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Annual Summary, US Armed Forces - 2001

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Hospitalizations among Active Duty Members, US Armed Forces, 2001

This report summarizes frequencies, rates, trends, and characteristics of hospitalizations of active duty members of the US Armed Forces during calendar year 2001. The illnesses and injuries that caused hospitalizations are summarized based on primary diagnoses at times of discharge (coded in accordance with the International Classification of Diseases, 9th Revision, Clinical Modifications [ICD-9-CM]). All data were derived from Standard Inpatient Data Records maintained in the Defense Medical Surveillance System.

Frequencies, rates, and trends. During calendar year 2001, there were 60,148 hospitalizations of active duty servicemembers worldwide. During 2001, there were fewer than half as many hospitalizations as in 1993, fewer than two-thirds as many as in 1997, and approximately 4.5% fewer than in 2000 (table 1).¹ The crude hospitalization rate in 2001 was 44.4 per 1,000 person-years. This rate is more than 50% lower than the rates from 1991 to 1996 and more than 20% lower than the rates from 1998 to 2000 (figure 1).¹

Hospitalizations, by illness and injury categories. The illnesses and injuries that accounted for hospitalizations in 2001 differed from those of the recent past. For example, in 2001, pregnancy-related conditions (24%) and mental disorders (15%) accounted for more hospitalizations than any other major categories (table 1). In contrast, in 1993, musculoskeletal and digestive disorders were the leading causes of hospitalizations of servicemembers; and in 1997, pregnancy-related conditions and musculoskeletal conditions were the leading diagnostic categories. Still, the five categories that accounted for the most hospitalizations in 2001 were identical to those in 2000.¹

Hospitalization rates, by gender. In 2001, the hospitalization rate for all causes among women (crude rate: 120.6 per 1,000 person-years) was almost 4-times higher than the rate among men (crude rate: 31.2 per 1,000 person-years). However, when pregnancy-related conditions were excluded, the hospitalization

rate among women (crude rate: 49.2 per 1,000 person-years) was approximately 1.6-times higher than the rate among men. For most categories of illnesses and injuries, hospitalization rates were higher among women than men; however, men were hospitalized at higher rates than women for "injuries and poisonings" and "disorders of skin and subcutaneous tissue" (figure 2).

Hospitalization rates, by age. Relationships between age and hospitalization rates varied across major diagnostic categories. For example, rates generally declined with age for mental, infectious, and respiratory conditions; however, they generally increased with age for digestive, musculoskeletal, genitourinary, circulatory, neoplastic, and endocrinologic conditions (figure 2).

Most frequent diagnoses. The diagnoses that accounted for the most hospitalizations among males were "adjustment reaction" (n=2,665), "affective psychoses" (n=1,160), "acute appendicitis" (n=1,104), "intervertebral disc disorders" (n=1,027), and "internal derangement of knee" (1,025) (table 2). Among females, the non-pregnancy-related diagnoses that accounted for the most hospitalizations were "adjustment reactions" (n=925), "affective psychoses" (n=486), "uterine leiomyoma" (n=369), "other symptoms of the abdomen and pelvis" (n=271), and "dentofacial anomalies," including "malocclusion" (n=248) (table 3). Thus, psychiatric disorders were leading causes of hospitalizations among both male and female servicemembers.

Days per hospitalization. There was not much variability in median lengths of hospitalizations across diagnostic categories; however, ranges of hospital stays did significantly vary across categories. Among major categories, mental disorders accounted for the widest range of hospital stays (figure 4). In the past three years, ranges of hospital stays have remained fairly stable; however, lengths of hospital stays have decreased significantly since the early- to mid-1990s (figure 4).

Natures of injuries and poisonings that resulted in hospitalizations. In 2001, injuries and poisonings accounted for the third most hospitalizations of servicemembers among all major diagnostic categories. More than 90% of all injuries and poisonings that resulted in hospitalizations were “unintentional”: most of these were related to “falls and miscellaneous,” “land transport,” and “complications of medical care” (table 4). Approximately 9% of injuries and poisonings were

“intentional” (e.g., self-inflicted injuries/poisonings, fighting, combat-related wounds) (table 4).

Data analysis and report by Garret R. Lum, MPH, Analysis Group, Army Medical Surveillance Activity.

References

1. Lesikar SE. Hospitalizations among active duty personnel—2000. *Medical Surveillance Monthly Report* 2001;7(4):2-7.

Table 1. Hospitalizations, by ICD-9 diagnostic categories, US Armed Forces, 1993, 1997, and 2001

| Category | 1993 | | 1997 | | 2001 | |
|--|--------|--------|--------|--------|--------|--------|
| | Number | (Rank) | Number | (Rank) | Number | (Rank) |
| Pregnancy-related | 20,748 | (3) | 16,053 | (1) | 14,315 | (1) |
| Mental disorders | 17,824 | (5) | 11,651 | (3) | 9,095 | (2) |
| Injury and poisoning | 18,354 | (4) | 9,777 | (4) | 7,636 | (3) |
| Digestive | 27,878 | (2) | 9,730 | (5) | 6,044 | (4) |
| Musculoskeletal | 29,168 | (1) | 12,182 | (2) | 5,796 | (5) |
| Symptoms, signs, and ill-defined conditions | 6,954 | (10) | 4,133 | (8) | 3,200 | (6) |
| Respiratory | 13,496 | (6) | 4,663 | (6) | 2,606 | (7) |
| Genitourinary | 10,939 | (7) | 4,569 | (7) | 2,457 | (8) |
| Neoplasms | 5,012 | (13) | 2,584 | (11) | 1,564 | (9) |
| Circulatory | 5,393 | (12) | 2,712 | (9) | 1,523 | (10) |
| Skin and subcutaneous tissue | 4,242 | (14) | 1,894 | (14) | 1,446 | (11) |
| Other contact with health services | 9,634 | (8) | 2,618 | (10) | 1,283 | (12) |
| Infectious and parasitic | 7,358 | (9) | 1,973 | (12) | 1,239 | (13) |
| Nervous system and sense organs | 5,905 | (11) | 1,939 | (13) | 846 | (14) |
| Endocrine, nutritional, metabolic and immunity | 1,606 | (15) | 934 | (15) | 562 | (15) |
| Blood and blood-forming organs | 567 | (17) | 306 | (17) | 235 | (16) |
| Congenital anomalies | 1,283 | (16) | 572 | (16) | 233 | (17) |

Figure 1. Rate of hospitalizations, US Armed Forces, 1991-2001.

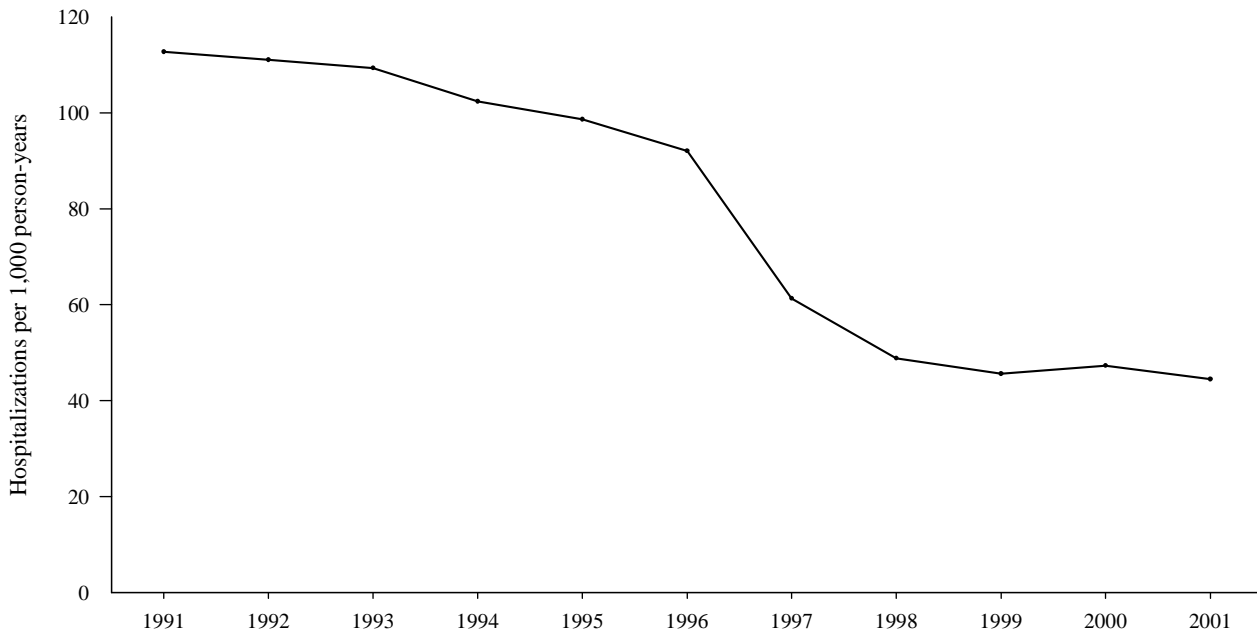


Figure 2. Rate of hospitalizations, by major category, gender, and age, US Armed Forces, 2001.

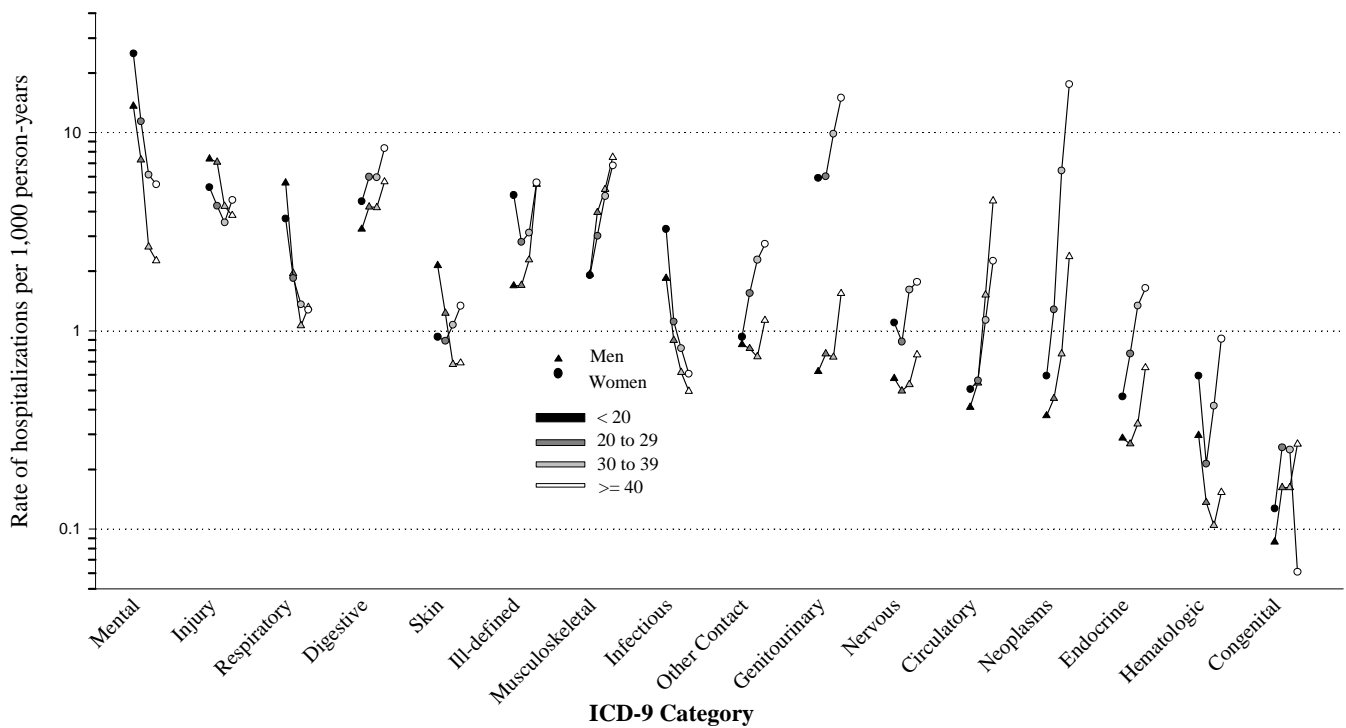


Figure 3. Length of hospital stay, by major diagnostic category, US Armed Forces, 2001.*

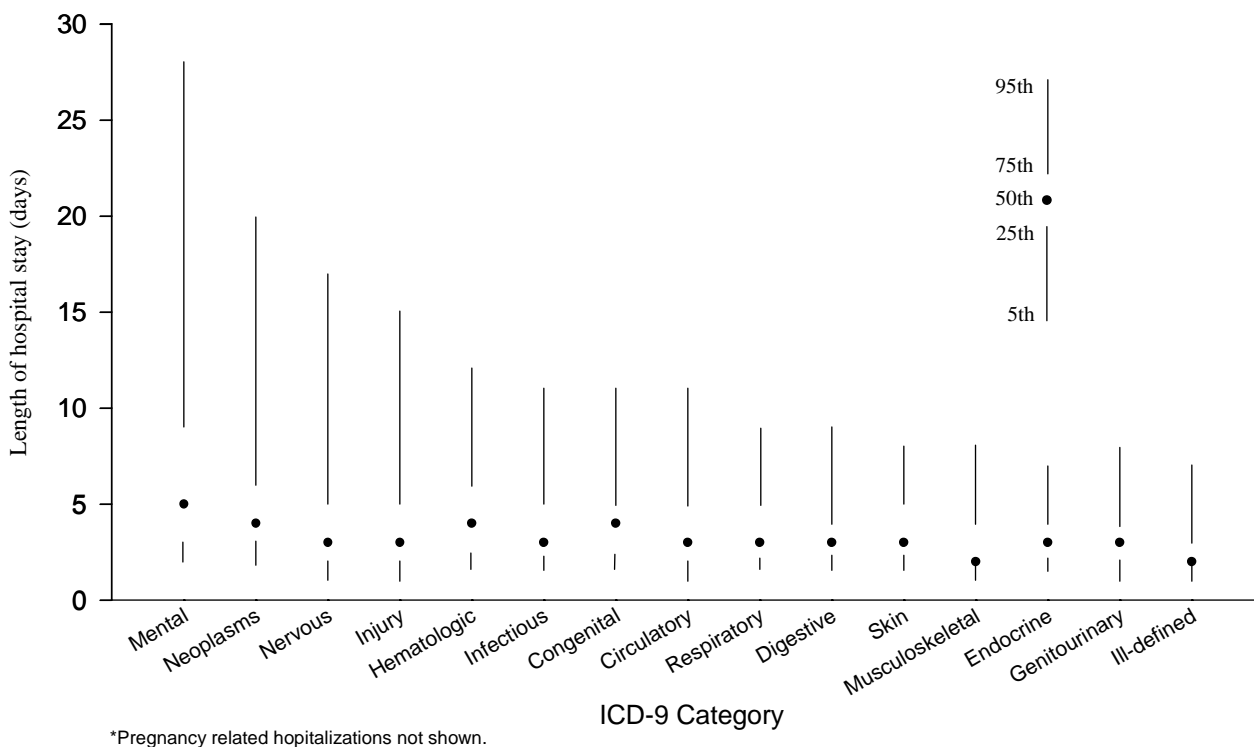


Figure 4. Length of hospital stay, by year, US Armed Forces, 1991-2001.

