,595, 13.7%) together represented the leading causes for medical encounters among beneficiaries aged 65 years or older, while injury (n=955,546, 21.9%) and cardiovascular diseases (877,678 days, 20.1%) were the leading diagnostic categories for hospital bed days **(Figures 5a, 5b)**. Back problems accounted for a little more than one-third (35.2%) of all musculoskeletal disease-related medical encounters (data not shown).

## Discussion

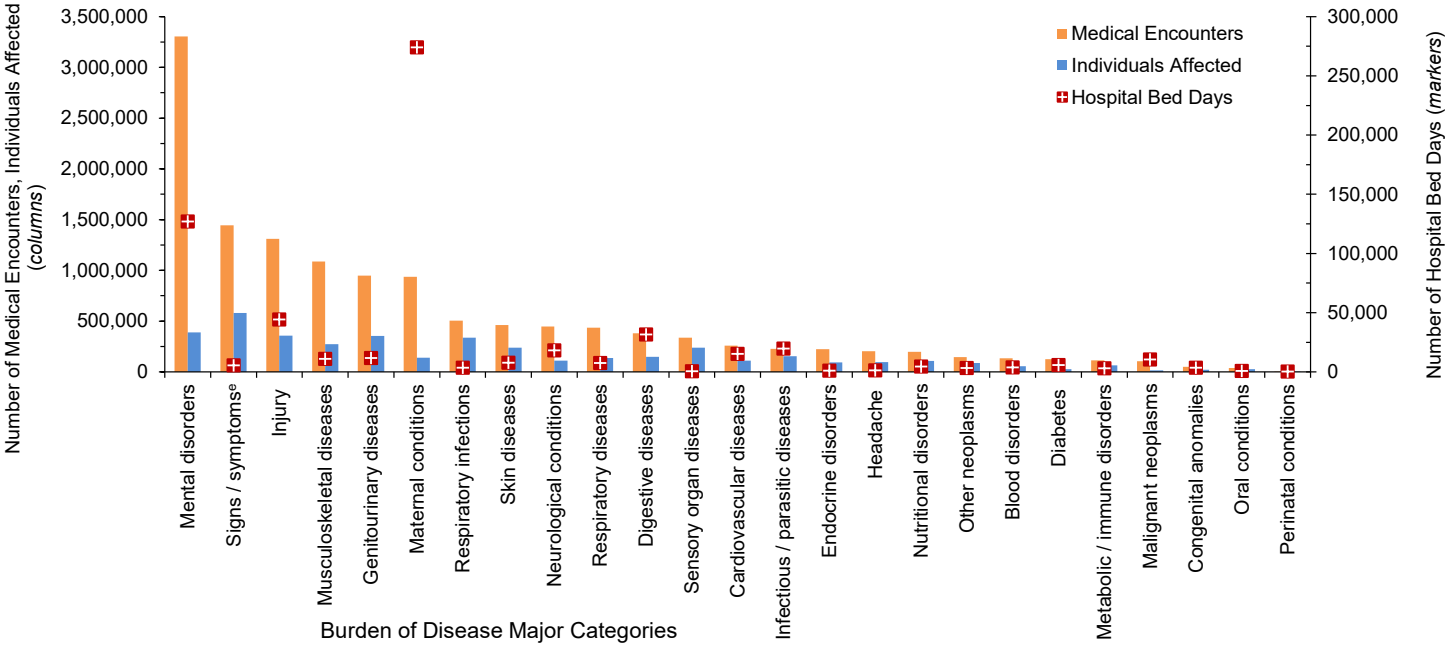
This report documents the overall health care burden of disease among non-service member MHS beneficiaries received through direct care at military hospitals and clinics, in addition to purchased care reimbursements from private sector facilities. In 2024, a substantial majority of non-service member MHS beneficiaries received medical care exclusively at private sector facilities, as only 8.1% of all ambulatory encounters and 4.4% of hospital bed days in 2024 were from direct care at military medical facilities.

The National Ambulatory Medical Care Survey of 2019 documented a substantially lower rate of ambulatory visits (3.2 visits per p-yr)[9] among the general U.S. population than among non-service member MHS beneficiaries (14.6 visits per p-yr) reported here. This higher rate of ambulatory visits among non-service member beneficiaries compared to national civilian data was observed for all age groups. Since the National Ambulatory Medical Care survey includes uninsured individuals, financial barriers to care may explain a portion of the lower overall use rate among the general U.S. population, while the families of uniformed personnel require more medical procedures in practice, which is reflected in the composition of the most common directly-provided and purchased procedures.[10,11]

As in previous years, mental health disorders were the leading cause for medical encounters within the pediatric (0-17 years) and young adult (18-44 years) beneficiaries age groups, although the proportion of medical encounters attributed to mental health disorders was markedly lower among young adult (24.6%) than pediatric (38.7%) beneficiaries. Developmental disorders were a significant factor for pediatric beneficiary health care, with almost 70% of medical encounters for mental health disorders attributable to autistic disorder and pervasive developmental disorders, specific developmental disorders of speech and language, or attention-deficit hyperactivity disorders.

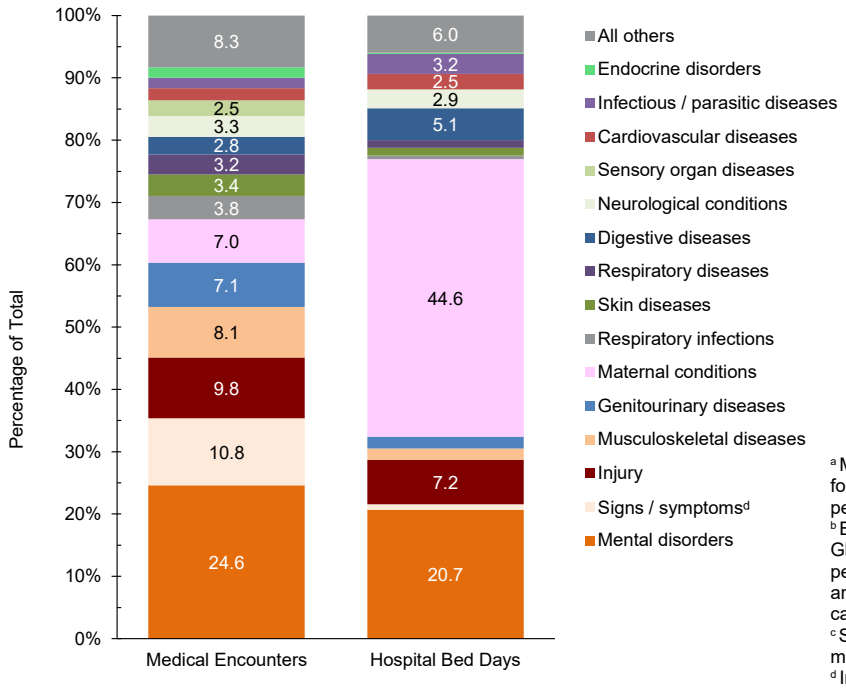
The leading diagnostic categories for medical encounters and hospitalizations among adult beneficiaries also reflects 2023 data.[12] Among adults older than age 45 years, musculoskeletal diseases continue to represent the leading medical encounter diagnostic category. As in prior years, maternal conditions in adult beneficiaries ages 18-44 years accounted for the highest

**FIGURE 3a.** Medical Encounters[a], Individuals Affected[b] and Hospital Bed Days, by Burden of Disease Major Category[c], Non-Service Member MHS Beneficiaries[d], Ages 18–44 Years, 2024




[a] Medical encounters include total hospitalizations and ambulatory visits for the condition (with no more than 1 encounter per individual per day per condition).
[b] Individuals with at least 1 hospitalization or ambulatory visit for the condition.
[c] Burden of disease major categories modified from those defined in Global Burden of Disease study.[3]
[d] Source of care includes medical encounters or hospitalizations at military hospitals or clinics and non-military medical facilities.
[e] Includes ill-defined conditions.

