

# US ARMY

Public Health Command

Morbidity Burdens, Army  
Non-Active Duty  
Beneficiaries, 2012



Photo graphic using models



Army Institute of Public Health  
Epidemiology and Disease Surveillance Portfolio  
Approved for public release; distribution unlimited.

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## BACKGROUND

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Morbidity burden estimates provide a means of assessing the relative magnitude of health outcomes among populations of interest. Morbidity burden is tracked annually for DoD active duty (AD) Servicemembers by the Armed Forces Health Surveillance Center (AFHSC). The Army Institute of Public Health (AIPH) has produced similar summaries for the Army AD population since 2005,<sup>1</sup> and in 2013 as part of larger initiative to assess selected indicators of health within Army communities.<sup>2</sup> However, such summaries do not exist for Army or DoD non-AD beneficiaries. This summary is an attempt to begin this process. It provides baseline health outcome information for this understudied population, and may serve to guide prevention campaigns such as the Army's Performance Triad. This campaign aims to improve sleep, activity, and nutrition, all of which are cornerstones for improved health outcomes and reduced morbidity burden. Lessons learned will also prove useful for expansion of ongoing AIPH surveillance efforts to include this population.

## METHODS

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Data summarized are limited to non-AD Army beneficiaries (e.g., dependents, retirees and non-activated Guard and Reserve members). Burden estimates associated with major diagnostic categories for calendar year (CY) 2012 are represented in terms of medical encounters, hospital bed days and affected individuals. Both direct care received from military treatment facilities (MTFs) and purchased care medical claims submitted from civilian providers are included. Morbidity burden data were extracted from the Defense Medical Surveillance System (DMSS) managed by the AFHSC using established data management and analysis procedures summarized in published reports; this includes adaptation of diagnostic groups developed by the Global Burden of Disease Study to classify the primary or first-listed diagnosis code in the patient's medical records.<sup>3</sup> The Defense Enrollment and Eligibility Reporting System (DEERS) table within the MHS Mart (M2) was used to generate population estimates of eligible Army non-AD beneficiaries contributing to the morbidity burden. Although the summaries in this report represent the Army as a whole, DMSS and DEERS data were extracted with sex, age and geographic strata to allow future assessments by population groups.

## RESULTS

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A total of 31,647,256 medical encounters and 225,861 hospital bed days among 3,248,553 Army non-AD beneficiaries eligible for care were documented in CY 2012.

Non-descript signs/symptoms diagnoses (e.g., cough, sore throat, chest pain) accounted for the majority of the morbidity burden associated with medical encounters (3,904,989 or 12%), followed by musculoskeletal conditions and injuries with 3,517,945 (11%) and 3,058,528 (10%)

encounters, respectively. Signs/symptoms also accounted for the majority of eligible non-AD beneficiaries affected (1,265,399 or 39%), followed by injuries (27%), respiratory infections (26%), sense organ disease (25%), musculoskeletal conditions (23%), and cardiovascular disease (21%). Maternal conditions accounted for the majority (32%) of documented bed days, followed by digestive disease (10%) and cardiovascular disease (8%) (Figure 1).

Medical conditions within each burden of disease category were also reviewed to determine the predominant diagnoses contributing to each (Appendix A). Unspecified or other medical conditions (e.g., musculoskeletal, signs/symptoms, cardiovascular, skin disease), and more specific conditions such as respiratory infections (upper or lower), musculoskeletal conditions (back), essential hypertension and signs/symptoms (respiratory/chest) were in the top 10 conditions identified for one or more morbidity burden criteria (i.e., encounters, individuals affected or associated bed days). Maternal deliveries and pregnancy complications ranked highest in terms of associated bed days. Other diagnoses which rounded out the top 10 included mental disorders (other), diabetes mellitus, signs/symptoms (abdomen/pelvis), sense organ disease (other), digestive disease (other), injury complications, genitourinary disease (other), and infectious/parasitic disease (other) (Table 1).

**Table 1. Top 10 Medical Conditions by Burden of Disease Criteria, Army Non-AD Beneficiaries, CY2012**

Medical encounters	Individuals affected	Bed days
1. Signs/symptoms (other)	1. Signs/symptoms (other)	1. Maternal (delivery)
2. Musculoskeletal (other)	2. Upper respiratory infection	2. Pregnancy complications
3. Musculoskeletal ( back)	3. Musculoskeletal (other)	3. Digestive disease (other)
4. Cardiovascular (other)	4. Skin disease (other)	4. Cardiovascular (other)
5. Mental disorders (other)	5. Signs/symptoms (resp/chest)	5. Lower respiratory infections
6. Diabetes mellitus	6. Essential hypertension	6. Injury complications
7. Skin disease (other)	7. Sense organ disease (other)	7. Signs/symptoms (resp/chest)
8. Signs/symptoms (resp/chest)	8. Signs/symptoms (abdomen/pelvis)	8. Signs/symptoms (other)
9. Essential hypertension	9. Skin disease (other)	9. Genitourinary disease (other)
10. Upper respiratory infections	10. Musculoskeletal (back)	10. Infectious/parasitic (other)

Burden estimates varied by age, with individuals 45 years and older accounting for the majority of medical encounters for most major diagnostic categories with the exception of maternal/perinatal conditions and congenital anomalies. Healthcare utilization or burden was more evenly distributed across age categories for mental disorders, respiratory infections, and oral conditions (Figure 2). Additional burden summaries, similar to those provided in Figure 1, are provided by age category in Appendix B. Summaries by regional medical command (RMC) are provided in Appendices C-G.

**Figure 1. Medical Encounters<sup>a</sup>, Individuals Affected<sup>b</sup>, and Hospital Bed Days<sup>c</sup> by Burden of Disease Category, Army Non-AD Beneficiaries CY2012**

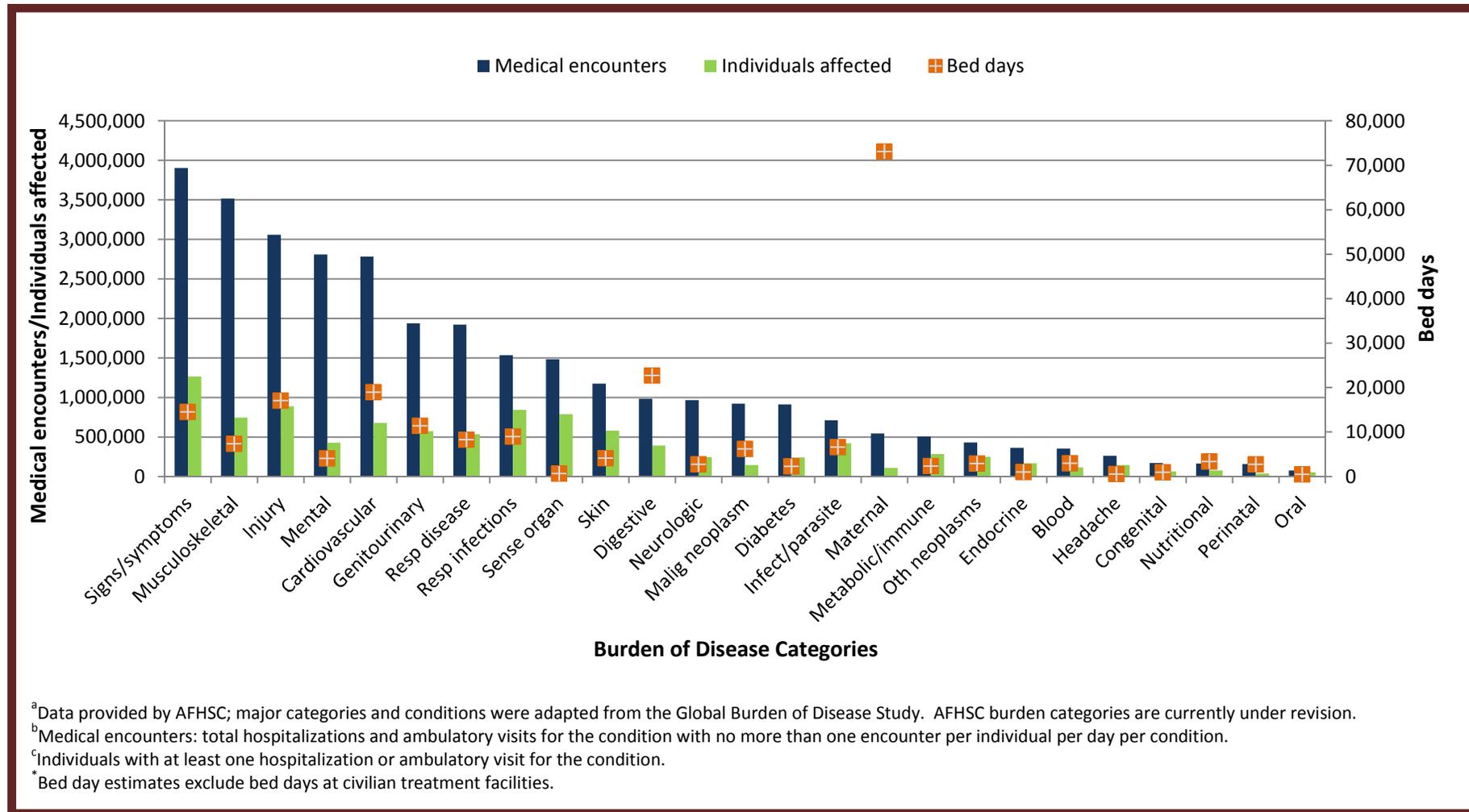
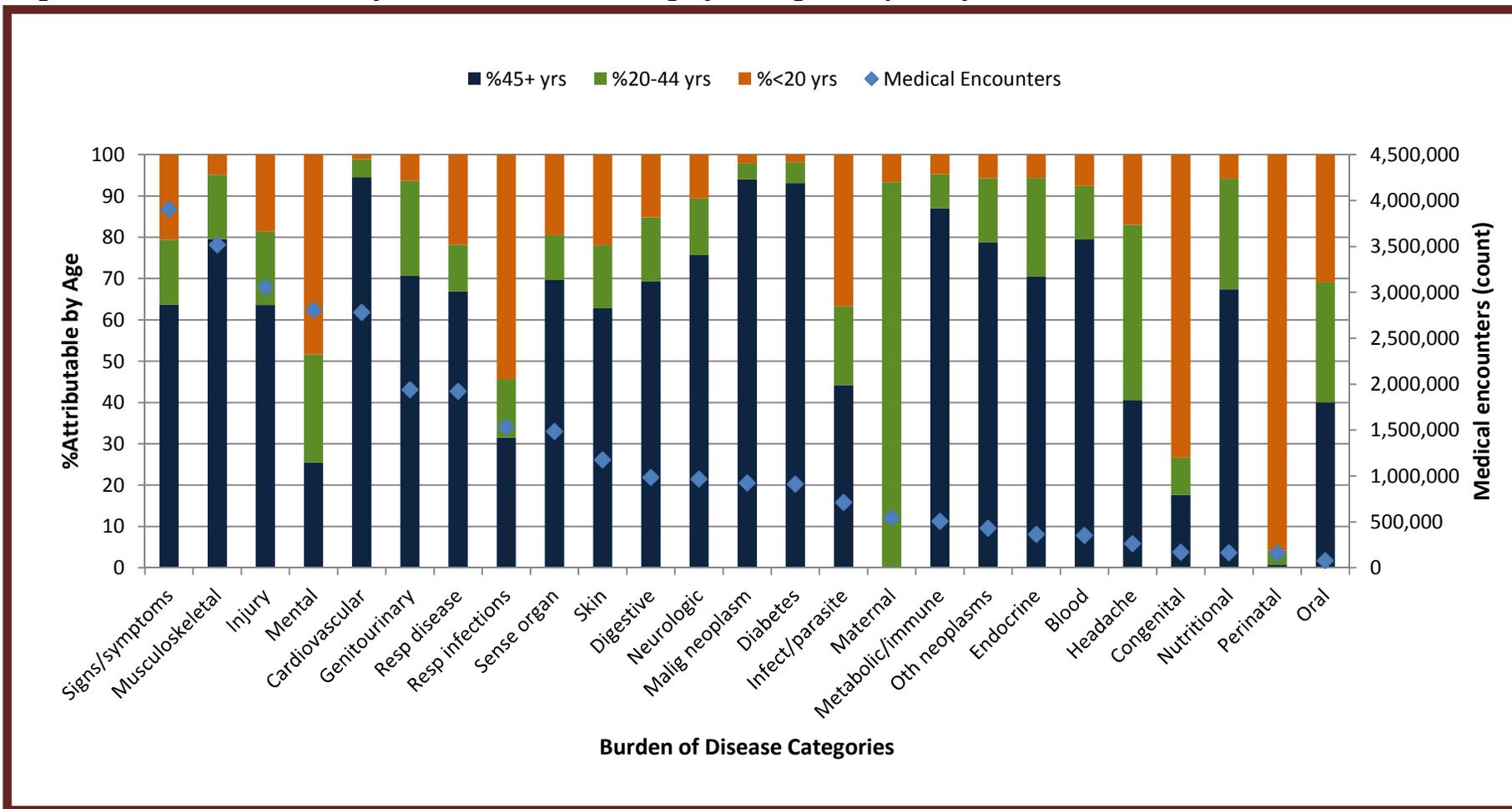


Figure 2. Medical Encounters by Burden of Disease Category and Age Group, Army Non-AD Beneficiaries, CY2012



## LIMITATIONS

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Several noteworthy limitations should be taken into consideration for future burden approximations among non-AD beneficiaries. First, the DMSS extract did not capture hospital bed days from civilian facilities. Because a large proportion of non-AD beneficiary care occurs in these facilities, reported bed day estimates are lower than the actual values. This is evidenced by the lower bed day estimate among this population as compared to their AD counterparts, despite having nearly eight-fold their medical encounters<sup>1</sup>.

Second, because the DMSS lacks beneficiary residence, enrollment, and eligibility information captured in DEERS, regional burden estimation is limited. The lowest level geographic region available for beneficiaries seen outside of MTFs is the state and country where medical encounter occurred; therefore, it was not possible to generate desired installation level summaries for this population. Approximately 10% of the morbidity burden could not be assigned to a known region using the state as a proxy. M2 or the Medical Data Repository (MDR) which populates M2 would be a better source for future morbidity burden estimates given that they house both medical records and DEERS personnel information.

Third, the data presented are based primarily on review of centralized medical records for documented ICD9 diagnosis codes. This type of passive surveillance is limited by variations in coding practices across MTFs and the possibility of misclassification due to incorrect ICD9 entries or lack of ICD9 documentation for certain conditions. Differences in coding practices between civilian and military providers may also occur. Additionally, certain conditions which are coded based on pain or symptoms may not reflect the cause of interest (e.g., lumbago diagnoses due to injury and cough diagnoses due to respiratory infections).

Finally, incomplete data capture is likely given that many health outcomes of interest go undetected or undocumented by the Military Health System (MHS). This may be due to beneficiaries not seeking care or seeking care outside of the MHS without Tricare reimbursement. Likewise, health outcomes are not always documented in the medical records using definitive ICD9 codes (e.g., medical screening). This is particularly true for infectious diseases, for which laboratory or reportable medical event databases may provide more optimal case capture.

## CONCLUSIONS

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The morbidity burdens described establish baseline healthcare utilization estimates for a comprehensive set of health outcomes among the Army non-AD population. Ideally, these summaries could be delineated by beneficiary type and installation to better guide local prevention efforts. The information summarized in this report is the first step toward the desired end state, which will entail integration of non-AD beneficiary data into an automated

platform from which community or installation-level health status reports can be generated. The analysis uncovered important data limitations and potential solutions which should be addressed in future updates.

## REFERENCES

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1. Dada-Laseinde E, M Canham-Chervak, N Clemmons, and BH Jones. U.S. Army Annual Injury Epidemiology Report 2007 (Report No. 12-HF-0APLa -08). U.S. Army Center for Health Promotion and Preventive Medicine: Aberdeen Proving Ground, MD. 2008.
2. Army Institute of Public Health. Army Community Health Status, 2011. USAPHC Report, limited governmental distribution. Aug 2013.
3. Armed Forces Health Surveillance Center. Absolute and Relative Morbidity Burdens Attributable to Various Illnesses and Injuries, U.S. Armed Forces, 2011. *MSMR*, 19(4):4-9, April 2012.

