



MSMR



Medical Surveillance Monthly Report

Vol. 7 No. 4

April 2001

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Annual Summary, US Armed Forces - 2000

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Hospitalizations among active duty personnel - 2000

This report documents frequencies, rates, trends, and characteristics of the hospitalizations of active duty members of the US Armed Forces at fixed military medical facilities during calendar year 2000. Hospitalizations are summarized based on primary diagnoses (which are coded using the International Classification of Diseases, 9th revision, Clinical Modifications). All data were derived from the Defense Medical Surveillance System.

Overall frequencies, rates, and trends. From January through December 2000, there were 62,925 hospitalizations of active duty servicemembers in US military hospitals worldwide. In 2000, the number of hospitalizations was less than one-third of those in 1992 and less than one-half of those in 1996 (table 1).

In 2000, the crude hospitalization rate was 47.3 per 1,000 person-years; the rate in 2000 was more than 50% lower than the annual rates between 1990-1995 but similar to the rates in 1998 and 1999 (figure 1). Thus, after years of decline, hospitalization rates have been stable since 1998.

Hospitalizations, by illness and injury categories. The distribution of illnesses and injuries that were treated in hospitals in 2000 was markedly different than those of the 1990s. In 2000, pregnancy-related conditions accounted for more hospitalizations (23%) than any other diagnostic category; mental disorders (13%) accounted for the second highest number of hospitalizations (table 1). In contrast, in 1992 and 1996, musculoskeletal and digestive system disorders were the first and second leading causes, respectively, of hospitalizations of servicemembers (table 1).

Hospitalization rates, by gender. In 2000, the hospitalization rate for all causes among women (crude rate: 128.9 per 1,000 person-years) was 3.8-times higher than the rate among men (crude rate: 33.9 per 1,000 person-years). Excluding pregnancy-related conditions, women (crude rate: 54.3 per 1,000 person-years) were 1.6-times more likely than men to be hospitalized; in nearly every illness and injury category, the hospitalization rate was higher among women than men (figure 2).

Hospitalization rates, by age. Relationships between age and hospitalization rates varied markedly across illness and

injury categories (figure 2). For example, hospitalization rates generally declined with age for mental, infectious, and respiratory disorders, but they generally increased with age for neoplasms and digestive, musculoskeletal, genitourinary, nervous, circulatory, and endocrine disorders (figure 2).

Most frequent diagnoses. There were six diagnoses (at the 3-digit level of the ICD-9-CM) among men that accounted for 1,000 or more hospitalizations each: two were mental disorders ("adjustment reaction" [n=2,988]; "affective psychosis" [n=1,126]); two were musculoskeletal disorders ("internal derangement of the knee" [n=1,136]; "intervertebral disc disorders" [n=1,034]); and the others were "viral and chlamydial infections" (n=1,052) and "acute appendicitis" (n=1,174) (table 2). In comparison, there were three diagnoses among women that accounted for 1,000 or more hospitalizations each: two were conditions related to pregnancy ("other indications for care" [n=1,140]; "normal delivery" [n=1,121]) and the other was a mental disorder ("adjustment reaction" [n=1,031]) (table 3).

Days per hospitalization. The median lengths of hospital stays were similar—but the ranges markedly varied—across illness and injury categories (figure 3). Mental disorders accounted for more hospital days—and a wider range of days per hospitalization—than any other illness or injury category (figure 3). Between 1990 and 2000, the medians of days per hospitalization remained relatively constant while the ranges markedly declined (figure 4).

Intentions and activities associated with injuries and poisonings. In 2000, injuries and poisonings were the third leading cause of hospitalizations of servicemembers. Approximately 7 of 8 injuries and poisonings that resulted in hospitalizations were "unintentional." Four categories of unintentional injuries accounted for approximately two-thirds (n=5,113) of all injury and poisoning-related hospitalizations: "falls and miscellaneous," "land transport," "athletics," and "complications of medical care" (table 4). Finally, approximately one-eighth of injuries and poisonings that resulted in hospitalizations were "intentionally self-inflicted" or related to "violence/assault" or "war" (table 4).

Table 1. Hospitalizations, by major diagnostic category, US Armed Forces, 1992, 1996, 2000

Category	1992		1996		2000	
	Number	Rank	Number	Rank	Number	Rank
Pregnancy complications	22,807	(3)	16,830	(3)	14,301	(1)
Mental disorders	19,514	(5)	13,963	(4)	9,675	(2)
Injury and poisoning	20,572	(4)	12,862	(5)	7,847	(3)
Digestive	30,365	(2)	18,116	(2)	6,267	(4)
Musculoskeletal	31,415	(1)	24,418	(1)	6,139	(5)
Symptoms, signs, and ill-defined conditions	7,643	(10)	4,918	(9)	3,079	(6)
Respiratory	13,851	(6)	8,906	(6)	2,772	(7)
Genitourinary	12,274	(7)	7,766	(7)	2,530	(8)
Infectious and parasitic	8,131	(9)	3,145	(13)	2,420	(9)
Circulatory	6,356	(11)	3,907	(12)	1,645	(10)
Neoplasms	5,364	(13)	4,065	(11)	1,560	(11)
Skin and subcutaneous tissue	4,887	(14)	3,025	(14)	1,368	(12)
Other contact with health services	11,649	(8)	6,285	(8)	1,224	(13)
Nervous system and sense organs	6,207	(12)	4,125	(10)	1,007	(14)
Endocrine, nutritional, metabolic and immunity	1,728	(15)	1,178	(15)	588	(15)
Congenital anomalies	1,328	(16)	992	(16)	253	(16)
Hematologic disorders	606	(17)	363	(17)	250	(17)

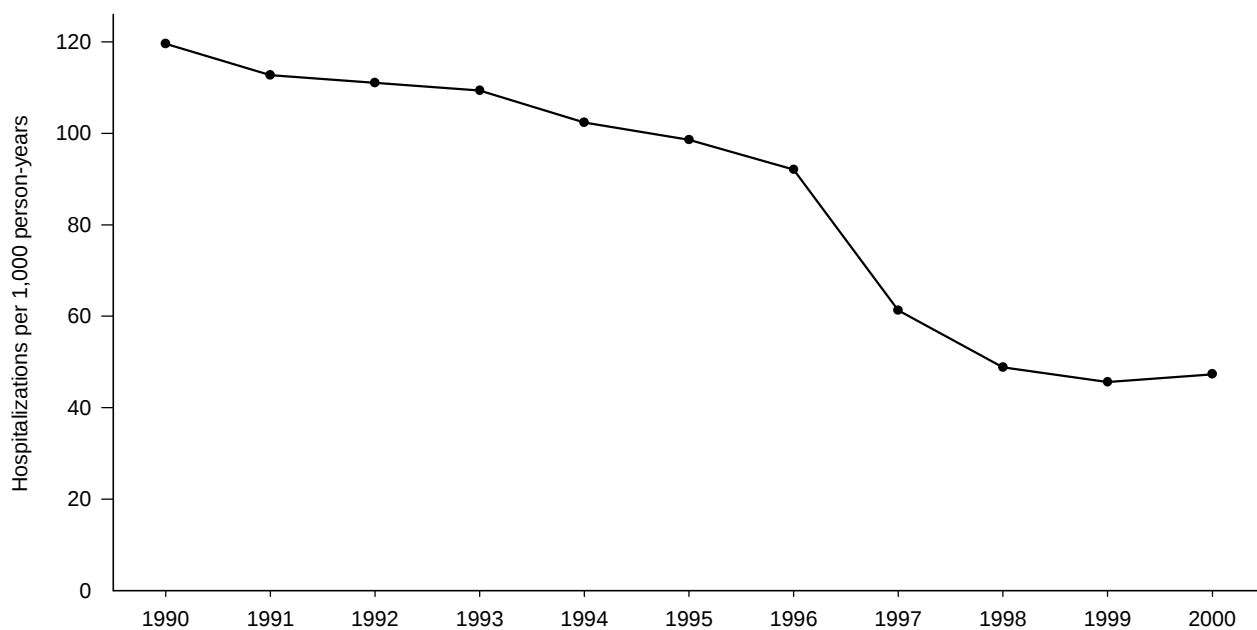
Figure 1. Rate of hospitalization, active duty servicemembers, US Armed Forces, 1990-2000

Table 2. Most frequent diagnoses during hospitalizations, by major diagnostic category, MEN, US Armed Forces, 2000

Diagnostic category	N	%	Diagnostic category	N	%
Infectious and parasitic diseases (001-139)	1,920		Digestive system (520 - 579)	5,123	
Viral and chlamydial infection	1052	54.8	Acute appendicitis	1,174	22.9
Meningitis due to enterovirus	145	7.6	Diseases of esophagus	523	10.2
Intestinal infections due to other organisms	113	5.9	Dentofacial anomalies	521	10.2
Streptococcal sore throat and scarlet fever	90	4.7	Inguinal hernia	366	7.1
Chickenpox	87	4.5	Other noninfectious gastroenteritis and colitis	305	6.0
Neoplasms (140 - 239)	821		Genitourinary system (580 - 629)	995	
Malignant neoplasm of testis	58	7.1	Calculus of kidney and ureter	318	32.0
Malignant neoplasm of thyroid	56	6.8	Other disorders of male genital organs	116	11.7
Benign neoplasm of bone and articular cartilage	60	7.3	Urethral stricture	86	8.6
Malignant neoplasm of prostate	54	6.6	Other disorders of kidney and ureter	67	6.7
Malignant neoplasm of brain	33	4.0	Orchitis and epididymitis	55	5.5
Endocrine, nutrition, immunity (240 - 279)	401		Pregnancy complications (630 - 679)		
Diabetes mellitus	155	38.7	-	-	-
Disorders of fluid, electrolyte	120	29.9	-	-	-
Nontoxic nodular goiter	21	5.2	-	-	-
Thyrotoxicosis with or without goiter	20	5.0	-	-	-
Other disorders of pancreatic secretion	13	3.2	-	-	-
Hematologic disorders (280 - 289)	189		Skin diseases (680 - 709)	1,174	
Other diseases of blood and blood-forming organs	58	30.7	Other cellulitis and abscess	819	69.8
Diseases of white blood cells	42	22.2	Pilonidal cyst	134	11.4
Purpura and other hemorrhagic conditions	27	14.3	Cellulitis and abscess of finger and toe	50	4.3
Aplastic anemia	17	9.0	Other disorders of skin and subcutaneous tissue	36	3.1
Other and unspecified anemias	12	6.3	Other local infections of skin	21	1.8
Mental disorders (290 - 319)	7,314		Musculoskeletal system (710 - 739)	5,350	
Adjustment reaction	2,988	40.9	Internal derangement of knee	1,136	21.2
Affective psychoses	1,126	15.4	Intervertebral disc disorders	1,034	19.3
Alcohol dependence syndrome	707	9.7	Other derangement of joint	805	15.0
Personality disorders	691	9.4	Other disorders of bone and cartilage	349	6.5
Neurotic disorders	395	5.4	Peripheral enthesopathies	342	6.4
Nervous system (320 - 389)	725		Congenital anomalies (740 - 759)	185	
Migraine	93	12.8	Circulatory system	24	13.0
Mononeuritis of upper limb	51	7.0	Intestinal malabsorption	21	11.4
Multiple sclerosis	36	5.0	Other disorders of gallbladder	20	10.8
Other conditions of brain	35	4.8	Musculoskeletal	18	9.7
Mononeuritis of lower limb	35	4.8	Other disorders of liver	15	8.1
Circulatory system (390 - 459)	1,503		Ill-defined conditions (780 - 799)	2,417	
Cardiac dysrhythmias	336	22.4	Symptoms involving respiratory system and chest	902	37.3
Other forms of chronic ischemic heart disease	180	12.0	General symptoms	676	28.0
Acute myocardial infarction	130	8.6	Other symptoms involving abdomen and pelvis	455	18.8
Other venous embolism and thrombosis	96	6.4	Symptoms involving head and neck	93	3.8
Hemorrhoids	94	6.3	Symptoms involving digestive system	57	2.4
Respiratory system (460 - 519)	2,321		Injury and poisoning (800 - 999)	6,930	
Pneumonia, organism unspecified	533	23.0	Fracture of ankle	524	7.6
Peritonsillar abscess	228	9.8	Other complications of procedures, NEC	508	7.3
Acute pharyngitis	226	9.7	Fracture of face bones	384	5.5
Pneumothorax	164	7.1	Sprains and strains of knee and leg	332	4.8
Asthma	144	6.2	Injury, other and unspecified	265	3.8

Table 3. Most frequent diagnoses during hospitalizations, by major diagnostic category, WOMEN, US Armed Forces, 2000