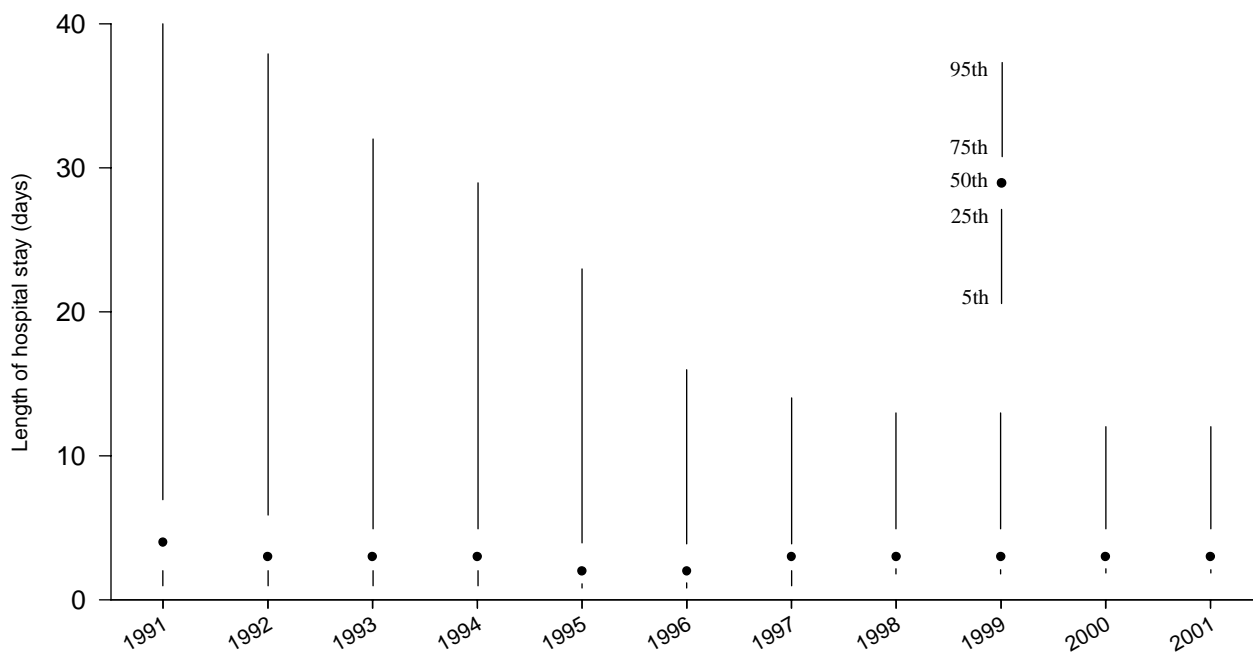


Table 2. Most frequent diagnoses during hospitalizations, by major diagnostic category, males, US Armed Forces, 2001

| Diagnostic category | No. | % | Diagnostic category | No. | % |
|--|-------|----|--|-------|----|
| Infectious and parasitic diseases (001-139) | 989 | | Digestive system (520 - 579) | 4,852 | |
| Meningitis due to enterovirus | 216 | 22 | Acute appendicitis | 1,104 | 23 |
| Viral and chlamydial infection | 162 | 16 | Dentofacial anomalies, including malocclusion | 526 | 11 |
| Intestinal infections due to other organisms | 106 | 11 | Diseases of esophagus | 504 | 10 |
| Infectious mononucleosis | 79 | 8 | Inguinal hernia | 298 | 6 |
| Chickenpox | 54 | 5 | Other noninfectious gastroenteritis and colitis | 276 | 6 |
| Neoplasms (140 - 239) | 818 | | Genitourinary system (580 - 629) | 929 | |
| Malignant neoplasm of testis | 75 | 9 | Calculus of kidney and ureter | 290 | 31 |
| Malignant neoplasm of prostate | 58 | 7 | Other disorders of male genital organs | 128 | 14 |
| Malignant neoplasm of thyroid gland | 48 | 6 | Urethral stricture | 92 | 10 |
| Benign neoplasm of bone and articular cartilage | 38 | 5 | Acute renal failure | 70 | 8 |
| Myeloid leukemia | 35 | 4 | Orchitis and epididymitis | 49 | 5 |
| Endocrine, nutrition, immunity (240 - 279) | 373 | | Pregnancy complications (630 - 679) | | |
| Diabetes mellitus | 137 | 37 | - | - | - |
| Disorders of fluid, electrolyte | 116 | 31 | - | - | - |
| Thyrotoxicosis with or without goiter | 23 | 6 | - | - | - |
| Nontoxic nodular goiter | 15 | 4 | - | - | - |
| Other disorders of pancreatic secretion | 11 | 3 | - | - | - |
| Hematologic disorders (280 - 289) | 163 | | Skin diseases (680 - 709) | 1,251 | |
| Diseases of white blood cells | 54 | 33 | Other cellulitis and abscess | 914 | 73 |
| Other diseases of blood and blood-forming organs | 40 | 25 | Pilonidal cyst | 123 | 10 |
| Purpura and other hemorrhagic conditions | 34 | 21 | Cellulitis and abscess of finger and toe | 69 | 6 |
| Hereditary hemolytic anemias | 9 | 6 | Diseases of sebaceous glands | 21 | 2 |
| Aplastic anemia | 9 | 6 | Other disorders of skin and subcutaneous tissue | 21 | 2 |
| Mental disorders (290 - 319) | 6,845 | | Musculoskeletal system (710 - 739) | 5,089 | |
| Adjustment reaction | 2,665 | 39 | Intervertebral disc disorders | 1,027 | 20 |
| Affective psychoses | 1,160 | 17 | Internal derangement of knee | 1,025 | 20 |
| Alcohol dependence syndrome | 633 | 9 | Other derangement of joint | 677 | 13 |
| Personality disorders | 536 | 8 | Other disorders of bone and cartilage | 352 | 7 |
| Depressive disorder, not elsewhere classified | 368 | 5 | Peripheral enthesopathies and allied syndromes | 317 | 6 |
| Nervous system (320 - 389) | 616 | | Congenital anomalies (740 - 759) | 188 | |
| Migraine | 73 | 12 | Other congenital musculoskeletal anomalies | 45 | 24 |
| Epilepsy | 43 | 7 | Congenital anomalies of urinary system | 20 | 11 |
| Mononeuritis of upper limb and multiplex | 38 | 6 | Other congenital anomalies of limbs | 18 | 10 |
| Inflammatory and toxic neuropathy | 32 | 5 | Bulbus cordis and cardiac septal closure | 17 | 9 |
| Other conditions of brain | 27 | 4 | Other congenital anomalies of circulatory system | 16 | 9 |
| Circulatory system (390 - 459) | 1,361 | | Ill-defined conditions (780 - 799) | 2,531 | |
| Cardiac dysrhythmias | 295 | 22 | Symptoms involving respiratory system and chest | 927 | 37 |
| Other forms of chronic ischemic heart disease | 170 | 12 | General symptoms | 740 | 29 |
| Acute myocardial infarction | 122 | 9 | Other symptoms involving abdomen and pelvis | 463 | 18 |
| Hemorrhoids | 82 | 6 | Symptoms involving head and neck | 110 | 4 |
| Other venous embolism and thrombosis | 81 | 6 | Symptoms involving digestive system | 70 | 3 |
| Respiratory system (460 - 519) | 2,227 | | Injury and poisoning (800 - 999) | 6,798 | |
| Pneumonia, organism unspecified | 640 | 29 | Fracture of ankle | 585 | 9 |
| Peritonsillar abscess | 203 | 9 | Other complications of procedures | 513 | 8 |
| Pneumothorax | 167 | 7 | Fracture of face bones | 381 | 6 |
| Asthma | 151 | 7 | Injury, other and unspecified | 278 | 4 |
| Acute pharyngitis | 150 | 7 | Effects of heat and light | 277 | 4 |

Table 3. Most frequent diagnoses during hospitalizations, by major diagnostic category, females, US Armed Forces, 2001

| Diagnostic category | No. | % | Diagnostic category | No. | % |
|--|-------|----|--|--------|----|
| Infectious and parasitic diseases (001-139) | 251 | | Digestive system (520 - 579) | 1,198 | |
| Meningitis due to enterovirus | 58 | 23 | Dentofacial anomalies, including malocclusion | 248 | 21 |
| Viral and chlamydial infection | 46 | 18 | Acute appendicitis | 156 | 13 |
| Intestinal infections due to other organisms | 43 | 17 | Cholelithiasis | 127 | 11 |
| Streptococcal sore throat and scarlet fever | 16 | 6 | Unspecified noninfectious gastroenteritis, colitis | 79 | 7 |
| Infectious mononucleosis | 13 | 5 | Diseases of esophagus | 67 | 6 |
| Neoplasms (140 - 239) | 752 | | Genitourinary system (580 - 629) | 1,529 | |
| Uterine leiomyoma | 369 | 49 | Noninflammatory disorders | 214 | 14 |
| Malignant neoplasm of thyroid gland | 48 | 6 | Pain and other symptoms | 180 | 12 |
| Benign neoplasm of ovary | 48 | 6 | Inflammatory disease | 169 | 11 |
| Malignant neoplasm of female breast | 45 | 6 | Infections of kidney | 164 | 11 |
| Other benign neoplasm of uterus | 22 | 3 | Other disorders of breast | 141 | 9 |
| Endocrine, nutrition, immunity (240 - 279) | 188 | | Pregnancy complications (630 - 679) | 14,307 | |
| Disorders of fluid, electrolyte, acid-base balance | 47 | 25 | Trauma to perineum and vulva during delivery | 3,316 | 23 |
| Thyrototoxicosis with or without goiter | 31 | 16 | Other indications for care, not elsewhere classified | 1,259 | 9 |
| Nontoxic nodular goiter | 28 | 15 | Abnormality of forces of labor | 1,027 | 7 |
| Obesity and other hyperalimentation | 23 | 12 | Normal delivery | 984 | 7 |
| Diabetes mellitus | 12 | 6 | Early or threatened labor | 861 | 6 |
| Hematologic disorders (280 - 289) | 73 | | Skin diseases (680 - 709) | 195 | |
| Iron deficiency anemias | 20 | 27 | Other cellulitis and abscess | 78 | 40 |
| Other and unspecified anemias | 15 | 21 | Other hypertrophic and atrophic conditions of skin | 48 | 25 |
| Diseases of white blood cells | 11 | 15 | Pilonidal cyst | 23 | 12 |
| Purpura and other hemorrhagic conditions | 9 | 12 | Other disorders of skin and subcutaneous tissue | 10 | 5 |
| Other diseases of blood and blood-forming organs | 7 | 10 | Cellulitis and abscess of finger and toe | 5 | 3 |
| Mental disorders (290 - 319) | 2,255 | | Musculoskeletal system (710 - 739) | 723 | |
| Adjustment reaction | 925 | 41 | Intervertebral disc disorders | 118 | 16 |
| Affective psychoses | 486 | 22 | Internal derangement of knee | 117 | 16 |
| Personality disorders | 167 | 7 | Other derangement of joint | 81 | 11 |
| Depressive disorder, not elsewhere classified | 167 | 7 | Other disorders of bone and cartilage | 68 | 9 |
| Neurotic disorders | 156 | 7 | Other and unspecified disorders of joint | 41 | 6 |
| Nervous system (320 - 389) | 231 | | Congenital anomalies (740 - 759) | 45 | |
| Migraine | 75 | 32 | Other congenital musculoskeletal anomalies | 7 | 16 |
| Other and unspecified disorders | 19 | 8 | Congenital anomalies of urinary system | 6 | 13 |
| Multiple sclerosis | 13 | 6 | Congenital anomalies of ear, face, and neck | 5 | 11 |
| Other disorders of eyelids | 13 | 6 | Congenital anomalies of genital organs | 5 | 11 |
| Other conditions of brain | 10 | 4 | Certain congenital musculoskeletal deformities | 4 | 9 |
| Circulatory system (390 - 459) | 166 | | Ill-defined conditions (780 - 799) | 670 | |
| Cardiac dysrhythmias | 23 | 14 | Other symptoms involving abdomen and pelvis | 271 | 40 |
| Other venous embolism and thrombosis | 22 | 13 | General symptoms | 152 | 23 |
| Hemorrhoids | 21 | 13 | Symptoms involving respiratory and chest | 120 | 18 |
| Other forms of chronic ischemic heart disease | 11 | 7 | Symptoms involving head and neck | 38 | 6 |
| Other diseases of pericardium | 8 | 5 | Symptoms involving digestive system | 32 | 5 |
| Respiratory system (460 - 519) | 380 | | Injury and poisoning (800 - 999) | 848 | |
| Pneumonia, organism unspecified | 68 | 18 | Other complications of procedures, NEC | 119 | 14 |
| Asthma | 56 | 15 | By analgesics, antipyretics, antirheumatics | 76 | 9 |
| Acute pharyngitis | 34 | 9 | Complications peculiar to certain specified procedures | 50 | 6 |
| Peritonsillar abscess | 32 | 8 | Fracture of ankle | 38 | 4 |
| Chronic disease of tonsils and adenoids | 31 | 8 | Complications affecting specified body systems | 35 | 4 |

Table 4. Injury hospitalizations by causal agent,* US Armed Forces, 2001

| Cause | Number | Percent |
|---------------------------------|---------------|----------------|
| Unintentional | | |
| Falls and miscellaneous | 1714 | 22.4 |
| Land transport | 1431 | 18.7 |
| Complications of medical care | 1100 | 14.4 |
| Athletics | 984 | 12.9 |
| Machinery, tools | 424 | 5.5 |
| Poisons and fire | 395 | 5.2 |
| Environmental factors | 374 | 4.9 |
| Air transport | 288 | 3.8 |
| Guns, explosives, except in war | 124 | 1.6 |
| Water transport | 46 | 0.6 |
| Unknown | 77 | 1.0 |
| Intentional | | |
| Violence | 350 | 4.6 |
| Self-inflicted | 297 | 3.9 |
| War | 42 | 0.5 |

* Causal agents were determined by STANAG "external cause of injury" codes.

Ambulatory Visits among Active Duty Members, US Armed Forces, 2001

This report summarizes the frequencies and trends of ambulatory visits by active duty US military personnel during 2001 at fixed military medical treatment facilities. All data were derived from the Defense Medical Surveillance System (DMSS). Diagnoses were summarized based on the first three digits of primary diagnosis codes (International Classification of Diseases, 9th Revision, Clinical Modifications).

Frequencies, rates, and trends. During 2001, there were 11,007,734 ambulatory visits by active duty servicemembers (table 1). There were approximately 9% more ambulatory visits in 2001 than in 2000 (figure 1); and the outpatient visit rate (all causes) in 2001 (8.1 per person-year) was approximately 5% higher than in 2000.

Distribution of visits, by diagnosis categories. The general distribution of ambulatory visits by major diagnostic categories was similar in 2001 to 2000. As in previous years, more than 40% of all ambulatory visits were for "other contact with health services" (e.g., periodic physical examinations, immunizations, health consultations). Of all other major diagnostic categories, "musculoskeletal disorders," "injuries and poisonings," and "respiratory disorders" accounted for the most ambulatory visits among service members; and in these major categories, respectively, the most frequent diagnoses were "other and unspecified disorders of the joint," "sprains and strains of the foot and ankle," and "acute upper respiratory infections" (tables 2,3). Of note, the numbers of ambulatory visits attributed to "mental disorders" and "disorders of nervous system and sensory organs" increased by 54% and 26%, respectively, since 1998 (table 1).

Rates, by gender and age. The outpatient visit rate (all causes) was more than twice as high among women (14.8 per person-year) as men (7.0 per person-year) (figure 2). In all major diagnostic categories, except digestive disorders, women had higher rates than men. For most major diagnostic categories, ambulatory visit rates were constant or increased with age; in addition, age trends among men and women were similar in most diagnostic categories. However, ambulatory visit rates for genitourinary disorders were relatively constant with age among women, but they increased with age among men. Also, ambulatory visit rates for "infection and parasitic disorders" and "injuries and poisonings" decreased with age among both men and women.