## Appendix A: Morbidity Burden Detail, Army Non-AD Beneficiaries, CY2012

Major Category/Condition	Medical encounters		Individuals affected <sup>a</sup>		Bed days	
	No	Rank	No	Rank	No	Rank
<b>Blood disorders</b>	<b>352,269</b>		<b>115,097</b>		<b>2,937</b>	
All other blood disorders	88,483	68	34,947	72	902	42
Other non-deficiency anemias	150,675	51	59,411	60	880	43
Iron-deficiency anemia	64,525	83	26,524	77	694	50
Hereditary anemias	10,633	118	2,660	118	442	66
Other deficiency anemias	37,953	93	13,181	90	19	115
<b>Cardiovascular disease</b>	<b>2,781,779</b>		<b>677,836</b>		<b>18,974</b>	
All other cardiovascular diseases	1,211,097	4	316,453	11	11,753	4
Ischemic heart disease	425,190	24	143,383	29	3,813	12
Cerebrovascular disease	257,838	37	81,507	45	2,492	17
Essential hypertension	872,973	9	422,642	6	729	49
Inflammatory	3,442	131	1,248	129	116	92
Rheumatic heart disease	11,239	117	8,039	100	71	98
<b>Congenital anomalies</b>	<b>170,516</b>		<b>63,888</b>		<b>901</b>	
All other congenital anomalies	136,533	55	52,466	64	793	46
Congenital heart disease	25,500	100	9,925	95	59	101
Other circulatory anomalies	8,483	122	3,829	114	49	103
<b>Diabetes mellitus</b>	<b>911,017</b>		<b>243,898</b>		<b>2,264</b>	
Diabetes mellitus	911,017	6	243,898	14	2,264	20
<b>Digestive diseases</b>	<b>982,628</b>		<b>392,397</b>		<b>22,682</b>	
All other digestive diseases	664,737	17	270,865	13	17,643	3
Appendicitis	9,359	121	4,754	112	2,295	18
Esophagus disease	179,013	46	111,876	38	914	41
Other gastroenteritis and colitis	70,169	78	53,316	63	803	45
Peptic ulcer disease	11,509	114	6,436	108	453	64
Cirrhosis of the liver	29,270	97	14,246	89	301	76
Inguinal hernia	18,571	105	9,002	97	273	80
<b>Endocrine disorders</b>	<b>363,424</b>		<b>166,162</b>		<b>966</b>	
Other thyroid disorders	87,156	69	42,165	71	610	55
All other endocrine disorders	118,257	58	44,703	70	288	79
Hypothyroidism	158,011	48	93,655	42	68	99
<b>Genitourinary diseases</b>	<b>1,939,791</b>		<b>574,385</b>		<b>11,374</b>	
All other genitourinary diseases	737,218	13	364,932	9	6,091	9
Nephritis and nephrosis	733,227	15	58,553	61	2,018	23
Menstrual disorders	118,129	59	73,575	50	1,469	31
Kidney stones	71,335	76	29,759	76	757	48
Female genital pain	101,122	65	65,741	54	507	61

Major Category/Condition	Medical encounters		Individuals affected <sup>a</sup>		Bed days	
	No	Rank	No	Rank	No	Rank
Benign prostatic hypertrophy	73,668	74	45,549	68	292	78
Other breast disorders	105,092	62	66,874	53	240	84
<b>Headache</b>	<b>261,185</b>		<b>145,341</b>		<b>551</b>	
Headache	261,185	35	145,341	26	551	57
<b>Infectious/parasitic diseases</b>	<b>711,263</b>		<b>420,205</b>		<b>6,607</b>	
All other infectious and parasitic diseases	506,778	20	295,485	12	4,648	10
Diarrheal diseases	39,418	91	24,758	80	1,163	36
STDs	73,283	75	56,655	62	444	65
Unspecified viral infection	68,958	79	61,799	57	244	82
Tuberculosis	1,397	134	746	134	43	106
Hepatitis B and C	14,360	109	4,870	111	32	111
Bacterial meningitis	811	136	176	136	28	113
Intestinal nematode infection	2,138	133	1,884	124	5	121
Chlamydia	3,871	130	3,209	116	0	-
Tropical cluster	136	138	82	138	0	-
Malaria	113	139	70	139	0	-
<b>Injury and poisoning</b>	<b>3,058,528</b>		<b>889,569</b>		<b>17,052</b>	
Other complications NOS	149,445	52	62,600	56	6,960	6
Leg	343,194	31	133,070	32	2,041	22
Environmental	74,237	73	51,415	65	1,504	29
Back and abdomen	146,585	53	74,938	48	1,244	35
Arm and shoulder	747,539	12	204,603	18	1,158	37
Poisoning, drugs	19,730	104	10,321	94	1,091	38
Head and neck	215,638	42	143,480	28	837	44
Foot and ankle	378,442	26	161,386	24	729	49
Other injury from external causes	62,906	84	34,232	73	515	60
Knee	487,801	21	145,259	27	401	67
Hand and wrist	216,045	41	119,618	34	297	77
Unspecified injury	177,068	47	115,703	37	190	87
Poisoning, nondrug	11,798	113	8,168	99	57	102
All other injury	28,100	98	19,924	84	28	113
<b>Malignant neoplasms</b>	<b>922,052</b>		<b>146,177</b>		<b>6,195</b>	
All other malignant neoplasms	109,072	61	20,725	83	1,592	28
Trachea, bronchus and lung	102,246	64	9,392	96	692	51
Colon and rectum	56,677	86	7,524	102	647	53
Breast	153,722	50	25,734	79	515	60
Lymphoma and multiple myeloma	78,417	71	8,981	98	386	68
Thyroid	12,613	112	3,749	115	350	69
Pancreas	16,889	106	1,461	128	338	72

Major Category/Condition	Medical encounters		Individuals affected <sup>a</sup>		Bed days	
	No	Rank	No	Rank	No	Rank
Prostate	122,185	56	26,341	78	322	75
Bladder	30,241	96	6,482	106	252	81
Leukemia	36,748	94	4,478	113	227	85
Stomach	8,469	123	1,125	131	160	88
Mouth and oropharynx	22,554	102	2,656	119	136	89
Ovary	14,424	108	1,846	126	136	89
Brain	13,731	111	1,634	127	103	93
Liver	7,067	127	1,244	130	101	94
Corpus uteri	10,269	120	2,151	123	94	97
Cervix uteri	4,564	129	752	133	52	103
Esophagus	11,457	115	927	132	49	104
Melanoma and other skin	109,845	60	46,237	67	43	106
Testicular	862	135	273	135	0	-
<b>Maternal</b>	<b>543,194</b>		<b>109,331</b>		<b>73,059</b>	
Delivery	185,597	45	67,593	52	50,674	1
Pregnancy complications	325,131	32	85,266	43	20,694	2
Ectopic/miscarriage/abortion	23,970	101	11,420	92	916	40
Puerperium complications	8,162	124	5,203	110	534	59
All other maternal disorders	334	137	159	137	241	83
<b>Mental disorders</b>	<b>2,809,434</b>		<b>426,262</b>		<b>4,042</b>	
Mood	805,846	11	147,886	25	1,333	34
Substance abuse	70,416	77	15,511	87	1,052	39
All other mental disorders	1,099,219	5	168,398	21	542	58
Psychotic	66,053	82	15,192	88	343	70
Adjustment	361,972	29	71,278	51	342	71
Anxiety	375,651	27	97,476	40	335	73
Personality	7,001	128	1,873	125	65	100
Somatoform	7,773	126	2,579	121	30	112
Tobacco dependence	15,503	107	10,576	93	0	-
<b>Metabolic/immunologic disorders</b>	<b>505,288</b>		<b>285,893</b>		<b>2,341</b>	
Other metabolic disorders	137,712	54	60,410	59	2,285	19
Immunity disorders	13,893	110	3,056	117	39	108
Lipoid metabolism disorders	353,683	30	233,367	15	17	117
<b>Musculoskeletal conditions</b>	<b>3,517,945</b>		<b>745,948</b>		<b>7,321</b>	
All other musculoskeletal diseases	1,629,032	2	490,094	3	2,682	15
Other knee disorders	258,364	36	81,308	46	1,984	25
Other back problems	1,310,893	3	318,216	10	1,668	27
Osteoarthritis	187,554	44	83,165	44	774	47
Rheumatoid arthritis	83,662	70	22,330	81	117	91

Major Category/Condition	Medical encounters		Individuals affected <sup>a</sup>		Bed days	
	No	Rank	No	Rank	No	Rank
Other shoulder disorders	48,440	89	20,818	82	96	96
<b>Neurologic conditions</b>	<b>965,743</b>		<b>245,498</b>		<b>2,706</b>	
All other neurologic conditions	370,102	28	121,463	33	1,337	33
Organic sleep disorders	448,942	23	102,618	39	640	54
Epilepsy	49,005	88	17,928	85	462	62
Multiple sclerosis	27,634	99	5,328	109	199	86
Parkinson's disease	38,515	92	7,850	101	35	109
Other mononeuritis - upper and lower limbs	31,545	95	17,012	86	33	110
<b>Nutritional disorders</b>	<b>164,061</b>		<b>77,076</b>		<b>3,350</b>	
Overweight, obesity	58,239	85	31,555	74	3,213	14
Protein-energy malnutrition	11,387	116	2,617	120	96	96
All other nutritional disorders	94,435	66	44,826	69	41	107
<b>Oral conditions</b>	<b>76,764</b>		<b>54,085</b>		<b>483</b>	
All other oral conditions	66,252	81	47,079	66	455	63
Dental caries	8,139	125	6,799	105	22	114
Periodontal disease	2,373	132	2,193	122	6	120
<b>Other neoplasms</b>	<b>431,272</b>		<b>248,108</b>		<b>2,880</b>	
All other neoplasms	321,907	33	192,502	19	1,471	30
Uterine leiomyoma	21,042	103	12,749	91	1,376	32
Lipoma	10,390	119	7,407	103	22	114
Benign skin neoplasm	77,933	72	63,708	55	11	118
<b>Perinatal anomalies</b>	<b>158,413</b>		<b>38,567</b>		<b>2,737</b>	
All other perinatal anomalies	68,481	80	31,435	75	2,169	21
Birth asphyxia and birth trauma	40,882	90	6,447	107	324	74
Low birth weight	49,050	87	6,829	104	244	82
<b>Respiratory disease</b>	<b>1,921,297</b>		<b>533,531</b>		<b>8,253</b>	
All other respiratory diseases	455,752	22	168,350	22	3,593	13
Chronic obstructive pulmonary disease	549,244	19	136,030	31	2,669	16
Asthma	254,555	38	116,199	36	1,885	26
Chronic sinusitis	104,166	63	74,507	49	99	95
Allergic rhinitis	557,580	18	166,052	23	7	119
<b>Respiratory infections</b>	<b>1,534,110</b>		<b>842,868</b>		<b>8,973</b>	
Lower respiratory infections	406,145	25	213,507	16	8,177	5
Upper respiratory infections	815,368	10	589,181	2	661	52
Otitis media	312,597	34	192,142	20	135	90
<b>Sense organ disease</b>	<b>1,484,645</b>		<b>786,665</b>		<b>627</b>	
All other sense organ diseases	736,201	14	420,176	7	581	56
Cataracts	238,424	39	140,042	30	28	113
Hearing disorders	92,413	67	60,555	58	18	116

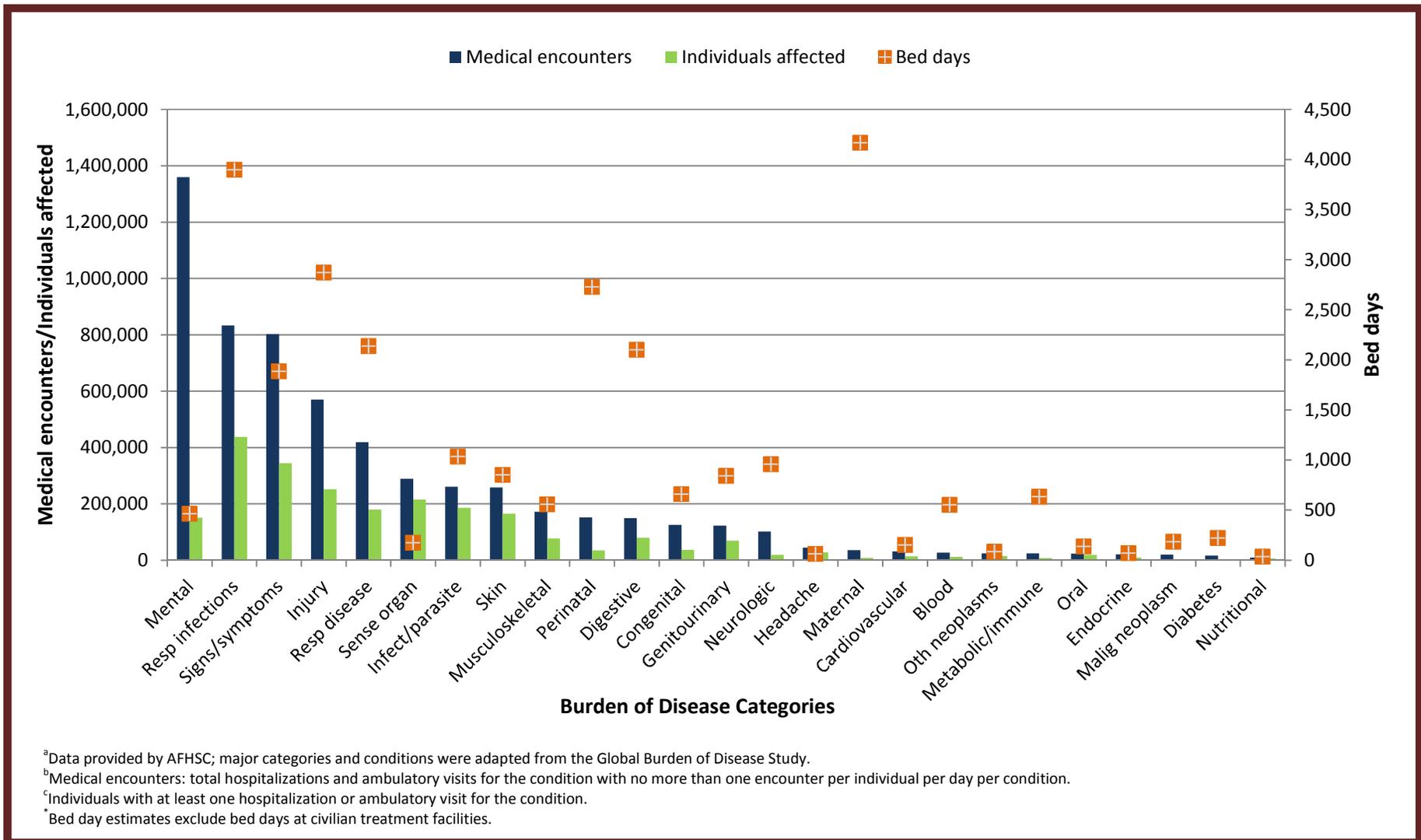
Major Category/Condition	Medical encounters		Individuals affected <sup>a</sup>		Bed days	
	No	Rank	No	Rank	No	Rank
Refraction/accommodation	216,637	40	209,054	17	0	-
Glaucoma	200,970	43	94,244	41	0	-
<b>Signs/symptoms</b>	<b>3,904,989</b>		<b>1,265,399</b>		<b>14,488</b>	
Respiratory and chest	891,600	8	437,020	5	6,333	7
All other signs and symptoms	2,302,925	1	895,185	1	6,155	8
Abdomen and pelvis	710,464	16	369,872	8	2,000	24
<b>Skin disorders</b>	<b>1,175,649</b>		<b>580,236</b>		<b>4,098</b>	
All other skin diseases	898,804	7	449,172	4	4,052	11
Contact dermatitis	157,376	49	118,782	35	44	105
Sebaceous gland diseases	119,469	57	76,291	47	2	122
<b>Totals</b>	<b>31,647,256</b>		<b>NA<sup>b</sup></b>		<b>225,861</b>	

<sup>a</sup>Numbers of individuals affected within each diagnosis sub-category may not add to the total number affected for each major category given that individuals may have more than one of the conditions listed within each major category.

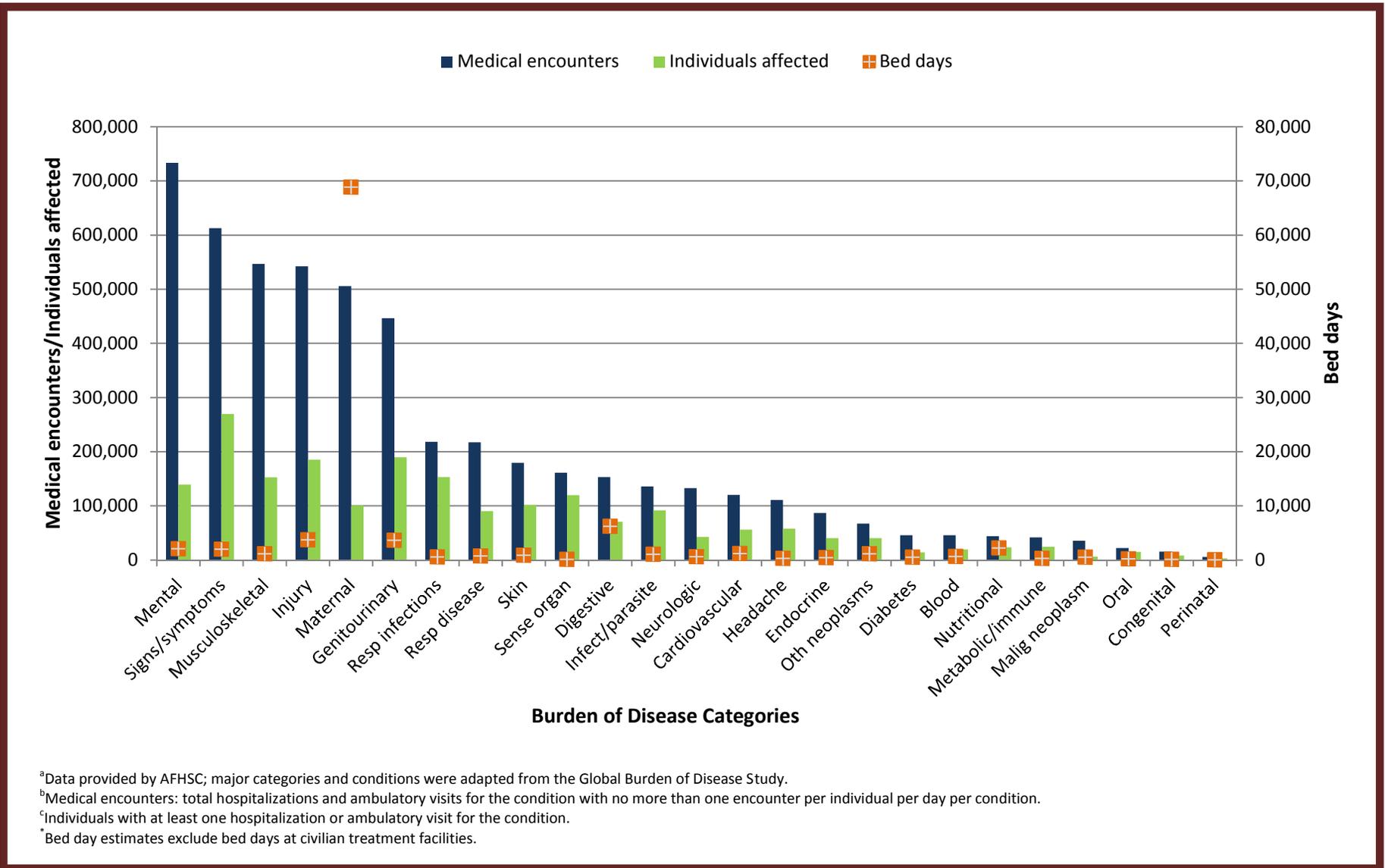
<sup>b</sup>Numbers of individuals affected for each major diagnostic category cannot be added to generate a total number of affected individuals due to potential comorbidities; the number of non-AD beneficiaries eligible for healthcare coverage through Tricare = 3,248,553.