Diagnostic category	N	%	Diagnostic category	N	%
Infectious and parasitic diseases (001-139)	500		Digestive system (520 - 579)	1,144	
Viral and chlamydial infection	270	54.0	Dentofacial anomalies	213	18.6
Intestinal infections due to other organisms	49	9.8	Acute appendicitis	162	14.2
Meningitis due to enterovirus	48	9.6	Cholelithiasis	129	11.3
Streptococcal sore throat and scarlet fever	24	4.8	Other noninfectious gastroenteritis & colitis	94	8.2
Infectious mononucleosis	16	3.2	Diseases of esophagus	63	5.5
Neoplasms (140 - 239)	739		Genitourinary system (580 - 629)	1,535	
Uterine leiomyoma	413	55.9	Infections of kidney	318	20.7
Malignant neoplasm of thyroid gland	54	7.3	Inflammatory disorders of reproductive organs	116	7.6
Benign neoplasm of ovary	44	6.0	Syndromes associated with female genital organs	86	5.6
Malignant neoplasm of female breast	32	4.3	Noninflammatory disorders of reproductive organs	67	4.4
Benign neoplasm of bone and articular cartilage	16	2.2	Other disorders of breast	55	3.6
Endocrine, nutrition, immunity (240 - 279)	187		Pregnancy complications (630 - 679)	14,301	
Disorders of fluid, electrolyte, and acid-base balance	53	28.3	Other indications for care, NEC	1,140	74.3
Nontoxic nodular goiter	33	17.6	Normal delivery	1,121	73.0
Thyrotoxicosis with or without goiter	16	8.6	Trauma to perineum and vulva during delivery	961	62.6
Diabetes mellitus	14	7.5	Early or threatened labor	961	62.6
Obesity and other hyperalimentation	23	12.3	Abnormality of forces of labor	959	62.5
Hematologic disorders (280 - 289)	61		Skin diseases (680 - 709)	194	
Purpura and other hemorrhagic conditions	10	16.4	Other cellulitis and abscess	83	42.8
Iron deficiency anemias	11	18.0	Other hypertrophic and atrophic conditions	36	18.6
Diseases of white blood cells	14	23.0	Pilonidal cyst	24	12.4
Other and unspecified anemias	11	18.0	Other disorders of skin and subcutaneous tissue	14	7.2
Other diseases of blood and blood-forming organs	11	18.0	Cellulitis and abscess of finger and toe	11	5.7
Mental disorders (290 - 319)	2,361		Musculoskeletal system (710 - 739)	789	
Adjustment reaction	1,031	43.7	Internal derangement of knee	126	16.0
Affective psychoses	532	22.5	Intervertebral disc disorders	117	14.8
Neurotic disorders	166	7.0	Other derangement of joint	92	11.7
Personality disorders	168	7.1	Other disorders of bone and cartilage	75	9.5
Depressive disorder	136	5.8	Acquired deformities of toe	55	7.0
Nervous system (320 - 389)	282		Congenital anomalies (740 - 759)	68	
Migraine	85	30.1	Congenital anomalies of the integument	9	13.2
Multiple sclerosis	24	8.5	Bulbus cordis anomalies	8	11.8
Other conditions of brain	14	5.0	Other musculoskeletal	7	10.3
Vertiginous syndromes	13	4.6	Other congenital anomalies of limbs	7	10.3
Mononeuritis of upper limb and mononeuritis multiplex	11	3.9	Genital organs	5	7.4
Circulatory system (390 - 459)	142		Ill-defined conditions (780 - 799)	662	
Cardiac dysrhythmias	27	19.0	Other symptoms involving abdomen and pelvis	260	39.3
Other venous embolism and thrombosis	16	11.3	General symptoms	149	22.5
Hemorrhoids	16	11.3	Symptoms involving respiratory system and chest	108	16.3
Varicose veins of lower extremities	7	4.9	Symptoms involving digestive system	39	5.9
Phlebitis and thrombophlebitis	6	4.2	Symptoms involving head and neck	35	5.3
Respiratory system (460 - 519)	451		Injury and poisoning (800 - 999)	917	
Pneumonia, organism unspecified	73	16.2	Other complications of procedures, NEC	135	14.7
Acute pharyngitis	62	13.7	Poisoning by analgesics, antipyretics	73	8.0
Asthma	58	12.9	Fracture of ankle	56	6.1
Peritonsillar abscess	38	8.4	Complications due to certain procedures	53	5.8
Chronic disease of tonsils and adenoids	38	8.4	Sprains and strains of knee and leg	39	4.3

Table 4. Injury hospitalizations by causal agent,¹ US Armed Forces, 2000

Cause	Number	Percent
Unintentional		
Falls and miscellaneous	1,474	18.8
Land transport	1,435	18.3
Athletics	1,107	14.1
Complications of medical care	1,097	14.0
Machinery, tools	484	6.2
Poisons and fire	410	5.2
Air transport	332	4.2
Environmental factors	309	3.9
Guns, explosives, except in war	99	1.3
Water transport	49	0.6
Unknown	18	0.2
Intentional		
Self-inflicted	311	4.0
Violence	696	8.9
War	31	0.4

1. Causal agents were determined by trauma and STANAG codes.

Figure 2. Rate of hospitalizations, by major category, by gender and age, US Armed Forces, 2000

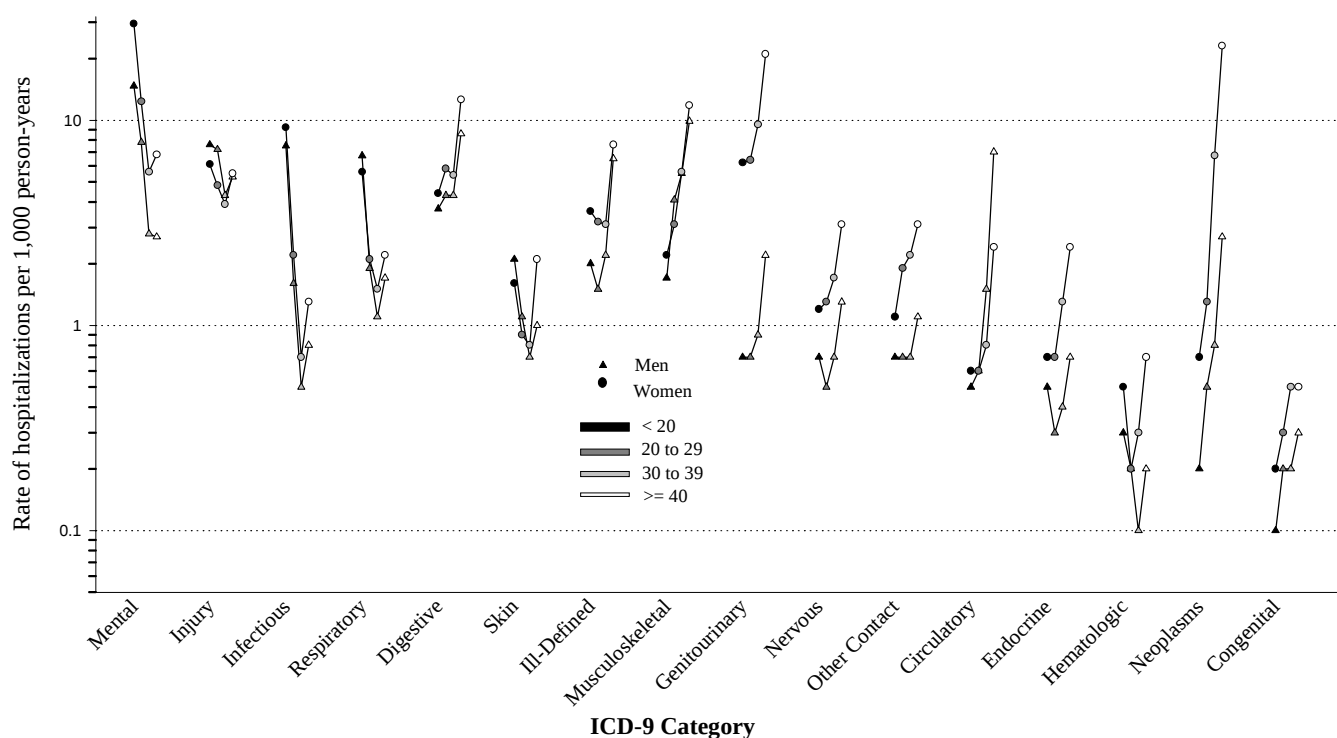
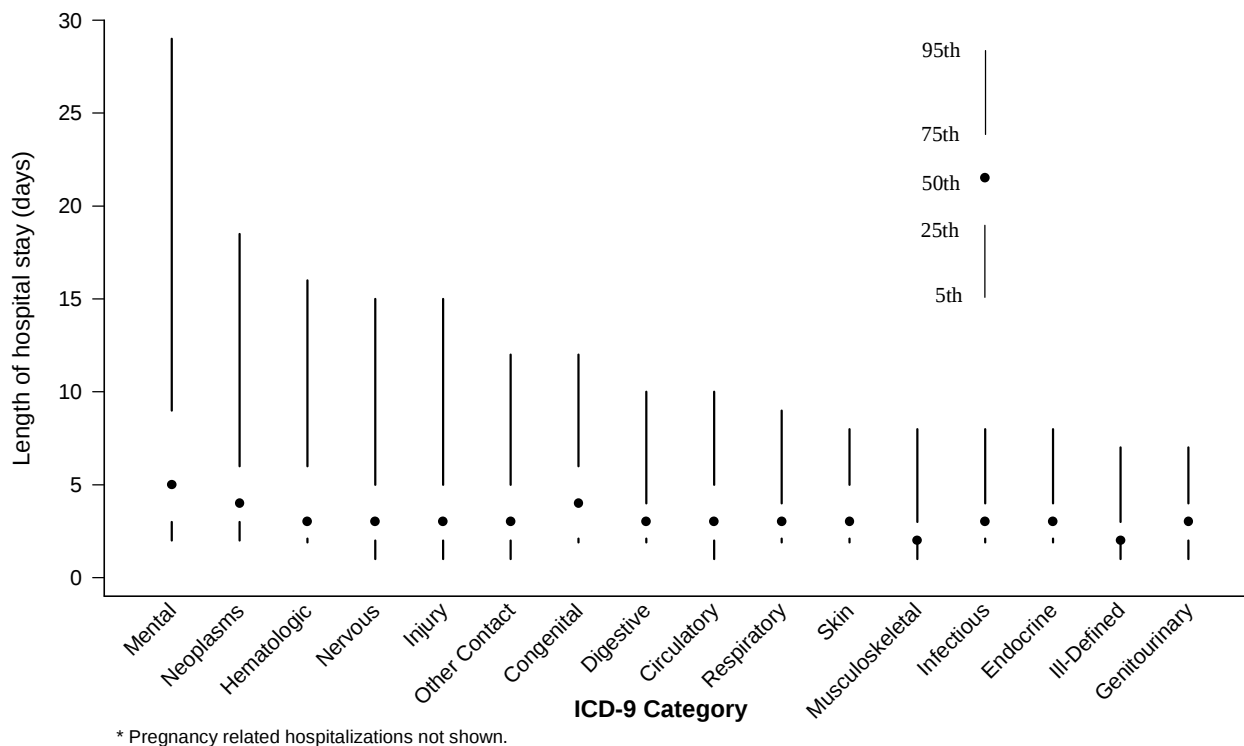
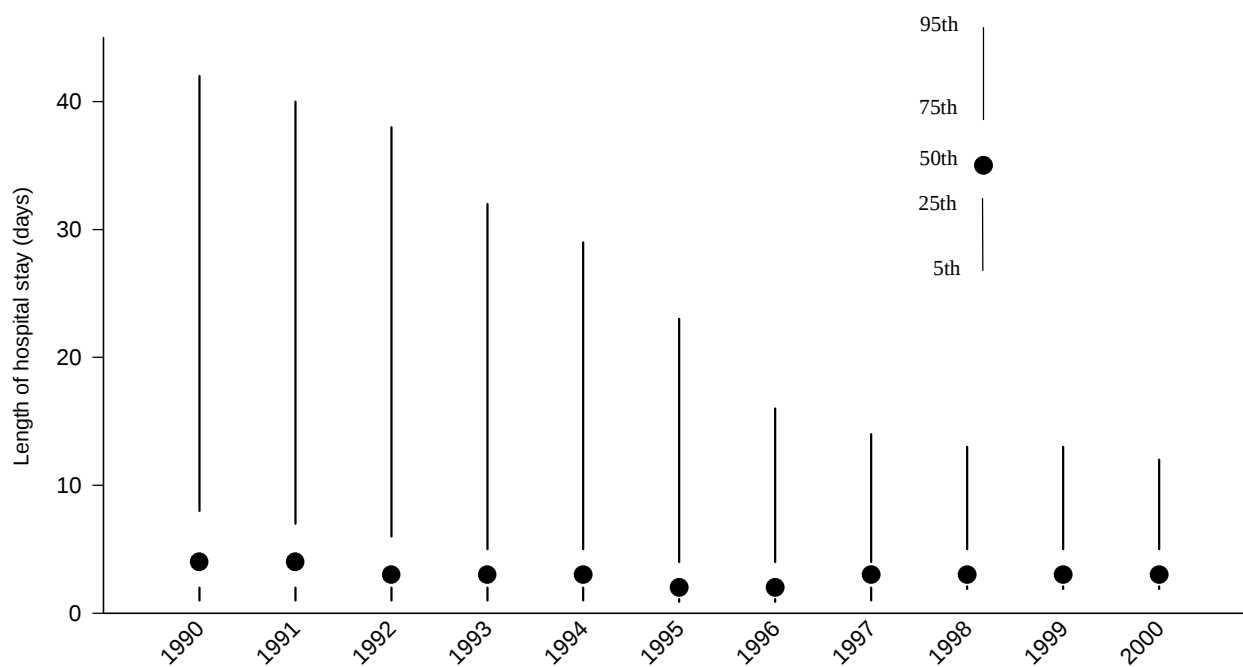


Figure 3. Length of hospital stay, by major diagnostic category, US Armed Forces, 2000***Figure 4. Length of hospital stay, by year, US Armed Forces, 1990-2000**

Ambulatory Visits among active duty personnel - 2000

This report documents frequencies, rates, trends, and characteristics of ambulatory visits by active duty members of the US Armed Forces during calendar year 2000 at fixed military medical facilities. All diagnoses were coded using the International Classification of Diseases, 9th revision, Clinical Modification (ICD-9-CM). For this summary, ambulatory visits were categorized based on the first three digits of the ICD-9-CM codes of the primary diagnoses. All data were derived from the Defense Medical Surveillance System.

