U.S. Army Injury Surveillance 2017 Summary

Clinical Public Health and Epidemiology
Injury Prevention
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Background

- This document provides a summary of injury medical encounter surveillance data for Active Duty Soldiers from Calendar Year (CY) 2017
- Injuries are defined using the U.S. Army Public Health Center (APHC) Taxonomy of Injuries[1]
- This summary highlights Army Active Duty injury rates and distribution of injuries resulting from the applied Taxonomy of Injuries
- For additional details about data contained in these slides, please see the associated Technical Information Paper[2]

[1]APHC Public Health Information Paper (PHIP) No. 12-01-0717: A Taxonomy of Injuries for Public Health Monitoring & Reporting. December 2017. http://www.dtic.mil/docs/citations/AD1039481

[2]APHC Technical Information Paper (TIP) No. 12-109-0520: Annual Injury Surveillance Report 2017 Summary. July 2019. <insert DTIC link post-PAC>

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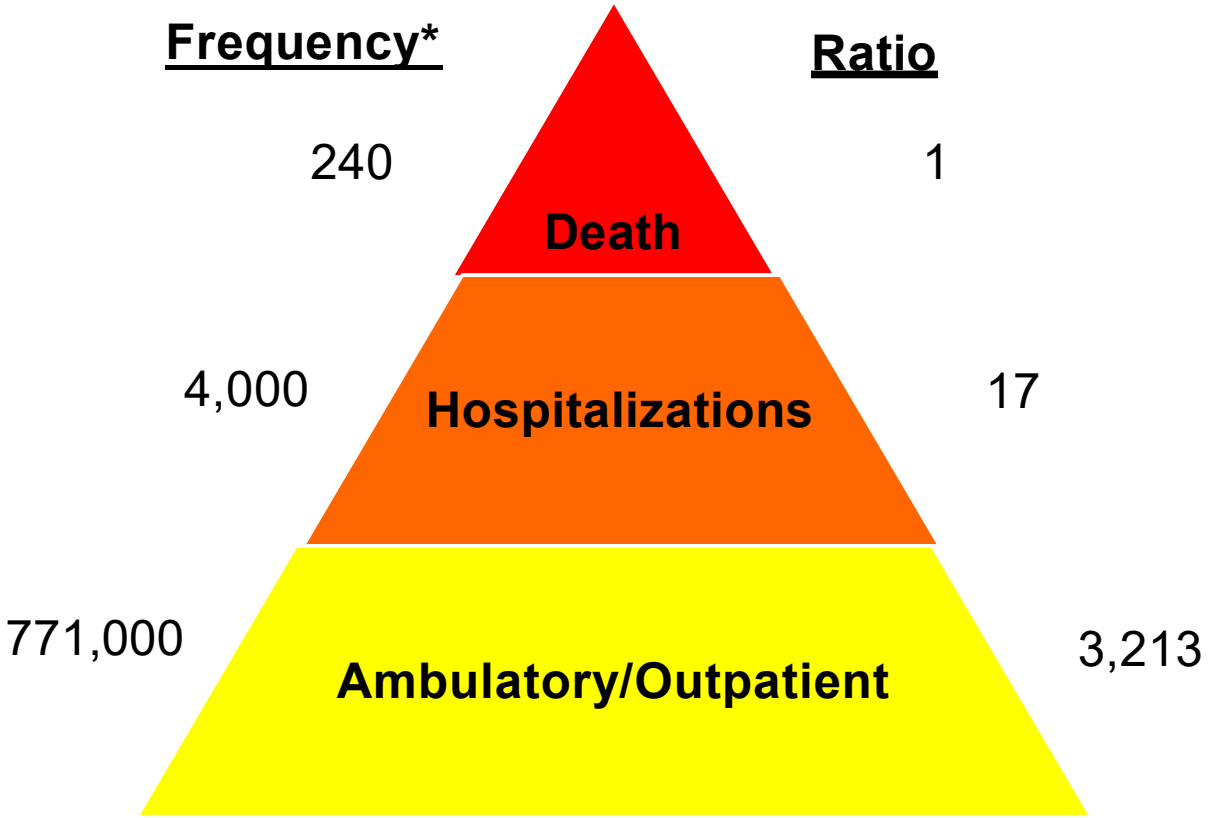
Injury Pyramid
U.S. Army Active Duty 2017