Appendix B: Morbidity Burden Summaries by Age, Army Non-AD Beneficiaries, CY2012

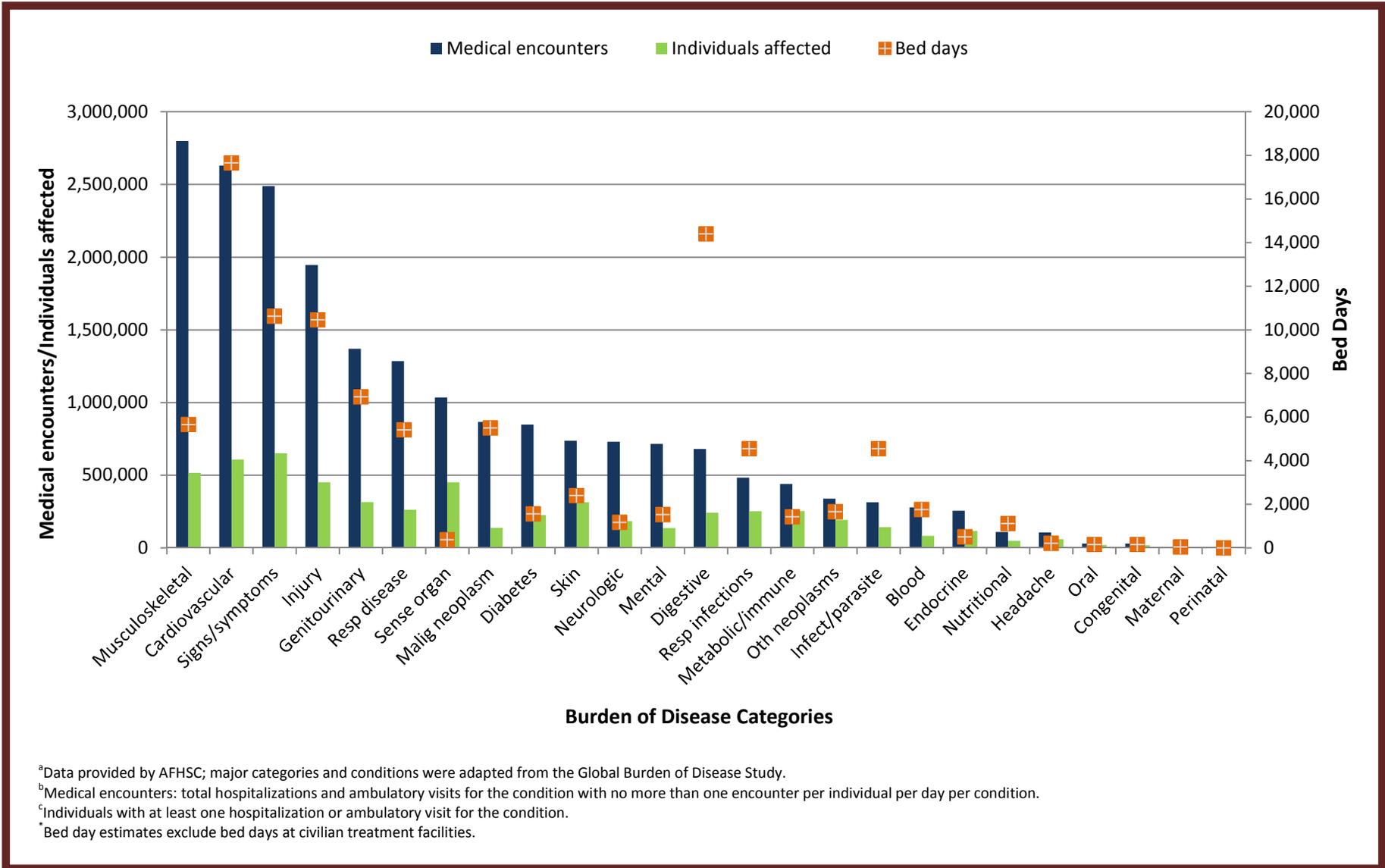
Figure B1. Medical Encounters<sup>a</sup>, Individuals Affected<sup>b</sup>, and Hospital Bed Days<sup>c</sup> by Burden of Disease Category, Army Non-AD Beneficiaries Under 20 years, CY2012



**Figure B2. Medical Encounters<sup>a</sup>, Individuals Affected<sup>b</sup>, and Hospital Bed Days<sup>c</sup> by Burden of Disease Category, Army Non-AD Beneficiaries 20-44 years, CY2012**



**Figure B3. Medical Encounters<sup>a</sup>, Individuals Affected<sup>b</sup>, and Hospital Bed Days<sup>c</sup> by Burden of Disease Category, Army Non-AD Beneficiaries 45+ years, CY2012**



Appendix C: Morbidity Burden, Army Non-AD Beneficiaries, European Regional Medical Command (ERMC), CY2012

Figure C-1. Medical Encounters<sup>a</sup>, Individuals Affected<sup>b</sup>, and Hospital Bed Days<sup>c</sup> by Burden of Disease Category, Army Non-AD Beneficiaries, ERMC, CY2012

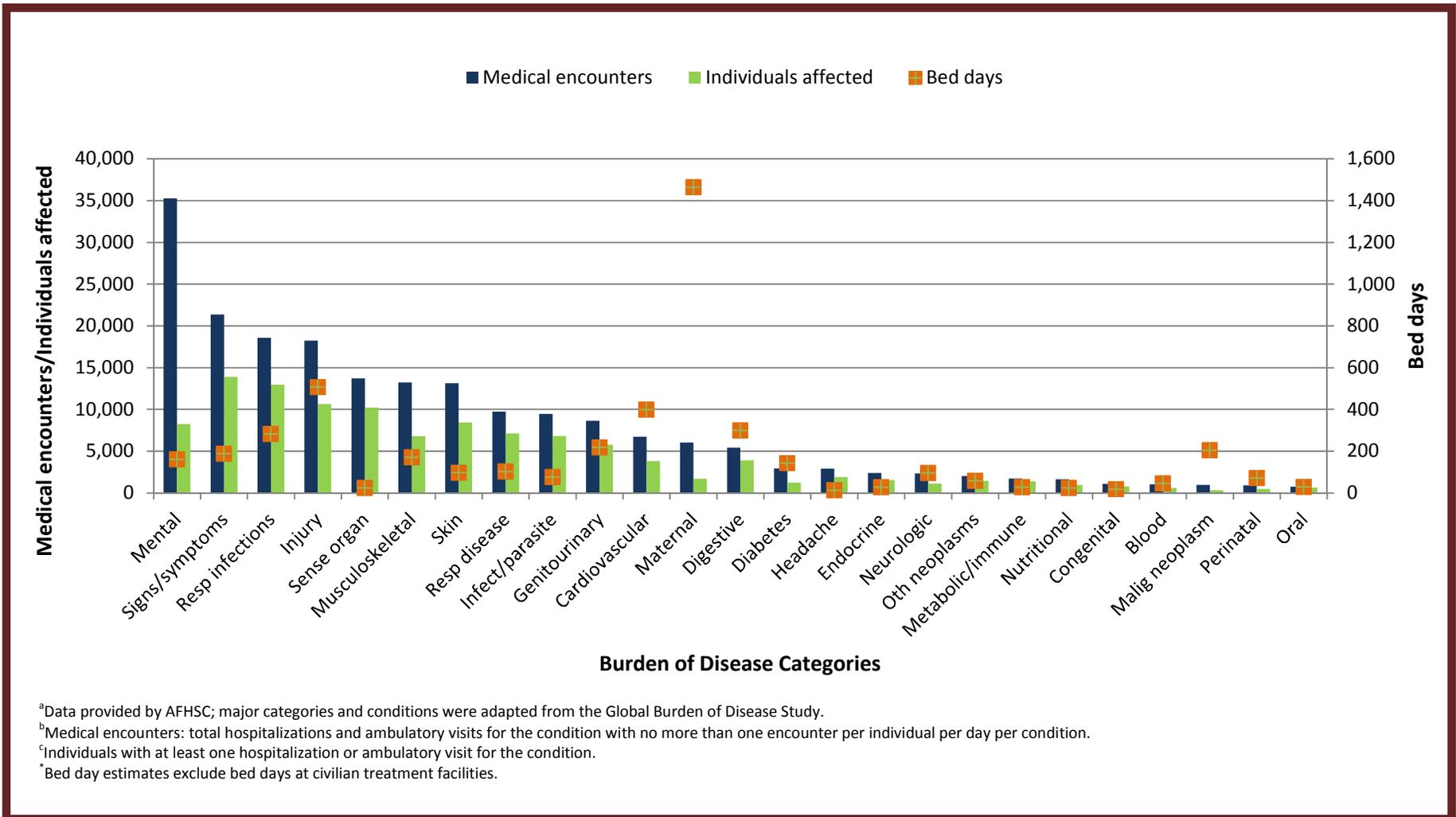
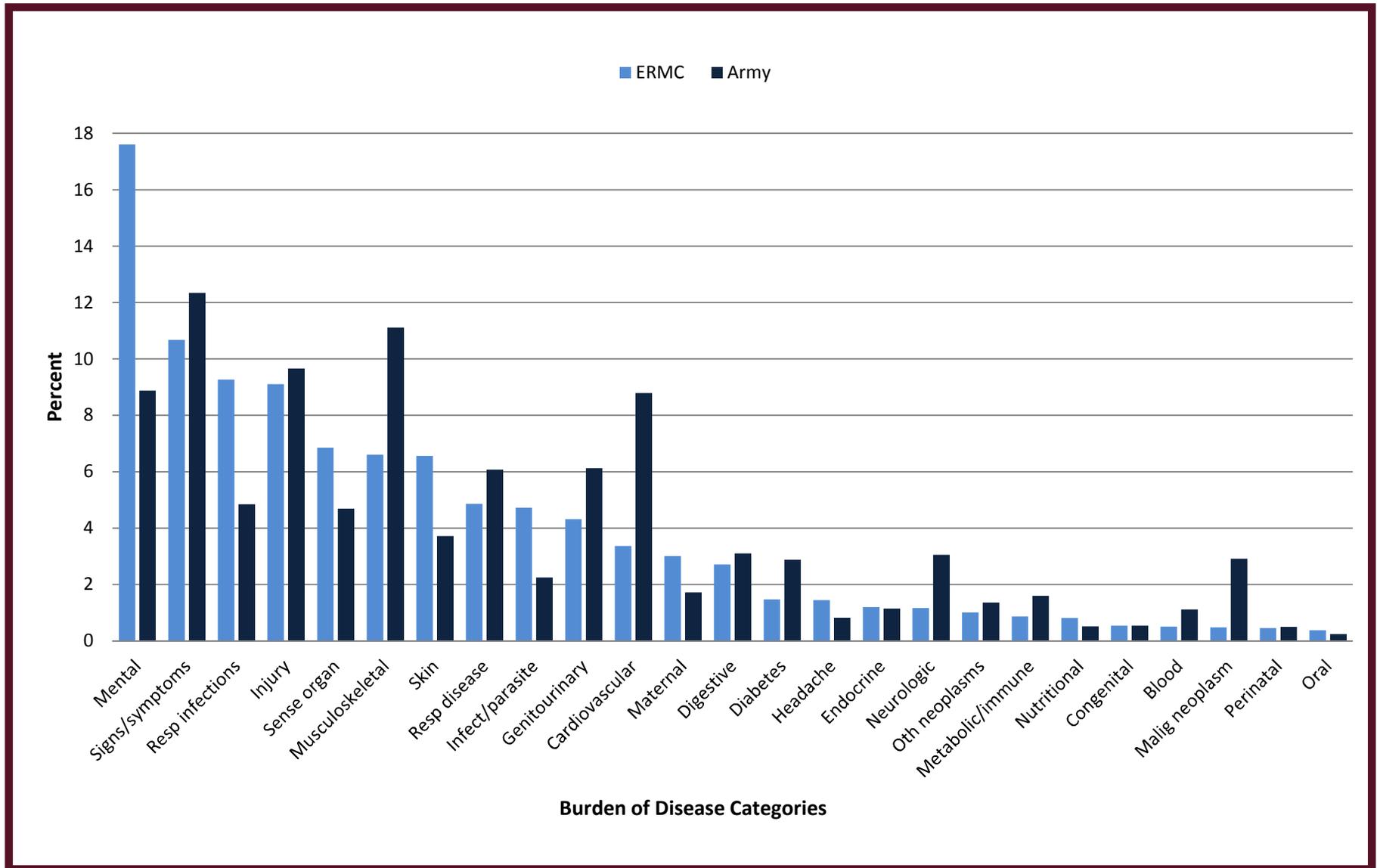


Figure C-2. %Medical Encounters by Burden of Disease Category, Army Non-AD Beneficiaries, CY2012



**Table C-1. Top 10 Medical Conditions by Burden of Disease Criteria, ERM Non-AD Beneficiaries, CY2012**

Medical encounters	Individuals affected	Bed days
1. Signs/symptoms - other	1. Upper respiratory infections	1. Maternal - delivery
2. Upper respiratory infections	2. Signs/symptoms - other	2. Pregnancy complications
3. Mental disorders - other	3. Skin disease - other	3. Injury complications
4. Mood disorders	4. Sense organ disease - other	4. Lower respiratory infections
5. Skin disease - other	5. Sense organ - refraction/accommodation	5. Cardiovascular - other
6. Anxiety	6. Infectious/parasitic - other	6. Digestive disease - other
7. Sense organ disease - other	7. Musculoskeletal - other	7. Diabetes mellitus
8. Adjustment reaction	8. Signs/symptoms - abdomen/pelvis	8. Cerebrovascular disease
9. Infectious/parasitic - other	9. Mental disorders - other	9. Signs/symptoms - other
10. Musculoskeletal - other	10. Genito-urinary - other	10. Skin disease - other

Table C-2. Morbidity Burden Detail, Army Non-AD Beneficiaries, ERMC, CY2012

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
<b>Blood disorders</b>	<b>1,019</b>		<b>614</b>		<b>46</b>	
Iron-deficiency anemia	421	67	226	71	19	36
Other non-deficiency anemias	336	70	260	68	9	46
All other blood disorders	196	80	119	78	18	37
Hereditary anemias	45	108	41	98	0	-
Other deficiency anemias	21	115	13	113	0	-
<b>Cardiovascular disease</b>	<b>6,744</b>		<b>3,811</b>		<b>399</b>	
Essential hypertension	3,645	19	2,394	15	0	-
All other cardiovascular diseases	2,403	28	1,439	28	258	5
Ischemic heart disease	457	63	244	69	43	20
Cerebrovascular disease	196	80	76	86	98	8
Rheumatic heart disease	32	111	17	109	0	-
Inflammatory	11	119	4	117	0	-
<b>Congenital anomalies</b>	<b>1,083</b>		<b>783</b>		<b>18</b>	
All other congenital anomalies	977	49	725	47	17	38
Congenital heart disease	57	102	43	97	1	53
Other circulatory anomalies	49	106	18	108	0	-
<b>Diabetes mellitus</b>	<b>2,950</b>		<b>1,240</b>		<b>143</b>	
Diabetes mellitus	2,950	21	1,240	35	143	7
<b>Digestive diseases</b>	<b>5,421</b>		<b>3,920</b>		<b>299</b>	
All other digestive diseases	2,858	24	2,024	19	201	6
Other gastroenteritis and colitis	1,237	43	1,123	38	6	49
Esophagus disease	1,056	47	863	44	8	47
Inguinal hernia	146	85	77	85	32	25
Appendicitis	58	101	33	101	45	19
Cirrhosis of the liver	46	107	32	102	7	48
Peptic ulcer disease	20	116	16	110	0	-
<b>Endocrine disorders</b>	<b>2,398</b>		<b>1,552</b>		<b>27</b>	
Hypothyroidism	1,387	39	970	40	0	-
Other thyroid disorders	555	59	331	63	25	31
All other endocrine disorders	456	64	315	65	2	52
<b>Genitourinary diseases</b>	<b>8,636</b>		<b>5,780</b>		<b>218</b>	
All other genito-urinary diseases	4,404	14	3,273	10	77	11
Menstrual disorders	1,432	38	1,037	39	27	30
Female genital pain	1,094	46	919	42	14	41
Other breast disorders	1,023	48	776	46	18	37
Nephritis and nephrosis	261	74	105	79	31	26
Kidney stones	216	77	104	80	40	21
Benign prostatic hypertrophy	206	78	144	76	11	44