Overall frequencies, rates, and trends. During 2000, there were 10,118,063 outpatient visits among active members of the U.S. Armed Forces (table 1). There were 11.1% more ambulatory visits in 2000 than in 1998 (figure 1, table 1). In 2000, the crude rate was 7,699.5 per 1,000 person-years; thus, during the year, an average of 7.7 outpatient visits were reported for each servicemember.

Distribution, by diagnostic categories. Between 1998 and 2000, the spectrum of illnesses and injuries treated in outpatient settings generally was stable (table 1). The largest category-specific increase (33%) in visits between 1998 and 2000 was for “mental disorders” (table 1).

In 2000, approximately 40% of all visits were for “other contact with health services.” This category (indicated by “V” codes of the ICD-9-CM) includes health care not related to current illnesses or injuries (e.g., prophylactic immunizations, management of normal pregnancies, routine physical examinations, health promotion counseling).

Musculoskeletal disorders were the most commonly reported illness/injury-related diagnoses (table 1). They accounted for nearly one-fourth of all illness/injury-related visits. The most frequent musculoskeletal diagnoses among

both men and women were due to joint and back disorders (tables 2,3).

The second and third most commonly reported diagnoses were related to injuries and poisonings and respiratory disorders (table 1). Sprains and strains of the lower extremities, including ankles, knees, and feet, accounted for nearly one-fourth of all injury-related visits (tables 2,3). Acute upper respiratory infections accounted for approximately one-third of all respiratory-related visits (tables 2,3).

Rates, by gender and age. Overall, outpatient visit rates were nearly 4-times higher among women (crude rate: 14,074.2 per 1,000 person-years) than men (crude rate: 3,955.6 per 1,000 person-years). Rates were higher among women than men in every diagnostic category (figure 2).

Not surprisingly, relationships between visit rates and age varied across diagnostic categories (figure 2). The relationships were generally similar among women and men (figure 2)—with one notable exception. Among women, outpatient visit rates for genitourinary disorders minimally changed in relation to age; in contrast, among men, outpatient visit rates for genitourinary disorders markedly increased with age (figure 2).

Duty restrictions, by diagnostic category. Disposition codes provide insights into the relative severities and operational impacts of illnesses and injuries treated in outpatient settings. Overall and in each diagnostic category, servicemembers returned to duty without limitations (figure 3) after more than 60% of ambulatory visits. Musculoskeletal disorders and injuries accounted for the most visits by far that resulted in duty restrictions (figure 3), while patients with respiratory, infectious, and digestive disorders were the most likely to be removed from work and sent to their quarters (figure 3).

*Data analysis and report by Barbara E. Brynan, MPH,
Analysis Group, Army Medical Surveillance Activity.*

Table 1. Outpatients visits by major diagnostic categories, US Armed Forces, 1998 and 2000

Category	1998		2000	
	Number	Rank	Number	Rank
Other contact with health services	3,672,891	(1)	4,106,349	(1)
Musculoskeletal	1,350,686	(2)	1,504,764	(2)
Injury and poisoning	809,008	(3)	852,988	(3)
Respiratory	578,571	(4)	634,458	(4)
Mental disorders	436,545	(6)	580,302	(5)
Nervous system and sense organs	506,479	(5)	570,064	(6)
Symptoms, signs, and ill-defined conditions	418,086	(7)	486,396	(7)
Infectious and parasitic	288,489	(8)	291,688	(8)
Skin and subcutaneous tissue	255,790	(9)	268,398	(9)
Genitourinary	214,580	(10)	219,795	(10)
Digestive	204,786	(11)	203,238	(11)
Endocrine, nutritional, metabolic and immunity	118,544	(12)	134,916	(12)
Circulatory	114,264	(13)	120,362	(13)
Neoplasms	74,413	(14)	76,522	(14)
Pregnancy	33,981	(15)	38,754	(15)
Congenital anomalies	15,193	(16)	16,042	(16)
Blood and blood-forming organs	11,701	(17)	13,204	(17)

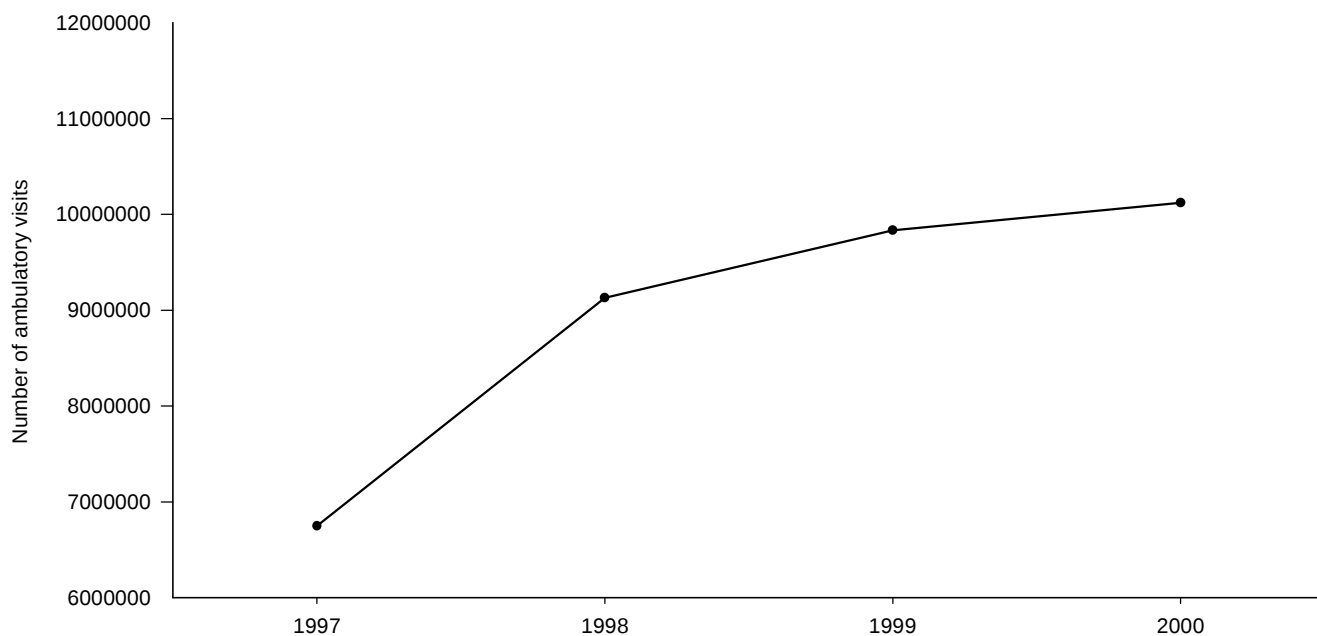
Figure 1. Annual number of outpatient visits, US Armed Forces, 1997-2000

Table 2. Most frequent diagnoses during outpatient visits, by major diagnostic category, MEN, US Armed Forces, 2000

Diagnostic category	N	%	Diagnostic category	N	%
Infectious and parasitic diseases (001-139)	216,054	-	Digestive system (520 - 579)	152,962	
Viral and chlamydial infection classified elsewhere	71,602	33	Other noninfectious gastroenteritis and colitis	49,156	32
Other diseases due to viruses and Chlamydiae	46,299	21	Diseases of esophagus	26,942	18
Dermatophytosis	24,266	11	Inguinal hernia	13,486	9
Other venereal diseases	9,413	4	Gastritis and duodenitis	8,732	6
Human immunodeficiency virus	7,965	4	Functional digestive disorders nec	6,082	4
Neoplasms (140 - 239)	57,210		Genitourinary system (580 - 629)	83,824	
Benign neoplasm of skin	15,647	27	Other disorders of urethra and urinary tract	16,430	20
Lipoma	7,759	14	Calculus of kidney and ureter	10,390	12
Malignant neoplasm of testis	3,350	6	Other disorders of male genital organs	10,338	12
Other malignant neoplasm of skin	3,087	5	Orchitis and epididymitis	8,887	11
Neoplasm of unspecified sites	2,840	5	Infertility	6,322	8
Endocrine, nutrition, immunity (240 - 279)	100,520		Pregnancy complications (630 - 679)		
Disorders of lipid metabolism	31,370	31	-	-	-
Obesity and other hyperalimentation	30,738	31	-	-	-
Diabetes mellitus	14,437	14	-	-	-
Disorders of fluid, electrolyte, and acid-base balance	6,419	6	-	-	-
Acquired hypothyroidism	4,784	5	-	-	-
Hematologic disorders (280 - 289)	7,365		Skin diseases (680 - 709)	204,562	
Other and unspecified anemias	1,885	26	Contact dermatitis and other eczema	39,466	19
Other diseases	1,226	17	Diseases of sebaceous glands	32,000	16
Hereditary hemolytic anemias	947	13	Other cellulitis and abscess	22,453	11
Coagulation defects	859	12	Diseases of hair and hair follicles	20,760	10
Iron deficiency anemias	795	11	Other disorders of skin and subcutaneous tissue	15,264	7
Mental disorders (290 - 319)	445,029		Musculoskeletal system (710 - 739)	1,149,810	
Alcohol dependence syndrome	126,793	28	Other and unspecified disorders of joint	247,740	22
Nondependent abuse of drugs	96,973	22	Other and unspecified disorders of back	243,684	21
Adjustment reaction	59,129	13	Peripheral enthesopathies and allied syndromes	141,574	12
Affective psychoses	37,095	8	Other disorders of soft tissues	105,034	9
Neurotic disorders	34,154	8	Internal derangement of knee	96,112	8
Nervous system (320 - 389)	439,181		Congenital anomalies (740 - 759)	11,880	
Disorders of refraction and accommodation	199,548	45	Certain congenital musculoskeletal deformities	3,703	31
Disorders of conjunctiva	34,602	8	Other congenital musculoskeletal anomalies	2,280	19
Hearing loss	29,626	7	Other congenital anomalies of limbs	1,215	10
Suppurative and unspecified otitis media	17,019	4	Congenital anomalies of the integument	1,019	9
Disorders of external ear	15,677	4	Congenital anomalies of genital organs	610	5
Circulatory system (390 - 459)	100,479		Ill-defined conditions (780 - 799)	324,812	
Essential hypertension	55,366	55	Symptoms involving respiratory system	55,972	17
Hemorrhoids	12,223	12	General symptoms	45,600	14
Cardiac dysrhythmias	5,440	5	Other symptoms involving abdomen and pelvis	41,632	13
Disease of capillaries	4,324	4	Symptoms involving head and neck	41,185	13
Other forms of chronic ischemic heart disease	3,557	4	Symptoms involving skin and integumentary tissue	33,801	10
Respiratory system (460 - 519)	465,718		Injury and poisoning (800 - 999)	694,916	
Acute upper respiratory infections, unspecified	158,200	34	Sprains and strains of ankle and foot	85,444	12
Allergic rhinitis	61,568	13	Sprains and strains of knee and leg	77,408	11
Acute pharyngitis	60,012	13	Other and ill-defined sprains and strains	66,962	10
Acute sinusitis	40,053	9	Sprains and strains of unspecified parts of back	48,520	7
Asthma	25,505	5	Sprains and strains of shoulder and upper arm	31,998	5