*Frequencies are rounded
Data source: Defense Medical Surveillance System (DMSS) and Armed Forces Medical Examiner System (AFMES); injuries defined using the APHC Taxonomy of Injuries
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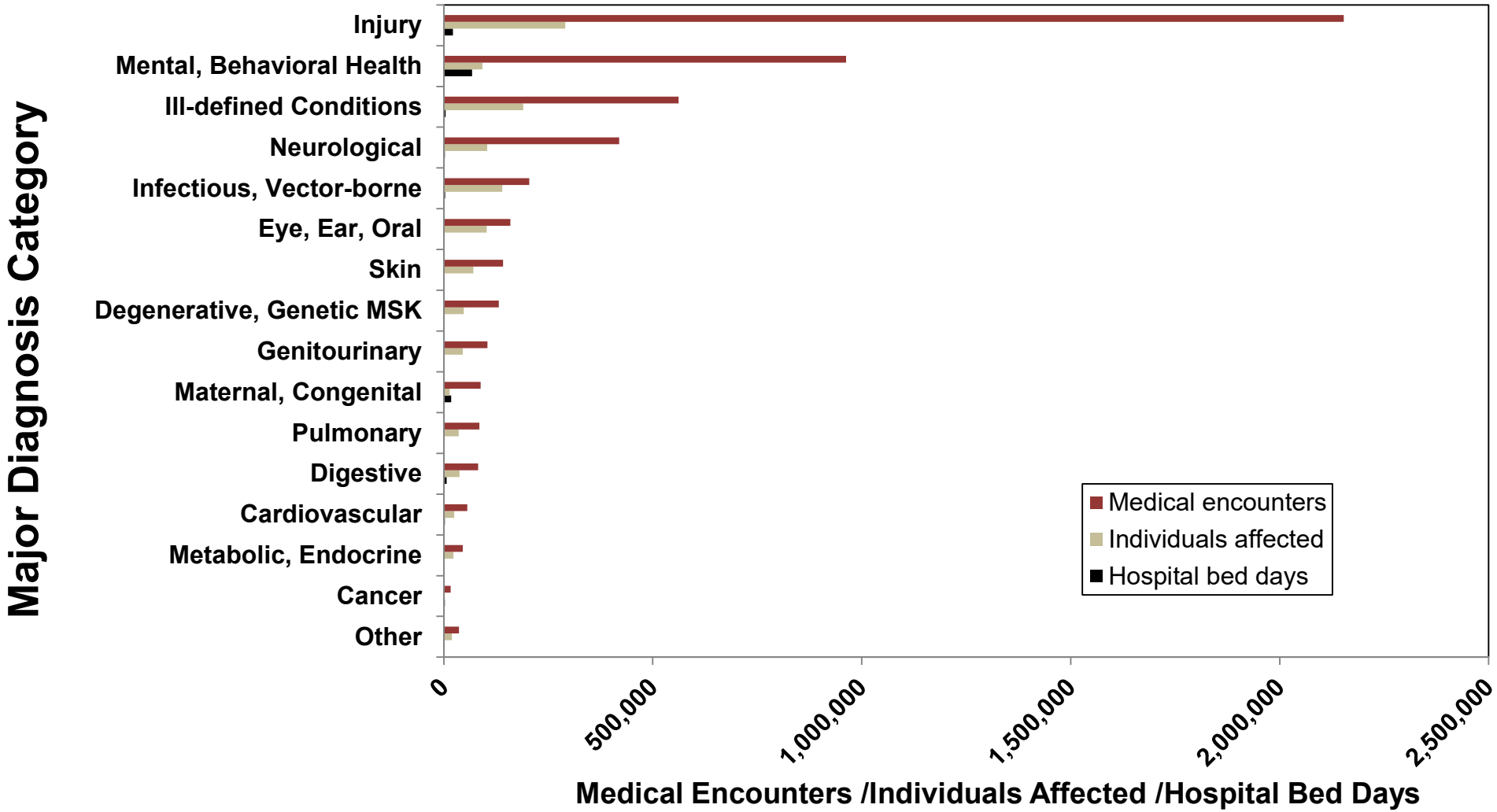
Relative Burden of Injuries and Diseases
U.S. Army Active Duty, 2017



Diagnosis group "Other" includes adverse effects of drugs, blood disorders, and other neoplasms (not cancer)
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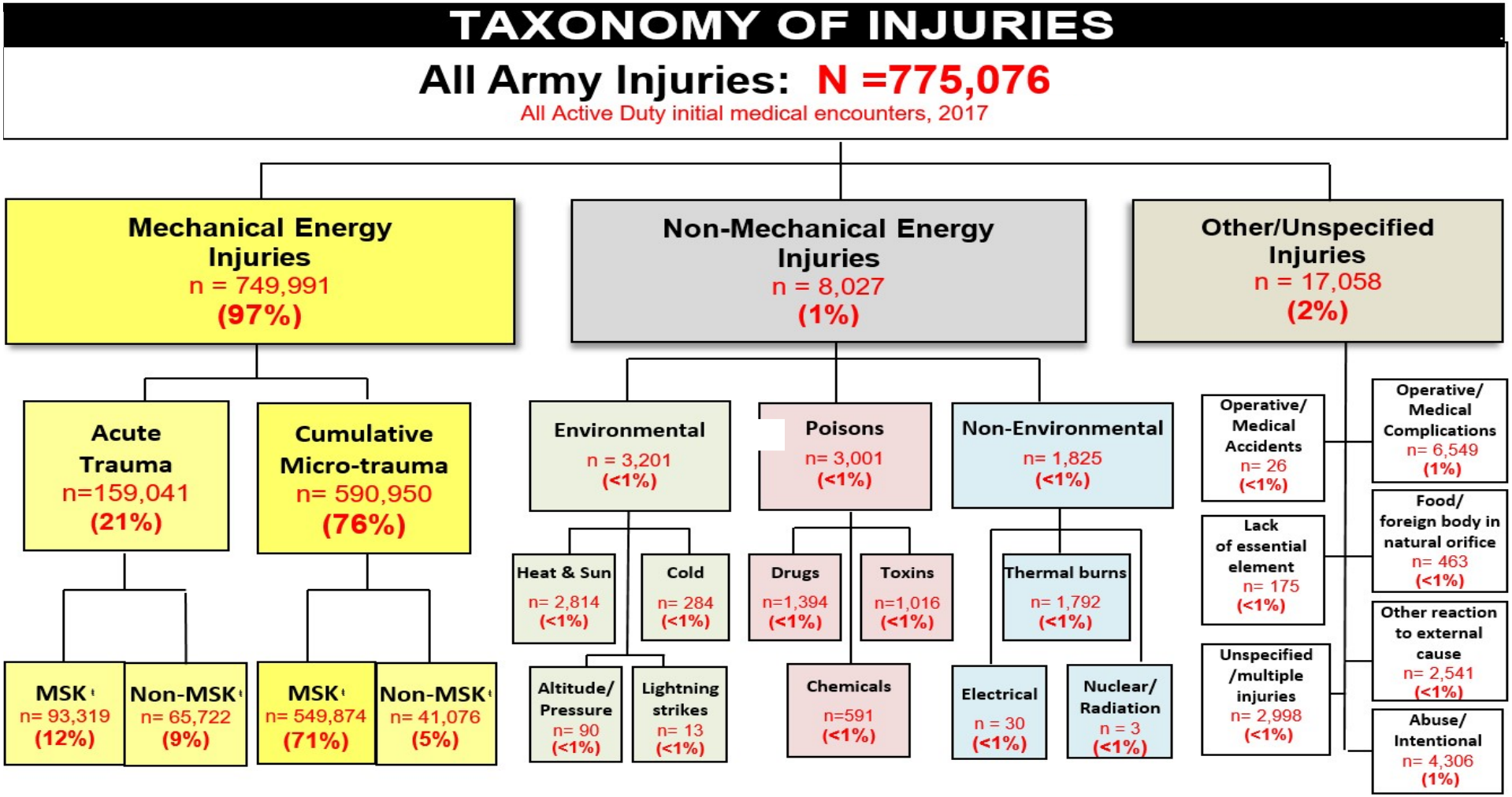
Taxonomy of Injuries
U.S. Army Active Duty, 2017