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
<b>Headache</b>	<b>2,901</b>		<b>1,915</b>		<b>13</b>	
Headache	2,901	23	1,915	23	13	42
<b>Infect/parasitic diseases</b>	<b>9,459</b>		<b>6,834</b>		<b>76</b>	
Other infectious/parasitic diseases	6,603	9	4,698	6	29	28
Unspecified viral infection	1,341	41	1,247	34	0	-
STDs	915	50	721	48	10	45
Diarrheal diseases	378	69	355	60	19	36
Intestinal nematode infection	64	100	58	90	0	-
Chlamydia	58	101	53	92	0	-
Hepatitis B and C	53	104	35	100	0	-
Tuberculosis	39	110	8	114	18	37
Malaria	5	121	4	117	0	-
Tropical cluster	2	124	1	120	0	-
Bacterial meningitis	1	125	1	120	0	-
<b>Injury and poisoning</b>	<b>18,226</b>		<b>10,652</b>		<b>507</b>	
Arm and shoulder	3,659	18	2,181	17	43	20
Foot and ankle	2,985	20	2,049	18	23	33
Knee	2,663	26	1,590	25	13	42
Hand and wrist	1,818	31	1,380	31	24	32
Head and neck	1,667	32	1,446	27	11	44
Unspecified injury	1,608	33	1,341	32	3	51
Leg	1,248	42	901	43	33	24
Back and abdomen	747	52	609	50	30	27
Other complications NOS	668	55	350	61	294	3
Environmental	483	61	452	57	12	43
Other injury from external causes	448	65	342	62	6	49
All other injury	119	91	94	83	0	-
Poisoning, drugs	58	101	44	96	12	43
Poisoning, nondrug	55	103	52	93	3	51
<b>Malignant neoplasms</b>	<b>970</b>		<b>339</b>		<b>204</b>	
Lymphoma and multiple myeloma	171	81	27	106	1	53
Prostate cancer	153	83	52	93	12	43
Melanoma and other skin cancers	116	93	86	84	0	-
All other malignant neoplasms	104	95	37	99	25	31
Breast	89	96	45	95	0	-
Colon and rectum	83	98	19	107	49	18
Thyroid	53	104	32	102	12	43
Leukemia	51	105	17	109	12	43
Trachea, bronchus and lung	45	108	14	112	16	39
Bladder	24	113	6	116	6	49

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
Stomach	23	114	4	117	21	35
Mouth and oropharynx	18	117	4	117	13	42
Ovary	17	118	3	118	37	22
Corpus uteri	10	120	7	115	0	-
Esophagus	4	122	3	118	0	-
Cervix uteri	3	123	3	118	0	-
Pancreas	2	124	1	120	0	-
Brain	2	124	2	119	0	-
Testicular	1	125	1	120	0	-
Liver	1	125	1	120	0	-
<b>Maternal</b>	<b>6,031</b>		<b>1,702</b>		<b>1,464</b>	
Pregnancy complications	4,181	16	1,432	30	344	2
Delivery	1,497	35	533	53	1,096	1
Ectopic/miscarriage/abortion	225	76	138	77	17	38
Puerperium complications	128	89	96	82	7	48
<b>Mental disorders</b>	<b>35,266</b>		<b>8,268</b>		<b>161</b>	
All other mental disorders	11,255	3	3,365	9	18	37
Mood	8,971	4	2,348	16	62	13
Anxiety	6,925	6	1,969	21	7	48
Adjustment	6,709	8	1,926	22	8	47
Substance abuse	470	62	177	73	8	47
Tobacco dependence	448	65	323	64	0	-
Psychotic	199	79	31	103	37	22
Personality	160	82	48	94	21	35
Somatoform	129	88	29	104	0	-
<b>Metabolic/immunologic disorders</b>	<b>1,734</b>		<b>1,394</b>		<b>27</b>	
Lipoid metabolism disorders	1,349	40	1,138	37	0	-
Other metabolic disorders	382	68	271	67	27	30
Immunity disorders	3	123	2	119	0	-
<b>Musculoskeletal conditions</b>	<b>13,219</b>		<b>6,808</b>		<b>170</b>	
All other musculoskeletal diseases	6,445	10	4,010	7	71	12
Other back problems	5,678	11	2,922	12	33	24
Other knee disorders	485	60	279	66	60	14
Osteoarthritis	267	73	205	72	0	-
Rheumatoid arthritis	235	75	77	85	6	49
Other shoulder disorders	109	94	72	88	0	-
<b>Neurologic conditions</b>	<b>2,330</b>		<b>1,132</b>		<b>95</b>	
All other neurologic conditions	1,479	36	698	49	71	12
Epilepsy	303	71	169	75	13	42
Organic sleep disorders	269	72	170	74	2	52

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
Multiple sclerosis	122	90	43	97	7	48
Other mononeuritis - upper and lower limbs	117	92	74	87	0	-
Parkinson disease	40	109	15	111	2	52
<b>Nutritional disorders</b>	<b>1,631</b>		<b>983</b>		<b>24</b>	
All other nutritional disorders	900	51	457	56	5	50
Overweight, obesity	726	53	540	52	19	36
Protein-energy malnutrition	5	121	4	117	0	-
<b>Oral conditions</b>	<b>754</b>		<b>649</b>		<b>28</b>	
All other oral conditions	656	56	559	51	28	29
Dental caries	67	99	65	89	0	-
Periodontal disease	31	112	28	105	0	-
<b>Other neoplasms</b>	<b>2,022</b>		<b>1,455</b>		<b>58</b>	
All other neoplasms	1,118	45	835	45	22	34
Benign skin neoplasm	619	58	518	54	0	-
Uterine leiomyoma	148	84	103	81	36	23
Lipoma	137	86	104	80	0	-
<b>Perinatal anomalies</b>	<b>911</b>		<b>494</b>		<b>71</b>	
All other perinatal anomalies	693	54	428	58	50	17
Low birth weight	131	87	57	91	13	42
Birth asphyxia and birth trauma	87	97	29	104	8	47
<b>Respiratory disease</b>	<b>9,740</b>		<b>7,121</b>		<b>102</b>	
Allergic rhinitis	2,912	22	2,614	14	0	-
Asthma	2,717	25	1,817	24	31	26
Chronic sinusitis	1,498	34	1,250	33	2	52
All other respiratory diseases	1,437	37	1,212	36	54	16
Chronic obstructive pulmonary disease	1,176	44	947	41	15	40
<b>Respiratory infections</b>	<b>18,564</b>		<b>12,949</b>		<b>282</b>	
Upper respiratory infections	12,111	2	9,750	1	9	46
Otitis media	4,338	15	3,245	11	0	-
Lower respiratory infections	2,115	29	1,512	26	273	4
<b>Sense organ disease</b>	<b>13,719</b>		<b>10,215</b>		<b>24</b>	
All other sense organ diseases	6,809	7	5,157	4	10	45
Refraction/accommodation	5,180	12	4,721	5	0	-
Hearing disorders	656	56	480	55	0	-
Glaucoma	633	57	360	59	0	-
Cataracts	441	66	242	70	14	41
<b>Signs/symptoms</b>	<b>21,374</b>		<b>13,889</b>		<b>188</b>	
All other signs and symptoms	13,026	1	9,016	2	94	9
Abdomen and pelvis	4,555	13	3,555	8	36	23

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
Respiratory and chest	3,793	17	2,890	13	58	15
<b>Skin disorders</b>	<b>13,141</b>		<b>8,430</b>		<b>96</b>	
All other skin diseases	8,668	5	5,665	3	93	10
Contact dermatitis	2,497	27	2,006	20	3	51
Sebaceous gland diseases	1,976	30	1,433	29	0	-
<b>Totals</b>	<b>200,243</b>		<b>NA</b>		<b>4,740</b>	

<sup>a</sup>Numbers of individuals affected within each diagnosis sub-category may not add to the total number affected for each major category given that individuals may have more than one of the conditions listed within each major category.

<sup>b</sup>Numbers of individuals affected for each major diagnostic category can't be added to generate a total number of affected individuals due to potential comorbidities; approximately 68,000 non-AD beneficiaries were enrolled at an ERMC facility or known to reside in ERMC in 2012,

Appendix D: Morbidity Burden, Army Non-AD Beneficiaries, Pacific Regional Medical Command (PRMC), CY2012

Figure D-1. Medical Encounters<sup>a</sup>, Individuals Affected<sup>b</sup>, and Hospital Bed Days<sup>c</sup> by Burden of Disease Category, Army Non-AD Beneficiaries, PRMC, CY2012

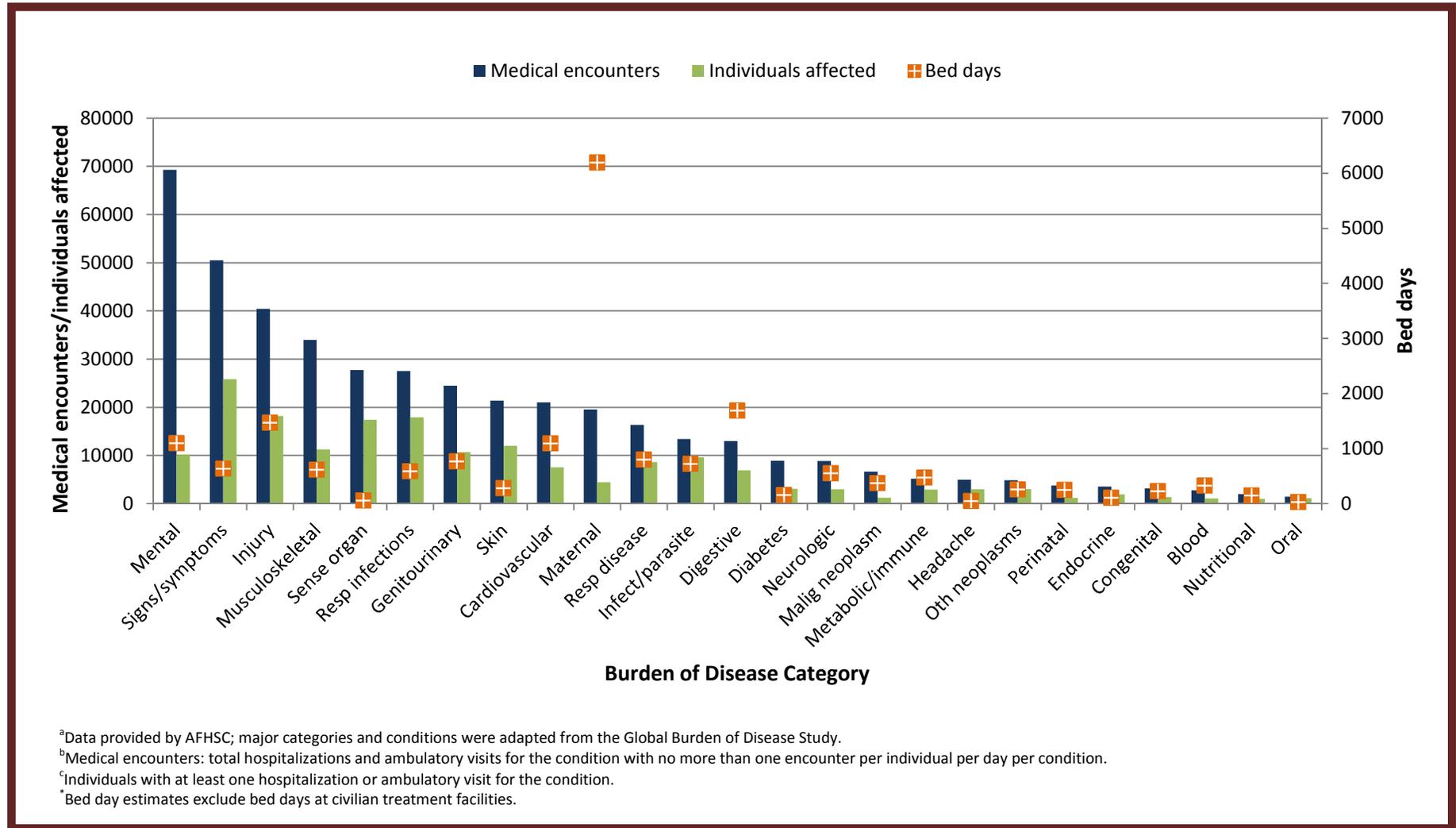
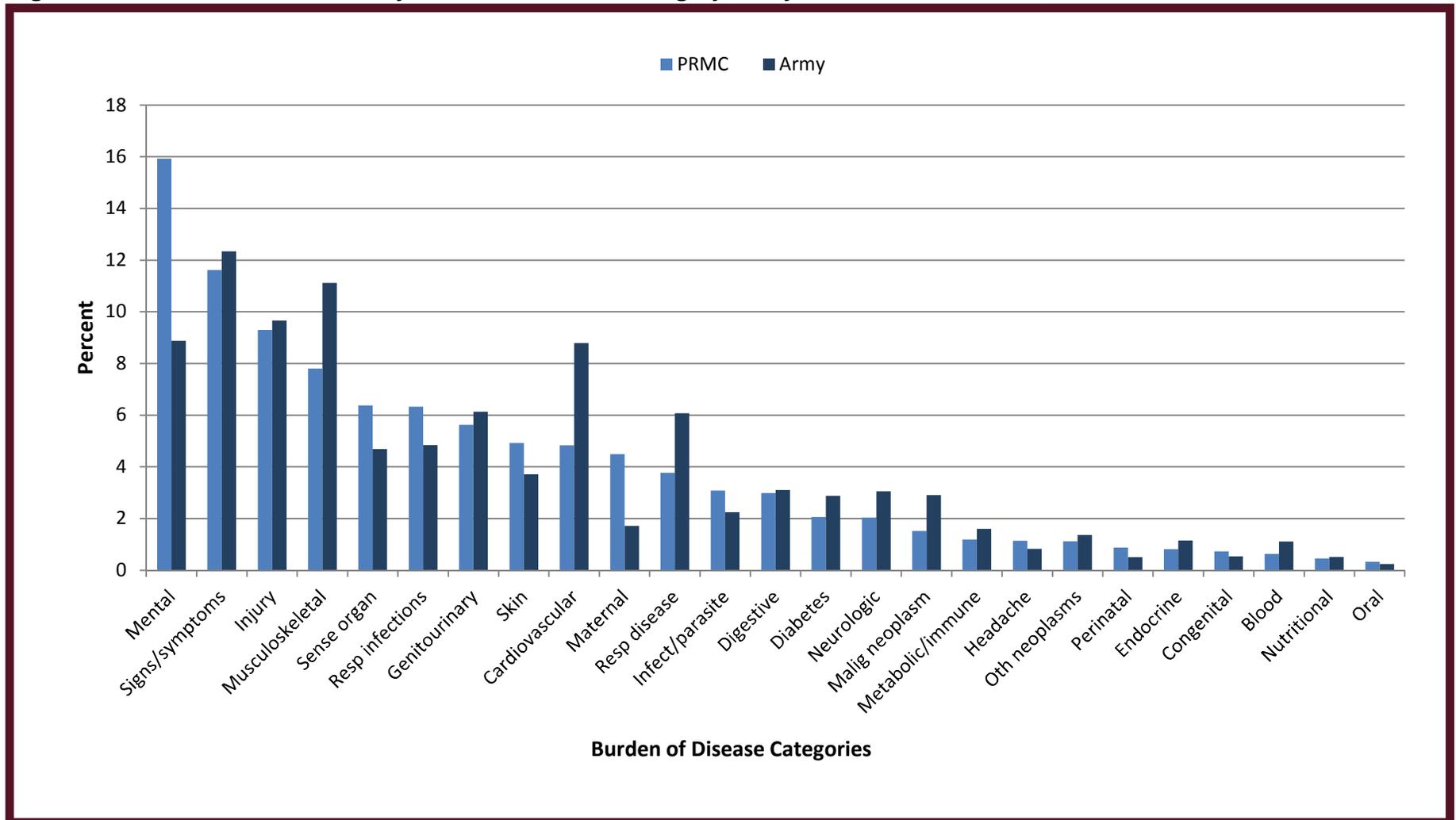


Figure D-2. %Medical Encounters by Burden of Disease Category, Army Non-AD Beneficiaries, CY2012



**Table D-1. Top 10 Medical Conditions by Burden of Disease Criteria, PRMC Non-AD Beneficiaries, CY2012**

Medical encounters	Individuals affected	Bed days
1. Mental disorders - other	1. Signs/symptoms - other	1. Maternal - delivery
2. Signs/symptoms - other	2. Upper respiratory infections	2. Pregnancy complications
3. Upper respiratory infections	3. Sense organ disease - other	3. Digestive disease - other
4. Musculoskeletal - other	4. Skin disease - other	4. Respiratory disease - other
5. Skin disease - other	5. Musculoskeletal - other	5. Infectious/parasitic - other
6. Sense organ disease - other	6. Signs/symptoms - abdomen/pelvis	6. Mood disorders
7. Musculoskeletal - back	7. Signs/symptoms - respiratory/chest	7. Cardiovascular - other
8. Pregnancy complication	8. Genito-urinary - other	8. Lower respiratory infections
9. Mood disorders	9. Sense organ disease - refraction/accommodation	9. Metabolic disorders - other
10. Genito-urinary disease - other	10. Infectious/parasitic - other	10. Signs/symptoms - other

Table D-2. Morbidity Burden Detail, PRMC Non-AD Beneficiaries, CY2012

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
<b>Blood disorders</b>	<b>2,752</b>		<b>1,099</b>		<b>330</b>	
Other non-deficiency anemias	1,236	66	568	65	70	47
All other blood disorders	667	81	291	77	106	38
Iron-deficiency anemia	477	88	268	78	72	46
Hereditary anemias	280	100	61	111	82	43
Other deficiency anemias	92	126	39	117	0	-
<b>Cardiovascular disease</b>	<b>21,033</b>		<b>7,525</b>		<b>1,096</b>	
All other cardiovascular diseases	8,478	15	3,113	20	532	7
Essential hypertension	8,268	18	4,536	12	39	60
Ischemic heart disease	2,271	49	862	58	275	14
Cerebrovascular disease	1,738	58	538	68	238	17
Rheumatic heart disease	260	103	83	105	10	80
Inflammatory	18	131	15	125	2	86
<b>Congenital anomalies</b>	<b>3,193</b>		<b>1,376</b>		<b>227</b>	
All other congenital anomalies	2,692	44	1,170	50	206	18
Congenital heart disease	303	95	177	86	2	86
Other circulatory anomalies	198	109	76	107	19	72
<b>Diabetes mellitus</b>	<b>8,940</b>		<b>3,111</b>		<b>159</b>	
Diabetes mellitus	8,940	13	3,113	20	159	24
<b>Digestive disease</b>	<b>13,006</b>		<b>6,903</b>		<b>1,690</b>	
All other digestive diseases	8,306	16	4,147	15	1,304	3
Esophagus disease	2,061	51	1,429	46	64	50
Other gastroenteritis and colitis	1,803	57	1,574	43	40	59
Cirrhosis of the liver	290	98	136	94	12	78
Inguinal hernia	221	108	104	100	17	74
Appendicitis	180	110	93	101	187	21
Peptic ulcer disease	145	116	72	108	66	49
<b>Endocrine disorders</b>	<b>3,566</b>		<b>1,923</b>		<b>106</b>	
Hypothyroidism	1,329	62	907	56	0	-
Other thyroid disorders	1,149	67	574	64	76	45
All other endocrine disorders	1,088	70	522	69	30	65
<b>Genito-urinary disease</b>	<b>24,468</b>		<b>10,683</b>		<b>770</b>	
All other genito-urinary diseases	10,543	10	6,510	8	353	12
Nephritis and nephrosis	5,401	26	549	67	141	27
Menstrual disorders	3,431	33	1,928	37	116	35
Female genital pain	2,307	48	1,653	40	34	63
Other breast disorders	1,533	59	1,107	52	20	71
Kidney stones	674	80	338	74	84	42