Table 3. Most frequent diagnoses during outpatient visits, by major diagnostic category, WOMEN, US Armed Forces, 2000

Diagnostic category	N	%	Diagnostic category	N	%
Infectious and parasitic diseases (001-139)	75,634		Digestive system (520 - 579)	50,276	
Viral and chlamydial infection classified	29,007	38	Other noninfectious gastroenteritis and colitis	20,803	41
Other diseases due to viruses and Chlamydiae	10,604	14	Diseases of esophagus	5,790	12
Candidiasis	6,916	9	Digestive disorders not elsewhere classified	5,271	10
Dermatophytosis	4,527	6	Gastritis and duodenitis	3,704	7
Herpes simplex	3,420	5	Dentofacial anomalies, including malocclusion	1,694	3
Neoplasms (140 - 239)	19,312		Genitourinary system (580 - 629)	135,971	
Benign neoplasm of skin	4,903	25	Other disorders of urethra and urinary tract	28,647	21
Malignant neoplasm of female breast	2,874	15	Inflammatory disease of cervix, vagina, and vulva	21,755	16
Uterine leiomyoma	1,988	10	Disorders of menstruation	15,716	12
Lipoma	1,219	6	Pain and other symptoms	15,678	12
Neoplasm of unspecified sites	800	4	Other disorders of breast	12,351	9
Endocrine, nutrition, immunity (240 - 279)	34,396		Pregnancy complications (630 - 679)	38,754	
Obesity and other hyperalimentation	13,330	39	Early or threatened labor	6,977	18
Acquired hypothyroidism	4,834	14	Hemorrhage in early pregnancy	5,048	13
Disorders of fluid, electrolyte, and acid-base	3,363	10	Other conditions classifiable elsewhere	3,568	9
Disorders of lipid metabolism	3,280	10	Other complications, not elsewhere classified	2,524	7
Diabetes mellitus	2,140	6	Spontaneous abortion	2,355	6
Hematologic disorders (280 - 289)	5,839		Skin diseases (680 - 709)	63,836	
Other and unspecified anemias	2,313	40	Diseases of sebaceous glands	13,788	22
Iron deficiency anemias	2,021	35	Contact dermatitis and other eczema	12,414	19
Other diseases of blood	404	7	Other disorders of skin and subcutaneous tissue	6,036	9
Other deficiency anemias	327	6	Other cellulitis and abscess	4,635	7
Hereditary hemolytic anemias	240	4	Urticaria	3,517	6
Mental disorders (290 - 319)	135,273		Musculoskeletal system (710 - 739)	354,954	
Adjustment reaction	30,919	23	Other and unspecified disorders of back	74,691	21
Affective psychoses	25,068	19	Other and unspecified disorders of joint	71,369	20
Neurotic disorders	16,421	12	Other disorders of soft tissues	40,697	11
Depressive disorder, not elsewhere classified	14,899	11	Peripheral enthesopathies and allied syndromes	37,871	11
Alcohol dependence syndrome	13,534	10	Internal derangement of knee	22,293	6
Nervous system (320 - 389)	130,883		Congenital anomalies (740 - 759)	4,162	
Disorders of refraction and accommodation	52,064	40	Certain congenital musculoskeletal deformities	1,269	30
Migraine	15,972	12	Congenital anomalies of the integument	780	19
Disorders of conjunctiva	11,090	8	Other congenital musculoskeletal anomalies	461	11
Mononeuritis of upper limb	6,583	5	Other congenital anomalies of limbs	450	11
Suppurative and unspecified otitis media	5,101	4	Congenital anomalies of respiratory system	171	4
Circulatory system (390 - 459)	19,883		Ill-defined conditions (780 - 799)	161,584	
Essential hypertension	8,254	42	Other symptoms involving abdomen and pelvis	35,431	22
Hemorrhoids	2,732	14	Symptoms involving head and neck	23,784	15
Disease of capillaries	1,829	9	Nonspecific abnormal histological findings	22,510	14
Varicose veins of lower extremities	1,467	7	Symptoms involving respiratory system	15,329	9
Cardiac dysrhythmias	1,336	7	General symptoms	15,179	9
Respiratory system (460 - 519)	168,740		Injury and poisoning (800 - 999)	158,072	
Acute upper respiratory infections, unspecified	55,157	33	Sprains and strains of ankle and foot	19,691	12
Allergic rhinitis	23,707	14	Sprains and strains of knee and leg	18,648	12
Acute pharyngitis	21,856	13	Other and ill-defined sprains and strains	16,303	10
Acute sinusitis	18,025	11	Sprains and strains of nspecified parts of back	15,084	10
Asthma	11,290	7	Certain adverse effects not elsewhere classified	8,961	6

Figure 2. Rate of outpatient visits, by major diagnostic category, by gender and age, US Armed Forces, 2000

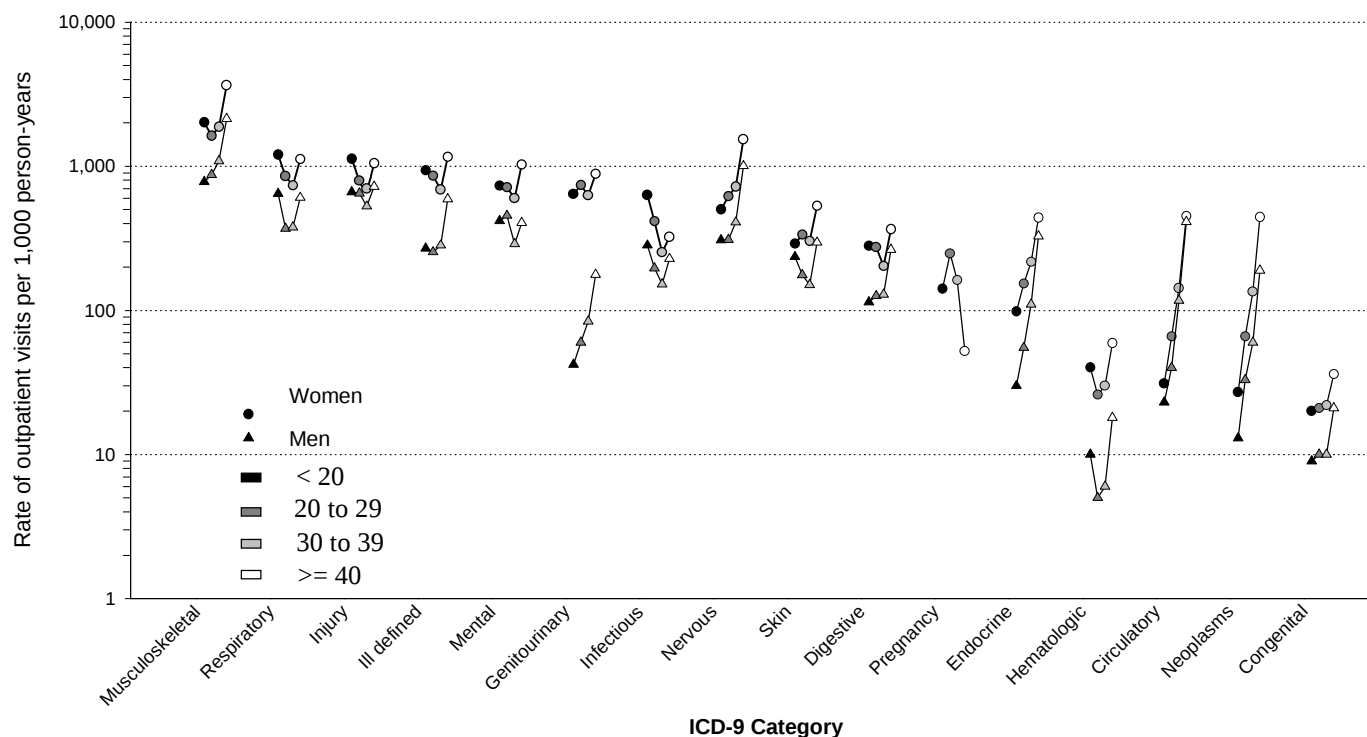
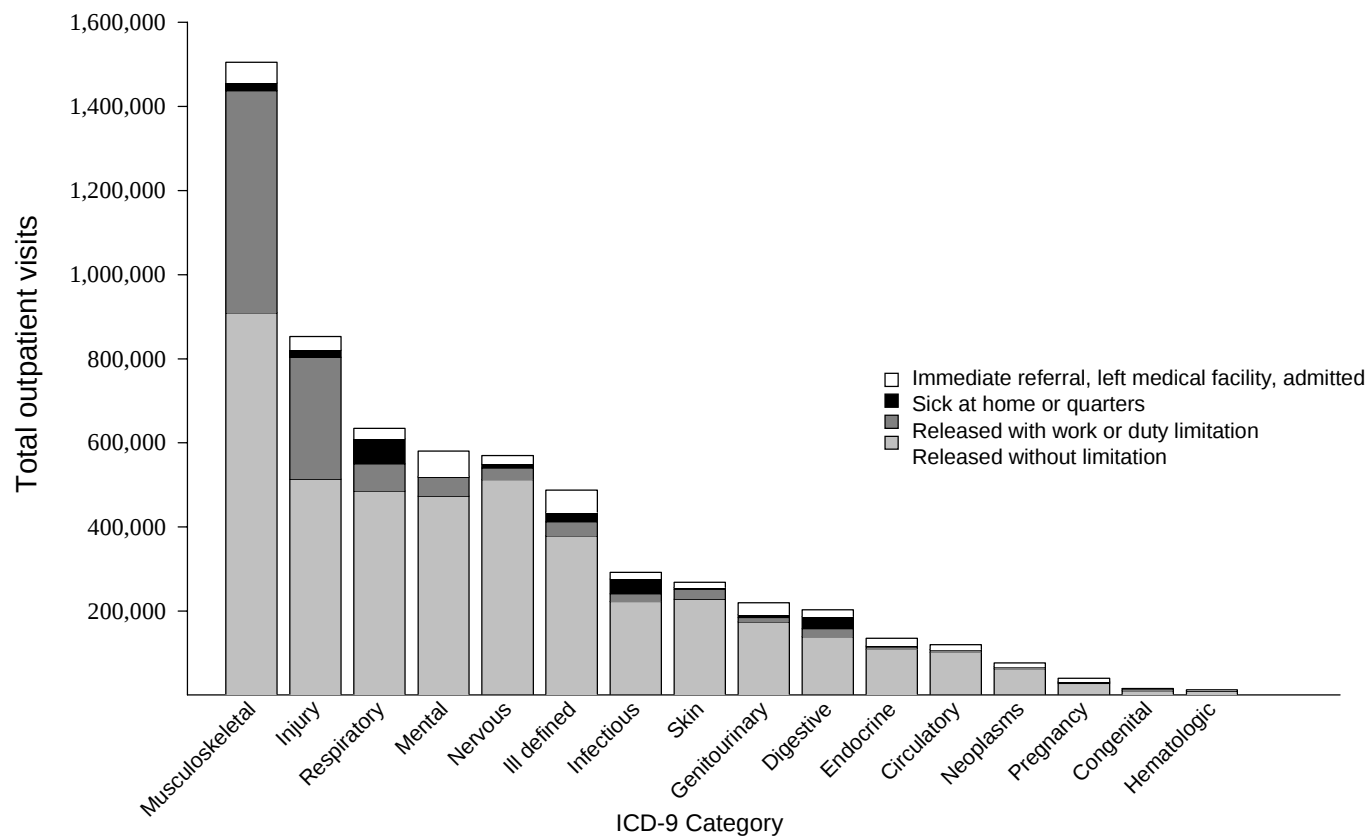


Figure 3. Outpatient dispositions by diagnostic category, US Armed Forces, 2000



Reportable Medical Events of the US Army, 2000

In the US Army, data regarding medical events of special surveillance interest are collected and reported using the Reportable Medical Events System (RMES). Currently, 34 Army preventive medicine/public health activities in the United States, Korea, and Europe electronically transmit reportable medical events data 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” throughout the Department of Defense. During calendar year 2000, the medical surveillance centers of the Navy and Air Force began to forward notifiable medical event case reports to AMSA for incorporation into the DMSS. The integration of data from all of the Services enables summaries and analyses across the entire US Armed Forces. Because reports from the other Services are incomplete for the year 2000, this report summarizes frequencies, rates, and trends (through calendar year 2000) of reportable medical events among active duty soldiers.

During the current year, 9,459 reports of notifiable medical events among soldiers—an average of 26 reports per day—were transmitted from field sites to the AMSA (table 2). There were more notifiable event reports in 2000 than in any previous year.

As in previous years, sexually transmitted diseases accounted for a large majority (92%) of the case reports in 2000. *Chlamydia trachomatis* genital infections remained the most frequently reported notifiable condition.