MSK = damage to tissue(s) of the musculoskeletal system i.e., bone, cartilage, muscle, tendon, fascia, joint, ligament, bursa, synovium

Data source: Defense Medical Surveillance System (DMSS)

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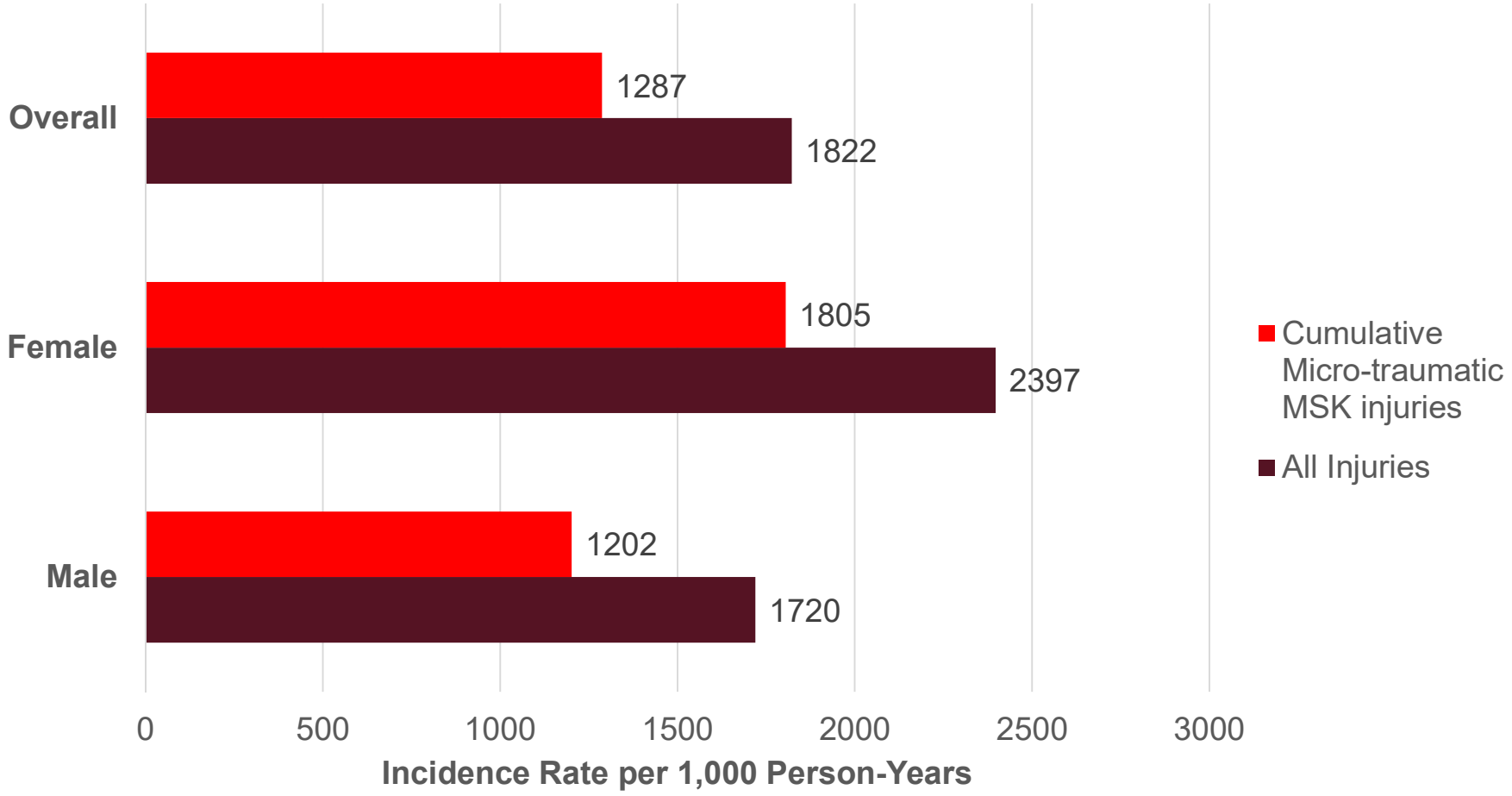
Visit Rates by Sex