Duty restrictions, by diagnosis categories. Patient dispositions after ambulatory visits provide insights into the relative severities and operational impacts of various conditions. After more than 80% of all ambulatory visits, servicemembers returned to duty without limitations; after approximately 10% of all visits, servicemembers were restricted to light or limited duties; and after approximately 1.7% of all visits, servicemembers were sent to their quarters for convalescence. Only 0.3% of all ambulatory visits resulted in hospitalizations. Visits for "musculoskeletal disorders," "respiratory disorders," and "injuries and poisonings" were the most likely to result in light or limited duty restrictions (figure 3). Visits for "injuries and poisonings" were the most likely to result in dispositions to quarters for convalescence.

Analysis and report by Samuel C. Washington, MPH, Analysis Group, Army Medical Surveillance Activity.

Table 1. Ambulatory visits, by major diagnostic category, active duty, US Armed Forces, 1998-2001

| Major diagnostic category (ICD-9-CM) | 1998 | | 1999 | | 2000 | | 2001 | |
|---|-----------|------|-----------|------|-----------|------|-----------|------|
| | No. | Rank | No. | Rank | No. | Rank | No. | Rank |
| Other contact with health services | 3,672,891 | (1) | 4,016,771 | (1) | 4,106,349 | (1) | 4,532,127 | (1) |
| Musculoskeletal | 1,350,686 | (2) | 1,436,855 | (2) | 1,504,764 | (2) | 1,588,104 | (2) |
| Injury and poisoning | 809,008 | (3) | 831,868 | (3) | 852,988 | (3) | 919,631 | (3) |
| Respiratory | 578,571 | (4) | 657,720 | (4) | 634,458 | (4) | 717,178 | (4) |
| Mental disorders | 436,545 | (6) | 518,161 | (6) | 580,302 | (5) | 671,085 | (5) |
| Nervous system and sense organs | 506,479 | (5) | 540,875 | (5) | 570,064 | (6) | 637,393 | (6) |
| Symptoms, signs, and ill-defined conditions | 418,086 | (7) | 474,437 | (7) | 486,396 | (7) | 512,877 | (7) |
| Infectious and parasitic | 288,489 | (8) | 303,117 | (8) | 291,688 | (8) | 296,981 | (8) |
| Skin and subcutaneous tissues | 255,790 | (9) | 269,795 | (9) | 268,398 | (9) | 285,631 | (9) |
| Genitourinary | 214,580 | (10) | 216,268 | (10) | 219,795 | (10) | 227,157 | (10) |
| Digestive | 204,786 | (11) | 212,296 | (11) | 203,238 | (11) | 205,120 | (11) |
| Endocrine, nutritional, metabolic, and immunity | 116,544 | (12) | 123,119 | (12) | 134,916 | (12) | 137,875 | (12) |
| Circulatory | 114,264 | (13) | 119,710 | (13) | 120,362 | (13) | 119,740 | (13) |
| Neoplasms | 74,413 | (14) | 76,938 | (14) | 76,522 | (14) | 75,808 | (14) |
| Pregnancy | 33,981 | (15) | 38,901 | (15) | 38,754 | (15) | 45,621 | (15) |
| Congenital anomalies | 15,193 | (16) | 15,727 | (16) | 16,042 | (16) | 19,097 | (16) |
| Blood and blood-forming organs | 11,701 | (17) | 11,719 | (17) | 13,204 | (17) | 16,309 | (17) |

Figure 1. Number of ambulatory visits, by calendar year, US Armed Forces, 1998-2001.

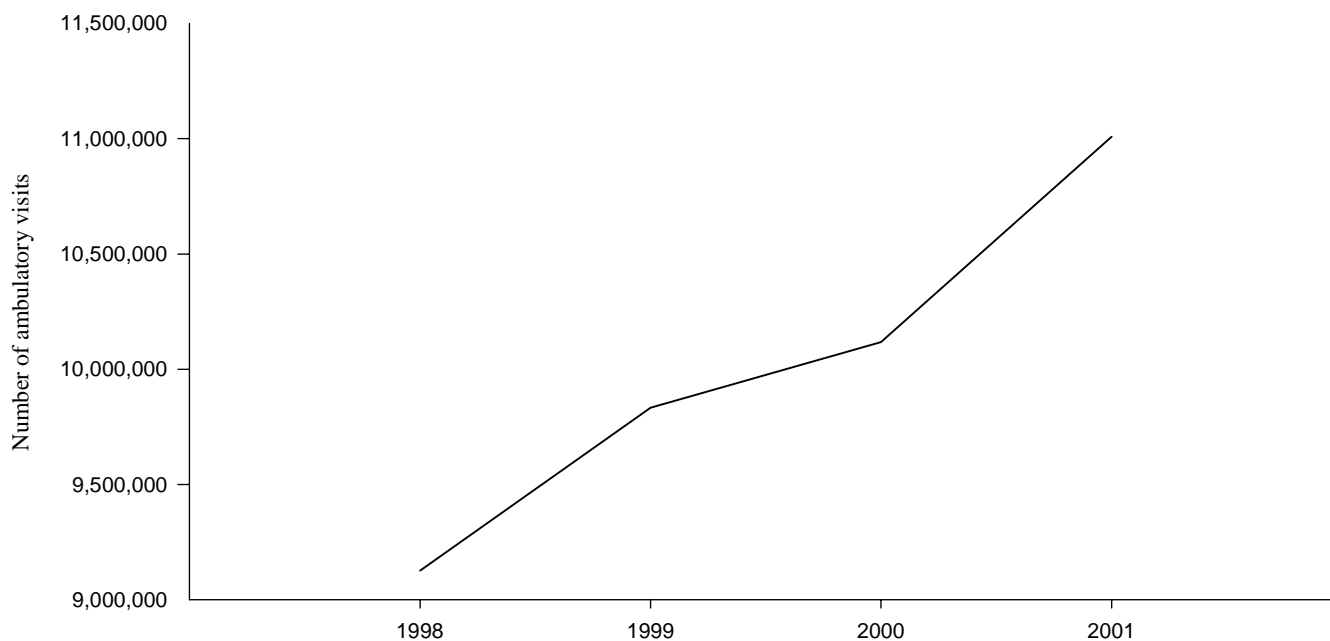


Figure 2. Rates of ambulatory visits, by major diagnostic category, gender, and age, US Armed Forces, 2001.

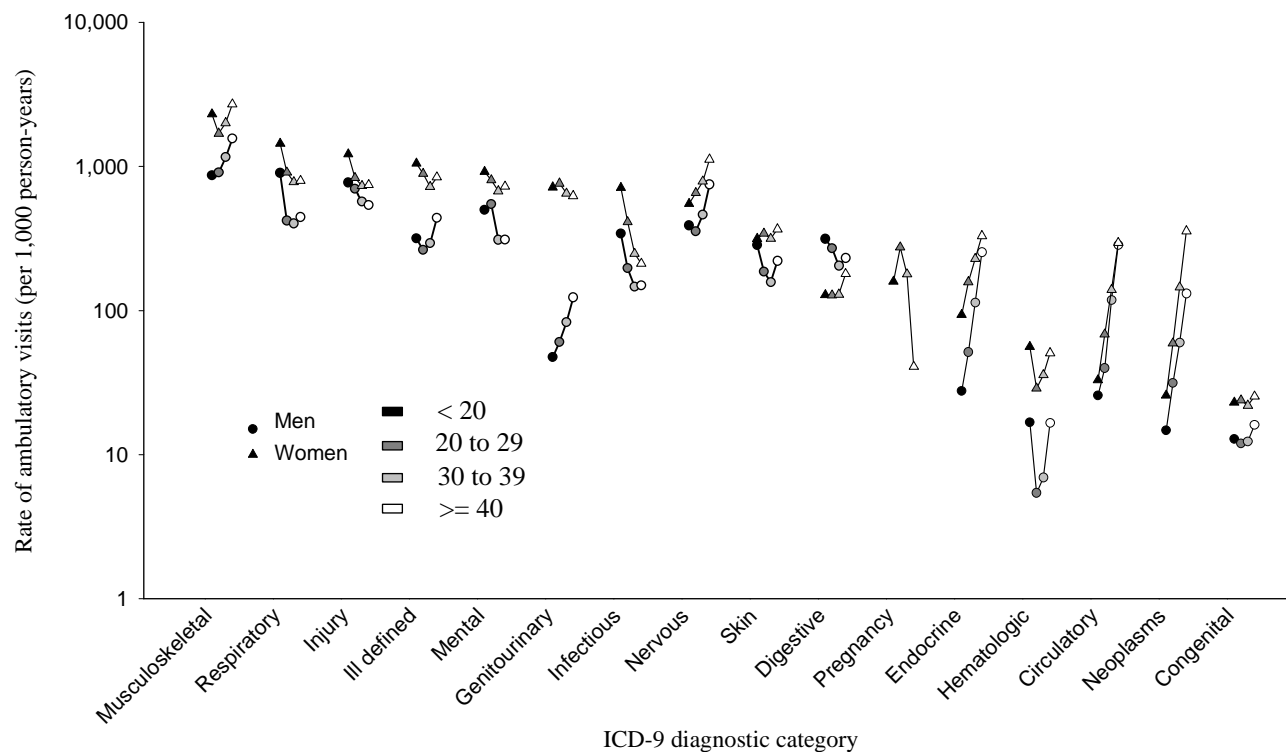
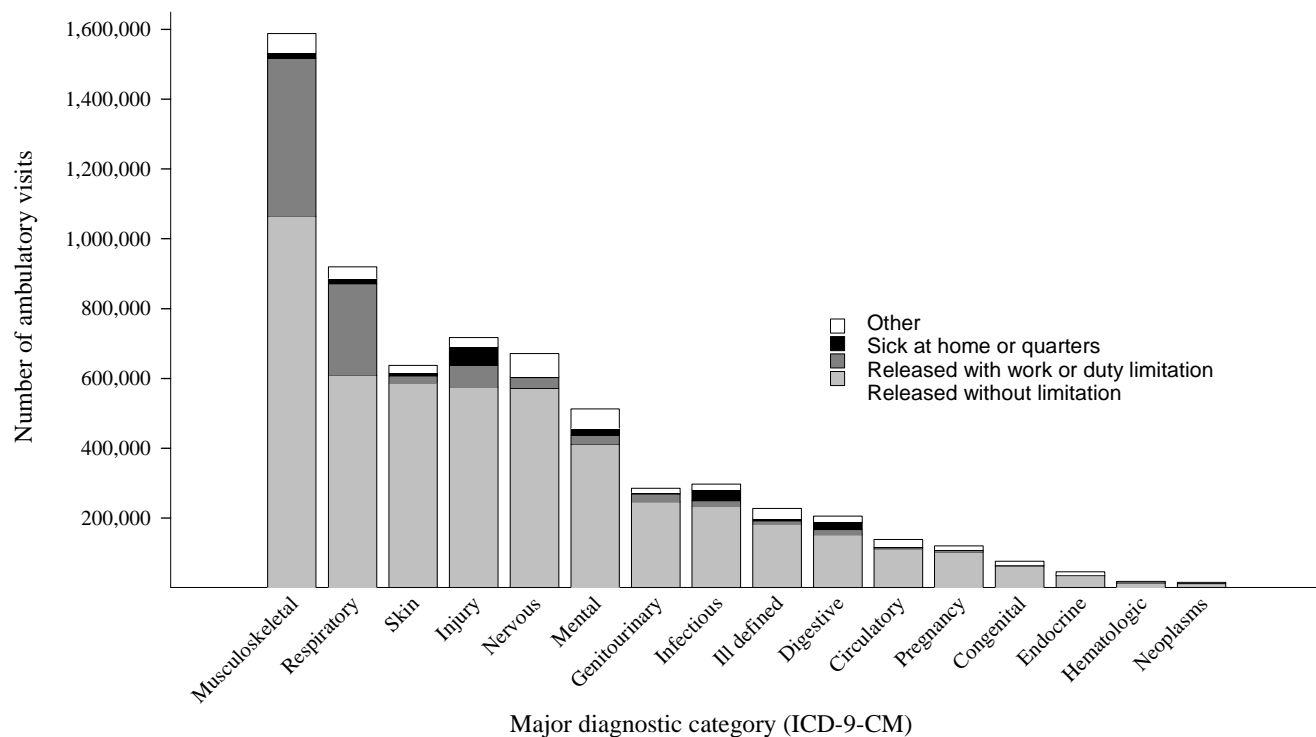


Figure 3. Dispositions after ambulatory visits, by major diagnostic categories, active duty, US Armed Forces, 2001.



Note: Other includes admitted, immediate referral, left without being seen, left against medical advice, and expired.

Table 2. Most frequent diagnoses during ambulatory visits, by major diagnostic categories, males, US Armed Forces, 2001

| Diagnostic category | No. | % | Diagnostic category | No. | % |
|--|---------|----|---|-----------|----|
| Infectious and parasitic disease (001-139) | 218,511 | | Digestive system (520-579) | 153,808 | |
| Viral and chlamydial infections classified elsewhere | 70,377 | 32 | Other noninfectious gastroenteritis and colitis | 45,004 | 29 |
| Other diseases due to viruses and Chlamydiae | 43,679 | 20 | Diseases of esophagus | 27,011 | 18 |
| Dermatophytosis | 24,785 | 11 | Inguinal hernia | 13,371 | 9 |
| Other venereal diseases | 9,897 | 5 | Gastritis and duodenitis | 9,186 | 6 |
| Ill-defined intestinal infections | 8,882 | 4 | Functional digestive disorders, not classified | 6,616 | 4 |
| Neoplasms (140-239) | 55,740 | | Genitourinary system (580-629) | 83,212 | |
| Benign neoplasm of skin | 13,826 | 25 | Other disorders of urethra and urinary tract | 14,176 | 17 |
| Lipoma | 7,967 | 14 | Other disorders of male genital organs | 11,077 | 13 |
| Other neoplasm of unspecified behavior and site | 3,487 | 6 | Calculus of kidney and ureter | 10,507 | 13 |
| Other malignant neoplasm of skin | 2,593 | 5 | Orchitis and epididymitis | 9,669 | 12 |
| Malignant neoplasm of testis | 2,484 | 4 | Infertility, male | 5,945 | 7 |
| Endocrine, nutritional, metabolic, immunity (240-279) | 101,609 | | Pregnancy complications (630-679) | | |
| Disorders of lipid metabolism | 34,025 | 33 | | | |
| Obesity and other hyperalimentation | 25,647 | 25 | | | |
| Diabetes mellitus | 16,192 | 16 | | | |
| Gout | 5,810 | 6 | | | |
| Disorders of fluid, electrolyte, and acid-base balance | 5,716 | 6 | | | |
| Hematological disorders (280-289) | 9,212 | | Skin diseases (680-709) | 218,556 | |
| Hereditary hemolytic anemias | 2,110 | 23 | Contact dermatitis and other eczema | 38,281 | 18 |
| Other and unspecified anemias | 1,823 | 20 | Diseases of sebaceous glands | 32,185 | 15 |
| Other diseases of blood and blood-forming organs | 1,306 | 14 | Other cellulitis and abscess | 25,078 | 11 |
| Coagulation defects | 1,112 | 12 | Diseases of hair and hair follicles | 22,857 | 10 |
| Iron deficiency anemias | 911 | 10 | Other disorders of skin/subcutaneous tissue | 18,643 | 9 |
| Mental disorders (290-319) | 515,047 | | Musculoskeletal system (710-739) | 1,202,782 | |
| Alcohol dependence syndrome | 157,121 | 31 | Other and unspecified disorders of joint | 278,412 | 23 |
| Nondependent abuse of drugs | 110,745 | 22 | Other and unspecified disorders of back | 249,917 | 21 |
| Adjustment reactions | 71,037 | 14 | Peripheral enthesopathies/allied syndromes | 144,570 | 12 |
| Neurotic disorders | 39,216 | 8 | Other disorders of soft tissues | 104,317 | 9 |
| Affective psychoses | 36,462 | 7 | Internal derangement of knee | 95,902 | 8 |
| Nervous system (320-389) | 494,514 | | Congenital anomalies (740-759) | 14,416 | |
| Disorders of refraction and accommodation | 246,025 | 50 | Certain congenital musculoskeletal deformities | 4,583 | 32 |
| Hearing loss | 32,565 | 7 | Other congenital musculoskeletal anomalies | 2,786 | 19 |
| Disorders of conjunctiva | 30,673 | 6 | Other congenital anomalies of limbs | 1,514 | 11 |
| Other disorders of ear | 15,748 | 3 | Other congenital anomalies of the integument | 1,067 | 7 |
| Disorders of external ear | 14,964 | 3 | Congenital anomalies of genital organs | 856 | 6 |
| Circulatory system (390-459) | 99,792 | | Ill-defined conditions (780-799) | 339,743 | |
| Essential hypertension | 52,270 | 52 | Symptoms involving chest/respiratory system | 64,447 | 19 |
| Hemorrhoids | 11,356 | 11 | General symptoms | 51,419 | 15 |
| Diseases of capillaries | 6,664 | 7 | Symptoms involving head and neck | 42,411 | 12 |
| Cardiac dysrhythmias | 5,085 | 5 | Other symptoms involving abdomen/pelvis | 41,434 | 12 |
| Other forms of chronic ischemic heart disease | 3,798 | 4 | Symptoms involving skin/integumentary tissue | 32,205 | 9 |
| Respiratory system (460-519) | 530,306 | | Injury and poisoning (800-999) | 750,069 | |
| Acute upper respiratory infections of multiple sites | 211,779 | 40 | Sprains and strains of ankle and foot | 95,345 | 13 |
| Allergic rhinitis | 67,092 | 13 | Sprains and strains of knee and leg | 87,675 | 12 |
| Acute pharyngitis | 59,757 | 11 | Other and ill-defined sprains and strains | 54,730 | 7 |
| Acute sinusitis | 39,696 | 7 | Sprains/strains of unspecified parts of back | 54,538 | 7 |
| Acute bronchitis and bronchiolitis | 26,043 | 5 | Sprains and strains of shoulder and upper arm | 37,330 | 5 |