**FIGURE 3b.** Percentages of Medical Encounters[a] and Hospital Bed Days, by Burden of Disease Major Category[b], Non-Service Member MHS Beneficiaries[c], Ages 18–44 Years, 2024

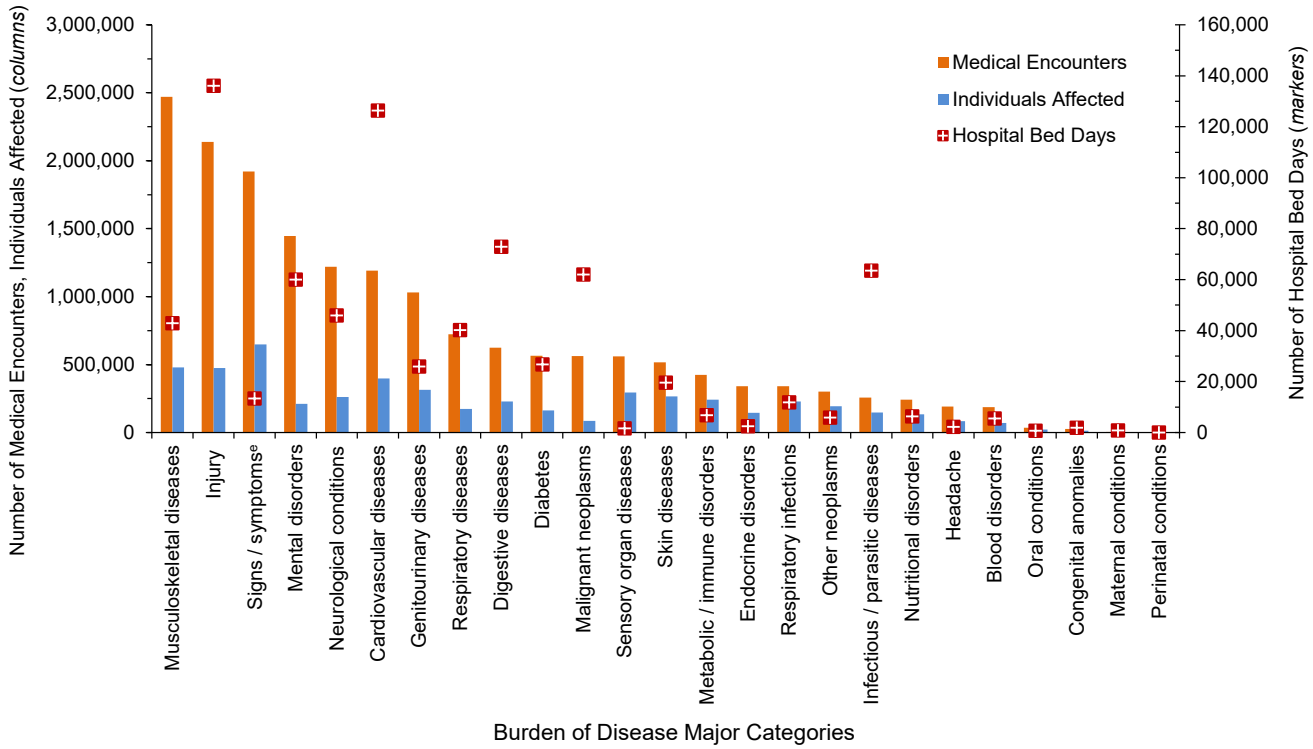



[a] Medical encounters include total hospitalizations and ambulatory visits for the condition (with no more than 1 encounter per individual per day per condition).
[b] Burden of disease major categories modified from those defined in Global Burden of Disease study.[3] The 15 categories with the highest percentages of medical encounters are depicted; additional categories are collapsed into an 'all others' grouping. Data labels are provided for categories with more than 2% of medical encounters/hospitalizations.
[c] Source of care includes medical encounters or hospitalizations at military hospitals/clinics and non-military medical facilities.
[d] Includes ill-defined conditions.

proportion of hospital bed days. Injury and cardiovascular diseases represent the leading diagnostic category for hospitalization among those aged 45 years and older.

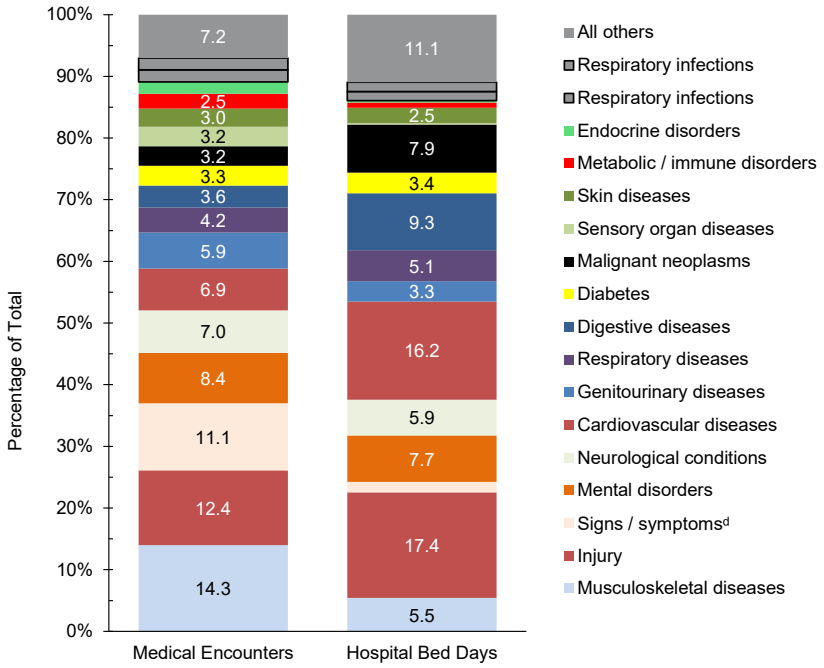
When comparing 2023 and 2024 ambulatory encounters (90,192,185 vs. 90,357,451, respectively) and hospital bed days (6,083,009 vs. 6,261,731, respectively) among non-service member MHS beneficiaries, both remained relatively stable. Since this report does not include person-time nor approximate rates, annual comparisons are not proportionate to changes in the numbers of beneficiaries

**FIGURE 4a.** Medical Encounters[a], Individuals Affected[b] and Hospital Bed Days, by Burden of Disease Major Category[c], Non-Service Member MHS Beneficiaries[d], Ages 45–64 Years, 2024




[a] Medical encounters include total hospitalizations and ambulatory visits for the condition (with no more than 1 encounter per individual per day per condition).
[b] Individuals with at least 1 hospitalization or ambulatory visit for the condition.
[c] Burden of disease major categories modified from those defined in Global Burden of Disease study.[3]
[d] Source of care includes medical encounters or hospitalizations at military hospitals or clinics and non-military medical facilities.
[e] Includes ill-defined conditions.