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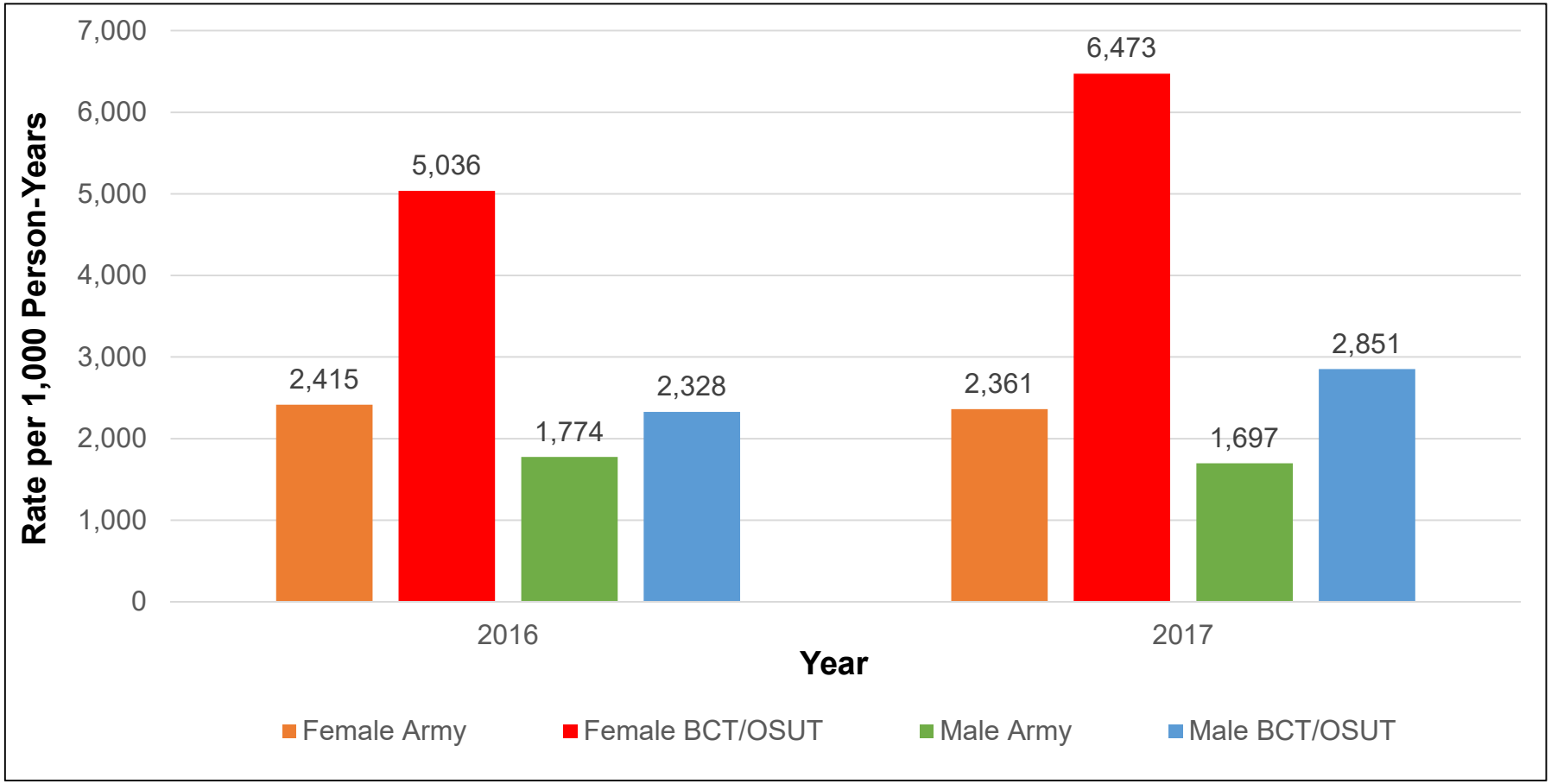
Overall Incident Injury Visit Rates
U.S. Army Active Duty vs. Trainee, 2016-2017



Active Duty injury adjusted to remove deployed injury and deployed person-time
Data source: Defense Medical Surveillance System (DMSS); injuries defined using the APHC Taxonomy of Injuries
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Incident Mechanical Injuries by Body Region and Acute/Overuse
U.S. Army Active Duty, 2017

Body Region	Acute Traumatic (Trauma)	Cumulative Micro-traumatic (Overuse)	All
Lower Extremity	65,447 (41.2%)	282,942 (48.1%)	351,000 (46.8%)
Spine & Back	8,340 (5.2%)	168,346 (28.6%)	176,687 (23.6%)
Upper Extremity	50,511 (31.8%)	107,531 (18.3%)	158,614 (21.1%)
Head, Face & Neck	24,983 (15.7%)	17,592 (3.0%)	42,575 (5.7%)
Torso	9,129 (5.7%)	871 (0.1%)	10,000 (1.3%)
Other	631 (0.4%)	10,458 (1.8%)	11,115 (1.5%)
Total	**159,041 (100%)**	**587,740 (100%)**	**749,991 (100%)**

Injuries defined using the APHC Injury Taxonomy; Acute traumatic (Trauma) and cumulative micro-traumatic (Overuse) injuries
Data source: Defense Medical Surveillance System (DMSS) ; injuries defined using the APHC Taxonomy of Injuries
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Incident Mechanical Injury Diagnoses by Body Region
U.S. Army Active Duty, 2017