Compared to the average of the previous 3 years, in 2000 there were more reports of heat exhaustion, fewer reports of heat stroke, and a similar number of reports of cold weather injuries among soldiers (figure 1). These findings

may indicate better ascertainment and reporting of heat-related injuries in general and/or earlier detection and treatment of heat-related injuries.

Compared to the average of the previous three years, there were more reports of adverse reactions to vaccines in 2000. Most “adverse reaction to vaccine” reports were associated with immunizations against anthrax.

Reports of arthropod-transmitted diseases such as Rocky Mountain spotted fever, Lyme disease, and malaria increased in 2000. The most reports of tick-transmitted infections among soldiers were from West Point (New York) and Europe. Most malaria cases were attributed to *Plasmodium vivax* infections acquired in Korea.²

In 2000 compared to the prior 3-year average, there were fewer reports of influenza, varicella, and hepatitis B among soldiers. The trend undoubtedly reflects the effects of vaccinations³ against these viruses (figure 1).

Finally, in 2000, there were generally fewer reports of food- and water-transmitted infectious illnesses (e.g., shigella, giardia, campylobacter, hepatitis A, salmonella) among soldiers. However, there were more reports of *E. coli* O157:H7-related illnesses than in the recent past. The trends are similar to those reported among US civilians during the same period.⁴

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.
2. Malaria, US Army, 1998. *MSMR*, 1999;5(1):2-8.
3. Niebuhr, DW. Varicella primary prevention program, Fort Knox, Kentucky. *MSMR*, 1999;5(4): 9-10.
4. CDC. Preliminary FoodNet data on the incidence of foodborne illnesses – selected sites, United States, 2000. *MMWR*, 2001;50(13): 241-6.

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

Table 1. Sentinel reportable events, US Army medical treatment facilities
Cumulative events for all beneficiaries,¹ calendar years 1999 and 2000

Reporting location	Number of reports all events ²		Food-borne								Vaccine Preventable					
			Campylobacter		Giardia		Salmonella		Shigella		Hepatitis A		Hepatitis B		Varicella	
	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000
NORTH ATLANTIC																
Washington DC Area	198	210	5	6	6	6	4	10	1	5	1	3	-	1	3	6
Aberdeen, MD	24	45	-	-	-	-	-	-	-	-	-	-	-	3	1	1
FT Belvoir, VA	228	248	9	15	12	5	12	9	3	2	1	-	1	5	-	1
FT Bragg, NC	1,282	1,491	9	2	3	-	33	18	-	1	-	-	-	-	1	6
FT Drum, NY	232	227	1	1	4	-	1	-	-	-	-	-	-	-	6	6
FT Eustis, VA	214	260	2	4	-	-	4	5	1	-	-	-	1	1	2	2
FT Knox, KY	302	252	3	1	3	2	1	1	3	-	-	-	-	1	1	7
FT Lee, VA	178	254	-	-	-	-	2	-	-	-	-	1	1	-	-	-
FT Meade, MD	84	100	-	-	1	-	4	2	-	-	-	-	-	-	1	-
West Point, NY	57	107	-	-	-	-	-	4	1	-	-	-	2	1	-	2
GREAT PLAINS																
FT Sam Houston, TX	317	328	-	-	-	3	4	8	2	7	1	3	-	-	2	2
FT Bliss, TX	423	304	-	4	-	5	7	4	4	7	3	-	4	-	2	2
FT Carson, CO	768	667	5	2	10	5	6	2	1	9	-	-	1	1	2	-
FT Hood, TX	1,672	2,159	3	6	1	1	12	15	16	6	1	1	1	2	4	2
FT Huachuca, AZ	74	62	1	-	-	-	1	1	1	-	1	-	-	-	-	-
FT Leavenworth, KS	20	33	2	1	1	2	-	1	-	-	-	-	-	-	-	-
FT Leonard Wood, MO	175	192	-	1	1	2	3	-	-	-	-	-	1	-	13	13
FT Polk, LA	219	265	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FT Riley, KS	314	245	-	-	-	-	2	-	-	-	-	-	-	-	-	-
FT Sill, OK	288	313	-	-	-	-	-	-	2	-	-	-	6	-	6	4
SOUTHEAST																
FT Gordon, GA	223	281	-	-	-	-	4	2	-	1	1	-	3	4	2	2
FT Benning, GA	432	386	1	3	2	3	17	17	2	1	1	-	-	1	2	8
FT Campbell, KY	325	514	7	4	3	7	2	17	11	15	-	-	-	1	-	2
FT Jackson, SC	527	419	-	-	-	-	1	-	-	-	-	-	-	-	6	3
FT Rucker, AL	59	85	-	-	-	-	-	3	1	-	-	-	-	1	-	-
FT Stewart, GA	508	552	-	-	3	-	6	8	-	-	-	-	1	2	4	-
WESTERN																
FT Lewis, WA	477	732	-	5	1	6	-	7	1	2	-	1	-	3	-	-
FT Irwin, CA	47	69	-	-	-	-	-	1	-	-	-	-	5	1	-	5
FT Wainwright, AK	134	118	-	-	-	-	-	-	-	-	-	-	1	-	2	-
OTHER LOCATIONS																
Hawaii	628	832	27	47	15	10	14	12	1	2	1	1	1	2	-	1
Europe	1,469	1,813	32	18	-	3	23	37	6	2	2	1	12	10	16	9
Korea	560	570	2	-	-	-	1	8	-	-	-	-	15	1	3	3
Total	12458	14133	109	120	66	60	164	192	57	60	13	11	56	41	79	87

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

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

Note: Completeness and timeliness of reporting vary by facility.

Source: Army Reportable Medical Events System.

Note: Reportable events are reported by date of onset. Only cases submitted as confirmed are included.

**Table 1. (Continued) Sentinel reportable events, US Army medical treatment facilities
Cumulative events for all beneficiaries,¹ calendar years 1999 and 2000**

Reporting location	Arthropod-borne				Sexually Transmitted								Environmental			
	Lyme Disease		Malaria		Chlamydia		Gonorrhea		Syphilis ³		Urethritis ⁴		Cold		Heat	
	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000
NORTH ATLANTIC																
Washington DC Area	3	3	6	1	87	77	22	29	3	2	1	-	-	1	-	-
Aberdeen, MD	-	3	-	-	8	19	13	6	-	2	2	2	-	-	-	-
FT Belvoir, VA	-	-	-	1	140	151	40	33	-	3	-	-	-	-	2	10
FT Bragg, NC	4	2	3	10	565	609	266	284	5	3	269	380	9	6	110	164
FT Drum, NY	-	-	3	1	116	144	56	59	-	-	4	2	35	12	3	1
FT Eustis, VA	-	1	2	-	144	189	51	46	-	-	-	-	1	-	3	8
FT Knox, KY	-	-	-	-	212	181	59	45	1	1	-	-	2	1	15	10
FT Lee, VA	-	-	-	-	141	193	30	59	3	-	-	-	-	-	1	1
FT Meade, MD	3	-	-	-	60	76	11	11	-	1	-	2	-	-	-	-
West Point, NY	18	37	-	1	29	45	3	12	-	1	-	-	-	1	2	1
GREAT PLAINS																
FT Sam Houston, TX	-	-	1	-	258	243	21	38	-	-	13	6	-	-	5	7
FT Bliss, TX	2	-	2	3	186	162	61	58	-	2	1	-	-	-	9	4
FT Carson, CO	-	-	-	1	559	502	100	74	-	-	72	51	2	2	-	-
FT Hood, TX	1	-	6	1	964	1130	287	421	5	1	332	496	-	1	8	32
FT Huachuca, AZ	-	-	-	-	54	48	12	12	-	-	-	-	-	-	2	1
FT Leavenworth, KS	-	1	-	-	14	21	3	3	-	-	-	-	-	-	-	2
FT Leonard Wood, MO	-	1	1	-	99	96	30	36	1	-	8	8	6	19	3	11
FT Polk, LA	-	-	1	-	171	225	42	35	2	-	-	-	-	-	1	4
FT Riley, KS	-	-	-	-	206	150	79	64	-	1	-	-	2	23	18	4
FT Sill, OK	-	2	1	-	163	180	62	62	2	-	33	50	-	-	9	8
SOUTHEAST																
FT Gordon, GA	-	2	-	3	179	228	16	27	1	1	-	-	1	-	4	1
FT Benning, GA	-	-	1	8	167	175	91	102	18	4	-	-	-	-	100	52
FT Campbell, KY	-	1	5	9	181	295	102	146	-	1	-	-	2	2	10	4
FT Jackson, SC	-	-	-	-	434	359	71	47	7	4	-	-	-	-	-	1
FT Rucker, AL	-	-	-	1	41	56	13	16	-	-	-	-	-	-	4	1
FT Stewart, GA	-	-	4	2	162	184	97	126	-	-	209	200	-	-	20	27
WESTERN																
FT Lewis, WA	-	3	6	9	283	496	54	67	-	-	120	108	-	-	-	-
FT Irwin, CA	-	-	-	1	37	48	4	9	-	2	-	-	-	-	-	-
FT Wainwright, AK	-	-	1	-	66	100	10	4	-	-	-	-	52	13	-	-
OTHER LOCATIONS																
Hawaii	-	-	7	5	381	573	94	100	-	-	-	2	-	-	3	3
Europe	22	19	2	3	1036	1394	284	276	4	5	1	-	6	6	-	-
Korea	-	-	21	17	439	441	20	47	16	16	-	11	9	2	5	5
Total	53	75	73	77	7582	8790	2104	2354	68	50	1065	1318	127	89	337	362

3. Primary and secondary.

4. Urethritis, non-gonoccal (NGU).

Note: Completeness and timeliness of reporting vary by facility.

Source: Army Reportable Medical Events System.

Note: Reportable events are reported by date of onset. Only cases submitted as confirmed are included.

Table 2. Number of reportable events¹ at US Army medical treatment facilities among active duty personnel, by year, 1996-2000

Diagnosis ¹	1996	1997	1998	1999	2000	Diagnosis ¹	1996	1997	1998	1999	2000
All reportable events	3825	5782	6911	8396	9459						
Amebiasis	3	-	1	1	1	Malaria, falciparum	10	5	-	5	3
Anthrax	-	-	-	-	-	Malaria, malariae	-	-	-	-	-
Biological warfare agent exp.	-	-	-	-	-	Malaria, ovale	-	-	-	-	-
Botulism	-	-	-	-	-	Malaria, unspecified	1	5	7	3	6
Brucellosis	-	-	-	-	-	Malaria, vivax	11	29	34	52	46
Campylobacter	34	30	42	46	35	Measles	-	-	-	-	-
Carbon monoxide poisoning	-	5	4	2	6	Meningococcal meningitis	-	-	-	2	5
Chemical agent exposure	8	1	-	-	-	Meningococcal septicemia	-	-	-	5	-
Chlamydia	1730	3223	3928	5002	5755	Mumps	1	3	1	2	2
Cholera	-	-	-	-	-	Pertussis	1	-	-	-	2
Coccidioidomycosis	-	2	3	1	2	Plague	-	-	-	-	-
Cold weather	155	43	71	117	76	Pneumococcal pneumonia	-	-	-	17	2
Cryptosporidiosis	-	-	1	-	2	Poliomyelitis	-	-	-	-	-
Cyclospora	-	-	-	-	-	Q fever	-	-	-	-	1
Dengue fever	1	3	6	3	1	Rabies, human	-	-	-	-	-
Diphtheria	-	-	-	-	-	Relapsing fever	-	-	-	-	-
E. coli O157:H7	-	-	3	3	8	Rheumatic fever, acute	-	-	1	-	-
Ehrlichiosis	1	2	2	1	2	Rift valley fever	-	-	-	-	-
Encephalitis	-	-	-	-	-	Rocky mountain spotted fever	1	-	2	-	13
Filariasis	-	-	-	1	1	Rubella	-	-	-	-	-
Giardiasis	30	18	27	18	16	Salmonellosis	26	31	59	37	40
Gonorrhea	804	1224	1457	1530	1691	Schistosomiasis	-	-	-	-	1
H. influenzae, invasive	-	2	-	4	1	Shigellosis	19	24	16	24	7
Hantavirus infection	-	-	2	-	-	Smallpox	-	-	-	-	-
Heat exhaustion	40	79	177	178	237	Streptococcus, group A, inv.	-	-	1	1	-
Heat stroke	17	41	73	66	52	Syphilis	22	34	50	66	49
Hemorrhagic fever	1	2	-	-	2	Tetanus	-	-	1	-	-
Hepatitis A	14	9	10	3	3	Toxic shock syndrome	-	-	2	-	1
Hepatitis B	29	29	45	28	22	Trichinosis	-	2	-	4	-
Hepatitis C	13	12	25	14	14	Trypanosomiasis	-	-	-	-	-
Influenza	10	1	12	63	8	Tuberculosis, pulmonary	2	1	5	6	3
Lead poisoning	-	-	-	-	-	Tularemia	-	2	-	-	1
Legionellosis	1	-	-	1	-	Typhoid fever	-	-	-	-	-
Leishmaniasis	23	26	4	4	-	Typhus fever	1	-	-	-	-
Leprosy	-	2	-	-	-	Urethritis, non-gonococcal	701	774	724	981	1222
Leptospirosis	-	-	3	-	2	Vaccine, adverse event	21	-	11	23	32
Listeriosis	1	-	-	-	-	Varicella, active duty only	64	92	91	67	67
Lyme disease	10	6	10	15	19	Yellow fever	-	-	-	-	-

1. Events reported by April 30, 2001.

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

Source: Reportable Events Surveillance System.