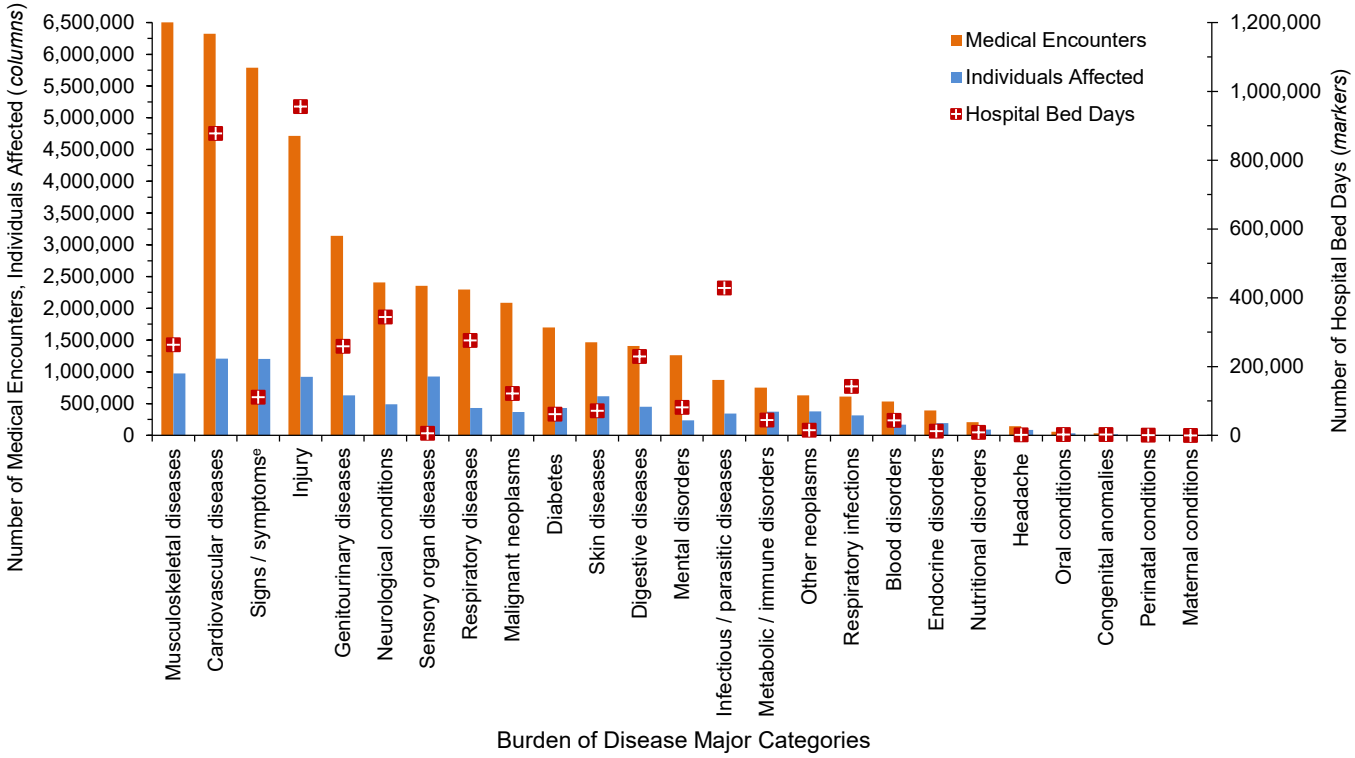
**FIGURE 4b.** Percentages of Medical Encounters[a] and Hospital Bed Days, by Burden of Disease Major Category[b], Non-Service Member MHS Beneficiaries[c], Ages 45–64 Years, 2024




procuring care. While this report aims to describe morbidity-related diagnoses for all MHS beneficiaries, the data are limited to beneficiaries who received care at military hospitals and clinics, or at private sector medical facilities and reimbursed through TRICARE (as primary or secondary insurance) or through Medicare, if TFL was also billed. Certain forms of care provision, such as that paid with other health insurance and not billed to TRICARE, or paid directly by the patient (or family member), are not captured in this report.

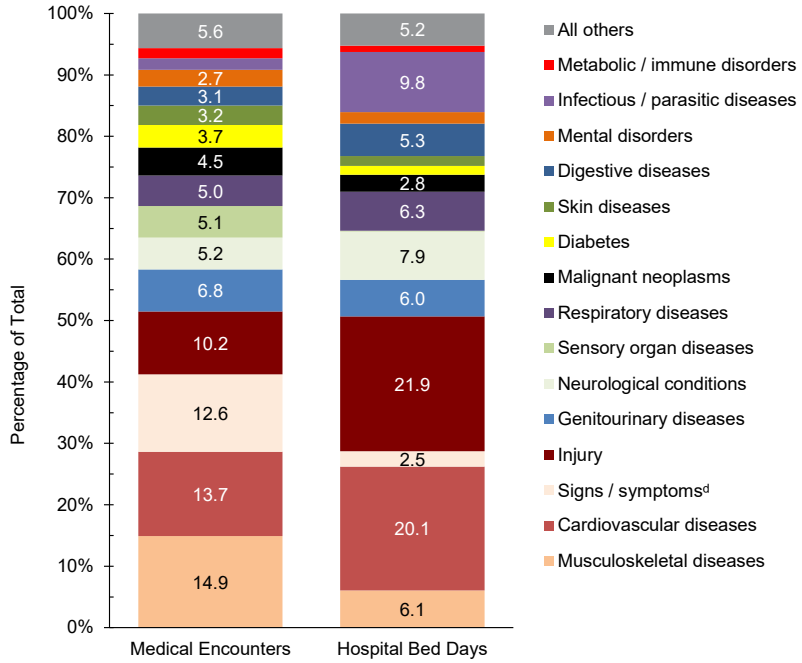
[a] Medical encounters include total hospitalizations and ambulatory visits for the condition (with no more than 1 encounter per individual per day per condition).
[b] Burden of disease major categories modified from those defined in Global Burden of Disease study.[3] The 16 categories with the highest percentages of medical encounters are depicted; additional categories are collapsed into an 'all others' grouping. Data labels are provided for categories with more than 2% of medical encounters and hospitalizations.
[c] Source of care includes medical encounters or hospitalizations at military hospitals or clinics and non-military medical facilities.
[d] Includes ill-defined conditions.