Diagnosis	Head, Face & Neck		Spine & Back		Torso		Upper Extremity		Lower Extremity		Other		Total n (%)
	Acute Trauma (ACT)	Cumulative Micro-trauma (CMT)	ACT	CMT	ACT	CMT	ACT	CMT	ACT	CMT	ACT	CMT	
MSK Tissue Damage	26	0	53	152,395	56	1	3,370	100,478	7,777	276,261	130	10371	**550,918 (73.5)**
Sprain/Joint Damage	13	0	2,253	1	787	0	7,118	572	26,626	2,611	49	26	**40,056 (5.3)**
Tissue Damage, Other	6,213	17567	1,820	0	1703	0	4,453	0	3,454	0	418	2	**35,630 (4.8)**
Strain/Tear	2,353	0	3,192	0	2,199	0	5,458	4,132	8,803	11	34	5	**26,187 (3.5)**
Contusion/Superficial	5,688	25	0	0	2,343	17	6,354	111	7,343	3,314	0	0	**25,195 (3.4)**
Nerve	59	0	14	15,926	3	430	3,845	2797	979	887	0	0	**24,940 (3.3)**
Fracture	1,507	0	882	25	724	423	8,884	13	6,899	2,469	0	80	**21,906 (2.9)**
Open Wound	4,071	0	0	0	525	0	7,897	0	2,577	0	0	0	**15,070 (2.0)**
Internal Organ & Blood Vessel	4,996	0	100	0	728	0	95	0	37	0	0	0	**5,956 (0.8)**
Dislocation	44	0	26	0	49	0	2,226	0	703	0	0	0	**3,048 (0.4)**
Crush	10	0	0	0	12	0	615	0	215	0	0	0	**852 (0.1)**
Amputation	3	0	0	0	0	0	196	0	34	0	0	0	**233 (<0.1)**
Total	**24,983**	**17,592**	**8,340**	**168,347**	**9,129**	**871**	**50,511**	**108,103**	**65,447**	**285,553**	**631**	**10,484**	**749,991**
% Total	**3.3%**	**2.3%**	**1.1%**	**22.4%**	**1.2%**	**0.1%**	**6.7%**	**14.4%**	**8.7%**	**38.1%**	**0.1%**	**1.4%**	

Injuries defined using the APHC Injury Taxonomy; Acute traumatic (Trauma) and cumulative micro-traumatic (Overuse) injuries
Data source: Defense Medical Surveillance System (DMSS); injuries defined using the APHC Taxonomy of Injuries
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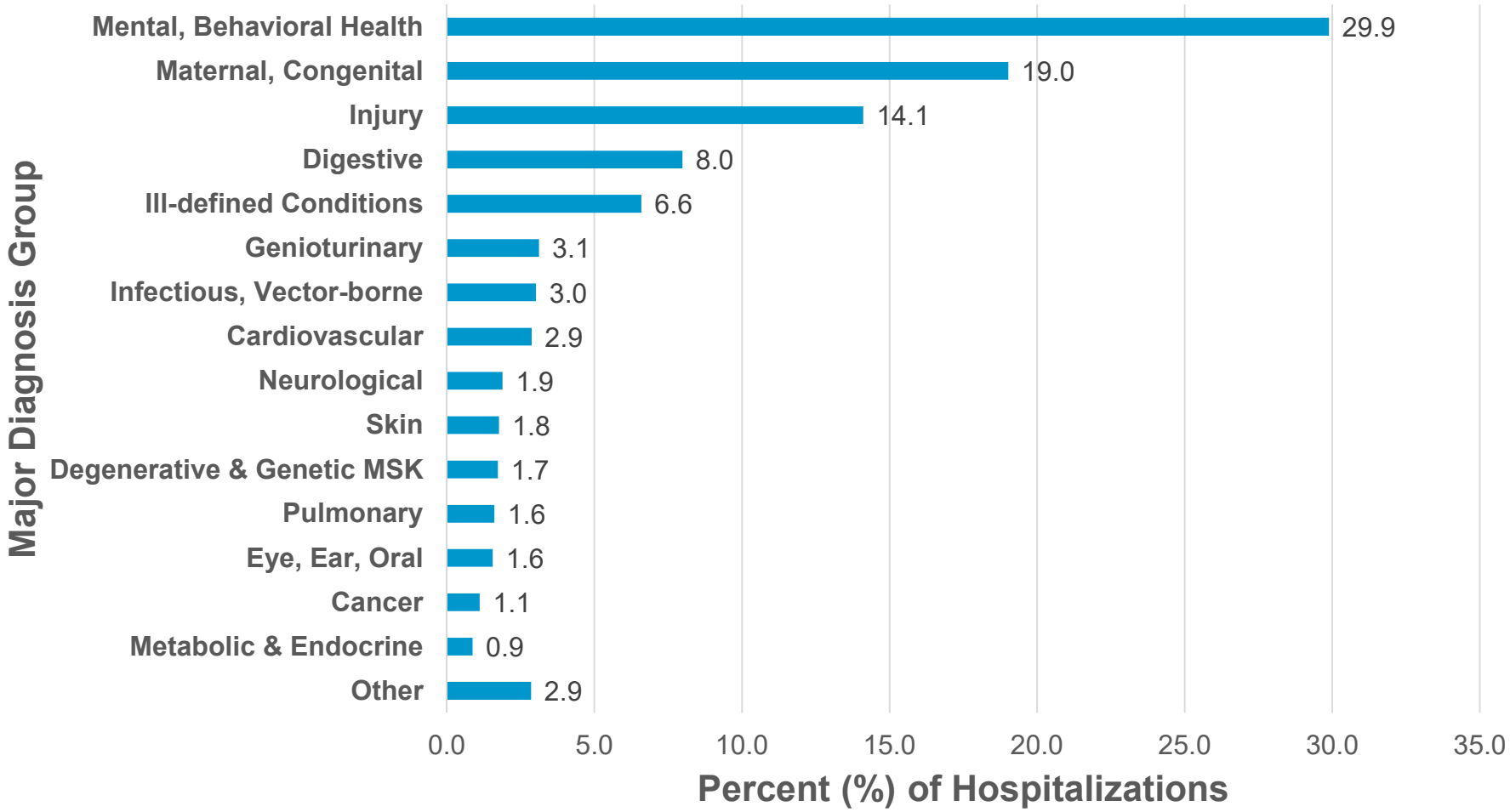
Major Diagnosis Groups Resulting in Hospitalizations
U.S. Army Active Duty, 2017