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
Benign prostatic hypertrophy	579	86	374	72	22	70
<b>Headache</b>	<b>4,963</b>		<b>2,986</b>		<b>49</b>	
Headache	4,963	27	2,986	21	49	55
<b>Infectious and parasitic disease</b>	<b>13,403</b>		<b>9,659</b>		<b>722</b>	
All other infectious and parasitic diseases	8,037	20	5,802	10	552	5
Unspecified viral infection	2,906	41	2,641	23	11	79
STDs	1,332	61	1,111	51	52	53
Diarrheal diseases	569	87	465	70	69	48
Hepatitis B and C	296	97	122	98	6	83
Intestinal nematode infection	123	119	111	99	0	-
Chlamydia	98	123	85	104	0	-
Tuberculosis	30	130	14	126	23	69
Tropical cluster	4	135	3	131	0	-
Malaria	4	135	1	133	0	-
Bacterial meningitis	4	135	2	132	9	81
<b>Injury and poisoning</b>	<b>40,462</b>		<b>18,179</b>		<b>1,471</b>	
Arm and shoulder	8,707	14	3,597	17	107	37
Knee	6,097	22	2,373	27	35	62
Foot and ankle	5,557	25	3,204	19	47	56
Head and neck	4,420	29	3,357	18	200	19
Hand and wrist	3,314	36	2,340	30	43	58
Leg	3,190	39	1,746	39	108	36
Unspecified injury	3,111	40	2,388	26	15	76
Back and abdomen	2,117	50	1,273	48	125	30
Other complications NOS	1,267	65	661	62	532	7
Environmental	1,013	73	862	58	131	29
Other injury from external causes	956	74	695	61	14	77
All other injury	300	96	248	80	2	86
Poisoning, drugs	270	101	172	87	108	36
Poisoning, nondrug	143	117	133	95	4	84
<b>Malignant neoplasms</b>	<b>6,636</b>		<b>1,234</b>		<b>375</b>	
Breast	1,298	63	239	81	72	46
All other malignant neoplasms	1,063	71	168	88	78	44
Prostate	689	79	193	84	22	70
Melanoma and other skin	618	85	300	75	2	86
Colon and rectum	474	90	65	110	36	61
Lymphoma and multiple myeloma	440	91	59	113	10	80
Trachea, bronchus and lung	400	92	54	114	24	68
Leukemia	260	103	42	116	4	84

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
Thyroid	245	105	91	102	58	52
Ovary	159	112	23	121	0	-
Liver	158	113	18	124	25	67
Bladder	150	115	30	118	11	79
Brain	145	116	21	123	2	86
Corpus uteri	136	118	27	120	8	82
Cervix uteri	105	121	8	129	9	81
Mouth and oropharynx	101	122	29	119	4	84
Stomach	97	124	14	126	0	-
Pancreas	79	127	12	127	10	80
Esophagus	14	133	5	130	0	-
Testicular	5	134	1	133	0	-
<b>Maternal</b>	<b>19,553</b>		<b>4,462</b>		<b>6,194</b>	
Pregnancy complications	12,739	8	3,697	16	2,213	2
Delivery	5,727	24	2,346	28	3,624	1
Ectopic/miscarriage/abortion	821	77	412	71	119	33
Puerperium complications	251	104	146	92	44	57
All other maternal disorders	15	132	10	128	194	20
<b>Mental disorders</b>	<b>69,309</b>		<b>10,238</b>		<b>1,099</b>	
All other mental disorders	38,054	1	4,531	13	139	28
Mood	11,552	9	2,615	24	536	6
Anxiety	8,299	17	2,304	31	31	64
Adjustment	8,186	19	2,109	36	76	45
Substance abuse	1,112	68	297	76	187	21
Tobacco dependence	820	78	297	76	0	-
Psychotic	655	82	149	91	103	39
Somatoform	345	94	151	90	16	75
Personality	286	99	79	106	11	79
<b>Metabolic and immunity disorders</b>	<b>5,173</b>		<b>2,937</b>		<b>474</b>	
Lipoid metabolism disorders	3,192	38	2,121	35	0	-
Other metabolic disorders	1,859	55	894	57	460	9
Immunity disorders	122	120	22	122	14	77
<b>Musculoskeletal conditions</b>	<b>33,972</b>		<b>11,291</b>		<b>617</b>	
All other musculoskeletal diseases	16,965	4	7,154	5	239	16
Other back problems	13,213	7	4,574	11	146	26
Other knee disorders	1,952	53	751	60	158	25
Osteoarthritis	1,105	69	557	66	44	57
Rheumatoid arthritis	475	89	181	85	6	83
Other shoulder disorders	262	102	132	96	24	68

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
<b>Neurologic conditions</b>	<b>8,851</b>		<b>2,980</b>		<b>555</b>	
All other neurologic conditions	4,756	28	1,648	41	120	32
Organic sleep disorders	2,810	43	989	54	372	11
Epilepsy	640	83	261	79	63	51
Parkinson disease	244	106	70	109	0	-
Other mononeuritis - upper and lower limbs	230	107	138	93	0	-
Multiple sclerosis	171	111	47	115	0	-
<b>Nutritional disorders</b>	<b>1,979</b>		<b>986</b>		<b>151</b>	
Overweight, obesity	1,051	72	633	63	121	31
All other nutritional disorders	872	76	346	73	20	71
Protein-energy malnutrition	56	129	15	125	10	80
<b>Oral conditions</b>	<b>1,446</b>		<b>1,131</b>		<b>29</b>	
All other oral conditions	1,285	64	1,012	53	18	73
Dental caries	94	125	88	103	11	79
Periodontal disease	67	128	60	112	0	-
<b>Other neoplasms</b>	<b>4,882</b>		<b>3,019</b>		<b>261</b>	
All other neoplasms	3,399	35	2,132	34	99	40
Benign skin neoplasm	929	75	764	59	1	87
Uterine leiomyoma	398	93	238	82	161	23
Lipoma	156	114	127	97	0	-
<b>Perinatal anomalies</b>	<b>3,798</b>		<b>1,194</b>		<b>252</b>	
All other perinatal anomalies	1,818	56	971	55	241	15
Low birth weight	1,348	60	207	83	0	-
Birth asphyxia and birth trauma	632	84	152	89	11	79
<b>Respiratory disease</b>	<b>16,382</b>		<b>8,647</b>		<b>802</b>	
All other respiratory diseases	4,324	30	2,345	29	621	4
Asthma	4,201	31	2,224	32	63	51
Chronic obstructive pulmonary disease	3,273	37	1,563	44	118	34
Allergic rhinitis	2,668	45	2,180	33	0	-
Chronic sinusitis	1,916	54	1,602	42	0	-
<b>Respiratory infections</b>	<b>27,531</b>		<b>17,951</b>		<b>591</b>	
Upper respiratory infections	17,345	3	13,336	2	58	52
Otitis media	6,026	23	4,178	14	29	66
Lower respiratory infections	4,160	32	2,681	22	504	8
<b>Sense organ diseases</b>	<b>27,759</b>		<b>17,385</b>		<b>57</b>	
All other sense organ diseases	14,025	6	8,865	3	50	54
Refraction/accommodation	6,781	21	6,499	9	0	-
Glaucoma	2,601	46	1,283	47	0	-

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
Hearing disorders	2,341	47	1,518	45	3	85
Cataracts	2,011	52	1,266	49	4	84
<b>Signs and symptoms</b>	<b>50,532</b>		<b>25,857</b>		<b>635</b>	
All other signs and symptoms	30,399	2	17,004	1	374	10
Abdomen and pelvis	10,236	11	6,955	6	87	41
Respiratory and chest	9,897	12	6,618	7	174	22
<b>Skin disease</b>	<b>21,403</b>		<b>12,026</b>		<b>284</b>	
All other skin diseases	15,118	5	8,769	4	281	13
Contact dermatitis	3,425	34	2,556	25	3	85
Sebaceous gland diseases	2,860	42	1,760	38	0	-

<sup>a</sup>Numbers of individuals affected within each diagnosis sub-category may not add to the total number affected for each major category given that individuals may have more than one of the conditions listed within each major category.

<sup>b</sup>Numbers of individuals affected for each major diagnostic category cannot be added to generate a total number of affected individuals due to potential comorbidities; approximately 78,000 non-AD beneficiaries were enrolled at an PRMC facility or known to reside in PRMC in 2012.

Appendix E: Morbidity Burden, Army Non-AD Beneficiaries, North Regional Medical Command (NRMC), CY2012

Figure E-1. Medical Encounters<sup>a</sup>, Individuals Affected<sup>b</sup>, and Hospital Bed Days<sup>c</sup> by Burden of Disease Category, Army Non-AD Beneficiaries, NRMC, CY2012

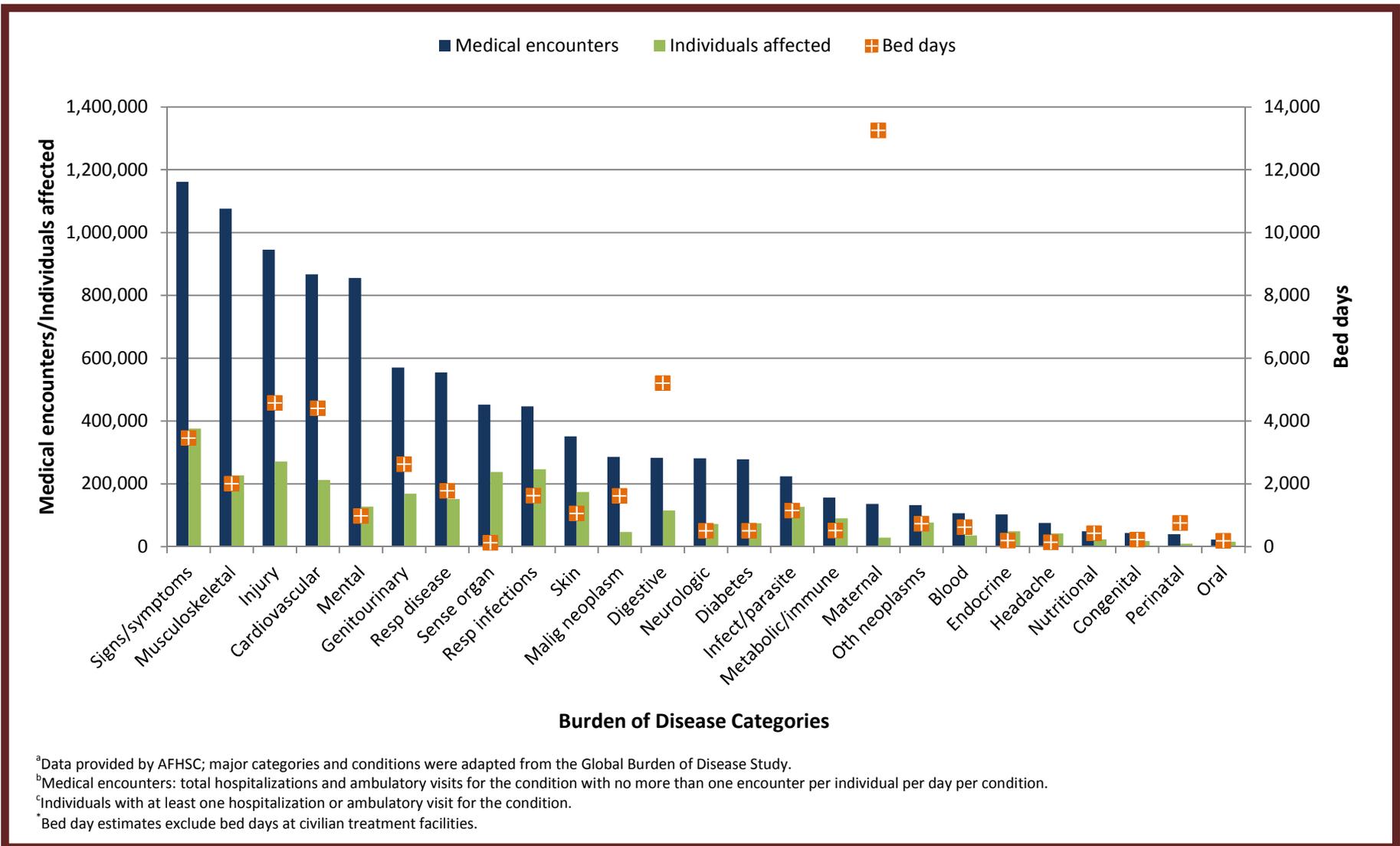
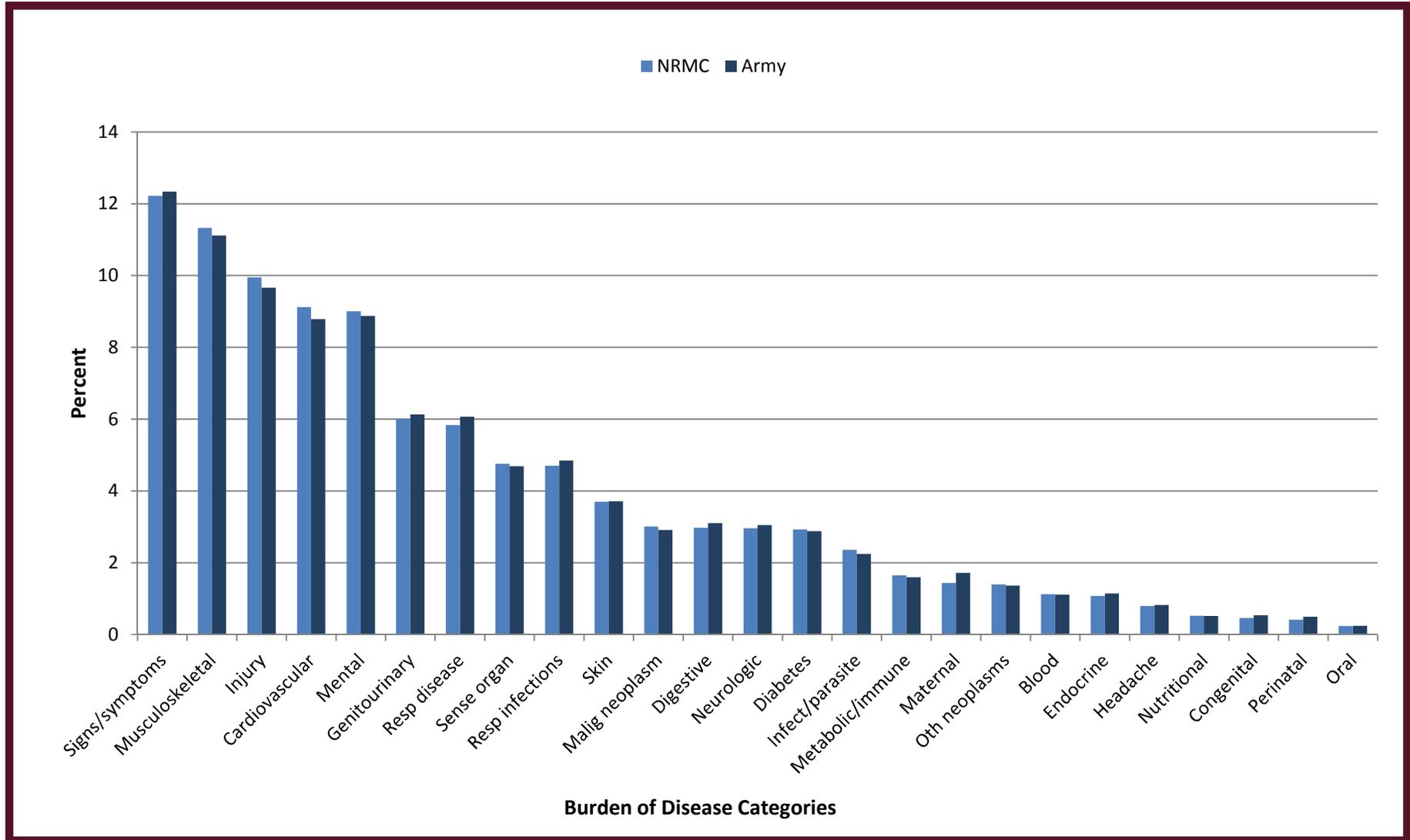


Figure E-2. %Medical Encounters by Burden of Disease Category, Army Non-AD Beneficiaries, CY2012



**Table E-1. Top 10 Medical Conditions by Burden of Disease Category, NRMCA Non-AD Beneficiaries, CY2012**

Medical encounters	Individuals affected	Bed days
1. Signs/symptoms - other	1. Signs/symptoms - other	1. Maternal - delivery
2. Musculoskeletal - other	2. Upper respiratory infections	2. Pregnancy complications
3. Cardiovascular disease - other	3. Musculoskeletal - other	3. Digestive - other
4. Musculoskeletal - back	4. Signs/symptoms - respiratory/chest	4. Cardiovascular - other
5. Mental disorders - other	5. Skin - other	5. Injury complications
6. Diabetes mellitus	6. Essential hypertension	6. Genitourinary - other
7. Signs/symptoms - respiratory/chest	7. Sense organ disease - other	7. Signs/symptoms - respiratory/chest
8. Skin disease - other	8. Genito-urinary - other	8. Signs/symptoms - other
9. Essential hypertension	9. Signs/symptoms - abdomen/pelvis	9. Lower respiratory disease
10. Mood disorders	10. Cardiovascular disease - other	10. Skin - other