**FIGURE 5a.** Medical Encounters[a], Individuals Affected[b] and Hospital Bed Days by Burden of Disease Major Category[c], Non-Service Member MHS Beneficiaries[d], Age 65 Years or Older, 2024




[a] Medical encounters include total hospitalizations and ambulatory visits for the condition (with no more than 1 encounter per individual per day per condition).
[b] Individuals with at least 1 hospitalization or ambulatory visit for the condition.
[c] Burden of disease major categories modified from those defined in Global Burden of Disease study.[3]
[d] Source of care includes medical encounters or hospitalizations at military hospitals or clinics and non-military medical facilities.
[e] Includes ill-defined conditions.

**FIGURE 5b.** Percentages of Medical Encounters[a] and Hospital Bed Days, by Burden of Disease Major Category[b], Non-Service Member MHS Beneficiaries, Age 65 Years or Older[c], 2024




The Military Health System Strategy for Fiscal Years 2024-2029 calls for additional capacity, to facilitate the return of patients including non-service member beneficiaries to military hospitals and clinics, improve their access to care, and increase opportunities for sustaining military clinical readiness for medical forces while delivering quality care to beneficiaries.[1,12] The need to "attract and reattract" beneficiaries to the direct care setting may be reflected in the data throughout this report,

[a] Medical encounters include total hospitalizations and ambulatory visits for the condition (with no more than 1 encounter per individual per day per condition).
[b] Burden of disease major categories modified from those defined in Global Burden of Disease study.[3] The 15 categories with the highest percentages of medical encounters are depicted; additional categories are collapsed into an 'all others' grouping. Data labels are provided for categories with more than 2% of medical encounters/hospitalizations.
[c] Source of care includes medical encounters or hospitalizations at military hospitals or clinics and non-military medical facilities.
[d] Includes ill-defined conditions.

which indicate a substantial proportion of medical encounters and hospitalizations for non-service member MHS beneficiaries exclusively from private sector care. Continued evaluation of health care provision and diagnostic patterns may aid senior leaders' allocation of resources for realization of the current MHS strategy and goals.

## References


1. Mendez BHP, Congressional Research Service. Defense Primer: Military Health System. *In Focus (10530)*. Library of Congress. Updated Oct. 2024. Accessed Aug. 5, 2025. https://www.congress.gov/crs-product/if10530
2. Analytics and Evaluation Division, Defense Health Agency. *Evaluation of the TRICARE Program: Fiscal Year 2024 Report to Congress: Access, Cost, and Quality Data Through Fiscal Year 2024*. Office of the Assistant Secretary of Defense (Health Affairs), U.S. Dept. of Defense. Accessed Aug. 5, 2025. https://health.mil/reference-center/reports/2024/09/23/annual-evaluation-of-the-tricare-program-fy24
3. Military Health System. Military Health System Strategy: Fiscal Years 2024-2029. Defense Health Agency, U.S. Dept. of Defense. Accessed Aug. 5, 2025. https://health.mil/reference-center/publications/2023/12/15/mhs_strategic_plan_fy24_29
4. Murray CJ, Lopez AD, Jamison DT. The global burden of disease in 1990: summary results, sensitivity analysis and future directions. *Bull World Health Organ*. 1994;72(3):495-509. Accessed Aug. 26, 2025. https://iris.who.int/bitstream/handle/10665/41177/9241561750_en_part2.pdf;jsessionid=3145C7676FA5B9E812A71046BA6326A2?sequence=2
5. World Health Organization. *The Global Burden of Disease: 2004 Update*. World Health Organization;2008. Accessed Aug. 26, 2025. https://www.who.int/publications/i/item/9789241563710
6. Murray CJL. The Global Burden of Disease Study at 30 years. *Nat Med*. 2022;28(10):2019-2026. doi:10.1038/s41591-022-01990-1
7. Roser M, Ritchie H, Spooner F. Burden of Disease. *Our World in Data*. Updated Feb. 2024. Accessed May 2, 2024. https://ourworldindata.org/burden-of-disease
8. Murray CJL, Lopez AD, eds. *The Global Burden of Disease: A Comprehensive Assessment of Mortality and Disability from Diseases, Injuries, and Risk Factors in 1990 and Projected to 2020*. Harvard University Press;1996:120-122.
9. Santo L, Kang K., National Center for Health Statistics. National Ambulatory Health Care Survey: 2019 National Summary. Centers for Disease Control and Prevention, U.S. Dept. of Health and Human Services 2019. Accessed May 24, 2024. https://www.cdc.gov/nchs/data/ahcd/namcs_summary/2019-namcs-web-tables-508.pdf
10. Frakes MD, Gruber J, Justicz T. Public and private options in practice: the Military Health System. *Am Econ J Econ Policy*. 2023;15(4):37-74. doi:10.1257/pol.20210625
11. Wooten NR, Brittingham JA, Pitner RO, et al. Purchased behavioral health care received by Military Health System beneficiaries in civilian medical facilities, 2000-2014. *Mil Med*. 2018;183(7-8):e278-e290. doi:10.1093/milmed/usx101
12. Armed Forces Health Surveillance Division. Absolute and relative morbidity burdens attributable to various illnesses and injuries among non-service member beneficiaries of the Military Health System, 2023. *MSMR*. 2024; 31(7):11-20. Accessed Aug. 26, 2025. https://www.health.mil/news/articles/2024/07/01/msmr-mhs-beneficiaries-2023
13. Mincher R, Military Health Systems Communications. Military Health System Stabilization: Rebuilding Health Care Access Is Critical to Patient's Well-Being. U.S. Dept. of Defense. 2024. Accessed May 10, 2024. https://www.defense.gov/news/news-stories/article/article/3652092/military-health-system-stabilization-rebuilding-health-care-access-is-critical

# Illness and Injury Burdens Among Reserve Component Members of the U.S. Armed Forces, 2024

**FIGURE 1.** Numbers of Medical Encounters[a], Individuals Affected and Hospital Bed Days by Burden of Disease Major Category[b], Reserve Componentd, U.S. Armed Forces, 2024