Table 2. (Continued) Number of reportable events¹ at US Air Force medical treatment facilities among active duty personnel, by year, 1996-2000

Diagnosis ¹	1996	1997	1998	1999	2000	Diagnosis ¹	1996	1997	1998	1999	2000
All reportable events	-	-	103	666	3173						
Amebiasis	-	-	-	1	1	Malaria, falciparum	-	-	-	-	2
Anthrax	-	-	-	-	-	Malaria, malariae	-	-	-	-	1
Biological warfare agent exp.	-	-	-	-	-	Malaria, ovale	-	-	-	-	-
Botulism	-	-	-	-	-	Malaria, unspecified	-	-	1	1	1
Brucellosis	-	-	-	-	-	Malaria, vivax	-	-	1	1	2
Campylobacter	-	-	-	1	36	Measles	-	-	-	-	-
Carbon monoxide poisoning	-	-	-	-	-	Meningococcal meningitis	-	-	-	-	1
Chemical agent exposure	-	-	-	-	-	Meningococcal septicemia	-	-	-	-	-
Chlamydia	-	-	-	254	2412	Mumps	-	-	-	-	1
Cholera	-	-	1	-	-	Pertussis	-	-	-	-	4
Coccidioidomycosis	-	-	-	6	3	Plague	-	-	-	-	-
Cold weather	-	-	-	-	3	Pneumococcal pneumonia	-	-	-	-	1
Cryptosporidiosis	-	-	-	-	-	Poliomyelitis	-	-	-	-	-
Cyclospora	-	-	-	-	-	Q fever	-	-	-	-	-
Dengue fever	-	-	2	-	-	Rabies, human	-	-	-	-	-
Diphtheria	-	-	-	-	-	Relapsing fever	-	-	-	-	-
E. coli O157:H7	-	-	-	1	1	Rheumatic fever, acute	-	-	-	-	-
Ehrlichiosis	-	-	-	-	-	Rift valley fever	-	-	-	-	-
Encephalitis	-	-	-	-	-	Rocky mountain spotted fever	-	-	-	-	-
Filariasis	-	-	-	-	-	Rubella	-	-	-	-	-
Giardiasis	-	-	-	6	12	Salmonellosis	-	-	5	8	22
Gonorrhea	-	-	69	182	363	Schistosomiasis	-	-	-	-	-
H. influenzae, invasive	-	-	-	-	-	Shigellosis	-	-	6	10	4
Hantavirus infection	-	-	-	-	-	Smallpox	-	-	-	-	-
Heat exhaustion	-	-	-	2	60	Streptococcus, group A, inv.	-	-	-	-	4
Heat stroke	-	-	-	-	1	Syphilis	-	-	3	9	10
Hemorrhagic fever	-	-	-	-	-	Tetanus	-	-	-	-	-
Hepatitis A	-	-	-	-	2	Toxic shock syndrome	-	-	-	-	-
Hepatitis B	-	-	-	9	26	Trichinosis	-	-	-	1	2
Hepatitis C	-	-	-	3	29	Trypanosomiasis	-	-	-	-	-
Influenza	-	-	13	158	131	Tuberculosis, pulmonary	-	-	2	1	1
Lead poisoning	-	-	-	-	-	Tularemia	-	-	-	-	-
Legionellosis	-	-	-	-	1	Typhoid fever	-	-	-	-	-
Leishmaniasis	-	-	-	-	-	Typhus fever	-	-	-	-	-
Leprosy	-	-	-	-	-	Urethritis, non-gonococcal	-	-	-	6	19
Leptospirosis	-	-	-	-	-	Vaccine, adverse event	-	-	-	-	-
Listeriosis	-	-	-	-	-	Varicella, active duty only	-	-	-	5	11
Lyme disease	-	-	-	1	6	Yellow fever	-	-	-	-	-

1. Events reported by April 30, 2001.

Source: Air Force Reportable Events System.

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

Table 2. (Continued) Number of reportable events¹ at US Navy medical treatment facilities among active duty personnel, by year, 1996-2000

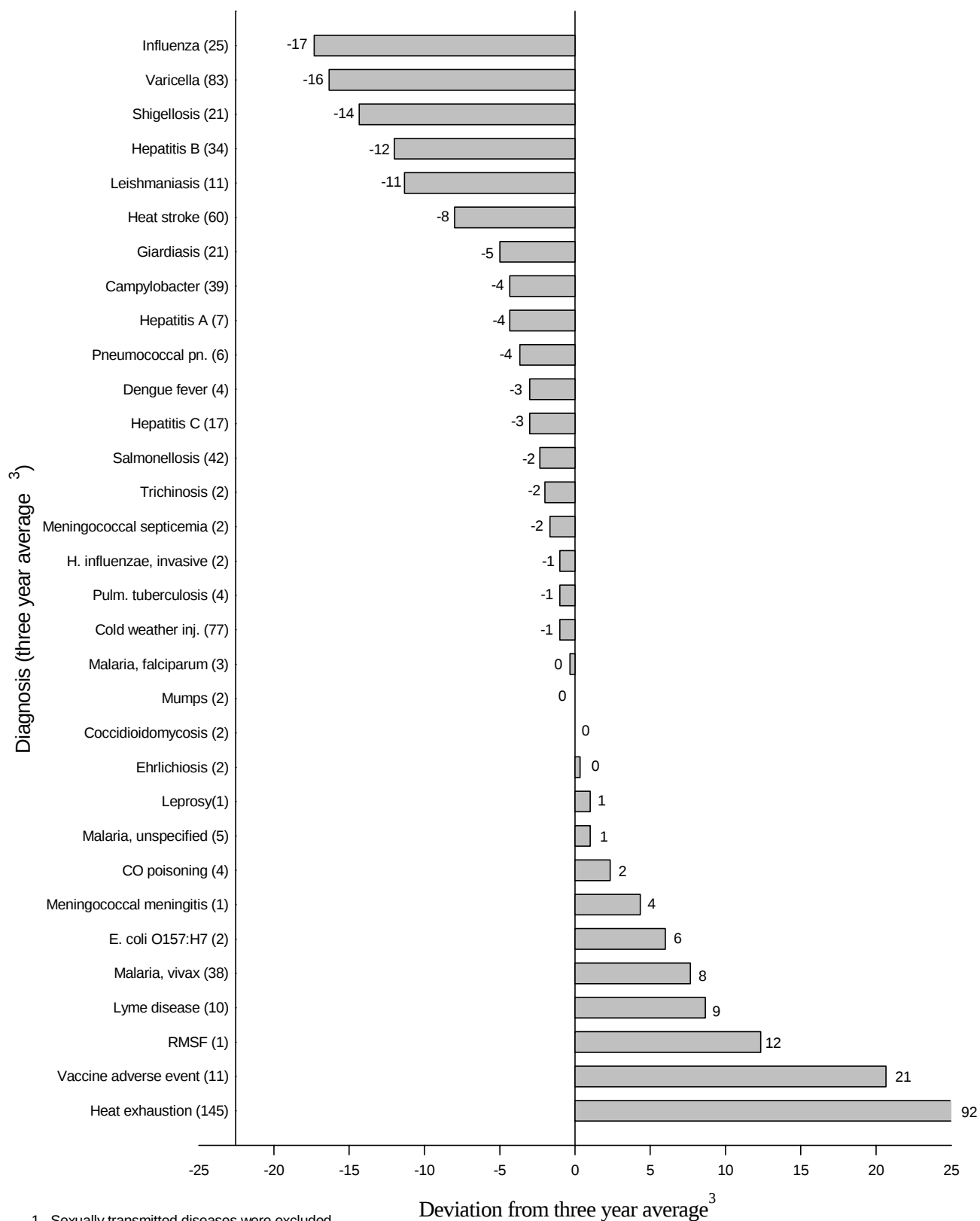
Diagnosis ¹	1996	1997	1998	1999	2000	Diagnosis ¹	1996	1997	1998	1999	2000
All reportable events	-	-	193	244	647						
Amebiasis	-	-	-	-	1	Malaria, falciparum	-	-	-	-	3
Anthrax	-	-	-	-	-	Malaria, malariae	-	-	-	-	-
Biological warfare agent exp.	-	-	-	-	-	Malaria, ovale	-	-	-	-	-
Botulism	-	-	-	-	-	Malaria, unspecified	-	-	-	-	3
Brucellosis	-	-	-	-	-	Malaria, vivax	-	-	-	-	-
Campylobacter	-	-	-	2	11	Measles	-	-	-	-	-
Carbon monoxide poisoning	-	-	-	-	-	Meningococcal meningitis	-	-	-	-	-
Chemical agent exposure	-	-	-	-	-	Meningococcal septicemia	-	-	-	-	2
Chlamydia	-	-	134	158	434	Mumps	-	-	-	-	-
Cholera	-	-	-	-	-	Pertussis	-	-	-	-	-
Coccidioidomycosis	-	-	-	-	-	Plague	-	-	-	-	-
Cold weather	-	-	-	-	-	Pneumococcal pneumonia	-	-	-	-	3
Cryptosporidiosis	-	-	1	-	-	Poliomyelitis	-	-	-	-	-
Cyclospora	-	-	-	-	-	Q fever	-	-	-	-	-
Dengue fever	-	-	-	-	-	Rabies, human	-	-	-	-	-
Diphtheria	-	-	-	-	-	Relapsing fever	-	-	-	-	-
E. coli O157:H7	-	-	-	-	2	Rheumatic fever, acute	-	-	-	-	-
Ehrlichiosis	-	-	-	-	-	Rift valley fever	-	-	-	-	-
Encephalitis	-	-	-	-	-	Rocky mountain spotted fever	-	-	-	-	2
Filariasis	-	-	-	-	-	Rubella	-	-	-	-	-
Giardiasis	-	-	-	2	2	Salmonellosis	-	-	1	4	-
Gonorrhea	-	-	51	65	151	Schistosomiasis	-	-	-	-	-
H. influenzae, invasive	-	-	-	-	-	Shigellosis	-	-	1	1	-
Hantavirus infection	-	-	-	-	-	Smallpox	-	-	-	-	-
Heat exhaustion	-	-	-	-	3	Streptococcus, group A, inv.	-	-	-	2	1
Heat stroke	-	-	-	-	2	Syphilis	-	-	1	2	7
Hemorrhagic fever	-	-	-	-	-	Tetanus	-	-	-	-	-
Hepatitis A	-	-	1	-	1	Toxic shock syndrome	-	-	-	-	-
Hepatitis B	-	-	1	-	9	Trichinosis	-	-	-	-	-
Hepatitis C	-	-	-	-	3	Trypanosomiasis	-	-	-	-	-
Influenza	-	-	-	-	-	Tuberculosis, pulmonary	-	-	-	4	1
Lead poisoning	-	-	-	-	-	Tularemia	-	-	-	-	-
Legionellosis	-	-	-	-	-	Typhoid fever	-	-	-	-	-
Leishmaniasis	-	-	-	-	-	Typhus fever	-	-	-	-	-
Leprosy	-	-	-	-	-	Urethritis, non-gonococcal	-	-	-	-	-
Leptospirosis	-	-	-	-	-	Vaccine, adverse event	-	-	-	-	-
Listeriosis	-	-	-	-	-	Varicella, active duty only	-	-	2	4	4
Lyme disease	-	-	-	-	2	Yellow fever	-	-	-	-	-

1. Events reported by April 30, 2001

Source: Navy Disease Reporting System

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

Figure 1. Number of reportable events¹ at US Army medical treatment facilities among active duty personnel during 2000² compared to the three year average³ of 1997-1999.



1. Sexually transmitted diseases were excluded.

2. Reported by April 30, 2001.

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

Relative Burdens of Selected Illnesses and Injuries, US Armed Forces, 2000

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. To some extent, prevention efforts (and associated resources) should be targeted at illnesses and injuries based on their “relative burdens.” Assessments of relative burdens based on standard disease and injury coding systems (such as the International Classification of Diseases), or on inpatient or outpatient encounters alone, provide incomplete views of relative burdens and are therefore potentially misleading.