Total number of hospitalizations = 28,111
Diagnosis group "Other" includes adverse effects of drugs, blood disorders, and other neoplasms (not cancer)
Data source: Defense Medical Surveillance System (DMSS); injuries defined using the APHC Taxonomy of Injuries
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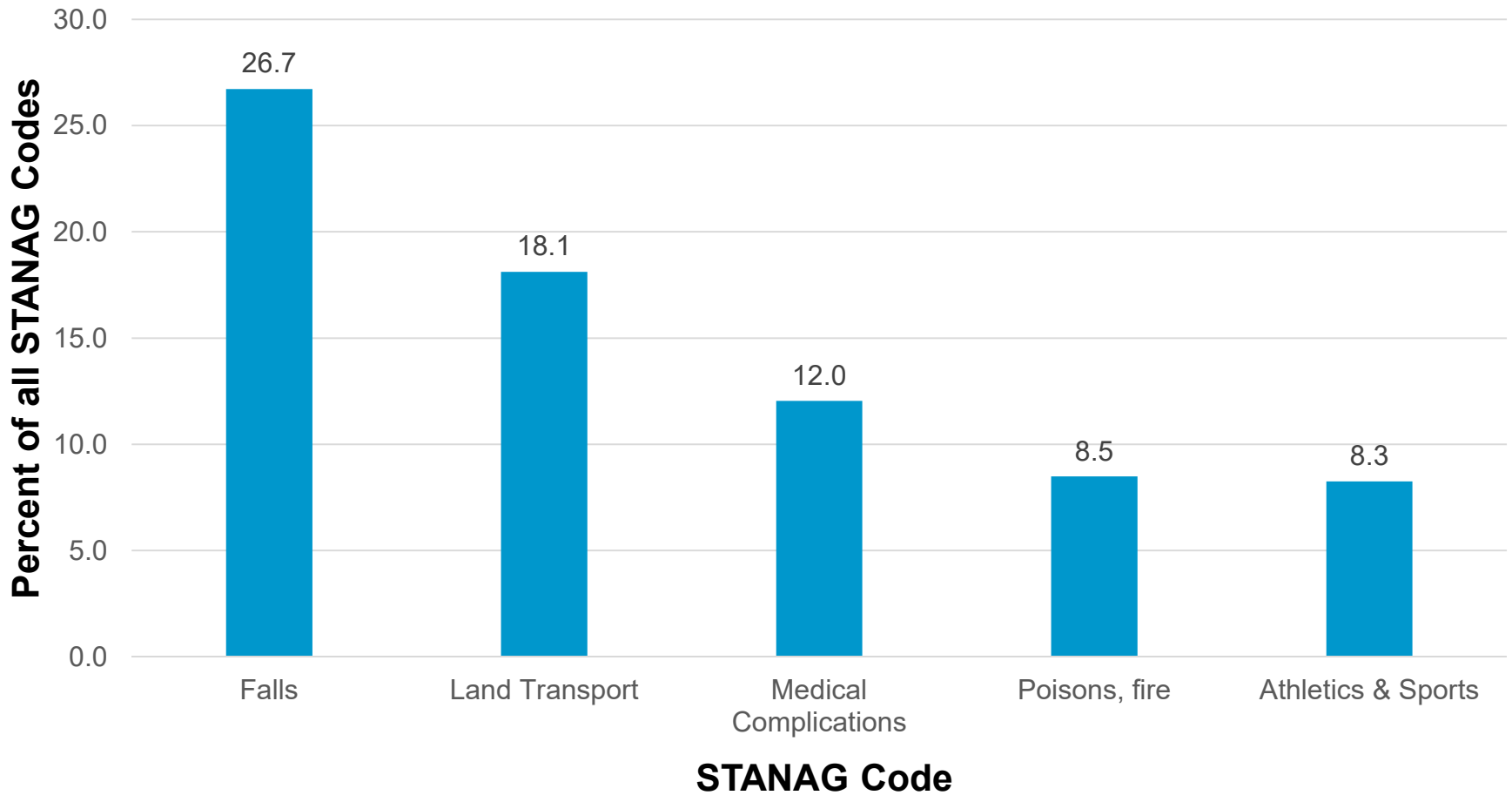
Leading Standardized Agreement (STANAG) Cause Codes for Injury Hospitalizations
U.S. Army Active Duty, 2017



Total number of STANAG-coded injury hospitalizations = 872; may not be representative of the distribution of causes for all injuries

Data source: Defense Medical Surveillance System (DMSS); injuries defined using the APHC Taxonomy of Injuries