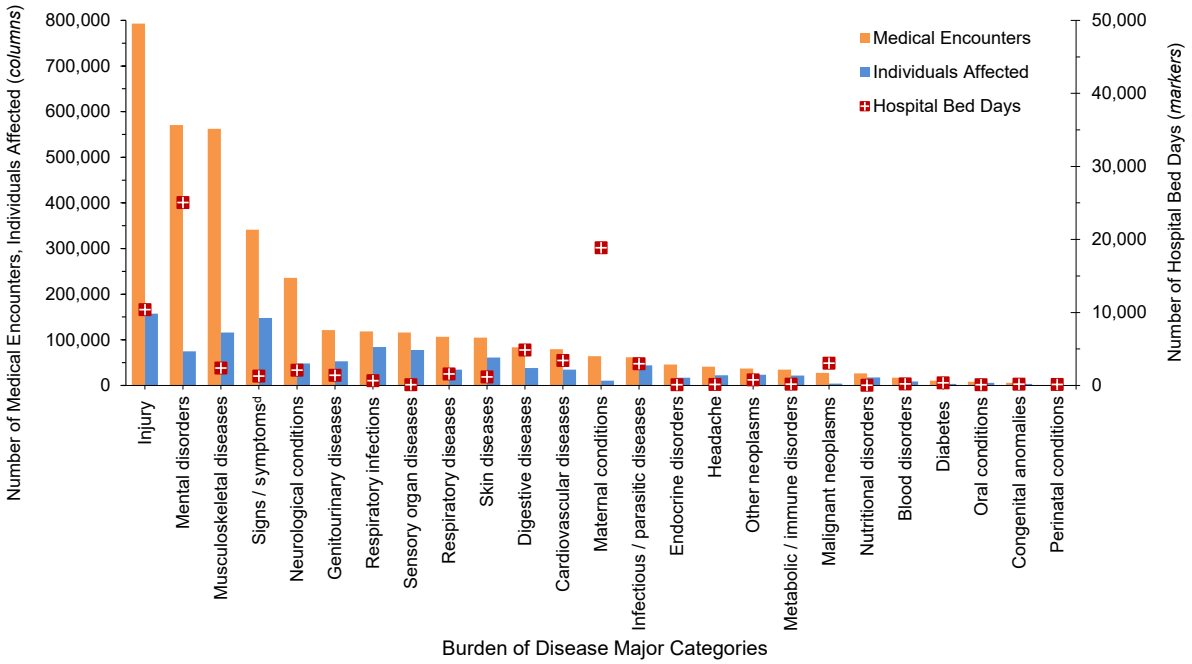
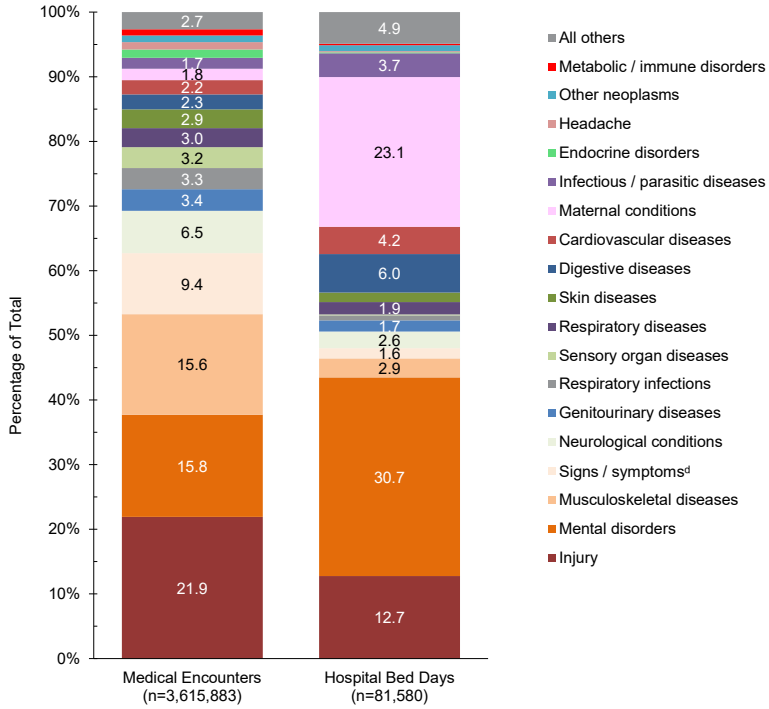



**FIGURE 2.** Percentages of Medical Encounters[a] and Hospital Bed Days by Burden of Disease Category[b], Reserve Component[c], U.S. Armed Forces, 2024




Abbreviation: No. number.

[a] Medical encounters include total hospitalizations and ambulatory visits for the condition (with no more than 1 encounter per individual per day per condition) occurring in U.S. military and non-military medical facilities.

[b] Burden of disease categories are the same as those used for analyses of morbidity burdens in the active component overall, pp. 4-12.

[c] The reserve component is comprised of reserve and Guard members of each service.

[d] Signs / symptoms category includes ill-defined conditions.

# Illness and Injury Burdens Among Reserve Component Members of the U.S. Coast Guard, 2024

**FIGURE 1.** Numbers of Medical Encounters[a], Individuals Affected and Hospital Bed Days, by Burden of Disease Major Category[b], Coast Guard Reserve Component, U.S. Armed Forces, 2024

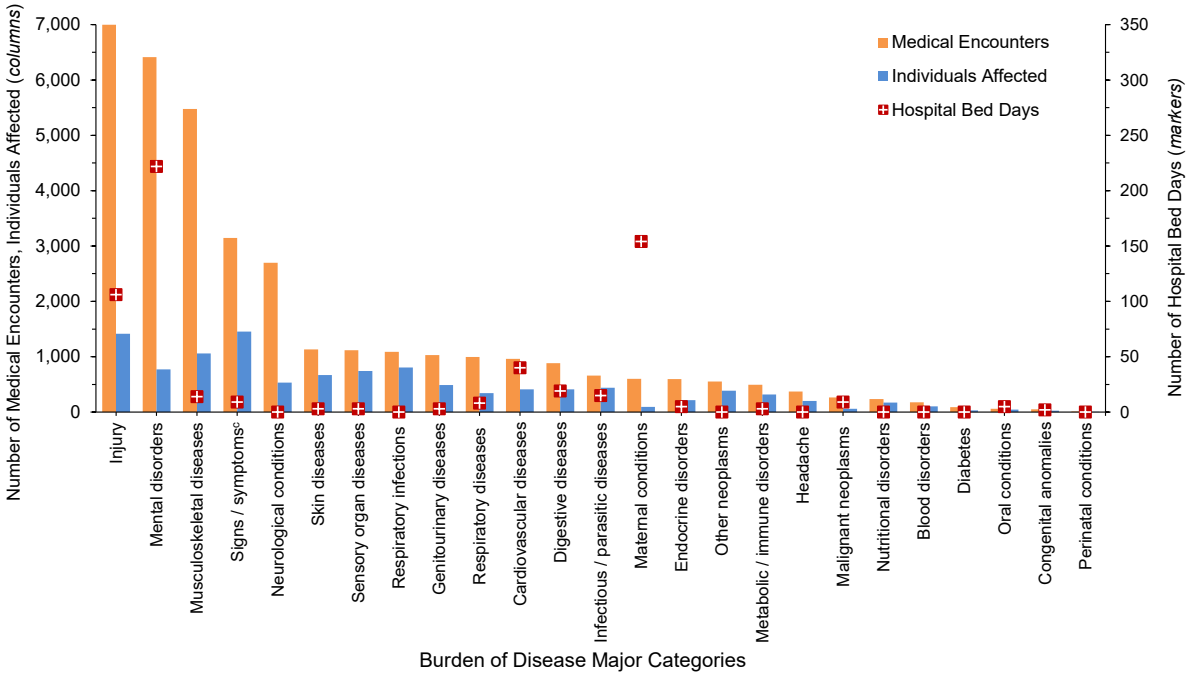
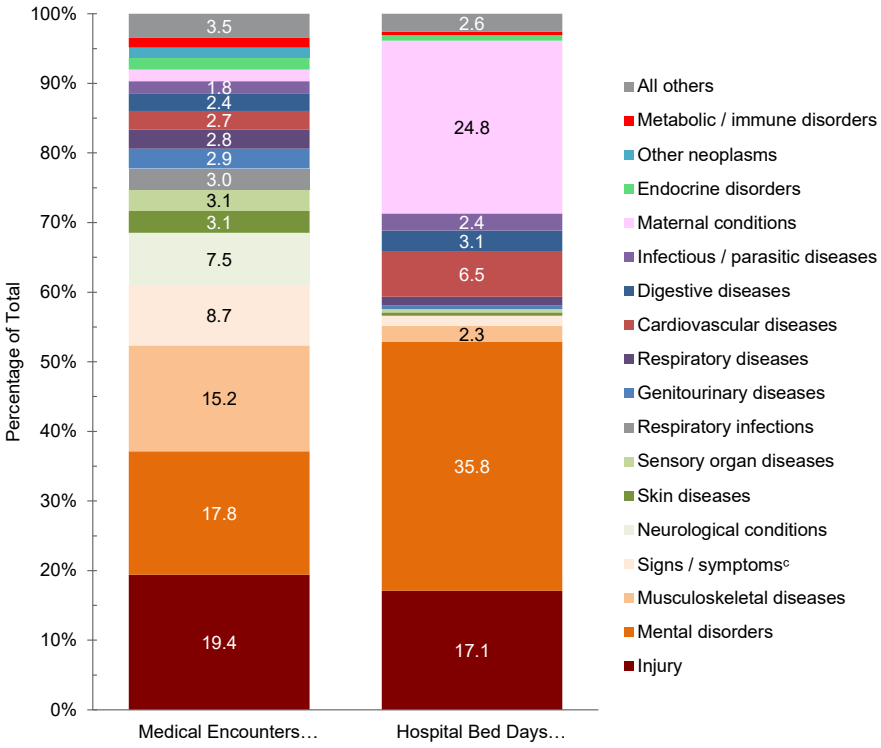