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 were designed to highlight diagnoses with particular importance in military populations and settings (e.g., knee disorders, mental disorders, back pain, heat- and cold-related injuries). We summarized the combined experiences of servicemembers in the inpatient and ambulatory settings to estimate the numbers of servicemembers affected by, and the numbers of medical encounters for, 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. Musculoskeletal disorders accounted for three (i.e., all other musculoskeletal disorders, back problems, joint pain) of the top six causes of medical encounters of servicemembers. Dislocations and sprains (other than of the ankle and foot), upper respiratory infections, and “all other signs and symptoms” also were among the top five reasons for accessing medical care.

Individuals affected. More servicemembers received medical care for upper respiratory infections than for any other condition. Of the seven conditions that affected the most servicemembers, three were musculoskeletal disorders (i.e., all other musculoskeletal disorders, back problems, joint pain) and one was injury-related (dislocations and sprains [other than of the ankle and foot]). Abnormalities of visual acuity (i.e., disorders of refraction and accommodation) and “all other signs and symptoms” also affected relatively large numbers of servicemembers.

Hospital bed-days. During 2000, deliveries of newborn infants and complications of pregnancy accounted for the first and the fifth most hospital bed-days, respectively.

Adjustment, mood, and substance abuse disorders accounted for the second, third, and sixth most hospital bed-days, respectively. Finally, fractures resulted in a significant number of in-hospital days. Thus, pregnancies, mental disorders, and acute skeletal injuries were the leading underlying causes of in-hospital care of servicemembers.

Relationships of burden indicators. Across diagnoses, the number of medical encounters was strongly correlated with the number of individuals affected (linear regression, total medical encounters = 1.82 x individuals affected, $R^2=0.87$). In contrast, total hospital bed-days was not significantly correlated with either the number of individuals affected or the number of medical encounters.

Editorial comment. The summaries presented here document that “burdens” attributable to various illnesses and injuries vary based on criteria for grouping diagnoses and measuring burdens. For example, mental disorders and pregnancy-related conditions accounted for relatively large numbers of hospital bed-days but relatively fewer total medical encounters. Based on hospital usage criteria 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. Again, assessments of the morbidity burdens associated these conditions would vary significantly based on the measures used.

During 2000, 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. The illness and injury subgroups that were in the top 25 in all three morbidity burden-related categories were back problems, knee disorders, fractures, unspecified viral infections, and non-specific groups (“all others”) of musculoskeletal disorders, injuries, signs and symptoms, infectious and parasitic diseases, and skin diseases.

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.

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

Table 1. Morbidity burdens of selected diseases and injuries, US Armed Forces, 2000

Category	Medical encounters ¹		Individuals affected ²		Hospital bed days	
	N	Rank	N	Rank	N	Rank
Musculoskeletal disease						
Back problems	374,433	(4)	135,937	(6)	5,109	(14)
Joint pain	256,431	(6)	129,627	(7)	179	(86)
Knee disorders	167,996	(11)	57,030	(14)	4,863	(16)
Shoulder disorders	135,329	(13)	41,375	(25)	2,426	(30)
Osteoarthritis	13,748	(64)	8,888	(60)	546	(62)
Rheumatoid arthritis	2,789	(88)	1,288	(89)	48	(106)
All other musculoskeletal disease	568,245	(1)	222,004	(2)	7,536	(9)
Injury and poisoning						
Dislocations and sprains (excl. ankle/foot)	389,885	(2)	180,725	(4)	2,615	(27)
Fractures	133,718	(14)	47,081	(21)	15,387	(4)
Ankle/foot sprains and strains	105,819	(16)	53,605	(16)	326	(76)
Other injury	91,995	(19)	69,907	(12)	7,282	(10)
Open wounds	49,118	(30)	36,778	(26)	2,950	(25)
Superficial injury	38,076	(38)	31,609	(28)	276	(81)
Other injury from external causes	34,796	(43)	18,570	(43)	496	(66)
Other complications NOS	7,945	(69)	6,246	(64)	6,065	(11)
Burns	6,097	(73)	3,942	(70)	1,103	(45)
Poisoning, nondrug	3,578	(83)	2,557	(76)	355	(73)
Heat-related injury	2,517	(89)	1,849	(78)	652	(57)
Poisoning, drugs	1,552	(100)	1,321	(87)	2,206	(33)
Cold injury	822	(108)	687	(98)	33	(108)
Mental disorders						
Substance abuse disorders	245,818	(8)	27,383	(35)	12,327	(6)
Mood	119,396	(15)	28,440	(34)	22,375	(3)
Adjustment	82,343	(22)	29,166	(31)	24,130	(2)
Anxiety	40,841	(37)	14,039	(48)	2,532	(29)
Tobacco dependence	24,643	(48)	12,308	(53)	2	(122)
Personality	14,093	(63)	5,881	(66)	3,944	(21)
Psychotic	8,521	(68)	1,622	(80)	10,152	(8)
Somatoform	5,652	(74)	2,593	(74)	762	(53)
All other mental disorders	48,421	(31)	20,315	(41)	5,050	(15)
Respiratory infections						
Upper respiratory	386,785	(3)	267,653	(1)	1,724	(38)
Lower respiratory	61,336	(28)	46,245	(22)	3,758	(23)
Otitis media	35,624	(40)	28,541	(33)	68	(101)
Sense organ diseases						
Refraction/accommodation	253,482	(7)	207,338	(3)	0	(123)
Glaucoma	12,710	(65)	8,174	(62)	207	(84)
Cataracts	1,614	(98)	1,042	(92)	3	(121)
All other sense organ diseases	188,434	(9)	123,633	(8)	1,081	(46)
Signs and symptoms						
Abdomen and pelvis	78,213	(23)	51,967	(17)	2,167	(34)
Respiratory and chest	72,876	(24)	49,682	(20)	2,320	(31)
All other signs and symptoms	289,497	(5)	173,579	(5)	4,820	(17)
Infectious and parasitic disease						
Unspecified viral infection	96,810	(17)	79,084	(11)	3,868	(22)
STDs	35,341	(41)	26,307	(36)	1,052	(47)
Diarrheal disease	21,063	(49)	17,929	(45)	627	(58)
Chlamydia	4,492	(76)	3,700	(72)	5	(120)
Hepatitis B and C	3,879	(80)	1,487	(82)	142	(89)
Tuberculosis	1,743	(96)	1,294	(88)	281	(79)
Bacterial meningitis	641	(109)	347	(105)	277	(80)
Malaria	379	(113)	249	(111)	173	(88)
Intestinal nematode infection	331	(114)	306	(107)	0	(124)
Tropical cluster	152	(117)	104	(115)	10	(119)
All other infectious and parasitic diseases	155,853	(12)	96,894	(10)	4,026	(19)

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, 2000

Category	Medical encounters ¹		Individuals affected ²		Hospital bed days	
	N	Rank	N	Rank	N	Rank
Skin disease						
Contact dermatitis	52,218	(29)	41,650	(23)	60	(102)
Sebaceous gland diseases	46,246	(33)	30,330	(30)	30	(111)
All other skin disease	173,551	(10)	106,915	(9)	5,669	(12)
Genitourinary disease						
Other urethra/urinary tract disorders	45,496	(34)	32,300	(27)	437	(70)
Female genital pain	16,359	(57)	11,036	(57)	771	(52)
Other breast disorders	16,136	(58)	8,852	(61)	501	(64)
Menstrual disorders	16,091	(59)	11,635	(56)	431	(71)
Kidney stones	12,352	(66)	5,176	(67)	1,260	(42)
Nephritis and nephrosis	3,598	(82)	1,263	(90)	446	(69)
Benign prostatic hypertrophy	2,130	(93)	1,616	(81)	49	(105)
All other genitourinary disease	87,698	(20)	51,645	(18)	4,229	(18)
Digestive disease						
Other gastroenteritis and colitis	70,605	(25)	57,014	(15)	1,138	(44)
Esophagus disease	33,682	(45)	20,048	(42)	1,953	(36)
Inguinal hernia	14,466	(62)	6,928	(63)	930	(49)
Appendicitis	3,734	(81)	2,221	(77)	5,643	(13)
Peptic ulcer	1,867	(94)	1,410	(85)	604	(59)
Cirrhosis	1,785	(95)	806	(94)	119	(92)
All other digestive disease	67,070	(26)	41,564	(24)	10,906	(7)
Respiratory disease						
Allergic rhinitis	85,981	(21)	50,971	(19)	11	(116)
Asthma	37,159	(39)	18,018	(44)	666	(55)
COPD	18,436	(53)	15,795	(47)	293	(78)
Chronic sinusitis	17,111	(55)	12,368	(52)	237	(83)
All other respiratory disease	34,018	(44)	21,169	(40)	4,014	(20)
Endocrine disorders						
Obesity	44,393	(35)	21,319	(39)	132	(90)
Lipoid metabolism disorders	34,966	(42)	23,596	(38)	55	(103)
Diabetes mellitus	17,012	(56)	4,912	(68)	713	(54)
All other endocrine disorders	43,921	(36)	25,233	(37)	2,299	(32)
Cardiovascular disease						
Essential hypertension	63,963	(27)	31,404	(29)	183	(85)
Ischemic	6,993	(71)	3,606	(73)	1,787	(37)
Cerebrovascular	2,850	(87)	941	(93)	1,148	(43)
Inflammatory	1,601	(99)	804	(95)	501	(65)
Rheumatic	627	(110)	502	(102)	18	(115)
All other cardiovascular disease	46,760	(32)	29,166	(32)	3,418	(24)
Headache	92,189	(18)	58,988	(13)	947	(48)
Maternal conditions						
Pregnancy complications	27,903	(46)	12,618	(51)	14,479	(5)
Delivery	19,440	(51)	12,027	(54)	38,488	(1)
Ectopic/miscarriage/abortion	6,435	(72)	3,792	(71)	1,477	(40)
Puerperium complications	1,028	(106)	755	(96)	471	(68)
Neurologic conditions						
Mononeuritis - upper and lower limbs	26,136	(47)	13,020	(49)	260	(82)
Epilepsy	4,051	(79)	1,437	(83)	179	(87)
Multiple sclerosis	2,153	(92)	455	(103)	419	(72)
Parkinson disease	97	(122)	45	(119)	0	(125)
All other neurologic conditions	19,429	(52)	8,967	(59)	2,550	(28)
Other neoplasms						
Benign skin neoplasm	20,848	(50)	16,088	(46)	21	(114)
Lipoma	9,105	(67)	6,049	(65)	71	(100)
Uterine leiomyoma	2,443	(90)	1,370	(86)	1,572	(39)
All other neoplasms	17,929	(54)	12,773	(50)	2,110	(35)