Table 3. Most frequent diagnoses during ambulatory visits, by major diagnostic categories, females, US Armed Forces, 2001

| Diagnostic category | No. | % | Diagnostic category | No. | % |
|--|---------|----|---|---------|----|
| Infectious and parasitic disease (001-139) | 78,740 | | Digestive system (520-579) | 51,312 | |
| Viral and chlamydial infections, classified elsewhere | 27,804 | 35 | Other noninfectious gastroenteritis and colitis | 19,317 | 38 |
| Other diseases due to viruses and Chlamydiae | 10,570 | 13 | Diseases of esophagus | 6,016 | 12 |
| Candidiasis | 8,093 | 10 | Functional digestive disorders, NEC | 5,835 | 11 |
| Dermatophytosis | 4,452 | 6 | Gastritis and duodenitis | 4,047 | 8 |
| Other venereal diseases | 4,223 | 5 | Disorders of function of stomach | 1,787 | 3 |
| Neoplasms (140-239) | 20,068 | | Genitourinary system (580-629) | 143,945 | |
| Benign neoplasms of skin | 4,231 | 21 | Other disorders of urethra and urinary tract | 27,411 | 19 |
| Malignant neoplasms of female breast | 3,395 | 17 | Inflammatory disease of cervix, vagina, vulva | 22,048 | 15 |
| Uterine leiomyoma | 2,137 | 11 | Disorders of menstruation | 17,192 | 12 |
| Lipoma | 1,139 | 6 | Other symptoms associated with genitalia | 17,141 | 12 |
| Other neoplasms of unspecified behavior and site | 957 | 5 | Noninflammatory disorders of cervix | 13,801 | 10 |
| Endocrine, nutrition, metabolic, immunity (240-279) | 36,266 | | Pregnancy (630-679) | 43,864 | |
| Obesity and other hyperalimentation | 13,796 | 38 | Early or threatened labor | 8,065 | 18 |
| Acquired hypothyroidism | 5,319 | 15 | Hemorrhage in early pregnancy | 5,659 | 13 |
| Disorders of lipid metabolism | 3,465 | 10 | Other conditions complicating pregnancy | 3,509 | 8 |
| Disorders of fluid, electrolyte, and acid-base balance | 3,106 | 9 | Other complications, not elsewhere classified | 3,326 | 8 |
| Diabetes mellitus | 2,071 | 6 | Spontaneous abortion | 2,660 | 6 |
| Hematological disorders (280-289) | 7,097 | | Skin diseases (680-709) | 67,075 | |
| Iron deficiency anemias | 2,574 | 36 | Diseases of sebaceous glands | 14,100 | 21 |
| Other and unspecified anemias | 2,253 | 32 | Contact dermatitis and other eczema | 12,268 | 18 |
| Other deficiency anemias | 520 | 7 | Other disorders of skin/subcutaneous tissue | 7,076 | 11 |
| Other diseases of blood and blood-forming organs | 452 | 6 | Other cellulitis and abscess | 4,739 | 7 |
| Hereditary hemolytic anemias | 427 | 6 | Urticaria | 3,797 | 6 |
| Mental disorders (290-319) | 156,038 | | Musculoskeletal system (710-739) | 385,322 | |
| Adjustment reactions | 38,386 | 25 | Other and unspecified disorders of joint | 85,262 | 22 |
| Affective psychoses | 25,196 | 16 | Other and unspecified disorders of back | 79,494 | 21 |
| Neurotic disorders | 19,285 | 12 | Other disorders of soft tissues | 41,993 | 11 |
| Depressive disorders, not elsewhere classified | 17,365 | 11 | Peripheral enthesopathies and allied syndromes | 40,528 | 11 |
| Alcohol dependence syndrome | 17,318 | 11 | Internal derangement of knee | 23,760 | 6 |
| Nervous system (320-389) | 142,879 | | Congenital anomalies (740-759) | 4,681 | |
| Disorders of refraction and accommodation | 61,691 | 43 | Certain congenital musculoskeletal deformities | 1,498 | 32 |
| Migraine | 16,772 | 12 | Other congenital anomalies of the integument | 688 | 15 |
| Disorders of conjunctiva | 9,992 | 7 | Other congenital anomalies of limbs | 574 | 12 |
| Mononeuritis of upper limb and mononeuritis multiplex | 7,032 | 5 | Other congenital musculoskeletal anomalies | 485 | 10 |
| Suppurative and unspecified otitis media | 4,606 | 3 | Congenital anomalies of urinary system | 228 | 5 |
| Circulatory system (390-459) | 19,948 | | Ill-defined conditions (780-799) | 173,134 | |
| Essential hypertension | 7,639 | 38 | Other symptoms involving abdomen/pelvis | 37,203 | 21 |
| Diseases of capillaries | 2,635 | 13 | Symptoms involving head and neck | 24,126 | 14 |
| Hemorrhoids | 2,532 | 13 | Nonspecific histological/immunological findings | 23,436 | 14 |
| Varicose veins of lower extremities | 1,451 | 7 | Symptoms involving chest/respiratory system | 18,860 | 11 |
| Cardiac dysrhythmias | 1,166 | 6 | General symptoms | 18,093 | 10 |
| Respiratory system (460-519) | 186,872 | | Injury and poisoning (800-999) | 169,562 | |
| Acute upper respiratory infections of multiple sites | 69,364 | 37 | Sprains and strains of ankle and foot | 22,110 | 13 |
| Allergic rhinitis | 26,325 | 14 | Sprains and strains of knee and leg | 20,159 | 12 |
| Acute pharyngitis | 22,358 | 12 | Sprains/strains of unspecified parts of back | 17,204 | 10 |
| Acute sinusitis | 17,900 | 10 | Other and ill-defined sprains and strains | 13,767 | 8 |
| Asthma | 11,695 | 6 | Certain adverse effects, not elsewhere classified | 9,214 | 5 |

Reportable Medical Events, US Armed Forces, 2001

In the US Armed Forces, data regarding medical events of special surveillance interest are collected and reported using service-specific electronic reporting programs. The Army uses the Reportable Medical Events System (RMES), the Air Force uses the Air Force Reportable Event Surveillance System (AFRESS), and the Navy uses the Navy Reportable Disease System (NDRS). Currently, 34 Army, 80 Air Force, and 27 fixed (e.g., not including ships) Navy preventive medicine/public health activities throughout the world electronically transmit reportable medical events data to their respective service surveillance centers. From these centers, the data are forwarded to the Army Medical Surveillance Activity (AMSA) in Washington, DC. At AMSA, the data are integrated with personnel and other medical event data in the Defense Medical Surveillance System (DMSS) to enable routine and special summaries, analyses, and reports.

Since 1998, 70 medical conditions¹ have been designated as “reportable” by the Department of Defense. The Army started reporting these conditions in 1994. During calendar year 2000, the medical surveillance centers of the Navy and Air Force began forwarding their reportable medical event case reports to AMSA for integration into the DMSS. The integration of data from all of the services enables summaries and analyses across the entire US Armed Forces. This report summarizes frequencies, rates, and trends (through calendar year 2001) of reportable medical events among active duty military personnel.

During calendar year 2001, there were a total of 15,554 notifiable medical event reports—more than in any previous year—from U.S. military medical treatment facilities (MTFs). During the year, there were an average of 27, 9, and 6 case reports per day from Army, Air Force, and Navy MTFs, respectively (tables 2, 3, 4). Reports of notifiable conditions from Army MTFs have increased each year since automated reporting began; however, in 2001 compared to 2000, there were approximately 14% fewer reports from Air Force MTFs and 4% fewer from Navy MTFs.

Sexually-transmitted infections. In 2001, as in previous years, genital infections (due to chlamydia, gonorrhea, syphilis, and non-gonococcal urethritis) accounted for more than 90% of all notifiable case reports. Genital infections caused by *Chlamydia trachomatis* remained the most frequently reported notifiable condition.

Environmental. In 2001, U.S. military MTFs reported 514 heat and cold-related injuries. During the year, compared to 2000, there were approximately 13% more heat injury, but nearly the same number of cold injury, reports. In Army MTFs, compared to the average of the prior 3 years, there were approximately 40% more heat injury, but approximately 9% fewer cold injury, reports (figure 1).

Vaccine preventable illnesses. In 2001, among active duty servicemembers, there were few or no reports of mumps, measles, rubella, diphtheria, rabies, or tetanus (tables 2,3,4). Overall, there were 252 reports of varicella, influenza, and hepatitis B combined among active duty servicemembers—approximately 25% fewer than in 2000. In Army MTFs, compared to the average of the prior 3 years, there were approximately 47% fewer reports of varicella, influenza, and hepatitis B combined (table 2, figure 1). Undoubtedly, the trends reflect the continuing impacts of vaccination programs against these viruses.²

Arthropod-transmitted diseases. In 2001, there were few or no reports of dengue, typhus, yellow fever, Rift Valley fever, or other hemorrhagic fevers among active duty servicemembers. During the year, there were 50 reports of malaria, 25 reports of Lyme disease, and 2 reports of Rocky Mountain spotted fever among active duty servicemembers—30%, 32%, and 88% fewer than in 2000, respectively (tables 2, 3, 4). In the past year, there was a 50% decrease in reports of malaria attributable to *Plasmodium vivax*³; however, there was an increase in reports of *P. falciparum* cases.⁴

Food/water-transmitted infections. There was no clear trend in reports of food and water-transmitted illnesses overall among active duty servicemembers. For example, in 2001 compared to 2000, there were more reports of salmonellosis and shigellosis, fewer reports of campylobacter, and an identical number of reports of giardiasis. As in previous years, there were few or no reports of cholera, amebiasis, or typhoid fever (tables 2, 3, 4). Finally, from 2000 to 2001, there was a notable decrease in reports of *E. coli* O157:H7 among servicemembers.

Data analysis and report by Abigail L. Wilson, MPH, Analysis Group, Army Medical Surveillance Activity.

References

1. Tri-Service consensus list of reportable medical events: Completeness and timeliness of reporting in the Army, January-June 1998. *MSMR*, 1998;4(8):2-11. www.amsa.army.mil
2. Niebuhr, DW. Varicella primary prevention program, Fort Knox, Kentucky. *MSMR*, 1999;5(4): 9-10.
3. P. vivax malaria acquired by US soldiers in Korea: acquisition trends and incubation period characteristics, 1994-2000. *MSMR*, 2001;6(1):7-9.
4. Malaria among active duty soldiers, US Army, 2001. *MSMR*, 2002;7(2):2-4.
5. CDC. Preliminary FoodNet data on the incidence of foodborne illnesses – selected sites, United States, 2001. *MMWR*, 2002;51(15): 325-9.

Table I. Sentinel reportable events, US Army medical treatment facilities, cumulative events for all beneficiaries,¹ calendar years 2000 and 2001^{2,3}

| Reporting Location | Number of reports for all events ² | | Food-borne | | | | | | | | Vaccine Preventable | | | | | |
|------------------------|---|---------------|---------------|------------|-----------|-----------|------------|------------|-----------|-----------|---------------------|-----------|-------------|-----------|-----------|-----------|
| | | | Campylobacter | | Giardia | | Salmonella | | Shigella | | Hepatitis A | | Hepatitis B | | Varicella | |
| | | | 2000 | 2001 | 2000 | 2001 | 2000 | 2001 | 2000 | 2001 | 2000 | 2001 | 2000 | 2001 | 2000 | 2001 |
| NORTH ATLANTIC | | | | | | | | | | | | | | | | |
| Walter Reed AMC, DC | 209 | 199 | 6 | 2 | 6 | 8 | 10 | 8 | 5 | 3 | 3 | - | 1 | - | 6 | 2 |
| Aberdeen, MD | 45 | 65 | - | - | - | - | - | - | - | - | - | - | 3 | 1 | 1 | - |
| FT Belvoir, VA | 248 | 206 | 15 | 11 | 5 | 11 | 9 | 10 | 2 | - | - | 1 | 5 | - | 1 | - |
| FT Bragg, NC | 1,489 | 1,740 | 2 | 6 | - | - | 18 | 36 | 1 | 1 | - | - | - | 6 | 6 | 3 |
| FT Drum, NY | 227 | 199 | 1 | 2 | - | 3 | - | 2 | - | - | - | - | - | - | 6 | - |
| FT Eustis, VA | 259 | 276 | 4 | 1 | - | - | 5 | 2 | - | - | - | - | 1 | - | 2 | 1 |
| FT Knox, KY | 252 | 278 | 1 | 1 | 2 | 5 | 1 | 2 | - | - | - | - | 1 | - | 7 | 1 |
| FT Lee, VA | 254 | 227 | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| FT Meade, MD | 100 | 70 | - | - | - | - | 2 | 1 | - | - | - | - | - | - | - | - |
| West Point, NY | 104 | 87 | - | 1 | - | - | 4 | 1 | - | - | - | 3 | 1 | - | 2 | - |
| GREAT PLAINS | | | | | | | | | | | | | | | | |
| Brooke AMC, TX | 328 | 399 | - | - | 3 | 2 | 8 | 4 | 7 | 1 | 3 | - | - | - | 2 | - |
| Beaumont AMC, TX | 304 | 283 | 4 | 3 | 5 | 7 | 4 | 1 | 7 | 6 | - | - | - | 2 | 2 | 1 |
| FT Carson, CO | 667 | 722 | 2 | 3 | 5 | 8 | 2 | 5 | 9 | 2 | - | - | 1 | 2 | - | - |
| FT Hood, TX | 2,159 | 2,284 | 6 | 4 | 1 | 2 | 15 | 16 | 6 | 16 | 1 | - | 2 | 10 | 2 | 2 |
| FT Huachuca, AZ | 62 | 46 | - | 1 | - | - | 1 | 1 | - | 1 | - | - | - | - | - | 1 |
| FT Leavenworth, KS | 33 | 43 | 1 | 1 | 2 | - | 1 | 2 | - | - | - | - | - | - | - | - |
| FT Leonard Wood, MO | 192 | 233 | 1 | 1 | 2 | - | - | - | - | - | - | 1 | - | - | 13 | 6 |
| FT Polk, LA | 265 | 270 | - | - | - | - | - | 3 | - | - | - | - | - | - | - | - |
| FT Riley, KS | 236 | 267 | - | - | - | 1 | - | 2 | - | - | - | - | - | 1 | - | - |
| FT Sill, OK | 312 | 443 | - | - | - | - | - | 1 | - | 7 | - | - | - | 1 | 4 | 2 |
| SOUTHEAST | | | | | | | | | | | | | | | | |
| Eisenhower AMC, GA | 273 | 272 | - | - | - | - | 2 | 2 | 1 | - | - | 3 | 3 | 2 | 2 | - |
| FT Benning, GA | 385 | 530 | 3 | 1 | 3 | 3 | 17 | 6 | 1 | 13 | - | - | 1 | - | 8 | 5 |
| FT Campbell, KY | 514 | 911 | 4 | 6 | 7 | 6 | 17 | 7 | 15 | 1 | - | 1 | 1 | - | 2 | - |
| FT Jackson, SC | 419 | 295 | - | - | - | - | - | - | - | - | - | 1 | - | 5 | 3 | 2 |
| FT Rucker, AL | 84 | 91 | - | - | - | - | 3 | 4 | - | - | - | - | 1 | - | - | - |
| FT Stewart, GA | 551 | 492 | - | - | - | - | 8 | 17 | - | - | - | - | 2 | 3 | - | - |
| WESTERN | | | | | | | | | | | | | | | | |
| Madigan AMC, WA | 732 | 754 | 5 | 5 | 6 | 3 | 7 | 9 | 2 | 1 | 1 | - | 3 | 2 | - | - |
| FT Irwin, CA | 69 | 86 | - | - | - | - | 1 | - | - | - | - | 2 | 1 | 3 | 5 | 2 |
| FT Wainwright, AK | 117 | 187 | - | - | - | 3 | - | - | - | - | - | - | - | - | - | - |
| OTHER LOCATIONS | | | | | | | | | | | | | | | | |
| Tripler, HI | 826 | 955 | 47 | 42 | 10 | 14 | 12 | 27 | 2 | 7 | 1 | 1 | 2 | 1 | 1 | - |
| Europe | 1,802 | 1,923 | 18 | 42 | 3 | 5 | 37 | 57 | 2 | 1 | 1 | 3 | 9 | 13 | 9 | 9 |
| Korea | 570 | 129 | - | - | - | - | 8 | 5 | - | - | - | 1 | 1 | - | 3 | 2 |
| Total | 14,087 | 14,962 | 120 | 133 | 60 | 81 | 192 | 231 | 60 | 60 | 11 | 17 | 39 | 52 | 87 | 39 |