Table E-2. Morbidity Burden Detail, NRMC Non-AD Beneficiaries, CY2012

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
<b>Blood disorders</b>	<b>107,043</b>		<b>35,850</b>		<b>619</b>	
Other non-deficiency anemias	46,999	51	19,022	56	156	51
All other blood disorders	26,523	68	10,777	72	195	43
Iron-deficiency anemia	18,998	83	7,987	79	143	57
Other deficiency anemias	11,380	93	3,803	91	10	101
Hereditary anemias	3,139	118	783	119	115	61
<b>Cardiovascular disease</b>	<b>866,728</b>		<b>212,324</b>		<b>4,402</b>	
All other cardiovascular diseases	387,616	3	99,678	10	2,937	4
Essential hypertension	265,440	9	130,010	6	200	42
Ischemic heart disease	128,161	23	43,044	28	564	15
Cerebrovascular disease	81,012	35	24,929	45	661	14
Rheumatic heart disease	3,224	116	2,372	101	26	90
Inflammatory	1,220	129	427	127	14	97
<b>Congenital anomalies</b>	<b>44,040</b>		<b>18,421</b>		<b>225</b>	
All other congenital anomalies	35,918	57	15,175	64	213	40
Congenital heart disease	5,874	103	2,782	98	8	103
Other circulatory anomalies	2,248	123	1,071	114	4	106
<b>Diabetes mellitus</b>	<b>278,132</b>		<b>74,970</b>		<b>501</b>	
Diabetes mellitus	278,132	6	75,146	14	501	20
<b>Digestive disease</b>	<b>282,637</b>		<b>115,179</b>		<b>5,205</b>	
All other digestive diseases	193,528	17	80,149	13	4,042	3
Esophagus disease	49,928	46	32,494	38	205	41
Other gastroenteritis and colitis	19,166	82	14,484	66	171	47
Cirrhosis of the liver	8,436	99	4,081	89	59	78
Inguinal hernia	5,764	104	2,846	97	89	68
Peptic ulcer disease	3,095	119	1,768	107	75	72
Appendicitis	2,720	120	1,379	111	564	15
<b>Endocrine disorders</b>	<b>102,688</b>		<b>49,453</b>		<b>194</b>	
Hypothyroidism	47,226	49	28,169	42	21	92
All other endocrine disorders	28,760	65	12,085	71	70	74
Other thyroid disorders	26,702	67	13,374	69	103	65
<b>Genito-urinary disease</b>	<b>570,540</b>		<b>168,496</b>		<b>2,627</b>	
Nephritis and nephrosis	222,568	14	17,260	61	517	18
All other genito-urinary diseases	212,061	15	105,652	8	1,488	6
Menstrual disorders	33,450	59	21,116	49	329	33
Other breast disorders	31,364	61	20,191	53	41	84
Female genital pain	26,490	69	17,635	60	71	73

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
Kidney stones	22,693	75	9,379	74	141	58
Benign prostatic hypertrophy	21,914	76	13,979	67	40	85
<b>Headache</b>	<b>75,531</b>		<b>42,205</b>		<b>140</b>	
Headache	75,531	38	42,102	30	140	59
<b>Infectious and parasitic disease</b>	<b>224,235</b>		<b>127,223</b>		<b>1,151</b>	
All other infectious and parasitic diseases	164,892	18	91,459	12	725	13
STDs	21,371	78	16,530	62	109	63
Unspecified viral infection	19,617	80	17,649	59	46	83
Diarrheal diseases	12,272	91	7,401	80	250	37
Hepatitis B and C	3,997	111	1,428	110	15	96
Chlamydia	928	131	786	118	0	-
Intestinal nematode infection	487	133	426	128	0	-
Tuberculosis	393	134	191	133	0	-
Bacterial meningitis	203	136	56	135	6	105
Tropical cluster	45	138	20	137	0	-
Malaria	30	139	20	137	0	-
<b>Injury and poisoning</b>	<b>945,394</b>		<b>271,069</b>		<b>4,576</b>	
Arm and shoulder	231,849	12	61,490	17	447	24
Knee	148,389	21	44,657	24	219	39
Foot and ankle	120,559	27	50,395	21	263	36
Leg	108,689	30	41,435	31	470	22
Hand and wrist	66,194	40	36,167	35	63	76
Head and neck	65,511	42	42,658	29	165	48
Unspecified injury	56,715	45	37,083	34	55	80
Back and abdomen	44,286	52	22,428	47	194	44
Other complications NOS	42,690	53	19,140	55	1,919	5
Environmental	23,032	74	15,878	63	359	31
Other injury from external causes	19,693	79	10,637	73	147	55
All other injury	8,775	98	6,171	84	18	94
Poisoning, drugs	5,403	106	2,885	96	242	38
Poisoning, nondrug	3,609	113	2,455	100	15	96
<b>Malignant neoplasms</b>	<b>286,157</b>		<b>46,568</b>		<b>1,616</b>	
Breast	47,022	50	8,351	77	153	53
Prostate	39,383	55	8,804	75	70	74
All other malignant neoplasms	34,667	58	6,760	81	445	25
Trachea, bronchus and lung	32,759	60	3,137	93	186	45
Melanoma/other skin	30,359	62	13,325	70	12	99

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
Lymphoma and multiple myeloma	25,015	71	2,991	95	78	71
Colon and rectum	17,077	85	2,372	101	151	54
Leukemia	11,954	92	1,496	108	86	69
Bladder cancer	10,154	94	2,213	103	50	82
Mouth and oropharynx	6,642	100	867	116	41	84
Pancreas	5,495	105	504	126	85	70
Brain	4,481	108	529	124	27	89
Ovary	4,401	109	597	123	46	83
Thyroid	3,845	112	1,223	113	52	81
Corpus uteri	3,571	114	792	117	56	79
Esophagus	3,541	115	318	131	26	90
Stomach	2,184	125	348	130	29	88
Liver	2,109	126	408	129	6	105
Cervix uteri	1,213	130	236	132	17	95
Testicular	285	135	90	134	0	-
<b>Maternal</b>	<b>136,467</b>		<b>29,448</b>		<b>13,245</b>	
Pregnancy complications	79,897	36	22,423	48	4,400	2
Delivery	48,134	48	18,293	58	8,590	1
Ectopic/miscarriage/abortion	6,401	102	3,101	94	161	50
Puerperium complications	1,976	128	1,267	112	94	66
All other maternal disorders	59	137	31	136	0	-
<b>Mental disorders</b>	<b>855,743</b>		<b>127,393</b>		<b>981</b>	
All other mental disorders	316,305	5	49,355	22	104	64
Mood	247,801	10	43,908	26	369	29
Anxiety	121,682	26	29,184	41	60	77
Adjustment	113,557	28	20,960	50	93	67
Substance abuse	25,992	70	5,453	85	283	35
Psychotic	21,675	77	4,702	88	66	75
Tobacco dependence	4,521	107	3,146	92	0	-
Personality	2,211	124	524	125	0	-
Somatoform	1,999	127	632	121	6	105
<b>Metabolic and immunity disorders</b>	<b>156,658</b>		<b>90,378</b>		<b>511</b>	
Lipoid metabolism disorders	110,397	29	73,996	15	7	104
Other metabolic disorders	42,144	54	18,668	57	493	21
Immunity disorders	4,117	110	997	115	11	100
<b>Musculoskeletal conditions</b>	<b>1,076,182</b>		<b>227,428</b>		<b>2,002</b>	
All other musculoskeletal diseases	511,710	2	149,932	3	870	11
Other back problems	375,852	4	92,543	11	546	16

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
Other knee disorders	87,058	34	26,381	43	401	27
Osteoarthritis	61,822	43	26,018	44	141	58
Rheumatoid arthritis	23,846	73	6,410	83	30	87
Other shoulder disorders	15,894	87	6,509	82	14	97
<b>Neurologic conditions</b>	<b>281,396</b>		<b>72,355</b>		<b>504</b>	
Organic sleep disorders	127,819	24	30,482	40	36	86
All other neurologic conditions	107,018	31	34,427	37	303	34
Epilepsy	13,795	88	5,407	86	111	62
Parkinson disease	13,654	89	2,604	99	4	106
Other mononeuritis - upper and lower limbs	9,671	95	5,010	87	9	102
Multiple sclerosis	9,439	96	1,823	106	41	84
<b>Nutritional disorders</b>	<b>49,544</b>		<b>23,531</b>		<b>427</b>	
All other nutritional disorders	30,115	63	14,524	65	12	99
Overweight, obesity	16,836	86	8,790	76	385	28
Protein-energy malnutrition	2,593	122	738	120	30	87
<b>Oral conditions</b>	<b>22,547</b>		<b>16,048</b>		<b>183</b>	
All other oral conditions	19,173	81	13,875	68	183	46
Dental caries	2,685	121	2,197	104	0	-
Periodontal disease	689	132	628	122	0	-
<b>Other neoplasms</b>	<b>132,719</b>		<b>76,842</b>		<b>732</b>	
All other neoplasms	98,187	32	58,943	19	356	32
Benign skin neoplasm	24,882	72	20,277	52	0	-
Uterine leiomyoma	6,473	101	3,962	90	363	30
Lipoma	3,177	117	2,267	102	13	98
<b>Perinatal anomalies</b>	<b>39,633</b>		<b>9,934</b>		<b>755</b>	
All other perinatal anomalies	17,867	84	8,014	78	438	26
Low birth weight	12,778	90	1,864	105	155	52
Birth asphyxia and birth trauma	8,988	97	1,455	109	162	49
<b>Respiratory disease</b>	<b>554,784</b>		<b>151,632</b>		<b>1,779</b>	
Chronic obstructive pulmonary disease	159,687	19	39,733	32	537	17
Allergic rhinitis	156,423	20	43,727	27	0	-
All other respiratory diseases	133,690	22	48,624	23	756	12
Asthma	76,961	37	34,766	36	463	23
Chronic sinusitis	28,023	66	20,373	51	23	91
<b>Respiratory infections</b>	<b>447,099</b>		<b>246,330</b>		<b>1,623</b>	
Upper respiratory infections	232,406	11	169,063	2	144	56
Lower respiratory infections	121,745	25	64,170	16	1,460	9
Otitis media	92,948	33	57,178	20	19	93

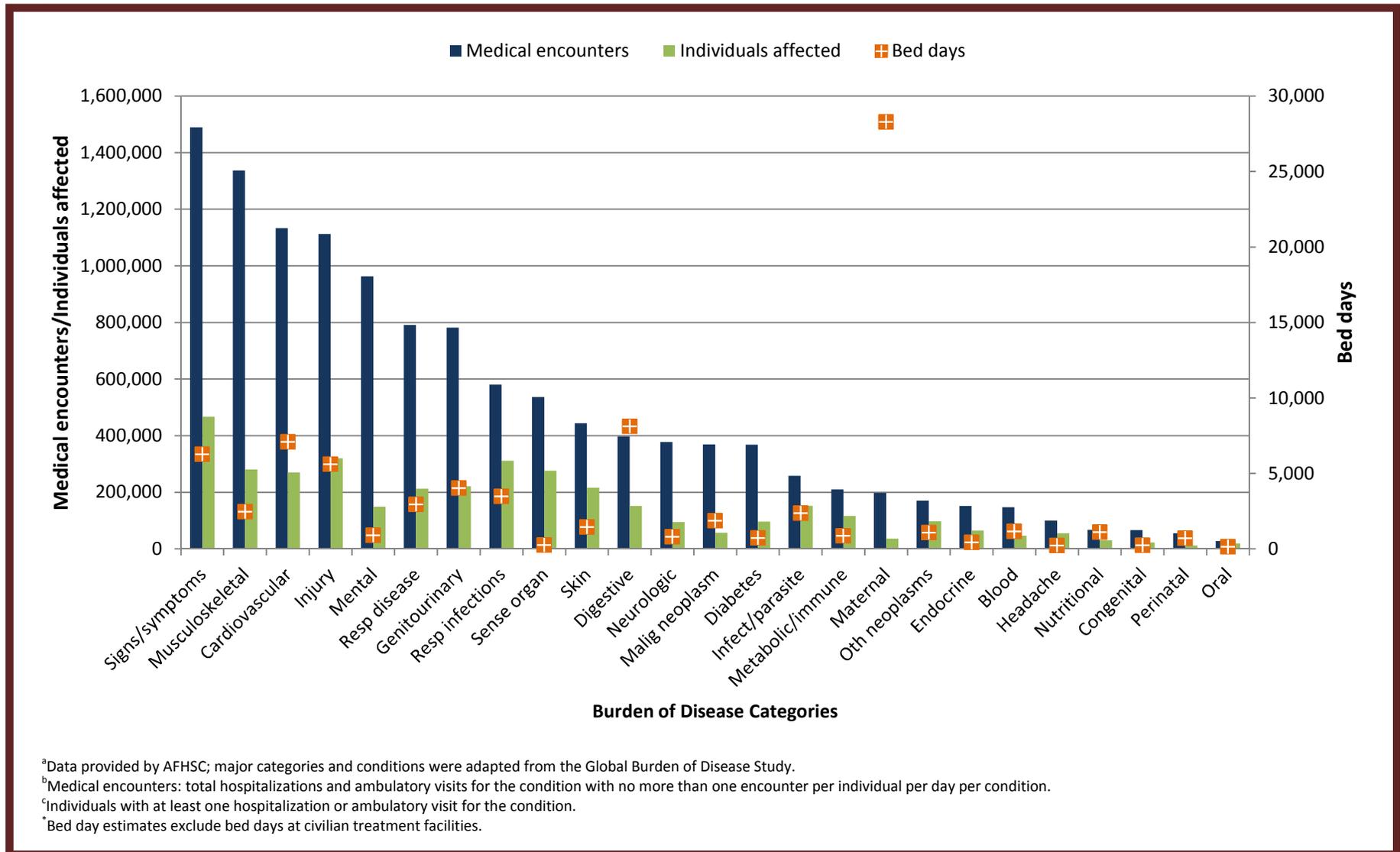
Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
<b>Sense organ disease</b>	<b>452,280</b>		<b>238,339</b>		<b>126</b>	
All other sense organ diseases	222,836	13	126,579	7	122	60
Cataracts	73,401	39	44,132	25	0	-
Glaucoma	65,729	41	31,643	39	0	-
Refraction/accommodation	61,104	44	59,358	18	0	-
Hearing disorders	29,210	64	19,678	54	4	106
<b>Signs and symptoms</b>	<b>1,160,961</b>		<b>376,335</b>		<b>3,459</b>	
All other signs and symptoms	684,961	1	267,434	1	1,470	8
Respiratory and chest	275,254	7	133,897	4	1,480	7
Abdomen and pelvis	200,746	16	104,315	9	509	19
<b>Skin disease</b>	<b>351,565</b>		<b>174,495</b>		<b>1,058</b>	
All other skin diseases	265,609	8	133,108	5	1,047	10
Contact dermatitis	49,605	47	37,461	33	11	100
Sebaceous gland diseases	36,351	56	23,164	46	0	-

<sup>a</sup>Numbers of individuals affected within each diagnosis sub-category may not add to the total number affected for each major category given that individuals may have more than one of the conditions listed within each major category.

<sup>b</sup>Numbers of individuals affected for each major diagnostic category cannot be added to generate a total number of affected individuals due to potential comorbidities; approximately 1,030,000 non-AD beneficiaries were enrolled at an NRM facility or known to reside in NRM in 2012.

Appendix F: Morbidity Burden, Army Non-AD Beneficiaries, Southern Regional Medical Command (SRMC), CY2012

Figure F-1. Medical Encounters<sup>a</sup>, Individuals Affected<sup>b</sup>, and Hospital Bed Days<sup>c</sup> by Burden of Disease Category, Army Non-AD Beneficiaries, SRMC, CY2012



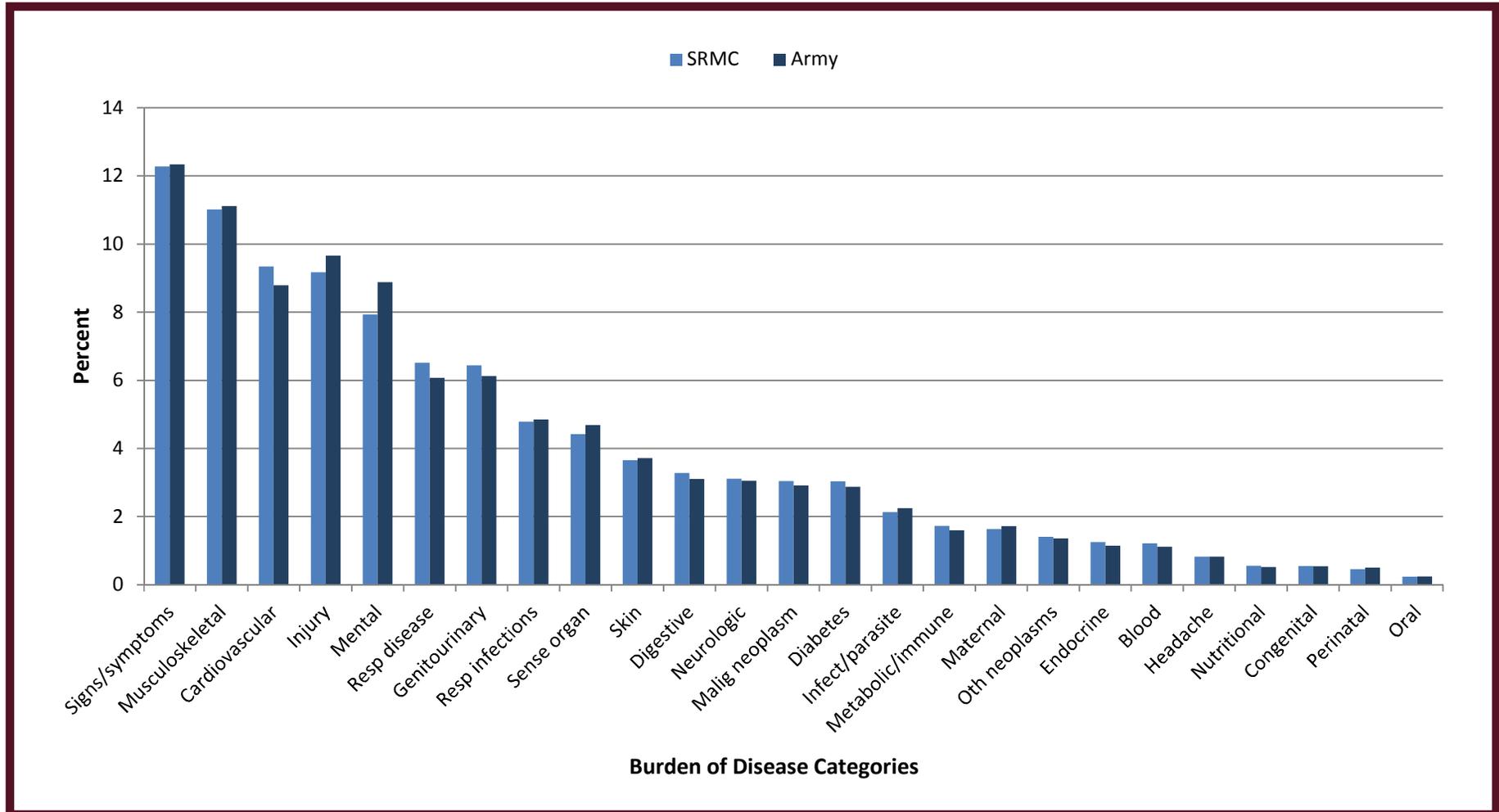
<sup>a</sup>Data provided by AFHSC; major categories and conditions were adapted from the Global Burden of Disease Study.