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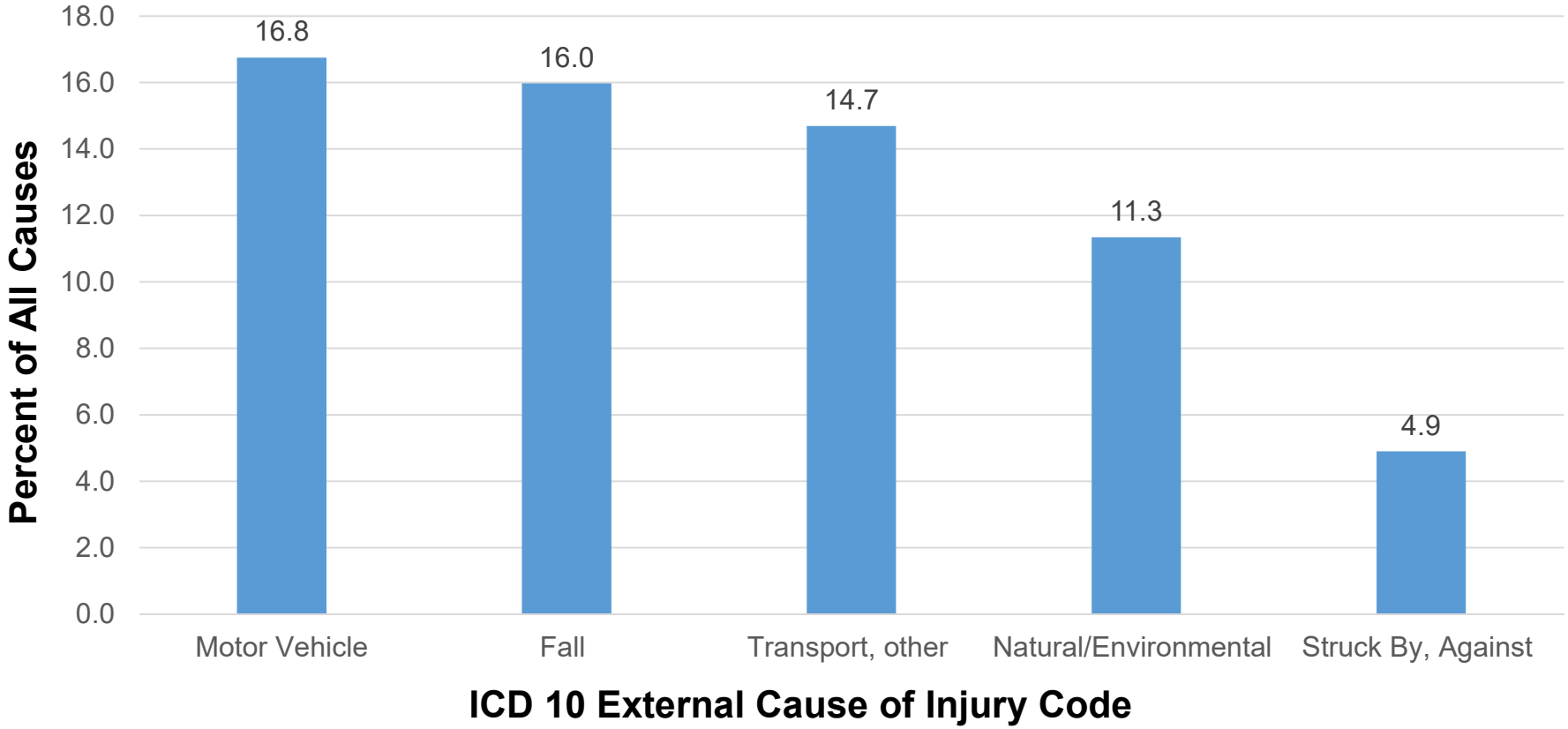
Leading External Causes of Unintentional Hospitalizations
U.S. Army Active Duty, 2017



Total number of cause-coded unintentional injury hospitalizations = 388; may not be representative of the distribution of causes for all injuries
Data source: Defense Medical Surveillance System (DMSS); injuries defined using the APHC Taxonomy of Injuries
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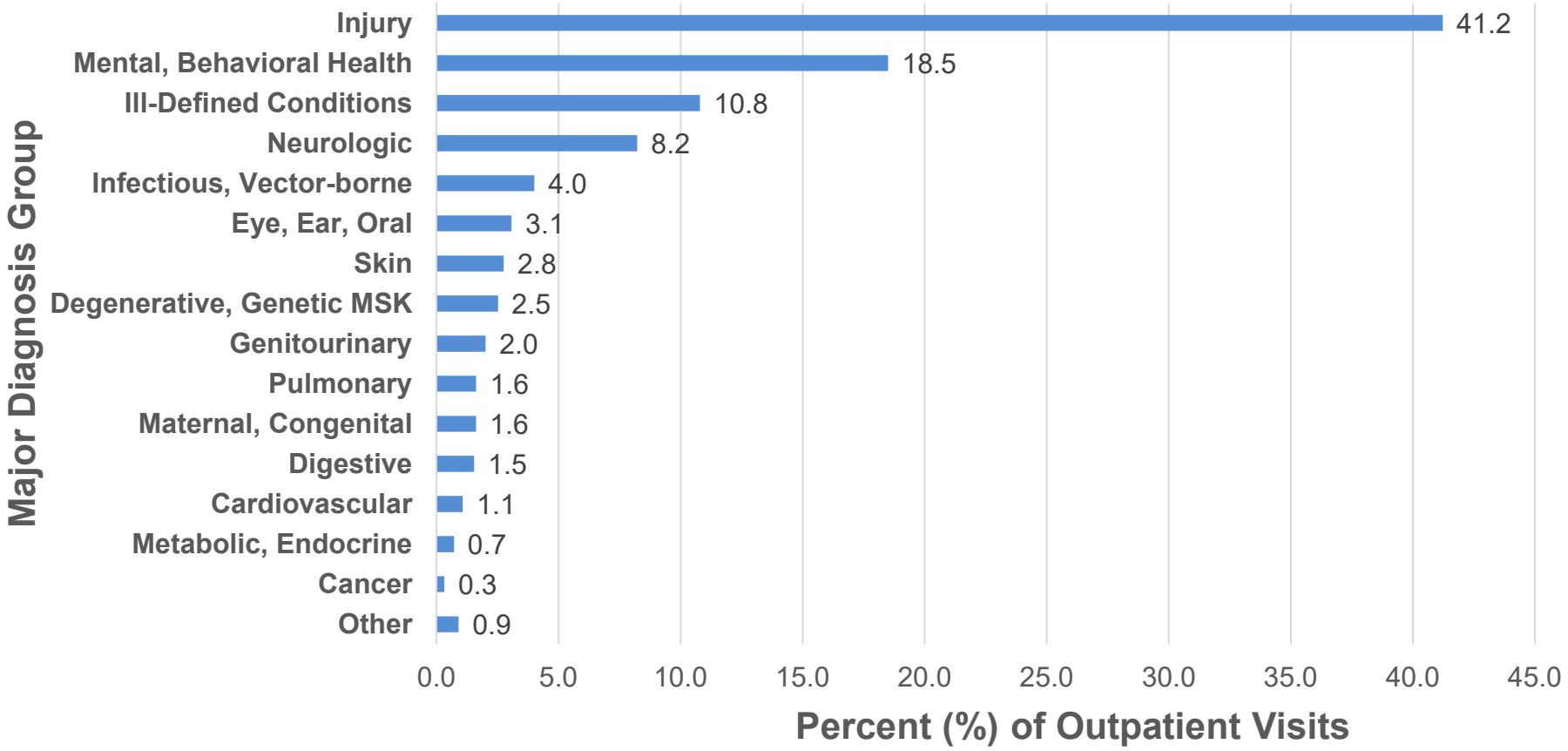
Major Diagnosis Groups Resulting in Outpatient Visits U.S. Army Active Duty, 2017