1. Includes active duty servicemembers, as well as dependents and retirees.

2. Seventy events specified by Tri-Service Reportable Events, Version 1.0, July 2000.

3. Events reported by April 30, 2001 and 2002

Table I. (Cont'd) Sentinel reportable events, US Army medical treatment facilities, cumulative events for all beneficiaries,¹ calendar years 2000 and 2001^{2,3}

| Reporting Location | Arthropod-borne | | | | Sexually Transmitted | | | | | | | | Environmental | | | |
|-------------------------|-----------------|-----------|-----------|-----------|----------------------|--------------|--------------|--------------|-----------------------|-----------|-------------------------|--------------|---------------|-----------|------------|------------|
| | Lyme Disease | | Malaria | | Chlamydia | | Gonorrhea | | Syphilis ⁴ | | Urethritis ⁵ | | Cold | | Heat | |
| | 2000 | 2001 | 2000 | 2001 | 2000 | 2001 | 2000 | 2001 | 2000 | 2001 | 2000 | 2001 | 2000 | 2001 | 2000 | 2001 |
| NORTH ATLANTIC | | | | | | | | | | | | | | | | |
| Walter Reed AMC, DC | 3 | 3 | 1 | 1 | 76 | 89 | 29 | 24 | 2 | 10 | - | - | 1 | - | - | - |
| Aberdeen Prov. Grd., MD | 3 | - | - | - | 19 | 43 | 6 | 13 | 2 | - | 2 | 2 | - | 3 | - | - |
| FT Belvoir, VA | - | - | 1 | - | 151 | 130 | 33 | 30 | 3 | 2 | - | - | - | - | 10 | 3 |
| FT Bragg, NC | 2 | - | 9 | 15 | 609 | 867 | 284 | 354 | 3 | - | 379 | 240 | 6 | 7 | 164 | 194 |
| FT Drum, NY | - | - | 1 | - | 144 | 146 | 59 | 40 | - | 1 | 2 | - | 12 | 2 | 1 | - |
| FT Eustis, VA | 1 | - | - | - | 188 | 187 | 46 | 72 | - | - | - | - | - | - | 8 | 10 |
| FT Knox, KY | - | - | - | 1 | 181 | 215 | 45 | 47 | 1 | 2 | - | - | 1 | - | 10 | 2 |
| FT Lee, VA | - | - | - | - | 193 | 174 | 59 | 53 | - | - | - | - | - | - | 1 | - |
| FT Meade, MD | - | - | - | - | 76 | 53 | 11 | 14 | 1 | 1 | 2 | 1 | - | - | - | - |
| West Point, NY | 34 | 50 | 1 | - | 45 | 26 | 12 | 3 | 1 | - | - | 1 | 1 | - | 1 | 1 |
| GREAT PLAINS | | | | | | | | | | | | | | | | |
| Brooke AMC, TX | - | - | - | 1 | 243 | 325 | 38 | 48 | - | - | 6 | 3 | - | 1 | 7 | 8 |
| Beaumont AMC, TX | - | 1 | 3 | 4 | 162 | 153 | 58 | 56 | 2 | 1 | - | - | - | - | 4 | 5 |
| FT Carson, CO | - | - | 1 | - | 502 | 545 | 74 | 66 | - | 1 | 51 | 85 | 2 | - | - | - |
| FT Hood, TX | - | 1 | 1 | 4 | 1,130 | 1,307 | 421 | 445 | 1 | 5 | 496 | 390 | 1 | - | 32 | 62 |
| FT Huachuca, AZ | - | - | - | - | 48 | 36 | 12 | 5 | - | - | - | - | - | - | 1 | - |
| FT Leavenworth, KS | 1 | - | - | - | 21 | 28 | 3 | 9 | - | - | - | - | - | - | 2 | - |
| FT Leonard Wood, MO | 1 | - | - | - | 96 | 146 | 36 | 41 | - | - | 8 | 8 | 19 | 9 | 11 | 15 |
| FT Polk, LA | - | - | - | 2 | 225 | 204 | 35 | 55 | - | - | - | - | - | - | 4 | 2 |
| FT Riley, KS | - | - | - | 1 | 147 | 183 | 60 | 46 | 1 | - | - | - | 23 | 5 | 2 | 27 |
| FT Sill, OK | 2 | 1 | - | 1 | 180 | 238 | 62 | 103 | - | - | 49 | 71 | - | 1 | 8 | 12 |
| SOUTHEAST | | | | | | | | | | | | | | | | |
| Eisenhower AMC, GA | 2 | - | 3 | 7 | 221 | 221 | 27 | 26 | 1 | - | - | - | - | - | 1 | 2 |
| FT Benning, GA | - | 2 | 8 | 1 | 174 | 312 | 102 | 101 | 4 | - | - | 1 | - | - | 52 | 47 |
| FT Campbell, KY | 1 | 2 | 9 | 1 | 295 | 716 | 146 | 157 | 1 | 1 | - | - | 2 | - | 4 | 8 |
| FT Jackson, SC | - | - | - | - | 359 | 192 | 47 | 60 | 4 | 3 | - | - | - | 1 | 1 | 27 |
| FT Rucker, AL | - | - | 1 | - | 55 | 65 | 16 | 15 | - | - | - | - | - | - | 1 | 4 |
| FT Stewart, GA | - | - | 2 | 1 | 183 | 178 | 126 | 140 | - | 1 | 200 | 138 | - | - | 27 | 11 |
| WESTERN | | | | | | | | | | | | | | | | |
| Madigan AMC, WA | 3 | - | 9 | - | 496 | 508 | 67 | 92 | - | 1 | 108 | 121 | - | 4 | - | - |
| FT Irwin, CA | - | - | 1 | - | 48 | 50 | 9 | 14 | 2 | - | - | - | - | - | - | 13 |
| FT Wainwright, AK | - | - | - | - | 99 | 130 | 4 | 5 | - | - | - | - | 13 | 44 | - | - |
| OTHER LOCATIONS | | | | | | | | | | | | | | | | |
| Tripler, HI | - | - | 5 | - | 571 | 689 | 100 | 85 | - | - | 2 | 1 | - | 1 | 3 | - |
| Europe | 19 | 7 | 3 | 7 | 1,386 | 1,474 | 275 | 246 | 5 | 2 | - | 2 | 6 | 17 | - | 5 |
| Korea | - | - | 17 | 13 | 441 | 61 | 47 | 35 | 16 | 1 | 11 | 1 | 2 | 1 | 5 | 4 |
| Total | 72 | 67 | 76 | 60 | 8,764 | 9,691 | 2,349 | 2,500 | 50 | 32 | 1,316 | 1,065 | 89 | 96 | 360 | 462 |

4. Primary and secondary.

5. Urethritis, non-gonococcal (NGU).

Note: Completeness and timeliness of reporting varies by facility.

Source: Army Reportable Medical Events System.

Table 2. Number of reportable events^a among active duty personnel, Army medical treatment facilities, 1997-2001

| Diagnosis ^b | 1997 | 1998 | 1999 | 2000 | 2001 | Diagnosis ^b | 1997 | 1998 | 1999 | 2000 | 2001 |
|-------------------------------|-------------|-------------|-------------|-------------|-------------|------------------------------|------|------|------|------|------|
| All reportable events | 6241 | 7479 | 8442 | 9530 | 9856 | | | | | | |
| Amebiasis | - | 2 | 1 | 1 | 4 | Malaria, falciparum | 5 | - | 5 | 4 | 13 |
| Anthrax | - | - | - | - | - | Malaria, malariae | - | - | - | - | 1 |
| Biological warfare agent exp. | - | - | - | - | - | Malaria, ovale | - | 1 | - | - | 1 |
| Botulism | - | - | - | - | - | Malaria, unspecified | 5 | 7 | 4 | 5 | 8 |
| Brucellosis | - | - | - | - | - | Malaria, vivax | 30 | 34 | 53 | 47 | 22 |
| Campylobacter | 31 | 45 | 46 | 35 | 55 | Measles | - | - | - | - | - |
| Carbon monoxide poisoning | 5 | 5 | 2 | 6 | 5 | Meningococcal meningitis | - | - | 2 | 3 | 1 |
| Chemical agent exposure | 1 | - | - | - | 1 | Meningococcal septicemia | - | - | - | - | - |
| Chlamydia | 3525 | 4243 | 5035 | 5788 | 6240 | Mumps | 3 | 1 | 2 | 2 | 1 |
| Cholera | - | 1 | - | - | - | Pertussis | - | - | - | 2 | - |
| Coccidioidomycosis | 2 | 3 | 1 | 2 | 2 | Plague | - | - | - | - | - |
| Cold weather | 43 | 75 | 117 | 79 | 82 | Pneumococcal pneumonia | - | 1 | 17 | 2 | 4 |
| Cryptosporidiosis | - | 1 | - | 2 | 1 | Poliomyelitis | - | - | - | - | - |
| Cyclospora | - | - | - | - | - | Q fever | - | - | - | 1 | - |
| Dengue fever | 4 | 6 | 3 | 1 | 1 | Rabies, human | - | - | - | - | - |
| Diphtheria | - | - | - | - | - | Relapsing fever | - | - | - | - | - |
| E. coli O157:H7 | - | 3 | 3 | 9 | 3 | Rheumatic fever, acute | - | 1 | - | - | - |
| Ehrlichiosis | 2 | 2 | 1 | 2 | 3 | Rift valley fever | - | - | - | - | - |
| Encephalitis | - | - | - | - | 2 | Rocky Mountain spotted fever | - | 2 | - | 13 | 2 |
| Filariasis | - | - | 1 | 1 | - | Rubella | - | - | - | - | - |
| Giardiasis | 18 | 29 | 17 | 16 | 19 | Salmonellosis | 49 | 75 | 37 | 40 | 59 |
| Gonorrhea | 1323 | 1537 | 1538 | 1711 | 1797 | Schistosomiasis | - | - | - | 1 | - |
| H. influenzae, invasive | 3 | - | 4 | 1 | 2 | Shigellosis | 24 | 16 | 24 | 7 | 9 |
| Hantavirus infection | - | 4 | 1 | - | - | Smallpox | - | - | - | - | - |
| Heat exhaustion | 80 | 179 | 179 | 240 | 260 | Streptococcus, group A, inv. | - | 1 | 1 | - | 4 |
| Heat stroke | 42 | 77 | 69 | 53 | 112 | Syphilis | 37 | 63 | 67 | 50 | 34 |
| Hemorrhagic fever | 2 | - | 1 | 2 | 1 | Tetanus | - | 1 | - | - | - |
| Hepatitis A | 9 | 10 | 3 | 3 | 7 | Toxic shock syndrome | - | 2 | - | 1 | - |
| Hepatitis B | 40 | 56 | 28 | 22 | 28 | Trichinosis | 1 | - | - | - | - |
| Hepatitis C | 14 | 29 | 14 | 16 | 23 | Trypanosomiasis | - | 1 | - | - | - |
| Influenza | 1 | 65 | 64 | 7 | 25 | Tuberculosis, pulmonary | 3 | 5 | 7 | 3 | 3 |
| Lead poisoning | - | - | - | - | - | Tularemia | 2 | - | - | 1 | - |
| Legionellosis | - | - | 1 | - | 1 | Typhoid fever | - | - | - | - | 1 |
| Leishmaniasis | 27 | 5 | 4 | - | 1 | Typhus fever | - | - | - | - | - |
| Leprosy | 2 | - | - | - | - | Urethritis, non-gonococcal | 793 | 758 | 981 | 1222 | 968 |
| Leptospirosis | - | 4 | - | 2 | 2 | Vaccine, adverse event | - | 15 | 24 | 35 | 4 |
| Listeriosis | - | - | - | - | - | Varicella, active duty only | 108 | 101 | 67 | 67 | 31 |
| Lyme disease | 7 | 13 | 18 | 25 | 13 | Yellow fever | - | - | - | - | - |

a. Events reported by March 31, 2002

b. Tri-Service Reportable Events, Version 1.0, July 1998

Source: Reportable Events Surveillance System

**Table 3. Number of reportable events^a among active duty personnel,
Air Force medical treatment facilities, 1997-2001**