**FIGURE 2.** Percentages of Medical Encounters[a] and Hospital Bed Days by Burden of Disease Category[b], Coast Guard Reserve Component, U.S. Armed Forces, 2024




Abbreviation: No. number.

[a] Medical encounters include total hospitalizations and ambulatory visits for the condition (with no more than 1 encounter per individual per day per condition) occurring in U.S. military and non-military medical facilities.

[b] Burden of disease categories are the same as those used for analyses of morbidity burdens in the active component overall, pp. 4-12.

[c] Includes ill-defined conditions.

*Surveillance Snapshot*

# Telehealth Services Among Active Component Members of the U.S. Armed Forces, 2020–2024

*Adewumi Adegboye, MPH; Sithembile L. Mabila, PhD*

Telehealth in the Military Health System (MHS) has long been an important tool for providing care in deployed and non-deployed settings.[1] The U.S. Department of Defense uses telehealth for primary care, medication management,[2] and other services including outpatient care. Certain types of care provided at fixed military hospitals and clinics, as well as health care encounters outside the military medical system that are billed to TRICARE, are also provided through telehealth.[3]

This Surveillance Snapshot presents trends in telehealth service use and identifies the 10 most frequent diagnoses addressed via telehealth among U.S. active component service members (ACSMs) using Defense Medical Surveillance System (DMSS) outpatient and demographic records from January 2020 through December 2024.

**TABLE.** Rate of Telehealth Services[a] by Year, Active Component U.S. Service Members, 2020–2024

| Variable | 2020 | 2021 | 2022 | 2023 | 2024 | Total |
|---|---|---|---|---|---|---|
| Overall rate[a] | 228.3 | 223.5 | 277.5 | 367.6 | 515.3 | 315.3 |
| Sex | | | | | | |
| Male | 207.8 | 203.5 | 266.6 | 364.9 | 523.7 | 304.7 |
| Female | 286.9 | 281.7 | 307.5 | 374.9 | 492.7 | 345.0 |
| Age group, y | | | | | | |
| <20 | 128.9 | 109.0 | 163.9 | 226.3 | 358.1 | 180.3 |
| 20–24 | 233.1 | 232.2 | 288.0 | 374.8 | 516.3 | 315.5 |
| 25–29 | 252.7 | 245.1 | 296.6 | 391.8 | 552.3 | 340.8 |
| 30–34 | 248.2 | 241.0 | 299.3 | 400.0 | 560.2 | 346.2 |
| 35–39 | 236.9 | 230.3 | 282.4 | 375.7 | 525.1 | 328.0 |
| 40+ | 203.0 | 198.8 | 242.8 | 324.6 | 456.9 | 283.9 |
| Race and ethnicity | | | | | | |
| White, non-Hispanic | 227.5 | 219.7 | 276.2 | 371.4 | 525.7 | 314.0 |
| Black, non-Hispanic | 239.6 | 229.4 | 261.4 | 338.3 | 475.0 | 302.2 |
| Hispanic | 223.7 | 225.7 | 285.1 | 366.6 | 508.8 | 319.9 |
| Other | 220.1 | 227.8 | 296.8 | 397.6 | 543.8 | 334.6 |
| Service branch | | | | | | |
| Army | 176.6 | 165.7 | 202.0 | 248.6 | 365.8 | 224.9 |
| Navy | 90.3 | 122.5 | 176.8 | 314.1 | 415.6 | 221.7 |
| Air Force | 511.2 | 464.5 | 487.5 | 578.5 | 862.6 | 571.5 |
| Marine Corps | 82.3 | 132.4 | 244.6 | 381.9 | 475.9 | 248.8 |
| Coast Guard | 54.8 | 137.7 | 384.2 | 408.8 | 421.6 | 301.2 |
| Space Force[b] | — | — | 610.6 | 967.3 | 1185.8 | 1060.3 |
| Source of care | | | | | | |
| Military clinic | 279.5 | 279.4 | 371.2 | 535.1 | 771.2 | 422.3 |
| Purchased care | 18.8 | 13.8 | 11.7 | 10.3 | 8.9 | 12.2 |

[a] Crude rates were calculated per 10,000 medical encounters.
[b] Space Force data are available beginning 2022.

Telehealth services were identified by having a virtual appointment type or by using the Common Procedural Terminology (CPT) code modifiers 98966–98969, 99374–99380, 99339–99444, 99421–99423, 98000–98007, G0320–G0321, G0425–G0427, G0459, G0508–G0509, D9995, G2061–G2063, C7900–C7902, T1014. The use of telehealth was defined as having at least 1 telehealth encounter per patient per day; if a patient had multiple telehealth encounters per day, the first record was retained as the qualifying encounter. Reasons for telehealth encounters among ACSMs were determined using International Classification of Diseases, 10th Revision codes associated with each telehealth visit. The rate of telehealth encounters was calculated per 10,000 encounter records and stratified by year, patient demographics, and type of care (military clinics or purchased care).

A total of 2,924,428 telehealth encounters were provided to over 1,007,453 ACSMs during the study period. The overall crude rate of telehealth per 10,000 encounters demonstrates an upward trajectory from 2020 to 2024, rising from 228.3 to 515.3 **(Table)**. Over the 5-year study period, women used telehealth at a higher rate than men (345.0 vs. 304.7 per 10,000 encounters, respectively). Direct care from military hospitals and clinics accounted for most telehealth encounters from 2020 through 2024.