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, 2000

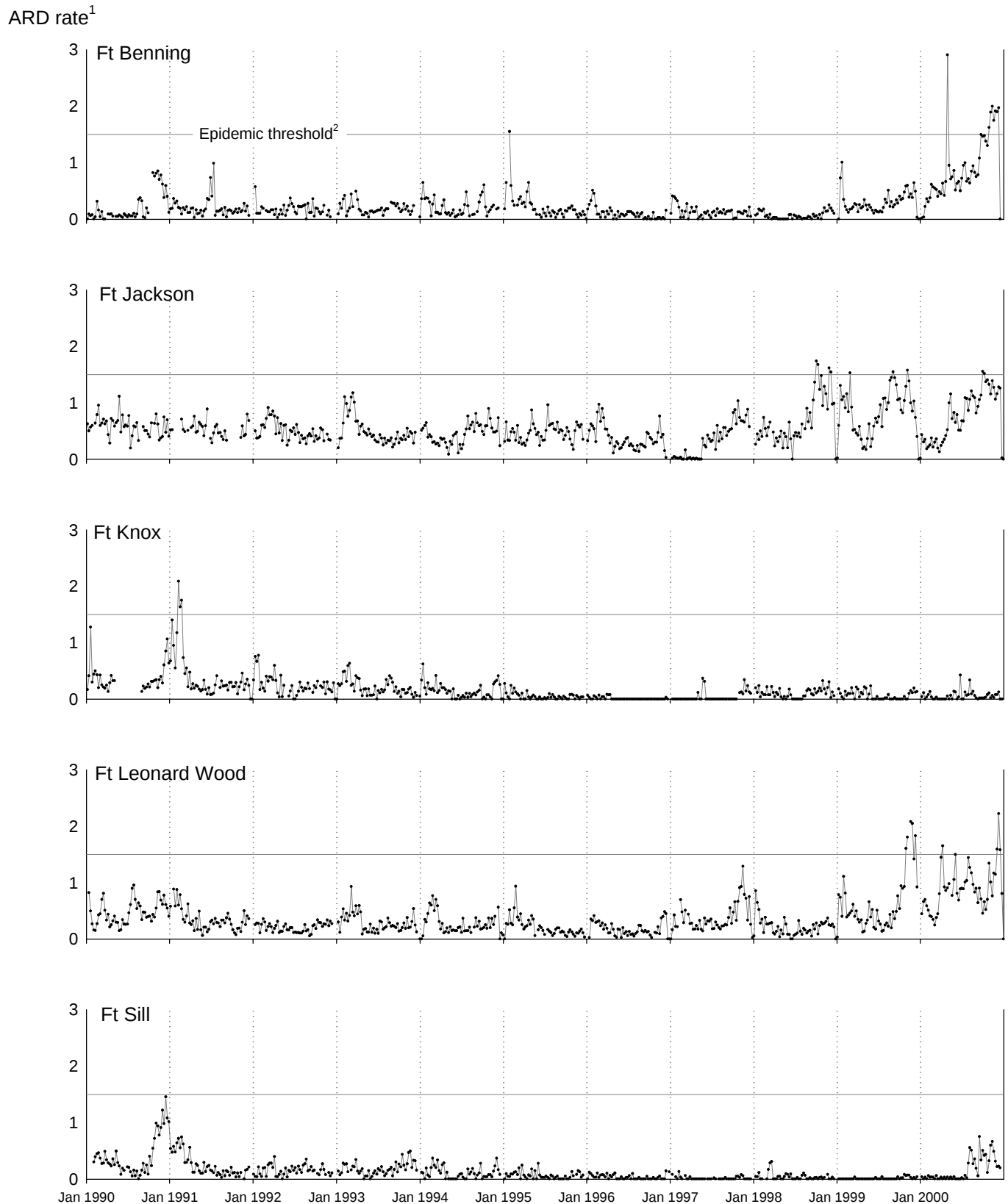
Category	Medical encounters ¹		Individuals affected ²		Hospital bed days	
	N	Rank	N	Rank	N	Rank
Malignant neoplasms						
Melanoma and skin cancer	5,134	(75)	2,568	(75)	87	(95)
Lymphomas and multiple myeloma	4,257	(77)	753	(97)	656	(56)
Testicular	3,460	(84)	584	(100)	772	(51)
Breast	3,011	(85)	418	(104)	106	(94)
Colon and rectum	1,697	(97)	285	(108)	548	(61)
Thyroid	1,349	(101)	325	(106)	349	(75)
Leukemia	1,334	(102)	153	(112)	604	(60)
Mouth and oropharynx	1,095	(103)	264	(109)	122	(91)
Prostate	1,073	(105)	254	(110)	494	(67)
Brain	886	(107)	132	(113)	326	(77)
Trachea, bronchus, and lung	470	(112)	110	(114)	81	(97)
Bladder	319	(115)	103	(116)	31	(110)
Stomach	222	(116)	29	(122)	81	(98)
Esophagus	148	(118)	21	(125)	11	(118)
Ovarian	142	(119)	44	(120)	48	(107)
Cervical	115	(121)	46	(118)	11	(117)
Pancreas	94	(123)	25	(123)	76	(99)
Uterine	90	(124)	44	(121)	32	(109)
Liver	54	(125)	24	(124)	82	(96)
Other malignant neoplasms	4,082	(78)	1,432	(84)	1,319	(41)
Oral conditions						
Dental caries	2,266	(91)	1,180	(91)	22	(113)
Periodontal disease	606	(111)	526	(101)	26	(112)
All other oral conditions	15,422	(60)	12,017	(55)	2,744	(26)
Congenital anomalies						
Congenital heart disease	1,077	(104)	641	(99)	524	(63)
All other congenital anomalies	15,209	(61)	10,761	(58)	872	(50)
Nutritional deficiencies						
Iron-deficiency anemia	2,852	(86)	1,782	(79)	55	(104)
Protein energy malnutrition	116	(120)	84	(117)	113	(93)
All other nutritional deficiencies	7,074	(70)	4,686	(69)	350	(74)

1. Medical encounters: hospitalizations and ambulatory visits.

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

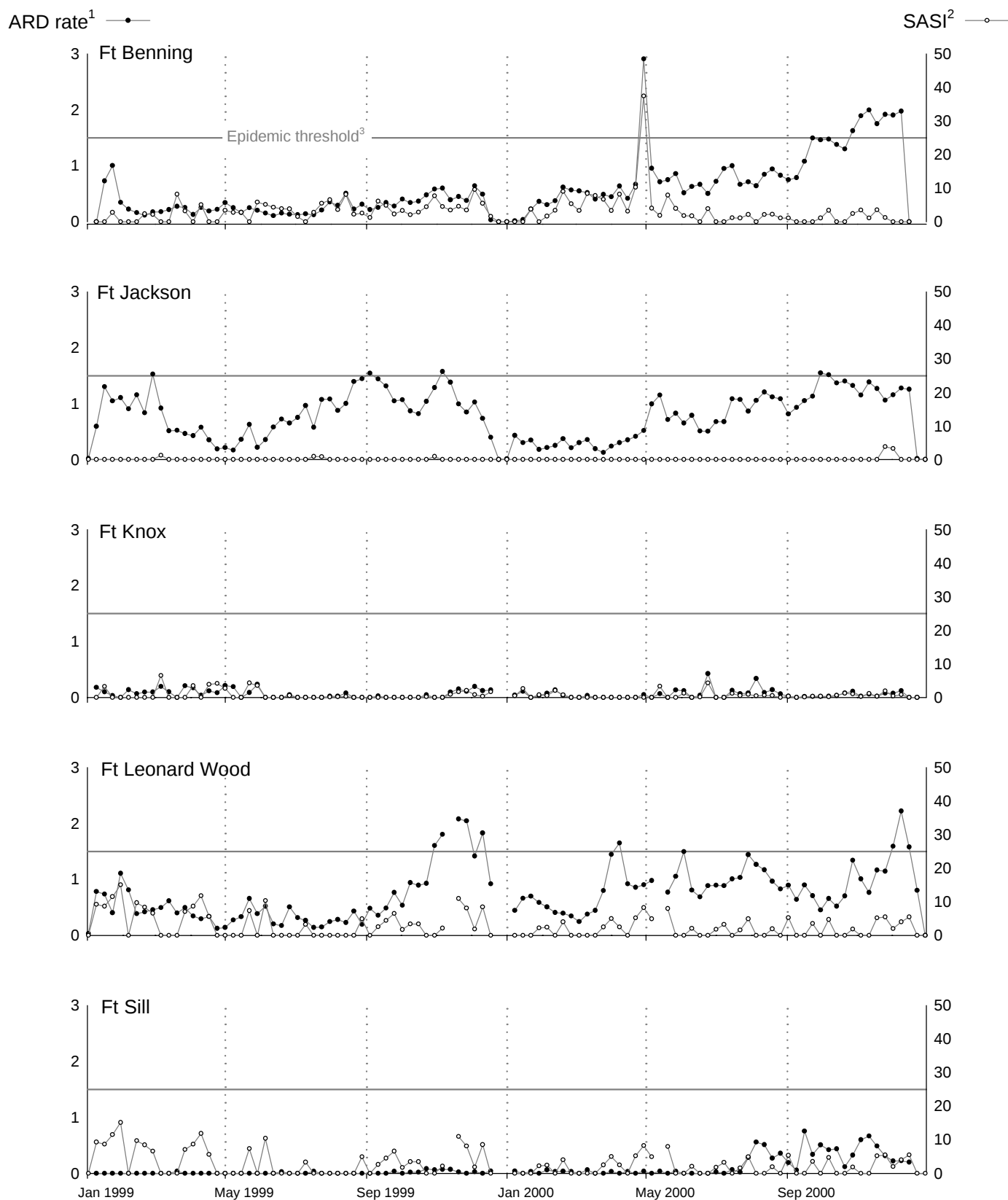
Acute Respiratory Disease Surveillance

Figure 1. Acute respiratory disease (ARD), by week, US Army basic training centers, 1990-2000



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, 1999-2000**



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.

Table 1. Demographic characteristics of active duty personnel- 2000

Characteristic	Army		Navy		Air Force		Marine Corps	
	Population	% total soldiers	Population	% total sailors	Population	% total airmen	Population	% total marines
Total	474,009	100	363,992	100	349,206	100	171,661	100
Gender								
Male	401,260	85	313,406	86	282,977	81	161,232	94
Female	72,749	15	50,586	14	66,229	19	10,429	6
Age (years)								
17 - 19	45,985	10	34,240	9	25,553	7	27,936	16
20 - 24	149,638	32	110,252	30	91,879	26	78,978	46
25 - 29	100,661	21	70,184	19	65,532	19	27,923	16
30 - 34	74,328	16	55,884	15	57,220	16	15,482	9
35 - 39	61,349	13	55,369	15	65,570	19	13,188	8
40 - 44	28,042	6	25,875	5	31,456	7	5,838	1
45 - 50	10,289	2	9,330	2	9,309	2	1,804	0
50 - 54	3,167	1	2,394	1	2,257	0	469	0
55 - 60	467	0	368	0	289	0	36	0
60 - 65	83	0	96	0	141	0	7	0
Race/ethnicity								
White non-Hispanic	277,293	58	229,654	63	258,506	74	115,609	67
Black non-Hispanic	125,846	27	68,344	19	56,623	16	26,083	15
Hispanic	40,216	8	33,752	9	17,170	5	21,984	13
Asian/Pacific Islander	14,677	3	22,777	6	8,895	3	4,199	2
Native American/Alaskan	3,792	1	6,593	2	1,619	0	1,656	1
Other	12,185	3	2,872	1	6,396	2	2,130	1
Marital Status								
Married	253,237	53	175,287	48	215,117	62	74,196	43
Single	200,898	42	188,705	52	110,640	32	91,865	54
Other	19,874	4	0	0	23,449	7	5,600	3
Education								
High school or less	360,543	76	299,288	82	228,406	65	150,281	88
Some college	29,028	6	14,564	4	39,617	11	4,155	2
Bachelors	55,208	12	31,657	9	41,788	12	14,160	8
Masters	19,305	4	13,124	4	31,030	9	2,647	2
Doctorate	9,925	2	5,359	1	8,365	2	418	0
Rank								
E1 - E4	222,901	47	155,506	43	132,528	38	103,378	60
E4 - E9	175,403	37	155,392	43	148,705	43	50,434	29
O1 - O3, W1 - W3	47,146	10	31,986	9	38,694	11	11,875	7
O4 - O9, W4 - W5	28,559	6	21,108	6	29,279	8	5,974	3

Table 2. Occupations of active duty personnel- 2000

Occupations	Army		Navy		Air Force		Marine Corps	
	Population	% total soldiers	Population	% total sailors	Population	% total airmen	Population	% total marines
Enlisted								
Infantry	104,940	22	56,738	16	27,876	8	54,512	32
Electronic equipment repair	25,897	5	46,670	13	25,130	7	9,254	5
Communication and intelligence	40,399	9	26,393	7	23,656	7	10,231	6
Health care	30,147	6	24,239	7	21,279	6	0	0
Technical, allied specialists	12,900	3	7,309	2	10,952	3	3,582	2
Functional support, administration	67,371	14	37,693	10	65,380	19	26,266	15
Electric/mechanic equipment repair	55,615	12	82,654	23	61,904	18	23,098	13
Craftworkers	7,831	2	15,336	4	12,108	3	3,432	2
Service and supply handlers	47,186	10	13,829	4	14,172	4	18,332	11
Non-occupational	6,018	1	37	0	18,776	5	5,105	3
Officers								
General officers and executives	378	0	2,407	1	947	0	493	0
Tactical operations officers	21,966	5	13,310	4	22,379	6	5,953	3
Intelligence officers	3,873	1	1,856	1	3,539	1	706	0
Engineering and maintenance	6,956	1	8,005	2	8,533	2	1,850	1
Scientists, professionals	4,475	1	3,290	1	5,318	2	442	0
Health care	12,293	3	8,410	2	12,241	4	0	0
Administrators	4,135	1	4,592	1	4,804	1	1,361	1
Supply, allied specialists	6,074	1	2,401	1	6,173	2	2,085	1
Non-occupational	15,555	3	8,823	2	4,039	1	4,959	3
Total	474,009	100	363,992	100	349,206	100	171,661	100

DEPARTMENT OF THE ARMY
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Senior Analyst

Jeffrey L. Lange, PhD

The Medical Surveillance Monthly Report (MSMR) is prepared by the Army Medical Surveillance Activity, Directorate of Epidemiology and Disease Surveillance, US Army Center for Health Promotion and Preventive Medicine (USACHPPM).

Data in the MSMR are provisional, based on reports and other sources of data available to AMSA.

Inquiries regarding content or material to be considered for publication should be directed to: Editor, Army Medical Surveillance Activity, Building T-20, Room 213 (Attn: MCHB-TS-EDM), 6900 Georgia Avenue, NW, Washington, D.C. 20307-5001. E-mail: editor@amsa.army.mil

To be added to the mailing list, contact the Army Medical Surveillance Activity @ (202) 782-0471, DSN 662-0471. E-mail: msmr@amsa.army.mil