| Diagnosis ^b | 1997 | 1998 | 1999 | 2000 | 2001 | Diagnosis ^b | 1997 | 1998 | 1999 | 2000 | 2001 |
|-------------------------------|------|------|------|-------------|-------------|------------------------------|------|------|------|------|------|
| All reportable events | - | - | - | 3959 | 3421 | | | | | | |
| Amebiasis | - | - | - | 1 | - | Malaria, falciparum | - | - | - | 2 | - |
| Anthrax | - | - | - | - | - | Malaria, malariae | - | - | - | 1 | - |
| Biological warfare agent exp. | - | - | - | - | - | Malaria, ovale | - | - | - | - | 1 |
| Botulism | - | - | - | - | - | Malaria, unspecified | - | - | - | 1 | - |
| Brucellosis | - | - | - | - | - | Malaria, vivax | - | - | - | 2 | 3 |
| Campylobacter | - | - | - | 36 | 25 | Measles | - | - | - | - | - |
| Carbon monoxide poisoning | - | - | - | - | - | Meningococcal meningitis | - | - | - | 1 | - |
| Chemical agent exposure | - | - | - | - | - | Meningococcal septicemia | - | - | - | - | - |
| Chlamydia | - | - | - | 3031 | 2813 | Mumps | - | - | - | 1 | 2 |
| Cholera | - | - | - | - | - | Pertussis | - | - | - | 4 | 2 |
| Coccidioidomycosis | - | - | - | 3 | 1 | Plague | - | - | - | - | - |
| Cold weather | - | - | - | 3 | 1 | Pneumococcal pneumonia | - | - | - | 1 | - |
| Cryptosporidiosis | - | - | - | 1 | 2 | Poliomyelitis | - | - | - | - | - |
| Cyclospora | - | - | - | - | - | Q fever | - | - | - | - | - |
| Dengue fever | - | - | - | - | 1 | Rabies, human | - | - | - | - | - |
| Diphtheria | - | - | - | - | - | Relapsing fever | - | - | - | - | - |
| E. coli O157:H7 | - | - | - | 1 | - | Rheumatic fever, acute | - | - | - | 1 | - |
| Ehrlichiosis | - | - | - | - | - | Rift valley fever | - | - | - | - | - |
| Encephalitis | - | - | - | - | - | Rocky Mountain spotted fever | - | - | - | - | - |
| Filariasis | - | - | - | - | - | Rubella | - | - | - | - | - |
| Giardiasis | - | - | - | 18 | 16 | Salmonellosis | - | - | - | 24 | 16 |
| Gonorrhea | - | - | - | 419 | 312 | Schistosomiasis | - | - | - | - | - |
| H. influenzae, invasive | - | - | - | 1 | - | Shigellosis | - | - | - | 5 | 9 |
| Hantavirus infection | - | - | - | - | 1 | Smallpox | - | - | - | - | - |
| Heat exhaustion | - | - | - | 74 | 23 | Streptococcus, group A, inv. | - | - | - | 9 | - |
| Heat stroke | - | - | - | 1 | 1 | Syphilis | - | - | - | 13 | 9 |
| Hemorrhagic fever | - | - | - | - | - | Tetanus | - | - | - | - | - |
| Hepatitis A | - | - | - | 3 | 4 | Toxic shock syndrome | - | - | - | - | - |
| Hepatitis B | - | - | - | 48 | 24 | Trichinosis | - | - | - | 2 | 1 |
| Hepatitis C | - | - | - | 41 | 13 | Trypanosomiasis | - | - | - | - | - |
| Influenza | - | - | - | 156 | 104 | Tuberculosis, pulmonary | - | - | - | 1 | - |
| Lead poisoning | - | - | - | - | - | Tularemia | - | - | - | - | - |
| Legionellosis | - | - | - | 1 | - | Typhoid fever | - | - | - | - | 1 |
| Leishmaniasis | - | - | - | - | - | Typhus fever | - | - | - | - | - |
| Leprosy | - | - | - | - | - | Urethritis, non-gonococcal | - | - | - | 34 | 19 |
| Leptospirosis | - | - | - | - | - | Vaccine, adverse event | - | - | - | - | - |
| Listeriosis | - | - | - | - | - | Varicella, active duty only | - | - | - | 11 | 9 |
| Lyme disease | - | - | - | 8 | 8 | Yellow fever | - | - | - | - | - |

a. Events reported by March 31, 2002

Source: Air Force Reportable Events System

b. Tri-Service Reportable Events, Version 1.0, July 1998

**Table 4. Number of reportable events^a among active duty personnel,
Navy medical treatment facilities, 1997-2001**

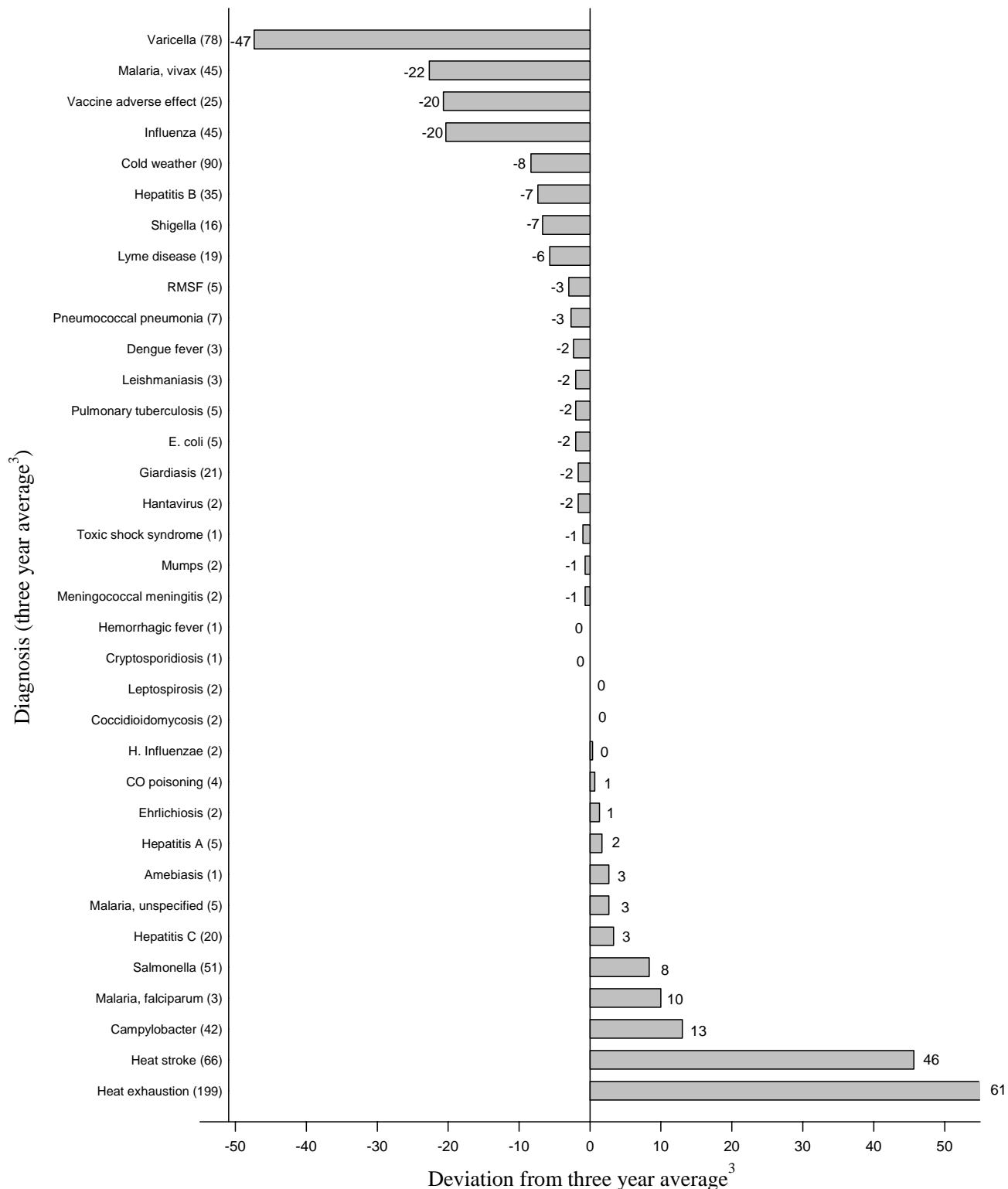
| Diagnosis ^b | 1997 | 1998 | 1999 | 2000 | 2001 | Diagnosis ^b | 1997 | 1998 | 1999 | 2000 | 2001 |
|-------------------------------|------|------|------|------|------|------------------------------|------|------|------|------|------|
| All reportable events | - | - | - | 2369 | 2277 | | | | | | |
| Amebiasis | - | - | - | 2 | 1 | Malaria, falciparum | - | - | - | 4 | 1 |
| Anthrax | - | - | - | 5 | - | Malaria, malariae | - | - | - | - | - |
| Biological warfare agent exp. | - | - | - | - | - | Malaria, ovale | - | - | - | - | - |
| Botulism | - | - | - | - | - | Malaria, unspecified | - | - | - | 4 | - |
| Brucellosis | - | - | - | - | 1 | Malaria, vivax | - | - | - | 1 | - |
| Campylobacter | - | - | - | 29 | 7 | Measles | - | - | - | - | - |
| Carbon monoxide poisoning | - | - | - | - | - | Meningococcal meningitis | - | - | - | 2 | - |
| Chemical agent exposure | - | - | - | - | - | Meningococcal septicemia | - | - | - | 4 | 1 |
| Chlamydia | - | - | - | 1615 | 1572 | Mumps | - | - | - | - | 1 |
| Cholera | - | - | - | - | - | Pertussis | - | - | - | - | - |
| Coccidioidomycosis | - | - | - | 2 | 12 | Plague | - | - | - | - | - |
| Cold weather | - | - | - | - | 1 | Pneumococcal pneumonia | - | - | - | 3 | - |
| Cryptosporidiosis | - | - | - | - | 2 | Poliomyelitis | - | - | - | - | - |
| Cyclospora | - | - | - | - | - | Q fever | - | - | - | - | - |
| Dengue fever | - | - | - | 2 | - | Rabies, human | - | - | - | - | - |
| Diphtheria | - | - | - | - | - | Relapsing fever | - | - | - | - | - |
| E. coli O157:H7 | - | - | - | 2 | - | Rheumatic fever, acute | - | - | - | - | 1 |
| Ehrlichiosis | - | - | - | - | 1 | Rift valley fever | - | - | - | - | - |
| Encephalitis | - | - | - | 4 | - | Rocky Mountain spotted fever | - | - | - | 4 | - |
| Filariasis | - | - | - | - | - | Rubella | - | - | - | - | - |
| Giardiasis | - | - | - | 9 | 8 | Salmonellosis | - | - | - | 7 | 8 |
| Gonorrhea | - | - | - | 565 | 422 | Schistosomiasis | - | - | - | - | - |
| H. influenzae, invasive | - | - | - | - | - | Shigellosis | - | - | - | 2 | 2 |
| Hantavirus infection | - | - | - | - | - | Smallpox | - | - | - | - | - |
| Heat exhaustion | - | - | - | 10 | 27 | Streptococcus, group A, inv. | - | - | - | 3 | 6 |
| Heat stroke | - | - | - | 4 | 7 | Syphilis | - | - | - | 16 | 11 |
| Hemorrhagic fever | - | - | - | - | - | Tetanus | - | - | - | - | - |
| Hepatitis A | - | - | - | 1 | - | Toxic shock syndrome | - | - | - | - | - |
| Hepatitis B | - | - | - | 15 | 7 | Trichinosis | - | - | - | - | - |
| Hepatitis C | - | - | - | 8 | 4 | Trypanosomiasis | - | - | - | - | - |
| Influenza | - | - | - | - | 11 | Tuberculosis, pulmonary | - | - | - | 8 | 2 |
| Lead poisoning | - | - | - | - | - | Tularemia | - | - | - | - | - |
| Legionellosis | - | - | - | - | - | Typhoid fever | - | - | - | - | 1 |
| Leishmaniasis | - | - | - | - | - | Typhus fever | - | - | - | - | 3 |
| Leprosy | - | - | - | - | - | Urethritis, non-gonococcal | - | - | - | 23 | 138 |
| Leptospirosis | - | - | - | - | - | Vaccine, adverse event | - | - | - | 2 | 1 |
| Listeriosis | - | - | - | - | 1 | Varicella, active duty only | - | - | - | 9 | 13 |
| Lyme disease | - | - | - | 4 | 4 | Yellow fever | - | - | - | - | - |

a. Events reported by March 31, 2002

Source: Navy Disease Reporting System

b. Tri-Service Reportable Events, Version 1.0, July 1998

Figure 1. Number of reportable events¹ among active duty personnel during 2001² compared to the three year average³ of 1998-2000, Army medical treatment facilities.



1. Sexually transmitted diseases were excluded.

2. Reported by March 31, 2002.

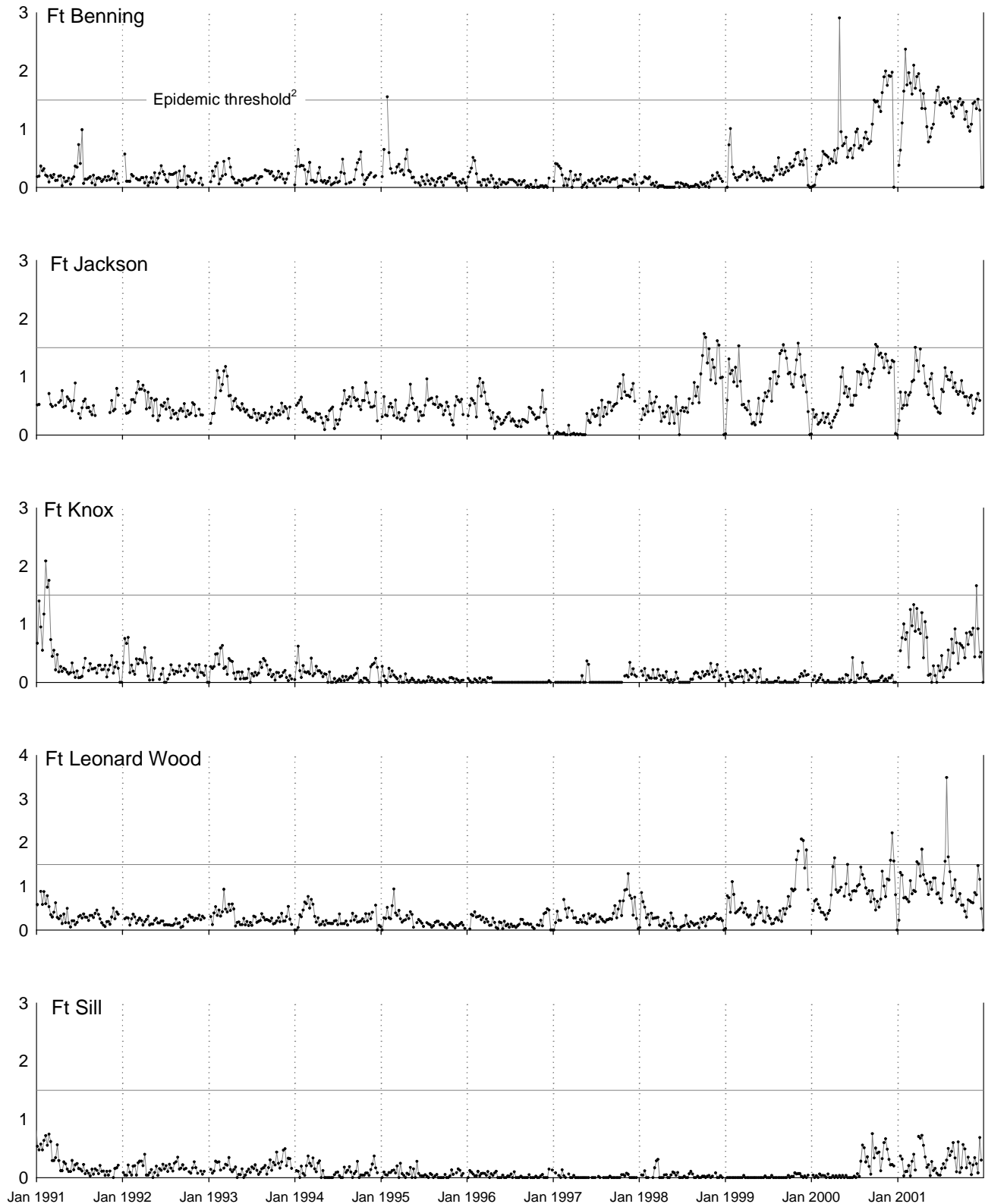
3. Comparisons given for diseases that had a total three year incidence of at least 3 cases. All averages are rounded to the nearest integer.