The leading 10 reasons for telehealth encounters from 2020 through 2024 were other general symptoms and signs, encounter for other administrative examinations, encounter for immunization, occupational Health Periodic Health Assessment examination, obstructive sleep apnea, low back pain, other specified counseling, pain in right knee, adjustment disorder with mixed anxiety and depressed mood, and pain in left knee (data not shown).

The highest rates observed in 2024 were among male ACSMs (523.7 per 10,000 encounters), those aged 30-34 years (560.2 per 10,000 encounters), Space Force ACSMs (1,185.8 per 10,000 encounters), those treated in a military clinic (771.2 per 10,000 encounters), and ACSMs of other races or ethnicities (543.8) **(Table)**.

The steady increase of telehealth encounter rates from 2020 through 2024 indicates a growing role for virtual care among ACSMs.

*Authors' Affiliation: Defense Health Agency, Epidemiology and Analysis Branch, Armed Forces Health Surveillance Division, Public Health Directorate, Defense Health Agency, Silver Spring, MD: Mr. Adegboye, Dr. Mabila*

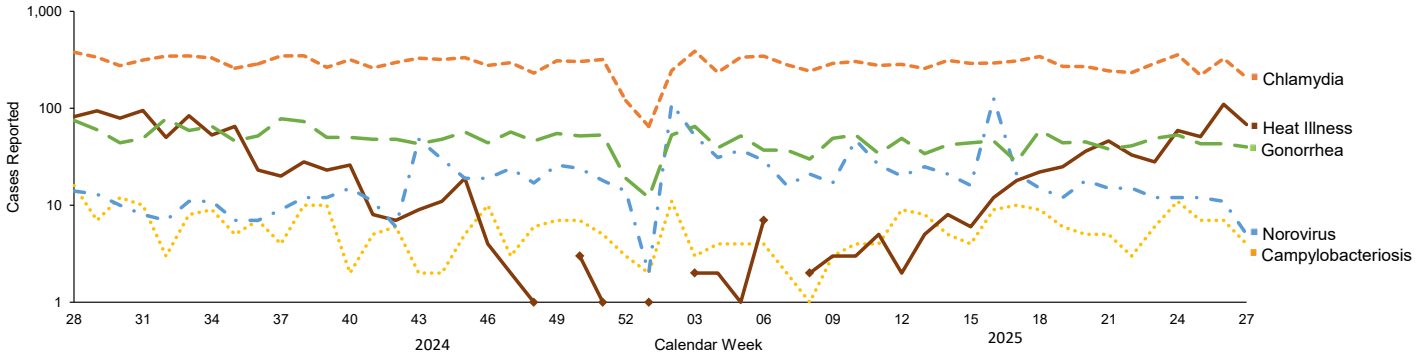
## References

1. Madsen C, Banaag A, Koehlmoos TP. Analysis of telehealth usage and trends in the Military Health System, 2006-2018. *Telemed J E Health*. 2021;27(12):1346-1354. doi:10.1089/tmj.2020.0474
2. Vaudreuil R, Langston DG, Magee WL, Betts D, Kass S, Levy C. Implementing music therapy through telehealth: considerations for military populations. *Disabil Rehabil Assist Technol*. 2022;17(2):201-210. doi:10.1080/17483107.2020.1775312
3. Gilder T, Banaag A, Madsen C, Koehlmoos TP. Trends in telehealth care during the COVID-19 pandemic for the Military Health System. *Telemed Rep*. 2023;4(1):147-155. doi:10.1089/tmr.2022.0042

# Reportable Medical Events at Military Health System Facilities Through Week 27, Ending June 30, 2025

*Idalia Aguirre, MPH; Matthew W.R. Allman, MPH; Anthony R. Marquez, MPH; Katherine S. Kotas, MPH*

## TOP 5 REPORTABLE MEDICAL EVENTS[a] BY CALENDAR WEEK, ACTIVE COMPONENT (JUNE 13, 2024 - JUNE 30, 2025)




Abbreviation: RMEs, reportable medical events.

[a]Cases are shown on a logarithmic scale.

Note: There were 0 reported heat illness cases during weeks 49, 52, 2 and 7.

Reportable Medical Events (RMEs) are documented in the Disease Reporting System internet (DRSi) by health care providers and public health officials throughout the Military Health System (MHS) for monitoring, controlling, and preventing the occurrence and spread of diseases of public health interest or readiness importance. These reports are reviewed by each service's public health surveillance hub. The DRSi collects reports on over 70 different RMEs, including infectious and non-infectious conditions, outbreak reports, STI risk surveys, and tuberculosis contact investigation reports. A complete list of RMEs is available in the *2022 Armed Forces Reportable Medical Events Guidelines and Case Definitions*.[1] Data reported in these tables are considered provisional and do not represent conclusive evidence until case reports are fully validated.

Total active component cases reported per week are displayed for the top 5 RMEs for the previous year. Each month, the graph is updated with the top 5 RMEs, and is presented with the current month's (June 2025) top 5 RMEs, which may differ from previous months. COVID-19 is excluded from these graphs due to changes in reporting and case definition updates in 2023.

For questions about this report, please contact the Disease Epidemiology Branch at the Defense Centers for Public Health–Aberdeen. Email: dha.apg.pub-health-a.mbx.disease-epidemiologyprogram13@health.mil

*Authors' Affiliation: Defense Health Agency, Disease Epidemiology Branch, Defense Centers for Public Health–Aberdeen*

## References

1. Armed Forces Health Surveillance Division. Armed Forces Reportable Medical Events. Accessed Feb. 28, 2024. https://health.mil/reference-center/publications/2022/11/01/armed-forces-reportable-medical-events-guidelines
2. Defense Manpower Data Center. Department of Defense Active Duty Military Personnel by Rank/Grade of Service. Accessed Feb. 28, 2024. https://dwp.dmdc.osd.mil/dwp/app/dod-data-reports/workforce-reports
3. Defense Manpower Data Center. Armed Forces Strength Figures for January 31, 2023. Accessed Feb. 28, 2024. https://dwp.dmdc.osd.mil/dwp/app/dod-data-reports/workforce-reports
4. Navy Medicine. Surveillance and Reporting Tools–DRSI: Disease Reporting System Internet. Accessed Feb. 28, 2024. https://www.med.navy.mil/navy-marine-corps-public-health-center/preventive-medicine/program-and-policy-support/disease-surveillance/drsi