<sup>b</sup>Medical encounters: total hospitalizations and ambulatory visits for the condition with no more than one encounter per individual per day per condition.

<sup>c</sup>Individuals with at least one hospitalization or ambulatory visit for the condition.

\*Bed day estimates exclude bed days at civilian treatment facilities.

Figure F-2. %Medical Encounters by Burden of Disease Category, Army Non-AD Beneficiaries, CY2012



**Table F-1. Top 10 Medical conditions by Burden of Disease Criteria, SRMC Non-AD Beneficiaries, CY2012**

<b>Medical encounters</b>	<b>Individuals affected</b>	<b>Bed days</b>
1. Signs/symptoms - other	1. Signs/symptoms - other	1. Maternal - delivery
2. Musculoskeletal - other	2. Upper respiratory infections	2. Pregnancy complications
3. Musculoskeletal - back	3. Musculoskeletal - other	3. Digestive disease - other
4. Cardiovascular - other	4. Essential hypertension	4. Cardiovascular disease - other
5. Mental disorders - other	5. Skin disease - other	5. Lower respiratory infections
6. Essential hypertension	6. Signs/symptoms - respiratory/chest	6. Signs/symptoms - respiratory/chest
7. Diabetes mellitus	7. Sense organ disease - other	7. Signs/symptoms - other
8. Signs/symptoms - respiratory/chest	8. Genito-urinary - other	8. Genito-urinary disease - other
9. Skin disease - other	9. Signs/symptoms - abdomen/pelvis	9. Injury complications
10. Upper respiratory infections	10. Musculoskeletal - back	10. Infectious/parasitic - other

Table F-2. Morbidity Burden Detail, SRMC Non-AD Beneficiaries, CY2012

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
<b>Blood disorders</b>	<b>147,298</b>		<b>47,009</b>		<b>1,150</b>	
Other non-deficiency anemias	61,465	49	24,157	54	308	44
All other blood disorders	35,923	67	13,776	72	355	36
Iron-deficiency anemia	27,111	77	11,102	76	293	45
Other deficiency anemias	17,718	90	6,258	87	9	100
Hereditary anemias	5,081	112	1,136	119	185	58
<b>Cardiovascular disease</b>	<b>1,133,678</b>		<b>270,047</b>		<b>7,093</b>	
All other cardiovascular diseases	466,707	4	122,397	11	4,462	4
Essential hypertension	377,571	6	177,922	4	323	40
Ischemic heart disease	181,223	20	61,630	24	1,528	11
Cerebrovascular disease	102,505	35	33,619	42	715	24
Rheumatic heart disease	4,525	116	3,393	97	8	101
Inflammatory	1,202	131	443	130	57	83
<b>Congenital anomalies</b>	<b>66,786</b>		<b>22,496</b>		<b>243</b>	
All other congenital anomalies	53,184	55	18,195	69	177	59
Congenital heart disease	10,676	98	3,791	93	43	88
Other circulatory anomalies	2,926	123	1,375	114	23	93
<b>Diabetes mellitus</b>	<b>368,446</b>		<b>96,682</b>		<b>726</b>	
Diabetes mellitus	368,446	7	97,287	14	726	23
<b>Digestive disease</b>	<b>397,846</b>		<b>151,736</b>		<b>8,117</b>	
All other digestive diseases	268,173	17	105,684	13	6,313	3
Esophagus disease	77,450	41	46,649	34	398	34
Other gastroenteritis and colitis	25,980	78	19,558	64	321	42
Cirrhosis of the liver	11,333	97	5,638	89	87	76
Inguinal hernia	7,063	105	3,289	99	75	79
Peptic ulcer disease	4,711	115	2,675	104	139	64
Appendicitis	3,136	122	1,545	113	784	19
<b>Endocrine disorders</b>	<b>151,715</b>		<b>65,073</b>		<b>427</b>	
Hypothyroidism	61,355	50	35,555	40	41	89
All other endocrine disorders	55,439	53	19,076	67	96	74
Other thyroid disorders	34,921	68	16,593	71	290	46
<b>Genito-urinary disease</b>	<b>781,823</b>		<b>221,325</b>		<b>4,033</b>	
Nephritis and nephrosis	303,230	11	23,979	56	782	20
All other genito-urinary diseases	294,562	12	142,581	8	2,104	8
Menstrual disorders	42,928	60	26,481	49	440	32
Other breast disorders	42,182	62	26,344	51	56	84
Female genital pain	39,265	66	25,169	52	188	57

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
Benign prostatic hypertrophy	31,416	71	19,120	66	136	66
Kidney stones	28,240	76	11,635	75	327	39
<b>Headache</b>	<b>100,117</b>		<b>55,593</b>		<b>225</b>	
Headache	100,117	36	55,709	26	225	54
<b>Infectious and parasitic disease</b>	<b>258,534</b>		<b>152,523</b>		<b>2,362</b>	
All other infectious and parasitic diseases	181,189	21	106,197	12	1,745	10
STDs	29,178	75	22,356	61	145	62
Unspecified viral infection	25,378	79	22,558	60	91	75
Diarrheal diseases	13,584	92	8,478	81	355	36
Hepatitis B and C	5,649	109	1,801	109	6	103
Chlamydia	1,742	129	1,353	115	0	-
Intestinal nematode infection	890	132	795	122	5	104
Tuberculosis	492	134	266	133	2	107
Bacterial meningitis	349	135	61	137	13	97
Tropical cluster	45	138	32	138	0	-
Malaria	38	139	19	139	0	-
<b>Injury and poisoning</b>	<b>1,112,854</b>		<b>320,107</b>		<b>5,611</b>	
Arm and shoulder	273,419	13	75,078	18	322	41
Knee	180,290	23	53,817	28	82	78
Foot and ankle	136,895	28	58,511	26	246	49
Leg	121,434	30	48,034	32	798	18
Hand and wrist	78,159	40	42,801	37	121	70
Head and neck	73,824	43	49,602	31	257	48
Unspecified injury	64,881	47	42,401	38	71	80
Other complications NOS	57,102	52	22,951	58	2,077	9
Back and abdomen	51,922	56	26,429	50	541	29
Environmental	29,181	74	20,182	63	495	31
Other injury from external causes	23,179	83	12,782	73	191	56
All other injury	10,166	99	6,995	84	0	-
Poisoning, drugs	7,377	104	3,751	94	394	35
Poisoning, nondrug	5,025	113	3,281	100	16	95
<b>Malignant neoplasms</b>	<b>369,232</b>		<b>57,193</b>		<b>1,868</b>	
Breast	62,992	48	9,964	79	136	66
Prostate	49,978	57	10,489	77	105	72
Melanoma and other skin	48,254	58	19,526	65	12	98
All other malignant neoplasms	41,745	63	7,818	83	428	33
Trachea, bronchus and lung	41,304	64	3,663	96	171	60

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
Lymphoma and multiple myeloma	30,638	72	3,329	98	227	53
Colon and rectum	22,822	84	2,933	101	200	55
Leukemia	13,510	93	1,597	112	84	77
Bladder	11,778	96	2,425	105	107	71
Mouth and oropharynx	9,097	101	1,025	120	23	93
Pancreas	6,528	106	520	127	91	75
Ovary	5,595	110	658	125	8	101
Brain	4,813	114	581	126	14	96
Thyroid	4,327	117	1,255	116	132	68
Esophagus	4,202	118	320	132	5	104
Stomach	3,545	120	423	131	64	81
Corpus uteri	3,524	121	731	124	8	101
Liver	2,656	126	457	129	45	86
Cervix uteri	1,590	130	259	134	8	101
Testicular	334	136	95	135	0	-
<b>Maternal</b>	<b>198,092</b>		<b>36,084</b>		<b>28,287</b>	
Pregnancy complications	121,303	31	29,006	47	7,218	2
Delivery	66,236	45	22,879	59	20,454	1
Ectopic/miscarriage/abortion	7,882	103	3,709	95	342	37
Puerperium complications	2,501	127	1,604	111	229	52
All other maternal disorders	170	137	70	136	44	87
<b>Mental disorders</b>	<b>962,958</b>		<b>149,012</b>		<b>899</b>	
All other mental disorders	409,195	5	61,982	23	135	67
Mood	270,340	15	51,030	30	138	65
Anxiety	115,863	33	33,315	43	146	61
Adjustment	112,640	34	23,995	55	102	73
Psychotic	23,489	82	5,670	88	84	77
Substance abuse	21,146	86	4,598	91	282	47
Tobacco dependence	5,834	107	3,844	92	0	-
Somatoform	2,686	125	924	121	3	106
Personality	1,765	128	519	128	9	100
<b>Metabolic and immunity disorders</b>	<b>209,828</b>		<b>116,121</b>		<b>873</b>	
Lipoid metabolism disorders	150,276	26	96,198	15	9	100
Other metabolic disorders	53,841	54	23,464	57	850	16
Immunity disorders	5,711	108	1,200	117	14	96
<b>Musculoskeletal disease</b>	<b>1,337,410</b>		<b>280,465</b>		<b>2,461</b>	
All other musculoskeletal diseases	580,880	2	182,450	3	831	17
Other back problems	534,953	3	126,616	10	570	27

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
Other knee disorders	98,621	37	31,303	45	674	25
Osteoarthritis	71,270	44	32,678	44	320	43
Rheumatoid arthritis	33,748	69	9,091	80	34	91
Other shoulder disorders	17,938	88	7,850	82	32	92
<b>Neurologic conditions</b>	<b>378,030</b>		<b>95,227</b>		<b>798</b>	
Organic sleep disorders	179,361	24	40,971	39	143	63
All other neurologic conditions	145,338	27	47,716	33	336	38
Epilepsy	18,040	87	6,430	86	200	55
Parkinson disease	13,152	94	2,788	102	18	94
Other mononeuritis - upper and lower limbs	12,178	95	6,699	85	14	96
Multiple sclerosis	9,961	100	1,800	110	87	76
<b>Nutritional disorders</b>	<b>67,494</b>		<b>30,364</b>		<b>1,101</b>	
All other nutritional disorders	40,314	65	18,306	68	4	105
Overweight, obesity	21,691	85	11,832	74	1,079	14
Protein-energy malnutrition	5,489	111	1,144	118	18	94
<b>Oral conditions</b>	<b>28,151</b>		<b>19,173</b>		<b>137</b>	
All other oral conditions	24,527	80	16,797	70	124	69
Dental caries	2,793	124	2,279	106	7	102
Periodontal disease	831	133	775	123	6	103
<b>Other neoplasms</b>	<b>170,834</b>		<b>97,224</b>		<b>1,084</b>	
All other neoplasms	127,944	29	76,286	17	512	30
Benign skin neoplasm	29,946	73	24,484	53	10	99
Uterine leiomyoma	9,027	102	5,314	90	558	28
Lipoma	3,917	119	2,787	103	4	105
<b>Perinatal anomalies</b>	<b>55,160</b>		<b>12,703</b>		<b>703</b>	
All other perinatal anomalies	23,618	81	10,438	78	641	26
Low birth weight	17,910	89	2,245	107	8	101
Birth asphyxia and birth trauma	13,632	91	2,064	108	54	85
<b>Respiratory disease</b>	<b>791,404</b>		<b>212,635</b>		<b>2,945</b>	
Allergic rhinitis	246,112	18	72,980	19	7	102
Chronic obstructive pulmonary disease	225,199	19	54,728	27	1,106	13
All other respiratory diseases	180,438	22	66,029	21	1,035	15
Asthma	96,825	38	43,596	35	736	21
Chronic sinusitis	42,830	61	30,068	46	61	82
<b>Respiratory infections</b>	<b>580,912</b>		<b>311,834</b>		<b>3,478</b>	
Upper respiratory infections	304,821	10	218,081	2	244	50

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
Lower respiratory infections	160,224	25	83,649	16	3,194	5
Otitis media	115,867	32	69,266	20	40	90
<b>Sense organ disease</b>	<b>536,298</b>		<b>276,184</b>		<b>253</b>	
All other sense organ diseases	269,476	16	152,554	7	233	51
Cataracts	92,208	39	53,465	29	10	99
Glaucoma	76,125	42	35,095	41	0	-
Refraction/accommodation	65,787	46	63,729	22	0	-
Hearing disorders	32,702	70	21,168	62	10	99
<b>Signs and symptoms</b>	<b>1,490,422</b>		<b>466,909</b>		<b>6,264</b>	
All other signs and symptoms	872,292	1	333,193	1	2,437	7
Respiratory and chest	346,446	8	165,701	6	3,095	6
Abdomen and pelvis	271,684	14	139,366	9	732	22
<b>Skin disease</b>	<b>443,620</b>		<b>215,880</b>		<b>1,443</b>	
All other skin diseases	342,017	9	170,087	5	1,431	12
Contact dermatitis	57,565	51	43,312	36	12	98
Sebaceous gland diseases	44,038	59	28,019	48	0	-

<sup>a</sup>Numbers of individuals affected within each diagnosis sub-category may not add to the total number affected for each major category given that individuals may have more than one of the conditions listed within each major category.

<sup>b</sup>Numbers of individuals affected for each major diagnostic category cannot be added to generate a total number of affected individuals due to potential comorbidities; approximately 1,276,000 non-AD beneficiaries were enrolled at an SRMC facility or known to reside in SRMC in 2012.

Appendix G: Morbidity Burden, Army Non-AD Beneficiaries, Western Regional Medical Command (WRMC), CY2012

Figure G-1. Medical Encounters<sup>a</sup>, Individuals Affected<sup>b</sup>, and Hospital Bed Days<sup>c</sup> by Burden of Disease Category, Army Non-AD Beneficiaries, WRMC, CY2012