Total number of outpatient visits = 5,471,286
Diagnosis group "Other" includes adverse effects of drugs, blood disorders, and other neoplasms (not cancer)
Data source: Defense Medical Surveillance System (DMSS); injuries defined using the APHC Taxonomy of Injuries
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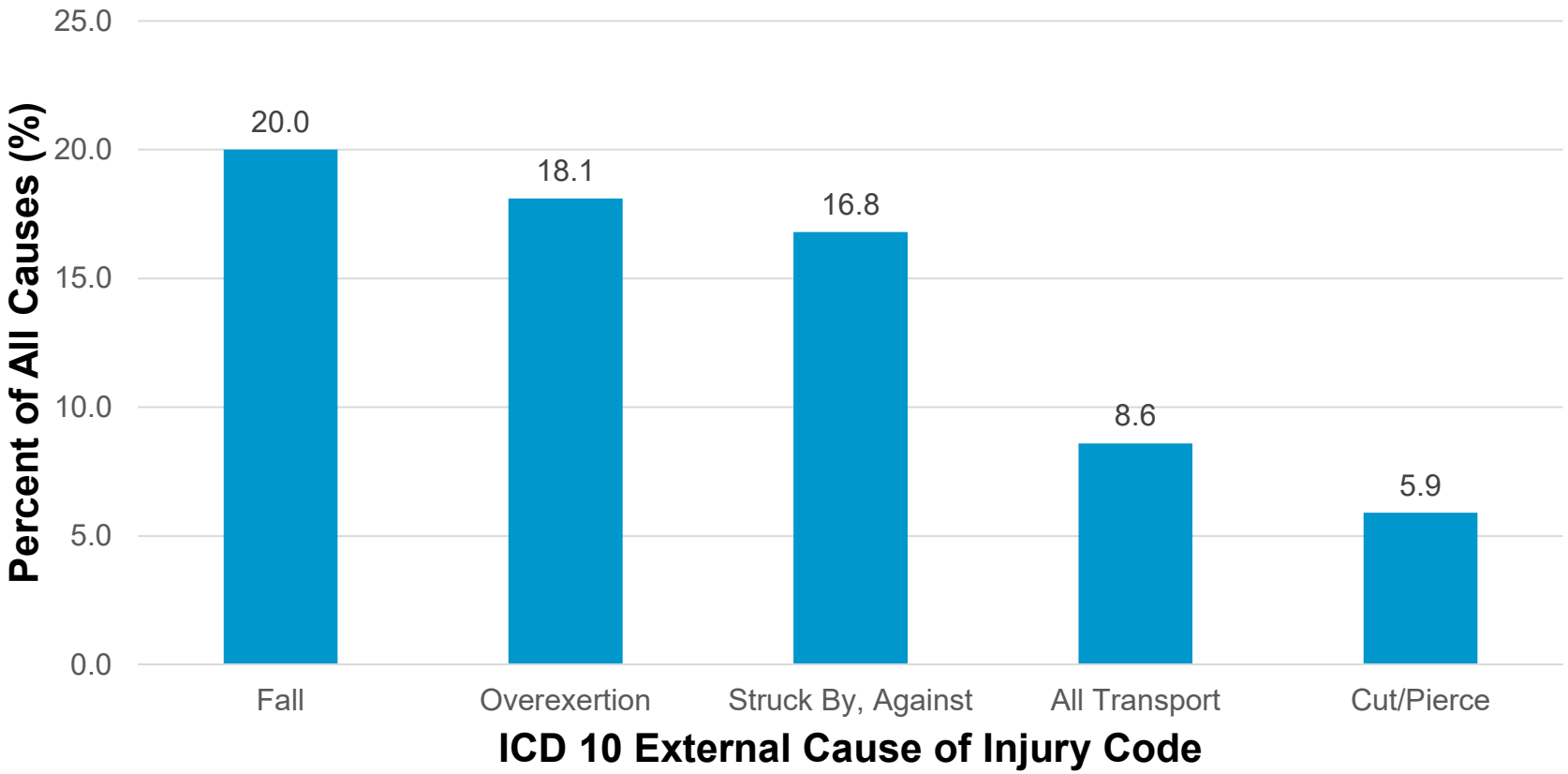
Leading External Causes of Unintentional Injury Outpatient Visits
U.S. Army Active Duty, 2017



Total number of cause-coded unintentional outpatient visits = 65,581; may not be representative of the distribution of causes for all injuries
Data source: Defense Medical Surveillance System (DMSS); injuries defined using the APHC Taxonomy of Injuries
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