Source: Army Reportable Medical Events System

Acute Respiratory Disease Surveillance

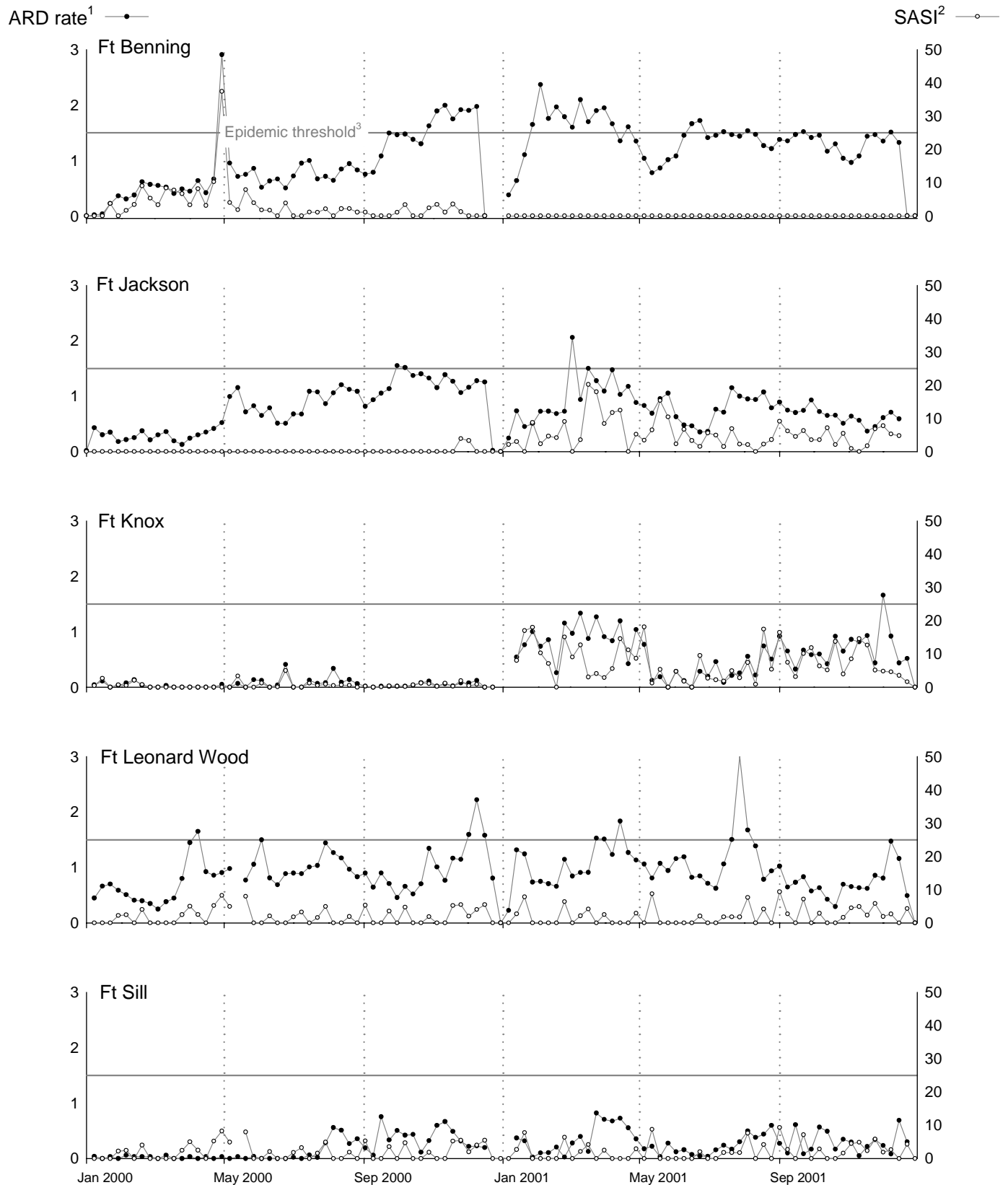
Figure 1. Acute respiratory disease (ARD), by week, Army basic training centers, 1990-2001.

ARD rate¹



1. ARD rate = cases per 100 trainees per week.
2. ARD rate ≥ 1.5 for 2 weeks defines epidemic.

Figure 2. Acute respiratory disease (ARD) and streptococcal pharyngitis surveillance, by week, US Army basic training centers, 1999-2001.



1. ARD rate = cases per 100 trainees per week.
 2. SASI (Strep ARD surveillance index) = (ARD rate)(rate of Group A beta-hemolytic strep).
 3. ARD rate ≥ 1.5 or SASI ≥ 25.0 for 2 weeks defines epidemic.

Relative Burdens of Selected Illnesses and Injuries, US Armed Forces, 2001

Illnesses and injuries are “burdens” to the US Armed Forces to the extent that they degrade the health, fitness, and operational readiness of servicemembers and demand resources for diagnosis, treatment, rehabilitation, and disability compensation. Arguably, prevention efforts (with associated resources) should target illnesses and injuries that account for the largest “morbidity burdens.” Of course, assessments of relative burdens of specific illnesses and injuries can vary greatly depending on the classification schemes and/or measures that are used. For example, assessments of illnesses and injuries based on numbers of related inpatient and outpatient encounters will identify different sets of “most important” diagnoses. Similarly, rankings based on numbers of medical encounters attributable to certain illnesses and injuries—rather than numbers of individuals affected by them—may prioritize conditions differently.

For this report, we modified the classification system used in the Global Burden of Disease Study.¹ In general, this system groups ICD-9-CM coded diagnoses that have common pathophysiologic or etiologic bases and/or significant international health policymaking importance. Our modifications included breaking out injury-specific diagnoses (as in the monthly installation-specific injury reports produced by AMSA²) and other diagnoses with particular military importance (e.g., mental disorders). For the analysis, we combined servicemembers’ inpatient and outpatient experiences for 2001 to estimate the numbers of medical encounters for, and the numbers of servicemembers affected by, each illness- and injury-specific subgroup. We also quantified hospital bed days associated with diagnostic subgroups to indicate their relative severities and health care costs.

Medical encounters. Upper respiratory infections accounted for the most medical encounters among active duty servicemembers in 2001. “All other musculoskeletal disorders,” knee injuries, and back/abdomen injuries were the second through fourth-ranked sources of medical encounters, respectively. “Injuries and poisonings,” mental disorders, and musculoskeletal disorders accounted for more medical

encounters than any other categories of diagnoses.

Individuals affected. More servicemembers received medical care for upper respiratory infections than any other condition. Abnormalities of visual acuity (i.e., disorders of refraction and accommodation), “all other musculoskeletal disorders,” “all other signs and symptoms,” and “unspecified injuries” affected the next highest numbers of servicemembers. “Injuries and poisonings” and “respiratory infections” affected more servicemembers than any other major categories of diagnoses.

Hospital bed-days. During 2001, deliveries of newborn infants and complications of pregnancy accounted for the first and fourth most hospital bed-days, respectively. Mood, adjustment, substance abuse, and psychotic disorders accounted for the second, third, fifth, and sixth most hospital bed-days, respectively. Thus, inpatient care for mental disorders and for pregnancies and deliveries accounted for more hospital bed-days than other major categories.

Relationships of burden indicators. In general, the number of individuals affected by particular conditions was strongly correlated with the number of medical encounters attributable to the conditions (linear regression, total medical encounters = 1.77 x individuals affected, $R^2=0.85$). On the other hand, the number of hospital bed-days attributable to conditions was not strongly correlated with either the number of individuals affected by or the number of medical encounters attributable to the conditions. Thus, relatively unique insights into morbidity burdens are gained by (1) hospital bed-days attributable to particular conditions and (2) either the number of individuals affected by or the total number of medical encounters for particular conditions.

Editorial comment: The summaries presented here document that “burdens” attributable to various illnesses and injuries vary based on criteria used for grouping diagnoses and on methods used for quantifying burdens. For example, in this summary, mental disorders and pregnancy-related conditions

accounted for relatively large numbers of hospital bed days but relatively fewer total medical encounters. Thus, based on hospital usage alone, these categories would be attributed with the highest morbidity burdens. On the other hand, upper respiratory infections and abnormalities of visual acuity affected very large numbers of servicemembers but accounted for relatively few hospital bed-days. Clearly, assessments of morbidity burdens significantly vary based on the morbidity measures that are used.

During calendar year 2001, there were few illnesses or injuries that affected large numbers of servicemembers, caused large numbers of medical encounters, and accounted for large numbers of hospital bed-days. Diagnostic subgroups that were in the top 25 in all three morbidity burden-related categories were injuries (to the knee, back/abdomen, foot/ankle, arm/shoulder, and head/neck) and non-specific groups (i.e., "all others") of musculoskeletal disorders, signs and symptoms, infectious and

parasitic diseases, genitourinary disease, digestive disease, and skin diseases.

Assessments of morbidity burdens using various measurement criteria may be informative and useful to military medical planners, policymakers, and preventive medicine/public health practitioners.

Data analysis and report by Karen E. Campbell, MS, Analysis Group, Army Medical Surveillance Activity.

References

1. The global burden of disease: A comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020. Murray, CJ and Lopez, AD, eds. Harvard School of Public Health (on behalf of the World Health Organization and The World Bank), 1996, 120-2.
2. Army Medical Surveillance Activity. Monthly installation injury surveillance reports: surveillance of injuries and their impacts at the installation level, US Armed Forces. *MSMR* 2001, 7(8), 7-9.

Table 1. Morbidity burdens of selected diseases and injuries, US Armed Forces, 2001

| Category | Medical encounters ¹ | | Individuals affected ² | | Hospital bed days | |
|---|---------------------------------|-------|-----------------------------------|-------|-------------------|-------|
| | No. | Rank | No. | Rank | No. | Rank |
| Injury and poisoning | | | | | | |
| Knee | 393,821 | (3) | 118,761 | (8) | 4,824 | (17) |
| Back and abdomen | 321,091 | (4) | 125,284 | (7) | 7,386 | (9) |
| Unspecified injury | 301,432 | (7) | 176,964 | (5) | 2,847 | (27) |
| Foot and ankle | 277,873 | (9) | 118,447 | (9) | 4,661 | (18) |
| Arm and shoulder | 276,912 | (10) | 82,130 | (12) | 4,888 | (16) |
| Hand and wrist | 134,458 | (15) | 64,507 | (15) | 2,367 | (29) |
| Head and neck | 120,298 | (17) | 59,353 | (16) | 7,572 | (8) |
| Leg | 67,920 | (26) | 26,655 | (34) | 5,002 | (15) |
| Environmental | 20,762 | (48) | 16,231 | (44) | 1,224 | (43) |
| Other injury from external causes | 20,546 | (49) | 13,986 | (46) | 200 | (83) |
| Other complications, not otherwise specified | 8,040 | (71) | 6,243 | (65) | 5,856 | (10) |
| Poisoning, nondrug | 2,817 | (89) | 1,957 | (80) | 390 | (69) |
| Poisoning, drugs | 1,664 | (100) | 1,361 | (88) | 2,007 | (34) |
| Other dislocations and sprains (excl. ankle/foot) | 12 | (126) | 12 | (126) | 0 | (122) |
| Other superficial injury | 2 | (127) | 2 | (127) | 0 | (122) |
| All other injury | 6,193 | (76) | 4,722 | (71) | 300 | (73) |
| Mental disorders | | | | | | |
| Substance abuse disorders | 296,667 | (8) | 30,508 | (28) | 12,583 | (5) |
| Mood | 125,311 | (16) | 29,577 | (32) | 22,805 | (2) |
| Adjustment | 98,109 | (18) | 33,987 | (26) | 20,452 | (3) |
| Anxiety | 46,780 | (33) | 15,394 | (45) | 1,962 | (35) |
| Tobacco dependence | 25,345 | (45) | 12,021 | (55) | 0 | (122) |
| Personality | 19,476 | (51) | 7,273 | (62) | 4,047 | (21) |
| Psychotic | 9,562 | (67) | 1,665 | (83) | 10,085 | (6) |
| Somatiform | 4,971 | (78) | 1,890 | (81) | 697 | (55) |
| All other mental disorders | 45,968 | (35) | 20,241 | (40) | 3,098 | (25) |
| Musculoskeletal disease | | | | | | |
| Other back problems | 141,002 | (14) | 68,937 | (14) | 1,875 | (36) |
| Osteoarthritis | 11,869 | (65) | 7,406 | (61) | 392 | (68) |
| Other knee disorders | 9,796 | (66) | 5,225 | (70) | 710 | (54) |
| Other shoulder disorders | 8,651 | (70) | 5,257 | (69) | 358 | (71) |
| Rheumatoid arthritis | 2,381 | (94) | 968 | (94) | 40 | (108) |
| All other musculoskeletal disease | 417,100 | (2) | 181,642 | (3) | 5,768 | (12) |
| Respiratory infections | | | | | | |
| Upper respiratory | 463,017 | (1) | 306,385 | (1) | 1,382 | (39) |
| Lower respiratory | 61,116 | (28) | 45,757 | (23) | 4,071 | (20) |
| Otitis media | 35,695 | (40) | 28,273 | (33) | 48 | (104) |
| Sense organ diseases | | | | | | |
| Refraction/accommodation | 307,896 | (5) | 234,842 | (2) | 0 | (122) |
| Glaucoma | 12,006 | (64) | 7,938 | (60) | 21 | (113) |
| Cataracts | 1,649 | (101) | 1,091 | (92) | 7 | (119) |
| All other sense organ diseases | 193,604 | (11) | 125,805 | (6) | 835 | (51) |
| Signs and symptoms | | | | | | |
| Respiratory and chest | 84,405 | (23) | 55,855 | (18) | 2,550 | (28) |
| Abdomen and pelvis | 79,428 | (24) | 52,416 | (21) | 2,195 | (31) |
| All other signs and symptoms | 301,625 | (6) | 179,987 | (4) | 5,336 | (13) |