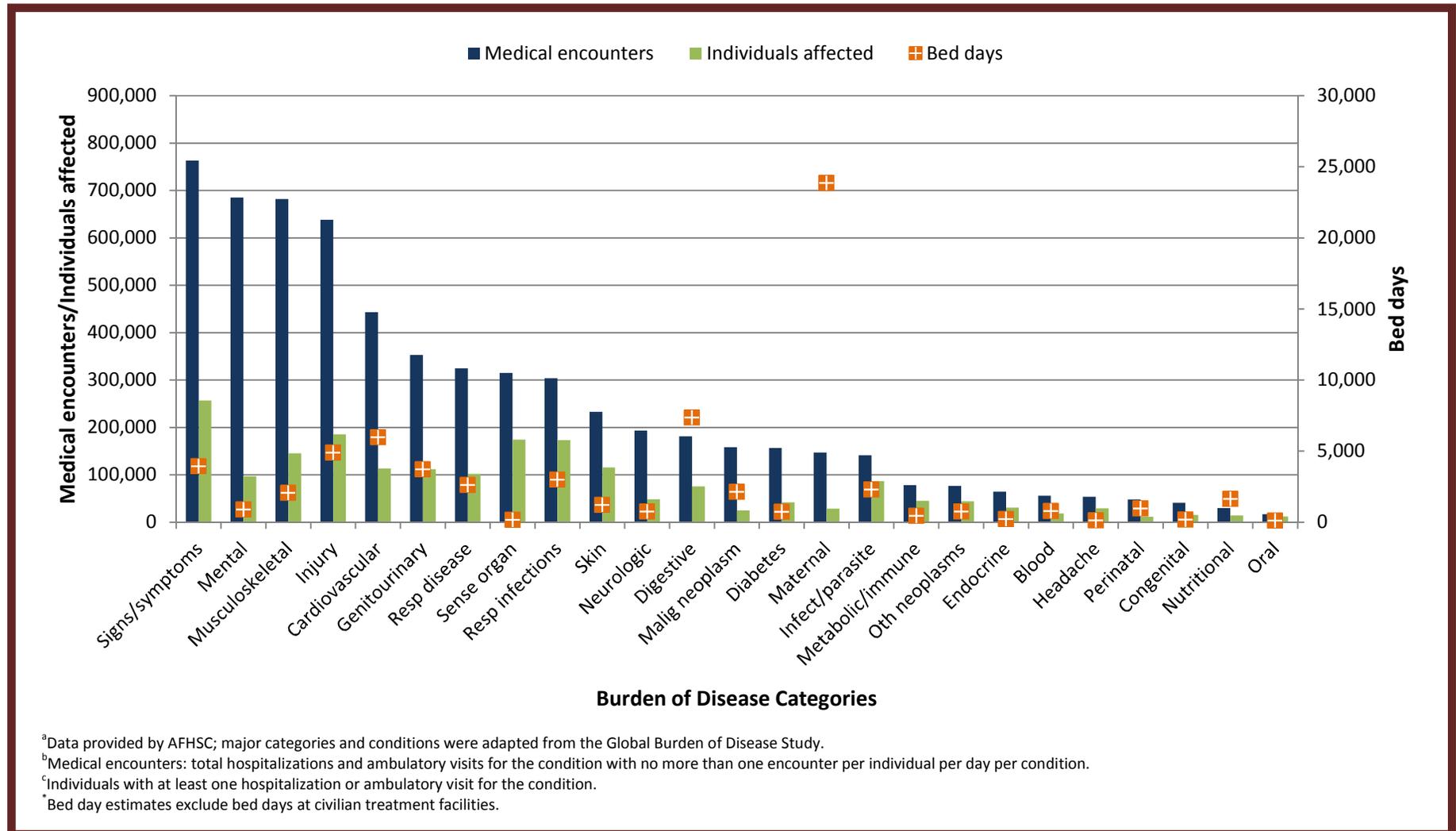
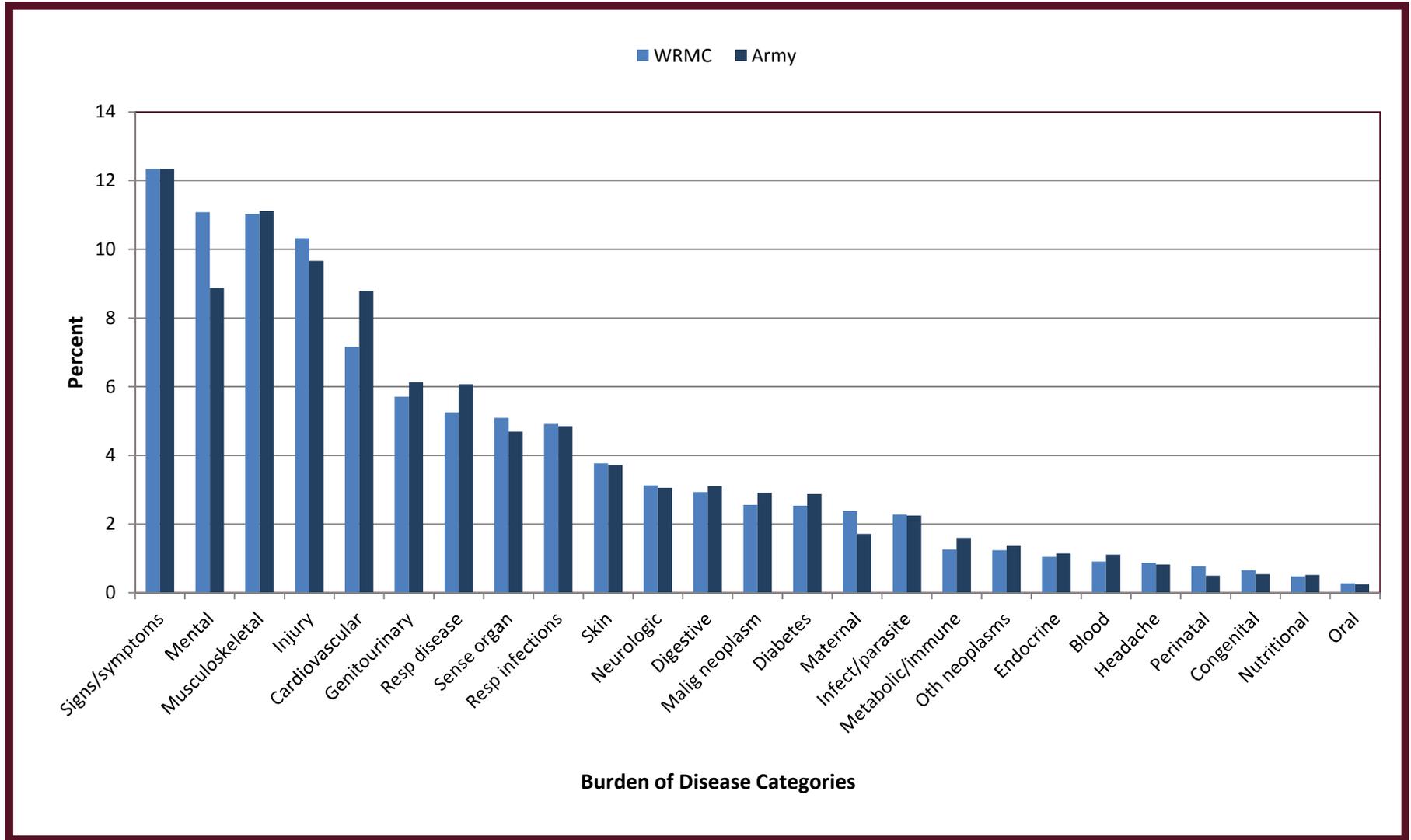


Figure G-2. %Medical Encounters by Burden of Disease Category, Army Non-AD Beneficiaries, CY2012



**Table G-1. Top 10 Medical Conditions by Burden of Disease Criteria, WRMC Non-AD Beneficiaries, CY2012**

Medical encounters	Individuals affected	Bed days
1. Signs/symptoms - other	1. Signs/symptoms - other	1. Maternal - delivery
2. Musculoskeletal - other	2. upper respiratory infections	2. Pregnancy complications
3. Mental disorders - other	3. Musculoskeletal - other	3. Digestive disease - other
4. Musculoskeletal - back	4. Skin disease - other	4. Cardiovascular - other
5. Cardiovascular - other	5. Sense organ disease - other	5. Lower respiratory infections
6. Mood disorders	6. Signs/symptoms - respiratory/chest	6. Injury complications
7. Skin disease - other	7. Signs/symptoms - abdomen/pelvis	7. Genito-urinary disease - other
8. Upper respiratory infections	8. Genito-urinary disease - other	8. Signs/symptoms - other
9. Injury - arm and shoulder	9. Essential hypertension	9. Overweight/obesity
10. Diabetes mellitus	10. Sense organ disease - refraction/accommodation	10. Infectious/parasitic - other

Table G-2. Morbidity Burden Detail, WRMC Non-AD Beneficiaries, CY2012

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
<b>Blood disorders</b>	<b>56,125</b>		<b>18,750</b>		<b>792</b>	
Other non-deficiency anemias	24,774	56	9,457	66	337	34
All other blood disorders	14,614	74	6,102	75	228	44
Iron-deficiency anemia	10,125	88	4,250	80	167	51
Other deficiency anemias	5,178	101	1,682	99	0	-
Hereditary anemias	1,438	127	467	121	60	79
<b>Cardiovascular disease</b>	<b>442,939</b>		<b>113,239</b>		<b>5,984</b>	
All other cardiovascular diseases	210,469	5	55,251	13	3,564	4
Essential hypertension	127,765	15	65,229	9	167	51
Ischemic heart disease	60,221	33	20,679	39	1,403	12
Cerebrovascular disease	41,735	43	12,789	56	780	17
Rheumatic heart disease	2,110	118	1,388	106	27	88
Inflammatory	639	131	230	129	43	85
Congenital anomalies	40,774	44	15,165	50	188	49
<b>All other congenital anomalies</b>	<b>32,334</b>		<b>12,681</b>		<b>180</b>	
Congenital heart disease	6,126	95	2,133	94	5	102
Other circulatory anomalies	2,314	113	933	113	3	104
<b>Diabetes mellitus</b>	<b>156,761</b>		<b>42,157</b>		<b>735</b>	
Diabetes mellitus	156,761	10	42,157	16	735	18
<b>Digestive disease</b>	<b>181,194</b>		<b>75,569</b>		<b>7,371</b>	
All other digestive diseases	121,597	17	51,046	14	5,783	3
Esophagus disease	30,815	50	19,353	41	239	42
Other gastroenteritis and colitis	15,378	68	11,836	60	265	40
Cirrhosis of the liver	5,344	99	2,616	90	136	60
Inguinal hernia	3,608	104	1,801	97	60	79
Peptic ulcer disease	2,260	114	1,183	108	173	50
Appendicitis	2,192	116	1,136	109	715	19
<b>Endocrine disorders</b>	<b>64,536</b>		<b>30,783</b>		<b>212</b>	
Hypothyroidism	29,780	52	18,062	42	6	101
All other endocrine disorders	19,598	62	7,880	68	90	69
Other thyroid disorders	15,158	71	7,243	71	116	63
<b>Genito-urinary disease</b>	<b>352,772</b>		<b>111,705</b>		<b>3,726</b>	
All other genito-urinary diseases	139,981	14	71,018	8	2,069	7
Nephritis and nephrosis	122,575	16	9,960	64	547	27
Menstrual disorders	25,568	54	16,034	48	557	26
Female genital pain	23,100	58	14,700	52	200	48
Other breast disorders	18,623	65	12,069	58	105	65
Kidney stones	11,887	84	5,118	77	165	53
Benign prostatic hypertrophy	11,038	87	6,766	73	83	72

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
<b>Headache</b>	<b>53,932</b>		<b>29,158</b>		<b>124</b>	
Headache	53,932	35	29,158	27	124	62
<b>Infectious and parasitic disease</b>	<b>140,987</b>		<b>86,892</b>		<b>2,296</b>	
All other infectious and parasitic diseases	99,060	19	60,290	12	1,597	10
Unspecified viral infection	15,144	72	13,723	54	96	67
STDs	14,111	77	11,022	61	128	61
Diarrheal diseases	8,150	91	5,432	76	470	30
Hepatitis B and C	2,874	108	1,019	112	5	102
Chlamydia	801	130	716	116	0	-
Intestinal nematode infection	379	133	322	127	0	-
Tuberculosis	247	134	164	133	0	-
Bacterial meningitis	176	135	32	137	0	-
Tropical cluster	32	138	21	138	0	-
Malaria	13	139	12	139	0	-
<b>Injury and poisoning</b>	<b>638,133</b>		<b>185,547</b>		<b>4,885</b>	
Arm and shoulder	157,151	9	42,569	15	237	43
Knee	104,941	18	29,158	26	52	82
Foot and ankle	76,434	27	32,553	23	150	58
Leg	71,776	28	26,947	29	632	23
Head and neck	48,935	38	32,536	24	204	47
Hand and wrist	45,561	40	25,677	30	46	84
Unspecified injury	33,410	46	21,470	38	46	84
Back and abdomen	31,944	48	16,643	46	354	33
Other complications NOS	31,024	49	13,031	55	2,138	6
Environmental	13,089	83	9,060	67	507	28
Other injury from external causes	11,785	85	6,550	74	157	55
All other injury	5,864	97	4,348	79	8	100
Poisoning, drugs	4,413	102	2,347	91	335	35
Poisoning, nondrug	1,806	122	1,453	103	19	93
<b>Malignant neoplasms</b>	<b>158,340</b>		<b>25,162</b>		<b>2,132</b>	
Breast	25,825	53	4,385	78	154	56
All other malignant neoplasms	19,617	61	3,621	85	616	24
Prostate	19,582	63	4,185	81	113	64
Melanoma and other skin	18,159	66	7,876	69	17	95
Trachea, bronchus and lung	16,365	67	1,463	102	295	36
Lymphoma and multiple myeloma	13,997	79	1,626	100	70	75
Colon and rectum	9,266	89	1,291	107	211	45
Leukemia	7,306	92	850	114	41	86
Bladder	5,215	100	1,099	111	78	73

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
Mouth and oropharynx	3,849	103	443	122	55	80
Pancreas	2,903	107	261	128	152	57
Thyroid	2,857	109	796	115	96	67
Ovary	2,832	110	369	124	45	85
Brain	2,584	112	334	126	60	79
Esophagus	2,163	117	165	132	18	94
Corpus uteri	1,718	124	353	125	22	92
Stomach	1,514	126	215	131	46	84
Liver	1,328	128	216	130	25	90
Cervix uteri	1,119	129	163	134	18	94
Testicular	141	136	54	135	0	-
<b>Maternal</b>	<b>147,230</b>		<b>28,686</b>		<b>23,869</b>	
Pregnancy complications	88,458	24	22,756	36	6,519	2
Delivery	49,487	37	17,709	43	16,910	1
Ectopic/miscarriage/abortion	6,453	94	3,044	88	277	38
Puerperium complications	2,751	111	1,751	98	160	54
All other maternal disorders	81	137	42	136	3	104
<b>Mental disorders</b>	<b>685,169</b>		<b>96,927</b>		<b>902</b>	
All other mental disorders	258,317	3	35,799	19	146	59
Mood	198,643	6	35,494	20	228	44
Anxiety	96,916	20	23,221	34	91	68
Adjustment	95,428	21	17,406	44	63	78
Substance abuse	15,364	69	3,505	86	292	37
Psychotic	13,435	80	3,019	89	53	81
Tobacco dependence	3,103	106	2,304	92	0	-
Personality	2,019	119	566	118	24	91
Somatoform	1,944	121	616	117	5	102
<b>Metabolic and immunity disorders</b>	<b>78,042</b>		<b>45,197</b>		<b>456</b>	
Lipoid metabolism disorders	50,809	36	35,298	21	1	106
Other metabolic disorders	25,009	55	11,008	62	455	31
Immunity disorders	2,224	115	502	120	0	-
<b>Musculoskeletal conditions</b>	<b>682,168</b>		<b>145,594</b>		<b>2,071</b>	
All other musculoskeletal diseases	330,879	2	96,268	3	671	21
Other back problems	250,743	4	60,360	11	373	32
Other knee disorders	43,463	41	14,178	53	691	20
Osteoarthritis	32,825	47	14,714	51	269	39
Rheumatoid arthritis	15,261	70	3,996	82	41	86
Other shoulder disorders	8,997	90	3,892	83	26	89
<b>Neurologic conditions</b>	<b>193,525</b>		<b>48,611</b>		<b>754</b>	
Organic sleep disorders	92,420	22	19,938	40	87	71

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
All other neurologic conditions	71,417	29	24,004	33	507	28
Epilepsy	11,368	86	3,806	84	75	74
Parkinson disease	6,610	93	1,449	104	11	98
Other mononeuritis - upper and lower limbs	6,059	96	3,276	87	10	99
Multiple sclerosis	5,651	98	1,133	110	64	77
<b>Nutritional disorders</b>	<b>29,642</b>		<b>14,457</b>		<b>1,647</b>	
All other nutritional disorders	14,659	73	7,027	72	0	-
Overweight, obesity	13,179	82	7,325	70	1,609	9
Protein-energy malnutrition	1,804	123	406	123	38	87
<b>Oral conditions</b>	<b>16,795</b>		<b>12,207</b>		<b>106</b>	
All other oral conditions	14,564	75	10,618	63	102	66
Dental caries	1,654	125	1,475	101	4	103
Periodontal disease	577	132	538	119	0	-
<b>Other neoplasms</b>	<b>76,827</b>		<b>44,345</b>		<b>745</b>	
All other neoplasms	56,985	34	34,027	22	482	29
Benign skin neoplasm	14,553	76	11,881	59	0	-
Uterine leiomyoma	3,273	105	2,057	95	258	41
Lipoma	2,016	120	1,426	105	5	102
<b>Perinatal anomalies</b>	<b>47,615</b>		<b>11,566</b>		<b>956</b>	
All other perinatal anomalies	20,172	60	9,509	65	799	16
Birth asphyxia and birth trauma	14,039	78	2,189	93	89	70
Low birth weight	13,404	81	1,906	96	68	76
<b>Respiratory disease</b>	<b>324,835</b>		<b>101,550</b>		<b>2,625</b>	
Chronic obstructive pulmonary disease	91,330	23	24,560	32	893	15
All other respiratory diseases	81,577	25	31,981	25	1,127	14
Allergic rhinitis	81,292	26	27,630	28	0	-
Asthma	48,738	39	23,188	35	592	25
Chronic sinusitis	21,898	59	16,039	47	13	97
<b>Respiratory infections</b>	<b>303,603</b>		<b>173,386</b>		<b>2,999</b>	
Upper respiratory infections	168,543	8	123,643	2	206	46
Lower respiratory infections	70,606	30	37,602	18	2,746	5
Otitis media	64,454	31	41,206	17	47	83
<b>Sense organ disease</b>	<b>315,050</b>		<b>174,002</b>		<b>167</b>	
All other sense organ diseases	151,446	12	87,171	5	166	52
Refraction/accommodation	64,250	32	61,740	10	0	-
Cataracts	43,096	42	24,989	31	0	-
Glaucoma	36,788	45	16,790	45	0	-
Hearing disorders	19,470	64	12,522	57	1	106
<b>Signs/symptoms</b>	<b>762,843</b>		<b>256,798</b>		<b>3,942</b>	

Major Category/Condition	Medical encounters		Individuals affected		Bed days	
	No	Rank	No	Rank	No	Rank
All other signs and symptoms	458,893	1	177,839	1	1,780	8
Respiratory and chest	155,978	11	81,516	6	1,526	11
Abdomen and pelvis	147,972	13	78,591	7	636	22
<b>Skin disease</b>	<b>232,955</b>		<b>115,843</b>		<b>1,217</b>	
All other skin diseases	179,121	7	89,310	4	1,200	13
Contact dermatitis	30,044	51	22,661	37	15	96
Sebaceous gland diseases	23,790	57	15,566	49	2	105

<sup>a</sup>Numbers of individuals affected within each diagnosis sub-category may not add to the total number affected for each major category given that individuals may have more than one of the conditions listed within each major category.

<sup>b</sup>Numbers of individuals affected for each major diagnostic category cannot be added to generate a total number of affected individuals due to potential comorbidities; approximately 770,000 non-AD beneficiaries were enrolled at an WRMC facility or known to reside in WRMC in 2012.