**TABLE.** Reportable Medical Events, Military Health System Facilities, June 2025[a]

| Reportable Medical Event[b] | Active Component[c] | | | | | MHS Beneficiaries[d] |
|---|---|---|---|---|---|---|
| | June 2025 | May 2025 | YTD 2025 | YTD 2024 | Total 2024 | June 2025 |
| | No. | No. | No. | No. | No. | No. |
| Amebiasis | 3 | 1 | 11 | 7 | 15 | 0 |
| Arboviral diseases, neuroinvasive and non-neuroinvasive | 1 | 0 | 1 | 0 | 4 | 0 |
| Brucellosis | 0 | 0 | 0 | 0 | 1 | 0 |
| COVID-19-associated hospitalization, death | 2 | 1 | 20 | 22 | 41 | 5 |
| Campylobacteriosis | 33 | 24 | 148 | 149 | 326 | 24 |
| Chikungunya virus disease | 0 | 0 | 0 | 0 | 1 | 0 |
| Chlamydia trachomatis infection | 1,249 | 1,145 | 7,356 | 8,194 | 16,030 | 169 |
| Cholera (O1 or O139) | 0 | 0 | 0 | 1 | 3 | 0 |
| Coccidioidomycosis | 0 | 4 | 11 | 35 | 53 | 1 |
| Cold weather injury | 8 | 16 | 279 | 134 | 174 | N/A |
| Cryptosporidiosis | 7 | 7 | 36 | 41 | 82 | 3 |
| Cyclosporiasis | 4 | 1 | 7 | 1 | 11 | 2 |
| Dengue virus infection | 1 | 1 | 6 | 5 | 12 | 0 |
| *E. coli*, Shiga toxin-producing | 8 | 12 | 34 | 38 | 93 | 1 |
| Ehrlichiosis and anaplasmosis | 1 | 0 | 1 | 1 | 1 | 0 |
| Giardiasis | 8 | 10 | 49 | 48 | 98 | 3 |
| Gonorrhea | 196 | 196 | 1,127 | 1,412 | 2,820 | 21 |
| *H. influenzae*, invasive | 0 | 0 | 2 | 3 | 3 | 1 |
| Heat illness[e] | 264 | 149 | 503 | 446 | 1,276 | N/A |
| Hepatitis A | 1 | 0 | 1 | 4 | 7 | 0 |
| Hepatitis B, acute and chronic[f] | 8 | 7 | 40 | 57 | 108 | 4 |
| Hepatitis C, acute and chronic | 2 | 1 | 13 | 18 | 33 | 4 |
| Influenza-associated hospitalization[g] | 0 | 2 | 47 | 35 | 54 | 1 |
| Lead poisoning, pediatric[h] | N/A | N/A | N/A | N/A | N/A | 5 |
| Legionellosis | 1 | 0 | 1 | 3 | 5 | 1 |
| Leprosy | 0 | 0 | 0 | 0 | 1 | 0 |
| Listeriosis | 0 | 0 | 1 | 0 | 0 | 0 |
| Lyme disease | 21 | 10 | 44 | 46 | 101 | 9 |
| Malaria | 4 | 2 | 8 | 4 | 21 | 0 |
| Meningococcal disease | 0 | 1 | 1 | 0 | 2 | 0 |
| Mpox | 0 | 1 | 3 | 8 | 14 | 0 |
| Mumps | 0 | 0 | 1 | 0 | 0 | 0 |
| Norovirus infection | 47 | 66 | 741 | 249 | 654 | 55 |
| Pertussis | 3 | 5 | 27 | 10 | 39 | 9 |
| Q fever | 1 | 0 | 1 | 0 | 3 | 0 |
| Rabies post-exposure prophylaxis | 51 | 43 | 272 | 306 | 637 | 61 |
| Salmonellosis | 27 | 12 | 69 | 63 | 160 | 23 |
| Schistosomiasis | 0 | 0 | 0 | 0 | 1 | 0 |
| Shigellosis | 8 | 2 | 20 | 28 | 53 | 3 |
| Spotted fever rickettsiosis | 4 | 5 | 17 | 12 | 22 | 3 |
| Syphilis[i] | 26 | 50 | 227 | 324 | 564 | 8 |
| Toxic shock syndrome | 0 | 0 | 0 | 2 | 2 | 0 |
| Trypanosomiasis | 0 | 0 | 1 | 1 | 5 | 0 |
| Tuberculosis | 0 | 1 | 3 | 2 | 6 | 0 |
| Tularemia | 0 | 0 | 0 | 1 | 1 | 0 |
| Typhoid fever | 0 | 0 | 0 | 0 | 1 | 0 |
| Typhus fever | 1 | 0 | 2 | 1 | 2 | 2 |
| Varicella | 1 | 3 | 7 | 9 | 18 | 2 |
| Zika virus infection | 0 | 0 | 0 | 1 | 1 | 0 |
| Total Case Counts | 1,991 | 1,778 | 11,138 | 11,721 | 23,559 | 420 |

Abbreviations: MHS, Military Health System; YTD, year-to-date; No., number; N/A, not applicable; *E., Escherichia*; *H., Haemophilus*.

[a] RMEs submitted to DRSi as of August 25, 2025. RMEs were classified by date of diagnosis or, where unavailable, date of onset. Monthly comparisons are displayed for the period of May. 1, 2025–May. 31, 2025 and Jun. 1, 2025–Jun. 30, 2025. YTD comparison is displayed for the period of Jan. 1, 2025–Jun. 30, 2025 for MHS facilities. Previous year counts are provided as the following: previous YTD, Jan. 1, 2024-Jun. 30, 2024; total 2024, Jan. 1, 2024–Dec. 31, 2024.

[b] RME categories with 0 reported cases among active component service members and MHS beneficiaries for the time periods covered were not included in this report.

[c] Services included in this report include the Army, Navy, Air Force, Marine Corps, Coast Guard, and Space Force, including personnel classified as Active Duty, Cadet, Midshipman, or Recruit in DRSi.

[d] Beneficiaries included the following: individuals classified as Retired and Family Members (including Spouse, Child, Other, and Unknown). National Guard, Reservists, civilians, contractors, and foreign nationals were excluded from these counts.

[e] Only reportable for service members.

[f] The observed decrease in hepatitis B cases from 2024 to 2025 may in part, be attributed to an updated case validation process.

[g] Influenza-associated hospitalization is reportable only for individuals under age 65 years.

[h] Pediatric lead poisoning is reportable only for children ages 6 years or younger.

[i] The observed drop in syphilis cases from 2024 to 2025 may be due, in part, to an updated case validation process that began Jan. 2024.

The ***Medical Surveillance Monthly Report (MSMR)***, in continuous publication since 1995, is produced by the Armed Forces Health Surveillance Division (AFHSD) of the Defense Health Agency (DHA) Public Health Directorate. AFHSD is a designated public health authority within the Defense Health Agency. *MSMR* provides evidence-based estimates of the incidence, distribution, impact, and trends of illness and injuries among U.S. military members and associated populations. Most reports in *MSMR* are based on summaries of medical administrative data routinely provided to AFHSD and integrated within the Defense Medical Surveillance System for health surveillance purposes.

- *Archive:* Past issues of *MSMR* are available as downloadable PDF files at www.health.mil/MSMRArchives.
- *Online Subscriptions:* Submit subscription requests at www.health.mil/MSMRSubscribe.
- *Editorial Inquiries*: Call (301) 319-3240 or email dha.ncr.health-surv.mbx.msmr@health.mil.
- *Instructions for Authors:* Information about article submissions is provided at www.health.mil/MSMRInstructions.





Follow us:

Facebook: https://www.facebook.com/AFHSDPAGE

Twitter: https://twitter.com/AFHSDPAGE

ISSN 2158-0111 (print)

ISSN 2152-8217 (online)

***Medical Surveillance Monthly Report (MSMR)***
Defense Health Agency—Public Health
Armed Forces Health Surveillance Division
11800 Tech Road, Suite 220
Silver Spring, MD 20904