1. Medical encounters: hospitalizations and ambulatory visits.

2. Individuals affected: individuals with a hospitalization or ambulatory visit.

**Table 1. (Continued) Morbidity burdens of selected diseases and injuries,
US Armed Forces, 2001**

| Category | Medical encounters ¹ | | Individuals affected ² | | Hospital bed days | |
|---|---------------------------------|-------|-----------------------------------|-------|-------------------|-------|
| | No. | Rank | No. | Rank | No. | Rank |
| Infectious and parasitic disease | | | | | | |
| Unspecified viral infection | 93,051 | (21) | 74,461 | (13) | 606 | (60) |
| STDs | 35,279 | (41) | 25,891 | (35) | 1,083 | (47) |
| Diarrheal disease | 24,073 | (46) | 20,839 | (38) | 610 | (59) |
| Chlamydia | 7,929 | (72) | 6,489 | (64) | 6 | (120) |
| Tuberculosis | 3,806 | (83) | 2,607 | (76) | 253 | (80) |
| Hepatitis B and C | 3,803 | (84) | 1,740 | (82) | 55 | (102) |
| Bacterial meningitis | 882 | (107) | 626 | (99) | 304 | (72) |
| Malaria | 350 | (113) | 211 | (111) | 178 | (86) |
| Intestinal nematode infection | 282 | (115) | 265 | (108) | 0 | (122) |
| Tropical | 141 | (119) | 88 | (117) | 26 | (111) |
| All other infectious and parasitic diseases | 154,300 | (13) | 95,631 | (11) | 3,534 | (23) |
| Skin disease | | | | | | |
| Contact dermatitis | 49,282 | (31) | 39,192 | (25) | 56 | (101) |
| Sebaceous gland diseases | 46,342 | (34) | 30,190 | (29) | 47 | (106) |
| All other skin disease | 190,349 | (12) | 114,039 | (10) | 5,847 | (11) |
| Genitourinary disease | | | | | | |
| Other urethra/urinary tract disorders | 41,694 | (36) | 29,615 | (31) | 256 | (79) |
| Female genital pain | 17,702 | (56) | 11,939 | (56) | 551 | (62) |
| Menstrual disorders | 17,450 | (57) | 12,767 | (51) | 420 | (66) |
| Other breast disorders | 16,649 | (58) | 8,881 | (59) | 467 | (64) |
| Kidney stones | 12,327 | (63) | 5,270 | (68) | 1,055 | (48) |
| Nephritis and nephrosis | 3,543 | (85) | 1,371 | (86) | 617 | (58) |
| Benign prostatic hypertrophy | 1,779 | (98) | 1,260 | (90) | 52 | (103) |
| All other genitourinary disease | 94,022 | (19) | 54,207 | (19) | 4,328 | (19) |
| Respiratory disease | | | | | | |
| Allergic rhinitis | 93,448 | (20) | 56,197 | (17) | 12 | (117) |
| Asthma | 37,803 | (38) | 18,077 | (43) | 689 | (56) |
| COPD | 15,959 | (60) | 13,554 | (49) | 234 | (81) |
| Chronic sinusitis | 14,118 | (61) | 9,793 | (57) | 197 | (84) |
| All other respiratory disease | 34,731 | (42) | 20,685 | (39) | 3,844 | (22) |
| Digestive disease | | | | | | |
| Other gastroenteritis and colitis | 64,731 | (27) | 52,515 | (20) | 1,133 | (45) |
| Esophagus disease | 33,625 | (43) | 20,087 | (41) | 1,655 | (37) |
| Inguinal hernia | 14,118 | (61) | 6,626 | (63) | 761 | (53) |
| Appendicitis | 3,990 | (81) | 2,217 | (78) | 5,171 | (14) |
| Peptic ulcer | 1,781 | (97) | 1,298 | (89) | 426 | (65) |
| Cirrhosis | 1,708 | (99) | 821 | (96) | 145 | (90) |
| All other digestive disease | 71,065 | (25) | 44,173 | (24) | 9,735 | (7) |
| Endocrine disorders | | | | | | |
| Obesity | 39,477 | (37) | 19,573 | (42) | 102 | (93) |
| Lipoid metabolism disorders | 37,540 | (39) | 24,368 | (37) | 36 | (110) |
| Diabetes mellitus | 18,431 | (52) | 4,447 | (72) | 587 | (61) |
| All other endocrine disorders | 47,186 | (32) | 24,983 | (36) | 2,079 | (33) |
| Cardiovascular disease | | | | | | |
| Essential hypertension | 60,025 | (29) | 29,784 | (30) | 177 | (87) |
| Ischemic | 6,328 | (75) | 2,873 | (75) | 1,582 | (38) |
| Cerebrovascular | 2,517 | (91) | 830 | (95) | 1,116 | (46) |
| Inflammatory | 1,561 | (102) | 700 | (98) | 291 | (76) |
| Rheumatic | 645 | (112) | 508 | (103) | 61 | (98) |
| All other cardiovascular disease | 50,294 | (30) | 30,825 | (27) | 3,522 | (24) |

1. Medical encounters: hospitalizations and ambulatory visits.

2. Individuals affected: individuals with a hospitalization or ambulatory visit.

**Table 1. (Continued) Morbidity burdens of selected diseases and injuries,
US Armed Forces, 2001**

| Category | Medical encounters ¹ | | Individuals affected ² | | Hospital bed days | |
|--|---------------------------------|-------|-----------------------------------|-------|-------------------|-------|
| | No. | Rank | No. | Rank | No. | Rank |
| Headache | 90,798 | (22) | 49,190 | (22) | 924 | (50) |
| Maternal conditions | | | | | | |
| Pregnancy complications | 30,964 | (44) | 13,755 | (48) | 14,530 | (4) |
| Delivery | 19,750 | (50) | 12,053 | (54) | 39,259 | (1) |
| Ectopic/miscarriage/abortion | 7,711 | (73) | 4,355 | (73) | 1,357 | (40) |
| Puerperium complications | 1,521 | (103) | 1,058 | (93) | 488 | (63) |
| Other neoplasms | | | | | | |
| Benign skin neoplasm | 18,072 | (55) | 13,878 | (47) | 9 | (118) |
| Lipoma | 9,147 | (68) | 5,917 | (67) | 118 | (91) |
| Uterine leiomyoma | 2,514 | (92) | 1,370 | (87) | 1,304 | (42) |
| All other neoplasms | 18,076 | (54) | 12,588 | (52) | 2,106 | (32) |
| Neurologic conditions | | | | | | |
| Other mononeuritis - upper and lower limbs | 6,726 | (74) | 3,674 | (74) | 76 | (96) |
| Epilepsy | 4,434 | (79) | 1,514 | (85) | 189 | (85) |
| Multiple sclerosis | 2,493 | (93) | 460 | (104) | 363 | (70) |
| Parkinson disease | 167 | (118) | 46 | (119) | 0 | (122) |
| All other neurologic conditions | 20,935 | (47) | 9,668 | (58) | 2,323 | (30) |
| Malignant neoplasms | | | | | | |
| Lymphomas and multiple myeloma | 5,145 | (77) | 820 | (97) | 1,191 | (44) |
| Melanoma and skin cancer | 4,212 | (80) | 2,244 | (77) | 62 | (97) |
| Breast | 3,515 | (86) | 421 | (105) | 165 | (88) |
| Testicular | 2,566 | (90) | 512 | (102) | 681 | (57) |
| Leukemia | 2,131 | (95) | 170 | (112) | 931 | (49) |
| Colon and rectum | 1,857 | (96) | 263 | (109) | 405 | (67) |
| Thyroid | 1,503 | (104) | 323 | (106) | 300 | (73) |
| Prostate | 1,178 | (105) | 320 | (107) | 297 | (75) |
| Brain | 803 | (108) | 114 | (113) | 223 | (82) |
| Mouth and oropharynx | 790 | (110) | 247 | (110) | 48 | (104) |
| Trachea, bronchus, and lung | 701 | (111) | 95 | (115) | 150 | (89) |
| Bladder | 317 | (114) | 108 | (114) | 45 | (107) |
| Stomach | 266 | (116) | 34 | (122) | 89 | (95) |
| Ovarian | 213 | (117) | 54 | (118) | 61 | (98) |
| Liver | 139 | (120) | 18 | (124) | 108 | (92) |
| Cervical | 132 | (121) | 43 | (120) | 59 | (100) |
| Pancreas | 101 | (123) | 14 | (125) | 37 | (109) |
| Esophagus | 82 | (124) | 29 | (123) | 26 | (111) |
| Uterine | 58 | (125) | 43 | (120) | 17 | (114) |
| All other malignant neoplasms | 3,910 | (82) | 1,192 | (91) | 1,341 | (41) |
| Oral conditions | | | | | | |
| Dental caries | 3,273 | (88) | 1,636 | (84) | 15 | (116) |
| Periodontal disease | 796 | (109) | 559 | (101) | 16 | (115) |
| All other oral conditions | 16,289 | (59) | 13,114 | (50) | 2,960 | (26) |
| Congenital anomalies | | | | | | |
| Congenital heart disease | 1,033 | (106) | 589 | (100) | 291 | (76) |
| All other congenital anomalies | 18,313 | (53) | 12,275 | (53) | 779 | (52) |
| Nutritional deficiencies | | | | | | |
| Iron-deficiency anemia | 3,513 | (87) | 2,159 | (79) | 98 | (94) |
| Protein energy malnutrition | 130 | (122) | 95 | (115) | 4 | (121) |
| All other nutritional deficiencies | 8,797 | (69) | 6,132 | (66) | 264 | (78) |

1. Medical encounters: hospitalizations and ambulatory visits.

2. Individuals affected: individuals with a hospitalization or ambulatory visit.

Table 1. Demographic characteristics of active duty members, US Armed Forces, 2001

| Characteristics | Army | | Navy | | Air Force | | Marine Corps | |
|-------------------------|---------|------------------|---------|-----------------|-----------|----------------|--------------|-----------------|
| | Pop. | % total soldiers | Pop. | % total sailors | Pop. | % total airmen | Pop. | % total marines |
| Total | 474,364 | 100.0 | 368,756 | 100.0 | 348,587 | 100.0 | 171,789 | 100.0 |
| Gender | | | | | | | | |
| Men | 401,303 | 84.6 | 316,895 | 85.9 | 282,023 | 80.9 | 161,405 | 94.0 |
| Women | 73,061 | 15.4 | 51,861 | 14.1 | 66,564 | 19.1 | 10,384 | 6.0 |
| Age (years) | | | | | | | | |
| < 20 | 44,705 | 9.4 | 35,264 | 9.6 | 23,879 | 6.9 | 27,070 | 15.8 |
| 20-24 | 153,118 | 32.3 | 117,219 | 31.8 | 95,044 | 27.3 | 80,375 | 46.8 |
| 25-29 | 98,166 | 20.7 | 69,932 | 19.0 | 65,983 | 18.9 | 27,780 | 16.2 |
| 30-34 | 74,476 | 15.7 | 55,436 | 15.0 | 56,205 | 16.1 | 15,682 | 9.1 |
| 35-39 | 61,448 | 13.0 | 53,737 | 14.6 | 64,385 | 18.5 | 12,997 | 7.6 |
| 40-44 | 28,424 | 6.0 | 25,254 | 6.8 | 31,561 | 9.1 | 5,674 | 3.3 |
| 45-49 | 10,317 | 2.2 | 9,146 | 2.5 | 9,070 | 2.6 | 1,739 | 1.0 |
| 50-54 | 3,151 | 0.7 | 2,319 | 0.6 | 2,143 | 0.6 | 438 | 0.3 |
| 55-59 | 492 | 0.1 | 373 | 0.1 | 285 | 0.1 | 32 | 0.0 |
| > 59 | 67 | 0.0 | 76 | 0.0 | 32 | 0.0 | 1 | 0.0 |
| Race/Ethnicity | | | | | | | | |
| White non-hispanic | 277,182 | 58.4 | 230,963 | 62.6 | 257,109 | 73.8 | 115,493 | 67.2 |
| Black non-hispanic | 124,978 | 26.3 | 69,758 | 18.9 | 56,485 | 16.2 | 25,839 | 15.0 |
| Hispanic | 40,987 | 8.6 | 34,790 | 9.4 | 17,357 | 5.0 | 22,255 | 13.0 |
| Asian/Pacific Islander | 14,994 | 3.2 | 23,170 | 6.3 | 9,120 | 2.6 | 4,290 | 2.5 |
| Native American/Alaskan | 3,952 | 0.8 | 7,033 | 1.9 | 1,659 | 0.5 | 1,633 | 1.0 |
| Other | 12,270 | 2.6 | 3,042 | 0.8 | 6,856 | 2.0 | 2,278 | 1.3 |
| Marital Status | | | | | | | | |
| Single | 202,920 | 42.8 | 195,414 | 53.0 | 112,123 | 32.2 | 91,529 | 53.3 |
| Married | 251,585 | 53.0 | 173,342 | 47.0 | 211,670 | 60.7 | 74,607 | 43.4 |
| Other | 19,859 | 4.2 | 0 | 0.0 | 24,794 | 7.1 | 5,653 | 3.3 |
| Education | | | | | | | | |
| High school or less | 361,511 | 76.2 | 303,865 | 82.4 | 228,336 | 65.5 | 150,236 | 87.5 |
| Some college | 28,252 | 6.0 | 16,010 | 4.3 | 39,578 | 11.4 | 4,093 | 2.4 |
| Bachelors | 55,251 | 11.6 | 29,820 | 8.1 | 41,702 | 12.0 | 14,350 | 8.4 |
| Masters | 19,414 | 4.1 | 12,744 | 3.5 | 30,693 | 8.8 | 2,693 | 1.6 |
| Doctorate | 9,935 | 2.1 | 6,318 | 1.7 | 8,277 | 2.4 | 417 | 0.2 |
| Grade | | | | | | | | |
| Enlisted | | | | | | | | |
| E1-E4 | 221,444 | 46.7 | 159,400 | 43.2 | 130,931 | 37.6 | 103,255 | 60.1 |
| E5-E9 | 177,256 | 37.4 | 155,801 | 42.3 | 149,602 | 42.9 | 50,508 | 29.4 |
| Officer | | | | | | | | |
| O1-O3 (W1-W3) | 47,251 | 10.0 | 32,344 | 8.8 | 38,779 | 11.1 | 11,884 | 6.9 |
| O4-O9 (W4-W5) | 28,413 | 6.0 | 21,212 | 5.8 | 29,275 | 8.4 | 6,141 | 3.6 |

Table 2. Occupations of active duty members, US Armed Forces, 2001

| Characteristics | Army | | Navy | | Air Force | | Marine Corps | |
|---------------------------------|---------|------------------|---------|-----------------|-----------|----------------|--------------|-----------------|
| | Pop. | % total soldiers | Pop. | % total sailors | Pop. | % total airmen | Pop. | % total marines |
| Total | 474,364 | 100.0 | 368,756 | 100.0 | 348,587 | 100.0 | 171,789 | 100.0 |
| Enlisted | | | | | | | | |
| Infantry, seamen, gun crews | 104,493 | 22.0 | 56,150 | 15.2 | 30,245 | 8.7 | 53,992 | 31.4 |
| Electronic equip repair | 25,577 | 5.4 | 47,427 | 12.9 | 24,240 | 7.0 | 9,260 | 5.4 |
| Communications, intelligence | 40,791 | 8.6 | 26,762 | 7.3 | 23,116 | 6.6 | 10,188 | 5.9 |
| Health care | 29,571 | 6.2 | 24,658 | 6.7 | 20,760 | 6.0 | 3,565 | 2.1 |
| Technical and allied support | 12,861 | 2.7 | 7,259 | 2.0 | 10,726 | 3.1 | 0 | 0.0 |
| Funct support, admin | 67,455 | 14.2 | 38,180 | 10.4 | 63,958 | 18.3 | 26,609 | 15.5 |
| Electric/mech equip repair | 55,412 | 11.7 | 84,913 | 23.0 | 61,382 | 17.6 | 23,189 | 13.5 |
| Craftworkers | 7,742 | 1.6 | 15,561 | 4.2 | 12,067 | 3.5 | 3,449 | 2.0 |
| Service, supply handlers | 47,442 | 10.0 | 14,271 | 3.9 | 13,943 | 4.0 | 18,567 | 10.8 |
| Non-occupational | 7,356 | 1.6 | 19 | 0.0 | 20,095 | 5.8 | 4,944 | 2.9 |
| Officers | | | | | | | | |
| General officers and executives | 378 | 0.1 | 2,234 | 0.6 | 943 | 0.3 | 495 | 0.3 |
| Tactical operations | 21,597 | 4.6 | 12,354 | 3.4 | 22,042 | 6.3 | 6,007 | 3.5 |
| Intelligence | 3,836 | 0.8 | 1,692 | 0.5 | 3,542 | 1.0 | 697 | 0.4 |
| Engineering and maintenance | 6,909 | 1.5 | 7,380 | 2.0 | 8,568 | 2.5 | 1,837 | 1.1 |
| Scientists, professionals | 4,512 | 1.0 | 3,029 | 0.8 | 5,254 | 1.5 | 449 | 0.3 |
| Health care | 12,311 | 2.6 | 7,643 | 2.1 | 12,026 | 3.4 | 0 | 0.0 |
| Administrators | 4,103 | 0.9 | 4,154 | 1.1 | 4,859 | 1.4 | 1,341 | 0.8 |
| Supply, allied specialists | 5,954 | 1.3 | 2,184 | 0.6 | 6,244 | 1.8 | 2,063 | 1.2 |
| Non-occupational | 16,065 | 3.4 | 12,884 | 3.5 | 4,575 | 1.3 | 5,138 | 3.0 |

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